

In-service certification (WoF)

Correct as at 20th November 2013. It may be superseded at any time.

Introduction

1 Purpose and scope

The [NZ Transport Agency Waka Kotahi](#) (NZTA) has prepared this manual to assist vehicle inspectors and inspecting organisations achieve correct and consistent standards of in-service vehicle inspection and certification (WoF and CoF).

The purpose of this manual is to enhance the safety of in-service vehicles in New Zealand by conveying to vehicle inspectors and inspecting organisations the conditions of their appointment and the requirements for the inspection and certification of vehicles for operation in service.

The scope of this manual is to set out the statutory requirements for all in-service vehicle inspections. No attempt has been made to give details on how to inspect a vehicle, a matter best addressed by training programmes.

Amendments to this manual will be issued from time to time as inspection requirements change and improvements are made. Details of amendments are available from the [Amendments](#) tab on the horizontal menu. Suggestions for improvement should be made using the feedback button found on every page.

2 Overview of the manual

How is the manual structured?

The manual is divided into ten vehicle-type sections plus technical bulletins and this introduction.

What information is in each part of the manual?

1. Introduction

The introduction is relevant to all vehicles requiring in-service inspection and certification (WoF and CoF). It explains the duties and responsibilities of the inspecting organisation and vehicle inspector, the inspection and certification process, complaints procedures, inspection premises and equipment, and the appointment of vehicle inspectors and inspecting organisations. It also includes definitions and abbreviations, and sample certification documents. Improvement suggestions can be made by clicking the 'Send us your feedback' button found on every page.

2. General vehicles

This part contains the inspection requirements for vehicles of classes LE that do not have motorcycle controls, MA, MB, MC, MD1, MD2, MD3, MD4, ME, NA, NB and NC.

Pages for particular types of vehicles are identified to enable easy access to the requirements for those vehicles.

Identifier	Vehicles covered
General vehicle	light vehicle WoF and general requirements
Light PSV	additional or replacement requirements for light passenger service vehicles (PSVs) – CoF only
Heavy vehicle	additional or replacement requirements for heavy vehicles – CoF only
Heavy PSV	additional or replacement requirements for heavy PSVs – CoF only

3. Motorcycles

This part of the manual covers the requirements for vehicles of classes LC, LD, and LE that have motorcycle controls.

Pages for particular types of vehicles are identified to enable easy access to the requirements for those vehicles.

Identifier	Vehicles covered
Motorcycle	motorcycle WoF and general requirements
Motorcycle PSV	additional or replacement requirements for motorcycle PSVs – CoF only

4. Trailers

This part of the manual covers the requirements for both light and heavy trailers, that is, vehicles of classes TA, TB, TC, and TD.

Pages for particular types of vehicles are identified to enable easy access to the requirements for those vehicles.

Identifier	Vehicles covered
General trailer	light trailer WoF and general requirements
Heavy trailer	additional or replacement requirements for heavy trailers – CoF only

5. Technical bulletins

These contain detailed requirements or helpful information which is not appropriate to put into the vehicle parts of the manual. Examples are processes/requirements for seatbelt replacements and jacking points for correctly checking suspension ball joints. The bulletins are divided into those that apply to general vehicles and those that apply only to CoF inspections.

6. Forklifts

This part contains the requirements for forklifts, all of which only require a WoF as far as is practicable for their design and type.

7. Tractors

This part contains the WoF requirements for all tractors and for all machines used for agricultural, land management and roading operations.

8. Unclassified vehicles

This part contains the WoF requirements for light and heavy specialist vehicles that only have to meet WoF requirements as far as practicable for their design and type.

'WoF only' inspecting organisations

An inspecting organisation appointed to carry out WoF inspections only will only need to view the general vehicle pages, motorcycle pages, general trailer pages, forklift pages, tractor pages, unclassified vehicle pages and technical bulletin (general) pages. The link is [here](#). This link displays only WoF pages, it does not display any pages that apply to CoF (heavy vehicle, light PSV, heavy PSV, heavy trailer and technical bulletin (CoF) pages).

'WoF and CoF' inspecting organisations (TSD agents)

An inspecting organisation appointed to carry out WoF and CoF inspections will need to view all the WoF and CoF pages,

which can be found [here](#). This link displays the same pages as for 'WoF only', but with additional pages for heavy vehicles, light PSV, heavy PSV, heavy trailers and technical bulletins (CoF).

How to use the manual

WoF inspections

- For a WoF inspection on a car, for example, refer only to the general vehicle pages.

CoF inspections

Many CoF requirements are the same as the WoF requirements. Where requirements differ:

- For a light PSV, refer first to the light PSV pages and then to the general vehicle pages
- For a heavy truck, refer first to the heavy vehicle pages and then to the general vehicle pages where required
- For a heavy PSV, refer first to the heavy PSV pages, then to the heavy vehicle pages and then the general vehicle pages where required.

Layout of manual pages

For each vehicle component, the inspection requirement pages are, in the main, divided into two columns. These columns are then broken up into 'mandatory equipment', 'permitted equipment', 'condition', 'performance' and 'modifications' (and 'repairs' for heavy vehicles on a CoF).

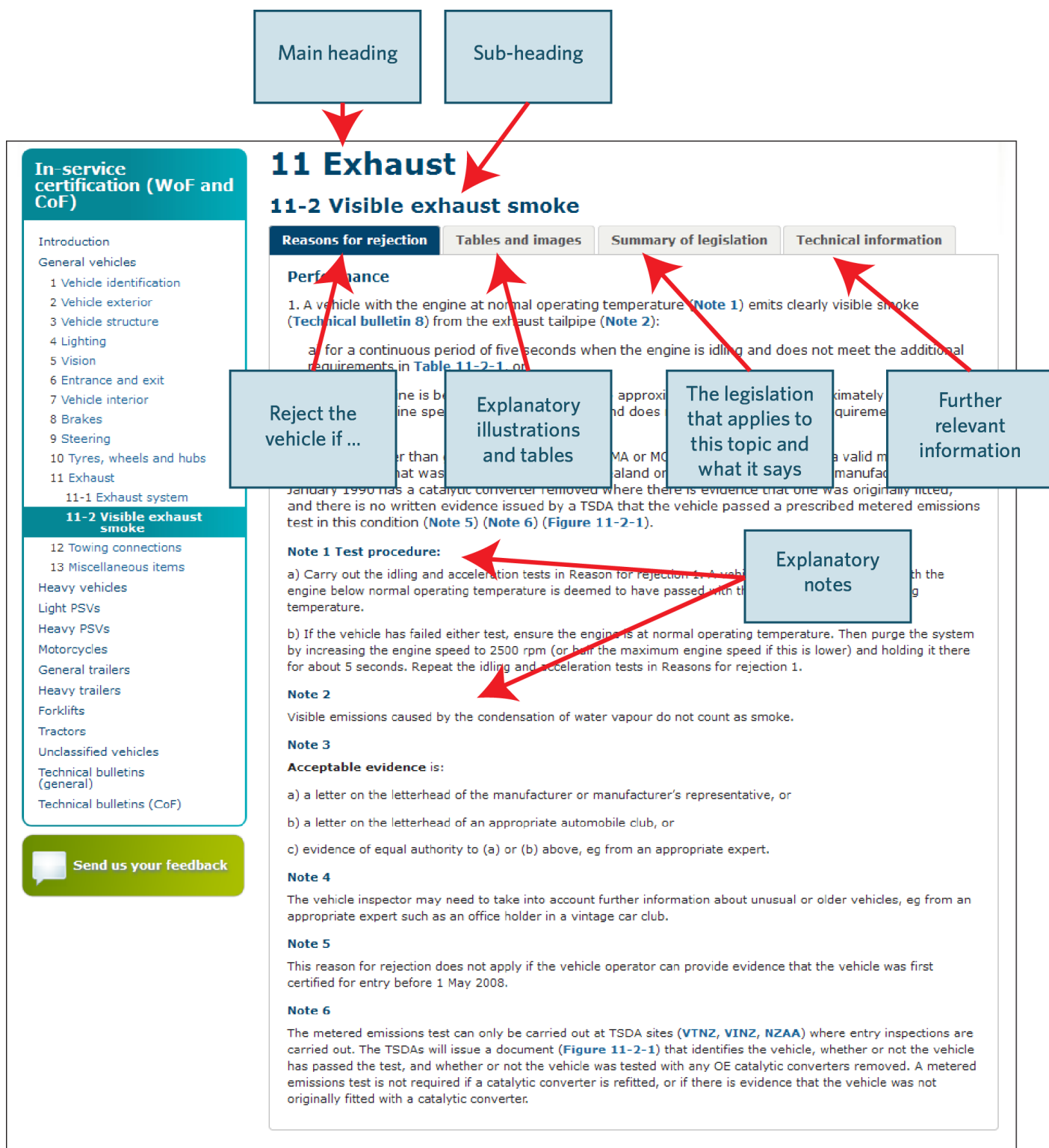
The **Reasons for rejection** column specifies the vehicle defects that must result in the vehicle being rejected for a WoF or CoF. The condition and performance reasons for rejection apply to mandatory, permitted, and modified equipment, unless otherwise stated. NZTA has imposed these requirements in accordance with Land Transport Rule: Vehicle Standards Compliance 2002, section 2.3(1). This column also contains notes for additional guidance, as referred to in the two columns.

The **Summary of legislation** column summarises the legislation that is relevant to in-service inspection and certification.

Many vehicle components have an additional one or two columns:

- **Tables and images** contain tables and illustrations referred to in the Reasons for rejection and Summary of legislation columns.
- **Technical information** contains additional relevant information that is not part of the manual, but which may be useful information, such as NZTA pamphlets.

The figure below illustrates the typical layout of pages in the manual. Greater detail is given in the [Vehicle inspection portal user guide](#) and the [Vehicle inspection portal quick reference guide](#).



3 Inspection and certification process

Overview – steps in the inspection and certification process

In order to inspect and certify a vehicle for a WoF or CoF the vehicle inspector and inspecting organisation must take the following steps:

1. Know the vehicle inspector's and inspecting organisation's responsibilities.

The legal responsibilities are listed in [section 3.1](#). The vehicle inspector and inspecting organisation must read these and understand them.

2. Identify the vehicle class.

A table of vehicle classes is given in [section 3.2](#).

3. Identify whether the vehicle requires a WoF or CoF inspection.

[Section 3.3](#) shows a list of vehicles that require a WoF, a list of vehicles that require a CoF and a list of vehicles that do not require a WoF or CoF.

4. Establish whether the vehicle may be inspected for the purposes of issuing a WoF or a CoF.

The vehicle must meet a number of criteria before inspection. These are listed in [section 3.4](#).

5. Establish whether the vehicle complies.

[Section 3.5](#) explains how to use this manual in order to determine the vehicle's compliance with the requirements.

6. Complete the inspection documentation (checksheet).

[Section 3.6](#) explains the requirements for handling and completing checksheets.

7. Record the inspection outcome ('determination').

[Section 3.7](#) explains how to record WoF and CoF inspection results into the NZTA computer system (WoF Online and LATIS).

8. Issue the WoF label, CoF label, or temporary permit.

[Section 3.8](#) explains the requirements when issuing the WoF label, CoF label, or temporary permit and attaching it to the vehicle.

9. Collect fees.

[Section 3.9](#) lists the requirements for the inspecting organisation when charging and collecting fees.

3.10 Operating a vehicle without a current WoF or CoF.

[Section 3.10](#) explains the vehicle operator's responsibilities when operating a vehicle without a current WoF or CoF.

3-1 Duties and responsibilities

3.1.1 General duties and responsibilities

Applicable legislation: [Vehicle Standards Compliance Rule 2002](#) (the Rule).

1. Vehicle inspectors and inspecting organisations [Definitions in the Rule]

Vehicle inspector means an individual appointed by the NZTA under 2.2(1) of the Rule to carry out inspection and certification activities in accordance with requirements and conditions imposed by the NZTA.

Inspecting organisation means a person or organisation appointed by the NZTA under 2.2(1) who is responsible for inspection and certification outcomes.

2. Inspection and certification activities [section 2.1(1) of the Rule]

Only vehicle inspectors and inspecting organisations appointed by NZTA may carry out inspection and certification activities as specified in the [Land Transport Rule: Vehicle Standards Compliance 2002](#).

3. Primary duty [section 2.1(2) of the Rule]

Vehicle inspectors and inspecting organisations must carry out inspection and certification activities competently and diligently and in accordance with the [Land Transport Rule: Vehicle Standards Compliance 2002](#) and with this manual.

4. Inspection and certification activities that can be carried out [section 2.2(2) of the Rule]

Vehicle inspectors and inspecting organisations may carry out only those inspection and certification activities for which NZTA has appointed them.

5. Requirements, conditions, and period of appointment [section 2.3(1) of the Rule]

The NZTA may specify the period of appointment for a vehicle inspector and inspecting organisation and may impose requirements and conditions as to the performance of the inspection and certification activities, including the performance of those activities at individual sites. This manual contains the requirements and conditions imposed by the NZTA.

6. Driver licence

Vehicle inspectors must hold a current driver licence for the vehicles that they are inspecting.

7. Fit and proper person [section 2.3(3) of the Rule]

It is a condition of an appointment that a vehicle inspector or inspecting organisation continues to be fit and proper.

8. Document retention, Advise incorrect certification, Advise vehicle defects [section 2.3(4) of the Rule]

It is a condition of an appointment that a vehicle inspector or inspecting organisation:

- a) keeps all records and associated documents relating to vehicle inspections and certifications (including failed inspections) for a minimum period of 12 months (LT400s and other HVS/engineer certificates indefinitely), and
- b) advises the NZTA as soon as practicable if there is a reason to believe that the inspection and certification of a vehicle has been carried out incorrectly, and
- c) advises the NZTA as soon as practicable of a defect in a manufacturer's production run or quality control process of which the inspector or organisation has become aware that may affect the safety performance of a vehicle that has been inspected and certified.

9. Delegation [section 2.4(1) of the Rule]

A vehicle inspector or inspecting organisation may not delegate any function or power to carry out inspection and certification activities for which they were appointed, except under conditions specified by NZTA in writing.

3.1.2 Inspection and certification

1. Inspection and certification of vehicles for operation in service [section 7.3(3) of the Rule]

The inspection and certification of a vehicle for operation in service must be carried out in accordance with requirements and conditions imposed by NZTA.

2. Determining compliance of a vehicle [section 7.4(1) of the Rule]

A vehicle is certified for in-service based on the condition of the vehicle at the time of the inspection.

A vehicle may be certified for operation in-service only if a vehicle inspector or inspecting organisation has identified the vehicle and has determined, on reasonable grounds, that the vehicle meets all of the following:

- a) it is safe to be operated under normal conditions of use, and
- b) it has been designed and constructed using components and materials that are fit for their purpose, and is within safe tolerance of its state when manufactured or modified, and
- c) it complies with the applicable requirements (all of which are contained within this manual), and
- d) it has undergone specialist inspection and certification as required by paragraphs 4, 5, and 6 below and the specific aspects of the vehicle have been certified.

3. Information to take into account when determining compliance of a vehicle [section 7.4(3) of the Rule]

A vehicle inspector or inspecting organisation, in making a determination, must take into account:

- a) information obtained from inspecting the vehicle and associated documents, and
- b) additional relevant information, if any, about the vehicle issued by a manufacturer, modifier, repairer, or other relevant person of which the inspector or organisation is aware.

4. Low volume vehicle specialist certification [section 7.5(1)(a) of the Rule]

Low volume vehicle (LVV) specialist inspection and certification is required prior to inspection and certification for in-service, if the vehicle is a light vehicle that, since it was last certified for operation in-service or last certified as a low volume vehicle, has been modified so as to affect its compliance with an applicable requirement ([Note 1](#)).

5. Heavy vehicle specialist certification [section 7.5(1)(b) of the Rule]

Heavy vehicle specialist (HVS) inspection and certification is required prior to inspection and certification for in service, if the vehicle is a heavy vehicle that, since it was last certified for operation in service or last certified for modification, has been modified so as to affect its compliance with an applicable requirement, including modifications to its chassis, brakes, log bolster attachments, towing connections or load anchorages.

6. Other specialist certification [section 7.5(1)(c) of the Rule]

Other specialist inspection and certification is required in accordance with an applicable requirement or as required by NZTA, all of which are contained within this manual.

7. Modified vehicles not requiring specialist certification [section 7.5(3) of the Rule]

Low volume vehicle (LVV) specialist inspection and certification or heavy vehicle specialist (HVS) inspection and certification is not required if a modified vehicle is:

- a) excluded in this manual from the requirement for LVV or HVS certification and meets the inspection requirements in this manual, including those for equipment, condition, and performance, or
- b) modified for the purposes of law enforcement or the provision of emergency services.

Note that this only covers the modifications for the specialised functions of the vehicle. Other modifications that affect compliance are subject to certification.

Note 1

1. Modifications not requiring LVV certification

All modifications must meet WoF or CoF requirements. However, not every modification requires LVV certification.

A modified light vehicle may or may not be required to undergo LVV certification, depending on the level of modification. Typical modifications that are made to vehicle components and systems are listed in tables, and identify:

- a) those modifications that do not require LVV certification unless they exceed a certain level. Where modifications exceed those listed in the table, a WoF or CoF provider must not issue a WoF or CoF for the vehicle until LVV certification has been issued
- b) those lower levels of modification that are never required to be LVV certified.

For most modifications, the introduction date for the requirement for LVV certification is 1 March 1999, which was the date that the Compliance Rule came into force. In addition, LVV certification was required for some items under the Transport (Vehicle Standards) Regulations 1990. In particular LVV certification is required for:

- a) a modification after 1 January 1992 that affected compliance with a brake standard on a class MA vehicle, or after 1 January 1993 on a vehicle of class MB, MC or NA.
- b) a modification after 1 January 1992 that affected a seatbelt anchorage standard on a passenger vehicle with up to nine seats, that is class MA, MB or MC.
- c) a modification after 1 January 1992 that affected compliance with a standard for door locks and hinges, steering column impact or interior impact on a class MA vehicle.

If a modification was carried out prior to LVV certification coming into force, a valid modification declaration must be produced. The vehicle inspector may also accept other authentic evidence to verify that the modifications were carried out prior to LVV certification coming into force. Examples are an invoice from the company that carried out the modification, insurance policy cover notes and motoring magazine features provided they record the vehicle's registration number or VIN, the modification details and a date or other information verifying when the modifications were carried out. Documents such as statements from previous owners are not acceptable.

2. Confirming LVV certification

Modifications can be confirmed as certified under the LVV Code by the following means:

- a) LVV certification plate riveted and glued to the vehicle in any one of the following positions:
 - i. within the engine compartment in a clearly visible position, or
 - ii. where there is insufficient available space within the engine compartment to enable the LVV certification plate to be fitted and remain clearly visible, in any one of the following locations:
 - (1) within the passenger compartment on the vehicle's A-pillar or B-pillar, or
 - (2) in the case of a sedan, on the rear bulkhead or other prominent position within the boot area, or
 - (3) in the case of a van with an engine cover in the passenger compartment, on a non-removable panel steel part of the engine cover or seat frame, or
 - (4) in the case of a vehicle with a raised floor, on the vertical area of a step behind a door, or
 - (5) in the case of a hatchback or station wagon, in the spare wheel well which is accessible without the use of tools.
- b) LVV authority card, linking listed vehicle modifications to the special requirements of one person.

All enquiries about the LVV process, LVV certifier locations and the issuing of LVV certification plates should be directed to the NZTA (0800 587 287).

3. Information on LVV plate differs from the vehicle

Where the information on the LVV plate (other than the vehicle's registration plate) differs from the vehicle, for example where a vehicle has been further modified or returned to original, the vehicle must be failed and sent to an appropriate LVV certifier:

- a) where the vehicle has been further modified or partially returned to the original condition, the LVV certifier will inspect and certify the vehicle to ensure the correct details are on the new LVV plate, or
- b) where the vehicle has been fully returned to original, the LVV certifier will confirm that this has been done and remove the LVV plate from the vehicle (only an LVV certifier or delegated NZTA staff can remove an LVV plate).

3.1.3 Revocation of a WoF, CoF, temporary permit, CoL, or record of determination

1. Revocation of evidence of vehicle inspection and conditional permit [section 11.3(1) of the Rule]

The NZTA may revoke, by giving written notice to a vehicle's operator, a WoF, CoF, conditional permit or a record of determination issued under the [Land Transport Rule: Vehicle Standards Compliance 2002](#) if the NZTA believes, on reasonable grounds, that:

- a) the vehicle does not comply with applicable requirements, or
- b) the WoF, CoF, permit or record of determination was issued on the basis of an incorrect determination.

2. Revocation of certificate of loading [section 11.3(2) of the Rule]

The NZTA may revoke, by giving written notice to a vehicle's operator, a certificate of loading issued for that vehicle under the Land Transport Rule: Vehicle Standards Compliance 2002 if the NZTA believes, on reasonable grounds, that the certificate is not valid.

3. Re-inspection and re-certification of a vehicle [section 11.4 of the Rule]

If a WoF, CoF, conditional permit, record of determination or certificate of loading has been revoked, the NZTA may require in writing that a vehicle inspector or inspecting organisation:

- a) repeat the inspection and certification of the vehicle, and
- b) issue, if appropriate, a WoF, CoF, permit, record of determination or other evidence, and
- c) meet the costs of the activities undertaken under (a) and (b).

3.1.4 Vehicles ordered off the road (green and pink stickers) [[Land Transport Act 1998](#): section 115 and section 96]

A green sticker, which directs that the vehicle is not to be driven on a road, may be issued to the driver or owner of a vehicle by an enforcement officer who believes on reasonable grounds that a vehicle does not comply with the provisions of the regulations or rules, or that a vehicle was operated with unnecessary exhibition of speed or acceleration or sustained loss of traction. At the discretion of the enforcement officer, the green sticker notice will remain in force until:

- a) the vehicle has been inspected and a new WoF or CoF has been issued, or
- b) the enforcement officer has been notified in writing that the vehicle is now compliant (this type of green sticker is often referred to as 'discretionary green sticker' or 'G2 sticker'). A new WoF or CoF is not required, however, instead of notifying the enforcement officer in writing, the vehicle driver/owner may choose to obtain a new WoF or CoF, which will automatically remove the flag from the NZ Police system.

A pink sticker, which directs that the vehicle is not to be driven on a road, may be issued to the driver or owner of a vehicle by an enforcement officer who believes on reasonable grounds that a vehicle is not in a safe condition to be driven on a road. A pink sticker will remain in force until the vehicle has been inspected and a new WoF or CoF has been issued.

Where a light vehicle has been ordered off the road by an enforcement officer for non-compliant exhaust noise, the vehicle must pass an LVVTA objective noise test before the vehicle may be issued with a new WoF or CoF – even if the vehicle is presented with a quieter or original exhaust system or with a previous LVV noise certification. Due to this requirement, for each green- or pink-stickered light vehicle presented for WoF or CoF and before issuing a new WoF or CoF, the vehicle inspector must check (usually by sighting the ordering-off-the-road notice or Landata):

- a) whether the vehicle was ordered off the road for non-compliant exhaust noise, and
- b) if (a) applies, that a valid LVVTA objective exhaust noise emissions test certificate was issued for the vehicle after the date the ordering off the road notice was issued.

A vehicle that has been green or pink stickered can only be inspected by a vehicle inspector who is employed with an inspecting organisation that does not engage in the repair of vehicles in the course of their business (other than replacing bulbs or wiper blades). This generally includes transport service delivery (TSD) agents ([VTNZ](#), [VINZ](#), [NZAA](#)) and some independent testing stations. A new WoF or CoF must be issued by the inspecting organisation before the vehicle is permitted to be used on the road. Once the new WoF or CoF has been issued, the vehicle inspector removes the green or pink sticker. The flag is automatically removed from the NZ Police system.

3.1.5 Performance review

1. The NZTA may monitor and review performance [section 3.1(1) of the Rule]

The NZTA may monitor and review the performance of a vehicle inspector or inspecting organisation in complying with the requirements and conditions imposed by the NZTA, including the performance of inspection and certification activities at individual sites.

The requirements and conditions are contained in this manual and in the NZTA's Performance review system manual.

2. Providing information to the NZTA [section 3.1(2) & (3) of the Rule]

In monitoring and reviewing performance, the NZTA may require a vehicle inspector or inspecting organisation to undergo such monitoring and review and provide such information as the NZTA reasonably considers relevant. A vehicle inspector or inspecting organisation must comply with a requirement from the NZTA.

3. Costs of monitoring and review [section 3.1(4) of the Rule]

A vehicle inspector or inspecting organisation must bear the costs of the monitoring and reviewing of their performance in accordance with any prescribed fee.

3.1.6 Investigations

1. Investigations [section 3.2(1) of the Rule]

If the NZTA has reason to believe that a vehicle inspector or inspecting organisation has failed to comply with any of the conditions of their appointment, or has failed to comply with the [Land Transport Rule: Vehicle Standards Compliance 2002](#) (the Rule) or with this manual, the NZTA may require the inspector or organisation to undergo such an investigation and to provide such information as the NZTA reasonably considers appropriate.

2. Notification of action (remedial action, suspension or revocation, but not immediate suspension or imposition of conditions) [section 3.2(3) of the Rule]

Following an investigation and before carrying out action, the NZTA must notify the vehicle inspector or inspecting organisation in writing of:

- a) the action that is being considered, and
- b) the reasons for the action that is being considered, and
- c) the date by which submissions may be made to the NZTA in respect of the action that is being considered, which must be at least 21 days after the notice is given, and
- d) where appropriate, the date on which the action that is being considered will take effect, which, unless the NZTA determines otherwise, must be at least 28 days after the notice is given.

3. Responding to a notification of action [section 3.2(5) of the Rule]

If a vehicle inspector or inspecting organisation is notified as above, they must ensure that all information that they wish the NZTA to consider in relation to the action that is being considered is received by the NZTA within the period specified in the notice or within any further period that the NZTA may allow.

4. The NZTA must consider submissions [section 3.2(6) of the Rule]

The NZTA must consider the submissions made and information supplied, and must:

- a) decide whether or not to take the action that is being considered, and
- b) as soon as is practicable, provide written notification to the vehicle inspector or inspecting organisation of:
 - i. the NZTA's decision, and
 - ii. if appropriate, the date on which the action is to take effect, and
 - iii. if appropriate, the right of appeal under section 106 of the [Land Transport Act 1998](#).

5. Remedial action, suspension, revocation [section 3.2(2) of the Rule]

If, following an investigation, the NZTA is satisfied that the vehicle inspector or inspecting organisation has failed to comply with any of the conditions of their appointment, or failed to comply with the Rule or this manual, NZTA may do one or more of the following:

- a) require that remedial action, such as training, be undertaken by the inspector or organisation
- b) suspend the whole or any part of the appointment of the inspector or organisation for a specified period or until specified conditions are met
- c) revoke the whole or any part of the appointment of the inspector or organisation.

6. Immediate suspension or imposing of conditions [section 3.3(1) of the Rule]

If the NZTA has reason to believe that a vehicle inspector or inspecting organisation has failed to comply with a condition of their appointment or with the Rule or this manual, and that this presents a significant risk to land transport safety, the NZTA may suspend, with immediate effect, the whole or any part of the appointment, or impose any conditions on the appointment.

7. Notification of immediate suspension or imposing of conditions [section 3.3(2) of the Rule]

Where the NZTA suspends the whole or any part of an appointment, or imposes conditions on the appointment, the NZTA must notify the vehicle inspector or inspecting organisation in writing of:

- a) the grounds for the suspension or imposing of conditions
- b) the fact that the inspector or organisation may make submissions to the NZTA
- c) the right of appeal under section 106 of the [Land Transport Act 1998](#).

8. The NZTA must consider submissions following immediate suspension or imposition of conditions [section 3.3(3) of the Rule]

The NZTA must, as soon as is practicable, consider any submission made and notify the inspector or inspecting organisation in writing of the result of any such consideration.

9. Duration of immediate suspension or imposing of conditions [section 3.3(5) of the Rule]

A suspension or condition imposed remains in force until the NZTA has determined the action to be taken and that action has been taken.

10. Withdrawal of immediate suspension or imposing of conditions [section 3.3(4) of the Rule]

The NZTA may at any time withdraw a suspension or condition imposed.

11. Right of appeal [section 3.3(6) of the Rule]

A vehicle inspector or inspecting organisation may appeal under section 106 of the [Land Transport Act 1998](#) against a decision by the NZTA to immediately suspend or impose conditions.

12. Costs of investigations [section 3.2(7) of the Rule]

The NZTA may require a vehicle inspector or inspecting organisation to bear the costs associated with an investigation or remedial action in accordance with any prescribed fee.

13. Obligation to comply [section 3.2(8) of the Rule]

A vehicle inspector or inspecting organisation must comply with a requirement of the NZTA in relation to paragraphs 1, 5, and 12.

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3-2 Identifying the vehicle class

The table of vehicle classes - **Table 3-2-1**, and the charts in **Figure 3-2-1** (four-wheeled vehicles), **Figure 3-2-2** (three-wheeled vehicles), **Figure 3-2-3** (two-wheeled vehicles) and **Figure 3-2-4** (trailers) identify the class of the vehicle that is to be inspected.

Confirm that the vehicle inspector and inspecting organisation have been appointed by the NZTA for the purpose of inspecting and certifying vehicles for a WoF or CoF specific to the class of vehicle that has been presented.

Table 3-2-1. Vehicle equipment standards classifications

Class	Description
AA (Pedal cycle)	A vehicle designed to be propelled through a mechanism solely by human power.
AB (Power-assisted pedal cycle)	A pedal cycle to which is attached one or more auxiliary propulsion motors having a combined maximum power output not exceeding 300 watts.
LA (Moped with two wheels)*	<p>A motor vehicle (other than a power-assisted pedal cycle) that:</p> <ul style="list-style-type: none"> • has two wheels; and • either: <ul style="list-style-type: none"> ◦ has an engine cylinder capacity not exceeding 50ml and a maximum speed not exceeding 50km/h; or ◦ has a power source other than a piston engine and a maximum speed not exceeding 50km/h.
LB (Moped with three wheels)	<p>A motor vehicle (other than a power-assisted pedal cycle) that:</p> <ul style="list-style-type: none"> • has three wheels; and • either: <ul style="list-style-type: none"> ◦ has an engine cylinder capacity not exceeding 50ml and a maximum speed not exceeding 50km/h; or ◦ has a power source other than a piston engine and a maximum speed not exceeding 50km/h. <p>An LB 1 motor vehicle has one wheel at the front and two wheels at the rear. An LB 2 motor vehicle has two wheels at the front and one wheel at the rear.</p>
LC (Motorcycle)	<p>A motor vehicle that:</p> <ul style="list-style-type: none"> • has two wheels; and • either: <ul style="list-style-type: none"> ◦ has an engine cylinder capacity exceeding 50ml; or ◦ has a maximum speed exceeding 50km/h.
LD (Motorcycle and side-car)	<p>A motor vehicle that:</p> <ul style="list-style-type: none"> • has three wheels asymmetrically arranged in relation to the longitudinal median axis; and • either: <ul style="list-style-type: none"> ◦ has an engine cylinder capacity exceeding 50ml; or ◦ has a maximum speed exceeding 50km/h.
Side-car	A car, box or other receptacle attached to the side of a motorcycle and supported by a wheel.
LE (Motor tri-cycle)	<p>A motor vehicle that:</p> <ul style="list-style-type: none"> • has three wheels symmetrically arranged in relation to the longitudinal median axis; and • has a gross vehicle mass not exceeding one tonne; and • either: <ul style="list-style-type: none"> ◦ has an engine cylinder capacity exceeding 50ml; or ◦ has a maximum speed exceeding 50km/h. <p>An LE 1 motor vehicle has one wheel at the front and two wheels at the rear. An LE 2 motor vehicle has two wheels at the front and one wheel at the rear.</p>
Passenger vehicle	<p>A motor vehicle that:</p> <ul style="list-style-type: none"> • is constructed primarily for the carriage of passengers; and • either: <ul style="list-style-type: none"> ◦ has at least four wheels; or ◦ has three wheels and a gross vehicle mass exceeding one tonne.

MA (Passenger car)	A passenger vehicle (other than a class MB or class MC vehicle) that has not more than nine seating positions (including the driver's seating position).
MB (Forward control passenger vehicle)	A passenger vehicle (other than a class MC vehicle): <ul style="list-style-type: none"> • that has not more than nine seating positions (including the driver's seating position); and • in which the centre of the steering wheel is in the forward quarter of the vehicle's total length.
MC (Off-road passenger vehicle)	A passenger vehicle, designed with special features for off-road operation, that has not more than nine seating positions (including the driver's seating position), and that: <ul style="list-style-type: none"> • has four-wheel drive; and • has at least four of the following characteristics when the vehicle is unladen on a level surface and the front wheels are parallel to the vehicle's longitudinal centre-line and the tyres are inflated to the vehicle manufacturer's recommended pressure: <ul style="list-style-type: none"> ◦ an approach angle of not less than 28 degrees; ◦ a breakover angle of not less than 14 degrees; ◦ a departure angle of not less than 20 degrees; ◦ a running clearance of not less than 200mm; ◦ a front-axle clearance, rear-axle clearance or suspension clearance of not less than 175mm.
Omnibus	A passenger vehicle that has more than nine seating positions (including the driver's seating position). An omnibus comprising two or more non-separable but articulated units shall be considered as a single vehicle.
MD (Light omnibus)	An omnibus that has a gross vehicle mass not exceeding 5 tonnes.
MD 1	An omnibus that has a gross vehicle mass not exceeding 3.5 tonnes and not more than 12 seats.
MD 2	An omnibus that has a gross vehicle mass not exceeding 3.5 tonnes and more than 12 seats.
MD 3	An omnibus that has a gross vehicle mass exceeding 3.5 tonnes but not exceeding 4.5 tonnes.
MD 4	An omnibus that has a gross vehicle mass exceeding 4.5 tonnes but not exceeding 5 tonnes.
ME (Heavy omnibus)	An omnibus that has a gross vehicle mass exceeding 5 tonnes.
Goods vehicle	<p>A motor vehicle that:</p> <ul style="list-style-type: none"> • is constructed primarily for the carriage of goods; and • either: <ul style="list-style-type: none"> ◦ has at least four wheels; or ◦ has three wheels and a gross vehicle mass exceeding one tonne. <p>For the purpose of this description:</p> <ul style="list-style-type: none"> • a vehicle that is constructed for both the carriage of goods and passengers shall be considered primarily for the carriage of goods if the number of seating positions multiplied by 68kg is less than 50 percent of the difference between the gross vehicle mass and the unladen mass • the equipment and installations carried on special purpose vehicles not designed for the carriage of passengers shall be considered to be goods • a goods vehicle that has two or more non-separable but articulated units shall be considered to be a single vehicle.
NA (Light	A goods vehicle that has a gross vehicle mass not exceeding 3.5 tonnes.

goods vehicle)	
NB (Medium goods vehicle)	A goods vehicle that has a gross vehicle mass exceeding 3.5 tonnes but not exceeding 12 tonnes.
NC (Heavy goods vehicle)	A goods vehicle that has a gross vehicle mass exceeding 12 tonnes.
Trailer	A vehicle without motive power that is constructed for the purpose of being drawn behind a motor vehicle.
TA (Very light trailer)	A single-axled trailer that has a gross vehicle mass not exceeding 0.75 tonnes.
TB (Light trailer)	A trailer (other than a class TA trailer) that has a gross vehicle mass not exceeding 3.5 tonnes.
TC (Medium trailer)	A trailer that has a gross vehicle mass exceeding 3.5 tonnes but not exceeding 10 tonnes.
TD (Heavy trailer)	A trailer that has a gross vehicle mass exceeding 10 tonnes.

Figure 3-2-1. Vehicle class logic chart – four-wheeled vehicles

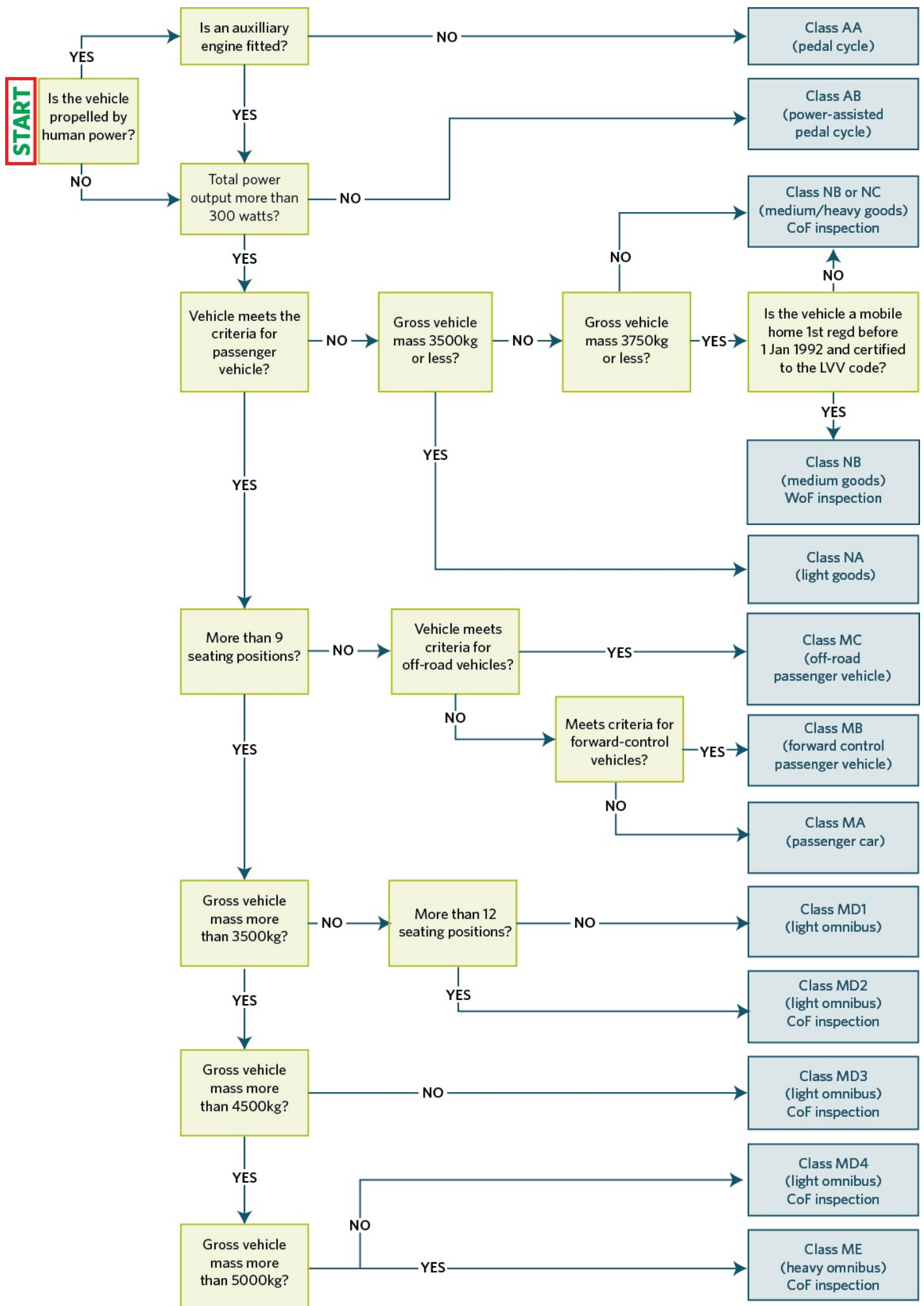
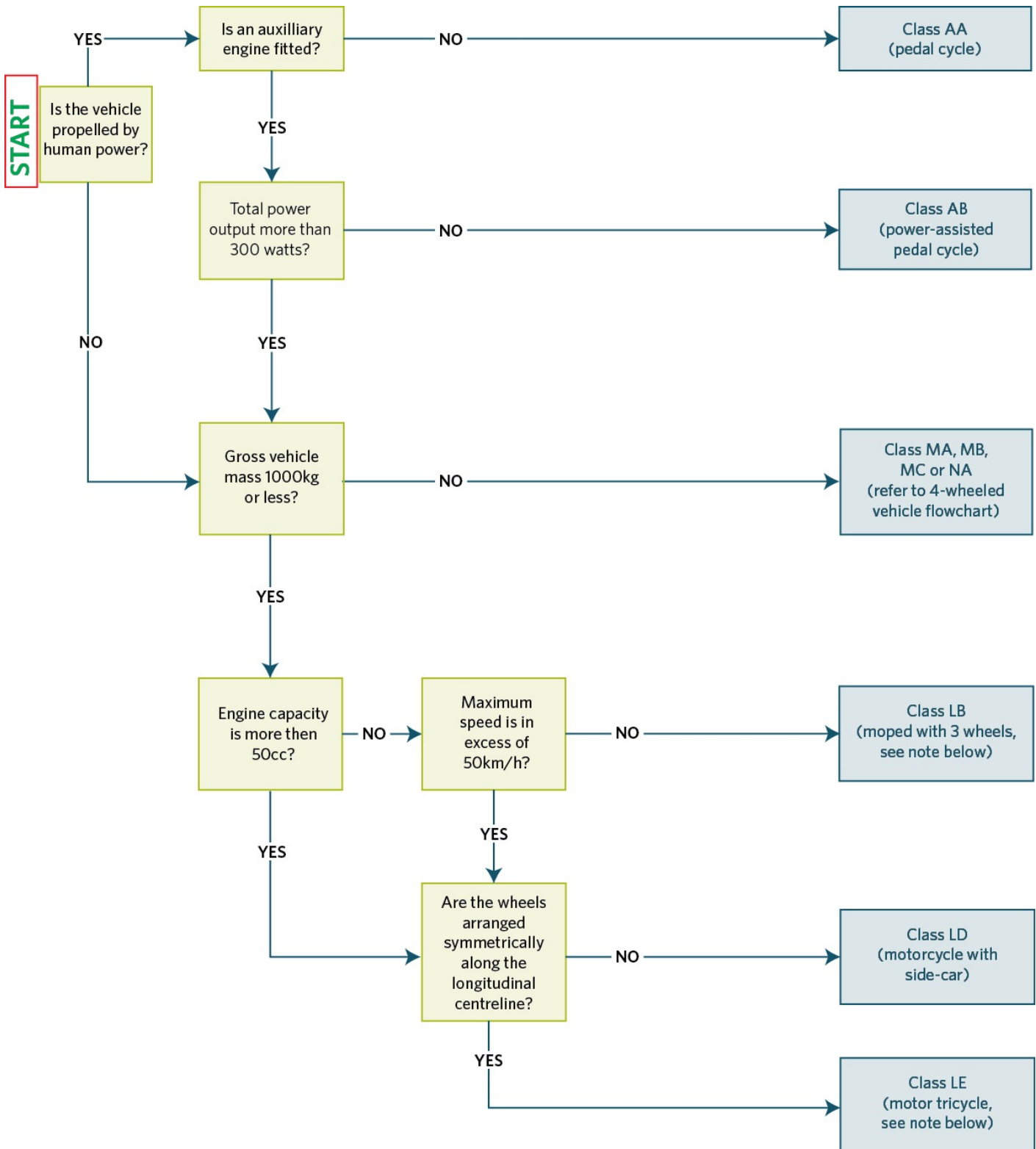


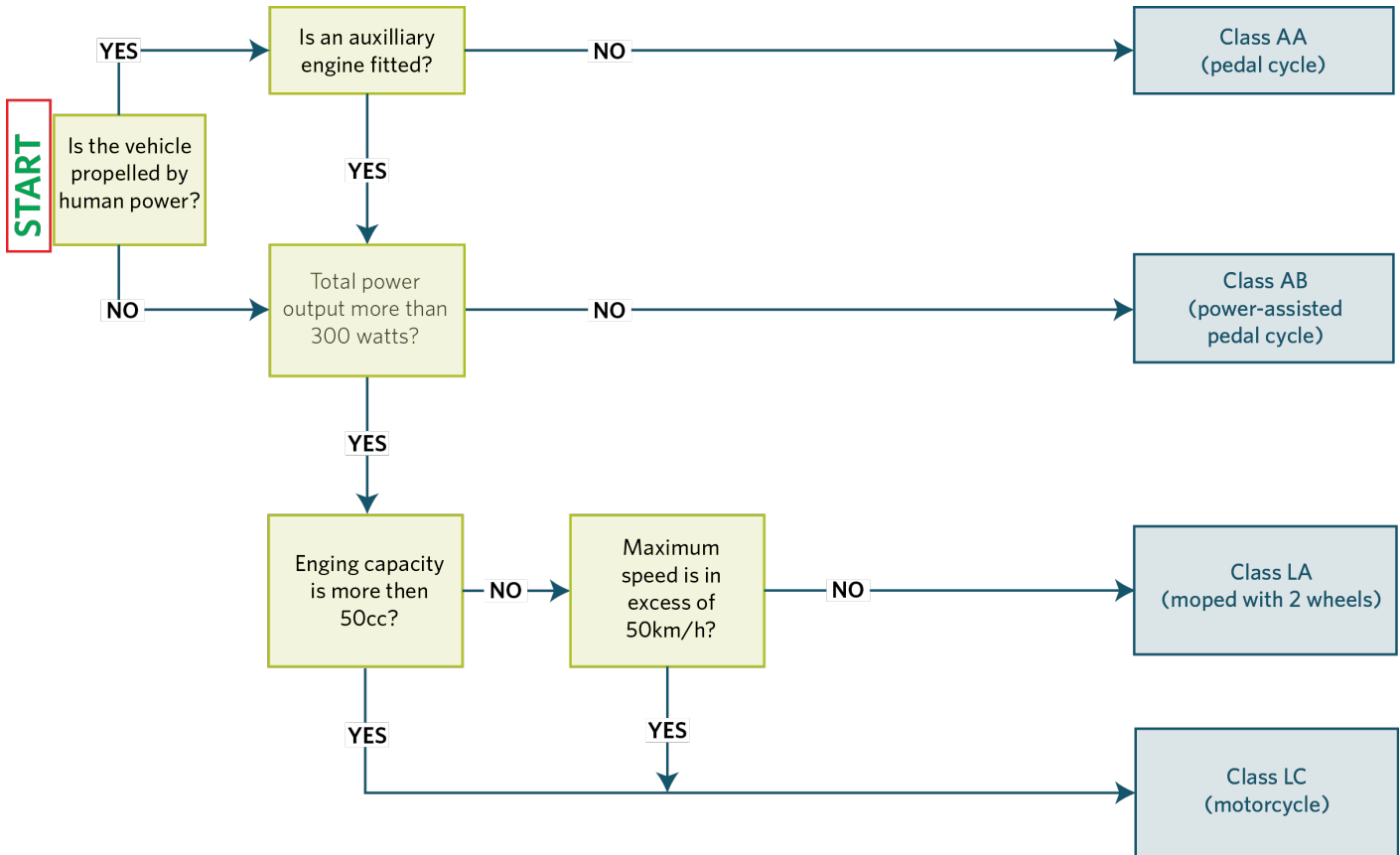
Figure 3-2-2. Vehicle class logic chart – three-wheeled vehicles



Note for classes LB and LE:

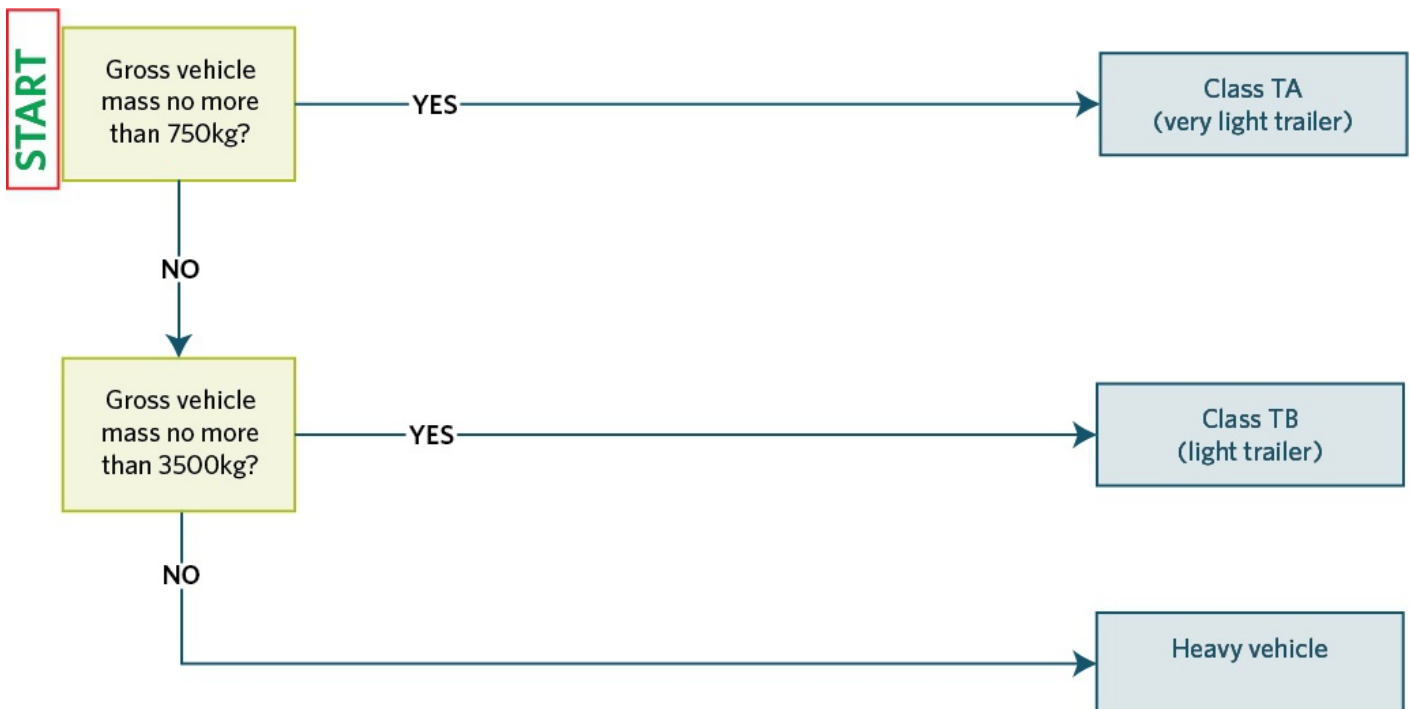
- Where the vehicle has one wheel at the front and two at the rear, the class has the suffix '1', ie, LB1 or LE1.
- Where the vehicle has two wheels at the front and one at the rear, the class has the suffix '2', ie, LB2 or LE2.

Figure 3-2-3. Vehicle class logic chart – two-wheeled vehicles



- [Download Figure 2-2-3 Vehicle class logic chart – two-wheeled vehicles](#) (PDF | 336KB)

3-2-4. Vehicle class logic chart – trailers



- [Download 3-2-4. Vehicle class logic chart – trailers](#) (PDF | 309KB)

3-3 Establishing whether the vehicle requires a WoF or CoF

The lists below show the type of inspection and certification (WoF or CoF) that is required for the different types of vehicles.

3.3.1 Certificate of Fitness (CoF)

A CoF is required for the following vehicles:

- Heavy vehicles, other than those listed under WoF below.
- Passenger service vehicles (including MD2 vehicles), other than those listed under WoF below.
- Rental service vehicles (except light rental trailers – these only require a WoF).
- Vehicle recovery service vehicles.

3.3.2 Warrant of Fitness (WoF)

A WoF is required for the following vehicles:

1. Vehicles that are not listed under certificate of fitness (section 3.3.1) or that are not listed as a vehicle not requiring a WoF or CoF (section 3.3.3).
2. Tractors (other than [agricultural tractors](#)), or machines used solely in non-agricultural, land management or roading operations, whether for traction or otherwise, that are operated at a speed exceeding 30km/h.
3. Class MA, MB or MC vehicles that, in the carriage of passengers for hire or reward:
 - a) are used solely for transporting not more than seven schoolchildren, and
 - b) do not exceed the designed adult passenger capacity of the vehicle by more than two schoolchildren.
4. Vehicles that are lawfully affixed with and operated under the authority of trade plates.
5. Vehicles used by the New Zealand Defence Force that are being used to convey persons who would otherwise use public transport during a period in which any public transport in New Zealand is suspended.
6. Motor caravans that:
 - a) have an original manufacturer's rating of 3750kg or less, and
 - b) were registered in New Zealand **as motor caravans** before 1 January 1992.
7. Vehicles that are used on a public highway only in connection with the inspection, servicing or repair of the vehicle or for the purpose of allowing any person to sit a practical driving test in that vehicle.
8. Vehicles used on roads only in road construction zones in accordance with notices declaring those zones.
9. Vehicles that are used on a road only when crossing or proceeding along a section of the road where the vehicles have been authorised to operate by an authorisation of a road-controlling authority that requires:
 - a) a written agreement by the vehicle's operator or the person for whom the vehicle is being operated, to construct, reconstruct, maintain or restore to the satisfaction of the road-controlling authority all or part of the road used by the vehicle, and
 - b) the erection and maintenance of warning devices, signs or control devices as required by the road-controlling authority and the NZTA, and
 - c) where the use of the road does not consist solely of the direct crossing of the road, the prior approval of the NZTA.
10. Light rental trailers.
11. Motor vehicles designed exclusively or principally as part of the armament of the New Zealand Defence Force.
12. The vehicles listed in the table below require a WoF only as far as is practicable for their design or type:

a) vehicles propelled and supported solely by self-laying tracks
b) motor vehicles exclusively designed and used on a road for driving, carrying or propelling any of the following, which must be permanently attached to the vehicle: <ul style="list-style-type: none"> i. aerodrome runway sweepers ii. electrical substations iii. filters for transformer oil iv. log haulers that are stationary when hauling logs v. aeroengine test benches
c) tractors owned by a local authority and used exclusively for the construction, maintenance or mowing of stopbanks and the banks of rivers, streams, drains, canals or other watercourses
d) mobile or movable huts, galleys or similar vehicles that are used on a road solely in connection with the construction or maintenance of roads
e) tractors used exclusively for shunting railway rolling stock
f) forklifts
g) aerodrome crash fire tenders that are used on a road only in emergencies
h) trailers while being drawn by a vehicle as stated in (b) to (g) above
i) motor vehicles used exclusively in connection with the embarking and disembarking of ships' passengers or for loading and unloading ships' mails, cargo and passengers' baggage, and used on a public highway only when proceeding unladen from one wharf to another wharf or from their usual place of storage to a wharf and returning to that place of storage
j) cable jinkers
k) front-end loaders
l) log skidders
m) tractor cranes
n) rough-terrain cranes
o) mobile crushing and screening plant machines which are mounted on trailers
p) motor graders
q) motor scrapers
r) trailer scrapers
s) plant for servicing oil-filled cables
t) post debarkers
u) saw bench apparatus

v) forestry chippers
w) tree feller bunchers
x) trench diggers and excavators
y) vehicles that are always used unladen on the road and that are designed exclusively for carrying earth or other bulk materials
z) mobile concrete mixers that are mounted on tractors
aa) a vehicle that is similar in design, construction or purpose to a vehicle listed above that cannot be categorised by vehicle class.
bb) an agricultural motor vehicle that is operated at a speed exceeding 40km/h.
cc) all-terrain vehicles (other than those listed in 3.3.3 Vehicles that do not require a WoF or CoF).

3.3.3 Vehicles that do not require a WoF or CoF

The vehicles listed in the table below do not require a WoF or CoF:

a) a vehicle of class AB, LA or LB
b) an armoured vehicle used exclusively as equipment of the New Zealand Defence Force
c) a traction engine
d) a mechanically propelled roller
e) a crane fitted with self-laying tracks
f) an excavator fitted with self-laying tracks
g) a tractor (other than an agricultural tractor), or a machine used solely in non-agricultural, land management or roading operations, whether for traction or otherwise, that is not operated at a speed exceeding 30km/h, together with any trailer operated only while being towed by that tractor or machine
h) a trailer designed exclusively for agricultural purposes and not operated except when being: <ul style="list-style-type: none"> i. delivered from a manufacturer to the manufacturer's agent, or ii. taken to or from an agricultural show for display or demonstration purposes, or iii. delivered from a manufacturer or a manufacturer's agent to a farm or an agricultural contractor
i) a vehicle normally propelled by mechanical power while it is being temporarily towed without the use of its own power
j) an all-terrain vehicle used: <ul style="list-style-type: none"> i. in moving from the operator's place of residence to a road that is not a public highway, when the distance travelled is less than 3km, or ii. in connection with its inspection, servicing or repair, or iii. as an agricultural vehicle.
k) an agricultural motor vehicle that is operated at a speed not exceeding 40km/h.

3-4 Establishing whether the vehicle may be inspected for a WoF or CoF

Before a vehicle can be inspected for the purpose of issuing a WoF or CoF, it must meet one of the following requirements:

- a) the number on the registration plate(s) is the same as that stated on the licence label, and the label correctly describes the vehicle and is current, or
- b) the number on the registration plate(s) is the same as that stated on the licence label, and the label correctly describes the vehicle and has not been expired for more than 12 months or de-registered, or
- c) it has been certified for entry or re-entry into service within the previous two years, but has not been registered, or
- d) The number on the registration plate(s) is the same as that stated on the licence label, and the label correctly describes the vehicle and has expired more than 12 months ago, but the vehicle has a current licence exemption ('restoration register'), or
- e) it is a vehicle that is listed in the table below, which does not require certification for entry or re-entry.

a) class TA or TB trailers
b) tractors (other than agricultural tractors) or machines, including trailers, for use solely in non-agricultural, land management or roading operations, whether for traction or otherwise that are operated at a speed exceeding 30km/h
c) pedestrian-controlled goods service vehicles
d) vehicles used on roads only in road construction zones in accordance with notices declaring those zones
<p>e) vehicles that are used on a road only when crossing or proceeding along a section of the road where the vehicles have been authorised to operate by an authorisation of a road-controlling authority that requires:</p> <ul style="list-style-type: none"> i. a written agreement by the vehicle's operator or the person for whom the vehicle is being operated, to construct, reconstruct, maintain or restore to the satisfaction of the road-controlling authority all or part of the road used by the vehicle, and ii. the erection and maintenance of warning devices, signs or control devices as required by the road-controlling authority and the NZTA, and iii. where the use of the road does not consist solely of the direct crossing of the road, the prior approval of the NZTA
f) all-terrain vehicles
<p>g) motor vehicles exclusively designed and used on a road for driving, carrying or propelling any of the following, which must be permanently attached to the vehicle:</p> <ul style="list-style-type: none"> i. aerodrome runway sweepers ii. electrical substations iii. filters for transformer oil iv. log haulers that are stationary when hauling logs v. aeroengine test benches
h) tractors owned by a local authority and used exclusively for the construction, maintenance or mowing of stopbanks and the banks of rivers, streams, drains, canals or other watercourses
i) mobile or movable huts, galleys or similar vehicles that are used on a road solely in connection with the construction or maintenance of roads
j) tractors used exclusively for shunting railway rolling stock
k) forklifts
l) aerodrome crash fire tenders that are used on a road only in emergencies
m) trailers while being drawn by a vehicle as stated in (b) to (l) above
n) motor vehicles used exclusively in connection with the embarking and disembarking of ships' passengers or for loading and unloading ships' mails, cargo and passengers' baggage, and used on a public highway only when proceeding unladen from one wharf to another wharf or from their usual place of storage to a wharf and returning to that place of storage
o) cable jinkers
p) front-end loaders
q) log skidders

r) tractor cranes
s) rough-terrain cranes
t) mobile crushing and screening plant machines which are mounted on trailers
u) motor graders
v) motor scrapers
w) trailer scrapers
x) plant for servicing oil-filled cables
y) post debarkers
z) saw bench apparatus
aa) forestry chippers
bb) tree feller bunchers
cc) trench diggers and excavators
dd) vehicles that are always used unladen on the road and that are designed exclusively for carrying earth or other bulk materials
ee) mobile concrete mixers that are mounted on tractors
ff) a vehicle that is similar in design, construction or purpose to a vehicle listed above that cannot be categorised by vehicle class
gg) a vehicle that is registered for use on a road in a country other than New Zealand and that is not going to be in New Zealand for a continuous period of more than 18 months.
hh) an agricultural motor vehicle .

Page amended **14 October 2013** (see [amendment details](#)).

3-5 Establishing whether the vehicle complies

1. Select the relevant section that relates to vehicle inspection requirements for the vehicle class. For temporary import vehicles on overseas registration plates, please refer to [Technical bulletin 6](#).
2. Visually inspect the vehicle to determine whether the vehicle complies with the requirements set out in this manual (see [clause 3.1.2.2](#) of the Introduction). Vehicle inspectors are not required to remove vehicle components during the inspection of the vehicle.
3. The vehicle inspector or inspecting organisation may refuse to inspect a vehicle which:
 - a) is presented in such a condition that inspection is unreasonably difficult or cannot be completed (components missing, covered in dirt, etc) or
 - b) has an insecure load.
4. Where the vehicle inspector determines that a Reason for rejection or [clause 3.1.2.2](#) of the Introduction to this manual applies to a vehicle, the vehicle inspector must reject the vehicle for certification.
5. Where the vehicle inspector requires further information in order to determine compliance with the requirements, the inspector must reject the vehicle until the information has been obtained.

6. Where a vehicle has changed use to a passenger service vehicle since it was last certified for entry or in-service (ie the vehicle enters service as a passenger service vehicle), the vehicle inspector must have written confirmation (in the form of a PSV entry checksheet) that the vehicle complies with the PSV requirements in the [VIRM: Entry certification](#) before it can pass certificate of fitness inspection.

3-6 Checksheets

Applicable legislation: [Land Transport Rule: Vehicle Standards Compliance 2002](#), section 2.3.

1. A checksheet that has been approved by the NZTA must be used. To get a checksheet approved, see:

- [WoF checksheet specifications](#) (PDF | 59KB)
- [CoF checksheet specifications](#) (PDF | 69KB).

2. The checksheet must be completed fully and accurately and the writing must be clearly legible on the original and the duplicate page. The vehicle inspector must sign the checksheet once he/she has completed the inspection and determined that the vehicle has either passed or failed the inspection.

3. Where parts of a vehicle are inspected by different people, all those inspecting the vehicle must be vehicle inspectors. The checksheet must record which inspector inspected which part of the vehicle. One vehicle inspector must take overall responsibility for the inspection of the vehicle and that vehicle inspector must sign the checksheet.

4. A vehicle inspector can determine one of two outcomes:

- a) Passed inspection: record the 'determination' as stated below and issue a WoF label or CoF label or temporary permit
- b) Failed inspection: record the 'determination' as stated below. The reasons for the failed inspection must be clearly stated on the checksheet.

5. The customer copy (usually the original) of the completed checksheet must be supplied to the vehicle owner or operator. The agent copy (usually the duplicate) is retained by the inspecting organisation.

6. A vehicle that has failed its first inspection for the purpose of issuing a WoF or CoF may be passed within 28 days of the first inspection if re-inspected by the same inspecting organisation. If the vehicle is not passed within 28 days of the first inspection, a new checksheet must be used and a new inspection carried out.

- **Note** In the case of split testing for heavy vehicle brakes at CoF, the 28 days start from the completion of the second phase of the split test.

3-7 Recording the inspection outcome ('determination')

Applicable legislation: [Land Transport Rule: Vehicle Standards Compliance 2002](#), section 7.6

1. The inspection outcome is recorded in either the WoF Online system or the LATIS system.

2. The inspection details must be entered into the system before the vehicle leaves the inspecting organisation's premises. This ensures that the vehicle can be relicensed by the vehicle owner.

3. Inspection details entered into the system must be accurate at the time the vehicle was inspected. This includes updating the odometer and hubodometer readings when a vehicle is re-presented for inspection.

4. For vehicles required to operate under a TSL, vehicle inspectors must also collect and record in the system the TSL number for both passed and failed inspections, and when issuing temporary permits.

3.7.1 WoF Online

1. The inspection details must be entered into the WoF Online system on the day of inspection in either:

- a) express mode,
- b) pass re-check mode (use this where a vehicle is failed, repaired then passes a WoF inspection without leaving the inspecting organisation site. This mode will record a fail and a pass in one transaction), or
- c) normal mode.

- **Note** Inspecting organisations must have the NZTA flow charts that show how to use the WoF Online system (express mode and recheck mode are mandatory; normal mode is optional).

2. Where the inspecting organisation wishes to issue WoFs but is unable to obtain the necessary authorisation numbers from the WoF Online system, several options are available:

- a) The NZTA computer system is not working: the vehicle inspector or inspecting organisation must use the checksheet number as the system authorisation number. The OFF-LINE box on the reverse side of the WoF label must be ticked.

b) The inspecting organisation's computer terminal is not working: the inspecting organisation must contact TRC Agent Help Desk (0800 804 580) who may grant permission for the inspecting organisation to continue to issue off-line WoFs.

c) The WoF Online system goes down during WoF entry: the vehicle inspector needs to ask the customer if they intend to relicense the vehicle in the next 24 hours. If NO, the WoF details should be keyed in as soon as possible. If YES, the vehicle inspector must fax a copy of the checksheet directly to TRC (fax 06 354 6931) with a covering note of explanation. When the system is working again they must check to see if the WoF information is in the system. If not, the vehicle inspector must key the WoF in themselves to minimise any inconvenience to the customer. If it is, they must make a record of the system authorisation number, to cross reference on their copy of the checksheet.

3. To check whether or not a vehicle has a current WoF, select 'View WoF result' and enter the vehicle's registration number. One of three screen displays are possible:

Case 1:**Screen message:**

Problem This plate is not attached to a vehicle. If the plate number is incorrect, overwrite with the correct plate number and click on the Continue button. If the plate number is correct, advise owner that a plate must be attached before a WoF can be issued. This can be done at an NZTA Plate Agent.

The error message means that:

The vehicle is not currently registered (never registered, registration cancelled, or registration lapsed because the licence label has been expired for more than 12 months).

Action:

A WoF must not be issued. The vehicle should be referred to a TSD agent for entry or re-entry inspection and certification.

Case 2:**Screen message:**

Plate Number: PX8961

Blue 1991 Holden Commodore

Exec Saloon Passenger CarVan

System Authorisation Number: 81-487

Inspection Date: 08/02/2006

Expires: 6 months

AVIC ID: MS62621

The screen message means that:

The vehicle is currently registered, licenced and has a current WoF.

Action:

A new WoF may be issued, or, if necessary, a duplicate WoF may be issued.

Case 3:**Screen message:**

Problem This vehicle does not have a current WoF.

The error message means that:

The vehicle has a registration plate attached, but the licence label has been expired for less than 12 months, and the WoF has expired.

Action:

A WoF may be issued.

Case 4:

The vehicle is unregistered and presented for inspection operating on trade plates. The vehicle must match the description on either:

- form 4085 or MR2A, or
- the expired licence label.

4. Calculate the WoF expiry date as specified in [clause 3.8.1](#).

3.7.2 LATIS

The procedures for keying inspections into LATIS are given in the [LATIS users' manual](#).

3-8 Issuing the WoF or CoF label - 'evidence of vehicle inspection' - or temporary permit

Applicable legislation: [Land Transport Rule: Vehicle Standards Compliance 2002](#), sections 7.9 and 9

3.8.1 Expiry dates

Expiry date of the WoF

The WoF expiry date is calculated from the reference date. The reference dates are:

- For a vehicle with an expired WoF: the date the vehicle passes the inspection
- For a vehicle with a current WoF expiring in 14 days or less after the vehicle passes the inspection: the expiry date of the current WoF
- For a vehicle with a current WoF expiring in more than 14 days after the vehicle passes the inspection: the date that is 14 days after the vehicle passes the inspection
- For a vehicle that has been issued with a pink or green sticker (other than a 'G2' green sticker) or that has its WoF revoked: the date the vehicle passes the inspection.

The WoF expiry date must be either:

a) 12 months from the reference date:

- for a vehicle that is less than six years old from its date of first registration anywhere, or
- for an agricultural motor vehicle, or

b) six months from the reference date for any other vehicle.

Expiry date of the CoF

The CoF expiry date is calculated from the reference date. The reference dates are:

- For a vehicle with an expired CoF: the date the vehicle passes the inspection
- For a vehicle with a current CoF expiring in 28 days or less after the vehicle passes the inspection: the expiry date of the current CoF
- For a vehicle with a current CoF expiring in more than 28 days after the vehicle passes the inspection: the date that is 28 days after the vehicle passes the inspection
- For a vehicle that has been issued with a pink or green sticker (other than a 'G2' green sticker) or that has its CoF or temporary permit revoked: the date the vehicle passes the inspection.

The CoF expiry date must be either:

a) six months from the reference date, or

b) for a class MA rental vehicle that was new when it was first registered in New Zealand and is less than six years old from the date of first registration:

- i. 12 months from the date the vehicle passes its first CoF inspection, then
- ii. six months from the reference date for any subsequent CoF inspections.

Expiry date of a temporary permit (CoF vehicles only)

The expiry date is 28 days after the date of issue of the permit.

When a WoF, CoF or temporary permit ceases to be current

A WoF, CoF or temporary permit ceases to be current:

- a) after its expiry date, or
- b) if the vehicle has been green or pink stickered and a new WoF or CoF is required (note that a new WoF or CoF is not required for a 'G2' green sticker so the existing expiry date remains unaffected), or
- c) if the WoF, CoF or temporary permit has been revoked by a person authorised by the NZTA.

3.8.2 Completing and affixing the WoF or CoF label

Completing the WoF label

Figure 3-8-1. Warrant of fitness WoF label details (for 2014 expiry dates only)

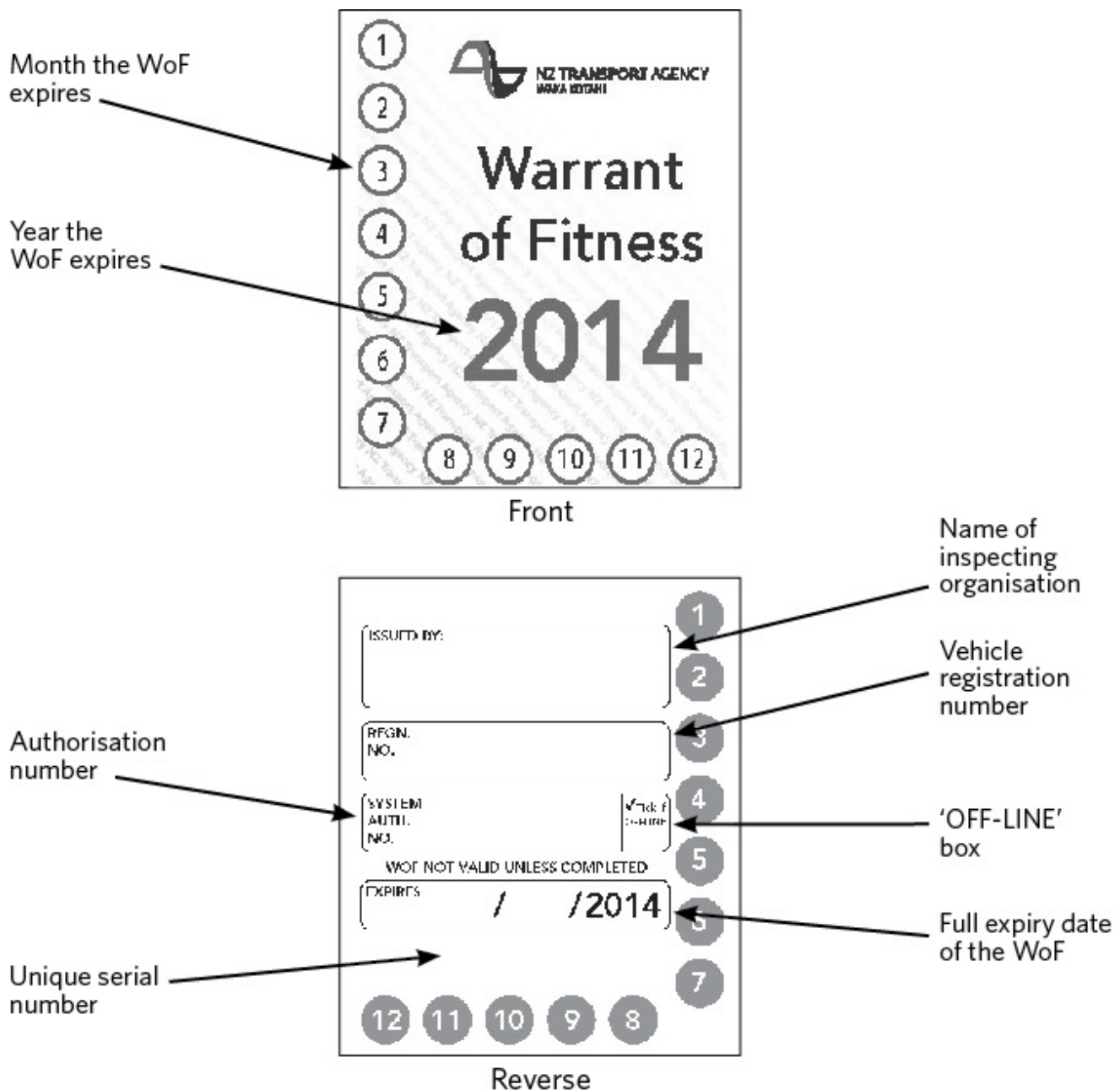
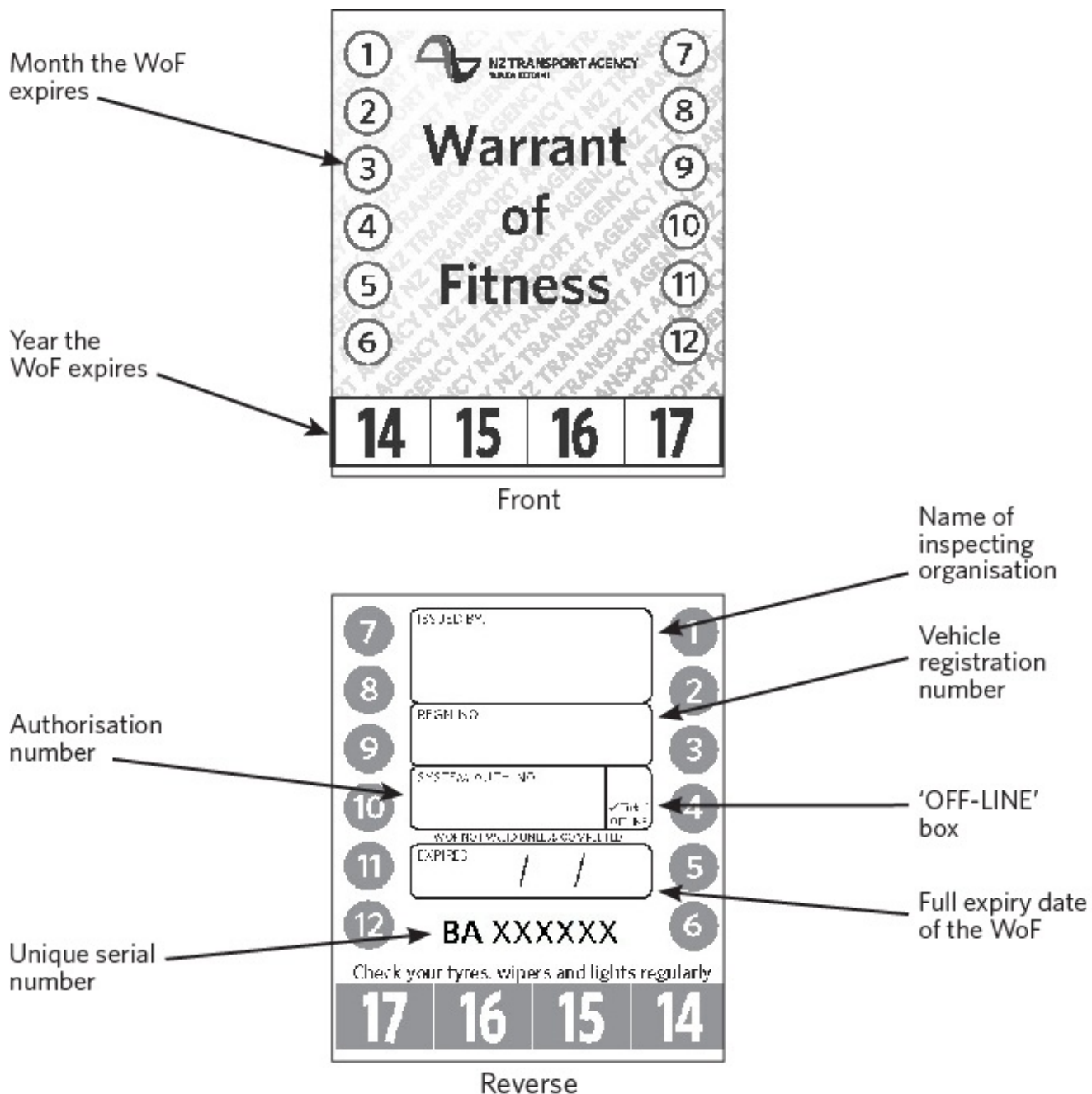


Figure 3-8-2. Warrant of fitness (WoF) label (for expiry dates from 2014 onwards)



If the vehicle passes the WoF inspection, the new WoF label must be completed in the following manner:

a) Front side:

- select the WoF label with the correct year of expiry of the WoF, and
- using a hole punch of at least 6mm diameter:
 - punch out the appropriate number representing the month of the WoF expiry date if using the WoF label in **Figure 3-8-1**, or
 - punch out the appropriate numbers representing the month and year of the WoF expiry date if using the WoF label in **Figure 3-8-2**.

b) Reverse side: record the:

- name of the inspecting organisation (a business stamp is acceptable), and
- vehicle registration number, and
- system authorisation number, and
- full expiry date of the WoF.

Each WoF label has a unique serial number printed on three places of the reverse side. The two small serial number stickers on the left are for cross referencing of the inspection documentation. The vehicle inspector must remove both serial number

stickers and attach one to the file copy of the checksheet and the other to the customer's copy of the checksheet.

Affixing the WoF label

The WoF label must be affixed by the vehicle inspector or a delegated employee of the inspecting organisation in one of the following positions:

- a) if the vehicle is fitted with a windscreen:
 - i. to the inside of the windscreen facing outwards on the same side as the steering wheel, and
 - ii. as close as possible to the edge of the windscreen where it is clearly visible from the outside and is not obscured by an anti-glare band or sticker
- b) for a trailer, on the back of the vehicle near the registration plate, or on the right-hand side of the vehicle at the rear, or if this is impracticable, in a position where it can readily be seen
- c) for any other vehicle, in a position where it can readily be seen.

Not more than one WoF label may be displayed at one time. When issuing a new WoF label, the vehicle inspector or a delegated employee of the inspecting organisation must remove the existing label.

Completing the CoF label

Figure 3-8-3. Certificate of Fitness (CoF) label details



If the vehicle passes the CoF inspection, the new CoF label must be completed in the following manner:

- a) Front side:
 - i. select the CoF label with the correct year of expiry of the CoF, and
 - ii. using a hole punch of at least 6mm diameter, punch out the appropriate number representing the month of the CoF expiry date.
- b) Reverse side: record the:
 - i. vehicle registration number, and
 - ii. vehicle make, and
 - iii. full expiry date of the CoF, and
 - iv. name of the inspecting organisation.
- c) Label record (butt): record the:
 - i. vehicle registration number, and
 - ii. date the CoF is issued, and
 - iii. full expiry date of the CoF, and
 - iv. signature of the vehicle inspector.

Each CoF label has a unique serial number which must be recorded on both copies of the checksheet.

Affixing the CoF label


The CoF label must be affixed by the vehicle inspector or a delegated employee of the inspecting organisation in one of the following positions:

- a) if the vehicle is fitted with a windscreen:
 - i. to the inside of the windscreen facing outwards, on the same side as the steering wheel, and
 - ii. as close as possible to the edge of the windscreen where it is clearly visible from the outside and is not obscured by an anti-glare band
- b) for a trailer, on the back of the vehicle near the registration plate, or on the right-hand side of the vehicle at the rear, or if this is impracticable, in a position where it can readily be seen
- c) for any other vehicle, in a position where it can readily be seen.

Not more than one CoF label may be displayed at one time. When issuing a new CoF label, the vehicle inspector must remove the existing label.

3.8.3 Completing the temporary permit ('28 day permit' for CoF vehicles only)

Figure 3-8-4. Temporary permit (28 day permit for CoF vehicles)

 NZ TRANSPORT AGENCY WAKA KOTAHİ		Permit for the Temporary Use of a Vehicle Without a Certificate of Fitness	
Registration no.	<input type="text"/>	Expiry date	<input type="text"/>
		XXXXXX	
<p>Pursuant to sections 7.10(a) and 9.6(3) of the Land Transport Rule: Vehicle Standards Compliance 2002 ("the rule") the vehicle described in this permit may be used on a road without a current certificate of fitness for a period of 28 days after the date of issue of this permit.</p> <p>Pursuant to section 9.7 of the rule this permit ceases to be current after the expiry date or if:</p> <ul style="list-style-type: none">a non-operation order is issued for the vehiclethe permit is revokedthe vehicle is a transport service vehicle that suffers significant damage or deterioration.			
Class of vehicle	<input type="text"/>		
Make and model	<input type="text"/>	VIN/Chassis no.	<input type="text"/>
Name of registered owner <input type="text"/>			
Business address <input type="text"/>			
Remarks and/or conditions of use <input type="text"/>			
Date of issue	<input type="text"/>	Issued by	<input type="text"/> (signature and full name of vehicle inspector)
		for	<input type="text"/> (full name of inspecting organisation)
<p>IMPORTANT NOTE: If the vehicle described in this permit is one that is, or ought to be, operated under a transport service licence, a relevant transport service licence must be held by the person carrying on the service.</p>			
			LT4013 1/09

This permit may be issued by an inspecting organisation in the case of a vehicle that does not comply with all applicable requirements, but is safe to be operated subject to specified conditions. The completed permit must be carried in the vehicle.

The permit must be completed in the following manner:

Record the:

1. vehicle registration number, and
2. expiry date of the permit, and
3. validity period of 28 days, and
4. class of the vehicle, and
5. make and model, and
6. VIN or chassis number, and
7. name of the registered owner, and
8. registered owner's business address, and
9. specified conditions relating to the vehicle's operation, and
10. date of issue of the permit, and
11. signature of the vehicle inspector.

- These details must be clearly legible on both copies of the permit.
- Each permit has a unique serial number which must be recorded on both copies of the checksheet.

Page amended **11 November 2013** (see [amendment details](#)).

3-9 Collecting fees

Applicable legislation: [Land Transport \(Certification and Other Fees\) Regulations 1999](#), Regulations 7 and 8.

Application for inspection and certification of vehicles for in-service

The fee to be paid by an applicant for inspection and certification of a vehicle for in-service (WoF, CoF or permit) is the amount fixed by the inspecting organisation that is reasonable, having regard to:

- a) the time spent in inspecting the vehicle to ascertain whether it complies with the relevant requirements, and
- b) any fees payable to the NZTA, and
- c) any standard or usual rate at which the inspecting organisation imposes charges for other work carried out in respect of motor vehicles.

Where a vehicle fails a WoF inspection, no additional fee is payable for any subsequent inspection by the same inspecting organisation for the purpose of the same certification, if such application is made within 28 days of the first inspection for the issue of the evidence of vehicle inspection. A fee is payable for an inspection if the vehicle is presented after the 28 days have lapsed.

Duplicate evidence of vehicle inspection

The fee to be paid by the operator of a motor vehicle to an inspecting organisation for a duplicate of an evidence of vehicle inspection is \$7.70 including GST.

When issuing a duplicate WoF or CoF label, the same requirements apply as for the original label as specified in [section 3.8](#), that is, it must be attached by the vehicle inspector or delegated employee, and only one label may be attached to the vehicle at any time.

3.10 Operating a vehicle without a current WoF or CoF

A person must not operate a vehicle on the road unless it has a current WoF/CoF and complies with WoF/CoF requirements.

A person may legally operate a vehicle with an expired WoF/CoF ONLY if the vehicle is being operated **SOLELY** for the purpose of bringing it into compliance, and provided the vehicle is safe to be operated for that purpose.

The 28 days given after a failed WoF/CoF only relate to the payment of inspection fees and when a new inspection starts, see sections [3.6.6](#) and [3.9](#). The 28 days do NOT allow a person to continue using the vehicle for a purpose other than for bringing the vehicle into compliance.

Where a vehicle still has a current WoF/CoF when it is failed, it must be brought up to compliance before it can again be operated for other purposes up to the date the WoF/CoF expires.

4 Complaints

Customers should be encouraged to direct any complaints to the inspecting organisation in the first instance.

To ensure all written complaints received are investigated, the inspecting organisation must maintain an effective complaint management process, which must meet the following requirements:

1. a clear and concise statement that recognises the positive value of complaints
2. clear and concise instructions to all customers on how to register a complaint. This can be accomplished in several ways, for example:
 - a) a conspicuous notice on the workplace wall, or
 - b) a clear statement on any receipt or invoice issued, or
 - c) a clear statement on the inspecting organisation's checksheet
3. a straightforward explanation of the expected standards for resolution and the customer's right to appeal to the NZTA if they are dissatisfied with the proposed resolution
4. documentation of any investigation into a complaint prepared in accordance with the PRS manual so that details of the investigation can be readily checked
5. acknowledgment of all written complaints in writing within three working days, and the investigation completed and a resolution proposed to the complainant within 20 working days of the complaint being made
6. a record of all complaints, both verbal and written, in accordance with the PRS manual
7. directions for any customer who wishes to make a complaint or appeal a decision made by an inspecting organisation to contact the NZTA Helpdesk (0800 699 000).

5 Inspection premises and equipment

- The inspecting organisation must continue to comply with the applicable requirements in this section.
- The inspecting organisation must maintain their premises and equipment in a good state of repair at all times.
- The inspecting organisation must use any specified equipment when inspecting a vehicle, where practicable.
- Brake performance testing equipment must be calibrated at least every 12 months, or more frequently if required by the equipment manufacturer.

5.1 Premises specifications

5.1.1 Access, exit, radius and brake test area specifications

Dimensions

	LC, LD, TA	LE, MA, MB, MC, MD1, MD2, NA, TB	MD3, MD4, ME, NB, NC, TC, TD
Specification	Vehicle class		
Minimum width of access to and exit from the inspection area	2.4m	2.8m	3.0m
Minimum height of access to and exit from the inspection area	2.0m	2.6m (3.0m TSDA)	4.5m
Access to a level test strip	Level test strip only required		
Minimum level access in front of roller brake machine (where used)	2.0m	5.0m	19m
Minimum level exit from roller brake machine (where used)	2.0m	5.0m	19m
Minimum turning radius	5.0m	8.0m	1
Marked turning circle diameter	N/A	N/A	25m ²

¹ 700mm clearance on each side of the 12.5m radius swept path for a B-train.

² May be located within 5km of inspection premises.

Other requirements and considerations

- The ground must be even and level (the ground will be considered level when it can be demonstrated that all vehicle combinations will remain stationary with all brakes released).
- The ground must be constructed of a material that will remain firm in all weather conditions.
- The access to or from the brake roller machine may encroach upon the inspection area.
- Inspections must take place in the inspection area unless otherwise permitted by the NZTA.

5.1.2 Inspection area specifications

Minimum dimensions

Specification	Vehicle class		
	LC, LD, TA	LE, MA, MC, MD1, MD2, NA, TB	MD3, MD4, ME, NB, NC, TC, TD
Inspection area width	2.4 m	3.5m (TSDA 4.0m)	5.0m – see (c) below
Inspection area height	2.5 m	3.0 m	5.0 m
Inspection area length	3.0 m	6.0 m	23.0m – see (g) below

Other requirements and considerations:

a) The inspection area must be situated within a building that has a roof, sides and doors made of permanent building materials.

b) The inspection area must be clear of all structural and equipment intrusions apart from the vehicle hoist and roller brake machine.

c) The inspection area width for vehicle classes MD3, MD4, ME, NB, NC, TC and TD may overlap any adjoining inspection

area for the same vehicle class up to 1m along its length.

d) The inspection area floor must be smooth concrete or tar seal.

e) The ground must be even and level. That is, all vehicle combinations must remain stationary with all brakes released.

f) There must be sufficient suitable lighting in the inspection area.

g) The minimum inspection area length for vehicle classes MD3, MD4, ME, NB, NC, TC, TD may be reduced to 16m for drive-through premises.

h) The inspection area length must be increased by 3m where a light board is used for testing headlamp alignment.

5.1.3 Minimum underbody inspection area specifications

Available options		Vehicle class		
At least one of the following as applicable		LC, LD	LE, MA, MB, MC, MD1, MD2, NA, TB, TA	MD3, MD4, ME, NB, NC, TC, TD
Vehicle hoist		N/A	WoF/CoF	N/A
Inspection pit	Width	N/A	0.8–1.0m	0.8–1.0m
	Depth	N/A	1.3m	1.3m
	Length	N/A	4m	Side entry: 10m End entry: 15m

Other requirements and considerations

- The underbody inspection facility must be located and centrally aligned within the inspection area.
- The pit length is measured at the base of the pit and does not include any steps that may be located at the ends.
- There must be sufficient and suitable lighting provided for the underbody inspection.

5.1.4 Warrant of fitness equipment

A tick means that the equipment is to be available for inspecting the indicated class of vehicle.

Equipment	Vehicle class			
	LC, LD	LE, MA, MB, MC, MD1, MD2, NA	TA, TB	NB, NC, TC, TD
Lamps				
Graduated light board (motorcycles only), or Commercial quality optical headlamp beam tester	✓	✓		✓
Vision				
Calibrated light transmission measuring device (optional)		✓		✓
Brakes				
Access to an NZTA-approved decelerometer, or an NZTA- approved roller brake machine		✓		✓
Air gauge (minimum 1000 kPa)				✓
Fittings that enable the air gauge to be attached to a duomatic coupling				✓
Stop watch				✓
Running gear				
a) Two-post vehicle hoist and industrial quality trolley jack	f only	f and any one of a–e	Any one of d–f	Any one of d–e, f optional
b) Four-post vehicle hoist with built-in jacking mechanism				
c) Four-post vehicle hoist and industrial quality trolley jack				
d) Inspection pit with in-pit jack				
e) Inspection pit and industrial quality trolley jack				
f) Industrial quality trolley jack and four axle stands				
Industrial quality hand-held inspection lamp	✓	✓	✓	✓

Steel test bar for steering and suspension		✓	✓	✓
Steel test bar for ball-race turntables				✓
Graduated tyre tread depth gauge	✓	✓	✓	✓
Vehicle dimensions				
3m measuring tape	✓	✓	✓	
25m measuring tape				✓
Tow connections				
40mm tow pin wear indicator gauge				✓
50mm tow pin wear indicator gauge				✓
40mm tow eye wear indicator gauge				✓
50mm tow eye wear indicator gauge				✓

5.1.5 Certificate of fitness equipment

Equipment	Vehicle class			
	LC, LD	LE, MA, MB, MC, MD1, MD2, NA	TA, TB	MD3, MD4, ME, NB, NC, TC, TD
Lamps				
Graduated light board (motorcycles only), or Commercial quality optical headlamp beam tester	✓	✓		✓
Vision				
Calibrated light transmission measuring device (optional)		✓		✓
Brakes				
Access to level test strip	✓			
NZTA-approved roller brake machine		✓		✓
Air gauge (minimum 1000 kPa)				✓
Fittings that enable the air gauge to be attached to a duomatic coupling				✓
Stop watch				✓
Running gear				
a) Two-post vehicle hoist		any one of a–e	any one of d or e	any one of d or e
b) Four-post vehicle hoist with built-in jacking mechanism				
c) Four-post vehicle hoist and industrial quality trolley jack				
d) Inspection pit with in-pit jack				
e) Inspection pit and industrial quality trolley jack				
f) Industrial quality trolley jack and four axle stands				

Industrial quality hand-held inspection lamp				
Steel test bar for steering and suspension				
Steel test bar for ball-race turntables				
Graduated tyre tread depth gauge				
Vehicle dimensions				
3m measuring tape				
25m measuring tape				
Tow connections				
40mm tow pin wear indicator gauge				
50mm tow pin wear indicator gauge				
40mm tow eye wear indicator gauge				
50mm tow eye wear indicator gauge				
Taxi meters				
Test strip, or Calibrated rolling road				
Meter seal kit				
Stop watch				

5.1.6 Compliance with statutory requirements

It is the inspecting organisation's responsibility to ensure that the inspection premises and equipment comply with:

- Occupational Safety and Health requirements, and
- any other relevant Acts, regulations, and local bylaws.

5.1.7 Approved brake test equipment (WoF)

Note The vehicle inspector must use an approved brake tester when carrying out the brake test. Should the tester break down, or a vehicle cannot reasonably be tested with that tester, the vehicle must be tested with another approved brake tester or undergo the brake distance test.

Manufacturer	Models	Gazette notice details
Anzen	BS52FL Roller brake testing machine	26 October 1989, No 189, p 5299
Autoteknik	Portable truck brake testing machine Model No BM20200	30 January 1997, No 8, p 190
	Model No BM8010 (with or without the facility to test the brakes on dedicated 4WD vehicles)	2 May 1996, No 41, p 1182
	BMX200 Roller brake testing machine	12 November 1998, No 184, p 4350
	BMX010 Turbo roller brake testing machine	14 January 1999, No 246, p 65
	Model BM17200	10 August 2000, No 89, p 2184
Auto Test Products	AutoStop Mini 1.0 AutoStop Maxi 6.2 and 6.2x AutoStop HVBM	5 December 2000, No 164, p 4262
	AutoStop Micro Plus AutoStop Mini Plus	3 March 2011, No 23, p 623
Banzai	BBT51S Roller brake testing machine	26 August 1989, No 189, p 5299
Bear	450, 451, 452, 4510 and 4511	7 March 1957, No 20, p 449
BM Autoteknik	BM17200	1 August 2000, No 89, p 2184
	BM7010	31 October 2000, No 150, p 3866
	BM30200 (upgraded Crypton EB30)	5 December 2000, No 164, p 4262
	BM63200 (upgraded Crypton 630)	12 March 2002, No 28, p 626
	BM3010, BM9010, BM12200	30 March 2001, No 37, p 830
	14200 series	17 April 2008, No 73, p 2055
	BM4010	14 December 2006, No 172, p 5032
Bowmonk	Brake Check Model 801	25 May 2006, No

		46, p 1232
Bowmonk	Brake Check Model 803	25 May 2006, No 46, p 1232
Bowmonk	Model MkIII Dynamometer	25 August 1960, No 54, p 1281
CEMB	DCA 3 Roller brake testing machine	10 June 1999, No 67, p 1549
	DCA5-FN3	25 June 2009, No. 94, p 2117
Circuitlink	Brake Check	22 May 2003, No 53, p 1380
	Brake-Testa Model BT1	25 May 1995, No 50, p 1282
Crypton	Crypton Bradbury E10 dynamic brake tester	16 March 1967, No 16, p 384
	Crypton Models 630 and 660 Roller brake testing machine	26 October 1989, No 189, p 5299
	Crypton 690A brake tester	14 August 2003, No 101, p 2689
Hammar	Dynometer 54	21 March 1968, No 15, p 474
Hartridge	MkII Brake tester	3 September 1970, No 53, p 1574
Hoffman Werkstatt	Brekon 131-3 Brekon 131-4 and 4S Safeline Pro testing lanes that include one of the following: Brekon 130-3 Brekon 130-4 and 4S Safeline Truck testing lanes that include brake testing devices suitable for 10, 13, 16 or 18 t axle load at a test speed of 2.6, 2.8, 5.2, or 5.6 km/h	25 September 2001, No 135, p 3469
	Brekon 141-3 and 141-4	9 November 2006, No. 132, p 3837
HPA	Models 2302, 2303, and 2313-MK Roller brake testing machine	22 March 1973, No 23, p 524
	Model 5023 Roller brake testing machine	29 June 1995, No 64, p 1733
	Model LX5004.138.009 Roller brake testing machine	21 March 1996, No 28, p 867
Hunter	B400 Plate Brake Tester	19 September 1991, No 140, p

		2992
	B404 Plate Brake Tester	22 August 1991, No 126, p 2727
Intertech	Model No HH650 EV	7 March 1996, No 23, p 735
Kismet	Model Nos KBT 300, 301 and 302	22 March 1973, No 23, p 524
MAHA	MAHA PP2 Platform brake tester (digital and analogue)	6 October 1988, No 170, p 3973
	MAHA Platform brake tester Model Junior-Check 2P	14 September 1995, No 99, p 3102
	MAHA Platform brake tester MPP 2240	9 June 2011, No 81, p1909
	MAHA Roller brake testing machine Model IW 2 Series	24 February 1994, No 16, p 914
	MAHA Roller brake testing machine Model IW 4	21 March 1996, No 28, p 867
	MAHA Roller brake tester Model IW 7 Mobile	15 June 2006, No 52, p 1430
	MAHA Roller brake tester Model MBT 2100	17 December 2009, No 188, p4524
Muller BEM	Billanmatic series 45200, 43300, 44800, 44700 Note the model number may also include B, 2V, B-2V Billanmatic series 7300, 7500, 7700, 8600, 10000	5 December 2000, No 164, p 4262
Nepean	Model Barbie 14104 Vehicle inspection trailer	11 June 1998, No 79, p 1760
Nissalco	Model IM2581 Roller brake tester	3 December 1981, No 145, p 3661
	Model M2581 Super-Combi Tester	24 June 1999, No 75, p 1696
PlateTronic	Models Pitstop 2P, Pitstop 4P Platebrake tester	9 April 2009, No 48, p 1177
Shenzhen Cosber Industrial Co Ltd	Model Cosber KZD-3 series of roller brake testing machines	25 September 2008, No 143, p 3901
Simaret	Models Simaret BrakeSafe, Simaret 3000, Simaret F	12 November 1998, No 184, p 4350
Tapley	Tapley portable brake tester	7 March 1957, No

		20, p 449
Tecalemit	Model No DE 5000 CU Roller brake testing machine	22 February 1996, No 15, p 508
Tiangle	Brake testing instruments Commercial Vehicle Model and Standard Model (Ref. DBT2)	5 May 1966, No 25, p 737
Vane	Vane Bowmonk dynamometer	16 March 1967, No 16, p 384
Vehicle Inspection Systems Pty Ltd	VIS-Check, VIS-TF-RL and VIS-VE-RL	4 March 2010, No 25, p 580
Vericom	Model VC2000 and VC2000PC brake testing computers	26 October 1995, No 122, p 3775
	Model VC3000	27 March 2003, No 30, p 847
Vipac	Model VBT101 brake-tester	23 June 1994, No 62, p 2089, or 25 May 1995, No 50, p 1282
VTEQ S.L. (Spain) (previously BCN)	VTEQ 3080	14 August 2003, No 101, p 2689
	VTEQ 2080	17 February 2004, No 17, p 372
	VTEQ 6000 (analogue) VTEQ 7000 (digital)	9 November 2006, No. 132, p 3837
Weaver	WY-25, WY-30, WY-40S, WY-55, WY-60, WY-70S, WY-75 and WY-76	7 March 1957, No 20, p 449

5.1.8 Approved brake test equipment (CoF)

Note A decelerometer from the WoF list under 5.1.7 may be used only under special circumstances, such as the roller brake machine breaking down unexpectedly, or being presented with a vehicle that cannot be reasonably tested on the roller brake machine. Refer to Heavy vehicle brake testing protocol for detailed requirements.

Manufacturer	Models	Gazette notice details
Autoteknik	Portable truck brake testing machine Model No BM 20200	30 January 1997, No 8, p 190
	Model BM 17200	10 August 2000, No 89, p 2184
BM Autotechnik	BM17200	1 August 2000, No 89, p 2184
	BM12200	30 March 2001, No 37, p 830
MAHA	MAHA Roller brake testing machine Model IW 4	21 March 1996, No 28, p 867
	MAHA Roller brake tester Model IW 7 Mobile	15 June 2006, No 52, p 1430
Nepean	Model Barbie 14104 Vehicle inspection trailer	11 June 1998, No 79, p 1760
Simaret	Models Simaret BrakeSafe, Simaret 3000, Simaret F	12 November 1998, No 184, p 4350
Tiangle	Brake testing instrument Commercial Vehicle Model	5 May 1966, No 25, p 737
Vehicle Inspection Systems Pty Ltd	VIS-Check, VIS-TF-RL and VIS-VE-RL	4 March 2010, No 25, p 580
Vericom	Model VC2000 and VC2000PC Brake testing computers	26 October 1995, No 122, p 3775
	Model VC3000	27 March 2003, No 30, p 847
VTEQ S.L. (Spain)	VTEQ 7000 (digital)	November 2006, No 132, p3837

6 Appointments

6.1 Vehicle inspectors

6.1.1 Warrant of Fitness

Applications for appointment must be sponsored by an employing inspecting organisation.

The candidate must:

a) have the following qualifications/work experience:

- i. be qualified as an automotive technician with either NZ Trade Certificate, National A-Grade Registration, NZ Advanced Trade Certificate or equivalent, or
- ii. be qualified as an automotive technician with either National Certificate in Automotive Engineering, National Registration or equivalent, and three years relevant work experience, or
- iii. have worked full-time carrying out repairs and maintenance to all safety aspects of light motor vehicles for at least five years **cumulatively**

Note Overseas qualifications must be recognized in New Zealand through the NZ Qualifications Authority (NZQA).

- Vehicle inspectors currently or wishing to be appointed to inspect general vehicles under this clause may, on application, also be appointed to inspect motorcycles if they are able to provide evidence of:

- i. appropriate training on motorcycle repairs, maintenance or inspections (may be external or internal training), or
 - ii. appropriate work experience repairing, maintaining or inspecting motorcycles (other practical experience, such as repairing and servicing own motorcycles, will be considered).
- b) demonstrate a comprehensive knowledge of the requirements in the [VIRM: In-service certification](#), sufficient to inspect and certify a vehicle
- c) demonstrate a comprehensive knowledge of common vehicles and their:
- i. structure, including glazing and external projections
 - ii. suspension, steering and braking systems
 - iii. safety equipment, including seatbelts and airbags
 - iv. lighting system requirements
- d) be a fit and proper person (section 2.6 of the Rule). The criteria considered with any application include:
- i. relevant criminal convictions
 - ii. transport related offences
 - iii. relevant warnings, penalties and disciplinary actions imposed
 - iv. relevant complaints
 - v. the public interest and land transport safety
- e) have a current driver licence for the class(es) of vehicles to be inspected.

Application packs may be obtained from, and applications must be made to:

Vehicle Certifiers Registers
NZ Transport Agency
Palmerston North Office
Private Bag 11777
Palmerston North 4442

Phone 0800 587 287

6.1.2 Certificate of Fitness

Applications for appointment must be sponsored by an employing TSD agent.

For vehicle classes LC, LD, LE, MA, MB, MC, MD1, MD2, NA:

The candidate must:

- a) have the following qualifications/work experience:
- i. be qualified as an automotive technician with either NZ Trade Certificate, National A-Grade Registration, NZ Advanced Trade Certificate or equivalent, or
 - ii. be qualified as an automotive technician with either National Certificate in Automotive Engineering, National Registration or equivalent, and three years relevant work experience, or
 - iii. have worked full-time carrying out repairs and maintenance to all safety aspects of light motor vehicles for at least five years **cumulatively**

Note Overseas qualifications must be recognized in New Zealand through the NZ Qualifications Authority (NZQA).

- Vehicle inspectors currently or wishing to be appointed to inspect general vehicles under this clause may, on application, also be appointed to inspect motorcycles if they are able to provide evidence of:

- i. appropriate training on motorcycle repairs, maintenance or inspections (may be external or internal training), or
 - ii. appropriate work experience repairing, maintaining or inspecting motorcycles (other practical experience, such as repairing and servicing own motorcycles, will be considered).
- b) demonstrate a comprehensive knowledge of the requirements in the [VIRM: In-service certification](#), sufficient to inspect and certify a vehicle
- c) demonstrate a comprehensive knowledge of common vehicles and their:
- i. structure, including glazing and external projections

- ii. suspension, steering and braking systems
- iii. safety equipment, including seatbelts and airbags
- iv. lighting system requirements

d) be a fit and proper person (section 2.6 of the Rule). The criteria considered with any application include:

- i. relevant criminal convictions
- ii. transport-related offences
- iii. relevant warnings, penalties and disciplinary actions imposed
- iv. relevant complaints
- v. the public interest and land transport safety

e) have a current driver licence for the class(es) of vehicles to be inspected.

For vehicle classes MD3, MD4, ME, NB, NC, TC, TD:

Note The applicant can only apply for one of the two following categories at a time, with two months between applications, that is, either:

- MD3, MD4, ME, or
- NB, NC, TC, TD.

The candidate must:

a) be qualified as:

- i. an automotive technician with either NZ Trade Certificate, National A-Grade Registration, or NZ Advanced Trade Certificate or equivalent and three years relevant workshop experience performing vehicle maintenance and repair work
- ii. an automotive technician with either National Certificate in Automotive Engineering, National Registration or equivalent and three years relevant work experience
- iii. a person who has worked in full-time employment carrying out repairs and maintenance to all safety aspects of heavy motor vehicles for at least five years **cumulatively**.

Note Overseas qualifications must be recognized in New Zealand through the NZ Qualifications Authority (NZQA).

b) demonstrate a comprehensive knowledge of the requirements in the [VIRM: In-service certification](#), sufficient to inspect and certify a vehicle

c) demonstrate a comprehensive knowledge of common vehicles and their:

- i. structures, including glazing and external projections, and
- ii. suspensions, steering and braking systems, and
- iii. tow connections and load anchorages, and
- iv. lighting system requirements

d) demonstrate a comprehensive knowledge of large passenger service vehicles and their requirements (applicable to MD3, MD4 and ME category only)

e) be a fit and proper person (section 2.6 of the Rule). The criteria considered with any application include:

- i. relevant criminal convictions
- ii. transport-related offences
- iii. relevant warnings, penalties and disciplinary actions imposed
- iv. relevant complaints
- v. the public interest and land transport safety

f) have a current driver licence for the class(es) of vehicles to be inspected.

Application for appointment must be made by the candidate's employing organisation head office to:

Vehicle Certifiers Registers
Transport Registry Centre
Private Bag 11777

6.1.3 Lapse of appointment

A vehicle inspector’s appointment category will be revoked if it is not used within a 12-month period.

6.2 Inspecting organisations

6.2.1 Warrant of Fitness

WoF inspecting organisations must:

- a) meet the requirements for inspection premises and equipment, and
- b) be fit and proper (section 2.6 of the Rule). The criteria considered with any application include:
 - i. relevant criminal convictions
 - ii. transport-related offences
 - iii. relevant warnings, penalties and disciplinary actions imposed
 - iv. relevant complaints
 - v. the public interest and land transport safety, and
- c) have currently employed a vehicle inspector approved for the relevant classes of vehicles.

6.2.2 Certificate of Fitness

The requirements are set out in the Transport Service Delivery (TSD) agent contracts.

Page amended **14 October 2013** (see [amendment details](#)).

7 Definitions and abbreviations

A-train	means an articulated vehicle towing a full trailer.
Affix	in relation to a vehicle identifier, means stamp, emboss, etch or engrave onto (a) the permanent structure of a motor vehicle, or (b) a plate affixed to the permanent structure of a vehicle.
Agricultural	in relation to purposes or operations, means connected directly with the operation or management of a farm.
Agricultural motor vehicle	a) means a motor vehicle that is designed, constructed or adapted for agricultural purposes, and includes: i) an agricultural trailer, and ii) an agricultural tractor, but b) does not include any vehicle that is: i) of a class specified in section 3-2 of the Introduction, and ii) designed or constructed for general road use.
Agricultural purpose	includes: a) land cultivation b) growing and harvesting crops (including horticulture and viticulture) c) rearing livestock d) any land management operation undertaken in connection with the operation or management of a farm. <ul style="list-style-type: none">• Agricultural purpose does not include forestry, or any land management operation not referred to in (a) to (d) above.
Agricultural tractor	means a vehicle that is designed and constructed principally for the purposes of: a) towing an agricultural trailer , or b) drawing, or powering, an implement ordinarily used for an agricultural purpose.
Agricultural trailer	means: a) a trailer that is used exclusively for agricultural purposes, and b) includes a wheeled agricultural implement, the wheels of which are in contact with the road when the implement is being towed; but c) does not include a trailer that is i. designed for the carriage of goods operated at a speed exceeding 40km/h, or ii. a logging trailer.
Air brake	means a brake, the operation of which requires the use of compressed air.
All-terrain vehicle (ATV)	means a vehicle, with or without motor cycle controls and equipment, that: a) is principally designed for off-road use, and b) has three or more wheels, and c) has an engine capacity exceeding 50 ml, and d) has a gross weight of less than 1000 kg.
Alley lamp	means a work lamp designed primarily to provide a fixed or movable beam of light to the side of a

	vehicle to which it is fitted.
Alternative fuel inspection certificate	means evidence of vehicle inspection relating to the periodic in-service inspection and certification of an LPG or CNG fuel system.
Alternative fuel installation certificate or compliance plate	means an inspection and certification document relating to the installation of an LPG or CNG fuel system.
Alternative fuel system	means a fuel storage and conducting system that is used to provide liquid petroleum gas, compressed natural gas or any other pressurised liquid or gaseous fuel (other than petrol or diesel) for the purpose of propulsion of a vehicle.
Alternative fuel system inspection and certification	means inspection and certification of an LPG or CNG fuel system comprising either a) specialist inspection and certification required for the issuing of an alternative fuel installation certificate or an alternative fuel installation compliance plate, or b) in-service inspection and certification required for the issuing of an alternative fuel inspection certificate.
Ambulance	means a motor vehicle designed and used principally for the carriage of sick or injured persons.
Ambulance service	means a service that complies with the requirements in NZS 8156:2002 Ambulance Sector Standard, and is generally a vehicle marked and identified as an ambulance.
Anti-glare band overlay	means a tinted overlay that is transparent and that is applied along the top edge of the windscreen for the purpose of reducing glare from the sun.
Anti-lock braking system (ABS)	means a device that senses that one or more of the wheels is starting to lock up during braking and regulates the braking forces automatically and effectively to prevent it.
Applicable requirement	means any requirement specified or incorporated in an Act, regulation, code or rule that applies to the design, construction, condition, equipment, modification, repair or maintenance of a specific vehicle. All applicable requirements for in-service inspection and certification are contained in this manual.
Approved	in relation to an appliance, apparatus, device, system, component, equipment or fitting, means approved by NZTA.
Articulated bus	means a bus consisting of two or more rigid sections that: a) articulate relative to each other, and b) have interconnecting passenger compartments that allow passengers to move freely between them, and c) are not easily detachable from each other without specialist equipment.
Articulated vehicle	means any motor vehicle with a semi-trailer attached, so that part of the semi-trailer is superimposed upon the motor vehicle and a substantial part of the weight of the semi-trailer and of its load is borne by the motor vehicle.
Asymmetric dipped-beam headlamp	means a dipped-beam headlamp that emits a beam of light with a distinct horizontal cut-off from at least the centre to the edge of the beam.
At a height not exceeding	in relation to lighting equipment fitted to a vehicle, means the height above which no part of the illuminated area of the equipment extends when the vehicle is at its gross vehicle mass and when each

	tyre with which the vehicle is fitted is inflated to the pressure recommended by the vehicle manufacturer.
Auxiliary brake	means a device, other than a service brake or parking brake, fitted to a vehicle to enable the driver to control its speed, whether or not it is suitable to stop the vehicle.
Average deceleration	means the average deceleration during braking, which is either the mean value of deceleration during braking or the deceleration calculated from the distance travelled during the period when the deceleration occurred and the difference between the speed immediately before and after that.
Axle	<p>means one or more shafts, spindles, or bearings in the same vertical transverse plane by means of which, in conjunction with wheels mounted on those shafts, spindles, or bearings, a portion of the weight of the vehicle is transmitted to the roadway, and:</p> <p>(a) if two or more wheels of a motor vehicle are substantially in the same line transversely and some or all of them have separate axles, the axles of all those wheels are to be treated as one axle;</p> <p>(b) if the longitudinal centre-line of an axle of a motor vehicle is less than 1 m distant from the longitudinal centre-line of another axle, the two axles are to be treated as one axle ("a dual axle");</p> <p>(c) for the purposes of measuring the distance of a dual axle from any other axle, the measurement is taken from the longitudinal centreline of the axle that is nearer to the axle from which the distance is to be measured.</p>
Axle set	means a single axle set, a tandem axle set, a twin-steer axle set, a tri-axle set or a quad-axle set.
Axle stop device	means a device to control the movement of the axle in the event of suspension failure.
B-train	means a motor vehicle comprising a towing vehicle and two semi-trailers connected at two points of articulation where the forward distance of the longer trailer divided by the forward distance of the shorter trailer does not exceed 1.4.
Ballrace turntable	means a device incorporating a low friction ball bearing fitted between two substantial structural components of a vehicle to enable rotational motion between those components about a vertical axis.
Beacon	means a warning lamp comprising one or more light sources designed to emit a flashing light or a revolving beam of light.
Body	means the part of the vehicle that is designed for the use and accommodation of the occupants or to hold any goods, and (for PSVs) includes all of the portion of the vehicle that is designed for the use and accommodation of the occupants and their luggage, and to hold any goods that may be carried.
Body transfer vehicle	means a motor vehicle that is used primarily for the transportation of deceased persons.
Bolster Attachment Code	means the Bolster Attachment Code of the Log Transport Safety Council, approved by the NZTA.
Brake	means a system to reduce the speed of a vehicle, to stop the vehicle or to keep the vehicle stationary.
Brake circuit	means the combination of components that functionally links the brake control and the foundation brake. The circuit may be mechanical, hydraulic, pneumatic, electrical or a mix of these.
Brake coupling	means the device for connecting the control and supply lines of the towing vehicle to the control and supply lines of the trailer.
Brake friction material	means a brake component having a friction surface that is designed to be preferentially sacrificed.

Brake friction surface	means any surface of a brake component that is designed to convert kinetic energy to heat.
Brake lining	means a brake lining in the case of a drum brake, and a brake pad in the case of a disc brake.
Brake lining assembly	means a component of a friction brake, including a brake lining and its backing plate or a brake lining and its brake shoe, that is pressed against the brake disc or drum to produce friction force.
Brake pedal assembly	means an assembly containing the brake pedal and pedal pivot, pedal bracket, pedal return spring and associated components.
Brake reservoir	means a device designed and constructed to store fluid, compressed air, compressed gas or vacuum; does not include pipes, valves, hoses or booster cylinders operated by vacuum or compressed air.
Braking force	means the retarding force generated by a brake assembly.
Breakaway brake	means a service brake or parking brake fitted to a trailer that ensures, under all conditions of use, that, if the trailer is unintentionally disconnected from its towing vehicle, the brake will automatically and immediately apply and will remain applied for at least 15 minutes.
Cab-guard	means a structure attached to a vehicle that provides protection to the cab occupants from the effects of load impact, and may include a headboard.
Caravan trailer	means a trailer that is permanently equipped with features intended to make the vehicle suitable as a person's dwelling place, and must include at least one sleeping berth and one table, both of which may be of a design that allows them to be retracted or folded away.
Central tyre inflation system	means a type of tyre pressure control system that adjusts tyre pressure for the purpose of inflating and deflating tyres to improve tyre adhesion and reduce road surface damage and which is under the central control of the driver or an automated system, or a combination of both the driver and an automated system (commonly known as 'CTI').
Certificate of fitness (CoF)	means evidence of vehicle inspection issued to vehicles listed under 3.3.1 of the Introduction.
Certificate of fitness inspection and certification	means periodic in-service inspection and certification of a vehicle listed under 3.3.1 of the Introduction.
Certificate of loading (CoL)	means a certificate issued to a vehicle that requires verification of its loading and weight limits.
Certificate of loading inspection and certification	means inspection and certification of a vehicle, required for the issuing of a certificate of loading.
Certify	<p>means</p> <p>a) in relation to a vehicle, or specific aspect of a vehicle, to make a record of determination that confirms that the vehicle inspector or inspecting organisation has determined that the vehicle or specific aspect of the vehicle complies with the applicable requirements, or</p> <p>b) in relation to a vehicle's loading and weight limits, to make a record of determination of a vehicle's loading and weight limits.</p>
Chassis	means the structural lower part of a vehicle to which the running gear and, as applicable, engine,

	transmission, steering system and body may be attached.
Chassis assembly	means a chassis with running gear attached and, as applicable, engine, transmission and steering system attached.
Child restraint	includes child seats, booster seats and seatbelts designed specifically to fit children.
Child safety lock	means a safety device installed during the manufacture of the vehicle to prevent a door from being opened from inside of the vehicle.
Class	in relation to vehicles, means a category of vehicle of one of the Groups A, L, M, N and T, as specified under 3.2 of the Introduction.
CNG	means compressed natural gas.
Coaming rail	means a raised frame boarder around the load platform of a vehicle.
Combination vehicle	means a towing vehicle in combination with one or more trailers or other motor vehicle that is being towed.
Compliance label	means an attachment to a vehicle in the form of a label that confirms compliance of the vehicle or a specific aspect of the vehicle with applicable requirements.
Compliance plate	means an attachment to a vehicle in the form of a plate that confirms compliance of the vehicle or a specific aspect of the vehicle with applicable requirements.
Conditional permit (or permit, including temporary permit or 28-day permit)	means inspection and certification document that confirms that a determination has been made that the vehicle is safe to be operated under specified conditions.
Construction (vehicle)	means the manufacture, assembly, reassembly or modification of a vehicle, and includes all acts and activities related or incidental to the construction of a vehicle.
Construction (tyre)	means <ul style="list-style-type: none"> (a) for a pneumatic tyre, the type of tyre carcass (including ply orientation and ply rating or load index), or (b) for any other tyre, characteristics relating to size, shape and material.
Control	means the part of the brake actuated directly by the driver to regulate the operation of the brake.
Control (service) line	means the part of the brake circuit that transmits the service brake signal within a vehicle and also between vehicles being operated as a combination vehicle.
Converter dolly	means an individual trailer unit with a fifth-wheel coupling used to convert a semi-trailer to a full trailer. A dolly must have either <ul style="list-style-type: none"> (a) a rigid drawbar associated with an oscillating fifth wheel and a single axle or a tandem axle set, or (b) a tandem axle set with a hinged drawbar with a fixed fifth wheel.
Cornering lamp	means a lamp designed to emit light at the front of the vehicle to supplement a vehicle's headlamps by illuminating the road ahead in the direction of the turn.
Corrosion	is where the metal has been eaten away, which is evident by pitting. The outward signs of such

damage	corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.
Coupling	means that part of a vehicle that is specifically designed to enable it to be connected to another vehicle, and does not include a structural member of the towing or towed vehicle.
Cosmetic lamp	means a lamp that is not a headlamp, stop lamp, direction-indicator lamp, position lamp, rear registration plate illumination lamp, reflector, fog lamp, daytime running lamp, cornering lamp, reversing lamp, reflective material, interior lamp, work lamp, flashing or revolving beacon or illuminated vehicle-mounted sign.
Crew	in relation to a PSV, means the person or group of persons in control or having responsibility for the operation of the vehicle or the well-being of the passengers.
Cross-ply	means a pneumatic tyre structure in which the ply cords in the tyre carcass extend to the beads and are laid at alternate angles, which are substantially less than 90 degrees, to the centreline of the tread. This tyre structure is also referred to as 'bias ply' or 'diagonal ply'.
Cut-off	means that part of a dipped beam that marks a separation between areas of higher and lower luminance.
Daytime running lamp	means a lamp designed to emit a low-intensity light forward of a vehicle to make it more easily seen in the daytime.
Deceleration	means the rate of speed reduction over time.
Dedicated combination	means, in relation to heavy vehicle brakes, a combination of vehicles certified for use in combination where both vehicles are affixed with a plate clearly and indelibly marked with the VIN or chassis number of the vehicle.
Dedicated emergency exit	in relation to a PSV, means any doorway, window, hatch or other opening that is designed and constructed solely to provide a means of leaving the vehicle in the event of an emergency.
Dedicated groundsprayer	means a self-propelled or trailing machine whose sole function is the application of chemicals or liquid fertiliser to crops or to the ground.
De-registered	means that a vehicle's New Zealand registration has been cancelled in accordance with section 27 or section 28 of the Transport (Vehicle and Driver Registration and Licensing) Act 1986.
Design	in relation to a motor vehicle, refers to the construction of the motor vehicle, and not its use or intended use, and 'designed' has a corresponding meaning.
Determination	means a record, in paper or electronic form, that a vehicle or specific aspect of vehicle complies or does not comply with the applicable requirements.
Dipped beam	means a beam of light, emitted from a lamp fitted to a vehicle, that is angled downwards in such a way that it prevents undue dazzle or discomfort to oncoming drivers and other road users.
Dipped-beam headlamp	means a headlamp designed to emit a dipped beam.
Direct trailer service brake	means a service brake fitted to a trailer that allows the driver of a towing vehicle, from their driving position, to directly and progressively regulate the trailer brake effort.
Direction indicator lamp	means a lamp designed to emit a flashing light to signal the intention of the driver to change the direction of the vehicle to the right or to the left.

Door retention system	means any system, contrivance or mechanism that connects the doors of a motor vehicle to those doorways that are used for the entry and exit of vehicle occupants.
Drawbar	means an assembly of components, that includes: the trailer coupling that connects the trailer to the coupling of the towing vehicle, hinges (where applicable) and the structural and other related components between the trailer coupling and trailer bogie or chassis.
Drawbeam	means the part of the towing vehicle to which a coupling is fitted to enable a heavy trailer to be connected, and includes the attached coupling.
Dual steering	in relation to a vehicle, means the vehicle is able to be steered from the left-hand and right-hand side of the vehicle.
Emergency brake	in relation to any vehicle, or combination of vehicles, means the system that makes it possible to undertake a controlled stop of the vehicle or combination in the event of the failure of the service brake.
Emergency exit	means: a) a door used for the entry and exit of the occupants and, for this purpose, a door of double width is a single emergency exit b) the access between the front and rear sections of an articulated bus c) the stairway from the upper deck to the lower deck d) a dedicated emergency exit.
Emergency vehicle	means a vehicle used for attendance at emergencies and operated a) by an enforcement officer, or b) by an ambulance service, or c) as a fire service vehicle, or d) as a civil defence emergency vehicle, or e) as a defence force emergency vehicle.
End-outline marker lamp	means a position lamp designed to be fitted near the outer extremity of a vehicle in addition to forward-facing and rearward-facing position lamps, and includes a cab roof lamp.
Engine brake	means a device or feature of an engine to increase, when applied, the retardation force provided by the engine that can be utilised to control the speed of the vehicle.
Enter service	in relation to a vehicle, means to begin to be operated in service on the road in New Zealand for the first time in compliance with registration requirements of the Transport (Vehicle and Driver Registration and Licensing) Act 1986.
Entered service as a passenger service vehicle	means the most recent occasion of the vehicle entering service as a passenger service vehicle.
Entry inspection and certification	means inspection and certification of a vehicle that is entering or re-entering service, and that is carried out by a TSD Agent.
Evidence of vehicle inspection	in relation to a vehicle, means any certificate, label or document issued as evidence of the completion of the periodic vehicle inspection requirements in respect of that vehicle (ie a WoF or CoF label or an Alternative Fuel Inspection Certificate, but not a temporary permit).
Exhaust system	means a pipe assembly through which the engine exhaust gases pass to the atmosphere and includes some means of sound attenuation.

Fifth wheel	means a device fitted to a vehicle to enable a semi-trailer to be connected to it by means of a kingpin so that the semi-trailer may be towed.
First registered	in relation to a motor vehicle, means, unless specified otherwise, first registered in any country.
Fog lamp	means a high-intensity lamp designed to aid the driver or other road users in conditions of severely reduced visibility, including fog or snow, but not including clear atmospheric conditions under the hours of darkness, and that is a) a front fog lamp, or b) a rear fog lamp.
Foot room	means an area on the floor in front of the seat or partially under the seat to accommodate the feet of the person sitting on the seat.
Forestry	in relation to purpose or operations, means connected directly with the operation or management of a forest. A 'forestry chipper' is a vehicle that is designed and used exclusively in this capacity.
Forklift	means a motor vehicle (not fitted with self-laying tracks) designed principally for lifting, carrying and stacking goods by means of one or more tines, platens or clamps.
Forward distance	means: a) in relation to a rigid vehicle, or the front section of an articulated bus, the distance from the rear axis to the front of the vehicle or its load, whichever is foremost b) in relation to a full trailer, the distance from the rear axis to the front of the trailer (excluding the drawbar and front axle set with its associated carriage) or its load, whichever is foremost c) in relation to a simple trailer, or the rear section of an articulated bus, the distance from the rear axis to the centre of the point of attachment to the towing vehicle d) in relation to a semi-trailer, the distance from the rear axis to centre of the kingpin e) in relation to a pole trailer with only one axle set, the distance, excluding load, from the trailer's rear axis to the centre of the point of attachment to the towing vehicle with the drawbar fully extended f) for a pole trailer having two axle sets, the distance, excluding load, from the trailer's front axis to the centre of the point of attachment to the towing vehicle with the drawbar fully extended.
Foundation brake	means the basic brake assembly fitted to each axle or road wheel which produces the braking force necessary to bring a vehicle to a stop; and includes the complete drum or disc brake.
Front axis	means: a) the centre point of the front axle set of a trailer that has two axle sets and is steered by the front axle set, or b) the centre of the foremost axle of a rigid vehicle with motive power.
Front fog lamp	means a fog lamp designed to provide a dipped beam of light to the front of a motor vehicle for the purpose of illuminating the road ahead of that vehicle.
Front overhang	means the distance measured to the foremost point of the vehicle, including its load but in the case of a full trailer excluding the drawbar, from the following positions: a) for a rigid vehicle, from the front edge of the driver's seat, when in the rearmost position, or b) for a semi-trailer, the centre of the kingpin, or c) for a full trailer, the centre of the turntable, or d) for a simple trailer, the centre of the tow coupling, or e) for the load of a pole trailer combination, the centre of the turntable on the towing vehicle.

Frontal impact protection system	means a set of associated parts, components and systems incorporated in a motor vehicle to protect occupants in a frontal impact collision.
Full trailer	means a trailer with two axle sets, the foremost of which is steered by a drawbar, and includes a semi-trailer with non-steering axles coupled to a converter dolly.
Goods	means all kinds of movable personal property, and includes articles sent by post and animals.
Goods service	means the carriage of goods on any road, whether or not for hire or reward, by means of a motor vehicle whose gross laden weight is 6000 kg or more, and includes the letting on hire of a motor vehicle whose gross laden weight is 6000kg or more by a person who drives the vehicle or provides a driver for the vehicle, where the motor vehicle is used for the carriage of goods.
Goods service licence	means a transport service licence granted by the NZTA that authorises its holder to carry on a goods service.
Goods service vehicle	means a motor vehicle used or capable of being used in a goods service for the carriage of goods, but does not include a vehicle specified as an exempt goods service vehicle in the regulations or the rules.
Goods vehicle	means a motor vehicle that is constructed primarily for the carriage of goods.
Gross combination mass	means, for a vehicle that is permitted to tow another vehicle, the maximum permitted combined mass of the towing vehicle and any combination of attached trailers or vehicles, determined by the vehicle manufacturer and approved by the NZTA, or determined by the NZTA.
Gross laden weight	<p>in relation to a motor vehicle, means:</p> <p>a) the greatest of the following weights:</p> <ul style="list-style-type: none"> i. a weight specified (subsequent to the latest modification specified, if any) as the gross laden weight of the vehicle by the manufacturer of the vehicle ii. a weight specified as the gross laden weight of the vehicle, or of a vehicle of that kind, by or under the regulations or the rules iii. the weight of the vehicle, together with the load that the vehicle is for the time being carrying, including equipment and accessories <p>b) if evidence is adduced in respect of any but not all of the 3 weights referred to in paragraph (a), the greater of the weights, or (as the case may be) the only weight, in respect of which evidence is adduced</p> <p>c) if evidence is not adduced in respect of any of the weights referred to in paragraph (a), the total of the unladen weight of the vehicle and the weight of the maximum load that the vehicle may safely carry.</p>
Gross mass (GM) (or gross weight)	in relation to any vehicle or combination vehicle, means the mass of that vehicle and its load, equipment, and accessories, which may be determined by adding the mass on the vehicle's axles or axle sets.
Gross vehicle mass (GVM)	<p>means either:</p> <p>a) the maximum permitted mass of a vehicle, which includes the mass of the accessories, the crew, the passengers and load, and is, unless (b) applies, the gross vehicle mass specified (subsequent to the latest modification, if any) by the manufacturer of the vehicle, or</p> <p>b) if a person approved for the purpose by the NZTA determines that the gross vehicle mass of a vehicle should differ from that specified by the manufacturer, taking into account evidence on the capability of the systems and components of the vehicle, or the effects of any modification, that mass determined by that person.</p>
Groundspreader	means a vehicle designed specifically for the carriage of powder or particulate artificial fertilisers on the road, and for the distribution of those fertilisers directly from the vehicle onto the land by means of a

	mechanical or pneumatic distributor that forms part of the vehicle.
Group	<p>in relation to vehicles, means a collective category of the vehicle classes listed under 3.2 of the Introduction as follows:</p> <p>(a) Group A means vehicles of class AA and AB</p> <p>(b) Group L means vehicles of class LA, LB, LC, LD and LE</p> <p>(c) group M means vehicles of class MA, MB, MC, MD and ME</p> <p>(d) Group N means vehicles of class NA, NB and NC</p> <p>(e) Group T means vehicles of class TA, TB, TC and TD.</p>
Head restraint	means a fitting forming part of a vehicle seat intended to restrain occupants' heads from excessive movement in the event of a crash.
Headboard	means the substantially vertical part of the forward end of a flat deck or curtain-sided body of a vehicle.
Headlamp	<p>means a lamp designed to illuminate the road ahead of a vehicle, and that is:</p> <p>(a) a dipped-beam headlamp, or</p> <p>(b) a main-beam headlamp, or</p> <p>(c) a combination of a dipped-beam headlamp and a main-beam headlamp.</p>
Heavy haulage trailer	means a trailer that is fitted with an hydraulic suspension system that allows the adjustment of the ride height, and for which the pressure in the hydraulic system varies significantly at any given load condition of the trailer depending solely on the ride height.
Heavy (motor) vehicle	<p>means a motor vehicle that is:</p> <p>(a) of class MD3, MD4, ME, NB, NC, TC or TD, or</p> <p>(b) a vehicle not listed under 3.2 of the Introduction with a gross vehicle mass that exceeds 3500 kg.</p>
Heavy passenger service vehicle (heavy PSV)	means a passenger service vehicle whose gross vehicle mass exceeds 3500kg.
Heavy vehicle specialist inspection and certification	means specialist inspection and certification of specific aspects of a heavy vehicle.
High-mounted stop lamp	means a stop lamp that is designed to be fitted in a central, high-mounted position at the rear of a vehicle.
Hook truck	means a vehicle recovery service vehicle with a crane hoist that partially lifts the vehicle to be recovered, which is then towed in this position.
Hours of darkness	<p>means:</p> <p>(a) a period of time between half an hour after sunset on one day and half an hour before sunrise on the next day, or</p> <p>(b) any other time when there is not sufficient daylight to render clearly visible a person or vehicle at a distance of 100 m.</p>
Hub	means the part of a vehicle that is attached to the axle and rotates on, or with, the axle, and to which the wheel is attached, and includes any bearings.

HVS	means heavy vehicle specialist, as in HVS certification.
Hydraulic brake	means a brake that utilises hydraulic pressure to activate the foundation brake, whether its operation is assisted by compressed air, vacuum or any other means.
Independent brake	means a brake of which the entire operating mechanism or system is either: (a) distinct and separate from all parts or connections of any other brake or brake system, so that the independent brake cannot be adversely affected by the operation or failure of any other brake, or (b) common to any other brake or brake system only in parts or connections which are of such design and strength that under normal operating conditions and with a proper standard of maintenance there is no reasonable probability of failure by reason of the failure of any other brake or brake system.
Indirect trailer service brake	means a service brake fitted to a trailer where the action of the driver of a towing vehicle applying the brakes of that vehicle results in a reaction by the trailer that is used to progressively regulate the trailer brake effort.
Inspecting organisation	means a person or organisation appointed by the NZTA who is responsible for inspection and certification outcomes.
Inspection and certification	means the performance of two or more of the following, for the purposes of determining compliance with applicable requirements: (a) examining vehicles (b) determining whether or not a vehicle or specific aspect of a vehicle complies with applicable requirements (c) issuing evidence of vehicle inspection, a conditional permit or a certificate of loading (d) recording and making available information about vehicles (including their systems, components, devices, fittings and equipment).
Inspection and certification document	means a document required, produced or issued in the inspection and certification process, including a plate, a label, an electronic record and a check sheet.
Inspection and certification outcome	in relation to a vehicle, means: (a) production of a record of determination as appropriate to the inspection and certification activity, or (b) provision of other records and information about the vehicle to the NZTA or other persons, or (c) production of evidence of vehicle inspection, conditional permits or certificates of loading.
Installer	in relation to glazing, means a person who repairs or modifies a vehicle by installing glazing in the vehicle.
Inter-vehicle spacing	means the distance between a towing vehicle (excluding the tow coupling shroud) and trailer (excluding the drawbar or tow rope or front dolly but including the load).
Interior lamp	means a lamp designed to illuminate the interior of the vehicle for the convenience of passengers.
J-hook assembly	means a load-rated metal lashing that: (a) consists of a bush, fastener, associated washer or washers, and J-shaped bar including its threaded portion, and (b) is used for the retention of a stockcrate or detachable bin to the vehicle load platform, and (c) is vertically fixed either inside or outside the deck coaming rail and tensioned through a permanently fitted bush on the crate or bin structure by way of a threaded fastener.

Jinker pole	means a telescoping or sliding pole that forms the drawbar to steer a pole trailer.
Kingpin	means a pin attached to the skid plate of a semi-trailer and used for connecting the semi-trailer to the fifth wheel of a towing vehicle.
Laden weight	means the weight of the vehicle and its load for the time being carried.
Laminated glass	means glazing consisting of two or more pieces of sheet glass, plate glass or float glass bonded together by one or more intervening layers of plastic material.
Lamp	means a device designed to emit light, and includes an array of separate light sources that appear as a continuous illuminated surface.
Lap-and-diagonal seatbelt	means a seatbelt comprising a lap strap that passes across the front of the wearer's pelvic region, and a diagonal strap that passes across the front of the wearer's torso from one side of the pelvic region to the shoulder on the opposite side.
Lap seatbelt	means a seatbelt that passes solely across the front of the wearer's pelvic region.
Lifting gear	in relation to a vehicle recovery service vehicle, means any equipment used to lift another vehicle, and includes towing attachments.
Light (motor) vehicle	means a motor vehicle that is: (a) of group A or L, or of class MA, MB, MC, MD1, MD2, NA, TA or TB, or (b) a vehicle not listed under 3.2 of the Introduction with a gross vehicle mass of 3500kg or less.
Light output	means the intensity or brightness of light emitted from lighting equipment per unit area in a given direction.
Light passenger service vehicle (light PSV)	means a passenger service vehicle whose gross vehicle mass is 3500kg or less.
Light source	means a device that emits light, including an incandescent or fluorescent light bulb, with each filament in an incandescent bulb having multiple filaments deemed to be a separate light source.
Light trailer	means a trailer that has a gross vehicle mass of 3500 kg or less.
Lighting equipment	means equipment designed both to emit or reflect light and to be fitted to a vehicle, and includes a reflector and reflective material.
Lighting equipment endorsement	means an endorsement, relating to lighting equipment on historic vehicles, on a valid Vehicle Identity Card issued by the Vintage Car Club of New Zealand (Inc.).
Load	includes part of a load, and: (a) includes covers, ropes, ties, blocks, tackles, barrows or other equipment or objects used in the securing or containing of a load on a vehicle or the loading or unloading of a vehicle, whether or not any other load is on the vehicle, and (b) does not include animal wastes discharged from animals being carried on a vehicle at the time.
Load anchorage point	means a device permanently attached to a vehicle to enable a load to be secured or attached to the vehicle.
Load rating	means the maximum force that can be withstood without incurring any loss of structural capacity.

Load securing equipment	means equipment or a device permanently fitted to a vehicle to secure, either by itself or in conjunction with other equipment or devices such as lashings, a load to a vehicle.
Load-sharing axle set	<p>means an axle set suspension system that has effective damping characteristics on all axles of the set and is built to divide the load between the tyres on the set so that no tyre carries a mass more than 10% greater than the mass it would carry if</p> <p>(a) the load were divided in the axle set so that each tyre carries an equal load, or</p> <p>(b) the axle set is a tandem axle set comprising a twin-tyred axle and a large single-tyred axle and is built to divide the load between the tyres on the set so that</p> <ul style="list-style-type: none"> i. 60% of the load is borne by the twin-tyred axle and 40% of the load is borne by the large single-tyred axle, or ii. 55% of the load is borne by the twin-tyred axle and 45% of the load is borne by the large single-tyred axle.
Logging bolster	means a vertically orientated member attached to a vehicle that is used to secure loads of timber logs.
Logging truck	means a heavy motor vehicle designed and used principally for transporting logs.
Logging vehicle	means a vehicle that is constructed exclusively for transporting timber logs using permanently fitted log bolsters.
Low volume vehicle	<p>means a make and model of a vehicle of a class other than MD3, MD4, ME, NB, NC, TC and TD, that is:</p> <p>(a) manufactured, assembled, or scratch-built in quantities of 500 or less in any one year, and where the construction of the vehicle may directly or indirectly affect compliance of the vehicle with any of the vehicle standards prescribed by New Zealand law, or</p> <p>(b) modified uniquely, or in quantities of 500 or less in any one year, in such a way that compliance of the vehicle, its structure, systems, components or equipment with a legal requirement relating to safety performance applicable at the time of the modification may be affected.</p>
Low Volume Vehicle Code	means the code of the Low Volume Vehicle Technical Association Incorporated (LVVTA).
Low volume vehicle plate, label or authority card	means a plate, label or authority card issued in accordance with the Low Volume Vehicle Code.
Low volume vehicle specialist inspection and certification	means specialist inspection and certification of a light vehicle as specified in the Low Volume Vehicle Code.
LPG	means liquefied petroleum gas.
LVV	means low volume vehicle.
LVVTA	means the Low Volume Vehicle Technical Association. The LVVTA administers the Low Volume Vehicle Code.
Main-beam headlamp	means a headlamp designed to illuminate the road over a long distance ahead of a vehicle.
Manufacturer's	means:

operating limits	<p>(a) in relation to a motor vehicle, the allowance provided by the vehicle manufacturer in terms of performance capability and dimensions, relative to deterioration, malfunction or damage beyond which the safe performance of the vehicle, as defined by the vehicle manufacturer, is compromised, and</p> <p>(b) in relation to a system, component or item of equipment, incorporated in or attached to a vehicle, the allowance provided by the system, component or equipment manufacturer in terms of performance capability and dimensions, relative to the deterioration, malfunction or damage, beyond which the safe performance of the system, component or item of equipment (and consequently the vehicle) is compromised.</p>
Maximum towed mass	means the maximum permitted mass of all vehicles that may be towed behind a vehicle as determined by the manufacturer of the towing vehicle and approved by the NZTA.
Middle seating position	means a seating position in a vehicle that is not an outer seating position.
Military trailer	means a trailer that is used exclusively as equipment of the New Zealand Defence Force.
Mobile crane	means a non-load carrying self-propelled vehicle designed solely or principally for lifting objects using a boom with lifting gear.
Modify	in relation to a vehicle, means to change the vehicle structure from its original state by altering, substituting, adding or removing any structure, system, component or equipment, but does not include repair.
Monocoque	in relation to a motor vehicle, means that the chassis of the vehicle is integral to the body.
Motor vehicle	<p>means a vehicle drawn or propelled by mechanical power, and includes a trailer, but does not include:</p> <p>(a) a vehicle running on rails</p> <p>(b) a trailer (other than a trailer designed solely for the carriage of goods) that is designed and used exclusively as part of the armament of the New Zealand Defence Force</p> <p>(c) a trailer running on one wheel and designed exclusively as a speed measuring device or for testing the wear of vehicle tyres</p> <p>(d) a vehicle designed for amusement purposes and used exclusively within a place of recreation, amusement or entertainment to which the public does not have access with motor vehicles</p> <p>(e) a pedestrian-controlled machine</p> <p>(f) a vehicle that the NZTA has declared is not a motor vehicle under section 168A of the Land Transport Act 1998</p> <p>(g) a mobility device.</p>
Motorcycle	means a motor vehicle running on 2 wheels, or not more than 3 wheels when fitted with a sidecar, and includes a vehicle with motorcycle controls that is approved as a motorcycle by the NZTA, but does not include a moped.
Motorhome	in relation to seatbelts and seatbelt anchorages only, means a motor vehicle, other than a trailer, that is permanently equipped with features intended to make the vehicle suitable as a dwelling place, and must include at least one sleeping berth and one table, both of which may be of a design that allows them to be retracted or folded away.
Mudguard	means a fitting, inclusive of any portion of the vehicle and of any mudflaps attached, that serves to intercept material thrown up by a wheel more or less in the plane of the wheel.
Multiple-sensitive emergency-locking retractor	means a seatbelt retractor that, during normal driving conditions, allows freedom of movement by the wearer of the seatbelt by means of length-adjusting components that automatically adjust the strap to the wearer, and that is activated by two or more of the following:

locking retractor	(a) deceleration of the vehicle (ie vehicle sensitive), or (b) acceleration of the strap from the retractor (ie web-sensitive), or (c) other means of activation.
Non-steering axle	means any axle of a vehicle the wheels of which remain substantially parallel with the longitudinal centreline of the vehicle while the vehicle is turning.
Normal braking	means the level of braking applied to a vehicle that does not lock any of the vehicle's wheels and permits the vehicle to decelerate without adversely affecting directional control.
NZTA	means the New Zealand Transport Agency
Occupant	in relation to a PSV, means a passenger or a member of the crew, whether seated or standing.
Open-bodied vehicle	means a PSV which is not fully enclosed by a permanent body structure.
Operate	in relation to a vehicle, means to drive or use the vehicle on a road, or to cause or permit the vehicle to be on a road or to be driven on a road, whether or not the person is present with the vehicle.
Operation in service	in relation to a vehicle, means to be operated on the road in New Zealand after having been registered in compliance with requirements in the Transport (Vehicle and Driver Registration and Licensing) Act 1986.
Original equipment (OE)	(unless stated otherwise elsewhere in this manual) means equipment that is fitted by the vehicle manufacturer when the vehicle is manufactured, or equipment that is approved by the vehicle manufacturer for use in a specific vehicle type for a specific purpose or as a replacement for the original equipment.
Oscillating Axle	means any axle that complies with the following provisions: (a) the axle has four wheels and four or eight tyres attached to it, consisting of two pairs of wheels, and (b) each of the pair of wheels is mounted on a separate axle affixed to the vehicle so as to share the load equally between the two wheels and to permit oscillation of the separate axles in a vertical transverse plane which is at right angles to the longitudinal centreline of the vehicle, and (c) the centre of each such wheel is at least 500mm distant from the centre of every other wheel fitted to the motor vehicle.
Outdoor-access vehicle	means a PSV that is used to provide access to remote areas solely in connection with outdoor activities.
Outer seating position	means a seating position next to a side wall of the vehicle where there is no more than 500mm between the longitudinal centre of the seat and the side wall.
Outrigger	in relation to a vehicle that is fitted with a crane or hoist, means a device fitted to the vehicle that extends and stabilises the vehicle while the crane or hoist is in use.
Overall length	means the length of a vehicle or vehicle combination measured in a straight line, and includes: (a) the length of any load, and (b) the length of the drawbar in a fully extended horizontal straight ahead position measured to the towing eye centre of a full trailer when measured on its own.
Overall visible light transmittance	is the visible light transmittance (VLT) of glazing including any overlays that are applied to the glazing.

Overlay	<p>means a transparent, translucent or opaque self-adhesive or clinging film that is applied to large areas, or the entirety, of a piece of glazing for purposes such as, but not limited to, reduction of ultraviolet, infrared or visible light transmission, advertising, identification, information, protection or for aesthetic reasons, and includes:</p> <p>(a) an anti-glare band overlay, and</p> <p>(b) a stoneguard overlay, and</p> <p>(c) a sticker of a size that cannot be wholly contained within the limits relating to the location and size of stickers on a particular piece of glazing, depending on the location of that piece of glazing on the vehicle.</p>
Parking brake	means a brake that is designed for keeping the vehicle stationary, and that is readily applicable and capable of remaining applied for an indefinite period without further attention.
Passenger	means a person travelling in a vehicle but does not include the crew.
Passenger service	means the carriage of passengers on any road for hire or reward by means of a motor vehicle, and includes the letting on hire of a vehicle by a person who drives the vehicle or provides a driver for the vehicle if, during the hiring, the vehicle is used for the carriage of passengers.
Passenger service licence	means a transport service licence granted by the NZTA that authorises its holder to carry on a passenger service.
Passenger service vehicle (PSV)	<p>means:</p> <p>(a) a motor vehicle used or available for use in a passenger service for the carriage of passengers, or</p> <p>(b) a motor vehicle with more than 12 seating positions, or</p> <p>(c) a heavy motor vehicle with more than nine seating positions.</p> <p>Note The following vehicles are not required to comply with the Passenger Service Vehicles Rule requirements contained in the light PSV and heavy PSV VIRM pages:</p> <p>(a) vehicles exempted from the transport service licensing requirements</p> <p>(b) ambulances designed to carry recumbent patients</p> <p>(c) vehicles designed or modified for lawfully-detained persons</p> <p>(d) NZ Defence Force dual purpose trucks with removable seating (eg some NZ Army Pinzgauers)</p> <p>(e) NZ Defence Force armoured vehicles</p> <p>(f) Vehicles registered under the Amusement Devices Regulations 1978 that are either used in venture tourism or that are trailers designed, constructed and permitted to be drawn at a maximum speed of 50 km/h or less</p> <p>(g) Motorcycles and motorcycles with side cars.</p>
Passenger vehicle	means a motor vehicle constructed primarily for the carriage of passengers.
Permanent structure	means a non-removable structure capable of sustaining loads associated with seatbelts and seatbelt anchorages.
Pivot steer vehicle	means a vehicle with a chassis that is split into two dependent parts that are connected by a permanent steering pivot.
Pneumatic tyre	means a tyre that, when in use, is inflated by air or gas introduced from time to time under pressure so as to enclose under normal inflation a cushion of air or gas forming altogether at least half of the total area of an average cross-section of a tyre so inflated.

Pole trailer	means a trailer that is attached to a towing vehicle by a telescoping or sliding pole, and is designed to support a common long load spanning between the trailer and the towing vehicle.
Position lamp	<p>means a low-intensity lamp that is designed to indicate to road users the presence and dimensions of a vehicle, being:</p> <ul style="list-style-type: none"> (a) a forward-facing position lamp, or (b) a rearward-facing position lamp, or (c) a side-marker lamp, or (d) an end-outline marker lamp.
PRS manual	means the Performance review system manual .
Quad-axle set	<p>means a set of four axles, where:</p> <ul style="list-style-type: none"> (a) the centres of the first and fourth axles are spaced not less than 3.75m and not more than 4m apart, and (b) all axles contain an equal number of tyres, and (c) none of the axles is a single standard-tyred axle.
Radial-ply	means a pneumatic tyre structure in which the ply cords, which extend from bead to bead, are laid at approximately 90 degrees to the centreline of the tread, the carcass being stabilised by an essentially inextensible circumferential belt.
Re-enter service	in relation to a vehicle previously certified for entry into service on the road in New Zealand that has been de-registered, means to begin to be operated in service again.
Rear axis	<ul style="list-style-type: none"> (a) in relation to a vehicle with only one non-steering axle, means that axle (b) in relation to a vehicle with a non-steering axle set of two axles, means <ul style="list-style-type: none"> i. midway between those axles, if each axle has an equal number of tyres on it ii. two-thirds of the distance from the lesser-tyred axle towards the greater-tyred axle, if one axle has twice as many tyres on it as the other axle (c) in relation to a vehicle with a non-steering tri-axle set or a non-steering quad-axle set, or an overdimension vehicle with more than three axles, means midway between the extreme axles of the set (d) except as specified in (e) below, in relation to a vehicle whose rear axle set includes one or more steerable axles in conjunction with one or more non-steering axles, means midway between the extreme non-steering axles of the set (e) in relation to a semi-trailer with two non-steering axles at the front and two steering axles at the rear, means the centre line of the second non-steering axle (f) in relation to a vehicle whose rear axle set includes one or more retracted axles in conjunction with one or more non-retracted axles, means midway between the extreme non-retracted axles of the set (g) in relation to a vehicle that does not have an axle arrangement that is in paragraphs (a) to (f), means a position determined by the NZTA.
Rear fog lamp	means a fog lamp designed to indicate to road users the presence of the rear of the vehicle.
Rear overhang	<ul style="list-style-type: none"> (a) for pole trailers transporting a long load, means the distance from the rear axis or centre of the bolster to the rear of the vehicle or its load, whichever is greater (b) for all other vehicles, means the distance from the rear axis to the rear of the vehicle or its load, whichever is the greater.
Rear-registration-plate	means a lamp designed to illuminate the rear registration plate of a motor vehicle.

illumination lamp	
Rear seating position	means a seating position in a vehicle behind the driver.
Rear trailing unit distance	means the maximum distance from the centre of the fifth wheel or tow coupling on the towing vehicle to the rear of the combination.
Record of determination	means a record, in paper or electronic form, that a vehicle or specific aspect of a vehicle complies or does not comply with applicable requirements.
Reflective material	means any material that reflects incident light back towards the light source or in a specific direction, but does not include a reflector.
Reflector	means a distinct item of lighting equipment that is designed to reflect incident light back towards the light source, but does not include retroreflective material.
Registered	in relation to a vehicle, means registered under the Transport (Vehicle and Driver Registration and Licensing) Act 1986.
Rental service	means the letting of a motor vehicle on hire for the carriage of passengers (including the driver) or of goods, or both, to a person who drives the vehicle or provides a driver for the vehicle.
Rental service licence	means a transport service licence granted by the NZTA that authorises its holder to carry on a rental service.
Rental service vehicle	means a vehicle used or available for use in a rental service for letting on hire for the carriage of passengers or goods, or both, to a person who drives the vehicle or provides a driver for the vehicle.
Repair	means to restore a damaged or worn motor vehicle, its structure, systems, components or equipment, and includes the replacement of damaged or worn structures, systems, components or equipment with equivalent undamaged or new structures, systems, components or equipment.
Retarder	means a device permanently fitted to a vehicle to provide, when applied, a continuous braking effort not generated by a brake.
Retractable axle	means an axle that has a convenient adjustment to allow the axle load distribution of the axle set to be varied substantially. An axle that is retracted is not considered to be part of the axle set.
Retractor	means a device to accommodate parts, or all, of the webbing of a seatbelt.
Retrofit	in relation to a seatbelt or seatbelt anchorage in a motor vehicle, means to fit a seatbelt or seatbelt anchorage in a location where a seatbelt or seatbelt anchorage has not been fitted before.
Reversing lamp	means a lamp designed to illuminate the area behind a vehicle while it is reversing and to warn other road users that the vehicle is reversing or about to reverse.
Rigid vehicle	means a vehicle that does not have any pivot points to allow any part of the chassis of the vehicle to move or rotate in relation to any other part of the chassis of the vehicle, and includes an articulated bus and a pivot steer vehicle.
Rim	means that part of the wheel on which the tyre is mounted and supported.
Rule	means Land Transport Rule: Vehicle Standards Compliance 2002.
Safe tolerance	means the tolerance within which the safe performance of the vehicle, its structure, systems,

	components or equipment is not compromised, having regard to any manufacturer's operating limits.
Scene lamp	means a work lamp designed to provide a fixed or moveable beam of light to illuminate the area around a vehicle, or the vehicle itself.
Scratch-built vehicle	<p>means a motor vehicle that is either:</p> <p>(a) assembled from previously unrelated components and construction materials that have not been predominantly sourced from donors of a single make or model and that, in its completed form, never previously existed as a mass-produced vehicle, although the external appearance may resemble or replicate an existing vehicle, or</p> <p>(b) a modified production vehicle that contains less than the following componentry from a mass-produced vehicle of a single make and model:</p> <ul style="list-style-type: none"> i. 40% of the chassis rails and 50% of the crossmembers, or alternatively 40% of a spaceframe, or 40% of the floorpan of a unitary constructed body, whichever is appropriate, and ii. for light vehicles, 40% of the bodywork (based on surface area of body panels but not including the floorpan, internal bracing, sub panels, bulkheads or firewall).
Seat	means an assembly, or part of an assembly, intended to seat at least one person, which may or may not be integral to the structure of the vehicle.
Seat anchorage	means the parts of the vehicle structure to which a seat is attached.
Seatbelt	<p>means an assembly of straps made of webbing or metal with a securing buckle, adjusting devices and attachments, including any device for absorbing energy or for retracting the webbing, that:</p> <p>(a) is able to be anchored to the interior of a vehicle, and</p> <p>(b) is designed to diminish the risk of injury to its wearer in the event of a collision or abrupt deceleration of the vehicle by limiting the mobility of the wearer's body.</p>
Seatbelt anchorage	means the parts of the vehicle structure, seat structure or any other part of the vehicle to which a seatbelt assembly is attached.
Seating position	means a seat or part of a seat that is of a suitable size and shape for one person.
Semi-trailer	<p>means a trailer with only one axle set where the point of attachment to the towing vehicle or leading trailer:</p> <p>(a) is no further rearward than the rearmost axle of the towing vehicle or rearmost axle of the leading trailer, or</p> <p>(b) if the towing vehicle is a rigid vehicle and has more than one axle in its rear axle set, is no more than 300mm rearward of the rear axis of the towing vehicle.</p>
Service brake	means a brake for intermittent use that is normally used to slow down and stop a vehicle.
Shuttle service	means a passenger service carried on by means of a shuttle or shuttles.
Side-marker lamp	means a position lamp designed to be fitted to the side of a vehicle or its load.
Sideboard	means the substantially vertical part of the side of a flat deck body of a vehicle.
Simple trailer	means a trailer (other than a semi-trailer) that has only one axle set.
Single-axle set	means either one axle or two axles having their centres spaced less than 1m apart.

Single large-tyred axle	means a single-tyred axle that is not a single standard-tyred axle.
Single-sensitive emergency-locking retractor	means a seatbelt retractor that, during normal driving conditions, does not restrict the freedom of movement by the wearer of the seatbelt by means of length adjusting components that automatically adjust the seatbelt to the wearer, and that comprises a locking mechanism activated in an emergency by deceleration of the vehicle.
Single standard-tyred axle	means a single-tyred axle fitted with tyres smaller than: (a) a manufacturer's designated tyre section width of 330mm and a rim diameter of 24 inches at the bead seat, or (b) a manufacturer's designated tyre section width of 355mm and a rim diameter of 19.5 inches at the bead seat.
Single-tyred axle	means any axle fitted with two or more wheels, but which is neither an oscillating axle nor a twin-tyred axle.
Skid plate	means the plate structure forming part of the semi-trailer that houses the kingpin and that mounts on the coupler plate to form the connection between the towing vehicle and the semi-trailer.
Small PSV	means a passenger service vehicle, used or available for use in a passenger service for the carriage of passengers, that is designed or adapted to carry 12 or fewer persons (including the driver).
Specialist inspection and certification	means inspection and certification of a specific aspect of a vehicle.
Specialist seatbelt	means a seatbelt that is designed for specialist purposes, and includes a full harness seatbelt used for motor sport activities.
Specific purpose	in relation to the modification of a motor vehicle, includes, but is not limited to, a modification for motor sport activities and for a person with a disability.
Speedometer	means an instrument in a motor vehicle that continuously indicates to the driver the forward speed of the vehicle in either kilometres per hour or miles per hour.
Static Roll Threshold (SRT)	means the maximum level of steady turning lateral acceleration a vehicle can tolerate without rolling over, which is expressed as a proportion of 'g' where 'g' is the acceleration constant due to gravity (9.81 m/s/s).
Steering axle	means the axle of a vehicle where the wheels can turn at an angle to the centreline of the vehicle.
Steering system	means those components, parts and systems that connect the driver's controls to the vehicle's wheels or tracks by means of which the direction of motion of a vehicle is controlled.
Sticker	in relation to glazing, means a self-adhesive or clinging film, with or without print on it, that is applied for purposes such as, but not limited to, advertising, identification, information, or for aesthetic or legal reasons.
Stinger lift truck	means a vehicle recovery service vehicle with an arm that partially lifts the vehicle to be recovered, which is then towed in this position.
Stockcrate	means a container designed for transporting livestock, which can be secured to a vehicle.
Stockcrate retention device	means one or more restraining devices or lashings designed to facilitate the attachment of the stockcrate to the deck or chassis of a vehicle.

Stoneguard overlay	means a clear overlay that is transparent and that is applied along the bottom edge of the windscreen for the purpose of preventing damage to the windscreen from stones and other debris thrown up by other vehicles.
Straddle truck	means a powered vehicle that transports a load beneath its chassis and between its wheels.
Stretch limousine	means a saloon-type motor vehicle that has been modified to increase the standard wheelbase by the insertion of a structure of a significant length whose cross-section conforms to that of the passenger compartment.
Sun visor	means any attachment mounted above the inside of the windscreen and provided for the purpose of shielding the eyes of the driver and other front seat passengers from solar glare.
Supply line	means the part of a brake circuit that supplies energy in the form of compressed air or in any other suitable form from the towing vehicle to the towed vehicle.
Suspension system	means a system that allows controlled and limited movement of an axle relative to the chassis or body of a vehicle, and includes a spring and damping system and any associated controls.
Swept path	means the maximum road width required by a vehicle when it negotiates a turn.
Symmetric dipped-beam headlamp	means a dipped-beam headlamp that is not an asymmetric dipped-beam headlamp.
Tailboard	means the substantially vertical part of the rear end of a flat deck or curtain-sided body of a vehicle.
Tandem axle set	means an axle set of two axles having their centres spaced not less than 1 m and not more than 2 m apart.
Temporary permit (or 28-day permit)	means inspection and certification document that confirms that a determination has been made that the vehicle is safe to be operated under specified conditions. This permit may be used only for CoF vehicles.
Temporary-use spare tyre	means a combination tyre and wheel designed and constructed solely for temporary use under restricted driving conditions, and not intended for use under normal driving conditions. (Commonly known as a 'space-saver tyre'.)
Three-point linkage	means, for a tractor or agricultural trailer, a towing connection that has three points of attachment.
Threshold pressure	for an axle of an air-braked vehicle, means the pressure measured at the control line of the brake coupling when a braking effect on the axle begins.
Towbar	means the part of the towing vehicle to which a coupling for a light trailer is connected.
Towing connection	means the combination of components that enables one vehicle to tow or be towed by another vehicle, and includes a towbar, drawbar, drawbeam and coupling.
Towing vehicle	means a rigid vehicle that tows a trailer or other motor vehicle.
Tractor	means a motor vehicle (not being a traction engine) designed exclusively for traction at speeds not exceeding 50 km/h (Note: See also definition for agricultural tractor).
Trailer	means a vehicle without motive power that is capable of being drawn or propelled by a motor vehicle from which it is readily detachable, but does not include

	<p>(a) a sidecar attached to a motorcycle, or</p> <p>(b) a vehicle normally propelled by mechanical power while it is being temporarily towed without the use of its own power.</p>
Trailer brake hand control	means a hand-operated control capable of applying the service brake of the trailer or trailers.
Transmission	in relation to a motor vehicle, means the gearing system and related components, including a driveshaft, by which power is transmitted from the flywheel or the engine output shaft to the input shafts of the powered axles.
Transport service licence	<p>means any of the following licences granted by the NZTA:</p> <p>(a) a goods service licence</p> <p>(b) a passenger service licence</p> <p>(c) a rental service licence</p> <p>(d) a vehicle recovery service licence.</p>
TRC	means the Transport Registry Centre of the NZTA.
Tri-axle set	<p>means a set of three axles, where</p> <p>(a) the centres of the first and third axles are spaced not less than 2m and not more than 3m apart, and</p> <p>(b) all axles contain an equal number of tyres, and</p> <p>(c) none of the axles is a single standard-tyred axle.</p>
TSD Agent (TSDA)	means a transport service delivery agent, that is the NZ Automobile Association, Vehicle Testing NZ, or Vehicle Inspection NZ.
Tube	means an inflatable elastic liner, in the form of a hollow ring fitted with an inflation valve assembly, designed for insertion into certain tyre assemblies to provide a cushion of air or gas, that, when inflated, supports the wheel. (Also known as an 'inner tube'.)
Twin-steer axle set	means an axle set of two axles with single tyres, where both axles are connected to the same mechanism in order to steer similarly.
Twin-tyred axle	means any axle, not being an oscillating axle, that has a wheel track of 1.3m or more and is equipped with four or more tyres.
Two-point linkage	means, for an agricultural trailer, a towing connection that has two points of attachment.
Tyre carcass	means that structural part of a pneumatic tyre other than the tread and outermost rubber of the sidewalls that, when inflated, contains the gas that supports the load.
Tyre load rating	means the maximum load a tyre can carry at the corresponding cold inflation pressure prescribed by the tyre manufacturer and the speed indicated by its speed category symbol.
Tyre pressure control system	means a system designed to maintain, monitor or vary tyre pressure while the vehicle is in operation.
Tyre rolling radius	means the distance from the centre of the wheel to the road.
Tyre tread	means the portion of a tyre that contacts the road.

Unclassified (motor) vehicle	In relation to lighting, means a motor vehicle not listed under 3.2 of the Introduction.
Unladen mass (or tare weight)	in relation to a vehicle, means the mass of the vehicle together with the fuel in its fuel system (if any) and the equipment and accessories on it that are necessary for its operation for the purpose for which it was designed.
Valid	in relation to a VIN, means capable of being decoded to provide information about the vehicle, from a unique number that has been assigned to the vehicle in the vehicle's country of origin or by a person appointed by the NZTA.
Vehicle Identification Number (VIN)	<p>means a group of letters and numbers, consisting of 17 characters, that is affixed to the vehicle and that complies with the requirements of one of the following</p> <p>(a) ISO 3779, or</p> <p>(b) Australian Design Rule 61/01, or</p> <p>(c) Chapter 565 of the Code of Federal Regulations 49.</p> <p>The VIN can be decoded to provide identifying information about the vehicle.</p>
Vehicle inspector	means an individual appointed by the NZTA to carry out inspection and certification activities in accordance with requirements and conditions imposed by the NZTA.
Vehicle recovery service	means the towing or carrying on any road of a motor vehicle, irrespective of the size or design of the towing or carrying vehicle, and whether or not the towing or carrying of the vehicle is carried out by a person intending to carry out repairs on the vehicle.
Vehicle recovery service licence	means a transport service licence granted by the NZTA that authorises its holder to carry on a vehicle recovery service.
Vehicle recovery service vehicle	means a vehicle used or available for use in a vehicle recovery service for towing or carrying on a road any motor vehicle.
Visible light transmittance (VLT)	is the proportion of visible light that passes through glazing, measured perpendicular to the glazing.
Warrant of fitness (WoF)	means evidence of vehicle inspection issued to a vehicle listed under 3.3.2 of the Introduction.
Warrant of fitness inspection and certification	means periodic in-service inspection and certification of a vehicle listed under 3.3.2 of the Introduction.
Wheel	means a rotating load-carrying member between the tyre and the hub, which usually consists of two major parts, the rim and the wheel disc, and which may be manufactured as one part, or permanently attached to each other or detachable from each other and, where relevant, includes the tyre fitted to the rim.
Wheel centre-disc	means that part of the wheel that is the supporting member between the hub and the rim.
Wheel spacer	means an additional component used for the purpose of positioning the wheel centre-disc relative to the hub, or in multiple wheel sets, for the purpose of positioning the wheel centre-disc relative to another wheel.

Wheel track	means the distance between the centres of the left-side and right-side wheels of a pair of wheels.
Wheelbase	means the distance from a vehicle's rear axis to its front axis.
Windscreen	means all glazing extending across the front of a vehicle that is not parallel to the vehicle's longitudinal centreline, but does not include a wind deflector.
Wire glass	means glass that incorporates reinforcing wire mesh. This glass is sometimes fitted to dangerous goods vehicles and is not usually marked.
Work lamp	means a high-intensity lamp, which is not necessary for the operation of the vehicle but is designed to illuminate a work area or scene, and includes: <ul style="list-style-type: none"> (a) a scene lamp, and (b) a spot lamp, and (c) an alley lamp.

Page amended **1 June 2013** (see [amendment details](#)).

Page amended **1 June 2013** (see [amendment details](#)).

8 Sample certification documents

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- **Figure 8-1-1.** LVV certification plates
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- **Figure 8-1-2.** Modification declaration
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- **Figure 8-1-3.** LVV Authority cards (can only be issued by MotorSport NZ and the NZ Hot Rod Association)
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- **Figure 8-1-4.** Vintage Car Club identity cards
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- **Figure 8-1-5.** Vehicle licence label
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- **Figure 8-1-6.** LT400 Heavy vehicle specialist certificate
-

Figure 8-1-1. LVV certification plates

Low Volume Vehicle Technical Association
Low Volume Vehicle Certification Plate

Certification Date

Certification Authority

Make Reg. No. MOT Approved plate

VIN/CHAS. No. Plate No.

Body Style Model

Cons. Body/Chas.

Susp/Axle/Stg. Chassis rating kg

Brakes

Rim Drive

Engine Capacity Make No.

Config. Induction

☐ Exemptions

LVV certification plate in use up to November 1993

Low Volume Vehicle Certification Plate

Certification Plate No.

Certification Date

Make Model

VIN No. Reg. No. Year

Body Style Chassis rating kg

Cons. Body/Chas.

Susp/Axle

Brakes

Stg. Rim

Gearbox Engine Make

Config. Induction No.

☐ Exemptions

LVV certification plate in use between November 1993 and May 1994

Low Volume Vehicle Certification Plate

Certification Plate No.

Certification Date

Make Model

VIN No. Reg. No. Year

Body Style Chassis rating kg

Cons. Body/Chas.

Susp/Axle

Brakes

Stg. Rim

G-Box Eng. Cap Make

Config. Induction No.

☐ Exemptions

LVV certification plate in use from May 1994

Low Volume Vehicle Certification Plate

transportsafety Plate No.

Date

Make Model

VIN Reg. No. Year

Body Style Chassis rating

Cons. Body/Chas.

Susp/Axle

Brakes

Stg. Rim

G-Box Eng. Cap Make MS Word

Config. Induction No.

☐ Exemptions

LVV certification plate in use up to 2007

Low Volume Vehicle Certification Plate

Land Transport NZ Plate No.

Ikiki Whenua Aotearoa Date

Make Model

VIN. Reg. No. Year

Body Style Chassis rating kg

Cons. Body/Chas.

Susp/Axle

Brakes

Stg. Rim

G-Box Eng. Cap Make

Config. Induction No.

Exemptions

LVV certification plate in current use

Figure 8-1-2. Modification declaration

VEHICLE MODIFICATION DECLARATION	
The vehicle identified below has been examined by (Warrant Authority; name, number and address): <div style="border-bottom: 1px solid black; height: 1.2em; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; height: 1.2em; margin-bottom: 2px;"></div>	
Vehicle make <div style="border-bottom: 1px solid black; height: 1.2em; display: inline-block; width: 400px;"></div>	
Model (or description if home built) <div style="border-bottom: 1px solid black; height: 1.2em; display: inline-block; width: 400px;"></div>	
Chassis No. <div style="border-bottom: 1px solid black; height: 1.2em; display: inline-block; width: 150px;"></div> Regd No <div style="border-bottom: 1px solid black; height: 1.2em; display: inline-block; width: 150px;"></div> Year of mfr <div style="border-bottom: 1px solid black; height: 1.2em; display: inline-block; width: 100px;"></div>	
Schedule of Modifications (Continue on reverse if necessary) Engine (capacity, configuration, make, carburation, supercharged or turbo-charged, any other special tuning modifications) - <div style="border-bottom: 1px solid black; height: 1.2em; margin-bottom: 2px;"></div> <div style="border-bottom: 1px solid black; height: 1.2em; margin-bottom: 2px;"></div>	
Transmission/Rear Axle (type, manufacturer, donor vehicle) - <div style="border-bottom: 1px solid black; height: 1.2em; display: inline-block; width: 400px;"></div>	
Front axle (type, manufacturer, donor vehicle) - <div style="border-bottom: 1px solid black; height: 1.2em; display: inline-block; width: 400px;"></div>	
Brakes (disc, drum, diameter, donor vehicle) Front <div style="border-bottom: 1px solid black; height: 1.2em; display: inline-block; width: 150px;"></div> Rear <div style="border-bottom: 1px solid black; height: 1.2em; display: inline-block; width: 150px;"></div>	
Body (structural modifications) - <div style="border-bottom: 1px solid black; height: 1.2em; display: inline-block; width: 400px;"></div>	
<p>Declaration by the Approved Person examining the vehicle: I confirm that I examined the above vehicle and the information noted accurately describes the modifications to the vehicle, and that the modifications are not required to be certified under the Transport (Vehicle Standards) Regulations 1990.</p> <div style="display: flex; justify-content: space-between; align-items: flex-end; margin-top: 20px;"> <div style="width: 30%;"> <div style="border-bottom: 1px solid black; height: 1.2em; margin-bottom: 2px;"></div> signature </div> <div style="width: 30%;"> <div style="border-bottom: 1px solid black; height: 1.2em; margin-bottom: 2px;"></div> name (print) </div> <div style="width: 30%; text-align: right;"> / /199 </div> </div> <p>Original of this declaration to be given to the vehicle owner and a copy sent to Vehicle Standards, Land Transport, PO Box 27-459, Wellington within five working days</p>	

Note: Other formats are available, and an invoice from the company carrying out the modification is acceptable.

Figure 8-1-3. LVV Authority cards (can only be issued by MotorSport NZ and the NZ Hot Rod Association)



LV Low Volume Vehicle Technical Association Inc.

LOW VOLUME VEHICLE AUTHORITY CARD

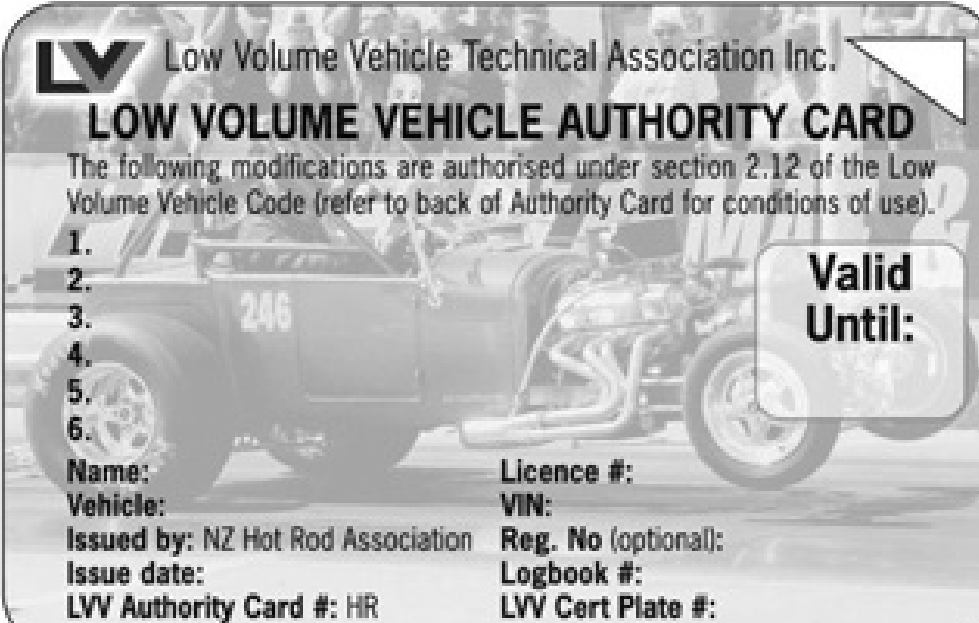
The following modifications are authorised under section 2.12 of the Low Volume Vehicle Code (refer to back of Authority Card for conditions of use).

1.
2.
3.
4.
5.
6.
7.
8.
9.

Valid Until:

Name:
Vehicle:
Issued by: MotorSport New Zealand
Issue date:

Licence #:
VIN:
Reg. No (optional):
Logbook #:



LV Low Volume Vehicle Technical Association Inc.

LOW VOLUME VEHICLE AUTHORITY CARD

The following modifications are authorised under section 2.12 of the Low Volume Vehicle Code (refer to back of Authority Card for conditions of use).

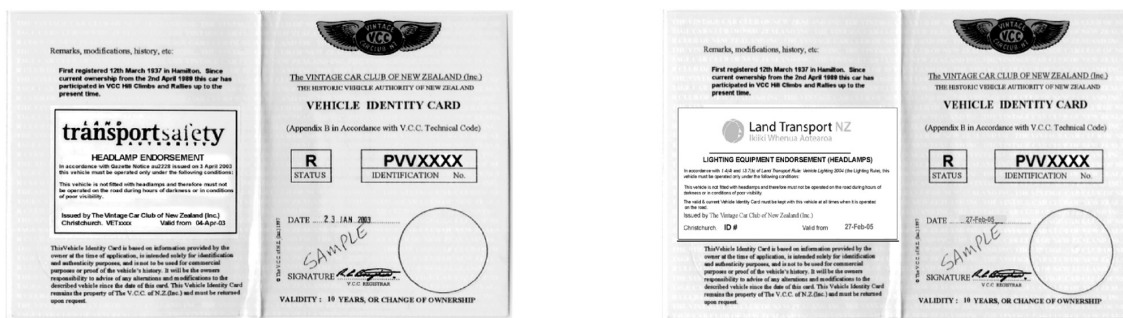
1.
2.
3.
4.
5.
6.

Valid Until:

Name:
Vehicle:
Issued by: NZ Hot Rod Association
Issue date:
LVV Authority Card #: HR

Licence #:
VIN:
Reg. No (optional):
Logbook #:
LVV Cert Plate #:

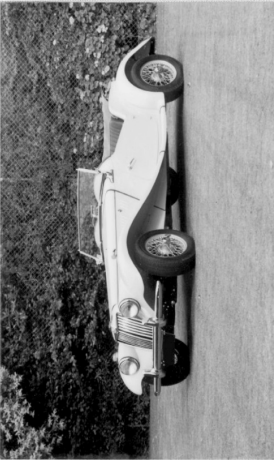
Figure 8-1-4. Vintage Car Club identity card



(a) before 27 February 2005

(b) on and after 27 February 2005

Vintage Car Club (Inc.) identity card cover

MAKE YEAR MADE TYPE / MODEL CHASSIS No. BODY No. ENGINE No. MAKE No. OF CYL/s CAPACITY NAME OF OWNER ADDRESS REGO No. V.I.N. No. VEHICLE CLASSIFICATION <input type="checkbox"/> In Accordance with Technical Code 3.1.2 VEHICLE CATEGORIES (PERIOD) <input type="checkbox"/> In Accordance with Technical Code 3.3.4 ISSUE DATE NAME	 <p>Photograph of Vehicle in present form</p>
--	---

Vintage Car Club (Inc.) identity card inside

The Vintage Car Club of New Zealand (Inc.) is recognised by the NZTA as the historic motor vehicle authority in New Zealand. They issue a vehicle identity card that can be used to confirm:

- < p>
 b) that the vehicle is a genuine historic motor vehicle and not a replica.

Historic vehicles that do not meet normal requirements for lighting equipment must present a vehicle identity card with a lighting endorsement at an in-service inspection. To pass the inspection the vehicle must meet the conditions of the endorsement. A historic vehicle may also have an endorsement for not meeting the normal requirements for visible smoke emissions.

Vehicle owners who would like more details should contact:

The National Vehicle Registrar
 Vintage Car Club of New Zealand Inc.
 PO Box 2546
 CHRISTCHURCH

Figure 8-1-5. Vehicle licence label

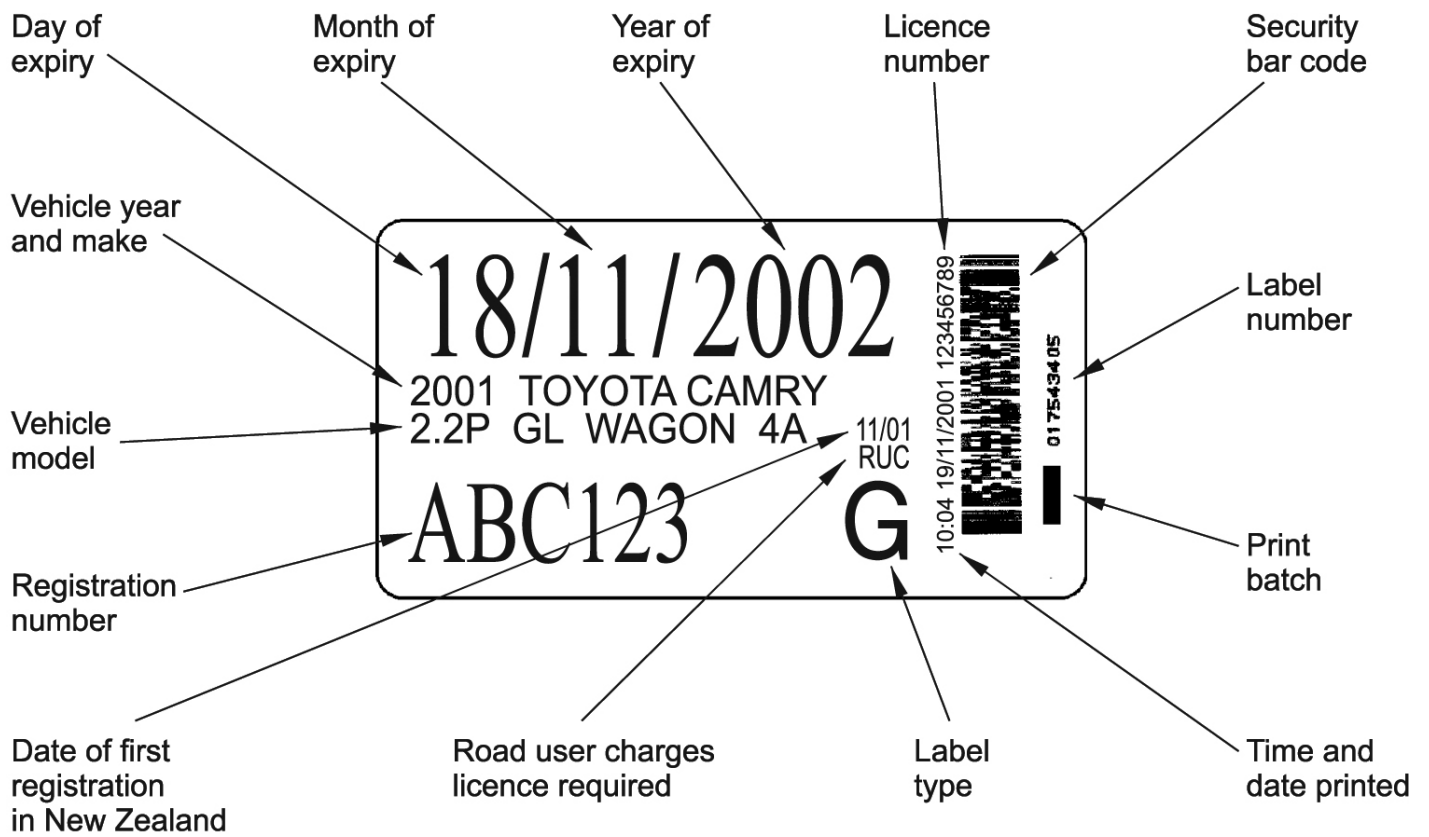


Figure 8-1-6. LT400 Heavy vehicle specialist certificate

Heavy Vehicle Specialist Certificate

Must be presented to a Transport Service Delivery Agent
Heavy Vehicle Specialist Inspector and Inspecting Organisation

Heavy Vehicle Specialist Inspector's Name (PRINT IN CAPS)

ID

Vehicle Registration*

VIN / Chassis Number

Component being certified:

☐

Chassis Modification

☐

Load Anchorage

☐

Log Bolsters

☐

Towing Connection

☐

Brakes

☐

SRT

☐

PSV Stability

☐

PSV Rollover

☐

Swept Path

☐

PBS

Certification Category

Description of Work

Code/Standard Certified to

Component Load Rating(s)

General Drawing Number(s)

Supporting Documents

*Special Conditions

Certification Expiry Date (if applicable)

or

Hubodometer Reading (whichever comes first)

Declaration

I the undersigned, declare that I am the Heavy Vehicle Specialist Inspector identified above and I hold a current valid appointment. I certify that the above mentioned vehicle component's design, manufacture and installation, and this certification complies in all respects with the Land Transport Rule Vehicle Standards Compliance 2002 and my Deed of Appointment. To the best of my knowledge the information contained in this Certificate is true and correct.

Designer's ID (if certified by a manufacturer)

Inspector's / Delegate's Signature

*Delegate's/Inspector's Name (PRINT IN CAPS)

ID number

Date

Number

COF Vehicle Inspector ID:

COF Vehicle Inspector Signature:

Date

All fields excluding those marked with * must be completed before this certificate can be accepted.

Certification category	Description	Required documentation
HVEC, HVMC, HMCD	Chassis, suspension, steering, PSV rollover strength, PSV stability	LT400 Heavy vehicle specialist certificate
HVET, HVMT, HMTD	Towing connections	LT400 Heavy vehicle specialist certificate
HVEA, HVMA, HMAD	Load anchorages	LT400 Heavy vehicle specialist certificate
HVEL, HVML, HMLD	Log bolster attachment code	LT400 Heavy vehicle specialist certificate
HVEK, HVMK, HMKD	Brake modification including New Zealand Heavy Vehicle Brake Specification (HVBNZ)	LT400 Heavy vehicle specialist certificate
	Heavy vehicle brake code (HVBC)	LT400 Heavy vehicle specialist certificate, and Statement of Compliance with the HVBC
HVS1, HVS2	Static roll threshold (SRT)	LT400 Heavy vehicle specialist certificate and SRT compliance certificate
HVP1	Swept path Certification	LT400 Heavy vehicle specialist certificate
HVP2	Performance based standards	LT400 Heavy vehicle specialist certificate

2 Vehicles certified by the New Zealand Army may be certified on an 'Army Heavy Vehicle Specialist Certificate' instead of an LT400, provided the following conditions are met:

- the vehicle is a heavy motor vehicle operated by the New Zealand Army
- the heavy vehicle specialist vehicle inspector is identified as Lt Col K. M. Barclay
- Lt Col K. M. Barclay's signature, which may be electronic, appears in the 'Inspector's signature' box
- the 'Examiner's signature' box contains an original signature, that is the signature must be pen ink, not printed or copied.

Page amended **1 June 2013** (see [amendment details](#)).

General vehicles

1 Vehicle identification

1-1 VIN and chassis number

Important Ensure that the VIN or chassis number is recorded in full on the checksheet.

This number must be:

- the VIN if fitted – not the chassis number (locally allocated VIN)
- the stamped VIN on the VIN plate – not the VIN etched on the glazing.

Also refer to **Table 1-1-1. Location of New Zealand VIN numbers**, **Figure 1-1-1. Structure of a VIN issued by the NZ Transport Agency** and **Figure 1-1-2. Structure of a VIN issued by the vehicle manufacturer**.

Reasons for rejection

Mandatory requirements

1. A vehicle first registered or re-registered in New Zealand before 1 April 1994 does not have a VIN or chassis number ([Note 1](#)).
2. A vehicle first registered or re-registered in New Zealand from 1 April 1994 does not have a VIN number ([Note 1](#)).
3. A VIN number is not valid ([Note 1](#)) ([Note 2](#)).

Condition

4. A VIN or chassis number has been ([Note 1](#)):
 - a) removed, or
 - b) erased, or
 - c) altered, or
 - d) defaced, or
 - e) obscured, or
 - f) destroyed, or
 - g) obliterated, or
 - h) affixed unlawfully or by unauthorised persons.

Note 1

The vehicle inspector must notify the Police and the NZTA using the [vehicle report form](#) if there is reason to believe that the VIN or chassis number has been tampered with in any way.

The vehicle inspector must not issue a WoF/CoF/permit until approved by NZTA. Approval will usually include the issue or re-issue of a new VIN plate.

Refer the vehicle to a VIN issuing agent ([VTNZ](#), [VINZ](#), [NZAA](#)). They will inspect the vehicle and seek approval from NZTA to issue or re-issue a VIN plate.

Note 2

A valid VIN is a unique number that has been assigned to the vehicle in the vehicle's country of origin or by a person appointed by the NZTA. It consists of 17 characters that never contain the letters I, O or Q, and that is capable of being decoded to provide identifying information about the vehicle.

Table 1-1-1. Location of New Zealand VIN numbers

Vehicle	Permitted VIN locations
Vehicles that are not forward controlled (passenger cars and off-road passenger vehicles)	<ul style="list-style-type: none"> • In the engine compartment on the right-hand side of the firewall • In the engine compartment on the right-hand side adjacent to the front suspension mounting point • In a location inside the engine compartment approved by the NZTA for a specified vehicle or vehicle model • On the firewall or inner guards so it is visible from the front of the vehicle.
Forward-controlled vehicles (passenger vans and off-road vehicles)	<ul style="list-style-type: none"> • In the passenger compartment, on the top of the right-hand side wheel arch adjacent to the seat cushion • In the passenger compartment, on the inner panel of the right-hand A-pillar, adjacent to where the floor meets the A-pillar • In the passenger compartment on the B-pillar.
Goods vehicles and light omnibuses	<p>Vehicle with a separate chassis:</p> <ul style="list-style-type: none"> • On the outside of the chassis adjacent to the right front wheel arch, <p>Vehicle without a separate chassis:</p> <ul style="list-style-type: none"> • As specified for forward-controlled vehicles.

If the vehicle is unfamiliar, and the VIN or chassis number cannot be located, the vehicle inspector should contact the manufacturer’s agent or the local VIN issuing agent ([VTNZ](#), [VINZ](#), [NZAA](#)).

Figure 1-1-1. Structure of a VIN issued by the NZ Transport Agency
Pre-29 November 2009

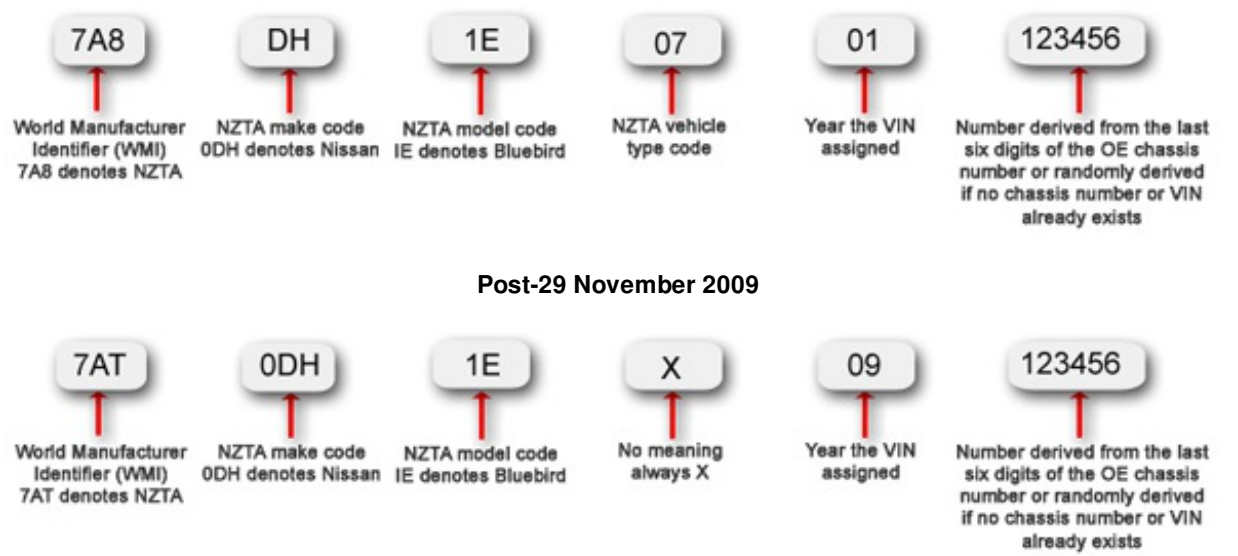
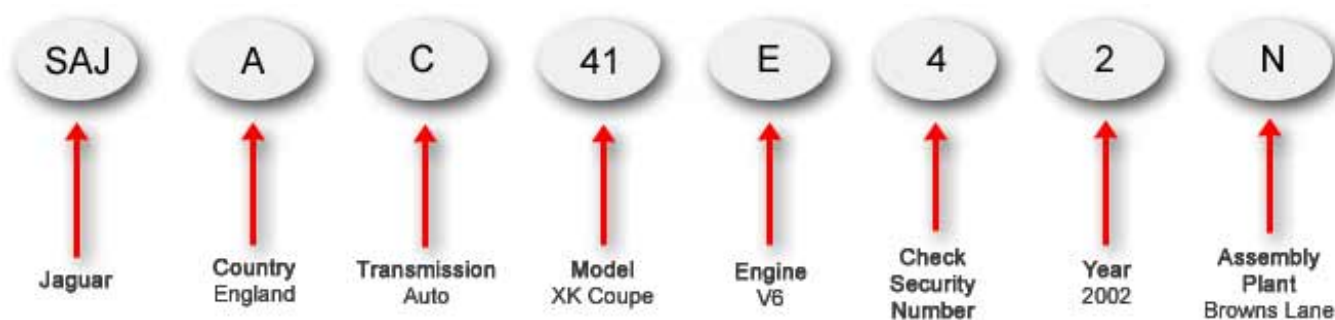
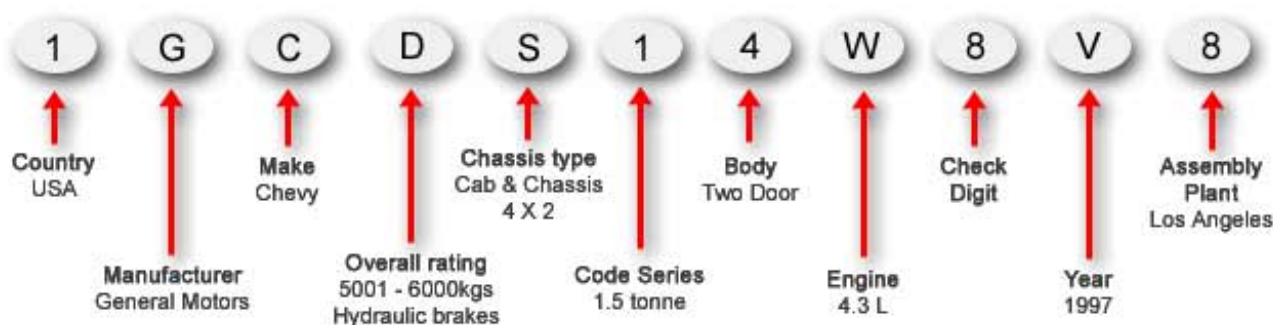


Figure 1-1-2. Structure of a VIN issued by the vehicle manufacturer
Car



A26658 ← Vehicles unique number

Truck



132166 ← Vehicles unique number

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Standards Compliance 2002](#).

Mandatory requirements

1. A vehicle first registered or re-registered in New Zealand before 1 April 1994 must have a chassis number or VIN.
2. A vehicle first registered or re-registered in New Zealand from 1 April 1994 must have a VIN.

Condition

3. A VIN or chassis number must not have been removed, erased, altered, defaced, obscured, destroyed, obliterated or affixed unlawfully, or be unauthorised.

Page amended **14 October 2013** (see [amendment details](#)).

2 Vehicle exterior

2-1 External projections

Reasons for rejection

Condition and performance

1. The risk of a component ([Note 5](#)) hooking a vehicle, or hooking or grazing a person, has not been minimised, eg a bonnet or bumper has been removed, exposing sharp, moving or hot components.
2. An ornamental object or fitting ([Note 2](#)) protrudes in such a way that it is likely to injure a person.
3. A protruding object or fitting that has a functional purpose ([Note 3](#)) is not installed so that the risk of causing injury to a

person is minimised, eg the object or fitting:

- a) is of excessively heavy construction for the purpose for which it has been fitted, or
- b) has sharp corners, or
- c) slopes forward, unless this is necessary to fit the contours of the vehicle, or
- d) has an unnecessarily wide gap between the object or fitting and the front of the vehicle, or
- e) exceeds the vehicle's width by more than 100mm on either side, other than side mounted glass sheet transport racks and collapsible side mirrors, or
- f) is a glass sheet transport rack that is not fitted with a front flaring to minimise the risk of injury to a person.

4. A protruding component, object or fitting is not securely attached to the vehicle.

5. A protruding object or fitting adversely affects the driver's vision or control.

Modifications

6. A modification ([Note 4](#)) affects an external projection – including a protruding object or fitting that has a functional purpose and affects the driver's vision or control of the vehicle, and

- a) is not excluded from the requirements for LVV specialist certification (**Table 2-1-1**), and
- b) is missing proof of LVV specialist certification, ie:
 - i. the vehicle is not fitted with a valid LVV vehicle certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1

The external projections requirements relate to the design and maintenance of objects and fittings that protrude from the exterior of the motor vehicle with regard to the safety of other motor vehicles, pedestrians and cyclists. The attachment of such objects and fittings to the vehicle is addressed in the [Vehicle structure](#) section of this manual.

Note 2

Ornamental object or fitting means an object or fitting that does not have a practical purpose, eg bonnet emblems.

Note 3

Functional object or fitting means an object or fitting that has a practical purpose, eg panniers, pack racks, spare wheel carriers, and so on.

Note 4

Modify means to change a vehicle from its original state by altering, substituting, adding or removing any structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with equivalent undamaged or new structures, systems, components or equipment.

Note 5

Components include damaged, corroded and exposed body panels.

Note 6

The following vehicles with a GVM of 2500kg or less must comply with a frontal impact occupant protection standard:

- Class MA motor vehicles manufactured on or after 1 March 1999
- Class MA motor vehicles that were less than 20 years old when they were first registered in New Zealand on or after 1 April 2002
- Class MB and MC motor vehicles manufactured on or after 1 October 2003.

Table 2-1-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is not required provided that:
Cosmetic body kits and components (including utility canopies and plastic bumper skins)	<ul style="list-style-type: none"> the fitting system does not weaken the vehicle structure, and no frontal impact components have been removed where the vehicle is required to comply with a frontal impact occupant protection standard (Note 6) the kit or components do not present any forward-facing external projections, and the performance of any lamps are not affected as a result of the kit or components.
Auxiliary winches	<ul style="list-style-type: none"> the winch either: <ul style="list-style-type: none"> does not protrude forward of the front face of the bumper, or does project forward of the bumper line, but is fitted with 'pedestrian-friendly' shrouds to reduce trapping risk and present a larger forward-facing surface area.
Side racks (for glass or other sheet materials)	<ul style="list-style-type: none"> there is no doubt as to the rack's load carrying capacity, and no forward-facing pedestrian traps exist, and the rack is designed and protected so that sharp or dangerous cargo cannot face directly forward projecting beyond the outside of the body.
Bumper bar (removal and change) (Note 1)	<ul style="list-style-type: none"> the vehicle is not required to comply with a frontal impact occupant protection standard (Note 6)
Auxiliary bars (including bull bars, nudge bars, external roll cages and A-frames [or similar])	<ul style="list-style-type: none"> the vehicle is not required to comply with a frontal impact occupant protection standard (Note 6), or the vehicle is required to comply with a frontal impact occupant protection standard and the auxiliary bar: <ul style="list-style-type: none"> is a vehicle manufacturer supplied component for that vehicle, or has been certified by the auxiliary bar manufacturer as frontal impact compliant (as may be indicated by a label), or is an A-frame that meets all of the following requirements: <ul style="list-style-type: none"> is attached to the chassis by means other than welding, and components are fit for purpose, and the brackets remaining on the vehicle when the A-frame is removed are recessed behind the forward surface of the bumper by no less than 20mm, and the brackets are fitted so that they do not bridge the vehicle's crumple zones or significantly stiffen the front of the vehicle. <p>Note that an auxiliary bar that does not meet the above minimum requirements is unlikely to meet LVV requirements and so cannot be certified.</p>

Fitting of or modification to:	LVV certification is never required:
Aerials	<ul style="list-style-type: none"> in-service requirements for conditions and performance must be met.
Engine hood emblems	
Engine hood pins	
Towbars	
Trunk racks	
Roof-mounted wheelchair winch	
Roofracks on a vehicle other than a PSV. (Refer to section 3-3 for PSV requirements.)	
Additional or substituted rear-view mirrors	
Any modification for the purposes of law enforcement or the provision of emergency services	

Summary of legislation

Applicable legislation

- [Land Transport Rule: External Projections 2001](#).

Permitted equipment

1. A motor vehicle may be fitted with a protruding ornamental or functional object or fitting.

Condition and performance

2. A protruding ornamental object or fitting must not be likely to injure a person.
3. A protruding object or fitting that has a functional purpose must be installed so that the risk of the object or fitting causing injury to a person is minimised.
4. Components of a motor vehicle, including damaged or corroded body panels, must be such that the risk of their hooking a vehicle, or hooking or grazing a person, is minimised.
5. A protruding object or fitting must not adversely affect driver vision or driver control.

Modifications

6. A modification that affects an external projection must be inspected and certified by an LVV specialist certifier, unless the vehicle:

- a) is excluded from the requirement for LVV specialist certification (**Table 2-1-1**), and
- b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

Page amended **14 October 2013** (see [amendment details](#)).

2-2 Dimensions

Reasons for rejection

Mandatory equipment

1. A rigid vehicle ([Note 1](#)) with a GVM of 3500kg or less exceeds the dimension requirements set out in **Table 2-2-1** and is not:
 - a) a specialist overdimension vehicle ([Note 3](#)), or

- b) a vehicle designed primarily to transport an overdimension load, or
- c) a vehicle operating on a valid permit, exemption or approval.

2. A rigid vehicle that exceeds the dimensions set out in **Table 2-2-1** is not fitted with the appropriate hazard warning equipment set out in **Table 2-2-2**.

3. A required revolving beacon cannot be activated and deactivated.

Note 1

A **rigid vehicle** means a vehicle with motive power, driver's position and steering system, that does not have any pivot points to allow any part of the vehicle chassis to move or rotate in relation to any other part of the vehicle chassis, but includes a pivot steer vehicle.

Note 2

The **rear axis of a vehicle** means:

- if the vehicle is fitted with one rear axle: the centre of that axle
- if the vehicle is fitted with a set of two axles: midway between those two axles if each axle has an equal number of tyres on it, or two-thirds of the distance from the lesser-tyred axle towards the greater-tyred axle, if one axle has twice as many tyres on it as the other axle.

Note 3

Specialist overdimension vehicle means a vehicle of which the primary purpose is to carry out a specialist function that requires overdimension equipment, and the dismantling of the equipment would make it unusable for its intended purpose, or it would take more than four hours to dismantle the equipment. Additional operational requirements may apply, eg if operated at night.

Table 2-2-1. Dimension requirements (see Figure 2-2-1)

Dimension	Maximum distance	Comments
Width	2.5m 1.25m from each side of the longitudinal centreline	Measurement does not include: <ul style="list-style-type: none"> • collapsible mirrors which extend no more than 240mm from the body • direction indicators and side-marker lamps • cab exterior grab rails that extend no more than 50mm from the side of the body • ropes, lashings, straps, chains and related connectors and tensioning devices that extend no more than 25mm from either side, and that are not permanently or rigidly fixed to the vehicle • the bulge towards the bottom of a tyre.
Overall length	12.6m (no tow coupling fitted) 11.5m (tow coupling fitted)	Measurement does not include collapsible mirrors.
Height	4.25m	Measurement does not include load restraining devices (ropes, lashings, straps, chains, covers and related connectors and tensioning devices) that extend no more than 25mm above the vehicle, and that are not permanently or rigidly fixed to the vehicle.
Forward distance	9.5m (no tow coupling fitted) 8.5m (including tow coupling if fitted)	Forward distance is measured from the rear axis (Note 2) to the front of the vehicle. Measurement does not include collapsible mirrors.
Rear overhang	4m	Rear overhang is measured from the rear axis (Note 2) to the rear of the vehicle.
Front overhang	3m	Front overhang is measured from the front edge of the driver's seat in the rearmost position to the front of the vehicle.

Table 2-2-2. Hazard warning equipment requirements (see Figure 2-2-4 for vehicle category thresholds)

Vehicle category (see Figure 2-2-4)	Dimension	Limits (up to and including)	Required hazard warning equipment
Category 1	Width/forward distance Length Front overhang Rear overhang	2.5m/11.4m, or 3.1m/10.5m, or 3.7m/8.5m, or 25m, or 7m, or 7m	Flags ¹ or panels ² fitted on each side at the front and rear as close as practical to the outside edge
Category 2 (not including category 1)	Width/forward distance Length Front overhang Rear overhang	2.5m/13.3m, or 4.5m/8.5m, or 35m, or 10m, or 10m	1. Panels ² fitted on each side at the front and rear as close as practical to the outside edge 2. OVERSIZE sign ³ fitted at the front and rear if more than 3.1m wide 3. Revolving amber beacon fitted so that it is visible to approaching traffic if the vehicle is more than 3.7m wide
Category 3 (not including category 2)	Width/forward distance	2.5m/20m 5m/20m 5m/8.5m	1. Panels ² fitted on each side at the front and rear as close as practical to the outside edge 2. OVERSIZE sign ³ fitted at the front and rear 3. Revolving amber beacon fitted so that it is visible to approaching traffic if the vehicle is more than 3.7m wide
Category 4 (not including category 3)	Width/forward distance	11m/20m 11m/8.5m	1. Panels ² fitted on each side at the front and rear as close as practical to the outside edge 2. OVERSIZE sign ³ fitted at the front and rear 3. Revolving amber beacon fitted so that it is visible to approaching traffic if the vehicle is more than 3.7m wide

¹ Flags:

- must be fluorescent yellow
- must be at least 400mm long x 300mm wide.

² Hazard warning panels:

- must be reflective yellow-green with a reflective orange diagonal stripe
- must be of at least the minimum dimensions and the colours specified in **Figure 2-2-2**.

³ OVERSIZE sign:

- must be black lettering on a yellow-green background
- must be at least 300mm x 1100mm in size
- may be in two parts: OVER and SIZE.

Figure 2-2-1. Dimension requirements

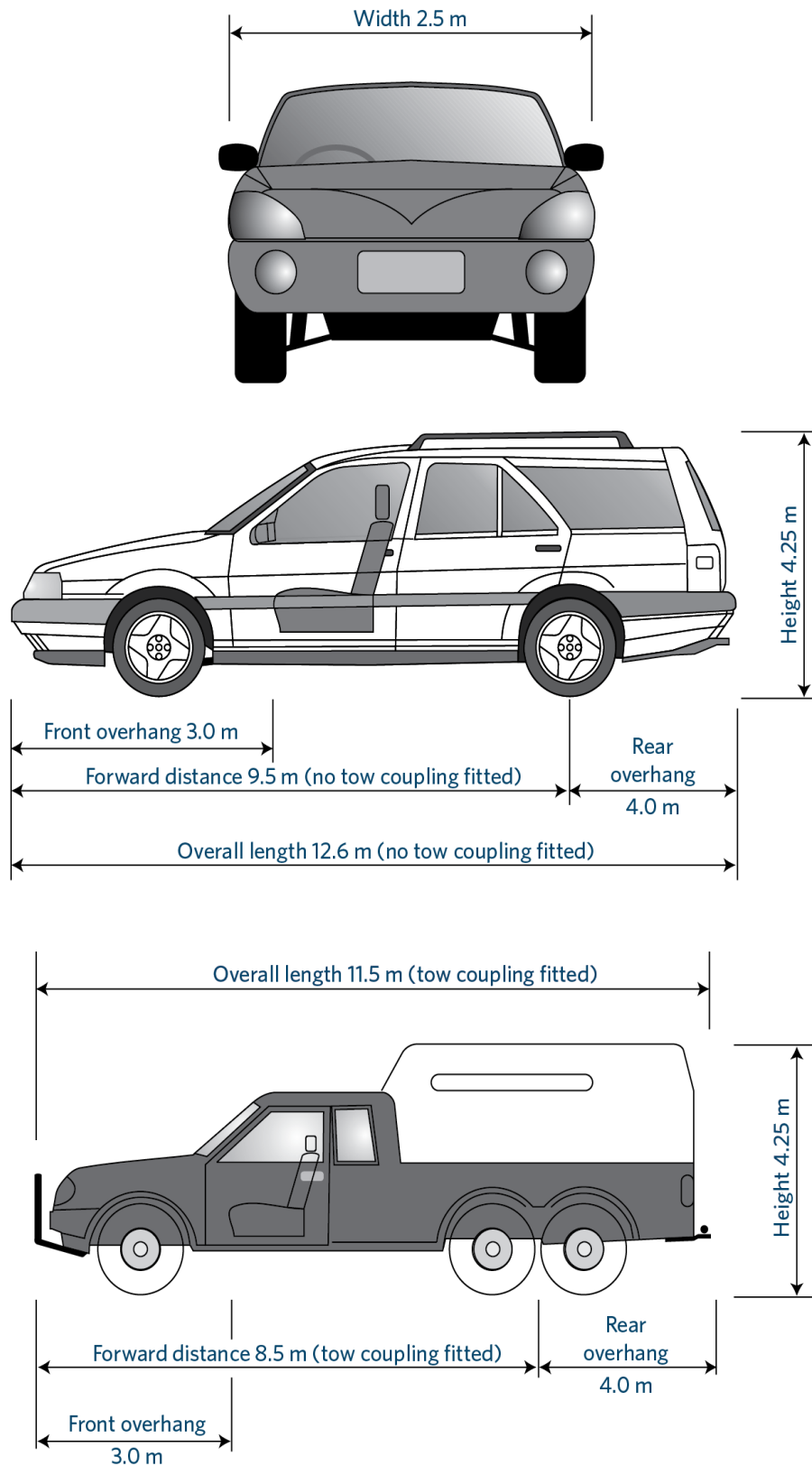
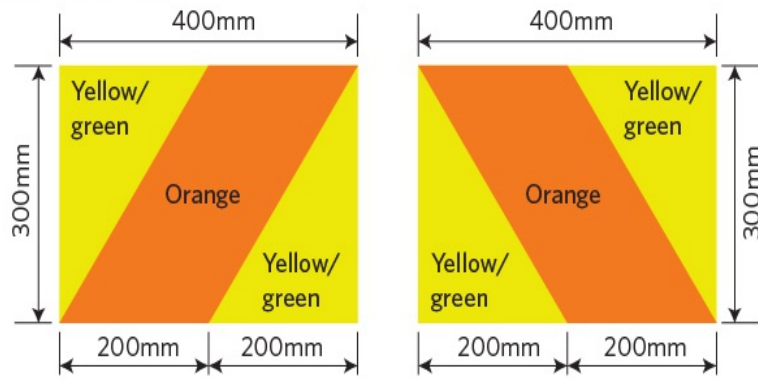


Figure 2-2-2. Hazard panel details

Display these panels



or these panels

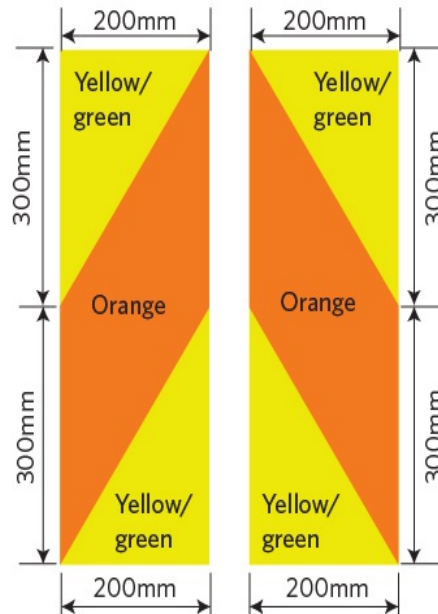


Figure 2-2-3. Hazard panel location and orientation

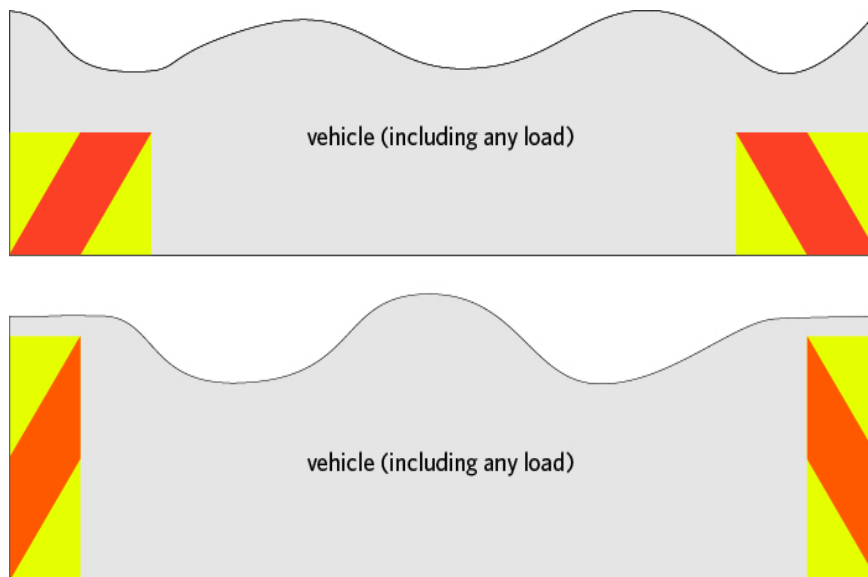
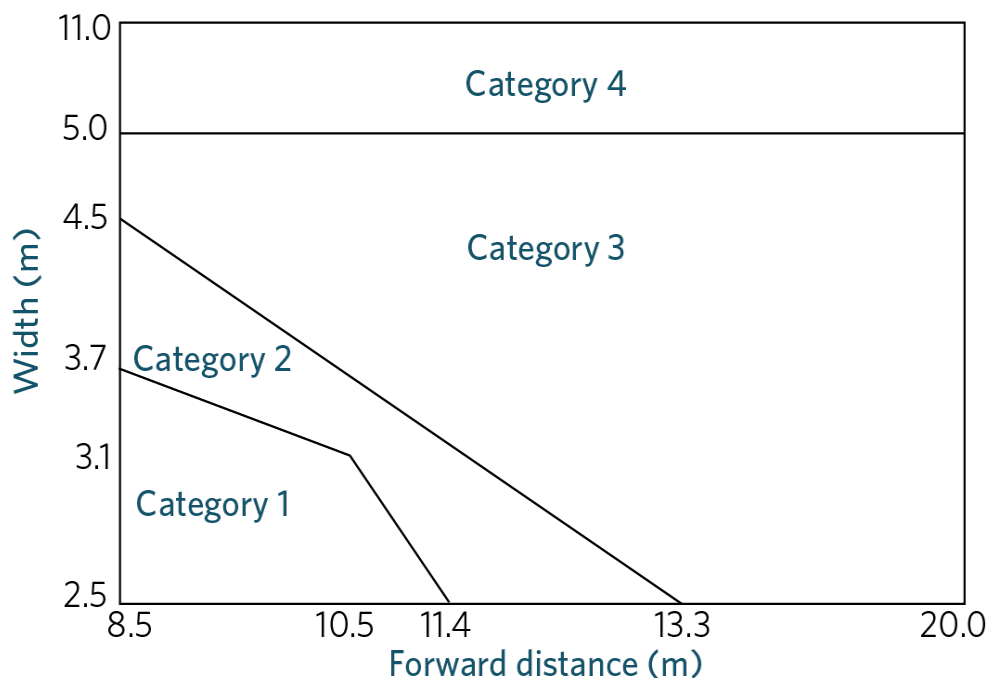


Figure 2-2-4. Vehicle categories and width/forward-distance thresholds

Use this figure to determine vehicle category in **Table 2-2-2**



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Dimensions and Mass 2002](#).

Mandatory equipment

1. A rigid vehicle, or an articulated bus, with a GVM of 3500kg or less that exceeds the dimensions in **Table 2-2-1** must meet the requirements in **Table 2-2-2**.
2. A vehicle may exceed the dimensions in **Table 2-2-3** only if it is:
 - a) a specialist overdimension vehicle ([Note 3](#)), or
 - b) a vehicle designed primarily to transport overdimension loads, or
 - c) a vehicle operating on a valid permit, exemption or approval.

3 Vehicle structure

3-1 Structure (incl. frontal impact)

Reasons for rejection

Condition

1. The structure of the vehicle (shaded areas of **Figure 3-1-2**) has visible:
 - a) deformation from the original shape that has affected the vehicle's structural integrity ([Note 1](#)) ([Note 3](#)), or
 - b) cracking, or
 - c) fracture, or
 - d) corrosion damage ([Note 2](#)) that is individually larger than 50mm in diameter (**Figure 3-1-1**), or
 - e) corrosion damage within 150mm of the top of an A-pillar (**Figure 3-1-2**), or
 - f) any corrosion that the inspector considers has caused weakening of a load-bearing structure ([Note 6](#)), or
 - g) poor repairs that have not returned the structure to within a safe tolerance of when it was manufactured ([Note 3](#)) ([Note 6](#)), eg:
 - i. filler has been used in an attempt to conceal corrosion damage or deformation of a component
 - ii. a high strength steel component has been heated
 - iii. a component has been strengthened.

Modification ([Note 5](#))

2. The performance of the frontal impact occupant protection system may have been affected by a modification, including an added or removed object, fitting or component, after the vehicle was manufactured if the vehicle has a GVM of 2500 kg or less and:

a) is:

- i. a class MA motor vehicle manufactured from 1 March 1999, or
- ii a class MA motor vehicle that was less than 20 years old when it was first registered in New Zealand on or after 1 April 2002, or
- iii a class MB or MC motor vehicle manufactured from 1 October 2003, and

b) is not excluded from the requirements for LVV specialist certification (**Table 3-1-1**).

3. A modification affects the vehicle structure – including an object or fitting affixed after manufacture that is welded to the chassis, sub-frame, cross-member or body of a monocoque structure, and

a) is not excluded from the requirements for LVV specialist certification (**Table 3-1-1**), and

b) is missing proof of LVV specialist certification, ie:

- i. the vehicle is not fitted with a valid low volume vehicle certification plate, or
- ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1

The structure of a vehicle may incorporate crumple zones that form part of a frontal impact occupant protection system.

Note 2

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward sign of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Bumper bar means either the structural part inside a plastic bumper or a complete metal bumper as used on older vehicles.

Note 3

The vehicle inspector may request additional relevant information from a repairer or other relevant person. The vehicle inspector should withhold the warrant of fitness if there is reason to believe that the vehicle has:

- a) structural damage, or
- b) inadequate structural repair(s), or
- c) corrosion damage

to the extent that it could affect the vehicle's structural strength or one of the vehicle's safety requirements. If the owner questions the decision, the vehicle inspector should recommend the vehicle owner obtain further written assessment from a panel beater.

Note 4

The following vehicles with a GVM of 2500kg or less must comply with a frontal impact occupant protection standard:

- Class MA motor vehicles manufactured on or after 1 March 1999
- Class MA motor vehicles that were less than 20 years old when they were first registered in New Zealand on or after 1 April 2002
- Class MB and MC motor vehicles manufactured on or after 1 October 2003.

Note 5 Definitions

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with equivalent undamaged or new structures, systems, components or equipment.

Note 6

Where the inspector is presented with a Nissan Terrano or Nissan Mistral vehicle of the type that is fitted with a two-layer (double skin) floor panel, the inspection procedure in Technical bulletin 2 must be followed.

Note 7

A body lift on a body/chassis vehicle (commonly a 4x4) always requires LVV certification.

Table 3-1-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is not required provided that:
Addition of side windows into a panel van or goods van	<ul style="list-style-type: none"> • The modification was carried out before 1/3/1999, or • The modification was carried out on or after 1/3/1999, and the material removed for the side window installation does not contribute to the strength of the vehicle structure (for example, cutting into flat panels does not affect the structural strength, but cutting into bracing material does affect the structural strength of the vehicle).
Campervan conversions	<ul style="list-style-type: none"> • The conversion was completed before 1/3/1999, or • The conversion was completed on or after 1/3/1999, and • No modifications were carried out to the vehicle roof or rear wall, and • No seats or seatbelt anchorages were retrofitted. <p>Note This means that a campervan conversion completed on or after 1/3/1999, other than a camper box fitted to an unmodified cab and chassis, always requires LVV certification.</p>
Cosmetic body kits and components (including utility canopies and plastic bumper skins)	<ul style="list-style-type: none"> • the fitting system does not weaken the vehicle structure, and • the kit or components do not present any forward-facing external projections, and • none of the frontal impact components have been removed where the vehicle is required to comply with a frontal impact occupant protection standard (Note 4), and • the performance of any lamps is not affected as a result of the kit or components.
Bumper bar (removal and change) (Note 2)	<ul style="list-style-type: none"> • the vehicle is not required to comply with a frontal impact occupant protection standard (Note 4)
Fibreglass replacement panels (that are substituted for OE panels)	<ul style="list-style-type: none"> • the OE panels being replaced do not contribute to the strength of the vehicle structure, including side impact resistance, and • the replacement panels use OE attachment points.
Seatbelt anchorages retrofitted after 1 January 1992 in vehicles of classes MA, MB, MC or after 1 March 1999, in vehicles of other classes	<ul style="list-style-type: none"> • the anchorage is a top tether anchorage for a child seat or child harness, and • the installation is carried out in accordance with the instructions of the seat or harness manufacturer.
Suspension braces (strut tower braces)	<ul style="list-style-type: none"> • there are no structural changes to the body or suspension mounting points.
Auxiliary bars (including bull bars, nudge bars, external roll cages and A-frames [or similar])	<ul style="list-style-type: none"> • the vehicle is not required to comply with a frontal impact occupant protection standard (Note 4), or • the vehicle is required to comply with a frontal impact occupant protection standard and the auxiliary bar: <ul style="list-style-type: none"> – is a vehicle manufacturer supplied component for that vehicle, or – has been certified by the auxiliary bar manufacturer as frontal impact compliant (as may be indicated by a label) or - is an A-frame that meets all of the following requirements: <ul style="list-style-type: none"> - is attached to the chassis by means other than welding, and

	<ul style="list-style-type: none"> - components are fit for purpose, and - the brackets remaining on the vehicle when the A-frame is removed are recessed behind the forward surface of the bumper by no less than 20mm, and - the brackets are fitted so that they do not bridge the vehicle's crumple zones or significantly stiffen the front of the vehicle. <p>Note that an auxiliary bar that does not meet the above minimum requirements is unlikely to meet LVV requirements and so cannot be certified.</p>
Front-mounted intercooler	<ul style="list-style-type: none"> • the front structure of the vehicle has not been modified, and • the front bumper structure is unaltered (cosmetic changes are permitted), and • the components do not present any forward-facing external projections, and • none of the frontal impact components have been removed where the vehicle is required to comply with a frontal impact occupant protection standard (Note 4).
Cargo hoist/lift platform	<ul style="list-style-type: none"> • the vehicle structure has not been weakened.
Stereo equipment and speakers	<ul style="list-style-type: none"> • any modification or fitting carried out before 1/1/1992 <p>If fitted to the rear parcel shelf :</p> <ul style="list-style-type: none"> • no upper seatbelt anchorage is attached to the shelf or any shelf support bracket, and • if upper seatbelt anchorage is fitted, the removal of any material from the rear shelf is unlikely to have weakened the vehicle structure to which a seatbelt anchorage is attached, and • in the case of a top tether point for a child seat attached to the rear shelf, the top tether point is not located within 150mm of a modification to a rear parcel shelf. <p>If fitted to a part of the vehicle other than the rear parcel shelf:</p> <ul style="list-style-type: none"> • no structural material has been removed from within 300mm of a seatbelt anchorage, and • any material removed is minimal and is unlikely to have weakened the vehicle structure (including a seatbelt anchorage structure).

Fitting of or modification to:	LVV certification is never required:
Aftermarket sunroof or roof vent/hatch	<ul style="list-style-type: none"> • in-service requirements for condition and performance must be met.
Towbars	
Any modification for the purposes of law enforcement or the provision of emergency services	
Roof racks fitted to a vehicle other than a PSV (refer to 3-3 for PSV requirements).	

Figure 3-1-1. Corrosion damage 50mm diameter limit

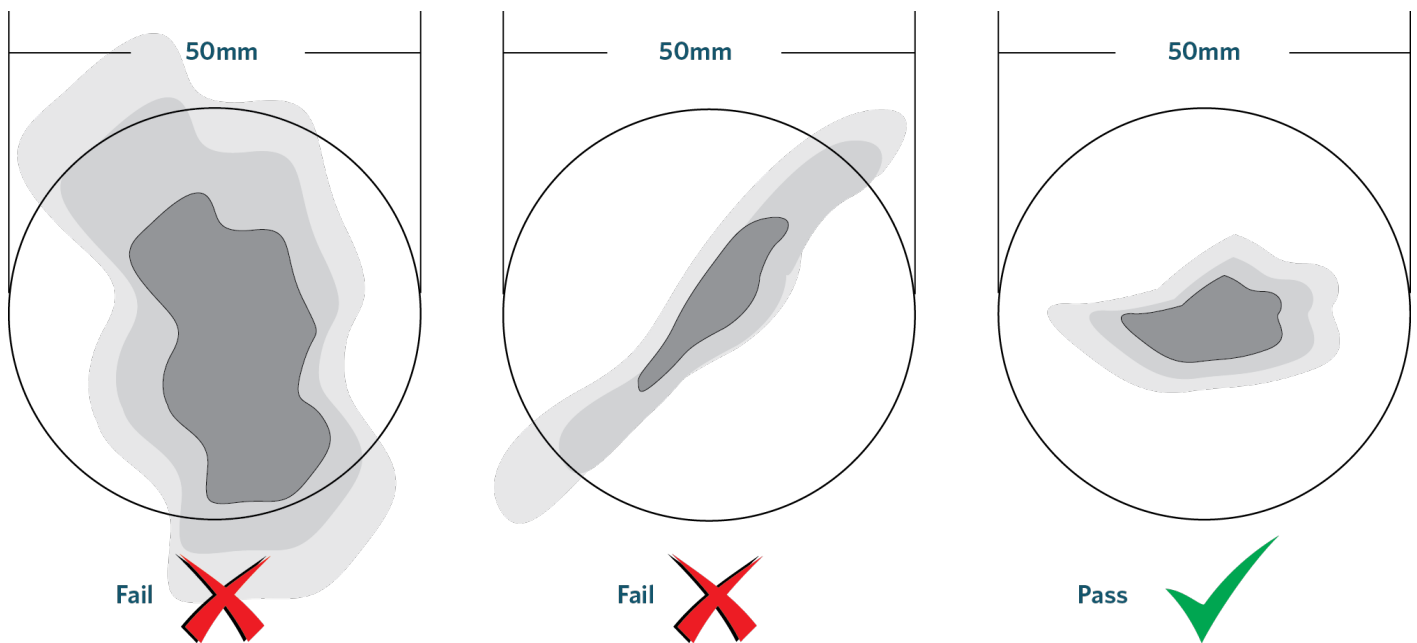
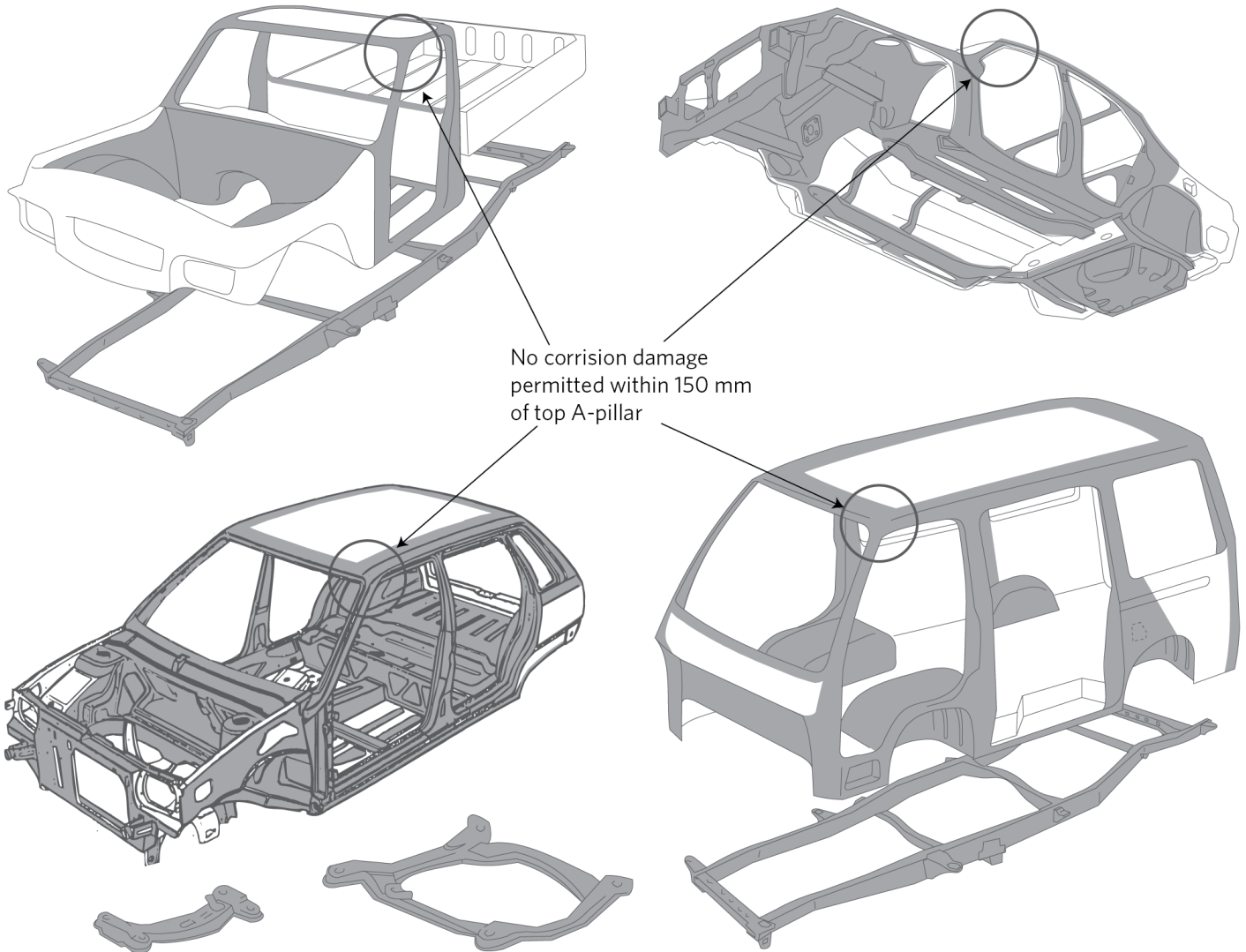


Figure 3-1-2. Corrosion damage as referred to in Condition above



These include chassis, cross-members and sub-frames, load-bearing monocoque body structures, body mounts and the body on a vehicle with a separate chassis. Other sections also contain Reasons for rejection and diagrams relating to specific vehicle components. See figures for corrosion limits to hinge and latch anchorages (section 6-1), seatbelt anchorages (section 7-5), and front or rear suspension anchorages (section 9-1).

Note that the diagram has been updated to take into account the more modern vehicle structures of common vehicles.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Frontal Impact 2001](#)
- [Land Transport Rule: Vehicle Standards Compliance 2002](#).

Condition

1. The vehicle must be safe to be operated.
2. The components and materials must be fit for their purpose and within safe tolerance of their state when manufactured or modified.
3. The performance of a motor vehicle in relation to protecting occupants in a frontal impact collision must not be reduced below a safe tolerance by any factors, including corrosion, structural damage, material degradation, inadequate repair, the fitting of additional equipment, or the removal of equipment, taking into account:
 - a) the function of the additional equipment fitted to the motor vehicle after manufacture, and the measures taken to minimise the risk of injury from the equipment;
 - b) evidence that the motor vehicle is within the manufacturer's operating limits.

Modification

4. A modification that affects the integrity of the vehicle structure must be inspected and certified by an LVV specialist certifier, unless the vehicle:
 - a) is excluded from the requirement for LVV specialist certification (**Table 3-1-1**), and
 - b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

Page amended **14 October 2013** (see [amendment details](#)).

4 Lighting

4-1 Headlamps

Reasons for rejection

Mandatory and permitted equipment

1. A vehicle other than class LE is not fitted with one pair of dipped-beam headlamps.
2. A vehicle other than class LE is fitted with more than:
 - a) one pair of dipped-beam headlamps, or
 - b) two pairs of dipped-beam headlamps if the vehicle was first registered anywhere between 1 January 1977 and 31 March 1980, or
 - c) two pairs of main-beam headlamps.
3. A vehicle other than class LE is fitted with a headlamp that is not in a pair.
4. A vehicle of class LE is not fitted with one dipped-beam headlamp.
5. A vehicle of class LE is fitted with more than:
 - a) two dipped-beam headlamps, or
 - b) two main-beam headlamps.
6. A vehicle (eg a vintage or veteran vehicle) does not meet standard headlamp requirements, and:
 - a) does not have a valid vehicle identity card with a lighting equipment endorsement, or
 - b) does not meet the conditions of the lighting equipment endorsement in its vehicle identity card.
7. A retrofitted pair of headlamps is not fitted:
 - a) symmetrically, or
 - b) as far towards each side of the vehicle as is practicable.

8. A retrofitted dipped-beam headlamp on a vehicle with a GVM of 12,000 kg or less is positioned at a height exceeding 1.2m from the ground ([Note 9](#)).

9. A device that allows the headlamps to flash alternately is fitted to a vehicle that is not an emergency vehicle or a pilot vehicle.

10. A vehicle is fitted with a dipped-beam headlamp where the maximum intensity of the beam is projected to the right.

Condition ([Note 5](#))

11. A lamp is insecure, obscured, or contains dirt or moisture in the form of large droplets, runs or puddles.

12. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.

13. A lens or reflector is damaged or has deteriorated so that light output is reduced.

14. A main-beam headlamp warning device is obscured from the driver's vision.

Performance

15. When switched on, a headlamp emits a light that is:

- a) not substantially white or amber, or
- b) different in colour or intensity from the other lamp in a pair, or
- c) not steady, or
- d) not bright enough to illuminate the road ahead, eg due to modification, deterioration or an incorrect light source, or
- e) too bright, eg due to the fitment of an HID conversion kit ([Note 8](#)) or other incorrect light source.

16. When the dipped-beam headlamps are switched on (with wheels pointing straight ahead):

- a) a lamp does not operate, or
- b) more than two lamps operate on dipped beam, or
- c) more than four lamps operate on dipped beam on a vehicle first registered anywhere between 1 January 1977 and 31 March 1980, or
- d) the light beam produces an incorrect beam pattern, is not focused, or is reduced or altered, or
- e) the centreline of the light beam is too far to the left or slopes down too far so that the headlamp is no longer capable of illuminating the road at least 50m ahead (**Figure 4-1-1**), or
- f) the centreline of the light beam projects to the right of the vehicle's centreline, or projects from the lamp at an angle other than:
 - i. as specified by the vehicle or lamp manufacturer, or
 - ii. as specified in **Table 4-1-1**.

17. When the main-beam headlamps are switched on (with wheels pointing straight ahead):

- a) a lamp does not operate, or
- b) more than two lamps operate on main beam on a class LE vehicle, or
- c) more than four lamps operate on main beam on a vehicle of group M or N, or
- d) a vehicle first registered anywhere between 1 February 1977 and 31 March 1980 has a second pair of dipped-beam headlamps that continue to operate, or
- e) the centreline of the light beam projects to the right of the vehicle's centreline or up from the horizontal, or
- f) the light beam produces an incorrect beam pattern, is not focused or is reduced or altered, or
- g) the lamps are not capable of being switched to dipped beam or turned off from the driver's seating position, or
- h) a main-beam headlamp warning device does not indicate to the driver that the main-beam headlamps are switched on.

18. A device fitted to a vehicle that allows the headlamps to flash alternately:

- a) does not indicate to the driver that the device is activated, or
- b) flashes:
 - i. faster than two flashes per second, or

- ii. slower than one flash per second, or
- iii. at a varying frequency.

Note 1

An **original equipment (OE) lamp** is one that is fitted by the vehicle manufacturer in the original position, or is an equivalent replacement or aftermarket lamp suitable for the position provided by the vehicle manufacturer for that lamp. All other lamps are considered retrofitted (ie non-OE).

Note 2

If the dipped-beam headlamps are able to be adjusted from the driver's seating position, the alignment must be checked with the adjustment at its highest position.

Note 3

If the vehicle is fitted with self-levelling suspension, the alignment must be checked with the suspension at its normal level.

Note 4 Definitions

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Headlamp means a lamp designed to illuminate the road ahead of a vehicle, and that is a:

- a) dipped-beam headlamp (single lamp), or
- b) main-beam (high-beam) headlamp (single lamp), and includes a driving lamp, or
- c) combination of a dipped-beam headlamp and a main-beam headlamp (dual-lamp unit).

Dipped-beam headlamp means a headlamp that is designed to emit a dipped beam, which is a beam of light that is angled downwards in such a way that it prevents undue dazzle or discomfort to oncoming drivers and other road users.

Main-beam headlamp means a headlamp that is designed to illuminate the road over a long distance ahead of the vehicle.

Note 5

If a headlamp is fitted with a readily removable cover, other than a clear protective cover, this must be removed for inspection of the headlamp.

Note 6

A vehicle originally manufactured with a headlamp arrangement that differs from what is required or permitted in this section may retain the original headlamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Note 7

A forward-facing permitted lamp that does not comply with the equipment, condition and performance requirements must be made to comply or be removed from the vehicle.

Note 8

A high-intensity discharge (HID or Xenon HID) conversion kit consists of an HID bulb with a high voltage power output or 'ballast' which fits into the original headlamp unit in place of the original bulb with no change to the headlamp lens, reflector or housing.

It is illegal to fit an HID conversion kit to a vehicle as it brings the headlamp out of standards compliance by producing poor beam patterns and light that is far too bright to be safe. The bulbs can also produce light that is noticeably blue and not the required substantially white or amber colour. Vehicle and headlamp manufacturers do not permit this modification, and these kits cannot be LVV certified.

It is permitted to replace a complete halogen headlamp unit with a complete HID headlamp unit.

Note 9

The dipped-beam headlamps may be positioned at a height exceeding 1.2 m if a road maintenance implement (eg, snowplough or roadsweeper) fitted to the front of the vehicle would obscure headlamps placed at a height of 1.2 m or less.

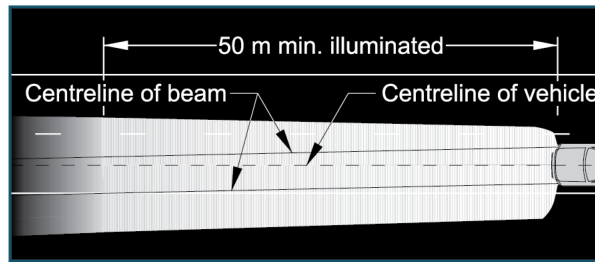
Table 4-1-1. Allowable dipped-beam headlamp alignment

	Headlamp type	Distance from ground to centre of light source	Dip rate of beam centre: lower and upper limits		
			Percent (%)	mm/3 m	Degrees (°)
EITHER	Any headlamp dipped beam	N/A	That specified by the vehicle or headlamp manufacturer		
OR	Headlamp with symmetric dipped-beam pattern	N/A	3.0–3.5	90–105	1.7–2.0
OR	Headlamp with asymmetric dipped-beam pattern and distance from ground to centre of light source	less than 0.8 m	1.0–1.5	30–45	0.57–0.85
		0.8–1.2 m	1.0–2.0	30–60	0.57–1.15
		more than 1.2 m	2.0–2.5	60–75	1.15–1.43

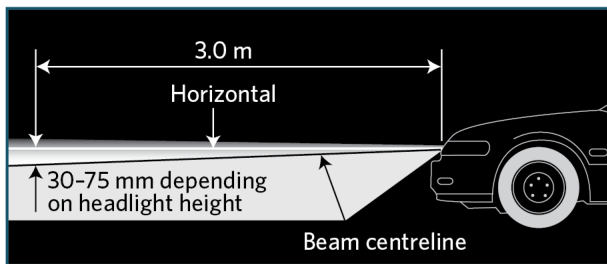
Table 4-1-2. Dipped-beam angle conversions

Percent (%)	mm/3 m	Degrees (°)	Percent (%)	mm/3 m	Degrees (°)
1.0	30	0.6	2.3	69	1.3
1.1	33	0.6	2.4	72	1.4
1.2	36	0.7	2.5	75	1.4
1.3	39	0.7	2.6	78	1.5
1.4	42	0.8	2.7	81	1.5
1.5	45	0.9	2.8	84	1.6
1.6	48	0.9	2.9	87	1.7
1.7	51	1.0	3.0	90	1.7
1.8	54	1.0	3.1	93	1.8
1.9	57	1.1	3.2	96	1.8
2.0	60	1.1	3.3	99	1.9
2.1	63	1.2	3.4	102	1.9
2.2	66	1.3	3.5	105	2.0

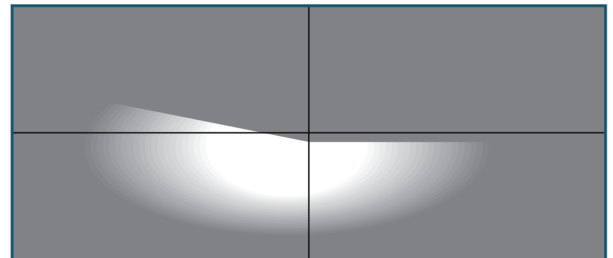
Figure 4-1-1. Minimum illuminated area



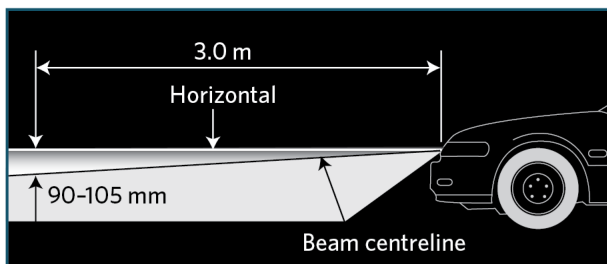
Minimum illuminated area



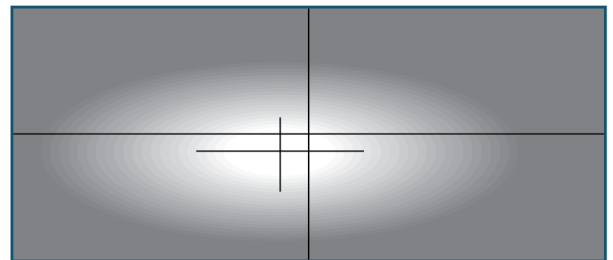
Asymmetric dipped beam



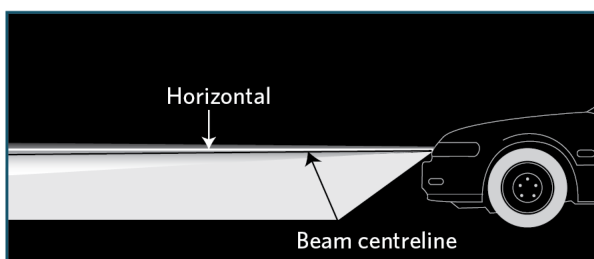
**Asymmetric dipped beam
headlamp pattern on light board**



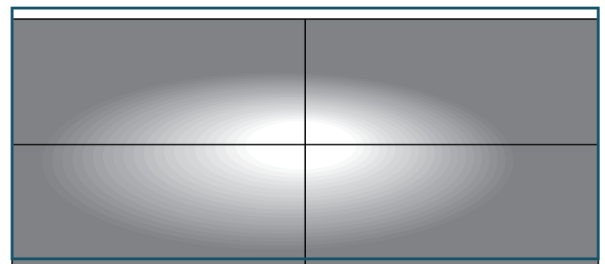
Symmetric dipped beam



**Symmetric dipped beam
headlamp pattern on light board**



Main (high) beam



**Main (high) beam headlamp
pattern on light board**

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#)
- New Zealand Gazette, 28 August 1980, issue 103, page 2569.

Mandatory and permitted equipment

1. A vehicle other than of class LE:
 - a) must be fitted with one pair of dipped-beam headlamps, and
 - b) may be fitted with one or two pairs of main-beam headlamps.

2. A vehicle of class LE:

- a) must be fitted with one or two dipped-beam headlamps, and
- b) may be fitted with one or two main-beam headlamps.

3. A vehicle first registered anywhere between 1 February 1977 and 31 March 1980 may be fitted with a second pair of dipped-beam headlamps that:

- a) do not operate when the main-beam headlamps are switched on, and
- b) may operate independently of the first pair of dipped-beam headlamps.

4. A vehicle (eg a vintage or veteran vehicle) manufactured without lamps, or with lamps that cannot meet specified requirements, may obtain a WoF if:

- a) the vehicle has a valid vehicle identity card with a lighting equipment endorsement, and
- b) the vehicle meets the conditions of that endorsement.

5. A retrofitted dipped-beam headlamp on a vehicle with a GVM of 12,000 kg or less must be fitted at a height not exceeding 1.2 m from the ground ([Note 9](#)).

6. A warning device may be fitted that indicates that the main-beam headlamps are switched on.

7. An emergency vehicle or a pilot vehicle may be fitted with a device that allows the headlamps to flash alternately, provided it is also fitted with equipment that indicates to the driver that the device is activated.

8. A retrofitted pair of headlamps must be symmetrically mounted as far towards each side of the vehicle as is practicable.

Prohibited equipment

9. A dipped-beam headlamp designed solely for a left-hand drive vehicle, where the maximum intensity of the beam is dispersed to the right, must not be fitted.

Condition ([Note 5](#))

10. A headlamp must:

- a) be in sound condition, and
- b) not be obscured.

Performance

11. A headlamp must operate in a way that is appropriate for the lamp and the vehicle.

12. A headlamp must emit a steady light.

13. A headlamp must provide sufficient illumination and light output to illuminate the road ahead.

14. If fitted with a device that allows headlamps to flash alternately, the lamps must flash at a fixed frequency.

15. A pair of headlamps must emit light that is approximately of equal colour and intensity when switched on.

16. A headlamp must emit a beam that is substantially white or amber.

17. A main-beam headlamp must be capable of being dipped or turned off from the driver's position.

18. A warning device that indicates that the main-beam lamps are in operation must be in good working order.

19. When the headlamps are switched on and the vehicle's front wheels are pointing in the straight-ahead position:

- a) the centre of a headlamp beam must be either parallel to or to the left of the longitudinal centreline of the vehicle, and
- b) the centre of a main-beam headlamp beam must be either parallel to or dipping down from the horizontal, and
- c) the centre of a dipped-beam headlamp beam must dip at an angle specified by the vehicle or lamp manufacturer, or:
 - i. 3–3.5% for a symmetric beam pattern, or
 - ii. 1–1.5% for an asymmetric beam pattern where the centre of the light source is less than 0.8 m from the ground, or
 - iii. 1–2% for an asymmetric beam pattern where the centre of the light source is 0.8–1.2 m from the ground, or
 - iv. 2–2.5% for an asymmetric beam pattern where the centre of the light source is above 1.2 m from the ground.

20. The dipped-beam headlamps must illuminate the road ahead for 50 m in normal darkness.

21. A device fitted to a vehicle that allows the headlamps to flash must:

- a) make the headlamps flash alternately at a frequency of 1–2 Hertz, and
- b) incorporate equipment that indicates to the driver that the device is activated.

22. A headlamp must be fitted with a light source that is specified by the vehicle manufacturer or the headlamp manufacturer.

Modifications (Note 4)

23. A headlamp that is affected by a modification must meet equipment, condition and performance requirements.

4-2 Front and rear fog lamps

Reasons for rejection

Permitted equipment

1. A group M or N vehicle is fitted with:
 - a) only one front fog lamp, or
 - b) more than one pair of front fog lamps.
2. A vehicle of class LE is fitted with more than two front fog lamps.
3. A vehicle is fitted with more than two rear fog lamps.
4. A retrofitted pair of fog lamps is not fitted:
 - a) symmetrically, or
 - b) as far towards each side of the vehicle as is practicable, or
 - c) positioned higher than the dipped-beam headlamps.

Condition (Note 3)

5. A lamp is insecure or contains moisture in the form of large droplets, runs or puddles.
6. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
7. A reflector is damaged or has deteriorated so that light output is reduced.
8. A fog lamp warning device, if fitted, is obscured from the driver's vision.

Performance

9. When switched on, a front fog lamp does not operate.
10. When switched on, a front fog lamp emits light that:
 - a) is not projected to the front, or
 - b) produces an incorrect beam pattern (**Figure 4-2-1**), or
 - c) is not substantially white or amber to the front, or
 - d) is different in colour or intensity from the other lamp in the pair, or
 - e) is not steady, or
 - f) is not bright enough to illuminate the road ahead in conditions of severely reduced visibility, eg due to modification, deterioration, dirt or an incorrect light source, or
 - g) is too bright, and could dazzle other road users, eg due to the fitment of an HID conversion kit (**Note 6**) or an incorrect, or
 - h) is altered, eg due to damage or modification, or
 - i) has a beam centre to the right of the vehicle's centreline, or
 - j) has a beam that is not permanently dipped, or
 - k) has a beam centre that dips at an angle of less than 3% (**Figure 4-2-1**).
11. When switched on, a rear fog lamp emits light that is:
 - a) not projected to the rear, or
 - b) not diffuse, or
 - c) not substantially red, or

d) different in colour or intensity from the other lamp in a pair, or

e) of variable intensity, or

f) not bright enough to indicate the presence of the vehicle from the rear in conditions of severely reduced visibility, eg due to modification, deterioration or an incorrect light source, or

g) altered, eg due to damage or modification.

12. A fog lamp cannot be switched off from the driver's seating position.

13. Where a fog lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

14. A fog lamp warning device, if fitted, does not operate.

Note 1

Fog lamp means a high-intensity front or rear lamp designed to aid the driver or other road users in conditions of severely reduced visibility, including fog or snow, but not including clear atmospheric conditions under the hours of darkness.

Note 2

A rear fog lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Note 3

If a front fog lamp is fitted with a readily removable cover, other than a clear protective cover, this must be removed for inspection of the fog lamp.

Note 4

A vehicle originally manufactured with a front- or rear-fog-lamp arrangement that differs from what is required or permitted in this section may retain the original front or rear fog lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

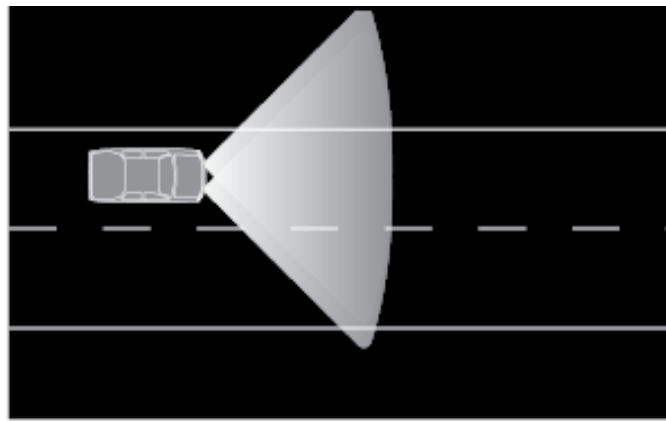
Note 5

A forward-facing permitted lamp that does not comply with the equipment, condition and performance requirements must be made to comply or be removed from the vehicle

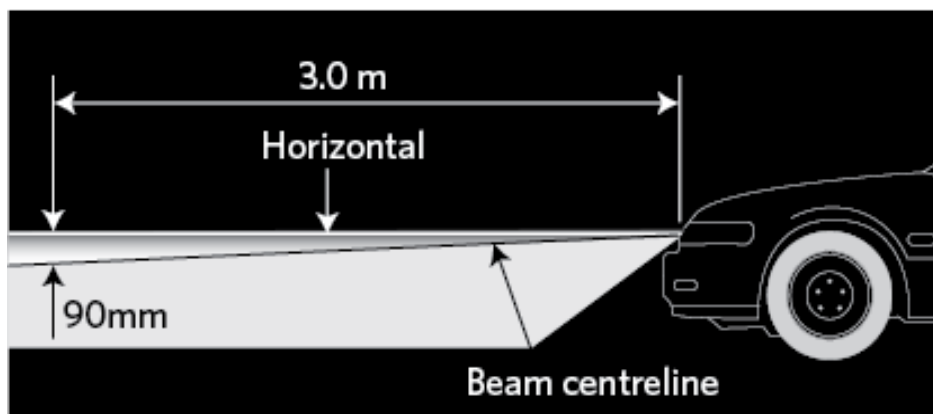
Note 6

A high-intensity discharge (HID or Xenon HID) conversion kit consists of an HID bulb with a high voltage power output or 'ballast' which fits into the original headlamp unit in place of the original bulb with no change to the headlamp lens, reflector or housing. It is illegal to fit an HID conversion kit to a vehicle as it brings the headlamp out of standards compliance by producing poor beam patterns and light that is far too bright to be safe. The bulbs can also produce light that is noticeably blue and not the required substantially white or amber colour. Vehicle and headlamp manufacturers do not permit this modification, and these kits cannot be LVV certified. It is permitted to replace a complete halogen headlamp unit with a complete HID headlamp unit.

Figure 4-2-1. Front fog lamp characteristics



(a) Pattern on the road



(b) Beam dip angle



(c) Pattern on light board

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Permitted equipment

1. A vehicle other than class LE: one pair of front fog lamps.
2. A vehicle of class LE: one or two front fog lamps.
3. One or two rear fog lamps.
4. A retrofitted pair of fog lamps must be symmetrically mounted as far as is practicable towards each side of the vehicle.

5. A retrofitted front fog lamp must not be positioned higher than the dipped-beam headlamps.
6. A vehicle may be fitted with a warning device that indicates that a front or rear fog lamp is in operation.

Condition

7. A front fog lamp must be in sound condition.
8. A rear fog lamp must be in sound condition if it emits a light.

Performance

9. A fog lamp must operate in a way that is appropriate for the lamp and the vehicle.
10. A fog lamp must emit a steady light.
11. A front fog lamp must provide sufficient light output to illuminate the road ahead in conditions of severely reduced visibility.
12. A rear fog lamp must provide sufficient light output to indicate the presence of the vehicle on the road in conditions of severely reduced visibility.
13. The light emitted from a front fog lamp must be substantially white or amber.
14. The light emitted from a rear fog lamp must be diffuse and substantially red in colour.
15. A pair of fog lamps must emit light that is approximately equal in colour and intensity.
16. The centre of a front fog lamp beam must be parallel to or to the left of the longitudinal centreline of the vehicle.
17. The centre of a front fog lamp beam must be permanently dipped at an angle of at least 3%.
18. A fog lamp must be able to be turned off from the driver's seating position.
19. A front or rear fog lamp warning device must be in good working order.
20. Where a fog lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Modifications

22. A fog lamp that is affected by a modification:
 - a) must meet equipment, condition and performance requirements, and
 - b) does not require LVV specialist certification.

4-3 Cornering lamps

Reasons for rejection

Permitted equipment

1. A vehicle is fitted with:
 - a) only one lamp, or
 - b) more than one pair of lamps, or
 - c) a lamp that either:
 - i. was not originally fitted by the vehicle manufacturer, or
 - ii. is not fitted in the original position.

Condition

2. A lamp is insecure.
3. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
4. A lamp's reflector is damaged or has deteriorated so that light output is reduced.

Performance

5. When activated by switching on the direction indicator lamp or by turning the steering wheel, a cornering lamp:
 - a) does not operate, or
 - b) does not project in the direction of the turn.
6. A cornering lamp emits light that is:

- a) not substantially white or amber, or
- b) different in colour or intensity from the other lamp in the pair, or
- c) not steady, or
- d) not bright enough to illuminate the road ahead in the direction of the turn, eg due to modification, deterioration, dirt or or an incorrect light source, or
- e) too bright causing dazzle to other road users, eg due to an incorrect light source or misalignment, or
- f) altered, eg due to damage or modification.

7. Where a cornering lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1

Cornering lamp means a lamp designed to emit light at the front of a vehicle to supplement the vehicle's headlamps by illuminating the road ahead in the direction of the turn.

Note 2

An **original equipment (OE) lamp** is one that is fitted by the vehicle manufacturer in the original position, or is an equivalent replacement or aftermarket lamp suitable for the position provided by the vehicle manufacturer for that lamp. All other lamps are considered retrofitted (ie non-OE).

Note 3

A vehicle originally manufactured with a cornering lamp arrangement that differs from what is required or permitted in this section may retain the original cornering lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Note 4

A forward-facing permitted lamp that does not comply with the equipment, condition and performance requirements must be made to comply or be removed from the vehicle.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Permitted equipment

1. One pair of cornering lamps fitted as OE.

Condition

2. A cornering lamp must be in sound condition.

Performance

3. A cornering lamp must operate in a way that is appropriate for the lamp and the vehicle.
4. A cornering lamp must emit light that is substantially white or amber.
5. A pair of cornering lamps must emit light that is approximately equal in colour and intensity.
6. A cornering lamp must emit a steady light.
7. A cornering lamp must provide sufficient light output to illuminate the road ahead in the direction of the turn.
8. A cornering lamp must be correctly aligned.
9. Where a cornering lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Modifications

10. A cornering lamp that is affected by a modification:
 - a) must meet equipment, condition and performance requirements, and
 - b) does not require LVV specialist certification.

4-4 Daytime running lamps

Reasons for rejection

Permitted equipment

1. A vehicle other than class LE is fitted with:
 - a) only one lamp, or
 - b) more than one pair of lamps.
2. A vehicle of class LE is fitted with more than two lamps.
3. A lamp is fitted in a position other than at the front of the vehicle.
4. A retrofitted lamp is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards each side of the vehicle as is practicable.

Condition

5. A lamp is insecure.
6. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
7. A lamp's reflector is damaged or has deteriorated so that light output is reduced.

Performance

8. When switched on, a daytime running lamp does not operate ([Note 4](#)).
9. When switched on, a daytime running lamp emits light that is:
 - a) projected in a direction other than to the front, or
 - b) not substantially white or amber, or
 - c) different in colour or intensity from the other lamp in the pair, or
 - d) not steady, or
 - e) not bright enough to make the vehicle more easily seen during the daytime, eg due to modification, deterioration, dirt or or an incorrect light source, or
 - f) too bright, causing significant dazzle to other road users, eg due to an incorrect light source, or
 - g) altered, eg due to damage or modification.
10. Where a daytime running lamp comprises an array of light sources, fewer than 75% of these operate.
11. A daytime running lamp continues to operate when the headlamps or fog lamps are switched on.

Note 1

Daytime running lamp means a lamp designed to emit a low-intensity light forward of a vehicle to make it more easily seen in the daytime.

Note 2

A vehicle originally manufactured with a daytime running lamp arrangement that differs from what is required or permitted in this section may retain the original daytime running lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Note 3

A forward-facing permitted lamp that does not comply with the equipment, condition and performance requirements must be made to comply or be removed from the vehicle.

Note 4

Some vehicles are equipped with OE or after-market daytime running lamps (DRLs) that also incorporate position lamp and direction indicator lamp functions. When the DRLs are on (when headlamps are off), and an indicator lamp is activated, the corresponding DRL is temporarily extinguished or dimmed. When the position lamps are on and an indicator lamp is activated, the corresponding position lamp may remain lit.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Permitted equipment

1. A vehicle other than class LE: one pair of daytime running lamps fitted to the front of the vehicle.
2. A vehicle of class LE: one or two daytime running lamps fitted to the front of the vehicle.

Condition

3. A daytime running lamp must be in sound condition.

Performance

4. A daytime running lamp must operate in a way that is appropriate for the lamp and the vehicle.
5. A daytime running lamp must emit light that is substantially white or amber.
6. A pair of daytime running lamps must emit light that is of approximately equal colour and intensity.
7. A daytime running lamp must emit a steady light.
8. A daytime running lamp must provide sufficient light output to make the vehicle more easily seen during the daytime.
9. A daytime running lamp must be correctly aligned.
10. A daytime running lamp must not operate when a front fog lamp or a headlamp is in use.
11. Where a daytime running lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Modifications

12. A daytime running lamp that is affected by a modification:
 - a) must meet equipment, condition and performance requirements, and
 - b) does not require LVV specialist certification.

4-5 Direction indicator lamps

Reasons for rejection

Mandatory and permitted equipment

1. A vehicle of class LE first registered in New Zealand on or after 1 January 1978 is not fitted with one pair of lamps to the front and one pair of lamps to the rear.
2. A vehicle of class LE first registered in New Zealand before 1 January 1978 is fitted with more than one pair of lamps to the front or more than one pair of lamps to the rear.
3. A vehicle other than class LE first registered anywhere on or after 1 July 1967 is not fitted with one pair of lamps to the front and one pair of lamps to the rear.
4. A vehicle is fitted with more than:
 - a) two pairs of lamps to the front, or
 - b) two pairs of lamps to the rear, or
 - c) three pairs of lamps (including top-mounted lamps) to the rear if the vehicle is an emergency vehicle.
5. An emergency vehicle is fitted at the rear with:
 - a) more than one pair of top-mounted lamps, or
 - b) top-mounted lamps that are not mounted as close as is practicable to the top corners of the bodywork.
6. A vehicle is fitted with more than two side-facing lamps on each side of the vehicle.
7. A vehicle is fitted with a lamp that is not in a pair.
8. A vehicle is not fitted with a visual lamp indicator device that indicates to the driver that a lamp has failed (only where one was fitted as original equipment).
9. A retrofitted lamp is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards each side of the vehicle as is practicable.
10. A retrofitted lamp, other than a top-mounted lamp on an emergency vehicle, is fitted at a height from the ground exceeding 1.5m (or 2.1m where fitting below 1.5m is not practicable due to the shape of the bodywork of the vehicle).

11. A vehicle (eg avintage or veteran vehicle) does not meet standard direction indicator lamp requirements, and:

- a) does not have a valid vehicle identity card with a lighting equipment endorsement, or
- b) does not meet the conditions of the lighting equipment endorsement in its vehicle identity card.

Condition

12. A lamp is insecure or, if a mandatory lamp, contains moisture in the form of large droplets, runs or puddles.

13. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.

14. A lamp's reflector is damaged or has deteriorated so that light output is reduced.

15. A visual lamp-failure warning device is obscured from the driver in the driver's seating position.

Performance

16. When switched on, a direction indicator lamp:

- a) does not operate, or
- b) does not begin flashing within one second of switching on, or
- c) flashes:
 - i. faster than two flashes per second, or
 - ii. slower than one flash per second, or
 - iii. at a different rate from other lamps on the same side.

17. When switched on, a direction indicator lamp emits a light that is:

- a) not substantially white or amber to the front, or
- b) not substantially amber or red to the rear, or
- c) not substantially amber to the side, or
- d) different in colour or intensity from the other lamp in a pair, or
- e) not bright enough to be visible from 100m in normal daylight and from 200m in normal darkness, eg due to modification, deterioration, dirt or an incorrect light source, or
- f) too bright causing significant dazzle to other road users, eg due to an incorrect light source , or
- g) altered, eg due to damage or modification.

18. A non-OE mandatory lamp mounted outside the original position emits a light that is not visible within (**Figure 4-5-1**):

- a) 15° above and below the horizontal, or
- b) 45° inboard or 80° outboard.

19. A modification to the vehicle has reduced the visibility angles of a mandatory lamp to less than (**Figure 4-5-1**):

- a) 15° above and below the horizontal, or
- b) 45° inboard or 80° outboard.

20. On a vehicle of American origin fitted with combined stop and indicator lamps, the stop lamp function is not overridden by the indicator function.

21. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

22. A visual lamp indicator device does not operate.

Note 1 Definitions

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Direction indicator lamp means a lamp designed to emit a flashing light to signal the intention of the driver to change the direction of the vehicle to the right or to the left.

Note 2

A permitted (ie non-mandatory) rear or a non-OE side-facing direction indicator lamp that does not comply with equipment, condition and performance requirements must be made to comply or disabled so that it does not emit a light.

Note 3

An **original equipment (OE) lamp** is one that is fitted by the vehicle manufacturer in the original position, or is an equivalent replacement or aftermarket lamp suitable for the position provided by the vehicle manufacturer for that lamp. All other lamps are considered retrofitted (ie non-OE).

Note 4

Vehicles first registered in New Zealand before 27 February 2005 may have rear direction indicator lamps that also function as reversing lamps.

Note 5

A vehicle originally manufactured with a direction indicator lamp arrangement that differs from what is required or permitted in this section may retain the original direction indicator lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

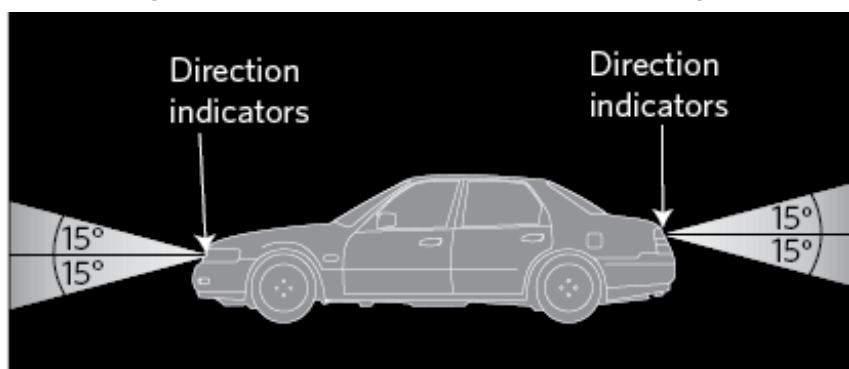
Note 6

A forward-facing permitted lamp that does not comply with the equipment, condition and performance requirements must be made to comply or be removed from the vehicle.

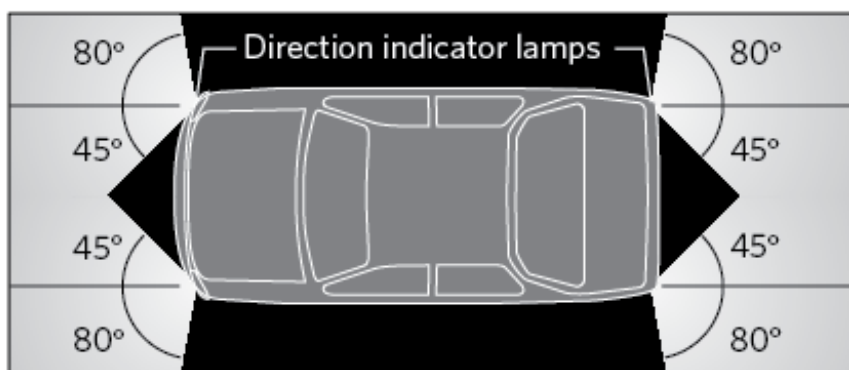
Note 7

Some vehicles are equipped with OE or after-market daytime running lamps (DRLs) that also incorporate position lamp and direction indicator lamp functions. When the DRLs are on (when headlamps are off), and an indicator lamp is activated, the corresponding DRL is temporarily extinguished or dimmed. When the position lamps are on and an indicator lamp is activated, the corresponding position lamp may remain lit.

Figure 4-5-1. Direction indicator beam angles



(a) Vertical beam angles



(b) Horizontal beam angles

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Mandatory and permitted equipment

1. A vehicle other than class LE first registered anywhere before 1 July 1967 may be fitted with one or two pairs of lamps to the front and one or two pairs of lamps to the rear of the vehicle.
2. A vehicle other than class LE first registered anywhere on or after 1 July 1967 must be fitted with one or two pairs of lamps to the front and one or two pairs of lamps to the rear of the vehicle.
3. A vehicle of class LE first registered in New Zealand before 1 January 1978 may be fitted with one pair of lamps to the front and one pair of lamps to the rear of the vehicle.
4. A vehicle of class LE first registered in New Zealand on or after 1 January 1978 must be fitted with one or two pairs of lamps to the front and one or two pairs of lamps to the rear of the vehicle.
5. An emergency vehicle may be fitted with an additional pair of indicator lamps at the rear of the vehicle that must be symmetrically mounted as near to the top corners of the bodywork of the vehicle as is practicable (top-mounted lamps).
6. A vehicle may be fitted with one or two side-facing lamps on each side.
7. A suitable device must be fitted that indicates to the driver the failure of a mandatory lamp.
8. A vehicle (eg a vintage or veteran vehicle) manufactured without lamps, or with lamps that cannot meet specified requirements, may obtain a WoF if:
 - a) the vehicle has a valid vehicle identity card with a lighting equipment endorsement, and
 - b) the vehicle meets the conditions of that endorsement.
9. A retrofitted pair of lamps, other than top-mounted lamps, must be mounted:
 - a) symmetrically as far towards each side of the vehicle as is practicable, and
 - b) at a height from the ground not exceeding 1.5 m, or if this is not practicable due to the shape of the bodywork of the vehicle, not exceeding 2.1 m.
10. On vehicles of American origin, the stop lamp and direction indicator lamp function may be combined in one lamp.

Condition

11. A direction indicator lamp must:
 - a) be in sound condition, and
 - b) not be obscured (if a mandatory lamp).

Performance

12. A direction indicator lamp must operate in a way that is appropriate for the lamp and the vehicle.
13. A direction indicator lamp must emit a light that is substantially:
 - a) white or amber to the front, and
 - b) red or amber to the rear, and
 - c) amber to the side.
14. A lamp must flash at a fixed frequency in the range of 1–2 Hertz.
15. Each lamp in a pair must, when operated, emit a light of approximately equal intensity, colour and frequency.
16. The lamp-failure indicating device must function.
17. A lamp must emit a light that is visible from 100m during normal daylight and 200m in normal darkness.
18. A retrofitted mandatory lamp must emit a light that is visible within angles of
 - a) 15° above and below the horizontal, and
 - b) 45° inboard, and
 - c) 80° outboard.
19. If a vehicle of American origin is fitted with combined stop and indicator lamps, the indicator lamps must override the stop lamps so that the stop lamps operate as direction indicators.
20. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Modifications ([Note 1](#))

21. A direction indicator lamp that is affected by a modification must meet equipment, condition and performance requirements.

4-6 Forward-facing position lamps

Reasons for rejection

Mandatory and permitted equipment

1. One pair of lamps is not fitted to:
 - a) a vehicle first registered in New Zealand on or after 1 January 1978 that exceeds 1.5m in width, or
 - b) a vehicle that exceeds 2m in width.
2. A vehicle is fitted with more than:
 - a) one pair of lamps, or
 - b) two single lamps.
3. A vehicle (eg a vintage or veteran vehicle) does not meet standard forward-facing position lamp requirements, and:
 - a) does not have a valid vehicle identity card with a lighting equipment endorsement, or
 - b) does not meet the conditions of the lighting equipment endorsement in its vehicle identity card.
4. A retrofitted lamp is mounted at a height from the ground exceeding 1.5m (or 2.1m where fitting below 1.5m is not practicable due to the shape of the bodywork of the vehicle).
5. A retrofitted pair of lamps is:
 - a) not symmetrically mounted, or
 - b) not mounted as far towards each side of the vehicle as is practicable.

Condition

6. A lamp is insecure or, if a mandatory lamp, contains moisture in the form of large droplets, runs or puddles.
7. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
8. A lamp's reflector is damaged or has deteriorated so that light output is reduced.

Performance

9. When switched on, a forward-facing position lamp does not operate ([Note 5](#)).
10. When switched on, a forward-facing position lamp emits a light that is:
 - a) not substantially white or amber, or
 - b) not diffuse, or
 - c) not projected to the front, or
 - d) different in colour or intensity from the other lamp in a pair, or
 - e) not steady, or
 - f) not bright enough to be visible from 200m in normal darkness, eg due to modification, deterioration, dirt or an incorrect light source, or
 - g) is altered, eg due to damage or modification.
11. A non-OE mandatory lamp mounted outside the original position emits a light that is not visible within (**Figure 4-6-1**):
 - a) 15° above and below the horizontal, or
 - b) 45° inboard or 80° outboard.
12. A modification to the vehicle has reduced the visibility angles of a mandatory lamp to less than (**Figure 4-6-1**):
 - a) 15° above and below the horizontal, or
 - b) 45° inboard or 80° outboard.
13. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1 Definitions

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Position lamp means a low-intensity lamp that is designed to indicate to road users the presence and dimensions of a vehicle, being:

- a) a forward-facing position lamp (front side lamp), or
- b) a rearward-facing position lamp (rear side lamp or tail lamp), or
- c) a side-marker lamp, or
- d) an end-outline marker lamp (including cab roof lamp).

Note 2

An **original equipment (OE) lamp** is one that is fitted by the vehicle manufacturer in the original position, or is an equivalent replacement or aftermarket lamp suitable for the position provided by the vehicle manufacturer for that lamp. All other lamps are considered retrofitted (ie non-OE).

Note 3

A vehicle originally manufactured with a forward-facing position lamp arrangement that differs from what is required or permitted in this section may retain the original forward-facing position lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

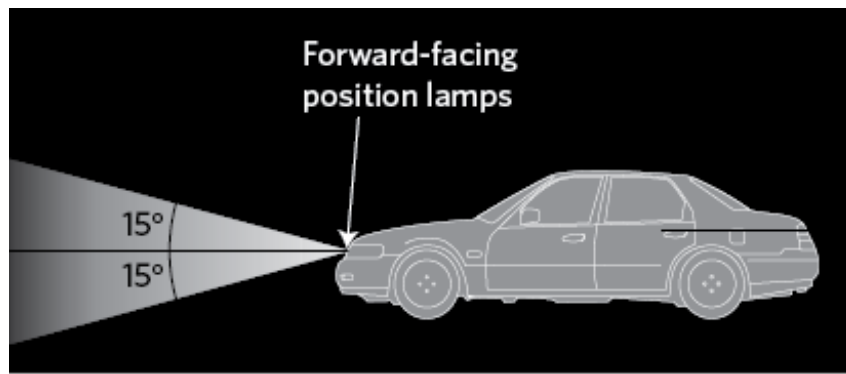
Note 4

A forward-facing permitted lamp that does not comply with the equipment, condition and performance requirements must be made to comply or be removed from the vehicle.

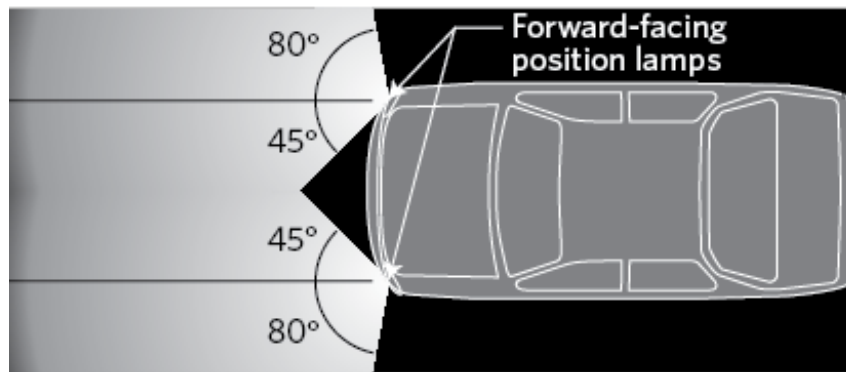
Note 5

Some vehicles are equipped with OE or after-market daytime running lamps (DRLs) that also incorporate position lamp and direction indicator lamp functions. When the DRLs are on (when headlamps are off), and an indicator lamp is activated, the corresponding DRL is temporarily extinguished or dimmed. When the position lamps are on and an indicator lamp is activated, the corresponding position lamp may remain lit.

Figure 4-6-1. Forward-facing position lamp beam angles



(a) Vertical beam angles



(b) Horizontal beam angles

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Mandatory and permitted equipment

- One pair of lamps must be fitted to:
 - a vehicle first registered in New Zealand on or after 1 January 1978 that exceeds 1.5m in width
 - a vehicle that exceeds 2m in width.
- One or two lamps may be fitted to:
 - a vehicle that does not exceed 1.5m in width
 - a vehicle first registered in New Zealand before 1 January 1978 that does not exceed 2m in width.
- A vehicle (eg a vintage or veteran vehicle) manufactured without lamps, or with lamps that cannot meet specified requirements, may obtain a WoF if:
 - the vehicle has a valid vehicle identity card with a lighting equipment endorsement, and
 - the vehicle meets the conditions of that endorsement.
- A retrofitted pair of lamps must be symmetrically mounted as far towards each side of the vehicle as is practicable.
- A retrofitted lamp must be mounted at a height from the ground not exceeding 1.5m, or if this is not practicable due to the shape of the bodywork of the vehicle, not exceeding 2.1m.

Condition

- A forward-facing position lamp must:
 - be in sound condition
 - not be obscured (if a mandatory lamp).

Performance

- A forward-facing position lamp must operate in a way that is appropriate for the lamp and the vehicle.

8. A lamp must emit a light that is:

- a) diffuse, and
- b) substantially white or amber, and
- c) steady, and
- d) sufficient to indicate to other road users the presence and dimensions of the vehicle, and
- e) visible from 200m in normal darkness, and
- f) of approximately equal intensity and colour to the other lamp of a pair.

9. A retrofitted mandatory lamp must be visible within angles of:

- a) 15° above and below the horizontal, and
- b) 45° inboard, and
- c) 80° outboard.

10. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Modifications ([Note 1](#))

11. A forward-facing position lamp that is affected by a modification must meet the equipment, condition and performance requirements.

4-7 Rearward-facing position lamps

Reasons for rejection

Mandatory and permitted equipment

1. A vehicle first registered in New Zealand on or after 1 January 1978 that is more than 1.5m wide:

- a) is not fitted with one pair of lamps, or
- b) is fitted with more than two pairs of lamps, or
- c) is fitted with a lamp that is not in a pair, or
- d) is an emergency vehicle and is fitted with more than three pairs of lamps, including top-mounted lamps.

2. A group M or N vehicle first registered in New Zealand before 1 January 1978 or is less than 1.5m wide is:

- a) not fitted with one single lamp or one pair of lamps, or
- b) fitted with more than one single lamp, or
- c) fitted with more than two pairs of lamps.

3. An emergency vehicle is fitted with:

- a) more than one pair of top-mounted lamps, or
- b) top-mounted lamps that are not mounted as close as is practicable to the top corners of the bodywork.

4. A class LE vehicle that was first registered in New Zealand before 1 January 1978 or that is less than 1.5m wide is not fitted with at least one lamp.

5. A vehicle (eg a vintage or veteran vehicle) does not meet standard rearward-facing position lamp requirements, and:

- a) does not have a valid vehicle identity card with a lighting equipment endorsement, or
- b) does not meet the conditions of the lighting equipment endorsement in its vehicle identity card.

6. A retrofitted lamp, other than a top-mounted lamp on an emergency vehicle, is mounted at a height from the ground exceeding 1.5m (or 2.1m where fitting below 1.5m is not practicable due to the shape of the bodywork of the vehicle).

7. A retrofitted pair of lamps:

- a) is not symmetrically mounted, or
- b) is not mounted as far towards each side of the vehicle as is practicable.

Condition

8. A lamp is insecure or, if a mandatory lamp, contains moisture in the form of large droplets, runs or puddles.

9. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.

10. A lamp's reflector is damaged or has deteriorated so that light output is reduced.

Performance

11. When switched on, a mandatory lamp does not operate.

12. When switched on, a lamp emits a light that is:

- a) not substantially red, or
- b) not diffuse, or
- c) not projected to the rear, or
- d) different in colour or intensity from that of the other lamp in a pair, or
- e) not steady, or
- f) not bright enough to be visible from 200m in normal darkness, eg due to modification, deterioration, dirt or an incorrect light source, or
- g) is altered, eg due to damage or modification.

13. A non-OE mandatory lamp mounted outside the original position emits a light that is not visible within (**Figure 4-7-1**):

- a) 15° above and below the horizontal, or
- b) 45° inboard or 80° outboard.

14. A modification to the vehicle has reduced the visibility angles of a mandatory lamp to less than (**Figure 4-7-1**):

- a) 15° above and below the horizontal, or
- b) 45° inboard or 80° outboard.

15. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1 Definitions

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Position lamp means a low-intensity lamp that is designed to indicate to road users the presence and dimensions of a vehicle, being:

- a) a forward-facing position lamp (front side lamp), or
- b) a rearward-facing position lamp (rear side lamp or tail lamp), or
- c) a side-marker lamp, or
- d) an end-outline marker lamp (including cab roof lamp).

Note 2

A permitted rearward-facing position lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

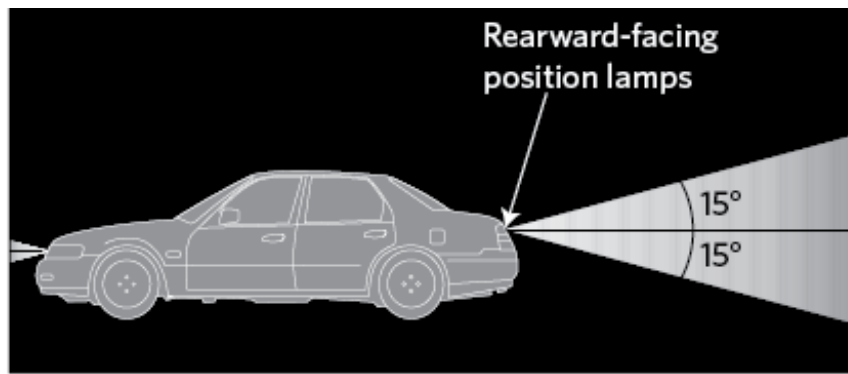
Note 3

An original equipment (OE) lamp is one that is fitted by the vehicle manufacturer in the original position, or is an equivalent replacement or aftermarket lamp suitable for the position provided by the vehicle manufacturer for that lamp. All other lamps are considered retrofitted (ie non-OE).

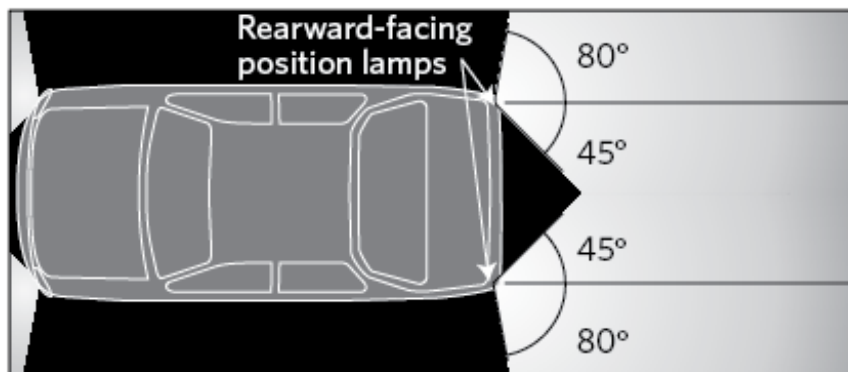
Note 4

A vehicle originally manufactured with a rearward-facing position lamp arrangement that differs from what is required or permitted in this section may retain the original rearward-facing position lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Figure 4-7-1. Rearward-facing position lamp beam angles



(a) Vertical beam angles



(b) Horizontal beam angles

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#)

Mandatory and permitted equipment

1. A vehicle first registered in New Zealand on or after 1 January 1978 and that is more than 1.5m wide must be fitted with one or two pairs of rearward-facing position lamps.
2. A vehicle of group M or N that was first registered in New Zealand before 1 January 1978 or that does not exceed 1.5m in width must be fitted with:
 - a) one single rearward-facing position lamp in the centre or to the right of the centre of the vehicle, or
 - b) one or two pairs of rearward-facing position lamps.
3. A vehicle of class LE that was first registered in New Zealand before 1 January 1978 or that does not exceed 1.5m in width must be fitted with at least one rearward-facing position lamp.
4. An emergency vehicle may be fitted with an additional pair of lamps that must be symmetrically mounted as near the top corners of the bodywork of the vehicle as is practicable (top-mounted lamps).
5. A vehicle (eg a vintage or veteran vehicle) manufactured without lamps, or with lamps that cannot meet specified requirements, may obtain a WoF if:
 - a) the vehicle has a valid vehicle identity card with a lighting equipment endorsement, and
 - b) the vehicle meets the conditions of that endorsement.
6. A retrofitted pair of lamps, other than top-mounted lamps, must be mounted:
 - a) symmetrically as far towards each side of the vehicle as is practicable, and
 - b) at a height from the ground not exceeding 1.5m, or if this is not practicable due to the shape of the bodywork of the vehicle, not exceeding 2.1m.

Condition

7. A rearward-facing position lamp must:
 - a) be in sound condition, and

- b) not be obscured (if a mandatory lamp).

Performance

- 8. A rearward-facing position lamp must operate in a way that is appropriate for the lamp and the vehicle.
- 9. A lamp must emit a light that is:
 - a) diffuse, and
 - b) substantially red.
- 10. A lamp must emit a steady light.
- 11. A lamp must provide sufficient light output to indicate to other road users the presence and dimensions of the vehicle.
- 12. A lamp must emit light that is visible from a distance of 200m in normal darkness.
- 13. A retrofitted mandatory lamp must be visible within angles of 15° above and below the horizontal, and within 45° inboard and 80° outboard.
- 14. Each lamp in a pair must, when operated, emit a light of approximately equal intensity and colour.
- 15. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Modifications ([Note 4](#))

- 16. A rearward-facing position lamp that is affected by a modification must meet equipment, condition and performance requirements.

4-8 Side-marker lamps

Reasons for rejection

Permitted and prohibited equipment

- 1. A side-marker lamp is not positioned so that it gives an indication of the vehicle's dimensions.
- 2. A vehicle less than 6m in length is fitted with a side-marker lamp.

Condition

- 3. A lamp is insecure.
- 4. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
- 5. A reflector is damaged or has deteriorated so that light output is reduced.

Performance

- 6. When switched on, a side-marker lamp emits a light that:
 - a) is not substantially white or amber to the front, or
 - b) is not substantially red or amber to the rear, or
 - c) is not diffuse, or
 - d) is not approximately of the same colour and intensity on each side of the vehicle, or
 - e) does not remain steadily illuminated, or
 - f) is not bright enough to produce light that is visible from 100m in normal daylight and from 200m in normal darkness, eg due to modification, deterioration, dirt or an incorrect light source.
- 7. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Modifications

- 8. A side-marker lamp that is affected by a modification must meet equipment, condition and performance requirements.

Note 1 Definitions

Side-marker lamp means a position lamp designed to be fitted to the side of a vehicle or its load.

Position lamp means a low-intensity lamp that is designed to indicate to road users the presence and dimensions of a vehicle, being:

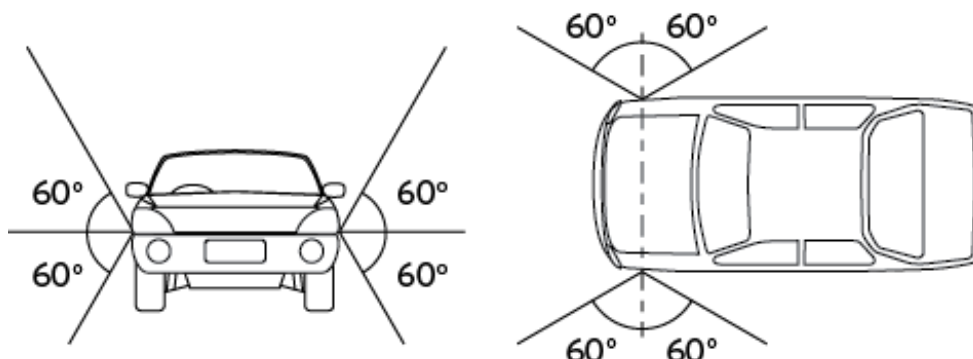
- a) a forward-facing position lamp (front side lamp), or
- b) a rearward-facing position lamp (rear side lamp or tail lamp), or

- c) a side-marker lamp, or
- d) an end-outline marker lamp (including cab roof lamp).

Note 2

A permitted side-marker lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Figure 4-8-1. Visibility angles for side marker lamps



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Permitted and prohibited equipment

1. A light vehicle 6m or more in length may be fitted with one or more side-marker lamps.
2. A side-marker lamp must be positioned so that it gives an indication of the vehicle's dimensions.
3. A light vehicle less than 6m in length must not be fitted with a side-marker lamp.

Condition

4. A side-marker lamp must be in sound condition.

Performance

5. A side-marker lamp must operate in a way that is appropriate for the lamp and the vehicle.
6. A lamp must emit a light that is:
 - a) diffuse, and
 - b) substantially white or amber to the front, and
 - c) substantially red or amber to the rear.
7. A lamp must emit a steady light.
8. A side-marker lamp must provide sufficient light output to indicate to other road users the presence and dimensions of the vehicle.
9. A side-marker lamp must emit a light that is visible from a distance of 100m in daylight and 200m during the hours of darkness.
10. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Modifications

11. A side-marker lamp that is affected by a modification must meet equipment, condition and performance requirements.

4-9 End-outline marker lamps

Reasons for rejection

Permitted and prohibited equipment

1. A light vehicle with an overall width of 1.8m or more is fitted with:

- a) more than four forward-facing lamps, or
 - b) more than two rearward-facing lamps.
2. A light vehicle with an overall width of less than 1.8m is fitted with end-outline marker lamps.
3. The lamps are not positioned in such a way that they give an indication of the vehicles dimensions.

Condition

4. A lamp is insecure.
5. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
6. A reflector is damaged or has deteriorated so that light output is reduced.

Performance

7. When switched on, a forward-facing end-outline marker lamp does not operate ([Note 2](#)).
8. When switched on, an end-outline marker lamp emits a light that is:
- a) not substantially white or amber to the front, or
 - b) not substantially red to the rear, or
 - c) not diffuse, or
 - d) not projected to the front or rear, or
 - e) not approximately of the same colour or intensity as the other lamp if fitted in a pair, or
 - f) not steady, or
 - g) not bright enough to indicate the presence and dimensions of the vehicle to other road users.
9. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1 Definitions

End-outline marker lamp means a position lamp designed to be fitted near the outer extremity of the vehicle in addition to forward-facing and rearward-facing position lamps, and includes a cab roof lamp.

Position lamp means a low-intensity lamp that is designed to indicate the presence and dimensions of a vehicle to other road users, being:

- a) a forward-facing position lamp (front side or park lamp), or
- b) a rearward-facing position lamp (rear side lamp or tail lamp), or
- c) a side-marker lamp, or
- d) an end-outline marker lamp (including cab roof lamp).

Note 2

A rearward-facing end-outline marker lamp that does not comply with the equipment, condition and performance requirements, must be made to comply or be disabled so that it does not emit a light. A non-complying forward-facing end-outline marker lamp must be made to comply or be fully removed from the vehicle.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Permitted and prohibited equipment

1. A light vehicle that has an overall width of 1.8m or more may be fitted with a maximum of:
- a) four forward-facing lamps, and
 - b) two rearward-facing lamps.
2. The position of the lamps must be such that it gives an indication of the vehicle's dimensions.
3. A light vehicle with an overall width of less than 1.8m must not be fitted with end-outline marker lamps.

Condition

4. An end-outline marker lamp must be in sound condition.

Performance

5. An end-outline marker lamp must operate in a way that is appropriate for the lamp and the vehicle.

6. A lamp must emit a light that is:

- a) diffuse, and
- b) substantially white or amber to the front, and
- c) substantially red to the rear.

7. A lamp must emit a steady light.

8. An end-outline marker lamp must provide sufficient light output to indicate to other road users the presence and dimensions of the vehicle.

9. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Modifications

10. An end-outline marker lamp that is affected by a modification must meet equipment, condition and performance requirements.

4-10 Stop lamps

Reasons for rejection

Mandatory and permitted equipment

1. A class LE vehicle first registered in New Zealand on or after 1 January 1978 is not fitted with one stop lamp.

2. A class LE vehicle is fitted with more than two stop lamps.

3. A group M or N vehicle first registered in New Zealand before 1 January 1978:

- a) is not fitted with one stop lamp if the vehicle is so constructed that the driver's arm signals cannot be seen from behind the vehicle, or
- b) is fitted with more than four stop lamps.

4. A group M or N vehicle first registered in New Zealand on or after 1 January 1978 is:

- a) not fitted with one pair of stop lamps, or
- b) fitted with more than two pairs of stop lamps, or
- c) fitted with a stop lamp that is not in a pair, or
- d) an emergency vehicle and is fitted with more than three pairs of lamps, including top-mounted lamps.

5. An emergency vehicle is fitted with:

- a) more than one pair of top-mounted lamps, or
- b) top-mounted lamps that are not mounted as close as is practicable to the top corners of the bodywork.

6. A vehicle (eg vintage or veteran vehicle) does not meet standard stop lamp requirements, and:

- a) does not have a valid vehicle identity card with a lighting equipment endorsement, or
- b) does not meet the conditions of the lighting equipment endorsement in its vehicle identity card.

7. A retrofitted stop lamp, other than a top-mounted lamp on an emergency vehicle, is fitted at a height from the ground exceeding 1.5m (or 2.1m where fitting below 1.5m is not practicable due to the shape of the bodywork of the vehicle).

8. A retrofitted pair of lamps is not:

- a) symmetrically mounted, or
- b) mounted as far towards each side of the vehicle as is practicable.

9. A vehicle (eg a vintage or veteran vehicle) does not meet standard stop lamp requirements, and:

- a) does not have a valid vehicle identity card with a lighting equipment endorsement, or
- b) does not meet the conditions of the lighting equipment endorsement in its vehicle identity card.

Condition

10. A lamp is insecure or, if a mandatory lamp, contains moisture in the form of large droplets, runs or puddles.
11. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
12. A reflector is damaged or has deteriorated so that light output is reduced.

Performance

13. When the service brake is activated:
 - a) a mandatory lamp does not operate, or
 - b) a lamp does not remain steadily illuminated.
14. A lamp operates when the service brake is not applied.
15. A lamp emits a light that is:
 - a) not substantially red, or
 - b) not diffuse, or
 - c) not projected to the rear, or
 - d) different in intensity from the other lamp in a pair, or
 - e) not bright enough to produce a light that is visible from 100m in normal daylight, eg due to modification, deterioration, dirt or an incorrect light source, or
 - f) is altered, eg due to damage or modification.
16. A non-OE mandatory lamp mounted outside the original position emits a light that is not visible within (**Figure 4-10-1**):
 - a) 15° above and below the horizontal, or
 - b) 45° inboard and outboard.
17. A modification to the vehicle has reduced the visibility angles of a mandatory lamp to less than (**Figure 4-10-1**):
 - a) 15° above and below the horizontal, or
 - b) 45° inboard and outboard.
18. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.
19. On a vehicle of American origin fitted with combined stop and direction indicator lamps, the stop lamp function is not overridden by the indicator function.

Note 1 Definitions

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Stop lamp means a lamp that is designed to operate when the service brake is activated.

Note 2

A permitted stop lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

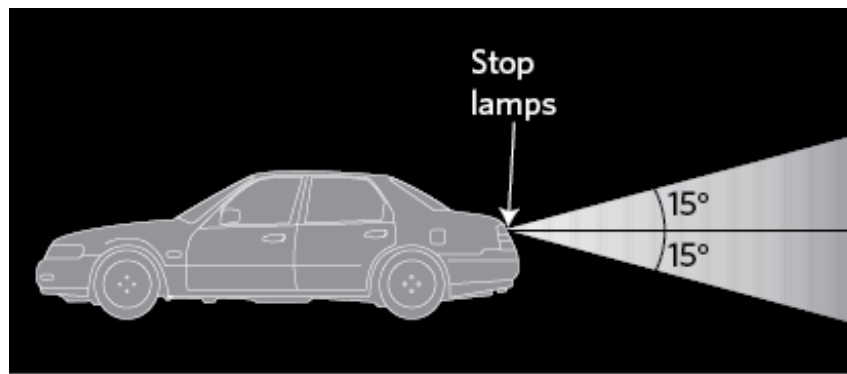
Note 3

An original equipment (OE) lamp is one that is fitted by the vehicle manufacturer in the original position, or is an equivalent replacement or aftermarket lamp suitable for the position provided by the vehicle manufacturer for that lamp. All other lamps are considered retrofitted (ie non-OE).

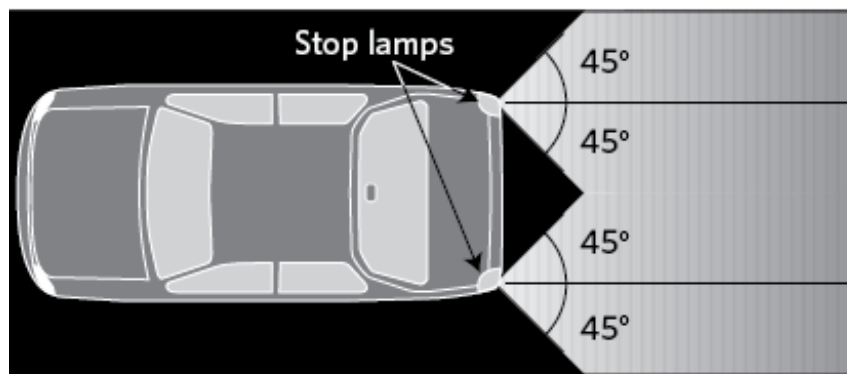
Note 4

A vehicle originally manufactured with a stop lamp arrangement that differs from what is required or permitted in this section may retain the original stop lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Figure 4-10-1. Stop-lamp visibility angles



(a) Vertical angles



(b) Horizontal angles

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#)

Mandatory and permitted equipment

1. A class LE vehicle:
 - a) first registered in New Zealand before 1 January 1978 may be fitted with one or two stop lamps.
 - b) first registered in New Zealand on or after 1 January 1978 must be fitted with one or two stop lamps
2. A group M or N vehicle:
 - a) first registered in New Zealand before 1 January 1978:
 - i. may be fitted with one, two or four stop lamps, or
 - ii. must be fitted with one, two or four stop lamps if its construction, equipment or loading prevents an arm signal given by the driver from being seen from behind the vehicle.
 - b) first registered in New Zealand on or after 1 January 1978 must be fitted with one or two pairs of stop lamps that emit a light that is visible from 100m.
3. An emergency vehicle may be fitted with an additional pair of lamps that must be symmetrically mounted as near the top corners of the bodywork of the vehicle as is practicable (top-mounted lamps).
4. A vehicle (eg a vintage or veteran vehicle) manufactured without lamps, or with lamps that cannot meet specified requirements, may obtain a WoF if:
 - a) the vehicle has a valid vehicle identity card with a lighting equipment endorsement, and
 - b) the vehicle meets the conditions of that endorsement.
5. A retrofitted pair of stop lamps must be symmetrically mounted as far towards each side of the vehicle as is practicable.
6. A retrofitted stop lamp, other than a top-mounted lamp, must be fitted at a height from the ground not exceeding 1.5m, or if this is not practicable due to the shape of the bodywork of the vehicle, not exceeding 2.1m.
7. A vehicle (eg a vintage or veteran vehicle) manufactured without lamps, or with lamps that cannot meet specified requirements, may obtain a WoF if:

- a) the vehicle has a valid vehicle identity card with a lighting equipment endorsement, and
- b) the vehicle meets the conditions of that endorsement.

Condition

8. A stop lamp must:

- a) be in sound condition, and
- b) not be obscured (if a mandatory lamp).

Performance

- 9. A stop lamp must operate in a way that is appropriate for the lamp and the vehicle.
- 10. The light emitted from a stop lamp must be diffuse light that is substantially red.
- 11. A required stop lamp must operate when a service brake is activated.
- 12. A required stop lamp must provide sufficient light output to fulfil its intended purpose.
- 13. A stop lamp must emit a steady light.
- 14. A retrofitted mandatory stop lamp must emit a light that is visible within the angles of 15° above and below the horizontal, and 45° inboard and outboard.
- 15. If a vehicle of American origin is fitted with combined stop and direction indicator lamps, the indicator lamps must override the stop lamps so that the stop lamps will operate as direction indicators.
- 16. Where a stop lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Modifications ([Note 1](#))

- 17. A stop lamp that is affected by a modification must meet equipment, condition and performance requirements.

4-11 High-mounted stop lamps

Reasons for rejection

Mandatory and permitted equipment

- 1. A class MA vehicle first registered in New Zealand on or after 1 January 1990 is not fitted with one high-mounted stop lamp.
- 2. A vehicle is fitted with more than two high-mounted stop lamps.
- 3. A lamp is not fitted in a central high-mounted position.
- 4. A lamp fitted to a group M or N vehicle, except one that does not have a rear window, or that does not have a rear window visible from the rear, has an illuminated surface that is lower than 150mm below the bottom edge of the rear window.
- 5. A vehicle (eg a vintage or veteran vehicle) does not meet standard stop lamp requirements, and:
 - a) does not have a valid vehicle identity card with a lighting equipment endorsement, or
 - b) does not meet the conditions of the lighting equipment endorsement in its vehicle identity card.

Condition

- 6. A lamp is insecure.
- 7. A mandatory lamp ([Note 2](#)) is obscured, or contains moisture in the form of large droplets, runs or puddles.
- 8. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
- 9. A reflector is damaged or has deteriorated so that light output is reduced.

Performance

- 10. When the service brake is activated:
 - a) a mandatory ([Note 2](#)) lamp does not operate, or
 - b) a lamp does not remain steadily illuminated.
- 11. A lamp operates when the service brake is not activated.
- 12. A lamp emits a light that is not:
 - a) substantially red, or

- b) diffuse, or
- c) projected to the rear, or
- d) bright enough to be visible from 100m in normal daylight, eg due to modification, deterioration, dirt or an incorrect light source

13. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1 Definitions

High-mounted stop lamp means a stop lamp that is designed to be fitted in a central, high-mounted position at the rear of a vehicle.

Stop lamp means a lamp that is designed to operate when the service brake is activated.

Note 2

Mandatory lamp – the vehicle must have one high-mounted stop lamp that meets the equipment, condition and performance requirements. Any other high-mounted stop lamp is a permitted lamp. The permitted lamp is not required to operate, but if it does operate, it must meet the equipment, condition and performance requirements, although it may be obscured.

Note 3

A vehicle originally manufactured with a high-mounted stop lamp arrangement that differs from what is required or permitted in this section may retain the original high-mounted stop lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Mandatory and permitted equipment

1. A class MA vehicle first registered in New Zealand on or after 1 January 1990 must be fitted with one or two high-mounted stop lamps.
2. Any other vehicle may be fitted with one or two high-mounted stop lamps.
3. A lamp on a group M or N vehicle must be fitted in a central high-mounted position at the rear of the vehicle.
4. No part of a lamp's illuminated surface must be lower than 150mm below the bottom edge of the rear window, except where there is no rear window fitted or visible from behind the vehicle.
5. A vehicle (eg a vintage or veteran vehicle) manufactured without lamps, or with lamps that cannot meet specified requirements, may obtain a WoF if:
 - a) the vehicle has a valid vehicle identity card with a lighting equipment endorsement, and
 - b) the vehicle meets the conditions of that endorsement.

Condition

6. A high-mounted stop lamp must be in good condition.
7. At least one high-mounted stop lamp must not be obscured.

Performance

8. A high-mounted stop lamp must operate in a way that is appropriate for the lamp and the vehicle.
9. The light emitted from a high-mounted stop lamp must be diffuse light that is substantially red.
10. A high-mounted stop lamp must emit a steady light.
11. At least one unobscured lamp must operate when the vehicle's service brakes are activated.
12. Where a high-mounted stop lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Modifications

13. A high-mounted stop lamp that is affected by a modification:
 - a) must meet equipment, condition and performance requirements, and
 - b) does not require LVV specialist certification.

4-12 Rear-reg.-plate illumination lamps

Reasons for rejection

Mandatory equipment

1. A vehicle is not fitted with at least one rear-registration-plate illumination lamp.
2. A vehicle (eg a vintage or veteran vehicle) does not meet standard rear-registration-plate illumination lamp requirements, and:
 - a) does not have a valid vehicle identity card with a lighting equipment endorsement, or
 - b) does not meet the conditions of the lighting equipment endorsement in its vehicle identity card.

Performance

3. The lamp emits a light that is not:
 - a) substantially white, or
 - b) steady, or
 - c) diffuse.
4. The lamps are not bright enough to show up the registration plate text from 20m in normal darkness.
5. The light source of a lamp is visible from the rear of the vehicle.

Note 1 Definitions

Rear-registration-plate illumination lamp means a lamp designed to illuminate the rear registration plate of a vehicle.

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Note 2

A vehicle originally manufactured with a rear-registration-plate illumination lamp arrangement that differs from what is required or permitted in this section may retain the original rear-registration-plate illumination lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Mandatory equipment

1. At least one rear-registration-plate illumination lamp.
2. A vehicle (eg a vintage or veteran vehicle) manufactured without lamps, or with lamps that cannot meet specified requirements, may obtain a WoF if:
 - a) the vehicle has a valid vehicle identity card with a lighting equipment endorsement, and
 - b) the vehicle meets the conditions of that endorsement.

Performance

3. A rear-registration-plate illumination lamp must operate in a way that is appropriate for the lamp and the vehicle.
4. A lamp must emit a diffuse light that is substantially white.
5. A rear-registration-plate illumination lamp must emit a steady light.
6. The light source of the lamp must not be visible from the rear of the vehicle.
7. A lamp must illuminate the figures and letters of the plate so that they are visible from 20m during normal darkness.
8. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Modifications

9. A rear-registration-plate illumination lamp that is affected by a modification must meet equipment, condition and performance requirements.

4-13 Rear-reflectors

Mandatory and permitted equipment

1. A group M or N vehicle:
 - a) is not fitted with at least one red rearward-facing reflector on each side, or
 - b) is fitted with a red rearward-facing reflector that is not in a pair.
2. A class LE vehicle is not fitted with at least one red rearward-facing reflector.
3. A reflector is not positioned to the rear of the vehicle.
4. A retrofitted reflector is fitted at a height from the ground exceeding 1.5m (or 2.1m where fitting below 1.5m is not practicable due to the shape of the bodywork of the vehicle).
5. A retrofitted pair of reflectors is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards each side of the vehicle as is practicable.

Condition

6. A mandatory reflector's ability to reflect light is affected by excessive:
 - a) fading, or
 - b) scratching or other damage.
7. A mandatory reflector is obscured.

Performance

8. The reflected light from a mandatory reflector is not visible from 100m.
9. The reflected light from a reflector is not red.

Note 1 Definitions

Reflector means a distinct item of lighting equipment that is designed to reflect incident light back towards the light source, but does not include reflective material (such as reflective tape).

Reflective material means any material that is designed to reflect incident light back towards the light source and includes reflective tape, but does not include a reflector.

Note 2

A vehicle originally manufactured with a rear reflector arrangement that differs from what is required or permitted in this section may retain the original rear reflectors provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Mandatory and permitted equipment

1. A group M or N vehicle must be fitted with at least one pair of rearward-facing reflectors at a height from the ground not exceeding 1.5m, or if this is not practicable due to the shape of the bodywork of the vehicle, not exceeding 2.1m.
2. A class LE vehicle must be fitted with at least one rearward-facing reflector that reflects light that is visible from 100m.
3. A rearward-facing reflector must be positioned to the rear of the vehicle.
4. A reflector must be of an area that allows it to reflect light to improve the visibility of the vehicle to other road users, but it must not cause them undue dazzle or discomfort.
5. A retrofitted pair of reflectors must be symmetrically mounted as far towards each side of the vehicle as is practicable.

Condition

6. A mandatory reflector must be in good condition and not be obscured.

Performance

7. A reflector must operate in a way that is appropriate for the reflector and the vehicle.
8. A reflector must reflect white light as substantially red light.
9. A reflector must provide sufficient light reflection to fulfil its intended purpose.

Modifications

10. A rear reflector that is affected by a modification:
 - a) must meet equipment, condition and performance requirements, and
 - b) does not require LVV specialist certification.

4-14 Reversing lamps

Reasons for rejection

Permitted equipment

1. A vehicle is fitted with more than two reversing lamps at the rear of the vehicle.
2. A retrofitted pair of reversing lamps is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards each side of the vehicle as is practicable.

Condition

3. A lamp is insecure.
4. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
5. A reflector is damaged or has deteriorated so that light output is reduced.

Performance

6. A lamp controlled by gear engagement continues to display a light to the rear when the reverse gear is disengaged.
7. A lamp controlled by a manual switch continues to display a light to the rear while the headlamps are switched on.
8. When engaged, a lamp emits light that is not:
 - a) substantially white ([Note 3](#)), or
 - b) steady, or
 - c) diffuse or a dipped beam.
9. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1 Definitions

Reversing lamp means a lamp designed to illuminate the area behind the vehicle while it is reversing and to warn other road users that the vehicle is reversing or about to reverse.

Note 2

A reversing lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Note 3

Vehicles first registered in New Zealand before 27 February 2005 were allowed to use rear indicator lamps as reversing lamps. Although the light emitted is amber rather than white, this arrangement is still permitted for these vehicles.

Note 4

A vehicle originally manufactured with a reversing lamp arrangement that differs from what is required or permitted in this section may retain the original reversing lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Permitted equipment

1. One or two reversing lamps fitted at the rear of the vehicle.
2. A retrofitted pair of reversing lamps must be symmetrically mounted as far towards each side of the vehicle as is practicable.

Condition

3. A reversing lamp must be in good condition.

Performance

4. A reversing lamp must operate in a way that is appropriate for the lamp and the vehicle.
5. A reversing lamp, when operated, must emit a diffuse light or a dipped beam of light that is substantially white ([Note 3](#)).
6. A reversing lamp must emit a steady light.
7. A reversing lamp may operate only when the reverse gear is engaged or the headlamps are turned off.
8. Where a reversing lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Modifications

9. A reversing lamp that is affected by a modification:
 - a) must meet equipment, condition and performance requirements, and
 - b) does not require LVV specialist certification.

4-15 Cosmetic lamps

Reasons for rejection

Permitted equipment

1. A cosmetic lamp (ie one not listed in **Table 4-15-1**) that is fitted to a vehicle:
 - a) has a part of its light-emitting surface positioned within 250mm of any mandatory lamp, or
 - b) is not mounted in a fixed position, or
 - c) is positioned so that its light-emitting surface is visible within the shaded areas in **Figure 4-15-1**.

Performance

2. When switched on, a cosmetic lamp with a light-emitting surface not visible within the shaded areas in **Figure 4-15-1** emits a light that:
 - a) is not diffuse, or
 - b) flashes or otherwise varies in intensity or colour, or
 - c) revolves, rotates or otherwise moves, or
 - d) is too bright and likely to dazzle other road users, or
 - e) is likely to cause confusion about the orientation of the vehicle, or
 - f) is red when seen directly from the front, or
 - g) is not red or amber when seen directly from the rear.

Note 1

A rear or side cosmetic lamp that does not comply with requirements for condition or performance must be made to comply, or be disabled so that it does not emit a light.

Note 2 Definitions

Lamp means a device designed to emit light, and includes an array of separate light sources that appear as a continuous illuminated surface.

Cosmetic lamp means any lamp that is not listed in **Table 4-15-1**.

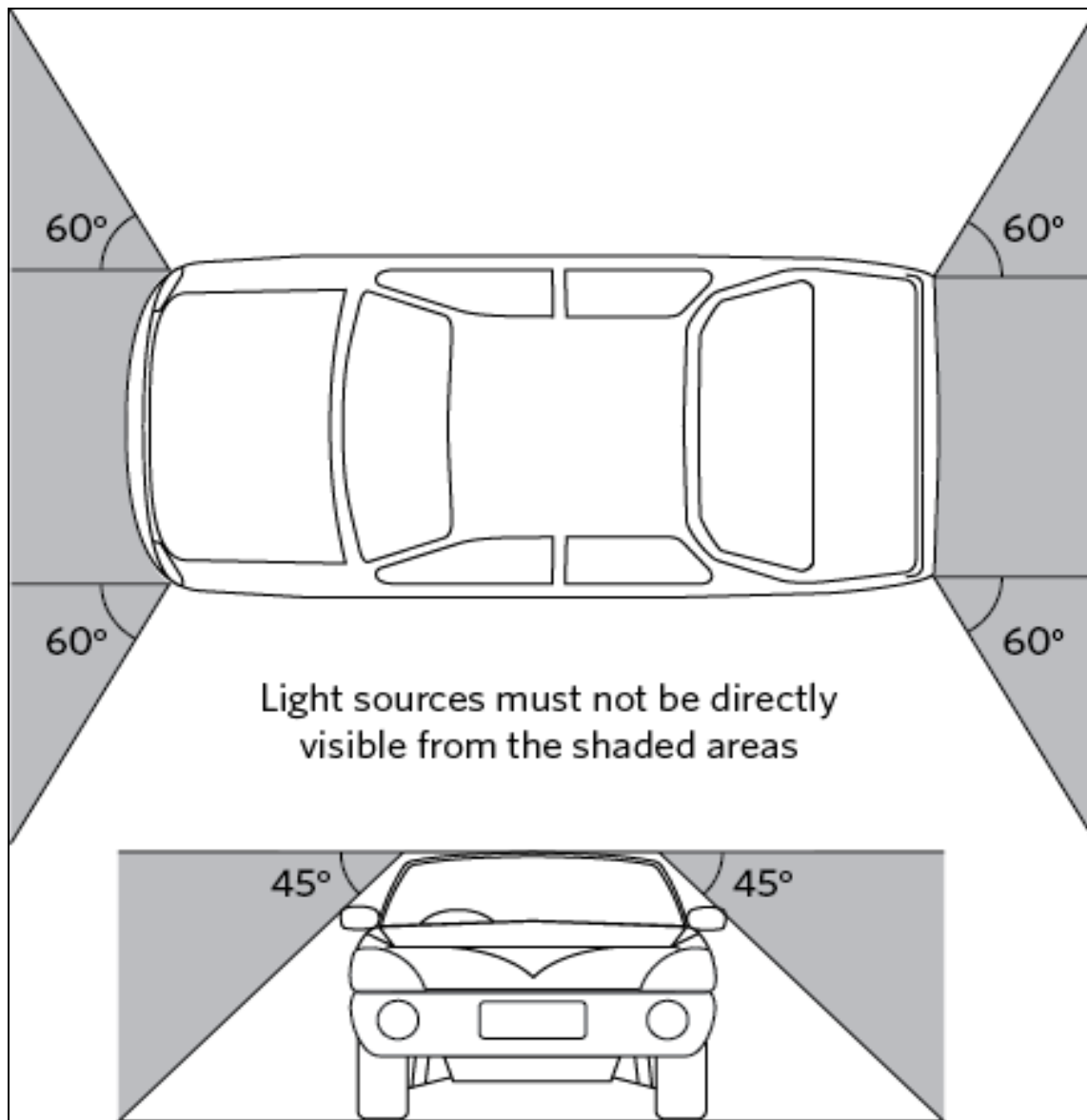
Note 3

A forward-facing cosmetic lamp that does not comply with the equipment, condition and performance requirements must be made to comply or be removed from the vehicle.

Table 4-15-1. Lamps that are not cosmetic lamps

Lamps covered in the VIRM	Other lighting equipment not requiring inspection
Headlamps	Reflective material
Stop lamps	Interior lamps <i>Designed to illuminate the interior of the vehicle for the convenience of passengers</i>
High-mounted stop lamps	
Direction indicator lamps	Work lamps <i>White or amber high-intensity lamps that are not necessary for the operation of the vehicle but are designed to illuminate the area around the vehicle or the vehicle itself</i>
Position lamps (includes side-marker lamps and end-outline marker lamps)	Scene lamps <i>Work lamps designed to provide a fixed or movable beam of light to illuminate the area around the vehicle or the vehicle itself</i>
Rear-registration-plate illumination lamps	
Rear reflectors	Alley lamps <i>Work lamps designed primarily to provide a fixed or movable beam of light to the side of the vehicle it is fitted to</i>
Fog lamps	
Daytime running lamps	Flashing or revolving beacons
Cornering lamps	Illuminated vehicle-mounted signs <i>Includes PSV destination signs, taxi signs and variable message signs operated by enforcement officers, under a traffic management plan or permitted by other legislation</i>
Reversing lamps	
PSV interior lamps	A light source that is a necessary part of equipment required or permitted by any enactment to be fitted to a vehicle <i>Includes LEDs that indicate status on eRUC labels</i>

Figure 4-15-1. Visibility angles for cosmetic lamps



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Permitted equipment

1. A vehicle may be fitted with one or more lamps not specified in **Table 4-15-1**, provided they are fitted so that light sources are not visible in those regions specified in **Figure 4-15-1**.
2. A lamp must be fitted in a fixed position on the vehicle and positioned so that no part of the light source is situated within 250mm of a mandatory lamp.

Performance

3. A lamp must:
 - a) only emit light that is diffuse, and
 - b) not emit light that flashes or otherwise varies in intensity or colour, and
 - c) be fitted in a way, and be of a luminance that ensures, that it does not dazzle, confuse or distract other road users, and
 - d) not emit a light that revolves, rotates or otherwise moves, and
 - e) not cause confusion as to the orientation of the vehicle, and
 - f) not emit a red light that is directly visible from the front of the vehicle, and
 - g) not emit a light other than red or amber if the light is directly visible from the rear of the vehicle.

5 Vision

5-1 Glazing

Reasons for rejection

Mandatory equipment

Glazing markings – visual inspection

1. A glazing marking is not permanent, except for:
 - a) glazing marked by a vendor or installer, and fitted in a vehicle before 1 January 1997, which may be marked by means of a self-adhesive label.
2. A glazing marking required in **Table 5-1-1** or **Table 5-1-2** is missing, except for:
 - a) plastic glazing behind the driver's seat in a soft-top convertible, or
 - b) hard plastic material behind the driver's seat in a vehicle manufactured before 1 January 1991, or
 - c) wire glass fitted to a window behind the driver's seat of a dangerous goods vehicle.
3. The glazing has an incorrect marking for the location in which it is fitted.
4. Glazing that is marked by a vendor or installer does not contain (**Table 5-1-3** and **Figure 5-1-3**):
 - a) wording, characters or symbols that indicate the approved vehicle standard, and
 - b) the type of glazing, and
 - c) the thickness of the glazing in millimetres, or, in the case of laminated glass only, the thickness of the intervening layer of plastic, and
 - d) the identity of the vendor or installer of the glazing.

Glazing condition

5. A piece of glazing is not mechanically sound, or is not securely affixed to the vehicle.
6. A windscreen or front side window is so dirty or obstructed that the driver's vision is impaired.
7. A windscreen has damage that prevents the wiper blades from working properly.
8. A windscreen has scratches, discolouration or other defects that unreasonably impair the driver's vision or compromise the strength of the windscreen.

Condition within the critical vision area (CVA)

9. The critical vision area (CVA) of a windscreen (**Figure 5-1-4**) is damaged (apart from scratching and surface pitting that does not affect the driver's vision, such as small stone marks).

Condition outside the CVA

10. A windscreen has damage ([Note 2](#)) of the types and exceeding the dimensions in **Table 5-1-5**.
11. Any damage that extends through more than one layer of glass.

Glazing performance

12. The overall visible light transmittance (VLT) ([Note 3](#)) of a windscreen is less than 70%.
13. The overall VLT of a front side window is less than 35%.
14. Glazing has a mirrored effect sufficient to dazzle other road users (unless it is OE and has an approved standard marking).

Permitted modifications

15. A modification that affects glazing is not within the limits in **Table 5-1-6**.

Glazing removal

16. OE glazing that affects the structural integrity of the vehicle (eg bonded glazing) has been permanently removed but the vehicle has not been certified to the LVV Code and is not fitted with a valid LVV certification plate, or the operator is not able to produce a valid modification declaration or authority card.

Condition of modified glazing

17. Glazing has scratches or other defects that unreasonably impair vision or compromise the strength of the glazing.

Performance of modified glazing

18. A modification:

- a) unreasonably impairs the driver's vision through the windscreen or a front side window, or
- b) adversely affects the strength or mechanical performance of the glazing or the vehicle.

Windscreen repair

19. A windscreen that has been rejected for a WoF or CoF has been repaired and re-presented without the required documentation ([Note 6](#)).

Note 1 - Definitions

Windscreen means all glazing extending across the front of a vehicle that is not parallel to the vehicle's longitudinal centreline, but does not include a wind deflector. No fitting or overlays of stickers are permitted to the windscreen except those previously mentioned.

Laminated glass means glazing consisting of two or more pieces of sheet glass, plate glass or float glass bonded together by one or more intervening layers of plastic material.

Overlay means a transparent, translucent or opaque self-adhesive or clinging film that is applied to large areas, or the whole, of a piece of glazing, including anti-glare band overlays, stoneguard overlays.

Sticker means a self-adhesive or clinging film, with or without print on it, that is applied for purposes such as, but not limited to, advertising, identification, information, or for aesthetic or legal reasons.

Anti-glare band overlay means a tinted overlay that is transparent and that is applied along the top edge of the windscreen for the purpose of reducing glare from the sun.

Stoneguard overlay means a clear overlay that is transparent and that is applied along the bottom edge of the windscreen for the purpose of preventing damage to the windscreen from stones and other debris thrown up by other vehicles.

Note 2

Damage includes any unrepaired damage and attempted visible repairs.

Note 3

Visible light transmittance (VLT) is the proportion of visible light that passes through glazing, measured perpendicular to the glazing. Overall VLT is the VLT of the glazing together with any overlays.

Note 4

Any OE opaque edging (usually black) is not considered part of the windscreen when determining the boundaries of the CVA, or the areas permitted for stickers, print on an anti-glare band, or radio antennae.

Note 5

Perforated overlays are usually made from printed-on materials. They are therefore not transparent and may be fitted only where stickers are allowed.

Note 6

When a windscreen has been rejected for a WoF or CoF, repaired, and then re-presented for inspection, the repair must be certified to AS/NZS 2366: 1999, AS 2366-1990 or NZS 5470: 1993. Proof of certification is the receipt issued in accordance with the relevant standard by the repairer. For AS/NZS 2366: 1999, the windscreen repair invoice must include:

- a) invoice number
- b) date of repair
- c) date of invoice (if different from date of repair)
- d) trading name and address of repairer
- e) name or identification of person performing the repair
- f) make of vehicle
- g) registration number of vehicle, or if registration number is unavailable then the vehicle identification number (VIN) or chassis number
- h) details of work carried out
- i) type and location of repaired damage on the windscreen (it is recommended that this be marked on a schematic windscreen on the invoice form)

j) in the case of repairs performed to this standard, a statement that the repairs have been made in accordance with and comply with AS/NZS 2366.1 using a repair system that complies with AS/NZS 2366.2

k) any guarantees or warranties given.

Table 5-1-1. Required markings for windscreens ([Note 1](#))

Vehicle class	Date of manufacture				
	before 1/1/60	1/1/60–1/7/86	1/7/86–1/1/91	1/1/91–1/7/97	from 1/7/97
MA, MB, MC, NA	–	Safety glass with approved trade name or approved standard	Laminated glass with approved standard	Laminated glass with approved standard	Laminated glass with approved standard
MD1, MD2	–	Safety glass with approved trade name or approved standard	Safety glass with approved standard	Safety glass with approved standard	Laminated glass with approved standard
Low volume vehicles	–	–	–	LVV Code	LVV Code

Table 5-1-2. Required markings for other glazing

Vehicle class	Date of manufacture		
	before 1/2/77	1/2/77–1/1/91	from 1/1/91
MA, MB ¹ , MC, NA, MD1 ¹ , MD2 ¹	–	Safety glass with approved trade name or approved standard	Safety glass with approved standard
Low volume vehicles	–	–	LVV Code

¹ Curved scenic skylights above the cant rail, curved windows at front and rear corners, skylights, louvres and interior partitions may be made of a transparent material of a kind that does not shatter. This material is not usually marked.

Table 5-1-3. Approved trade names for glazing

Armourfloat Armourplate Blindex Duolite Safety Duplate Safety Flolite Ford Indestructo Ford Safety Glass Ford Silver Arrow Glacetex	Hankuk Glass Safety Heat Line HMC Glass Safety Hankuk TF5 HMC Glass Safety Hankuk TV5 Indestructo Nippon Safety NM Laminated Safety Glass FHP Peerless	Plexite Safetyflex Safety MGB (Meloplate) Safety MGB (Melite Safety Plate) Sekurit Sigla Spectrofloat Splintex Sunmat Suntex Safety Glass	Temperlite Temperlite Santa Marina Thorex Connex Triplex Triplex Plate Tuflite Tyneside Veracetex
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Table 5-1-4. Glossary of codes for safety glass (including laminated glass) ([Note 1](#)) ([Note 4](#))



L	laminated glass
F	float glass
P	plate glass
LF	laminated float
LP	laminated plate
/	toughened, when near the  mark
// or ///	laminated, when near the  mark
TS	toughened glass
TP	toughened plate
T	toughened or tempered
Z	zone tempered
HP	high performance laminated safety glass
WHP	complies with impact test (windscreen high performance laminated safety glass)
DOT	Department of Transport (USA)
AS \pm 1 or AS \pm 2	the glass, in the direction of the arrow, complies with the 70% light transmission requirement
ANSI	American National Standards Institute
FMVSS codes	
AS1	for use anywhere in the vehicle
AS2	for use anywhere in the vehicle other than windscreen
AS3	for rear and rear side windows only
AS4 and AS5	for glazing not used for driver's vision (eg the rear window of heavy truck cabs or convertible tops, windows/doors in motorhome bodies, ute canopies, rear windows on buses, roof glazing etc)
Glazing cut from mother sheet	
L.76WHP	laminated, 0.76 mm interlayer, suitable for all locations
L.38	laminated, 0.38 mm interlayer, must not be used for windscreens
PCZ26.1	polycarbonate, meets requirements of ANSI Z26, must not be used for windscreens

Table 5-1-5. Types and maximum sizes of windscreen damage ([Note 2](#)).

(see also Figure 5-1-5)









<p>CRATER</p>  <p>Maximum diameter 5 mm</p>	<p>HORSESHOE</p>  <p>Maximum diameter 25 mm</p>	<p>STAR</p>  <p>Maximum diameter 30 mm</p>	<p>BULLSEYE</p>  <p>Maximum diameter 20 mm</p>	<p>CRACK</p>  <p>Maximum diameter 100 mm</p>
<p>COMBINATION SAME TYPE</p>  <p>Diameter of the smallest circle around all incidences is measured and maximum diameter applied.</p>	<p>COMBINATION DIFFERENT TYPES</p>  <p>Each type measured and maximum diameter applied separately.</p>	<p>COMBINATION SAME + DIFFERENT</p>  <p>Diameters of the smallest circles around all incidences of same types are measured and maximum diameter applied.</p>		

Table 5-1-6. Permitted modifications

Fitting of or modification to:	Modification permitted provided that:
<p>Overlays (Note 1):</p> <p>See below for overlays on windscreens, front side windows, rear and rear side windows, and sun roofs</p>	<ul style="list-style-type: none"> overlays do not: <ul style="list-style-type: none"> have any bubbling or other defect that could unreasonably impair vision, or have a mirrored effect that is sufficient to dazzle other road users, or affect the performance of any high-mounted stop lamp fitted to the vehicle.
Windscreens:	
<p>Stickers (Note 1)</p>	<ul style="list-style-type: none"> stickers are wholly within 100mm of the top or bottom edge, or 50mm of the side edges (Note 4), unless required or permitted by legislation, eg: <ul style="list-style-type: none"> a licence label a road user licence label a WoF label an alternative fuel sticker a current parking permit or other document issued by the local authority learner L-plates (in sticker format) provided the driver's vision is not unreasonably affected.
<p>Anti-glare band overlay (Note 1)</p>	<ul style="list-style-type: none"> the overlay is transparent, and the overlay does not extend below the bottom edge of the vehicle's OE sun visors when they are folded down as far as possible towards the windscreen, and the overlay does not contain print below a line that is 100 mm below and parallel to the top edge of the windscreen (Note 4).
<p>Clear or transparent stoneguard overlay (Note 1)</p>	<ul style="list-style-type: none"> the vehicle is not of class MA or MC, and the overlay is applied only to the bottom edge of the windscreen, and the top edge of the overlay does not extend any higher than the highest point of the steering wheel.
<p>Radio antennae</p>	<ul style="list-style-type: none"> antennae are wholly within 100mm of any edge (Note 4).
Front side windows:	
<p>Transparent overlays (Note 5)</p>	<ul style="list-style-type: none"> the overall visible light transmittance (VLT) is not reduced to below 35%.
<p>Stickers</p>	<ul style="list-style-type: none"> stickers are wholly within 100mm of the bottom edge, or 50 mm of any other edge, unless required or permitted by legislation.
<p>Radio antennae</p>	<ul style="list-style-type: none"> antennae are wholly within 100mm of any edge.
Rear and rear-side windows (behind the driver's seat) –	

class MA vehicles except stretch limousines and body transfer vehicles:	
Transparent overlays (Note 5)	<ul style="list-style-type: none"> the overall visible light transmittance (VLT) is not reduced to below 35%, and the vehicle is equipped on both sides with external rear-view mirrors.
Stickers	<ul style="list-style-type: none"> the stickers are wholly within 100mm of any edge unless they are: <ul style="list-style-type: none"> required or permitted by legislation required for motorsport purposes (such as competition numbers or competitor names), and the vehicle has a valid motorsport authority card.
Radio antennae	<ul style="list-style-type: none"> antennae are wholly within 100mm of any edge.
Rear and rear-side windows (behind the driver's seat) – any vehicle class except MA, but including stretch limousines and body transfer vehicles:	
Overlays and other modifications	<ul style="list-style-type: none"> the vehicle is equipped on both sides with external rear-view mirrors.
Stickers	<ul style="list-style-type: none"> stickers may be applied anywhere on the glazing but, if not wholly within 100mm of any edge (Note 4), the vehicle must be equipped on both sides with external rear-view mirrors.
Radio antennae	<ul style="list-style-type: none"> in-service requirements for condition and performance are met.

Fitting of or modification to:	Modification always permitted:
Monsoon shields	<ul style="list-style-type: none"> in-service requirements for condition and performance must be met.
Electric demisters	
Sunroofs (overlays and stickers applied anywhere on the glazing, radio antennae, and electric demisters)	
Any modification for the purposes of law enforcement or the provision of emergency services	

Figure 5-1-1 Approved standards markings

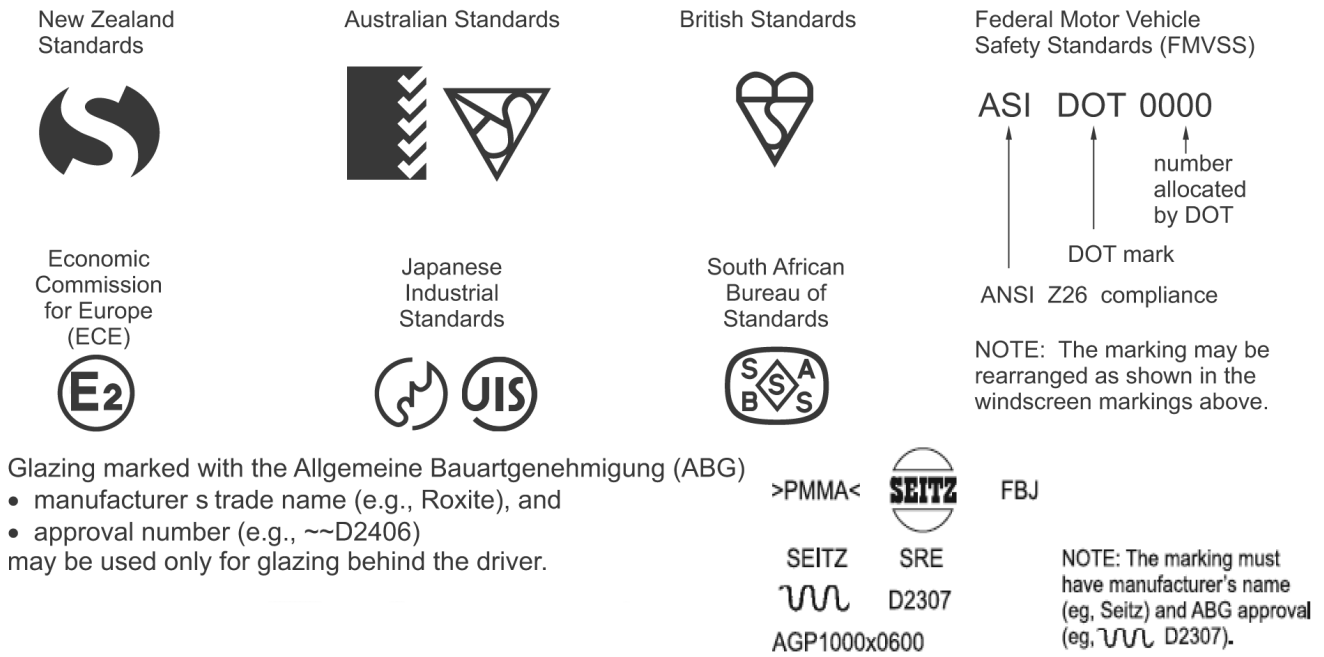


Figure 5-1-2. Typical laminated glazing markings (Note 1)

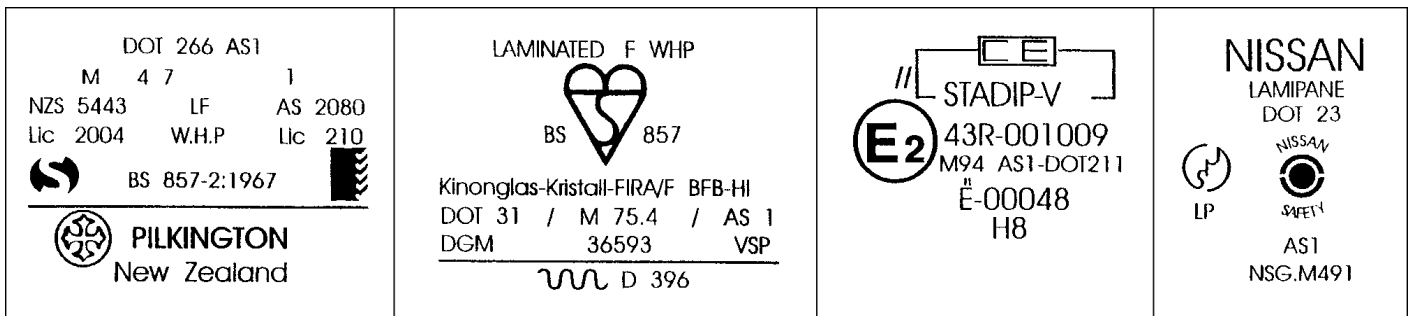


Figure 5-1-3. Typical markings required on glazing cut from mother sheet

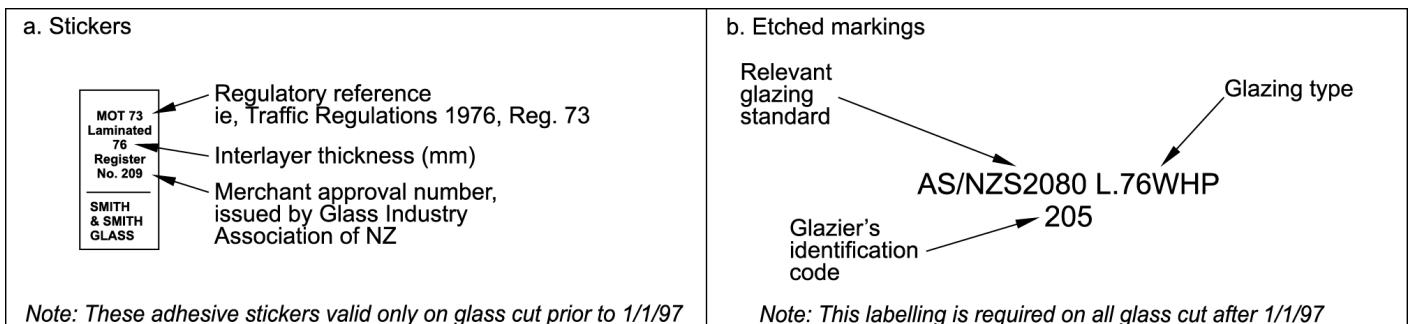


Figure 5-1-4. Windscreen critical vision area (CVA)

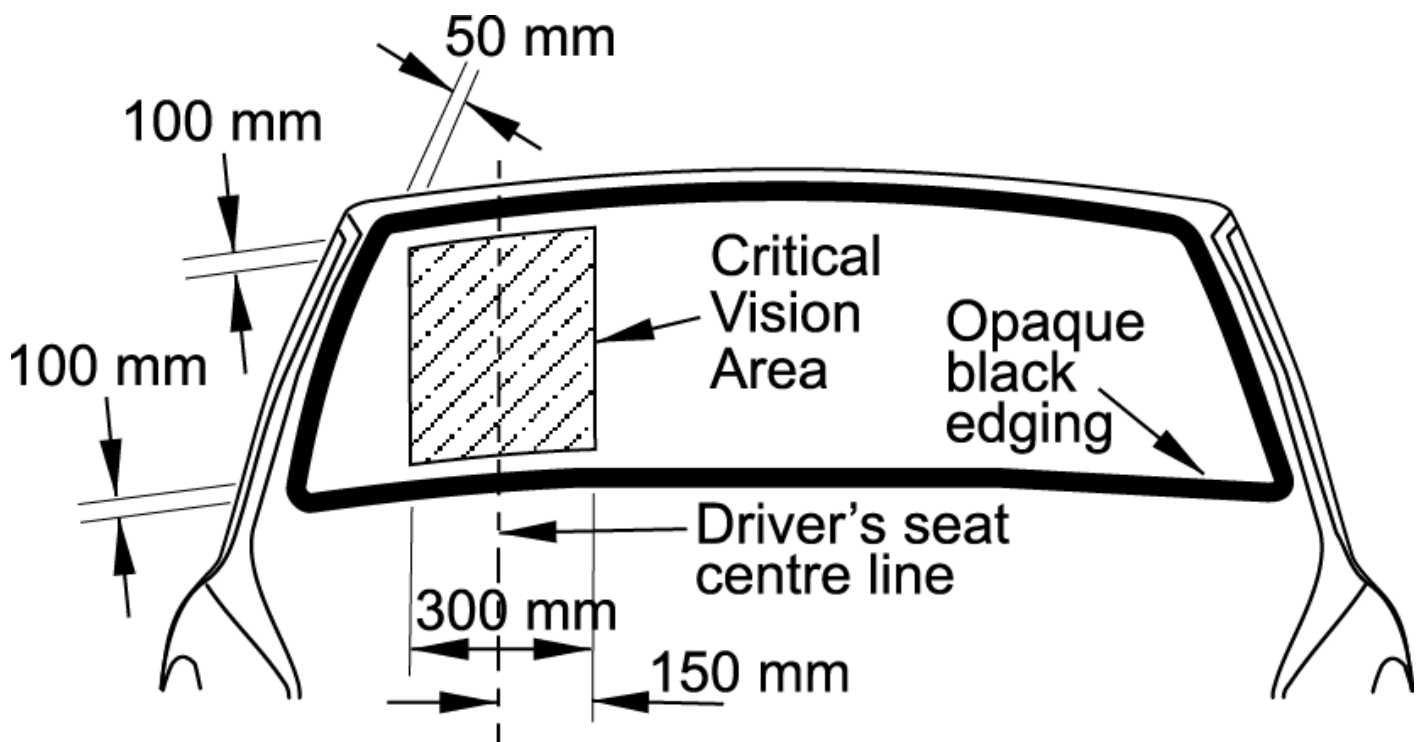


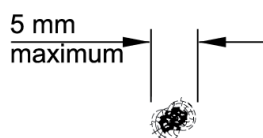
Figure 5-1-5. Actual maximum sizes of types of windscreen damage

COMBINATION DAMAGE

Combination: same type

Diameter of the smallest circle around all incidences is measured and maximum diameter applied.

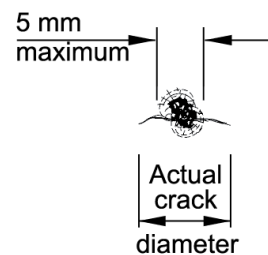
Example:
Two craters:
Maximum diameter
5 mm for both
craters together.



Combination: same + different types

Each type is measured and maximum diameter applied separately.

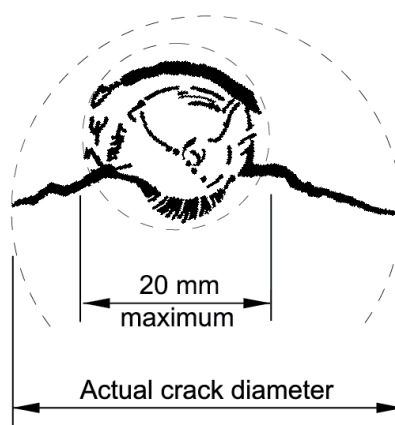
Example:
Two craters + crack:
Maximum diameter
5 mm for two craters;
100 mm for the crack,
whichever applies.



Combination: different types

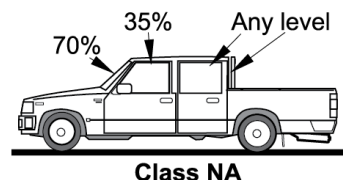
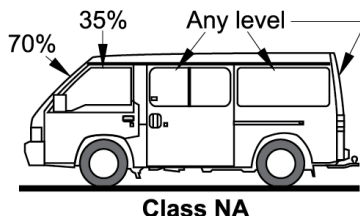
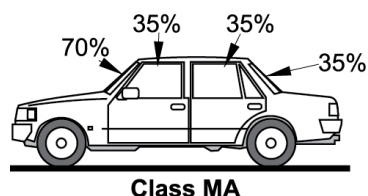
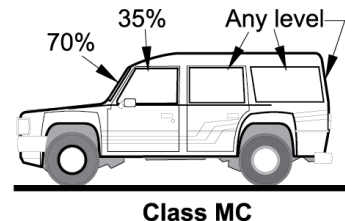
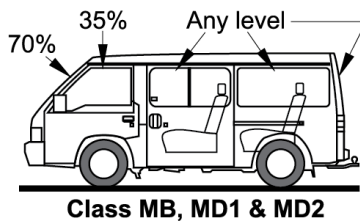
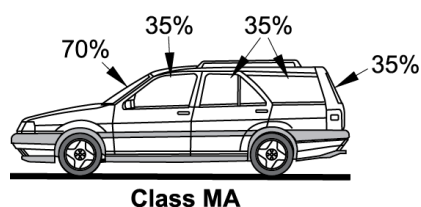
Each type measured and maximum diameter applied.

Example:
Bullseye + crack:
Maximum diameter
20 mm for the bullseye;
100 mm for the crack,
whichever applies.



Note Due to different screen resolutions and sizes the above image may not be shown at actual size.

Figure 5-1-6. Minimum VLT limits for modified glazing (tinted overlays) for different vehicle classes



Note The minimum VLT for any windscreen is 70% but no overlays may be fitted.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Glazing, Windscreen Wipe and Wash, and Mirrors 1999.](#)

Mandatory equipment

Glazing markings

1. Windscreens and other glazing must be permanently and indelibly marked as complying with an approved trade name or approved vehicle standard as shown in **Table 5-1-1** and **Table 5-1-2** unless excluded as below:

- glazing marked by a vendor or installer, and fitted in a vehicle before 1 January 1997, may be marked by means of a self-adhesive label
- plastic glazing behind the driver's seat in a soft-top convertible need not be marked
- hard plastic material behind the driver's seat in a vehicle manufactured before 1 January 1991 need not be marked.

2. Glazing marked by the vendor or installer must contain wording, characters or symbols that indicate the approved vehicle standard, and the:

- type of glazing, and
- thickness of the glazing in millimetres or, in the case of laminated glass only, the thickness of the intervening layer of plastic, and
- identity of the vendor or installer of the glazing.

Permitted glazing

3. Wire glass may be used in any window behind the driver's seat, if required or allowed under any legislation.

4. Vehicles of class MD1 or MD2 may be fitted with the following, which may be made of a transparent material of a kind that does not shatter:

- curved scenic skylights above the cant rail
- curved windows at the front and rear corners
- skylights
- louvres
- interior partitions.

Glazing condition

5. Glazing must be mechanically sound, strong, and securely affixed to the vehicle.

6. A windscreen and front side windows must be clean and free of obstruction to ensure the driver has sufficient vision through the glazing to operate the vehicle safely.

7. A windscreen must not have scratches and other defects that:

- a) unreasonably impair vision, or
- b) compromise its strength.

8. A laminated windscreen must not show signs of discolouration that could unreasonably impair the driver's vision.

9. Glazing in roof panels may be tinted.

Glazing performance

10. A windscreen visible light transmittance (VLT) must be at least 70%.

11. Front side windows VLT must be at least 35%.

12. Glazing must not have a mirrored effect sufficient to dazzle other road users.

Permitted modifications

13. A modification that affects glazing is permitted if within the limits in **Table 5-1-6**.

Glazing removal

14. Permanent removal of OE-specified glazing that affects the structural integrity of the vehicle (eg bonded glazing) must be certified in accordance with the Low Volume Vehicle Code.

Condition of modified glazing

15. Overlays must not have any bubbling or other defects that could unreasonably impair vision.

16. Glazing must not have any scratches or other defects that unreasonably impair vision or compromise the strength of the glazing.

Performance of modified glazing

17. Modifications must not:

- a) unreasonably impair vision through a windscreen or a front side window, or a rear or rear side window in the case of MA vehicles other than stretch limousines or body transfer vehicles, or
- b) adversely affect the strength or mechanical performance of the glazing or the vehicle.

Windscreen repair

18. Windscreens: a repair to a windscreen carried out on or after 1 January 1997 must comply with whichever of the following standards is applicable at the date of repair:

- a) New Zealand standard 5470: 1993, Code of Practice for Automotive Windscreen Repair (superseded by Australian Standard/New Zealand standard 2366: 1999, Windscreen Repairs), or
- b) Australian standard 2366-1990, Repair of Laminated Glass Windscreens fitted to Road Vehicles (superseded by Australian Standard/New Zealand standard 2366: 1999, Windscreen Repairs).

Page amended **1 November 2012** (see [amendment details](#)).

5-2 Sun visors

Reasons for rejection

Mandatory equipment

1. A sun visor for the driver's use is not fitted to a vehicle (other than of class LE) which can practicably be fitted with a sun visor ([Note 1](#)).

Condition

2. A sun visor:

- a) is insecurely mounted, or
- b) for the driver, cannot be adjusted from the normal driving position, or
- c) cannot maintain its adjusted position, or
- d) has been modified or has deteriorated, and the likelihood of injury to vehicle occupants has not been minimised.

Performance

3. A driver's sun visor does not effectively aid the driver's vision by intercepting the glare from the sun.

Note 1 Definitions

Sun visor means any attachment mounted above the inside of the windscreen and provided for the purpose of shielding the eyes of the driver and other front seat passengers from solar glare.

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004](#)
- [Land Transport Rule: Interior Impact 2002](#).

Mandatory equipment

1. A vehicle other than of class LE must be fitted with a sun visor for the driver's use if it is reasonable and practicable to do so ([Note 1](#)).

Permitted equipment

2. A vehicle of class LE may be fitted with a sun visor.
3. Additional sun visors may be fitted in other positions.

Condition

4. The condition of a sun visor must be such that the likelihood of injury to occupants is minimised.

Performance

5. A driver's sun visor must be effective.

Modification

6. A sun visor that is not OE or that has been affected by a modification ([Note 1](#)):
 - a) must meet the requirements for equipment, condition and performance, and
 - b) does not require LVV specialist certification.

5-3 Windscreen wipe and wash

Reasons for rejection

Mandatory equipment

1. A vehicle that has a windscreen is not fitted with a windscreen wipe system.
2. A vehicle manufactured on or after 1 January 1992 is not fitted with a windscreen wash system.
3. A vehicle manufactured on or after 1 January 1960 is fitted with wipers that are not power driven.

Condition

Windscreen wipe system

4. The wiper operating device is missing.
5. A wiper arm or wiper blade is:
 - a) missing, or
 - b) insecure, or
 - c) damaged so as to affect the performance of the wipers.
6. The wiper operating mechanism is:
 - a) missing, or
 - b) insecure, or
 - c) damaged so as to affect the performance of the wipers.

Windscreen wash system

7. A wash system component is missing or insecure.
8. The wash operating device is missing.

Performance

Windscreen wipe system

9. A windscreen wiper does not wipe the windscreen effectively, preventing adequate forward vision by the driver.
10. The wipe operating device is unable to activate the wipe system.

Windscreen wash system

11. A windscreen wash nozzle does not discharge washer liquid directly onto the windscreen.
12. The wash operating device is unable to activate the wash system.

Modifications

13. A modification affects a windscreen wipe system, and:
 - a) is not excluded from the requirements for LVV specialist certification (**Table 5-3-1**), and
 - b) is missing proof of LVV specialist certification, ie:
 - i. the vehicle is not fitted with a valid LVV certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Table 5-3-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is never required:
Removal of a windscreen wash system from a vehicle manufactured before 1/1/1992	<ul style="list-style-type: none">in-service requirements for condition and performance must be met.
Any modification for the purposes of law enforcement or the provision of emergency services	

Summary of legislation

Applicable legislation

- [Land Transport Rule: Glazing, Windscreen Wipe and Wash, and Mirrors 1999](#).

Mandatory equipment

1. A vehicle manufactured before 1 January 1992 that is fitted with a windscreen must have a windscreen wipe system.
2. A vehicle manufactured on or after 1 January 1992 that is fitted with a windscreen must have a windscreen wipe and wash system.
3. Windscreen wipers must be power driven, unless they follow OE specifications in a vehicle manufactured before 1 January 1960.

Permitted equipment

4. A vehicle may be fitted with a wash system when this is not required.

Condition

5. A vehicle's windscreen wipe system must be efficient and within the vehicle manufacturer's operating limits.

Performance

6. The equipment fitted must be capable of keeping an adequate area of the windscreen clean and clear so that the vehicle may be operated safely under all reasonably foreseeable conditions.

Modifications

7. An OE windscreen washing system may be removed from a vehicle manufactured before 1 January 1992.
8. A modification to the windscreen wipe system must be inspected and certified by an LVV specialist certifier unless the

vehicle:

- a) is excluded from the requirement for LVV specialist certification (**Table 5-3-1**), and
- b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition, and performance.

5-4 Rear-view mirrors

Reasons for rejection

Mandatory equipment

1. A mandatory rear-view mirror identified in **Table 5-4-1** is missing.

Condition

2. A rear-view mirror:
- a) is not mounted securely, or
 - b) cannot be adjusted, or
 - c) cannot maintain its adjusted position, or
 - d) is corroded or dirty, or
 - e) is damaged so that it increases the risk of injury to vehicle occupants.

Performance

3. A rear-view mirror:
- a) does not provide a clear view to the rear of the vehicle, or
 - b) is not sufficiently isolated from vibrations.

Modifications

4. A modification affects rear-view mirrors, and:
- a) is not excluded from the requirements for LVV specialist certification (**Table 5-4-2**), and
 - b) is missing proof of LVV specialist certification, ie:
 - i. the vehicle is not fitted with a valid LVV certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1

A vehicle with overlays on the rear side windows and rear screen must be fitted with a left-hand and a right-hand exterior mirror.

Table 5-4-1. Mandatory requirements for rear-view mirrors

For **left-hand drive** vehicles, read R/H side instead of L/H side, and L/H side instead of R/H side.

Vehicle class	Year of manufacture	
	Before 1 January 2000	From 1 January 2000
MA, MB, MC	External R/H side or interior	External R/H side and interior
NA	External R/H side or interior	External R/H side and interior or external L/H side
MD1, MD2	External R/H side and external L/H side	External R/H side and external L/H side

Table 5-4-2. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is never required:
Additional or substituted rear-view mirrors , or removal of a non-mandatory mirror	<ul style="list-style-type: none"> in-service requirements for condition and performance must be met.
Any modification for the purposes of law enforcement or the provision of emergency services	

Summary of legislation

Applicable legislation

- [Land Transport Rule: Glazing, Windscreen Wipe and Wash, and Mirrors 1999.](#)

Mandatory equipment

- A vehicle must be fitted with one or more of the rear-view mirrors listed in **Table 5-4-1**.

Permitted equipment

- Additional rear-view mirrors may be fitted.

Condition

- A rear-view mirror must be:
 - securely attached so that the risk of injury is minimised, and
 - mounted so that vibration does not inhibit the driver's required clear view to the rear, and
 - sufficiently adjustable, and able to maintain its position.

Performance

- A rear-view mirror must provide a clear view to the rear of:
 - the motor vehicle itself, and
 - the vehicle's load, and
 - any towed trailer and its load.
- A rear-view mirror must be sufficiently isolated from vibrations.

Modifications

- The fitting of additional rear-view mirrors, or a modification that affects rear-view mirrors, must be inspected and certified by an LVV specialist certifier, unless the vehicle:
 - is excluded from the requirement for LVV specialist certification (**Table 5-4-2**), and
 - has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

6 Entrance and exit

6-1 Door and hinged panel retention systems

Reasons for rejection

Mandatory equipment

- A motor vehicle fitted with doors used by the driver or passengers for entrance and exit of the motor vehicle does not have a door retention system.
- A vehicle for transporting prisoners which does not have doors in the prison compartment that can be opened from the inside, has no alternative exit that can be operated by an authorised person in an emergency.

Equipment condition

- A hinge for a door or other hinged panel is not securely attached to both the vehicle body and to the door or other hinged panel due to loose connections, corrosion or other damage ([Note 1](#)).

4. A door used for entrance and exit of the driver or passengers cannot be opened from the inside, unless the vehicle is designed or adapted to transport prisoners and the door is inoperable from the inside of the prison compartment.
5. A child safety lock or similar safety device cannot be deactivated.
6. There is corrosion damage within 150 mm of the hinge of a door or other hinged panel (see **Figure 6-1-1**).
7. There is corrosion damage within 150 mm of the latch of a door or other hinged panel (see **Figure 6-1-1**).

Equipment performance

8. A door used for entrance and exit of the driver or passengers does not open or close easily.
9. A door or other hinged panel does not remain secure in a closed or locked position.

Modifications

10. A modification ([Note 2](#)) affects door or hinged panel retention systems, and:
 - a) is not excluded from the requirements for LVV specialist certification (**Table 6-1-1**), and
 - b) is missing proof of LVV specialist certification, ie:
 - i. the vehicle is not fitted with a valid low volume vehicle certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward signs of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Note 2 Definitions

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment, including replacement with undamaged or new structures, systems, components or equipment.

Child safety lock (also known as a kiddi-lock) means a safety device installed during the manufacture of the vehicle to prevent a door from being opened from the inside of the vehicle.

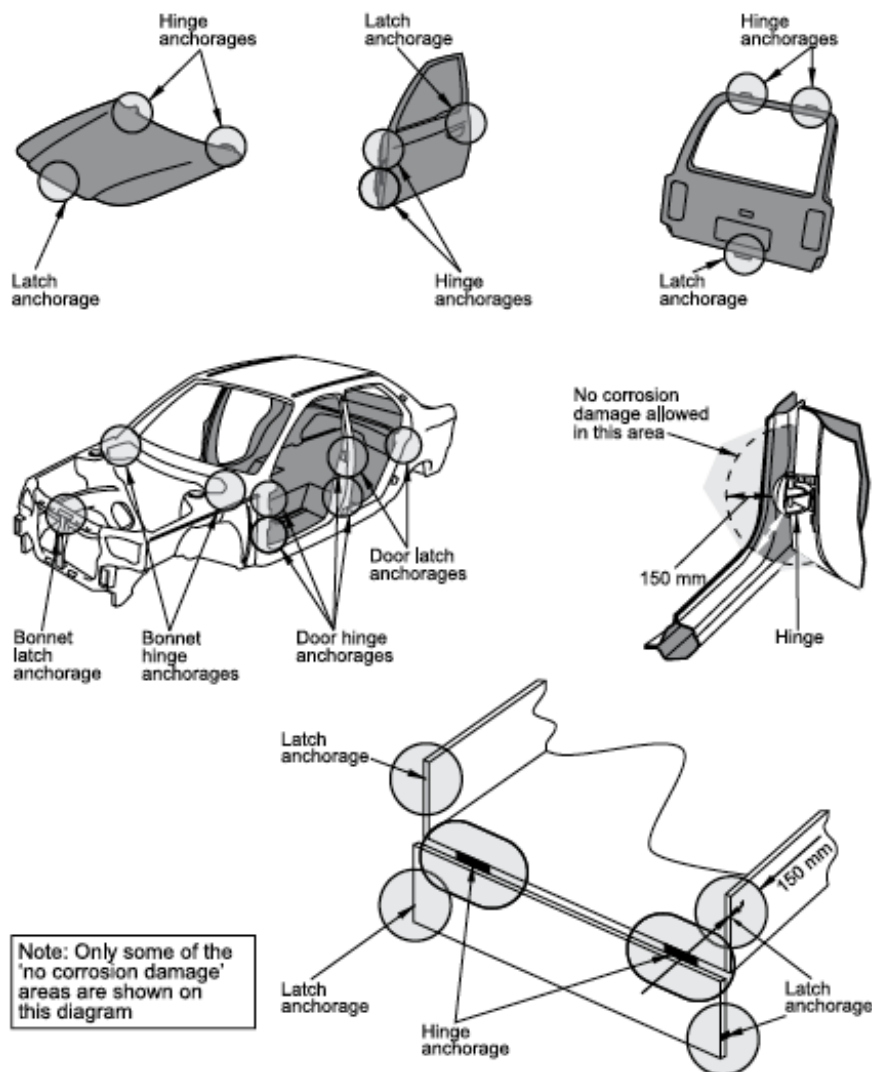
Tables and images

Table 6-1-1 Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is not required provided that:
Exterior door handles (on doors normally used for entry and exit of occupants)	<ul style="list-style-type: none"> the modification is minor (eg removal of key locks), and door handles remain fitted and in serviceable condition. <p>Note The fitting of a door opening/closing mechanism (which may include the removal of exterior door handles) that differs from original must be LVV certified.</p>

Fitting of or modification to:	LVV certification is never required:
Any modification for the purposes of law enforcement or the provision of emergency services	<ul style="list-style-type: none"> in-service requirements for condition and performance must be met.

Figure 6-1-1 Hinge and latch anchorages



No corrosion damage is allowed within 150mm of a circle around the outside of hinge or latch components.

See also figures for corrosion limits to structure ([section 3-1](#)), seatbelt anchorages ([section 7-5](#)), and front or rear suspension anchorages ([section 9-1](#)).

Summary of legislation

Applicable legislation

- [Land Transport Rule: Door Retention Systems 2001](#)
- [Land Transport Rule: Vehicle Standards Compliance 2002, section 7.4.](#)

Mandatory equipment

1. A motor vehicle fitted with doors used by the driver or passengers for entrance and exit of the motor vehicle must have a door retention system.

Permitted equipment

2. The door retention system on doors to the rear of the driver's seat may incorporate safety devices installed during the manufacture of the vehicle to prevent the doors from being opened from the inside of the vehicle (eg child safety locks).

3. A vehicle designed or adapted to transport prisoners is not required to be fitted with a mechanism for opening a door from the inside if the prison compartment has an alternative exit that can be operated by an authorised person in an emergency.

Equipment condition

4. A door retention system and its mountings must be safe and structurally sound.

5. A door used for the entrance and exit of the driver or passengers must be operable by any occupant seated by the door from inside the motor vehicle, unless it is permitted equipment designed or adapted to operate otherwise.

6. The vehicle must be designed and constructed using components and materials that are fit for their purpose, and within safe

tolerance of their state when manufactured or modified.

Equipment performance

7. A door retention system must be in good working order.
8. A door used for entrance and exit must open and close easily.
9. A door used for entrance and exit must remain secure in a closed position during the operation of the motor vehicle.

Modifications

10. A modification that affects door or hinged panel retention systems must be inspected and certified by a low volume vehicle specialist certifier, unless the vehicle:
 - a) is excluded from the requirement for LVV specialist certification (**Table 6-1-1**), and
 - b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

7 Vehicle interior

7-1 Seats and seat anchorages

Reasons for rejection

Mandatory equipment

1. The vehicle is not fitted with a driver's seat.
2. A seat is not attached to the vehicle structure by seat anchorages.

Condition and performance

3. A seat frame or seat structure has been weakened, eg due to damage, corrosion or excessive wear.
4. The adjustment mechanism of a driver's seat:
 - a) does not operate, or
 - b) is worn, causing excessive movement of the seat.
5. The attachment of the seat to the seat anchorage is loose or weakened by damage.
6. The attachment of the seat anchorage to the vehicle structure is loose or weakened by damage.
7. There is corrosion damage within 150mm of a seat anchorage ([Note 4](#)).
8. There is corrosion damage within 300mm of the anchorage of a seat with integrated seatbelt anchorages ([Note 4](#)).
9. A driver's seat is in such a condition that it does not allow the driver to have proper control of the vehicle.

Modification

10. A modification ([Note 3](#)) carried out after 1 March 1999 affects a seat or seat anchorage, and:
 - a) is not excluded from the requirements for LVV specialist certification (**Table 7-1-1**), and
 - b) is missing proof of LVV specialist certification, ie:
 - i. the vehicle is not fitted with a valid low volume vehicle certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1

A seat may be able to be rotated or placed to face in different directions.

Note 2

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward sign of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Note 3 Definitions

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Seat means an assembly, or part of an assembly, intended to seat at least one person, which may or may not be integral to the structure of the vehicle, and includes components, such as rails and runners, that attach to the seat anchorages.

Seat anchorages means the parts of the vehicle structure to which a seat is attached.

Note 4

Where the inspector is presented with a Nissan Terrano or Nissan Mistral vehicle of the type that is fitted with a two-layer (double skin) floor panel, the inspection procedure in [Technical bulletin 2](#) must be followed.

Note 5

Where a seat with an integrated airbag is fitted with a seat cover that is not airbag compatible, this modification is allowed (a pass), but the inspector should advise the operator, for example by putting a note on the checksheet, that the seat airbag may not work properly in a crash. Airbag compatible seat covers are now readily available.

Table 7-1-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is not required provided that:
Aftermarket 'Retro' brand child seats designed for children 5–12 years old (up to 38kg)	<ul style="list-style-type: none"> the seat is identified as complying with the Australian Federal Code of Practice VSB-5A (category 2 and 3) and installed by Auckland Auto Trimmers or their agents before 1 June 2012.
Seats – modification or replacement or installation of a seat anchorage after 1 March 1999	<ul style="list-style-type: none"> the seat is either an unmodified OE seat from another vehicle or of a known and reputable aftermarket brand, and <ul style="list-style-type: none"> the seat is fitted to unmodified OE seat anchorages, and the seatbelt anchorage or operation is not affected, and the seat components (including brackets, runners and rails) are compatible with each other, ie they are either OE components from a production vehicle or of a known and reputable aftermarket brand, and are not fitted together by welding, and the relationship between seat, seat occupant, front airbag and location of the seatbelt anchorages is not affected. <p>Note LVV certification is not required where the only modification is the removal of seats and/or seatbelts. However, a class change and a new load rating may be required in some cases.</p>
Campervan conversions	<ul style="list-style-type: none"> The conversion was completed before 1/3/1999, or The conversion was completed on or after 1/3/1999, and No modifications were carried out to the vehicle roof or rear wall, and No seats or seatbelt anchorages were retrofitted. <p>Note This means that a campervan conversion completed on or after 1/3/1999, other than a camper box fitted to an unmodified cab and chassis, always requires LVV certification.</p>

Fitting of or modification to:	LVV certification is never required:
Seat pads or covers (see (Note 5) for seats with integrated airbags)	<ul style="list-style-type: none"> in-service requirements for condition and performance must be met.
Any modification for the purpose of law enforcement or the provision of emergency services	

Summary of legislation

Applicable legislation

- [Land Transport Rule: Seats and Seat Anchorages 2002](#).

Mandatory equipment

1. A motor vehicle must be fitted with a driver's seat.
2. A seat in a motor vehicle must be fitted to the vehicle structure by means of seat anchorages.

Condition and performance

3. Seats and seat anchorages must be safe, strong, in sound condition and compatible in strength with each other and with the vehicle structure.
4. The driver's seat and its anchorages must be designed, constructed and maintained to enable the driver to have proper control of the vehicle.
5. Seats and seat anchorages must be securely attached to the vehicle structure.
6. When a seatbelt or any part of the seatbelt is integral to a seat, the seat and seat anchorages must be compatible in strength with the seatbelt or with that part of the seatbelt attached to the seat.

Modification

7. A modification, on or after 1 March 1999 to a seat or seat anchorage must be inspected and certified by an LVV specialist certifier, unless the vehicle:
 - a) is excluded from the requirement for LVV specialist certification (**Table 7-1-1**), and
 - b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

Page amended **14 October 2013** (see [amendment details](#)).

7-3 Head restraints

Reasons for rejection

Condition and performance

1. The external surfaces and padding of a head restraint have deteriorated to the extent that they are likely to injure a vehicle occupant.
2. An adjustable head restraint is unable to remain locked in its adjusted position.

Modification

3. A modification ([Note 1](#)) affects a head restraint, and
 - a) is not excluded from the requirements for LVV specialist certification (**Table 7-3-1**), and
 - b) is missing proof of LVV specialist certification, ie:
 - i. the vehicle is not fitted with a valid LVV certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1 Definitions

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Table 7-3-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is not required provided that:
Head restraint removal	<ul style="list-style-type: none"> A front-seat head restraint must not be removed from a vehicle required to comply with a frontal impact occupant protection standard. These vehicles are the following with a GVM of 2500 kg or less: <ul style="list-style-type: none"> a class MA motor vehicle manufactured from 1 March 1999 a class MA motor vehicle that was less than 20 years old when it was first registered in New Zealand on or after 1 April 2002, a class MB or MC motor vehicle manufactured from 1 October 2003.
Fitting of aftermarket LCD screens to head restraints	<ul style="list-style-type: none"> the performance of the head restraint is not affected, eg the head restraint still provides sufficient padding for the seat occupant, and the screen is fitted in a suitable manner, eg it appears similar to OE fitments in other vehicles, or the screen can be easily attached or removed.

Fitting of or modification to:	LVV certification is never required:
Any modification for the purpose of law enforcement or the provision of emergency services	<ul style="list-style-type: none"> in-service requirements for condition and performance must be met.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Head Restraints 2001](#)
- [Land Transport Rule: Frontal Impact 2001.](#)

Permitted equipment

- A motor vehicle may be fitted with head restraints.

Condition and performance

- The external surfaces and padding of a head restraint must not have deteriorated to the extent that the likelihood of injury to an occupant of the vehicle is increased.
- An adjustable head restraint must remain able to be adjusted and locked into position.

Modification

- A modification that affects a head restraint must be inspected and certified by an LVV specialist certifier, unless the vehicle is:
 - excluded from the requirement for LVV specialist certification (**Table 7-3-1**), and
 - has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

7-5 Seatbelts and seatbelt anchorages

Reasons for rejection

Mandatory equipment

- A seatbelt (**Note 1**) of the type specified in **Table 7-5-1** (first registered in NZ before 1/1/1991), **Table 7-5-2** (first registered in NZ between 1/1/1991 and 31/3/2002) and **Table 7-5-3** (first registered in NZ from 1/4/2002) has not been fitted (see (**Note 18**) for permitted specialist seatbelts), and

- a) the requirements for specific motor vehicles in **Table 7-5-4** are not met, or
 - b) the requirements for modification in **Table 7-5-5** are not met.
2. A seat that can be rotated or reversed to face in different directions, for which seatbelts are not provided for all directions, has no notice easily visible by the seat occupant that indicates the direction the seat must (or must not) face when the vehicle is moving.

Condition

Seatbelts

3. The seatbelt assembly is not securely fixed to a seatbelt anchorage.
4. A seatbelt component (eg protective plastic cover on buckle, tongue or retractor system) is damaged so that foreign objects may enter the interior components, or that they may cause damage to the interior components, mechanisms or webbing.
5. The seatbelt webbing (including webbing attached to the buckle) has:
- a) a cut, including a cut on the surface, or
 - b) a rip or tear, or
 - c) fraying, or
 - d) stretching (eg the belt has unusual web patterns or the webbing is deformed, will not lie flat, or is curled or rippled), or
 - e) fading so that most of the colour has been bleached, and:
 - i. shows signs of chalking, or a powdery residue is evident on the webbing, or
 - ii. it has become stiff
 - f) been dyed to conceal fading, or
 - g) contamination from grease, paint, solvents or similar products.
 - h) been replaced or shows other signs of repair ([Note 14](#)) and there is no evidence of approval from the seatbelt manufacturer.

Note Such approval is very unlikely.

6. The seatbelt stitching:
- a) is damaged or insecure, or
 - b) shows signs of home repair, eg gluing, stitching by hand or home sewing machine, staples, bolts, or rivets, or
 - c) indicates that the 'rip stitch' system has been activated, ie the stitching is broken and a 'REPLACE BELT' label has been exposed near the lower seatbelt anchorage, or this label has been cut off.
7. A buckle and tongue:
- a) are mismatched, or
 - b) do not lock, or
 - c) do not remain locked, or
 - d) do not release easily, or
 - e) are insecure when coupled.
8. A component is missing ([Note 19](#)), or is cracked, distorted, damaged or deteriorated in such a way that:
- a) its strength or integrity is reduced, or
 - b) it may damage another component or the webbing, or
 - c) foreign matter may enter the interior of the mechanism, or
 - d) the seatbelt or a seatbelt component cannot function as intended.
9. A seatbelt stalk:
- a) (wire-cable type) shows broken wires, or
 - b) (plastic-covered webbing type) webbing has deteriorated, or is frayed, cut or faded, or
 - c) (solid metal type) is corroded, cracked or buckled, or

d) is not the correct type for the vehicle or the seating position.

10. A seatbelt pretensioning system has not been replaced after activation.

Seatbelt anchorages

11. A seatbelt anchorage ([Note 12](#)):

a) is not securely fixed to the vehicle structure, or

b) is not securely fixed to the seat if the seatbelt is an integral part of the seat, or

c) is corroded, damaged or shows signs of tampering, or

d) has evidence of corrosion damage (Note 13 and Note 17) or structural damage within 150 mm of a lower seatbelt anchorage mounted in a wheel arch, or within 300 mm of any other seatbelt anchorage.

Performance

12. The seatbelt webbing of a retractor-type seatbelt does not easily pull out from the retractor.

13. The seatbelt webbing of a retractor-type seatbelt has difficulty retracting, eg is slow or intermittent, or does not fully retract.

14. A static seatbelt cannot be adjusted to fit a variety of persons.

15. The seatbelt is not of sufficient length to fit a variety of persons.

16. A seatbelt is located so that it cannot be readily fastened or released by the wearer.

17. The web and/or vehicle sensitivity of a dual-sensitive retractor type seatbelt fitted in a front seating position does not function correctly.

18. The vehicle sensitivity of a single-sensitive retractor type seatbelt fitted in a front seating position does not function correctly.

19. The web sensitivity of a dual-sensitive retractor type seatbelt fitted in a rear seating position does not function correctly.

20. The vehicle sensitivity of a single-sensitive retractor type seatbelt fitted in a rear seating position does not function correctly.

Modification

21. A modification affects a seatbelt or seatbelt anchorage – including fitting of an alternative type of seatbelt, or a modification (since 1 January 1992) that affects a seatbelt anchorage, and

a) is not excluded from the requirements for LVV specialist certification (**Table 7-5-5**), and

b) is missing proof of LVV specialist certification, ie:

i. the vehicle is not fitted with a valid LVV certification plate, or

ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1

Seatbelt means an assembly of straps made of webbing or metal with a securing buckle, adjusting devices and attachments, including any device for absorbing energy or for retracting the webbing, that is:

a) able to be anchored to the interior of a vehicle, and

b) designed to diminish the risk of injury to its wearer in the event of a collision or abrupt deceleration of the vehicle by limiting the mobility of the wearer's body.

Note 2

Retractor means a device to accommodate parts, or all, of the webbing of a seatbelt.

Note 3

Single-sensitive means a seatbelt retractor that, during normal driving conditions, allows freedom of movement by the wearer of the seatbelt by means of length-adjusting components that automatically adjust the seatbelt to the wearer, and that comprises a locking mechanism activated in an emergency by deceleration of the vehicle (ie the seatbelt is vehicle sensitive).

Note 4

Dual-sensitive means a seatbelt retractor that, during normal driving conditions, allows freedom of movement by the wearer of the seatbelt by means of length-adjusting components that automatically adjust the strap to the wearer, and that is activated by two or more of the following:

a) deceleration of the vehicle, or

b) acceleration of the strap from the retractor, or

c) other means of activation.

Note 5

Seating position means a seat or part of a seat that is of a suitable size and shape for one person.

Note 6

Outer seating position means a seating position next to a side wall of a vehicle where there is no more than 500mm between the longitudinal centre of the seat and the side wall.

Note 7

Middle seating position means a seating position in a vehicle that is not an outer seating position.

Note 8

Rear seating position means a seating position in a vehicle behind the driver.

Note 9

Monocoque, in relation to a motor vehicle, means that the chassis of the vehicle is integral to the body.

Note 10

Retrofit, in relation to a seatbelt or seatbelt anchorage in a motor vehicle, means to fit a seatbelt or seatbelt anchorage in a location where a seatbelt or seatbelt anchorage has not been fitted before.

Note 11

Motorhome means a motor vehicle, other than a trailer, that is permanently equipped with features intended to make the vehicle suitable as a dwelling place, and must include at least one sleeping berth and one table, both of which may be of a design that allows them to be retracted or folded away.

Note 12

Seatbelt anchorage means the parts of a vehicle structure, seat structure or any other part of the vehicle to which a seatbelt assembly is attached.

Note 13

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward signs of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases the area affected by the corrosion damage will fall out and leave a hole.

Note 14

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

- Any repairs, such as webbing or retractor replacement, must be approved by the seatbelt manufacturer. Any modification, such as fitting a different type of seatbelt or a seatbelt extension, must be approved by the seatbelt or vehicle manufacturer. It is very unlikely that a repair or modification will be approved by the vehicle or seatbelt manufacturer. Where such approval is claimed, the inspector must request appropriate evidence.

Note 15

Specialist seatbelt means a seatbelt that is designed for specialist purposes, and includes a full harness seatbelt used for motorsport activities.

Note 16

Permanent structure means a non-removable structure capable of sustaining loads associated with seatbelts and seatbelt anchorages.

Note 17

Where the inspector is presented with a Nissan Terrano or Nissan Mistral vehicle of the type that is fitted with a two-layer (double skin) floor panel, the inspection procedure in [Technical bulletin 2](#) must be followed.

Note 18

A vehicle may be fitted with seatbelts other than of type L, S, R1 or R2 only if the seatbelts are of a specialist type (eg full

harness seatbelts), and:

- a) the specialist seatbelts are the vehicle manufacturer's original equipment specification, or
- b) the specialist seatbelts have been fitted for a specific purpose (eg motorsport), and the operator produces a valid LVV authority card, or
- c) the vehicle is scratchbuilt and the specialist seatbelts are noted on the LVV plate.

Note 19

Some vehicles (such as the Peugeot 307 SW) are designed with rear OE seats that can be placed in any of the rear seating positions provided by the vehicle manufacturer (4 or 5 positions in two rear rows). However, vehicle manufacturers may supply rear seats only for one rear row, leaving two positions with only the upper seatbelt parts, but no seats and attached seatbelt buckles.

If you are presented with such a vehicle with incomplete seatbelts, these incomplete seatbelts must be inspected as far as practicable as presented (ie a seat/buckle is not required to be fitted in these positions). The vehicle may be passed only if these incomplete seatbelts, including the webbing, retractor mechanism and anchorages, meet the condition and performance requirements, and only if the vehicle is fitted with at least the number of seats to fit the first rear row of seats.

Key to Table 7-5-1, Table 7-5-2 and Table 7-5-3: Types of seatbelts¹

–	No seatbelt required
L	Lap seatbelt
S	Static lap-and-diagonal seatbelt without a retractor (Note 2)
R1	Single-sensitive emergency-locking retractor (ELR) lap and diagonal seatbelt (Note 3)
R2	Multiple- (dual-) sensitive emergency-locking retractor lap-and-diagonal seatbelt (Note 4)

¹ A requirement for a specified type of seatbelt may be met by the type specified or another type below it in the key.

Table 7-5-1. Vehicles first registered in New Zealand before 1 January 1991

Vehicle class	Seating position (Note 5)	First registered anywhere	
		1/1/1955–31/10/1979	1/11/1979–31/12/1990
MA, MB, MC LE (without motorcycle controls) (tare <2000 kg)	Front outer and driver's (Note 6)	S ²	R2 ^{1, 3}
	Front middle (Note 7)	–	L
	Rear outer (Note 8)	–	R2 or R1 or S
	Rear middle	–	L
NA (tare <2000 kg)	Front outer and driver's	S ²	R2 ¹
	Front middle	–	L

¹ A four-wheel-drive vehicle may be fitted with type S or type R1 seatbelts in the front outer seating position.

² May retain OE seatbelts, but replacement seatbelts must be of type S, R1 or R2.

³ A class MA vehicle must have a type R2 webbing clamp seatbelt in a front outer seating position, when a type R1 or R2 seatbelt in that position failed an in-service inspection on or after 1 April 2003 because of its condition or performance.

Refer to [Technical bulletin 5](#) for requirements and exceptions.

Key to Table 7-5-1, Table 7-5-2 and Table 7-5-3: Types of seatbelts¹

–	No seatbelt required
L	Lap seatbelt
S	Static lap-and-diagonal seatbelt without a retractor (Note 2)
R1	Single-sensitive emergency-locking retractor (ELR) lap and diagonal seatbelt (Note 3)
R2	Multiple- (dual-) sensitive emergency-locking retractor lap-and-diagonal seatbelt (Note 4)

¹ A requirement for a specified type of seatbelt may be met by the type specified or another type below it in the key.

Table 7-5-2. Vehicles first registered in New Zealand 1 January 1991 to 31 March 2002

Vehicle class	Seating position	First registered anywhere	
		1/1/1955–31/12/1960	1/1/1961–31/3/2002
MA, MB, MC LE (without motorcycle controls)	Front outer and driver's	S ^{1, 2}	R2 ^{5, 6}
	Front middle	–	L
	Rear outer	–	R2 or R1 or S ¹
	Rear middle	–	L or S or R1 or R2
NA	Front outer and driver's	S ^{1, 2}	R2 ⁵
	Front middle	–	L
MD1, MD2	Front outer and driver's	–	R2 ^{3, 4, 5}
	Front middle	–	L ⁴

¹ Tare weight less than 2000 kg.

² May retain OE belts, but replacement belts must be of type S, R1 or R2.

³ Applies to MD2 only if of monocoque construction ([Note 9](#)).

⁴ If seatbelts are not fitted, but anchorages are fitted, must have seatbelts fitted from 1 October 2002. If anchorages are not fitted, seatbelts must be retrofitted from 1 October 2003.

⁵ Front type R1 seatbelts may remain fitted if they were fitted as OE and have a declaration issued by a TSD agent, or a plate affixed to the vehicle in a position approved by the NZTA (see **Figure 7-5-2, Figure 7-5-3, Figure 7-5-4, Figure 7-5-5 and Figure 7-5-6**). If missing, refer the vehicle to a TSD agent.

⁶ A class MA vehicle must have a type R2 webbing clamp seatbelt in a front outer seating position, when a type R1 or R2 seatbelt in that position failed an in-service inspection on or after 1 April 2003 because of its condition or performance. Refer to [Technical bulletin 5](#) for requirements and exceptions.

Key to Table 7-5-1, Table 7-5-2 and Table 7-5-3: Types of seatbelts¹

–	No seatbelt required
L	Lap seatbelt
S	Static lap-and-diagonal seatbelt without a retractor (Note 2)
R1	Single-sensitive emergency-locking retractor (ELR) lap and diagonal seatbelt (Note 3)
R2	Multiple- (dual-) sensitive emergency-locking retractor lap-and-diagonal seatbelt (Note 4)

¹ A requirement for a specified type of seatbelt may be met by the type specified or another type below it in the key.

Table 7-5-3. Vehicles first registered in New Zealand from 1 April 2002

Vehicle class	Seating position	Manufactured		
		1/1/1955– 31/10/1979	1/11/1979– 30/9/2003	1/10/2003–
MA, MB, MC LE (without motorcycle controls)	Front outer and driver's	S ^{1, 2}	R2 ^{5, 6}	R2 ^{5, 6}
	Front middle	–	L	L
	Rear outer	–	R2 or R1 or S ¹	R2 or R1
	Rear middle	–	L or S or R1 or R2	L or S or R1 or R2
NA (excluding motorhomes manufactured from 1 October 2003, refer to Table 7-5-4)	Front outer and driver's	S ^{1, 2}	R2 ⁵	R2 ⁵
	Front middle	–	L	L
	Rear outer	–	–	R2 or R1
	Rear middle	–	–	L or S or R1 or R2
MD1, MD2 ⁷	Front outer and driver's	–	R2 ^{3, 4, 5}	R2 ⁵
	Front middle	–	L ^{3, 4}	L
	Rear outer	–	–	R2 or R1
	Rear middle	–	–	L or S or R1 or R2

¹ Tare weight less than 2000 kg.

² May retain OE belts, but replacement belts must be of type S, R1 or R2.

³ Applies to MD2 only if of monocoque construction ([Note 9](#)).

⁴ If seatbelts are not fitted, but anchorages are fitted, must have seatbelts fitted from 1 October 2002. If anchorages are not fitted, seatbelts must be retrofitted from 1 October 2003 ([Note 10](#)).

⁵ Front type R1 seatbelts may remain fitted if they were fitted as OE and have a declaration issued by a TSD agent, or a plate affixed to the vehicle in a position approved by the NZTA (see Figures 7-5-2 to 7-5-6). If missing, refer the vehicle to a TSDA.

⁶ A class MA vehicle must have a type R2 webbing clamp seatbelt in a front outer seating position, when a type R1 or R2 seatbelt in that position failed an in-service inspection on or after 1 April 2003 because of its condition or performance. Refer to [Technical bulletin 5](#) for requirements and exceptions.

⁷ MD2 vehicles must be issued with a CoF, please refer the vehicle to the nearest CoF testing station.

Table 7-5-4. Requirements for specific motor vehicles

Specific vehicles	Mandatory equipment
Sideways-facing seating positions	<p>1. A Land Rover manufactured before 1 January 1991 does not require a seatbelt to be fitted.</p> <p>2. A vehicle first registered in New Zealand before 1 October 2002 must have a seatbelt of any type fitted.</p> <p>3. A vehicle first registered in New Zealand on or after 1 October 2002 must have a lap seatbelt fitted.</p>
Vehicles without a structure to fit required seatbelts	<p>4. A vehicle manufactured before 1 October 2003 may be fitted with lap belts in any seating position if the vehicle has a permanent structure that ends less than 500mm above the top of the uncompressed seat cushion (measured from a point 150mm forward of the lowest part of the back cushion), and OE upper seatbelt anchorages are not fitted.</p> <p>5. An class MA or MC vehicle manufactured before 1 October 2003 may be fitted with static lap-and-diagonal seatbelts in outer seating positions instead of R2 type seatbelts if the vehicle has a permanent structure that ends less than 500mm above the top of the uncompressed seat cushion (measured from a point 150mm forward of the lowest part of the back cushion).</p> <p>6. An class MA or MC vehicle first registered outside New Zealand before 1 November 1979 that does not have B-pillars, and does not have seatbelts or seatbelt anchorages fitted for the front-outer seating positions, may be fitted with lap belts if the inspector has determined that it is not practicable to retrofit upper anchorages for static lap-and-diagonal seatbelts, and the lower anchorages have been certified to the LVV Code if retrofitted after 1 April 2002, or LVV code or ST120395 if retrofitted prior to 1 April 2002.</p> <p>Note The vehicle inspector may accept documentation issued by the LVVTA (see Figure 7-5-5) that verifies that the vehicle does not have a suitable structure to fit required seatbelts.</p>
Motorhomes (Note 11)	<p>7. Motorhomes manufactured prior to 1 October 2003 or motor vehicles converted to motorhomes prior to 1 October 2003 must have seatbelts fitted that are appropriate for the class of vehicle in which the vehicle was registered when it was registered as a motorhome.</p> <p>8. Motorhomes manufactured from 1 October 2003 or motor vehicles converted to motorhomes from 1 October 2003 must be fitted with the following seatbelts and notice:</p> <ul style="list-style-type: none"> a) front seating positions: seatbelts must be fitted as specified for class MB vehicles in Table 7-5-3 b) rear seating positions: as many or more lap belts as there are sleeping berths which exceed the number of front seating positions. c) a notice must be displayed in a prominent location that recommends, on safety grounds, that when the vehicle is travelling, passengers use seats that are fitted with seatbelts, and that advises passengers that it is compulsory to wear fitted seatbelts.
Motor vehicles that transport detained persons	<p>9. A motor vehicle designed exclusively for transporting a person detained by the NZ Police or the Department of Corrections or a person acting on their behalf must comply with requirements for front seating positions, but does not have to comply with requirements for other seating positions.</p>

Table 7-5-5. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is not required provided that:
Seatbelts	<ul style="list-style-type: none"> the modification is approved by the seatbelt or vehicle manufacturer (note that such approval is unlikely, but the inspector must ask for proof if approval is claimed) (Note 14), or the modification is temporary for the accommodation of a child restraint, and does not: <ul style="list-style-type: none"> affect the performance of the child restraint, or cause injury to a vehicle occupant, or cause damage to the seatbelt.
Top-tether anchorage for a child seat or harness	<ul style="list-style-type: none"> the installation has been carried out in accordance with the instructions of the seat or harness manufacturer.
Stereo equipment and speakers	<p>If fitted to the rear parcel shelf:</p> <ul style="list-style-type: none"> no upper seatbelt anchorage is attached to the shelf or any shelf support bracket, and in the case of a top tether point for a child seat attached to the rear shelf, the top tether point is not located within 150 mm of a modification to a rear parcel shelf, and the removal of any material from the rear shelf is minimal and is unlikely to have weakened the vehicle structure to which a seatbelt anchorage is attached. <p>If fitted to a part of the vehicle other than the rear parcel shelf:</p> <ul style="list-style-type: none"> no structural material has been removed from within 300 mm of a seatbelt anchorage, and any material removed is minimal and is unlikely to have weakened the vehicle structure (including a seatbelt anchorage structure).
Campervan conversions	<ul style="list-style-type: none"> The conversion was completed before 1/3/1999, or The conversion was completed on or after 1/3/1999, and No modifications were carried out to the vehicle roof or rear wall, and No seats or seatbelt anchorages were retrofitted. <p>Note This means that a campervan conversion completed on or after 1/3/1999, other than a camper box fitted to an unmodified cab and chassis, always requires LVV certification.</p>

Fitting of or modification to:	LVV certification is never required:
Retrofitted type-tested rear seatbelt anchorages	<ul style="list-style-type: none"> in-service requirements for condition and performance must be met.
Rear seatbelts fitted to class MD1, MD2 and NA vehicles before 1 March 1999	
Removal of non-mandatory seatbelts	
Replacing a type R1 or R2 seatbelt with a webclamp R1 or R2 seatbelt (eg where Technical bulletin 5 applies)	
Any modification for the purposes of law enforcement or the provision of emergency services	

Table 7-5-6. Specific seatbelt exemptions

Key to exemption codes	
Front out-board seating positions	
F1	Seatbelts may be static or single sensitive.
F2	Seatbelts may be single sensitive, that is web or vehicle sensitive.
F3	Seatbelts may be vehicle sensitive only.
F4	Seatbelts may be web sensitive only.
F5	Driver's seatbelt may be approved lap belt.
Seating positions behind the driver	
R1	All seatbelts may be approved lap belts.
R2	Forward-facing folding seats may be fitted with approved lap belts.
R3	Side-facing folding seats behind the driver are not required to have seatbelts fitted.
R4	Rear seats occupied by prisoners are not required to have seatbelts.

Note Exemptions (other than R4 and F5) are only available for vehicles first registered in New Zealand before 1 January 1991.

The following exemptions are applicable only to vehicles first registered in New Zealand before 1 January 1991:

Bedford CF: Exemption code F1: Serial numbers: 97360JZ7: 860638, 860640, 860641, 860643, 860644. 97560JZ7: 859025, 859026, 859027, 859029, 859031, 859032, 859035, 860581. 97370JZ7: 855826, 855827, 855835, 855836, 856133, 856769, 856733, 856775, 858021, 858026, 858027, 859127, 858593, 858594, 858596, 858599, 859200, 859469, 859471, 859473, 859474, 859475, 859477, 859479, 859529, 859531, 859533, 859535, 859536, 860163, 860837, 860848, 860938, 860939, 860941, 860944, 862061, 862067. 97G70JZ7: 856782, 860142, 860144, 860147, 860148, 860150, 860152, 861858, 861859, 861860, 861861, 861862, 861863, 861868, 862265, 862266, 862267, 862268, 862270, 862271, 862273, 862274, 862276. 97570JZ7: 853277, 855402, 855405, 855407, 855408, 855409, 855410, 855411, 855412, 856702, 856709, 856711, 856713, 858402, 858404, 858408, 858410, 858641, 858642, 858643, 858644, 859087, 859088, 859089, 959093, 859096, 861456, 861457, 861459, 861953, 861954. 97770JZ7: 851548. 97360JZ7: 800842, 860634, 860644, 861767. 97370JZ7: 851296, 853467, 854403, 854404, 854529, 854836, 855418, 855729, 855734, 855735, 855766, 855826, 856051, 856133, 856261, 856616, 856653, 856769, 856917, 857154, 857157, 858024, 858593, 858594, 859014, 859020, 859024, 859196, 859197, 859474, 859530, 860160, 860848, 860933, 860942, 862061, 862065, 862288, 862458, 862468, 862653, 863080, 863204, 863205, 863208, 863210, 863211, 863212, 864817. 97G70JZ7: 854097, 855062, 855063, 856783, 856790, 857907, 859349, 859350, 859358, 860141, 860142, 860144, 860148, 861858, 861860, 861867, 862265, 862276, 862271. 97560JZ7: 859035. 87570JZ7: 852305, 854309, 854310, 854314, 854319, 854463, 854544, 855774, 855780, 855783, 857463, 857714, 858406, 858412, 861460. 97670JZ7: 860145. 97770JZ7: 852373, 856250

Citroen 2CV: Exemption code R1

Chrysler Avenger: Exemption code R1: Vehicles with model prefix: BP

Daihatsu Charade: Exemption codes F1, R1: Serial numbers: XTE: G10-GMG: 830230, 830331, 830379, 830388, 830402, 830416, 830442, 830453, 830490, 830518, 830540, 830558, 830571, 830579, 830602, 830611, 830631, 830646, 830663, 830672, 830697, 830713, 830733, 830747, 830761, 830792, 830801, 830815, 823244, 823291, 823313, 823428, 831579, 831609, 831630, 831643, 831679, 831747, 831777, 831833, 831849, 831885, 831917, 831963, 831973, 832018, 832064, 854309. XG: G10-GMD: 830280, 830305, 830393, 830510, 830599, 830617, 830654, 830691, 830711, 830719, 830764, 830798, 830820. XG: G10-GKD: 830345, 830526, 830637, 830683, 830770

Daihatsu Delta: Exemption code F1: Serial numbers: VT24T-C: 90990, 91015, 91016, 91028, 91029, 91032, 91033, 91054, 91091, 91094-91099, 91100-91128, 91165-91200. V24W-C: 91129, 91131, 91133-91138. S60P: 022366

Daihatsu Rocky: Exemption codes R2, R3: Models: F75RV-BG, F75RV-MBGT and F85-VBG

Datsun 180SX: Exemption code F4: Serial numbers: KHS110: 000074, 000124, 000580, 000583, 000585, 000589, 000591, 000594, 000597, 000603, 000607, 000611, 000615, 000618, 000621, 000624, 000630, 000640, 000644, 000645, 000649, 000651, 000655, 000658, 000660, 000663, 000680, 000687, 000689, 000695, 000697, 000699

Datsun Cherry: Exemption code F1: Series: BF10

Fiat 128: Exemption code F2: FA289 to FA336

Ford Cortina wagon: Exemption code R1: Serial numbers: CLBNVJ: 35642, 38051, 38052, 38053. CLBNVL: 30889, 31516. CLBNVT: 32987, 32998, 35480, 35488, 35498, 35502, 35503, 35504, 35505, 35507, 35508, 35511, 35514, 35524, 35526, 35532, 35533, 35545, 35581, 36548. CLBNVY: 32881, 32885, 32909, 32925, 32926, 32969

Ford Cortina sedan: Exemption code R1: CLBFVE: 28977, 29656. CLBFVJ: 37727, 37745, 37758, 37761, 37798, 37799, 37808, 37818, 37855, 37890, 37906, 37957, 37958, 37984, 38354, 38373, 38374. CLBFVL: 29738, 30749, 30845, 31404, 31429, 31448, 32172, 32313, 32688. CLBFVY: 30320, 30815, 31448, 32629, 32374, 32391, 32680, 35024, 35030. CLBFVS: 32352, 32361, 32796, 32840, 32844, 32852, 32861, 34220, 34248, 34255, 34258, 34262, 34264, 34265, 34267, 34269, 34272, 34274, 34280, 34296, 34298, 34299, 34310, 34322, 34328, 34341, 34962, 34963, 34986, 35173, 35183, 35233, 35246, 35267, 35271, 35277, 35280, 35281, 35282, 35285, 35291, 35330, 35333, 35340, 35367, 35369, 35370, 35384, 35395, 35396, 35401, 35402, 35407, 35408, 35410, 35411, 35412, 35416, 35419, 35420, 35430, 35434, 35442, 35444, 35450, 35452, 35454, 35457, 35612, 35728, 36589, 36590, 36591, 36593, 36598, 36600, 36604, 36605, 36607, 36608, 36614, 36615, 36616, 36618, 36623, 36630, 36631, 36633, 36892, 36893, 36894, 36896, 36898, 36900, 36901, 36908, 36911, 36921, 37451, 37593, 37595, 37627, 37642. CLBFVT: 35534, 35566, 36539, 36541, 36546, 36547, 36549, 36553, 36554, 36555, 36556, 35564, 36565, 36569, 36571, 36577, 36923, 36925, 36926, 36927, 36929, 36941, 36946, 36950, 36951, 36952, 36953, 36956, 36960, 36964, 36965, 36966, 36972, 36975, 36979, 36980, 36981, 36982, 36983, 3685, 36990, 37641, 37642, 37644, 37645, 37649, 37651, 37652, 37653, 37656, 37657, 37659, 37660, 37661, 37664, 37666, 37670, 37674, 37675, 37676, 37677, 37679, 37680, 37686, 37692, 37694, 37697, 37698, 3799, 37700, 37701, 37702, 37704, 37705, 37706, 37707, 37708, 37710, 37711, 37714, 37716, 37733, 37736, 37737, 37775, 37992, 37994, 37996, 37997, 37999, 38000, 38001, 38002, 38004, 38007, 38008, 38011, 38012, 38013, 38018, 38022, 38024, 38028, 38030, 38032, 38035, 38037, 38038, 38039, 39648. BABFWD: 44439, 44444, 44446, 44449, 44450

Ford Escort wagon: Exemption code R1: Serial numbers: CLADVS: 30987, 30998, 31001, 31018, 31022, 31024, 31025, 31033, 39140. CLADVT: 37320

Holden HZ utility: Exemption code F1: Serial numbers: 8N80TJZ7: 0048Z, 00049, 00053, 00059, 00065, 00904, 00907, 00913, 00918, 00923, 00929, 00931, 00934, 00941, 00949, 00950, 00951, 00953, 00954, 00956. 8N80DJZ7: 99950Z, 99956, 99959, 99966, 99969, 99977, 99981, 99984, 99985, 99987, 99991. 8N80JZ7: 00891, 00893, 00898, 00902, 00903, 00905, 00908, 00911, 00916, 00917, 00947, 00948, 00986, 00993, 00996, 01002, 01003, 01008, 01038, 01042, 01062, 01100, 01101, 01102, 01103, 01026, 01050, 01070, 01074, 01090, 01085, 01087, 01092, 01093, 01094, 01152, 99951, 99955. 8N80DJZ7: 98169Z. 8N80LJZ7: 0128Z, 01990Z, 97844Z, 97854Z, 98216Z, 99259Z, 99276Z. 8N80TJZ7: 00051Z, 00893Z, 00922Z, 00932Z, 00946Z, 00957Z, 97107Z

Holden One Ton chassis/cab: Exemption code F1: Serial numbers: 8M60JZ7: 01113, 01117, 01121, 01123Z, 01124, 01125, 01136, 01138, 01141, 01142, 01145, 01146, 01169, 98821, 98833, 98846, 98851. 8M60LJZ7: 01105Z, 01124Z, 01136Z, 01141Z, 96554Z, 98725Z, 98801Z, 98857Z, 98861Z, 99902Z

Isuzu Gemini model PF50: Exemption code F3: Serial numbers: 6709544 to 548, 6709806 to 810, 6714557 to 576, 6715252 to 261, 6715835 to 844, 6720255 to 264, 6702417 to 436, 6720675 to 681, 6725925 to 934, 6726142 to 151, 6726286 to 295, 6726536 to 545, 6731789 to 791, 6732010 to 017, 6732219 to 227, 6732425 to 432, 6732635 to 642, 6732826 to 829, 6736172 to 181

Isuzu KAG51 light commercial: Exemption code F1

Isuzu Space cab TFR17HPRRML: Exemption code R1

Isuzu TLD23: Exemption code F1

Kawasaki KAP-300 Mule 500: Exemption code F5

Land Rover all models: Exemption code R3

Mitsubishi L300 all types (includes Delica): Exemption codes F1, R1

Mitsubishi Colt 1400 light commercial: Exemption code F1

Mitsubishi Galant Sigma Estate: Exemption code R1: Any chassis number less than GQ7445 1753

NZ Police prisoner vans: Exemption code R4

Renault Alpine V6 GT D50005: Exemption code R1

Renault Alpine V6 GT Turbo D50105: Exemption code R1

Subaru 1600 GFT: Exemption code R1: Serial numbers: 002019, 002121, 002122, 002123, 002124, 002127, 002128, 002129, 002130, 002131, 002132, 002133, 002134, 002135, 002136, 002137, 002138, 002139, 002140, 002144, 002149, 002150, 002151, 002153, 002158, 002161, 002162, 002163, 002164, 002169, 002172, 002173, 002174, 002175, 002176, 002177, 002178, 002180, 002182, 002183, 002184, 002185, 002186, 002187, 002188, 002191, 002192, 002197, 002201, 002202, 002430, 002431, 002432, 002433, 002436, 002443, 002444, 002446, 002447, 002448, 002449, 002453, 002454, 002455, 002456, 002457, 002458, 002459, 002460, 002461, 002465, 002469, 002470, 002476, 002478

Subaru Domingo van: Exemption code R1: 1986 and 1987 models

Subaru 700 van: Exemption code R1: 1986 and 1987 models

Suzuki ST80: Exemption code F1: ST80 KRA: 0003, 0010, 0034, 0036, 0044, 0049, 0050, 0079, 0096

Suzuki ST90: Exemption code F1: ST90 KRA: 0097 to 0132. ST90 VRA: 0133 to 0493

Toyota Corolla mode: Exemption code F4: Serial numbers: KE 35R-KSB: up to serial number 3681

Toyota Corona estate: Exemption code R1: Serial numbers: TT132RG-TWKDS: up to unit number 781. TT132RG-TWHDS: up to unit number 381

Toyota Dyna chassis/cab: Exemption code F1: Serial numbers: RU20R-QRBT3 (petrol): up to serial number 171. RU30R-QRDHT3 (diesel): up to serial number 151

Toyota Hi-Ace van: Exemption code F1: Serial numbers: RH20RV-JRE: up to serial number 1381

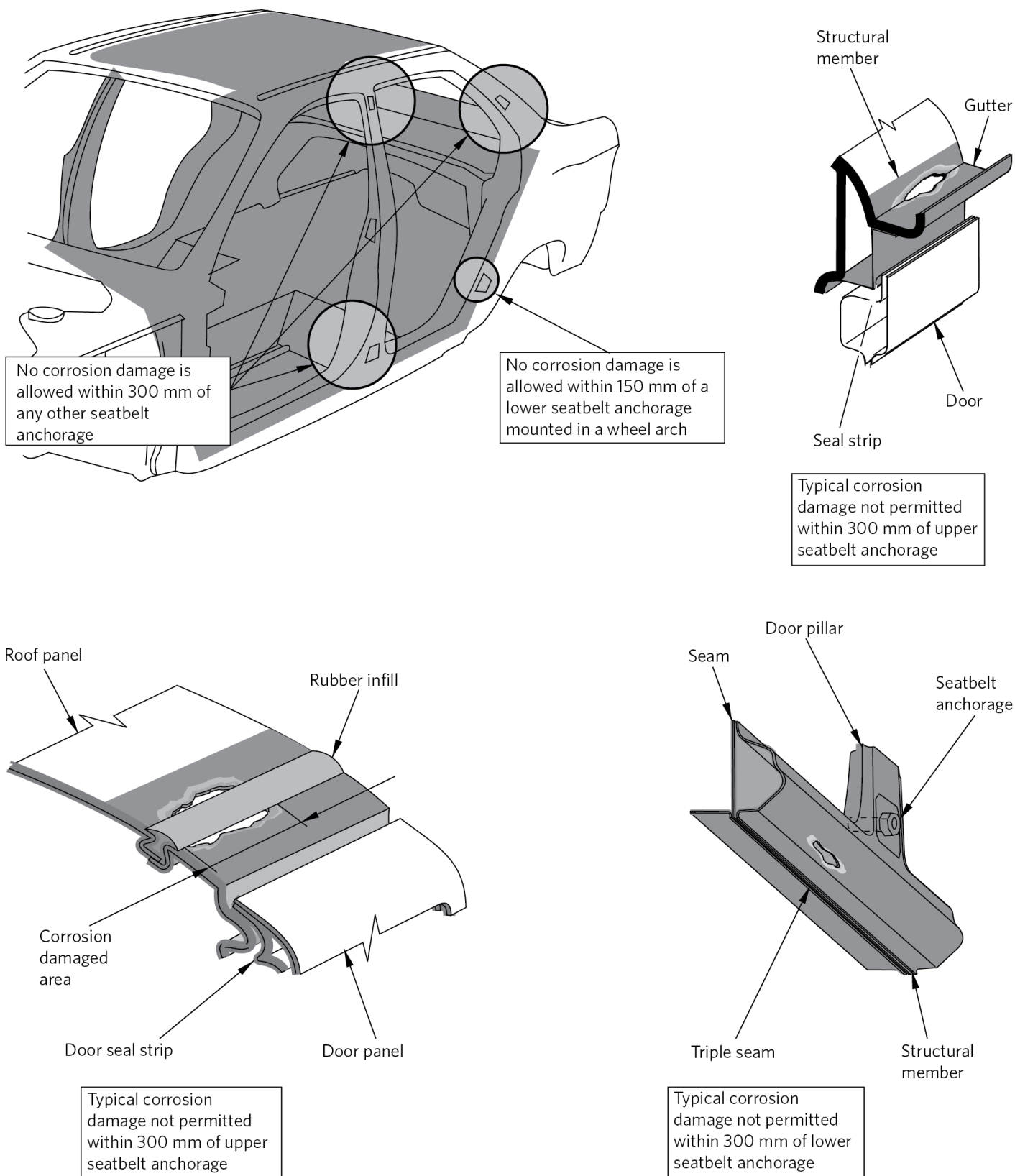
Toyota Hi-Ace chassis/cab: Exemption code F1: Serial numbers: RH11R-JR3: up to serial number 391

Toyota Hilux chassis/cab: Exemption code F1: Serial numbers: RN40R-JRS3: up to serial number 401. RN41R-JR3 up to serial number 171

Toyota Hilux 850 double cab: Exemption code R1: Serial numbers: YN 65: 0002226, 0002916 to 0002925, 0002946 to 0002955, 0002993 to 0003002, 0003235 to 0003264, 0003306 to 0003335, 0003489 to 0003498, 0003733 to 0003742, 0003827 to 0003836, 0003951 to 0003960, 0003994 to 0004003, 0004075 to 0004084.

Toyota Lite Ace: Exemption code R1: Model: KM20RV-JRZ or YM20RV-MR

Figure 7-5-1. Corrosion limits around seatbelt anchorages



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See also figures for corrosion limits to structure ([section 3-1](#)), hinge and latch anchorages ([section 6-1](#)), and front or rear suspension anchorages ([section 9-1](#)).

Figure 7-5-2. Example of seatbelt declaration: Approved Certifier's Declaration

Approved Certifier's Declaration

The exemption notice copied on reverse, as published in the New Zealand Gazette No. 26 of 12 February 1998, page 574, and referenced as 'au986', is applicable to the following vehicle:

Make: _____
Model: _____
Year of manufacture: _____
VIN/Chassis number: _____

This vehicle complies with the following approved frontal impact standard:

The seat belts installed in the vehicle are the vehicle manufacturer's original equipment, or original equipment placement, and identifiable by the following part/identification numbers:

Row	Left outer seat belt	Middle seat belt	Right outer seat belt
Front:	_____	_____	_____
First rear:	_____	_____	_____
Second rear:	_____	_____	_____

I declare that:

- (a) I have personally examined the vehicle specified above; and
(b) the above information is true.

Signed: _____ Name: _____
Address: _____
Date: _____ Stamp: _____

VIN Agent's Validation:

I am satisfied with the evidence provided in support of this exemption.

Signed: _____ Name: _____
Address: _____
Date: _____ Stamp: _____

Exemptions from the 1976 and the 1990 Regulations with respect to seatbelts in vehicles that comply with approved frontal impact standards

Extract from *N.Z. Gazette*, 12 February 1998, No. 26, p. 574

Exemption from Specified Seat Belt Requirements of the Traffic Regulations 1976 and the Transport (Vehicle Standards) Regulations 1990, Subject to Frontal Impact Standards

Pursuant to regulation 90 (1) of the Traffic Regulations 1976 and regulation 36 of the Transport (Vehicle Standards) Regulations 1990, I, John Andrew Justice, Senior Engineer, hereby exempt seat belts in motor vehicles of Classes MA, MB, MC, and NA from the requirement in regulation 78A of the Traffic Regulations 1976 of having to be approved, and from the requirements of regulation 29 (2) and (3) of the Transport (Vehicle Standards) Regulations 1990, subject to the conditions specified in Schedule 1 of this notice.

Schedule 1

Conditions

- (i) This exemption only applies to vehicles manufactured on or after 1 January 1993 that comply with, and are certified to comply with, one or more of the frontal impact standards listed in Schedule 2 of this notice, in the versions in force at the time of manufacture;
- (ii) This exemption only applies to original equipment seat belts, and replacement seat belts approved by the vehicle manufacturer that are identifiable by part numbers or identification numbers identical to the original equipment seat belts;
- (iii) This exemption is only valid if declared by an approved certifier as being applicable to a particular vehicle, and if validated by a VIN agent;
- (iv) The declaration must be on the reverse of a copy of this notice and contain the following information:
 - (a) Vehicle make, model, year of manufacture, and VIN or chassis number,
 - (b) The frontal impact standard with which the vehicle complies,
 - (c) The part numbers or identification numbers of the seat belts in each seating position,
 - (d) A statement to the effect that this exemption notice applies to the vehicle,

- (e) Date, and certifier's signature and contact details;
- (v) The declaration specified in (iv) must be validated by a VIN agent, but only if the VIN agent is satisfied with the evidence provided by the certifier that this exemption is applicable to the specified vehicle;
- (vi) This notice is only valid as long as an exempted vehicle continues to comply with the approved frontal impact standard to which it was certified;
- (vii) A copy of this notice, including the declaration and validation specified in (iii), (iv) and (v), must be carried in all exempted vehicles at all times and must be readily available for inspection;
- (viii) This exemption may be revoked at any time.

Schedule 2

Approved frontal impact standards

- (i) Directive 96/79/EC of the European Parliament and of the Council of 16 December 1996 on the protection of occupants of motor vehicles in the event of a frontal impact [which, for the purpose of occupant protection in the event of a frontal impact, amends the Council Directive of 6 February 1970 on the approximation of the laws of the Member States relating to the type-approval of motor vehicles and their trailers (70/156/EEC)];
- (ii) Federal Motor Vehicle Safety Standard No. 208, Occupant Crash Protection in Passenger Cars, Multipurpose Passenger Vehicles, Trucks and Buses;
- (iii) Australian Design Rule 69/00, Full Frontal Impact Occupant Protection;
- (iv) Technical Standard for Occupant Protection in Frontal Collision, Jisha Circular No. 899 of October 1, 1983.

Signed at Wellington this 10th day of February 1998.

JOHN ANDREW JUSTICE, Senior Engineer, acting under the authority delegated to me by way of instrument of delegation dated 23 December 1996.

au986

Figure 7-5-3. Example of seatbelt declaration: TSD Agent's Declaration

TSD Agent's Declaration

The exemption notice copied on reverse, as published in the *New Zealand Gazette* of 29 March 2001, page 781, and referenced as 'au2141', is applicable to the following vehicle:

Make: _____

Model: _____

Year of manufacture: _____

VIN/Chassis number: _____

The vehicle [tick applicable box]:

- ☐ complies with the following approved frontal impact standard:

- ☐ is fitted with airbags that are the vehicle manufacturer's original equipment specification;
- ☐ has seatbelts with features that are specifically designed to operate in conjunction with other parts of an integrated occupant protection system. The features are:

The seatbelts installed in the vehicle are the vehicle manufacturer's original equipment specification and identifiable by the following part/identification numbers:

Row	Left outer seatbelt	Middle seatbelt	Right outer seatbelt
Front:	_____	_____	_____
First rear:	_____	_____	_____
Second rear:	_____	_____	_____

I declare that:

- (a) I have personally examined the vehicle specified above; and
- (b) the above information is true.

Signed: _____ Name: _____

Address: _____

Date: _____ Stamp: _____

**Exemption from Specified Seatbelt Requirements of the
Traffic Regulations 1976 and the
Transport (Vehicle Standards) Regulations 1990**

Pursuant to regulation 90 (1) of the *Traffic Regulations 1976* and pursuant to regulation 36 of the *Transport (Vehicle Standards) Regulations 1990*, I, Jörg Simon Mager, Senior Engineer Vehicle Policy, hereby exempt any motor vehicle that is required to be fitted with seatbelts from the requirement in regulation 78A of the *Traffic Regulations 1976* of having to have seatbelts of an approved type, and from the requirements in regulation 29 (2) and 29 (3) of the *Transport (Vehicle Standards) Regulations 1990*, in respect of specified seatbelts in the vehicle, subject to the conditions specified in the schedule of this notice.

The following notice in the *New Zealand Gazette* is hereby revoked: 12 February 1998, No. 26, p. 574, (au986) is hereby revoked.

Schedule: *Conditions*

- (i) This exemption applies only to a vehicle that:
 - (a) complies with a frontal impact standard approved under *Land Transport Rule: Frontal Impact*, or
 - (b) is fitted with airbags that are the vehicle manufacturer's original equipment specification, or
 - (c) has seatbelts with features, such as pretensioners or load limiters, that are specifically designed to operate in conjunction with other parts of an integrated occupant protection system;
- (ii) The exemption applies only in respect of seatbelts that are the vehicle manufacturer's original equipment specification;
- (iii) This exemption is valid only if a declaration, as specified in (iv) below, is issued by a Transport Services Delivery Agent, declaring the exemption to be applicable to a particular vehicle;
- (iv) The declaration must be on the reverse of a copy of this exemption notice and contain the following information:
 - (a) Vehicle make, model, year of manufacture, and VIN or chassis number,
 - (b) Part numbers or identification numbers of the seatbelts in each seating position,
 - (c) A statement to the effect that the vehicle qualifies for the exemption and meets the conditions of the exemption,
 - (d) Date of issue, and inspector's name, contact details and signature.

Signed at Wellington this 22nd day of March 2001.

JÖRG SIMON MAGER, Senior Engineer Vehicle Policy, acting under an authority delegated to me by the Director of Land Transport Safety by way of instrument of delegation dated 3 May 1999.

Figure 7-5-4. Example of plate fitted to a vehicle that may retain single-sensitive front seatbelts



Figure 7-5-5. FS012 Upper seatbelt anchorage request form



FS012 Upper Seatbelt Anchorage Request Form

Low Volume Vehicle Certifiers' Declaration of Inspection and Approval for Non-requirement of Retro-fitted Upper Seatbelt Anchorages

This declaration may only be applied to MA and MC-class vehicles manufactured before 1 November 1979.

LVV Certifier's declaration:

I (LVV certifier's name): _____ (certifier ID): _____

declare that, in relation to the following motor vehicle, I have personally inspected the vehicle and its structure in relation to the suitability of the retro-fitting of upper seatbelt anchorages (*photographs of vehicle are to accompany application*)

Vehicle Make: _____ Model: _____

Year: _____ Chassis No./VIN: _____

I declare that: (*fill out either (A) or (B), as applicable*)

(A) No fixed roof, B-pillar, or other permanent structure:

The vehicle specified above does not incorporate a fixed roof, B-pillar, or other permanent structure capable of supporting a retro-fitted upper seatbelt anchorage, that is within the permitted area required by 2.3(2) of LVV Standard 175-00 (Seatbelt Anchorages) for the installation of an upper seatbelt anchorage, in the following seating positions: _____

or;

(B) Unsuitable pillar/cant-rail size or design:

The vehicle specified above does have a fixed roof or other permanent structure that is within the permitted area specified in 2.3(2) of LVV Standard 175-00 (Seatbelt Anchorages) for the installation of an upper seatbelt anchorage, however that structure is of insufficient dimensions, or is of a design, that precludes the correct installation of seatbelt anchorage doubler plates as required by 2.6(2) of LVV Standard 175-00 (Seatbelt Anchorages), for the installation of an upper seatbelt anchorage, in the following seating positions: _____

General comments: _____

LVV Certifier's signature: _____ Date: _____

LVVTA's validation:

I am satisfied that this declaration is appropriate for the vehicle in question, taking into account the vehicle's age, design, and construction type (*TSDA should contact LVVTA [09-268-9550] in the first instance if there are any concerns about the use of this declaration for this vehicle*).

LVVTA representative: _____

Signature: _____ Date: _____

Form Approval Number: _____

LVVTA stamp

Summary of legislation

Applicable legislation

- [Land Transport Rule: Seatbelts and Seatbelt Anchorages 2002](#).

Mandatory equipment

1. A motor vehicle must be fitted with seatbelts as specified in **Table 7-5-1**, **Table 7-5-2** and **Table 7-5-3**, or as specified for specific vehicles in **Table 7-5-4**, or as specified in requirement 2 below, unless an exemption in **Table 7-5-5** applies.
2. A seat that can be rotated or reversed to face in different directions: if seatbelts are not provided for all directions, a notice easily visible by the seat occupant must be placed inside the vehicle, indicating the direction the seat must face so that a seatbelt may be worn while the vehicle is moving.

Permitted equipment

3. A vehicle fitted with a seatbelt and seatbelt anchorage in a position where these are not required must meet the condition and performance requirements for seatbelts and seatbelt anchorages.

Condition

Seatbelts

4. A seatbelt must be of a design suitable for the vehicle, and must be strong, secure and in sound condition.
5. Seatbelt webbing must not be cut, stretched, frayed or faded, or have otherwise deteriorated so as to reduce the performance of the seatbelt.
6. Seatbelt webbing must be securely attached to the tongue or the adjusting buckle and to any fittings that secure a seatbelt to the seatbelt anchorages.
7. The strands of the steel cables of a seatbelt stalk must not be damaged or have deteriorated, and the seatbelt stalk must not have any other weaknesses that could reduce its performance.
8. Seatbelt buckles, retractor mechanisms or any other fittings intended to ensure the safe use of the seatbelt must not have deteriorated below safe tolerance.

Seatbelt anchorages

9. A seatbelt anchorage and its mounting location:
 - a) must be of a strength appropriate to both the motor vehicle and the attached seatbelt
 - b) must be structurally sound and free of corrosion, and
 - c) must not be damaged or distorted.
10. When a seatbelt or part of a seatbelt is integral to a seat, the seat and seat anchorages must be compatible in strength with the seatbelt or with that part of the seatbelt attached to the seat.

Performance

11. A seatbelt must be in good working order.
12. A seatbelt must be able to be adjusted by the wearer.
13. A seatbelt must be able to be readily fastened and released by the wearer.

Modification

14. A seatbelt must not have been modified ([Note 14](#)) since 1 January 1992, except where:
 - a) the modification is approved by the seatbelt or vehicle manufacturer
 - b) the seatbelt has been modified temporarily to accommodate a child restraint, provided the modification:
 - i. does not affect the performance of the child restraint, and
 - ii. is not likely to cause injury to a vehicle occupant, and
 - iii. does not cause damage to the seatbelt.
15. The fitting of an alternative type of seatbelt ([Note 15](#)) or a modification that affects a seatbelt anchorage must be inspected and certified by an LVV specialist certifier, unless the vehicle is:
 - a) excluded from the requirement for LVV specialist certification (**Table 7-5-5**), and
 - b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition and

performance.

7-6 Frontal impact airbags

Reasons for rejection

Mandatory equipment

1. A deployed frontal impact airbag has not been replaced.
2. An OE airbag warning light system has been removed from a vehicle fitted with airbags.
3. A motor vehicle has a sign, light or other device that indicates the vehicle is fitted with an airbag when it is not fitted with an airbag.

Condition and performance

4. An airbag cover:
 - a) is damaged, or
 - b) has deteriorated, or
 - c) shows signs of tampering or inadequate repair.
5. Additional equipment has been fitted that may affect the proper performance of the airbag.
6. The airbag warning light:
 - a) does not operate, or
 - b) indicates a fault in the system.

Modification

7. A modification ([Note 2](#)) affects an airbag system (eg an airbag has been removed, or made inoperable, including retrofitting a switch), and:
 - a) is not excluded from the requirements for LVV specialist certification (**Table 7-6-1**), and
 - b) is missing proof of LVV specialist certification, ie:
 - i. the vehicle is not fitted with a valid LVV certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.
8. A motor vehicle that has had an airbag system removed or made inoperable and been certified as above does not:
 - a) have all OE signs, lights, or other devices that indicated the vehicle was fitted with an airbag removed, or
 - b) if the signs, lights, or other devices cannot be readily removed, have a label that indicates an airbag has been removed permanently attached in a prominent location where it is clearly visible to any occupant of the seating position that was previously protected by the airbag.

Note 1 Definitions

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Note 2

Some modifications are permitted, but they must always be LVV certified. The only modifications permitted are:

1. fitting a switch to render an airbag temporarily inoperable, and
2. the removal or permanent deactivation of an airbag in a vehicle that:
 - is at least 14 years old, or
 - has been adapted for a person with a disability, or
 - has been extensively modified for motorsport use.

Table 7-6-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is never required:
Any modification for the purposes of law enforcement or the provision of emergency services	<ul style="list-style-type: none"> in-service requirements for condition and performance must be met.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Frontal Impact 2001.](#)

Mandatory equipment

- A frontal impact airbag and its operating system must remain operational if the vehicle was originally manufactured with a frontal impact airbag.
- An airbag warning light system must remain operational if it was fitted by the vehicle manufacturer.
- A motor vehicle must not have a sign, light, or other device that indicates the vehicle is fitted with an airbag if it is not fitted with an airbag.
- A motor vehicle must not have a light or other device indicating an airbag operating system is operable if it is inoperable.

Permitted equipment

- A switch may be installed as OE to render an airbag temporarily inoperable.

Condition and performance

- An airbag and its operating system must be safe and in good condition.
- An airbag warning light fitted by the manufacturer must remain operational.

Modification

- A motor vehicle that has had an airbag removed or made inoperable must either:
 - have all OE signs lights, or other devices that indicated the vehicle was fitted with an airbag removed, or
 - if the signs, lights, or other devices cannot be readily removed, have a label that indicates an airbag has been removed permanently attached in a prominent location where it is clearly visible to any occupant of the seating position that was previously protected by the airbag.
- A modification that affects an airbag system must be inspected and certified by an LVV specialist certifier, unless the vehicle is:
 - excluded from the requirement for LVV specialist certification (**Table 7-6-1**), and
 - has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

7-7 Interior impact

Reasons for rejection

Mandatory equipment

- Where an interior fitting, control or surface has been added, removed, substituted or has deteriorated, the likelihood of injury to occupants has not been minimised.

Modification

- A modification ([Note 1](#)) affects an interior fitting, control or surface, and:
 - is not excluded from the requirements for LVV specialist certification (**Table 7-7-1**), and
 - is missing proof of LVV specialist certification, ie:
 - the vehicle is not fitted with a valid LVV certification plate, or
 - the operator is not able to produce a valid modification declaration or authority card.

Note 1 Definitions

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Table 7-7-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is not required provided that:
Cargo hoists and tail-lifters in goods vans	<ul style="list-style-type: none"> the vehicle is not adapted for the transportation of a person in a wheelchair, and the hoist or tail lifter is positioned to the rear of any vehicle occupants and adequately mounted.
Disability adaptive controls	<p>For disability adaptive hand control systems:</p> <ul style="list-style-type: none"> the hand control operates the accelerator system only, and the presence of the hand control system does not significantly increase the risk of injury to occupants in the event of a crash. <p>For an additional accelerator pedal fitted to the left of the brake pedal:</p> <ul style="list-style-type: none"> the vehicle is equipped with automatic transmission, and the additional accelerator pedal does not affect the operation of the brake pedal or any other part of the brake system, and the vehicle retains the original equipment accelerator pedal to the right of the brake pedal, and adequate clearance is maintained between all pedals, and the accelerator system is protected from accidental application, eg by shielding the right hand accelerator pedal or ability to fold away either accelerator pedal when not in use, and there is a warning notice easily visible to the driver warning that the foot controls are not as provided by the vehicle manufacturer. <p>For a steering wheel spinner to assist in the operation of the steering wheel:</p> <ul style="list-style-type: none"> the spinner is contained within the outer circumference of the steering wheel.
Stereo equipment and speakers	<p>If fitted to the rear parcel shelf:</p> <ul style="list-style-type: none"> no upper seatbelt anchorage is attached to the shelf or any shelf support bracket, and in the case of a top tether point for a child seat attached to the rear shelf, the top tether point is not located within 150 mm of a modification to a rear parcel shelf, and the removal of any material from the rear shelf is minimal and is unlikely to have weakened the vehicle structure to which a seatbelt anchorage is attached. <p>If fitted to a part of the vehicle other than the rear parcel shelf:</p> <ul style="list-style-type: none"> no structural material has been removed from within 300 mm of a seatbelt anchorage, and any material removed is minimal and is unlikely to have weakened the vehicle structure (including a seatbelt anchorage structure).
Steering wheels	<ul style="list-style-type: none"> the vehicle does not have an airbag installed as OE, and the vehicle is not required to comply with a frontal impact occupant protection standard¹. The following vehicles with a GVM of 2500 kg or less are required to comply with such a standard: <p>– class MA motor vehicles manufactured from 1 March 1999, and</p>

	<ul style="list-style-type: none"> – class MA motor vehicles that were less than 20 years old when they were first registered in New Zealand on or after 1 April 2002, and – class MB or MC motor vehicles manufactured from 1 October 2003, and • the steering wheel is: <ul style="list-style-type: none"> – a direct substitute without shaft modification, and – a non-OE item of a reputable brand or an OE item from another vehicle.
Additional and substituted items such as instruments, switches, cellphone installations and navigation equipment or an OE item from another vehicle	<ul style="list-style-type: none"> • the items are: <ul style="list-style-type: none"> – mounted flush with, or protected by, the dashboard surface, or – fitted forward of the steering wheel, or between the steering wheel and the nearest door, or – fitted between and forward of the front seats (where no centre seat exists), and within 140 mm either side of the vehicle centreline.
Roll-bar or roll-cage structures (roll protection or cosmetic)	<ul style="list-style-type: none"> • each seating position is fitted with an effective head restraint, and • the bars are positioned: <ul style="list-style-type: none"> – behind, following a plane extending upward, parallel to the back of the backrest on the rear-most seat, and – in such a way that the head restraint would provide protection from head contact with any bar section during a crash.
Gear shift lever relocation	<ul style="list-style-type: none"> • no substantial modifications have occurred to the floor or gearbox tunnel area, other than provision for gear-shift mechanism.

¹A vehicle that cannot comply with this clause cannot be LVV certified unless it has been issued with an LVV authority card or is at least 14 years old.

Fitting of or modification to:	LVV certification is never required:
Modified accelerator pedal	<ul style="list-style-type: none"> • in-service requirements for condition and performance must be met.
Roof and door lining replacement	
Cargo barriers	
Any modification for the purpose of law enforcement or the provision of emergency services	

Summary of legislation

Applicable legislation

- [Land Transport Rule: Interior Impact 2001](#).

Condition and performance

1. Interior fittings, controls and surfaces in the passenger compartments must be such that the likelihood of injury to occupants is minimised.

Modification

2. A modification that affects the interior fittings, controls or surfaces must be inspected and certified by an LVV specialist certifier, unless the vehicle:

- a) is excluded from the requirement for LVV specialist certification (**Table 7-7-1**), and
- b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

7-12 Speedometer

Reasons for rejection

Mandatory equipment

1. A vehicle first registered in New Zealand on or after 1 December 1951 that is capable of a speed exceeding 50km/h is not fitted with a speedometer, and the vehicle operator cannot produce acceptable written evidence ([Note 2](#)) that:

- a) the speedometer has been removed for repair, or
- b) there are no undue delays by the vehicle owner in having the speedometer replaced.

Condition and performance

2. The speedometer:

- a) does not operate as intended when the vehicle is moving forward, or
- b) is obscured from the driver's position, or
- c) does not indicate the vehicle's speed in km/h or mph.

3. Reason for rejection 2(a), 2(b) or 2(c) applies and the vehicle operator cannot produce acceptable written evidence ([Note 2](#)) that repair of the speedometer or associated equipment is impracticable or that a suitable replacement is not available.

Note 1

Speedometer means an instrument in a motor vehicle that continuously indicates to the driver the forward speed of the vehicle in either kilometres per hour (km/h) or miles per hour (mph). For clarification: This definition does not include the speed provided by a GPS system.

Note 2

Acceptable written evidence is documentation provided by the speedometer repairer or supplier. A copy of the documentation must be kept on file with the checksheet.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004](#).

Mandatory equipment

1. A vehicle first registered in New Zealand on or after 1 December 1951 that is capable of a speed exceeding 50km/h must be fitted with a speedometer ([Note 1](#)).

2. A vehicle is not required to have a speedometer if the speedometer or associated equipment:

- a) has been removed for repair and there are no undue delays by the vehicle owner in having it replaced, or
- b) is out of repair, repair is impracticable and a suitable replacement is not available.

Condition and performance

3. The speedometer must be in good working order and operate while the vehicle is moving forward.

Modification

4. A speedometer that is affected by a modification:

- a) must meet the requirements for equipment, condition and performance, and

- b) does not require LVV specialist certification.

7-13 Audible warning devices

Reasons for rejection

Mandatory equipment

1. A motor vehicle is:
 - a) not fitted with a horn, or
 - b) fitted with a bell or whistle ([Note 2](#)), or
 - c) not an emergency vehicle ([Note 1](#)) and is fitted with a siren ([Note 2](#)).
2. A horn cannot be easily operated from the driver's seating position.

Performance

3. The horn does not operate when activated.
4. The horn operates when not activated.
5. The sound from the horn is not steady and continuous, eg the horn plays a tune.
6. The horn is not audible at a distance of 100 m.
7. A siren fitted to an emergency vehicle operates when not activated.

Note 1

Emergency vehicle means a vehicle used for the attendance of emergencies and operated:

- a) by an enforcement officer, or
- b) by an ambulance service, or
- c) as a fire service vehicle, or
- d) as a civil defence emergency vehicle, or
- e) as a New Zealand Defence Force emergency vehicle.

Note 2

A vehicle may be fitted with a bell, whistle or siren that is part of an anti-theft car alarm, personal security alarm or reversing warning device.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004](#).

Mandatory equipment

1. A vehicle must be fitted with a device (horn) that is audible to other road users.

Permitted equipment

2. A vehicle may be fitted with a bell, whistle or siren only as follows:
 - a) a siren fitted to an emergency vehicle ([Note 1](#)), or
 - b) a siren, bell or whistle that is part of an anti-theft car alarm, personal security alarm or a reversing warning device.

Performance

3. The device must be in good working order.
4. The device must be capable of giving a warning that is audible under normal traffic conditions from a distance of at least 100 m.

Modification

5. An audible warning device that is affected by a modification:
 - a) must meet the requirements for equipment and performance, and

- b) does not require LVV specialist certification.

8 Brakes

8-1 Service brake and parking brake

Reasons for rejection

Mandatory equipment

Service brake ([Note 1](#))

1. A vehicle does not have a service brake.
2. A vehicle first registered anywhere on or after 1 February 1977 does not have a service brake that is designed to act on each wheel.
3. A vehicle first registered anywhere before 1 February 1977 does not have a service brake that is designed to act on at least two wheels.
4. A vehicle of class LE first registered anywhere before 1 February 1977 does not have a service brake that is designed to act on at least one wheel.
5. A vehicle of class MA, MB, MC, MD1, MD2 or NA first registered in New Zealand after 1 November 1990 that does not have a dual-circuit service brake does not have a parking brake that is capable of bringing the vehicle to a controlled stop.

Parking brake ([Note 1](#))

6. A vehicle does not have a parking brake.
7. A parking brake on a vehicle of class MA, MB, MC, MD1, MD2 or NA does not act on at least one complete axle.
8. A parking brake on a vehicle of class MA, MB, MC, MD1, MD2 or NA does not act on at least one axle that has dual wheels fitted.

Condition

Service brake

9. There is corrosion damage ([Note 1](#)) within 150mm of a brake component mounting point.
10. The service brake pedal:
 - a) is insecure, or
 - b) is spongy (indicating air in the system), or
 - c) creeps, or
 - d) has a non-slip surface which has deteriorated to such an extent that the brake cannot be safely applied, or
 - e) has excessive travel (pedal travel reduces after one or two applications).
11. A vacuum hose or pipe (including connections) is:
 - a) insecure, or
 - b) leaking, or
 - c) damaged (cracked, chafed, twisted, stretched or corroded, eg showing signs of pitting or a noticeable decrease in the pipe's outside diameter).
12. The brake vacuum servo (brake booster) is:
 - a) not functioning fully or adequately, or
 - b) leaking, or
 - c) insecure.
13. The brake vacuum pump:
 - a) is not functioning fully or adequately, or
 - b) is insecure, or
 - c) drive belt is in poor condition.

14. The brake master cylinder is:

- a) leaking brake fluid, or
- b) insecure, or
- c) excessively corroded.

15. A brake valve is:

- a) not operating (eg has a seized load-sensing valve), or
- b) leaking brake fluid, or
- c) insecure, or
- d) excessively corroded.

16. A brake pipe (including connections) is:

- a) leaking brake fluid, or
- b) insecure, or
- c) deformed from its original shape, or
- d) chafed, or
- e) corrosion damaged, eg there are signs of pitting or a noticeable increase in the pipe's outside diameter.

17. A flexible hydraulic brake hose (including connections):

- a) is leaking brake fluid, or
- b) is insecure, or
- c) bulges under pressure, or
- d) is twisted, stretched or chafed, or
- e) has external sheathing which is cracked to the extent that the reinforcing cords are exposed, or
- f) has metal connections which are excessively corroded, or
- g) has an end fitting which is not attached to the hose by means of swaging, machine crimping or a similar process ([Note 3](#)).

18. A brake calliper:

- a) shows visible signs of leaking, or
- b) is insecure.

19. A brake backing plate is:

- a) insecure, or
- b) severely corroded, or
- c) deformed from its original shape, or
- d) cracked, or
- e) contaminated by brake fluid, oil or grease.

20. A wheel cylinder:

- a) shows visible signs of leaking, or
- b) is insecure, or
- c) is seized.

21. An ABS system component is damaged, insecure or missing.

22. A brake disc or drum is:

- a) worn beyond manufacturer's specifications (where visible without removing vehicle components) ([Note 2](#)), or
- b) fractured or otherwise damaged (where visible without removing components) ([Note 2](#)), or

c) contaminated by brake fluid, oil or grease.

23. Brake friction material (where visible without removing vehicle components) ([Note 2](#)) is:

- a) worn below manufacturer's specifications, or
- b) separating from the brake pad backing plate or brake shoe, or
- c) contaminated by brake fluid, oil or grease.

24. A gap between the brake shoe and the brake drum exceeds manufacturer's specifications (where visible without removing vehicle components) ([Note 2](#)).

25. A service brake component shows signs of heating or welding after original manufacture.

Parking brake

26. The parking brake lever:

- a) has excessive travel, or
- b) is insecure, or
- c) mounting is damaged, corroded, distorted or fractured within 150 mm of the lever mounting, or
- d) mechanism or lever pivot bearing is worn or damaged so that the parking brake could be easily released by accident.

27. The parking brake cable:

- a) is knotted, frayed or excessively corroded, or
- b) has an auxiliary tensioner fitted, or
- c) has otherwise deteriorated so that it may affect the parking brake performance.

28. A parking brake actuating rod or guide:

- a) is excessively corroded, or
- b) is excessively worn, or
- c) has otherwise deteriorated so that it may affect the parking brake performance.

29. A parking brake component shows signs of heating or welding after original manufacture.

Performance ([Note 4](#))

Service brake

30. The service brake cannot be applied in a controlled and progressive manner.

31. When the service brake is applied and without assistance from the engine:

- a) the vehicle does not stop within 7m from a speed of 30km/h (average brake efficiency of 50%), or
- b) the vehicle does not stop within 9m from a speed of 30km/h (average brake efficiency of 40%) for a vehicle which has a service brake designed to act on fewer than four wheels, or
- c) the vehicle does not stop within 20m from a speed of 30km/h (average brake efficiency of 18%) for a vehicle which has been manufactured before 31 December 1918.

32. When the service brake is applied:

- a) the vehicle vibrates under braking to the extent that the control of the vehicle is adversely affected, or
- b) the brake fails to release immediately after the brake pedal has been released, or
- c) the directional control is affected (eg there is swerving to one side, or the brakes on one side apply more slowly than on the other side), or
- d) the brake balance, at any time during the brake application, varies by more than 20% between wheels on a common axle.

33. The ABS or brake system warning lamp or self-check system, if fitted, indicates a defect in the ABS or brake system (does not apply to brake pad wear warning systems).

Parking brake

34. When the parking brake is applied:

- a) the vehicle does not stop within 18m from a speed of 30km/h (average brake efficiency of 20%), or
- b) it does not hold the vehicle at rest on a slope of 1 in 5, or
- c) it does not hold all the wheels on a common axle stationary against attempts to drive the vehicle away.

35. The directional control of the vehicle is affected when the parking brake is being applied on a vehicle of class MA, MB, MC, MD1, MD2 or NA first registered in New Zealand on or after 1 November 1990 that does not have a dual-circuit service brake.

Modification ([Note 1](#))

36. A modification affects a brake or braking performance, and:

- a) is not excluded from the requirements for LVV specialist certification (**Table 8-1-1**), and
- b) is missing proof of LVV specialist certification, ie:
 - i. the vehicle is not fitted with a valid low volume vehicle certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1 Definitions

Service brake means a brake for intermittent use that is normally used to slow down and stop a vehicle.

Parking brake means a brake readily applicable and capable of remaining applied for an indefinite period without further attention.

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward signs of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Note 2

If a brake is fitted with an inspection port plug, this must be removed for inspection of the brake components.

Note 3

Hose end fittings that can be undone using hand tools are unacceptable.

Note 4

Refer to [Technical bulletin 10](#) for specific service and parking brake test procedures for specific vehicles (such as electro-mechanical parking brakes on BMW vehicles), especially when testing these vehicles on roller brake machines.

Table 8-1-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is not required provided that:
Aftermarket brake pedal pads or covers	<ul style="list-style-type: none"> the fitment of the pads or covers does not: <ul style="list-style-type: none"> necessitate any modification to the pedal arm, or significantly affect the safe operation of the brake pedal or other pedals (eg a brake pad or cover significantly wider than the original brake pad may not be acceptable, depending on fitment).
Aftermarket or custom brake pedal extensions (for unusually short people)	<ul style="list-style-type: none"> The extension: <ul style="list-style-type: none"> does not exceed 100mm length when measured from the surface of the original brake pedal, and is securely clamped to the original pedal by mechanical means, and is sufficiently strong and rigid to withstand emergency brake loads, and does not involve any modification to, or compromise the strength of, the original brake pedal, and does not significantly change the sideways load or leverage against the pedal, and does not significantly increase the weight of the pedal.
Additional brake pedals (for driving school vehicles)	<ul style="list-style-type: none"> the operation of the primary brake pedal is not affected, and no modifications to the primary brake pedal or any other part of the primary brake system has occurred.
Removal of secondary accelerator and brake system (where driving school vehicle is converted to single primary system)	<ul style="list-style-type: none"> the vehicle was not originally manufactured as a dual-control vehicle (system was retrofitted after manufacture), and the removal of the secondary system has reinstated the vehicle's primary systems back to the vehicle's exact original specification.
Aftermarket brake rotors	<ul style="list-style-type: none"> the substitute rotors are: <ul style="list-style-type: none"> the same size as the OE rotors, and catalogued aftermarket items for that make and model of vehicle (and can include cross-drilled and/or slotted types), and attached to unmodified OE parts.
Disability parking brake system	<ul style="list-style-type: none"> the system is a non-OE mechanical or electrical system for applying and releasing the parking brake, and: <ul style="list-style-type: none"> the parking brake performance is not compromised, and in the case of electrical failure, the parking brake does not release.

Fitting of or modification to:	LVV certification is never required:
Aftermarket brake pads, linings and hoses (including stainless steel braided brake hoses)(Note 3)	<ul style="list-style-type: none"> in-service requirements for condition and performance must be met.
Any modifications for the purposes of law enforcement or the provision of emergency services	

Summary of legislation

Applicable legislation

- [Land Transport Rule: Light-Vehicle Brakes 2002.](#)

Mandatory equipment

Service brake

1. Vehicles must have a service brake that acts on each wheel, except in the following cases:

- A vehicle first registered anywhere before 1 February 1977 may have a service brake that is designed to act on fewer than four wheels
- A vehicle of class LE first registered anywhere before 1 February 1977 may have a service brake that is designed to act on fewer than three wheels.

2. A vehicle of class MA, MB, MC, MD1, MD2 or NA first registered in New Zealand from 1 November 1990 that does not have a dual-circuit service brake must have a parking brake that is capable of bringing the vehicle to a controlled stop if the service brake fails.

Parking brake

3. A vehicle of class MA, MB, MC, MD1, MD2 or NA must have a parking brake that:

- acts on at least one complete axle, or
- if the vehicle has dual wheels on an axle, acts on that axle.

4. A vehicle of class MA, MB, MC, MD1, MD2 or NA first registered in New Zealand from 1 November 1990 without dual-circuit service brakes must have a parking brake that is capable of bringing the vehicle to a controlled stop if the service brake fails.

Permitted equipment

5. A vehicle of class MA, MB, MC, MD1, MD2 or NA may be fitted with a warning system that is part of, or associated with, the use of a brake component or system.

Condition

6. A brake must be in good condition.

7. The brake friction surfaces on a vehicle of class MA, MB, MC, MD1, MD2 or NA must be within safe tolerance of their state when manufactured, and must not be scored, weakened or damaged to the extent that the safety performance of the brake is adversely affected.

Performance

8. The service brake on a vehicle of class MA, MB, MC, MD1, MD2 or NA must be able to be applied in a controlled and progressive manner.

9. When the brake on a vehicle of class MA, MB, MC, MD1, MD2 or NA is applied:

- the vehicle or its controls must not vibrate to the extent that control of the vehicle is adversely affected, and
- the braking effort on each wheel must provide stable and efficient braking without adverse effect on the directional control of the vehicle, and
- if the vehicle is equipped with an anti-lock braking system (ABS), the wheels must not lock, other than when the speed of the vehicle falls below the ABS activation parameters set by the vehicle manufacturer.

10. A brake warning system, if fitted on a vehicle of class MA, MB, MC, MD1, MD2 or NA, must function correctly (does not apply to a brake pad wear system).

Service brake

11. The service brake of a vehicle or vehicle combination that is operated on a hard, dry, level surface that is free of loose material and without assistance from the compression of the engine or other retarders must operate in the following manner:

- a) A service brake that acts on each wheel must stop the vehicle within a distance of 7m from a speed of 30km/h (average brake efficiency of 50%).
- b) A service brake that is designed to act on fewer than four wheels on a vehicle first registered anywhere before 1 February 1977 must stop the vehicle within a distance of 9 m from a speed of 30km/h (average brake efficiency of 40%).
- c) The service brake on a vehicle manufactured before 31 December 1918 not capable of exceeding 30km/h must stop the vehicle within a distance of 20m from a speed of 30km/h (average brake efficiency of 18%).

Parking brake

12. A parking brake must:

- a) stop the vehicle within 18m from a speed of 30km/h (average brake efficiency of 20%), or
- b) hold the vehicle at rest on a slope of 1 in 5.

Modification

13. A modification to a brake or vehicle that affects the braking performance must be inspected and certified by an LVV Specialist Certifier, unless the vehicle:

- a) is excluded from the requirement for LVV specialist certification (**Table 8-1-1**), and
- b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

Page amended **14 October 2013** (see [amendment details](#)).

9 Steering and suspension

9-1 Steering and suspension systems

Reasons for rejection

Mandatory equipment

1. A vehicle capable of exceeding a speed of 50km/h and equipped with a steering system ([Note 1](#)) with no direct mechanical connection between the driver's means of control and the wheels, or other means of changing the vehicle's direction, does not have at least one additional means of steering.

Condition

2. The steering wheel:

- a) is insecurely attached to the steering shaft, or
- b) shows excessive movement indicating unacceptable wear or looseness in the steering box or rack or steering column bearings, or
- c) has a rim covering which is insecure so that the directional control of the vehicle is affected.

3. The steering column is insecure.

4. The power steering:

- a) has been disconnected, or
- b) system does not operate correctly, requiring unreasonable force to steer the vehicle, or
- c) has a hose, pump drive, drive belt or pump mounting that is insecure, damaged or has significantly deteriorated, or
- d) has a significant fluid leak.

5. A linkage or joint between the steering column shaft and steering box or rack:

- a) is insecure, or
- b) is damaged, significantly corroded, distorted or cracked, or
- c) shows signs of welding or heating after original manufacture, or
- d) has play beyond manufacturer's specifications, or

- e) does not operate smoothly without roughness or stiffness, or
- f) is fouling on the vehicle structure, wheel tyre or brake system component.

6. The steering box or rack:

- a) is insecure, or
- b) is damaged, significantly corroded, distorted or cracked, or
- c) shows signs of welding or heating after original manufacture, or
- d) has play beyond manufacturer's specifications, or
- e) does not operate smoothly without roughness or stiffness, or
- f) has an excessive fluid leak.

7. A steering rack gaiter is missing, insecure or split.

8. A steering linkage or joint ([Note 2](#)):

- a) is insecure, or
- b) is damaged, significantly corroded, distorted or cracked, or
- c) shows signs of welding or heating after original manufacture, or
- d) has play beyond manufacturer's specifications, or
- e) does not operate smoothly without roughness or stiffness, or
- f) is fouling on the vehicle structure, wheel tyre or brake system component, or
- g) shows signs of plastic injection.

9. A steering arm or associated component:

- a) is insecure, or
- b) is damaged, significantly corroded, distorted or cracked, or
- c) shows signs of welding or heating after original manufacture.

10. A king pin or suspension joint ([Note 3](#)):

- a) is insecure, or
- b) is damaged, significantly corroded, distorted or cracked, or
- c) shows signs of welding or heating after original manufacture, or
- d) has play beyond the manufacturer's specifications, or
- e) does not operate smoothly without roughness or stiffness, or
- f) shows signs of plastic injection.

11. A lock stop is loose or damaged.

12. A steering or suspension component mounting point:

- a) is insecure, or
- b) has corrosion damage, buckling or fractures within 150mm of a mounting point (**Figure 9-1-1**).

13. Any other suspension component:

- a) is insecure or missing, or
- b) is damaged, significantly corroded, distorted or cracked, or
- c) shows signs of welding or heating after original manufacture, or
- d) has play beyond manufacturer's specifications, or
- e) does not operate smoothly without roughness or stiffness, or
- f) has excessive leakage of damping fluid or air ([Technical bulletin 9](#)), or
- g) shows excessive play, roughness or stiffness in a strut upper support bearing, or

- h) is a replacement urethane suspension bush that is not voided or shaped to allow for similar movement to an OE bush, or
- i) is a flexible bush that is significantly cracked, damaged or perished.

14. There is corrosion damage ([Note 4](#)) within 150mm of a suspension component mounting point.

Performance

15. During operation:

- a) the vehicle veers significantly to one side, or
- b) the vehicle requires unreasonable force to steer, or
- c) the steering is unreasonably stiff, rough or light, or
- d) the vehicle does not handle safely under normal conditions of road use, eg the suspension is excessively hard or soft, or there is excessive body roll.

Modifications

16. A modification affects a component or system that directly or indirectly affects the directional control of the vehicle, and:

- a) is not excluded from the requirements for LVV specialist certification (**Table 9-1-1**), and
- b) is missing proof of LVV specialist certification, ie:
 - i. the vehicle is not fitted with a valid LVV certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1 Definitions

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Steering system means those components, parts and systems that connect the driver's controls to a vehicle's wheels or tracks by means of which the direction of motion of a vehicle is controlled.

Note 2

A damaged boot on a steering joint is not a ground for rejection; however, the vehicle's owner should be advised.

Note 3

A damaged boot on a suspension joint is not a ground for rejection; however, the vehicle's owner should be advised.

Note 4

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward signs of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Note 5

Where a vehicle has LVV certified modified suspension, the ride height is provided on the LVV plate. The ride height is measured from the centre of the wheel to the underside of the wheel arch.

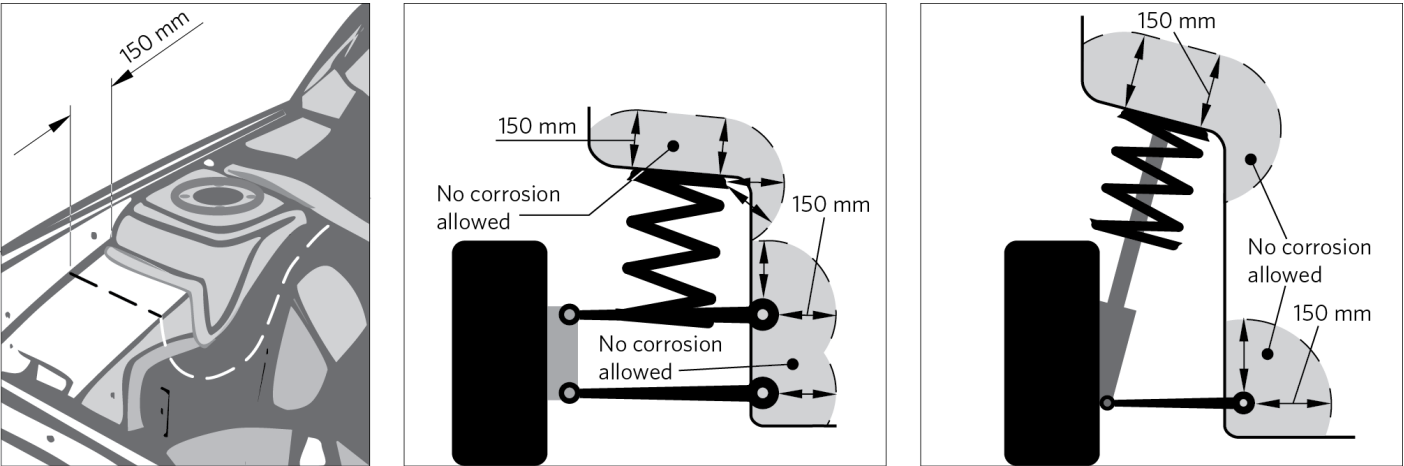
Table 9-1-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is not required provided that:
Steering wheel spinner to assist in the operation of the steering wheel	<ul style="list-style-type: none"> • The spinner is contained within the outer circumference of the steering wheel.
Right-hand drive steering conversions	<ul style="list-style-type: none"> • the conversion can be proven via documented evidence to have been carried out prior to 1 August 1990, or • the conversion was carried out between 1 August 1990 and 1 March 1999 and an approved conversion agent's individually numbered plate is attached to the vehicle structure.
Steering wheels	<ul style="list-style-type: none"> • the vehicle does not have an airbag installed as OE, and • the vehicle is not required to comply with a frontal impact occupant protection standard¹. The following vehicles with a GVM of 2500kg or less are required to comply with such a standard: <ul style="list-style-type: none"> – class MA motor vehicles manufactured from 1 March 1999, and – class MA motor vehicles that were less than 20 years old when they were first registered in New Zealand on or after 1 April 2002, and – class MB or MC motor vehicles manufactured from 1 October 2003, and • the steering wheel is: <ul style="list-style-type: none"> – a direct substitute without shaft modification, and – a non-OE item of a reputable brand or an OE item from another vehicle. <p>¹ A vehicle that cannot comply with this clause cannot be LVV certified unless it has been issued with an LVV authority card, or is at least 14 years old.</p>
Springs and shock absorbers	<ul style="list-style-type: none"> • the springs or shock absorbers are direct replacements, and • replacement springs are contained within unmodified OE seats throughout full suspension travel, and • replacement springs are self-retaining in their seats at full extension, without the use of non-standard devices such as wire-ties, straps, or external spring locators, and • replacement springs have not been heated or cut, and • springs and spring seats are not height adjustable by any means (unless OE), and • replacement shock absorbers, including air-adjustable units, fit unmodified OE mountings, and • suspension maintains sufficient travel for safe operation when fully laden, and • suspension components maintain sufficient clearance from unmodified bumpstops when fully laden, and • a minimum of 100mm ground clearance (unladen and without driver) exists below any part of the vehicle structure, or any steering, braking or suspension component², and • the normal relationship between front and rear suspension height is not unduly affected. <p>² Does not include such items as exhaust pipes and exterior body panels that do not contribute to the structural strength of the vehicle.</p>

Blocks for leaf springs to adjust their ride height (up or down)	<ul style="list-style-type: none"> the suspension has not been raised by any other means, and the blocks are: <ul style="list-style-type: none"> securely fitted, and constructed from metal, and designed for the purpose, and firmly seated over not less than the OE seat area, and not more than 50mm in height.
Larger diameter anti-sway bar	<ul style="list-style-type: none"> the bar is attached to unmodified OE mounting points.
Addition of anti-sway bar	<ul style="list-style-type: none"> no cutting, heating or welding to the vehicle structure or suspension components is involved in attachment of the bar.
Suspension braces (strut tower braces)	<ul style="list-style-type: none"> there are no structural changes to the body or suspension mounting points.
Eccentric bolts/bushes for adjustability of wheel alignment (eg for camber correction in association with lowered suspensions)	<ul style="list-style-type: none"> the bolts/bushes are: <ul style="list-style-type: none"> designed as a means of correcting or improving wheel alignment; and catalogued aftermarket items for that make and model of vehicle.

Fitting of or modification to:	LVV certification is never required:
Urethane suspension bushes	<ul style="list-style-type: none"> in-service requirements for condition and performance must be met.
Any modification for the purposes of law enforcement or the provision of emergency services	

Figure 9-1-1. Corrosion limits around front or rear suspension anchorages.



See also figures for corrosion limits to structure ([section 3-1](#)), hinge and latch anchorages ([section 6-1](#)), and seatbelt anchorages ([section 7-5](#)).

Summary of legislation

Applicable legislation

- [Land Transport Rule: Steering Systems 2001](#)
- Traffic Regulations 1976, regulation 70
- New Zealand Gazette, 19 March 1998, issue 42, page 978, notice 1851 and amendment
- New Zealand Gazette, 25 February 1999, issue 23, page 575, notice 1478.

Mandatory equipment

1. The steering column of a motor vehicle shall be to the right of the longitudinal centreline of the body of the vehicle except as permitted below.
2. A motor vehicle capable of a speed of more than 50km/h and equipped with a steering system with no direct mechanical connection between the driver's means of control and the wheels or other means of changing the vehicle's direction must have at least one additional means of steering.

Permitted equipment

3. A registered vehicle may be in left-hand drive or dual-steer configuration. Such a vehicle is not required to carry a Left-Hand Drive Permit, as the LHD requirements are enforced at the time of first registration in New Zealand.

Condition

4. The steering system and associated systems and components that directly or indirectly affect the directional control of the vehicle must be:
 - a) sound and in good condition, and
 - b) strong, durable and fit for their purpose, taking into account whether adverse effects have resulted from a loss of integrity of any protective system used by a relevant component.

Performance

5. The steering system and associated systems and components that directly or indirectly affect the directional control of the vehicle must provide the vehicle with safe, efficient, convenient and sensitive control.

Modifications

6. A modification that affects the steering system must be inspected and certified by an LVV Specialist Certifier, unless the vehicle:
 - a) is excluded from the requirement for LVV specialist certification (**Table 9-1-1**), and
 - b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

Page amended **14 October 2013** (see [amendment details](#)).

10 Tyres, wheels and hubs

10-1 Tyres and wheels

Reasons for rejection

Mandatory equipment

Tyres

1. Tyres on the same axle are not of the same:
 - a) size designation, or
 - b) carcass type (ie mixed steel ply, fabric radial ply, bias/cross ply, run-flat), or
 - c) tread pattern type (mixed asymmetric, directional, normal highway, traction, winter tyre tread (**Figure 10-1-3**)).
2. All the tyres on a vehicle class MA, MB, MD1 or NA that was first registered or re-registered in New Zealand from 1 October 2002, other than vehicles that are incapable of exceeding 30km/h or are 30 years old or more, are not of the same carcass type (ie mixed steel ply, fabric radial ply, bias/cross ply, run-flat).
3. A class MA, MB, MC, MD1, MD2 or NA vehicle fitted with a winter tyre ([Note 3](#)) is not fitted with winter tyres on all road wheels.
4. The tyres on an axle of a light vehicle do not meet at least one of the following:

- the tyre ply ratings are the same
- the tyre load indices differ by no more than 2 ([Note 4](#)).

5. An asymmetric tyre is fitted to a vehicle with the 'inside' tyre wall facing outwards.

6. A directional tyre is fitted contrary to its correct direction of rotation.

7. A tyre has a speed category that is less than the speed limit for the vehicle or less than the vehicle's maximum speed if this is less than the speed limit ([Note 4](#)) ([Note 5](#)).

8. The vehicle has one or more of the following types of tyre fitted:

- a) a space-saver tyre, or
- b) a non-pneumatic tyre, or
- c) a tyre with studs, cleats, lugs or other gripping devices, or
- d) a tyre that is not compatible with the vehicle to which it is fitted, eg a tyre is marked with any of the following:
 - i. 'NOT FOR HIGHWAY USE'
 - ii. 'NHS' (Not for Highway Service)
 - iii. 'FOR TRAILER USE ONLY'
 - iv. 'ADV' (Agricultural Drawn Vehicle)
 - v. 'RACING PURPOSES ONLY'.
- e) a tyre that has had all its manufacturer / brand / model information removed so that the tyre can no longer be identified (**Figure 10-1-4**).

Wheels

9. A wheel is not compatible with the tyre fitted to it for rim profile, flange height or valve fitment ([Note 6](#)).

10. A wheel is:

- a) not compatible with the vehicle to which it is fitted, or
- b) not correctly attached to the vehicle.

Condition

Tyres (excluding spare tyres)

11. There are signs that a tyre is fouling on another part of the vehicle.

12. A tyre shows damage that is likely to compromise its ability to operate in a safe manner or lead to premature tyre failure, such as:

- a) a lump or bulge that is likely to be caused by separation or partial failure of the tyre structure, or
- b) a cut or crack in a sidewall or tread more than 25mm long that reaches the cords, or
- c) exposed or cut cords, or
- d) the tread of a retreaded tyre shows signs of separation, or
- e) nails or other sharp objects embedded in the tyre, or
- f) significant perishing, eg due to age, moisture or exposure.

13. A tyre has a string-type repair visible from the outside.

14. A tyre, other than a winter tyre ([Note 3](#)), fitted to a vehicle capable of exceeding 30km/h, does not have a tread pattern depth ([Technical bulletin 7](#)) of at least 1.5mm (excluding any tie-bar or tread-depth indicator strip) around the whole circumference of the tyre:

- a) within all the principal grooves that normally contain moulded tread depth indicators, or
- b) if the tyre does not normally have moulded tread-depth indicators (such as some retreaded or vintage tyres), across at least three-quarters of the tread width.

15. A winter tyre ([Note 3](#)) does not have a tread depth of at least 4mm (excluding any tie-bar or tread-depth indicator strip) within all principal grooves that normally contain moulded tread-depth indicators and around the whole circumference of the tyre.

16. A tyre not identified as designed for regrooving has had its tread depth increased by regrooving.

17. A tyre is noticeably under- or over-inflated.

Spare tyres

18. A spare tyre, if carried is not:

- a) securely attached by a device that is in good condition and correctly applied, or
- b) stowed in a closed compartment separate from the occupant space (eg if the manufacturer's attachment device is missing or faulty).

Wheels

19. There are signs that a wheel is fouling on another part of the vehicle.

20. A wheel is:

- a) cracked, or
- b) significantly damaged, distorted or has deteriorated, or
- c) not securely attached to the hub.

21. An alloy wheel has poor visible repairs.

22. A wheel nut is:

- a) missing, or
- b) loose, or
- c) has deteriorated, or
- d) is of the incorrect type, or
- e) has insufficient thread engagement to the wheel stud.

Modifications

23. A modification affects the wheels or tyres, and:

- a) is not excluded from the requirements for LVV specialist certification (**Table 10-1-1**), and
- b) is missing proof of LVV specialist certification, ie:
 - i. the vehicle is not fitted with a valid LVV certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1

Tread pattern and tread depth requirements do not apply to vehicles that are not capable of exceeding 30 km/h.

Note 2 Definitions:

Asymmetric tyre means a tyre which, through tread pattern or construction, is required to be fitted to a vehicle so that one particular side wall faces outwards.

Construction in relation to a tyre means:

- a) for a pneumatic tyre, the type of tyre carcass (including ply orientation and ply rating or load index, but not including tyre tread), or
- b) for any other tyre, characteristics relating to size, shape and material.

Cross-ply means a pneumatic tyre structure in which the ply cords in the tyre carcass extend to the beads and are laid at alternate angles, which are substantially less than 90 degrees, to the centreline of the tread. This tyre structure is also referred to as 'bias ply' or 'diagonal ply'.

Directional tyre, also known as **unidirectional tyre**, means a tyre with a tread pattern that is designed to run in only one direction. A directional tyre usually has an arrow marked on the side wall indicating the direction it is designed to run.

Load index is an assigned number ranging from 0 to 279 that corresponds with the maximum load-carrying capacity of the tyre. Most passenger car tyre load indices range from 62 (= 265kg) to 126 (= 1700kg).

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Ply rating is an index of tyre strength used to identify a given tyre with its recommended maximum permitted load when used for a specific service. It does not necessarily represent the actual number of plies in a tyre. Common ply ratings are 2, 4, 6, 8, 10 and 12. Commercial (eg truck) tyres often have a ply rating rather than a load index.

Pneumatic tyre means a tyre that, when in use, is inflated by air or gas introduced from time to time under pressure so as to enclose under normal inflation a cushion of air or gas forming altogether at least half of the total area of an average cross-section of a tyre so inflated.

Principal grooves means the wide grooves in the tyre tread which have the tread-wear indicators located inside them. Any other grooves are secondary grooves which may wear out during the service life of the tyre.

Radial-ply means a pneumatic tyre structure in which the ply cords, which extend from bead to bead, are laid at approximately 90 degrees to the centreline of the tread, the carcass being stabilised by an essentially inextensible circumferential belt.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Rim means that part of the wheel on which the tyre is mounted and supported.

Run-flat tyre (also known as self-supporting tyre) means a tyre that is so constructed that in case of a puncture the basic tyre functions are still provided for a short distance (at least 80km) and at a reduced speed (usually 80km/h), allowing the vehicle to be safely driven to a place of repair. Some run-flat tyres are identified by an 'F' within the size designation.

Size designation means the size description of the tyre, ie section width, aspect ratio and rim diameter. It does not include the speed rating, load index or tyre construction (eg 'R' for radial).

Space saver tyre (temporary-use spare tyre) means a combination tyre and wheel designed and constructed solely for temporary use under restricted driving conditions, and not intended for use under normal driving conditions.

Speed category means a code allocated to a tyre by a tyre manufacturer that indicates the maximum vehicle speed for which the use of the tyre is rated.

Tread means that part of a pneumatic tyre which comes into contact with the ground.

Tread-depth indicator (or tread-wear indicator) means the projections within the principal grooves designed to give a visual indication of the degree of wear of the tread. To help locate these on a tyre, inspectors should look for a '△' or 'TWI' mark on the outer edge of the tyre side wall (most tyres have these marks).

Tube means an inflatable elastic liner, in the form of a hollow ring fitted with an inflation valve assembly, designed for insertion into certain tyre assemblies to provide a cushion of air or gas that, when inflated, supports the wheel (also known as an 'inner tube').

Tyre carcass means the structural part of a pneumatic tyre other than the tread and outermost rubber of the sidewalls that, when inflated, contains the gas that supports the load. Carcass type refers to steel ply, fabric radial ply, bias/cross ply, run-flat.

Tyre load rating means the maximum load a tyre can carry at the corresponding cold inflation pressure prescribed by the tyre manufacturer and the speed indicated by its speed category symbol. It is usually indicated by the load index or ply rating.

Wheel means a rotating load-carrying member between the tyre and the hub, which usually consists of two major parts, the rim and the wheel disc, and which may be manufactured as one part, or permanently attached to each other, or detachable from each other.

Wheel centre-disc means the part of the wheel that is the supporting member between the hub and the rim.

Wheel spacer means an additional component used for the purpose of positioning the wheel centre-disc relative to the hub or, in multiple wheel sets, for the purpose of positioning the wheel centre-disc relative to another wheel.

Note 3

Winter tyre means a tyre which is principally designed to be operated at temperatures of less than 7 °C. A winter tyre can be identified by its distinctive tyre tread pattern consisting of deep tread blocks with wavy sipes and is always marked with the word 'STUDLESS' and/or a symbol of a snowflake and mountain on the sidewall (see **Figure 10-1-3**).

Note 4

The tyre load index and speed category are usually marked on the tyre. Where the tyre is not marked, the load and speed rating information must be obtained from the tyre manufacturer or a reference guide of tyre ratings before the tyre can be passed.

Note 5

Sometimes a retreaded or repaired tyre has had its speed rating removed. Where a tyre has been repaired or retreaded in accordance with standard NZS 5423 (Repairing and retreading car, truck and bus tyres), the tyre must be marked with

NZS 5423 and, if a car tyre, have the speed rating removed. In such a case, a missing speed rating is acceptable for WoF/CoF (unless the inspector believes on reasonable grounds that the tyre would not have had the required minimum speed rating for the vehicle in the first place).

Note 6

If there is any doubt about the compatibility of a tyre/wheel combination, the vehicle inspector may request/ take into account relevant information provided by the tyre manufacturer.

Table 10-1-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is not required provided that:
Aftermarket wheel fitments ¹	<ul style="list-style-type: none"> the wheels: <ul style="list-style-type: none"> are of a known and reputable brand, and would be considered an appropriate fitment for the vehicle type by the wheel manufacturer, and are not modified, and do not have spacers or adaptors fitted. the tyre tread: <ul style="list-style-type: none"> does not protrude beyond the unmodified original body panels (including unmodified factory-fitted mudguard extensions), or protrudes beyond the unmodified original body panels, but is covered by aftermarket or modified mudguard extensions or modified body panels, and the track width has increased by no more than 25mm from OE.
Tyre size changes	<ul style="list-style-type: none"> the tyres: <ul style="list-style-type: none"> have an outer circumference that is no more than 5% greater than OE, and are an appropriate selection for rim width, and have tread that does not extend beyond the original or modified body panels or guard extension (see Figure 10-1-1).

¹ The vehicle inspector may refer the vehicle to an LVV certifier if the inspector has reasonable concerns that the safety of the vehicle has been affected by an aftermarket wheel fitment.

Fitting of or modification to:	LVV certification is never required:
Any modification for the purposes of law enforcement or the provision of emergency services	<ul style="list-style-type: none"> in-service requirements for condition and performance must be met.

Table 10-1-2. Tyre speed symbol categories

Speed symbol – speed category (km/h)							
A1 – 5	A5 – 25	B – 50	F – 80	L – 120	Q – 160	U – 200	Y – 300
A2 – 10	A6 – 30	C – 60	G – 90	M – 130	R – 170	H – 210	ZR – over 240
A3 – 15	A7 – 35	D – 65	J – 100	N – 140	S – 180	V – 240	
A4 – 20	A8 – 40	E – 70	K – 110	P – 150	T – 190	W – 270	

Table 10-1-3. Tyre interchangeability – imperial and metric

Imperial sizing	Metric sizing
10/70R22.5	255/70R22.5
11/70R22.5	275/70R22.5
12/70R22.5	305/70R22.5
15R22.5	385/65R22.5
16.5R22.5	425/65R22.5

Figure 10-1-1. Tyre and body panel position

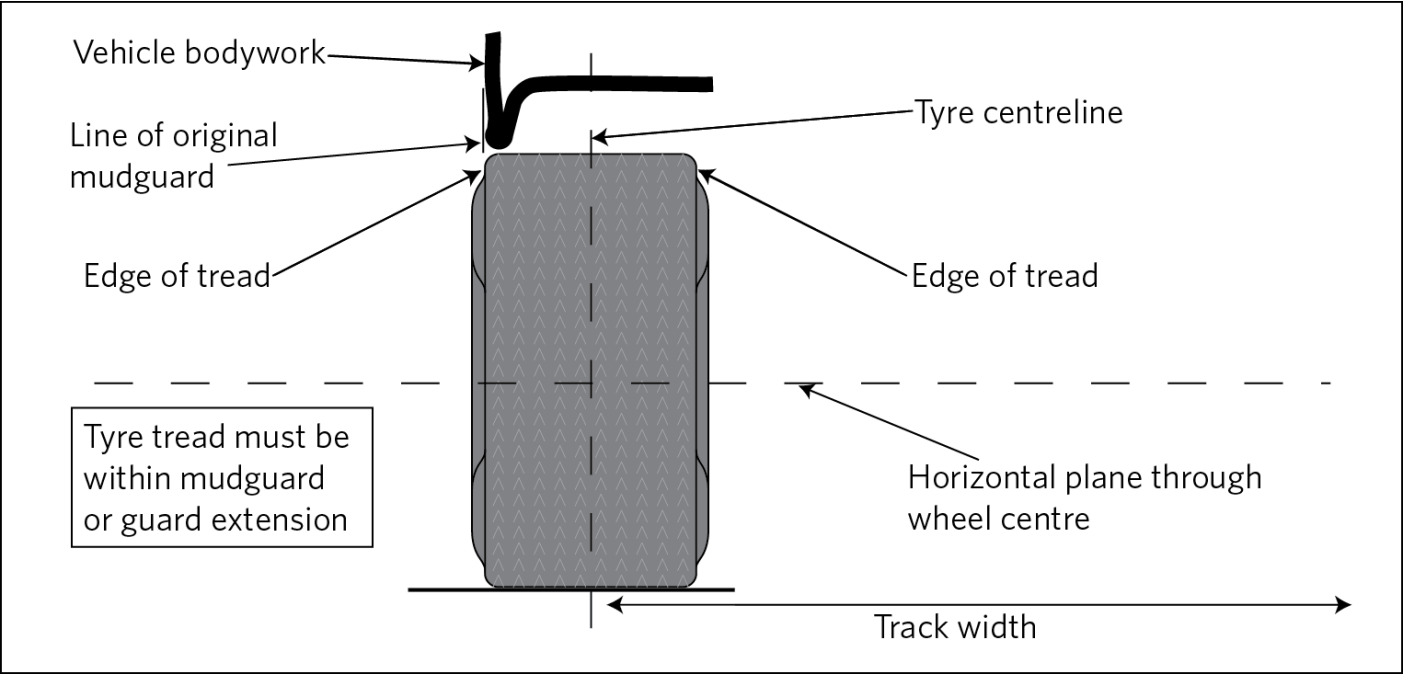


Figure 10-1-2. Tyre markings







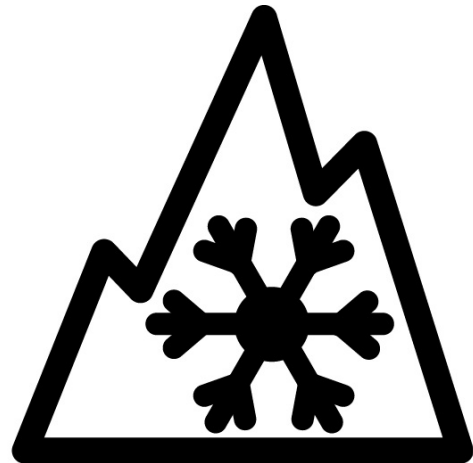
	Aspect ratio	Rim diameter	Speed symbol
			
185/60R15 91H			
			
Section width (mm)	Radial construction	Load index	

Figure 10-1-3. How to identify a winter tyre



Sample winter tyre tread



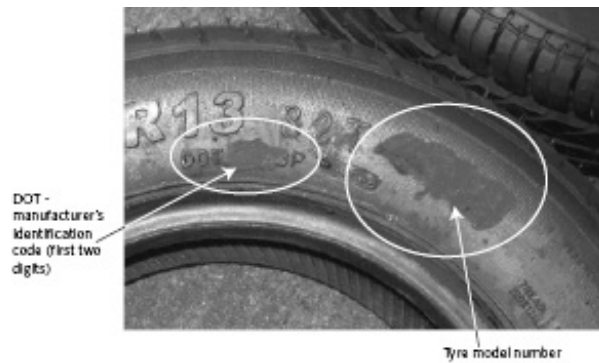
Mountain and snowflake symbol



Example of 'Studless' on a tyre sidewall

Note: For WoF purposes, a tyre is considered to be a winter tyre only if it has BOTH a winter tyre tread AND a studless marking and/or mountain/snowflake symbol.

Figure 10-1-4. Example of tyre with manufacturer/brand/model information removed



The circled areas show where information has been removed so that the tyre can no longer be identified.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Tyres and Wheels 2001](#).

Mandatory equipment

Tyres

1. Tyres must be compatible with the vehicle to which they are fitted.
2. Tyres on the same axle must be of the same size designation and construction, and of the same tread pattern type.
3. A vehicle of class MA, MB, MD1 or NA first registered or re-registered in New Zealand from 1 October 2002, must have all tyres of the same construction unless the vehicle is incapable of exceeding 30km/h or is 30 years old or more.
4. Winter tyres ([Note 3](#)), if fitted to a class MA, MB, MC, MD1, MD2 or NA vehicle, must be fitted to all of the vehicle's road wheels.
5. Asymmetric tyres must be fitted in axle sets in accordance with manufacturer's instructions.
6. A directional tyre must be fitted to a wheel position corresponding to its direction of rotation.
7. The speed category of a tyre must be compatible with the maximum legal speed limit for the vehicle, or the vehicle's maximum speed ([Note 4](#)) ([Note 5](#)).
8. A vehicle must not be fitted with a metal tyre or other non-pneumatic tyre, or with a tyre with studs, cleats, lugs or other gripping devices.

Wheels

9. A wheel must be:
 - a) sufficiently strong for the type of vehicle to which it is fitted, and
 - b) compatible with the vehicle to which it is fitted, and
 - c) compatible with the tyre rim profile, flange height and valve fitment ([Note 6](#)).
10. There must be adequate clearance for the brake, hub, suspension and steering mechanism, and body parts.

Permitted equipment

11. A vehicle may be fitted with retreaded tyres.

Condition

Tyres (excluding spare tyres and space-saver tyres)

12. A tyre must be of good quality and construction, fit for its purpose, and maintained in a safe condition.
13. A tyre must not have worn, damaged or visible cords apparent by external examination.
14. A tyre, other than a winter tyre, fitted to a vehicle capable of exceeding 30km/h, must have a tread pattern depth of not less than 1.5mm (excluding any tie-bar or tread-depth indicator strip) around the whole circumference of the tyre:
 - a) within all principal grooves that contain tread-depth indicators, or

b) if the tyre does not normally have tread-depth indicators, across at least three-quarters of the tyre tread width.

15. A winter tyre ([Note 3](#)) must have a tread pattern depth of not less than 4mm (excluding any tie-bar or tread-depth indicator strip) within all principal grooves that contain moulded tread-depth indicators and around the circumference of the tyre.

16. The regrooving of a tyre is permitted only if the tyre is identified as having been specifically designed for regrooving after manufacture.

17. A tyre that is fitted to a vehicle must be maintained at a safe inflation pressure.

Spare tyre

18. If the vehicle carries a spare tyre, the tyre must be securely attached on or in the vehicle.

Wheels

19. The components of the wheel assembly must be in good condition.

20. The wheel must be securely attached to the hub.

Modifications

21. A modification that affects the wheels or tyres must be inspected and certified by an LVV Specialist Certifier, unless the vehicle is:

- a) excluded from the requirement for LVV specialist certification (**Table 10-1-1**), and has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance, or
- b) fitted with a wheel spacer that is approved for the purpose by the vehicle, wheel or axle manufacturer, or
- c) fitted with a hand-grooved tyre, provided the tyre was a blank tyre case manufactured for hand-grooving, and complies with the applicable listed requirements.

10-2 Hubs and axles

Reasons for rejection

Condition

1. A hub:

- a) is not securely attached to the vehicle, or
- b) has a visible crack, or
- c) is significantly damaged, distorted or has deteriorated, or
- d) has a broken or missing wheel stud.

2. A wheel bearing:

- a) has play beyond the manufacturer's specifications, or
- b) is over-tight or sounds rough.

3. An axle:

- a) is insecure, eg has loose U-bolts, or
- b) is visibly cracked, or
- c) is significantly damaged, distorted or has deteriorated, or
- d) shows signs of welding or heating after original manufacture, or
- e) shows signs of fouling the vehicle structure or a brake, suspension or steering component.

Performance

4. The geometry of a hub or axle causes:

- a) the vehicle to veer significantly to one side, or
- b) the wheels not to self centre.

Modification

5. A modification affects the hubs or axles, and:

- a) is not excluded from the requirements for LVV specialist certification (**Table 10-2-1**), and

b) is missing proof of LVV specialist certification, ie:

- i. the vehicle is not fitted with a valid low volume vehicle certification plate, or
- ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1 Definitions

Hub means that part of a vehicle that is attached to the axle and rotates on, or with, the axle, and to which the wheel is attached, and includes any bearings.

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Table 10-2-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is not required provided that:
Differential ratio changes	<ul style="list-style-type: none">only the differential centre or gear-set is changed, andthe OE axle housing is retained.
Axle housing replacement	<ul style="list-style-type: none">the axle housing fits the vehicle without adaptation, andno change to the OE suspension geometry occurs, andthe OE drive-shafts(s) is unmodified, andno changes are made to the OE brake system.

Fitting of or modification to:	LVV certification is never required:
Any modification for the purposes of law enforcement or the provision of emergency services	<ul style="list-style-type: none">in-service requirements for condition and performance must be met.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Tyres and Wheels 2001](#).

Condition

- The components of the assembly must be in good condition.
- The hub and axle must be sufficiently strong for the type of vehicle to which they are fitted.
- The hub and axle must have a suitable and correctly adjusted geometry.

Modification

4. A modification that affects the hubs or axles must be inspected and certified by a Low Volume Vehicle Specialist Certifier, unless the vehicle:

- a) is excluded from the requirement for LVV specialist certification (**Table 10-2-1**), and
- b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

10-3 Mudguards

Reasons for rejection

Mandatory equipment

1. A mudguard over a road wheel is missing where it is reasonable and practicable to fit a mudguard, unless the vehicle is:
 - a) in an unfinished condition legally used under the authority of trade plates, or
 - b) not capable of exceeding a speed of 30km/h, or
 - c) has a valid mudguard exemption issued by the New Zealand Hot Rod Association (**Figure 10-3-4**).
2. A mudguard does not cover the full tread width ([Note 2](#)) of a tyre or tyres fitted to a road wheel (**Figure 10-3-1** and **Figure 10-3-2**), except when the mudguard is fitted to a vehicle designed for industrial purposes and it is not practicable to fit a full mudguard due to the vehicle's construction.
3. On a vehicle with twin or close-spaced multiple tyres a mudguard fitted over a wheel on the rear axle is more than one-third higher than the horizontal distance between the vertical lines of the lowest point of the mudguard and the centre of the wheel (**Figure 10-3-3**), except when:
 - a) the mudguard is fitted to a vehicle designed for industrial purposes and it is not practicable to fit a full mudguard due to the vehicle's construction.

Mudguard condition

4. A mudguard is not securely fixed to the vehicle.
5. A mudguard is so constructed or damaged that it is likely to present a hazard to road users ([Note 2](#)).

Modification

6. A modification affects a mudguard, and:
 - a) is not excluded from the requirements for LVV specialist certification (**Table 10-3-1**), and
 - b) is missing proof of LVV certification, ie:
 - i. the vehicle is not fitted with a valid low volume vehicle certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1 Definitions

Mudguard means a fitting, inclusive of any portion of the vehicle and of any mudflaps attached, that serves to intercept material thrown up by a wheel more or less in the plane of the wheel.

Tyre tread means the portion of a tyre that contacts the road.

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Note 2

Damage on full mudguards fitted to logging trucks is permissible if it is above a horizontal line on top of the tyre (**Figure 10-3-5**), and that damage is unlikely to result in the mudguard presenting a hazard to road users.

Table 10-3-1. Modifications that do not require LVV certification

Fitting of or modification to	LVV certification is never required:
Modified mudguards, including flared wheel arches or the addition of mudguard extensions ¹	<ul style="list-style-type: none"> in-service requirements for condition and performance must be met. (see also Table 10-1-1)
Any modification for the purposes of law enforcement or the provision of emergency services	

¹ Some vehicles fitted with flared wheel arches or mudguard extensions will require LVV certification as a result of aftermarket wheel fitments and tyre size changes. See [Table 10-1-1](#).

Figure 10-3-1. Position of individual mudguard in relation to tyre tread

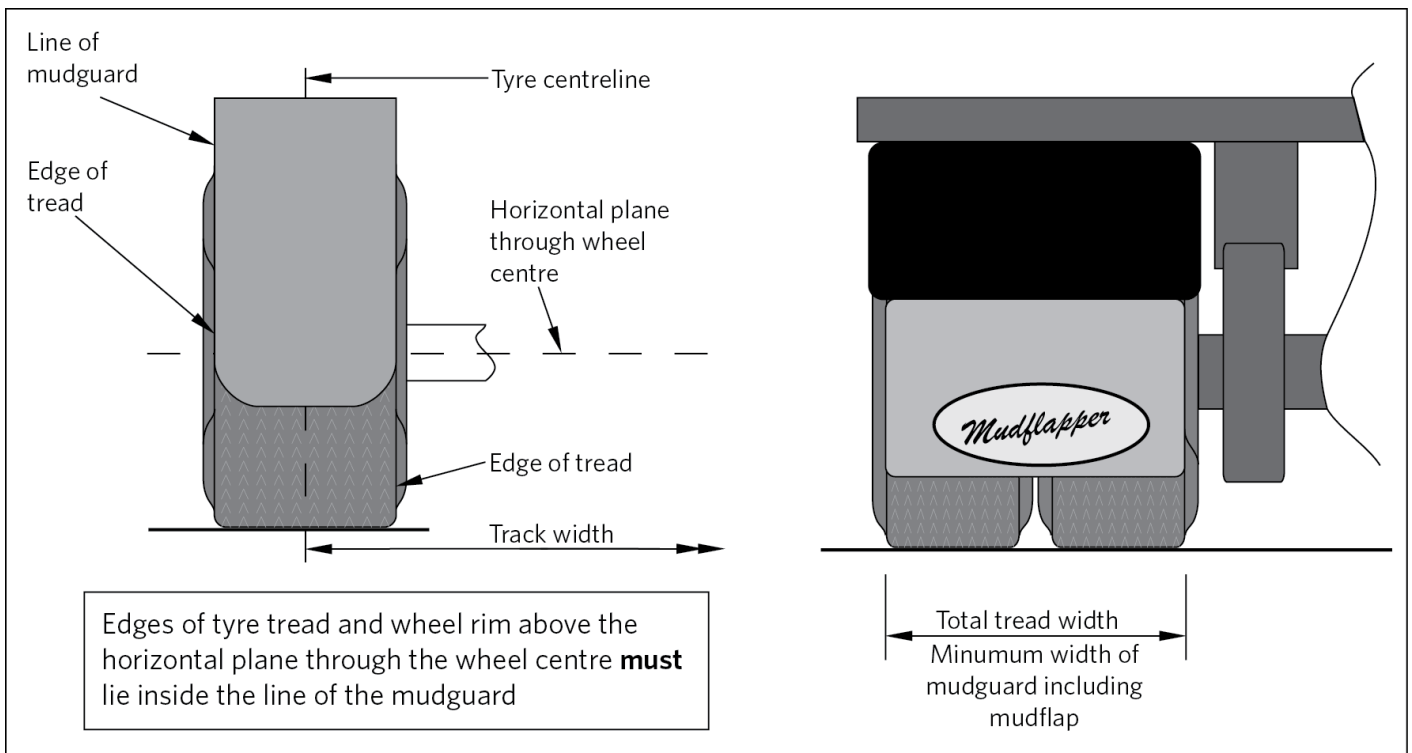


Figure 10-3-2. Position of body panel mudguard in relation to tyre tread

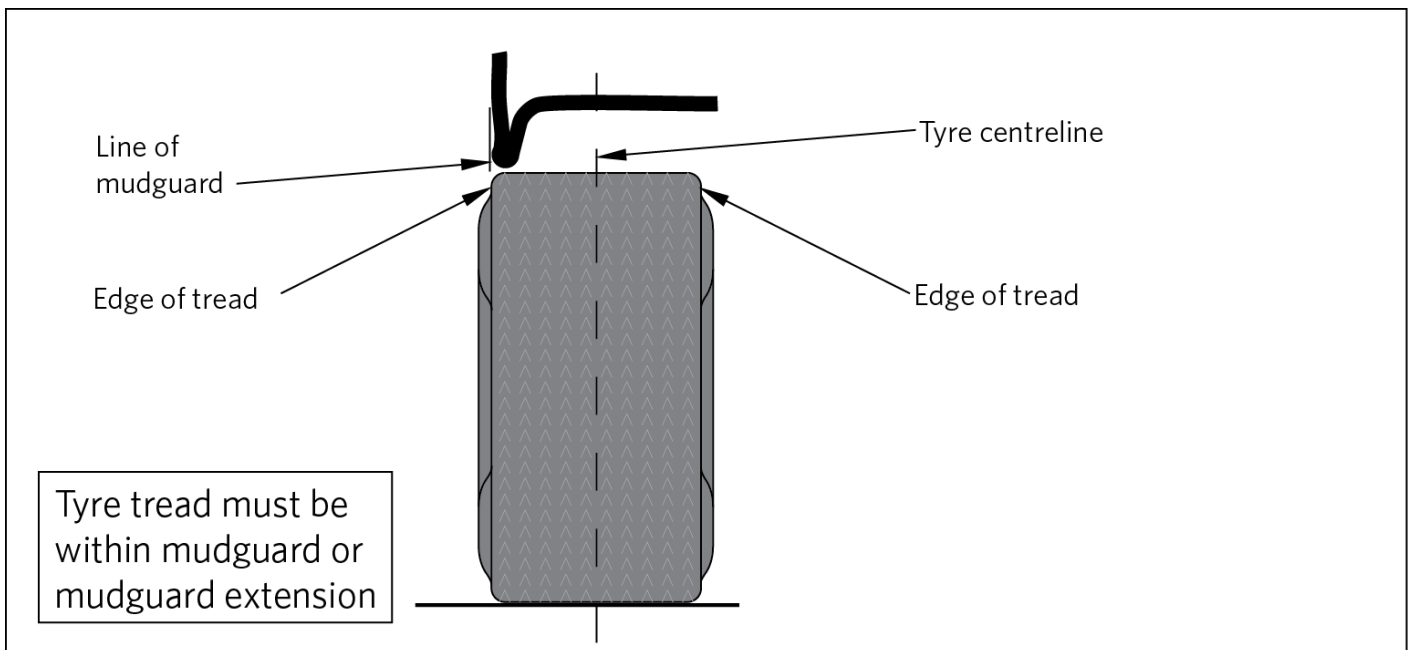


Figure 10-3-3. Size and position of mudguards for the rear wheels of a vehicle fitted with dual wheels or close-spaced multiple wheels

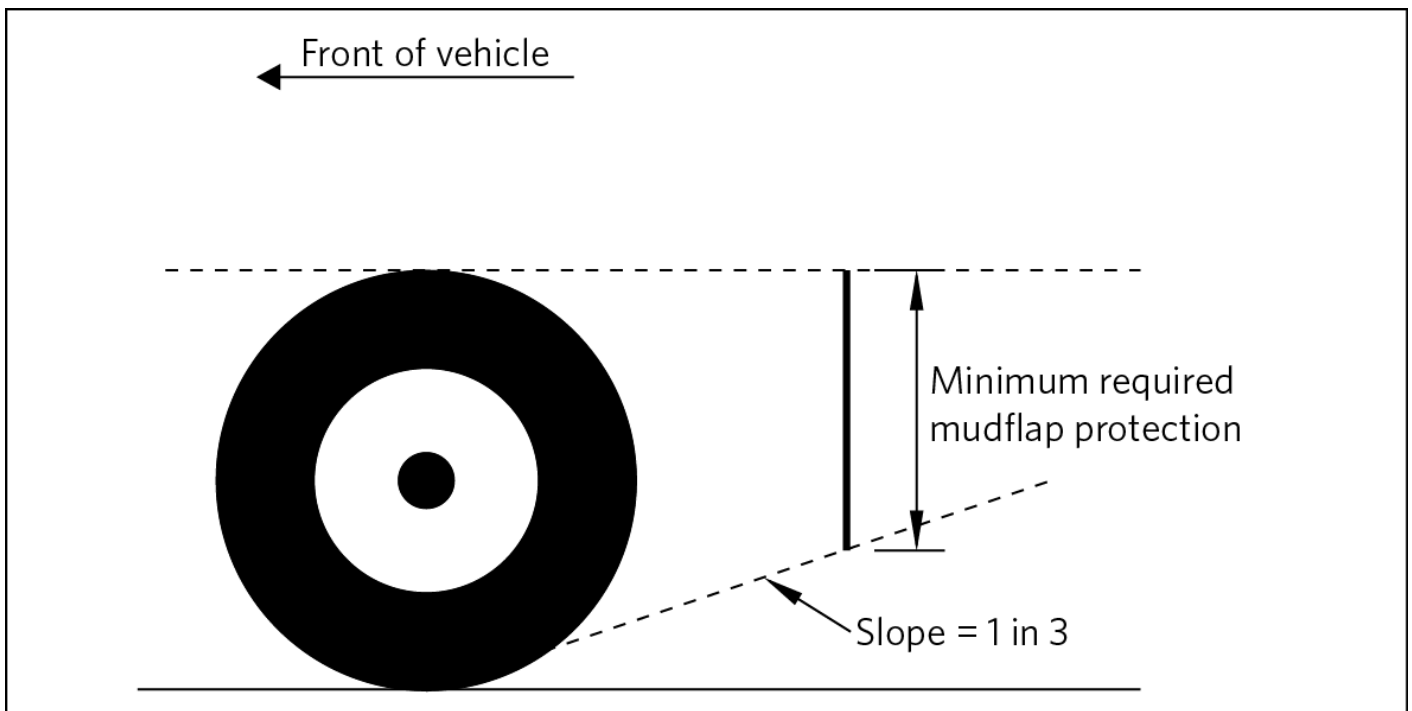


Figure 10-3-4. LVV Authority Card: New Zealand Hot Rod Association

Low Volume Vehicle Technical Association Inc.

LOW VOLUME VEHICLE AUTHORITY CARD

The following modifications are authorised under section 2.12 of the Low Volume Vehicle Code (refer to back of Authority Card for conditions of use).

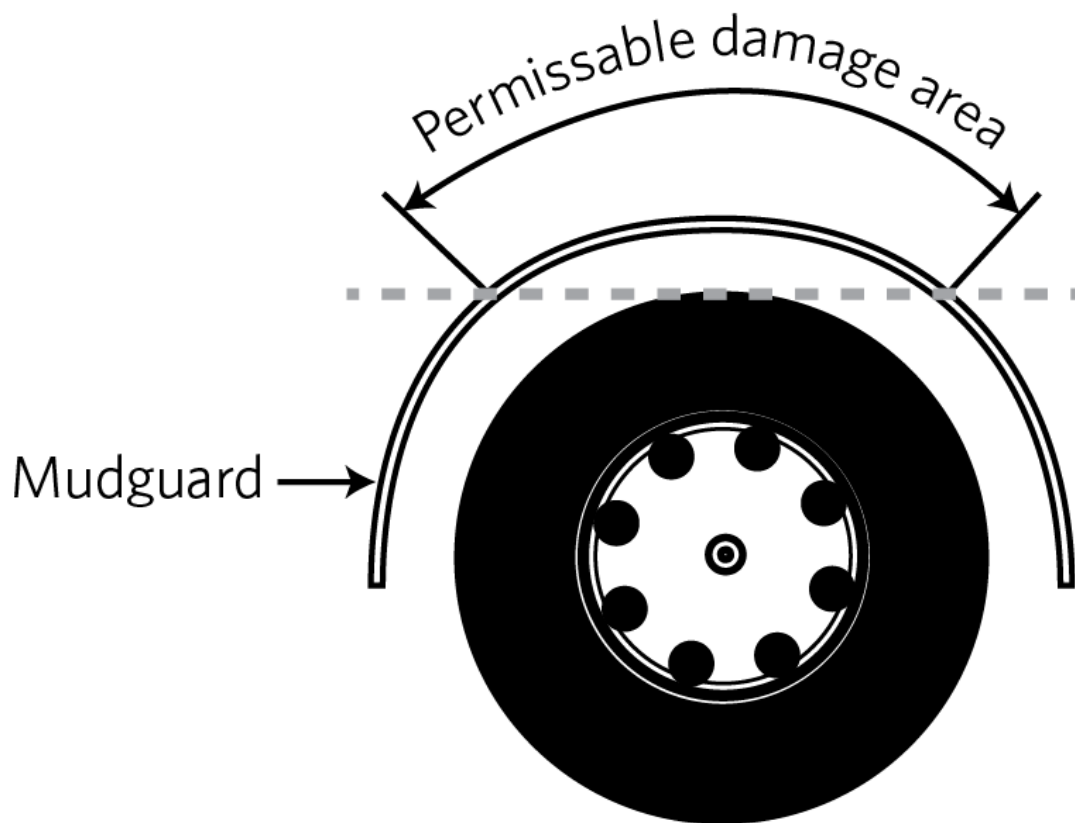
- 1.
- 2.
- 3.
- 4.
- 5.
- 6.

Name:
Vehicle:
Issued by: NZ Hot Rod Association
Issue date:
LVV Authority Card #: HR

Licence #:
VIN:
Reg. No (optional):
Logbook #:
LVV Cert Plate #:

Valid
Until:

Figure 10-3-5. Permissible damage area on logging truck mudguards ([Note 2](#))



Summary of legislation

Applicable legislation

- [Land Transport Rule: Tyres and Wheels 2001](#).

Mandatory equipment

1. A vehicle must be fitted with a mudguard over each road wheel if it is reasonable and practicable to do so ([Note 1](#)).
2. A mudguard must cover no less than the width of the tyre tread on each road wheel (**Figure 10-3-1** and **Figure 10-3-2**).
3. A vehicle fitted with twin tyres or close-spaced multiple tyres must be fitted with a mudguard over each wheel on the rear axle that provides continuous protection from a horizontal line tangent to the top of the tyre tread ([Note 2](#)) to a line with a slope of 1 in 3 rising rearward from the tyre's contact point on the road (**Figure 10-3-3**).
4. A vehicle designed for industrial purposes may be fitted with partial mudguards if the vehicle's construction makes it impracticable to fit full mudguards.
5. The following vehicles are not required to be fitted with mudguards:
 - a) a vehicle in an unfinished condition used under the authority of trade plates and operated in accordance with the Compliance Rule
 - b) a vehicle not capable of exceeding a speed of 30 km/h
 - c) a vehicle with a valid LVV authority card (**Figure 10-3-4**).

Mudguard condition

6. A mudguard must be securely fixed to the vehicle and must be constructed so that it does not present a hazard to road users.

Modification

7. A modification that affects a mudguard must be inspected and certified by a Low Volume Vehicle specialist certifier, unless the vehicle:
 - a) is excluded from the requirement for LVV certification (**Table 10-3-1**), and
 - b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

11 Exhaust

11-1 Exhaust system

Reasons for rejection

Mandatory equipment

1. A vehicle is not fitted with an exhaust system that includes a means of sound reduction ([Note 1](#)) ([Note 6](#)).
2. A light vehicle is presented for a WoF or CoF because it has been ordered off the road (pink- or green-stickered) by an enforcement officer for non-compliant exhaust noise, and there is no evidence that the vehicle has passed an LVVTA objective noise test since the vehicle was ordered off the road ([Note 4](#)), ie:
 - a) the owner cannot produce a valid objective exhaust noise emissions test certificate (**Figure 11-1-1**) issued after the vehicle was ordered off the road ([Note 5](#)), and
 - b) the exhaust system tail pipe is not fitted with a valid LVVTA noise test label (**Figure 11-1-2**).

Condition

3. An exhaust system is not securely mounted.
4. The exhaust system is so constructed or modified that its operation or effectiveness can be readily interfered with, eg the driver is able to interfere with the exhaust system by operating a manual switch, or the exhaust is fitted with a flame thrower kit.
5. The exhaust system is so constructed that emitted heat or fumes are likely to harm vehicle occupants, eg the exhaust gases are not directed away from the perimeter of the vehicle's passenger compartment ([Note 6](#)).

Performance

6. There is a leak of exhaust fumes from the exhaust system.
7. The exhaust noise output from a class LE, MA, MB, MC, MD1, MD2 or NA vehicle (other than a class MA or MC motorsport vehicle with a valid motorsport authority card) is not less than or similar to the noise output the vehicle (or a vehicle of a similar type ([Note 2](#))) would have had when it was manufactured with its original exhaust system, and:
 - a) the increased noise output exceeds the relevant noise limit in **Table 11-1-1** when assessed by the vehicle inspector:
 - i. using their own experience, or
 - ii. using the Noise Quick Check specified in [Technical bulletin 1](#), or
 - b) there is no evidence that the vehicle has passed an LVVTA objective noise test, ie:
 - i. the owner cannot produce a valid objective exhaust noise emission test certificate (**Figure 11-1-1**), and
 - ii. the exhaust system tailpipe is not fitted with a valid LVVTA noise test label (**Figure 11-1-2**).

Note 1

Exhaust system means a pipe assembly through which the engine exhaust gases pass to the atmosphere and includes some means of sound reduction such as a silencer or resonator.

Note 2

For the purpose of Reason for rejection, a vehicle of a similar type means a vehicle of similar age, vehicle size, body type, engine size and power output, and may be of a different make and model.

Note 3

The noise limits in **Table 11-1-1** are lower than the noise limits specified in legislation, and considered to be 'clearly below' the legal noise limits. Vehicles with an exhaust noise output clearly below the legal limits do not require an Objective Noise Test.

Note 4

A new objective noise test is required every time the vehicle is ordered off the road for non-compliant exhaust noise, even if the vehicle is presented for WoF or CoF with a quieter or original exhaust system.

Note 5

Sight the ordering off the road notice or phone the NZ Police to find out when the ordering off the notice was issued.

Note 6

Externally venting wastegates (screamer pipes) are not permitted as they are not adequately muffled and the exhaust gases passing through the wastegate are not directed through the vehicle's exhaust system. However, wastegates that have their own exhaust system or exhaust pipe exiting behind the passenger compartment are permitted.

Note 7


LVV certification is always required for the fitting of a turbocharger as a modification, or the upgrading of a turbo or wastegate.

Table 11-1-1. Noise limits for the Noise Quick Check ([Note 3](#))

Vehicle	Noise limit (decibels) (Note 3)
Class LE with an engine capacity of 125 cc or less	93 dBA
Class LE with an engine capacity of more than 125 cc	97 dBA
Class MA, MB, MC, MD1, MD2, NA first registered in New Zealand before 1 June 2008	92 dBA
Class MA, MB, MC, MD1, MD2, NA first registered in New Zealand on or after 1 June 2008 and: – manufactured before 1 January 1985 – manufactured on or after 1 January 1985	92 dBA 87 dBA

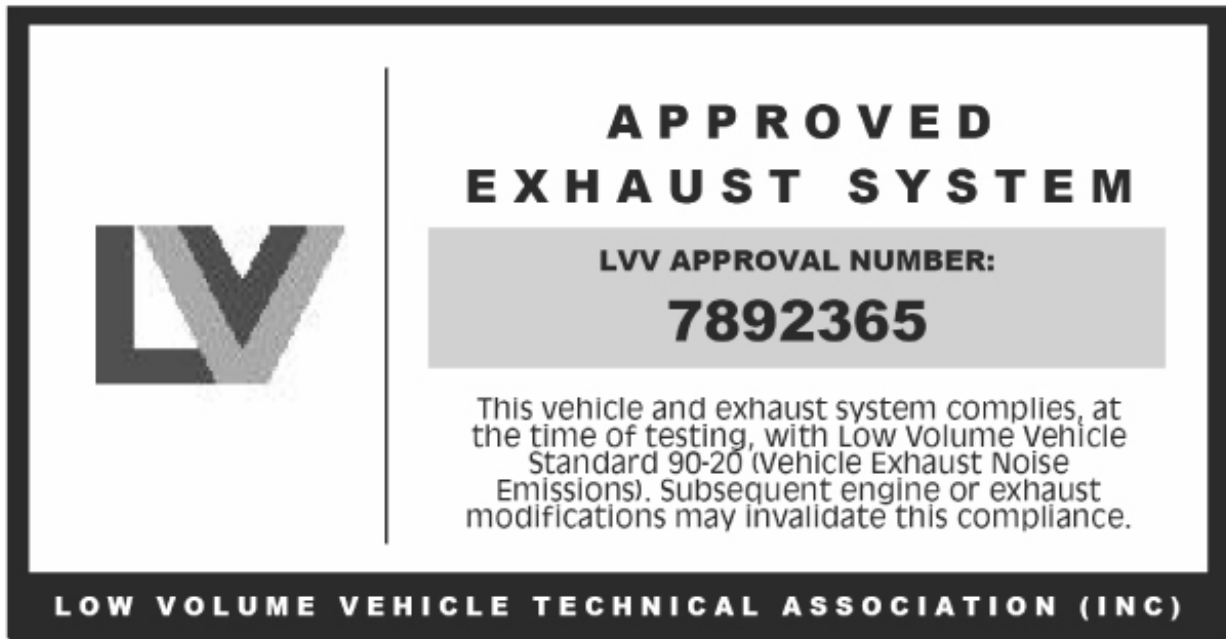
Figure 11-1-1. Objective exhaust noise emission test certificate

Objective Exhaust Noise Emission Test Certificate

Vehicle and owner details: (white copy for vehicle owner)			
Owner: (Name)		(Contact Ph #) ()	
Vehicle: (Make)	(Model)	(Sub-model)	
(Year)	(Colour)	(VIN)	
Engine: (Make)	(Code if known)	(Modified?)	
(Cylinder configuration & #)		(Camshaft & valve arrangement)	
Exhaust system description & details:			
(a) Exhaust manifold(s): (make/type)			
(b) Front pipe(s): (OD/material/length)			
(c) Muffler(s)/resonator(s) #1: (make/material/length/OD)			
(d) Intermediate pipe(s): (OD/material/length)			
(e) Muffler(s)/resonator(s) #2: (make/material/length/OD)			
(f) Tail-pipe(s): (OD/material/length)			
(g) Other exhaust system details: (catalytic convertor(s)/balance pipe/additional mufflers/other)			
Low Volume Vehicle Certifier's declaration:			
LVV Certifier: (Name)		(ID)	(Contact Ph #) ()
<input type="checkbox"/> PASS:	Approval label: (Number)	(Location of label)	
<p>I, the above-named Low Volume Vehicle Certifier appointed by the Low Volume Vehicle Technical Association (Inc) for the purpose of Objective Exhaust Noise Emission Testing, declare that, I carried out an objective exhaust noise emission test on the above-described vehicle in accordance with the procedures specified by Low Volume Vehicle Standard 90-20, and confirm that at the time of testing the vehicle complied with all requirements of, and emitted exhaust noise emissions not exceeding that specified by, Low Volume Vehicle Standard 90-20. (Signed)..... (Date).....</p>		<p>LVV certifier's authentication (only if pass is recorded):</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>[Authenticity sticker with hologram security feature]</p> </div>	
<input type="checkbox"/> FAIL: Recommendations to vehicle owner on bringing the exhaust system into compliance (expert advice is offered without any guarantees of a pass as a result of the advice given or implied):			
Vehicle exhaust system schematic:			
			

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Figure 11-1-2. Objective noise test label



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004](#)
- [Land Transport Act 1998, section 115.](#)

Mandatory equipment

1. A vehicle with an internal combustion engine must be fitted with an exhaust system ([Note 1](#)) ([Note 6](#)).
2. A vehicle that is presented for a WoF or CoF because it has been ordered off the road by an enforcement officer for non-compliant exhaust noise must pass an LVVTA objective noise test before the vehicle may be issued with a WoF or CoF ([Note 4](#)).

Condition

3. An exhaust system must not be constructed or modified in a way that allows a person to interfere readily with its operation or reduce its effectiveness.
4. An exhaust system must be designed, constructed, positioned and maintained in a way that minimises the risk of heat or fumes emitted from the system harming the vehicle's occupants.

Performance

5. An exhaust system must be effective and in good working order.
6. The noise output from the exhaust system of a class LE, MA, MB, MC, MD1, MD2 or NA vehicle (other than a class MA or MC motorsport vehicle with a valid motorsport authority card):
 - a) must be less than or similar to the noise output from the vehicle's original exhaust system at the time of the vehicle's manufacture, or
 - b) must not, if the noise output of the vehicle's original exhaust system at the time of the vehicle's manufacture is not known, exceed the applicable maximum decibel level when tested and certified by an LVV specialist certifier in accordance with the LVVTA objective noise test.

Modification

7. A class LE, MA, MB, MC, MD1, MD2 or NA vehicle that has been modified so as to increase its exhaust noise output must have the exhaust system inspected, tested and certified by an LVV specialist certifier as having passed the LVVTA objective noise test, unless:
 - a) the increased noise output is clearly below ([Note 3](#)) the applicable noise limits, and

b) the vehicle has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

8. When a vehicle has been certified by an LVV specialist certifier as having passed the LVVTA objective noise test:

a) the owner must produce a valid objective exhaust noise emissions test certificate (**Figure 11-1-1**), and

b) the exhaust system tailpipe must be fitted with a valid LVVTA noise test label (**Figure 11-1-2**).

11-2 Exhaust emissions

Reasons for rejection

Performance

1. A vehicle with the engine at normal operating temperature ([Note 1](#)) emits clearly visible smoke ([Technical bulletin 8](#)) from the exhaust tailpipe ([Note 2](#)):

a) for a continuous period of five seconds when the engine is idling and does not meet the additional requirements in **Table 11-2-1**, or

b) as the engine is being rapidly accelerated to approximately 2500rpm or approximately half the maximum engine speed (whichever is lower) and does not meet the additional requirements in **Table 11-2-1**.

2. A vehicle (other than group L vehicle or a class MA or MC motorsport vehicle with a valid motorsport authority card) that was first registered in New Zealand on or after 1 May 2010 and manufactured from 1 January 1990 has a catalytic converter removed where there is evidence that one was originally fitted, and there is no written evidence issued by a TSDA that the vehicle passed a prescribed metered emissions test in this condition ([Note 5](#)) ([Note 6](#)) (**Figure 11-2-1**).

Note 1 Test procedure:

a) Carry out the idling and acceleration tests in Reason for rejection 1. A vehicle that passes both tests with the engine below normal operating temperature is deemed to have passed with the engine at normal operating temperature.

b) If the vehicle has failed either test, ensure the engine is at normal operating temperature. Then purge the system by increasing the engine speed to 2500 rpm (or half the maximum engine speed if this is lower) and holding it there for about 5 seconds. Repeat the idling and acceleration tests in Reasons for rejection 1.

Note 2

Visible emissions caused by the condensation of water vapour do not count as smoke.

Note 3

Acceptable evidence is:

a) a letter on the letterhead of the manufacturer or manufacturer's representative, or

b) a letter on the letterhead of an appropriate automobile club, or

c) evidence of equal authority to (a) or (b) above, eg from an appropriate expert.

Note 4

The vehicle inspector may need to take into account further information about unusual or older vehicles, eg from an appropriate expert such as an office holder in a vintage car club.

Note 5

This reason for rejection does not apply if the vehicle operator can provide evidence that the vehicle was first certified for entry before 1 May 2008.

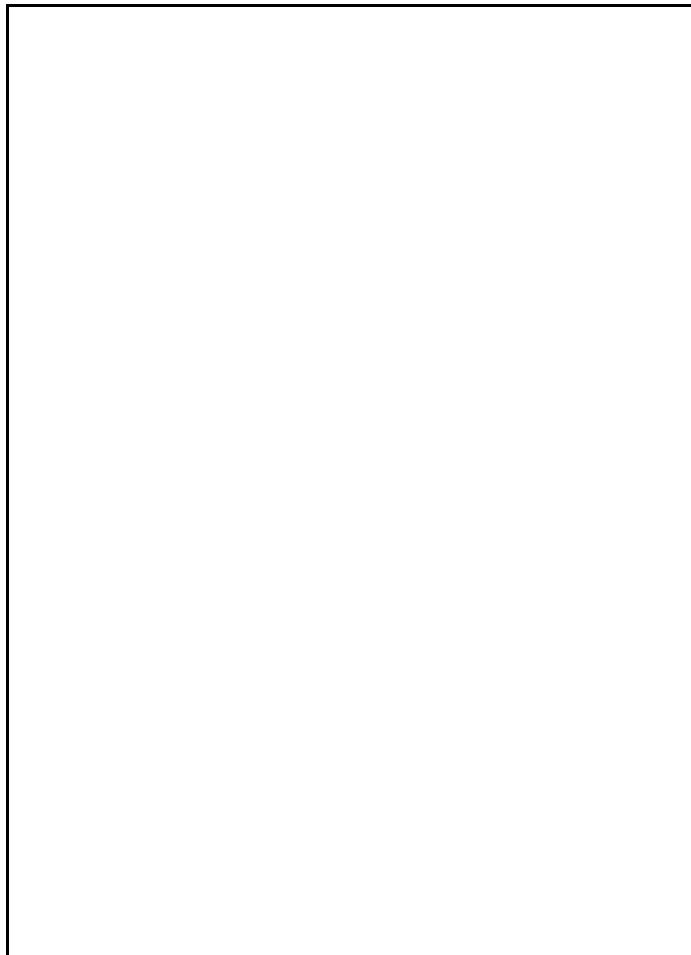
Note 6

The metered emissions test can only be carried out at TSDA sites ([VTNZ](#), [VINZ](#), [NZAA](#)) where entry inspections are carried out. The TSDAs will issue a document (**Figure 11-2-1**) that identifies the vehicle, whether or not the vehicle has passed the test, and whether or not the vehicle was tested with any OE catalytic converters removed. A metered emissions test is not required if a catalytic converter is refitted, or if there is evidence that the vehicle was not originally fitted with a catalytic converter.

Table 11-2-1. Additional requirements

Type of vehicle	Additional requirements
<p>First registered on or after 1 January 1960 with four-stroke engine, or</p> <p>First registered before 1 January 1960 with four-stroke engine manufactured on or after 1 January 1960.</p>	<p>1. Document produced by the vehicle operator that proves that (Note 3):</p> <p>a) the engine is original equipment for the vehicle, and</p> <p>b) its design means that the vehicle cannot reasonably comply with the visible smoke emission requirements.</p> <p>Note No evidence is required if, during the acceleration test, a diesel-powered vehicle emits moderate smoke caused by turbo lag.</p> <p>2. The smoke produced is not noticeably and significantly more visible than it would have been when the vehicle was manufactured and supplied with the fuel recommended by the manufacturer.</p>
<p>First registered before 1 January 1960 with four-stroke engine manufactured before 1 January 1960, or</p> <p>Vehicle with two-stroke engine or rotary engine.</p>	<p>The smoke produced is not noticeably and significantly more visible than it would have been when the vehicle was manufactured and supplied with the fuel recommended by the manufacturer (Note 4).</p>

Figure 11-2-1. Exhaust emissions test certificate



- Download a copy of the [Exhaust emissions test certificate](#).

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Exhaust Emissions 2007](#).

Performance

1. A motor vehicle must not emit clearly visible smoke ([Note 2](#)) when the vehicle's engine is running at its normal operating temperature, under either of the following conditions:

- a) for a continuous period of five seconds when the engine is idling
- b) as the engine is being accelerated rapidly to approximately 2500 revolutions per minute or approximately half the maximum engine speed (whichever is lower).

2. Requirement 1 above does not apply if the driver of the vehicle produces documentation that proves that the engine is original equipment for the vehicle and the engine's design means the vehicle cannot reasonably comply ([Note 3](#)).

3. The exhaust emissions system or exhaust control equipment of a vehicle (other than a group L vehicle or a class MA or MC motorsport vehicle) first certified for entry into service on or after 1 May 2008 and manufactured on or after 1 January 1990 must not be modified so as to prevent the vehicle from being able to pass a prescribed metered emissions test.

Technical Information

- www.nzta.govt.nz/resources/vehicle-failed-smoky-exhaust/smoky-exhaust-test.html
- Download a copy of the [Exhaust emissions test certificate](#).

12 Towing connections

12-1 Light vehicle towbar and fifth wheel

Reasons for rejection

Mandatory equipment

1. A towbar fitted to a vehicle does not have provision for securely fitting the safety chain from a trailer coupling, except for:

- a) New Zealand Defence Force vehicles
- b) fire-fighting vehicles.

Condition

2. The towbar or towbar mounting (or fifth wheel or fifth-wheel mounting):

- a) is not securely attached, or
- b) has a bolt or nut that is missing or significantly corroded, or
- c) has corrosion damage ([Note 1](#)) within 150mm of the mounting points, or
- d) is cracked or distorted, or
- e) jaws are worn beyond manufacturer's specifications or out of adjustment, or
- f) pivot is seized, worn beyond manufacturer's specifications, or insecure, or
- g) has any other damage that the vehicle inspector considers has affected the structural integrity of the towbar or its attachment to the vehicle.

3. The towbar coupling (towball):

- a) is not securely attached, or
- b) is worn beyond the manufacturer's specifications, or
- c) is significantly corroded, distorted or cracked, or
- d) has a nut that is missing or significantly corroded.

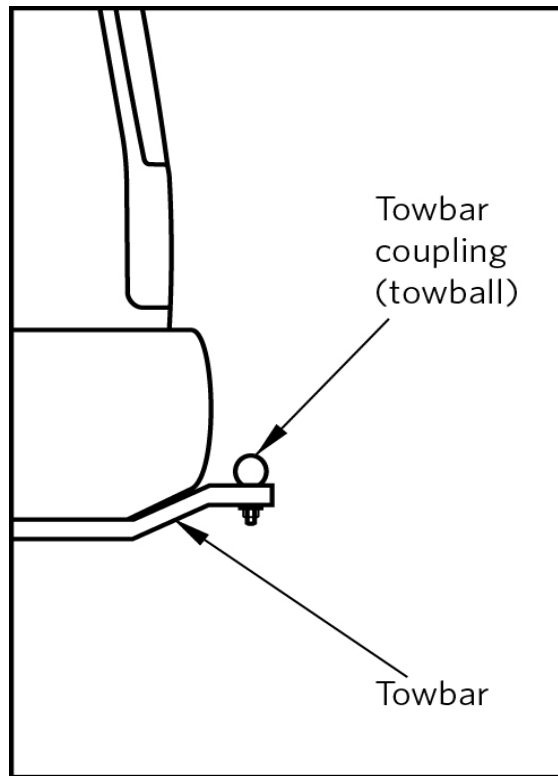
Note 1

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward signs of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Note 2

A towbar attachment is a modification to the vehicle structure (which never requires LVV certification), refer to [section 3-1 Structure](#) for structure requirements around the towbar attachments.

Figure 12-1-1. Towbar and towbar coupling



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Standards Compliance 2002](#), section 7.4
- [Land Transport Rule: Light-vehicle Brakes 2002](#).

Mandatory equipment

1. A towbar, if fitted to a vehicle, must have provision for securing the safety chain or cable from a trailer coupling, except if the vehicle is likely to tow any of the following trailers:

- a) a trailer designed for armament purposes by the New Zealand Defence Forces
- b) a trailer pump for fire-fighting purposes.

Condition

2. A trailer must be securely attached to the towing vehicle by an adequate coupling.

3. A vehicle must:

- a) be safe to be operated, and
- b) have been constructed using components and materials that are fit for the purpose, and
- c) be within safe tolerance of its state when manufactured or modified.

13 Miscellaneous items

13-1 Engine and transmission

Reasons for rejection

Condition

1. The engine or gearbox is insecurely mounted.
2. A driveshaft is bent or severely damaged.
3. A driveshaft flange:
 - a) is insecure, or
 - b) has a bolt or nut missing.

4. A driveshaft support bearing is:

- a) insecure, or
- b) worn beyond manufacturer's specifications.

5. A driveshaft universal joint spider (cross) bearing:

- a) is worn so that the movement in the joint is beyond manufacturer's specifications, or
- b) caps have loose or missing cap bolts or circlips, or
- c) is damaged, displaced or the seals between the spider journals and bearing caps are missing.

6. A rubber doughnut-type driveshaft coupling:

- a) is worn or damaged beyond manufacturer's specifications, or
- b) is split or delaminated so that its mechanical integrity is affected, or
- c) securing bolt is loose or missing.

7. A driveshaft slip joint (spline) is worn beyond manufacturer's specifications.

8. The universals in the driveshaft are not fitted in accordance with manufacturer's specifications.

Modifications

9. A modification ([Note 1](#)) affects the engine and transmission ([Note 2](#)), and:

- a) is not excluded from the requirements for LVV specialist certification (**Table 13-1-1**), and
- b) is missing proof of LVV specialist certification, that is:
 - i. the vehicle is not fitted with a valid LVV certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1 Definitions

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Note 2

LVV certification is always required for the fitting of a supercharger or turbocharger as a modification, or the upgrading of a supercharger, turbo or wastegate, or the re-chipping of electronic engine control units on turbo vehicles.

Note 3

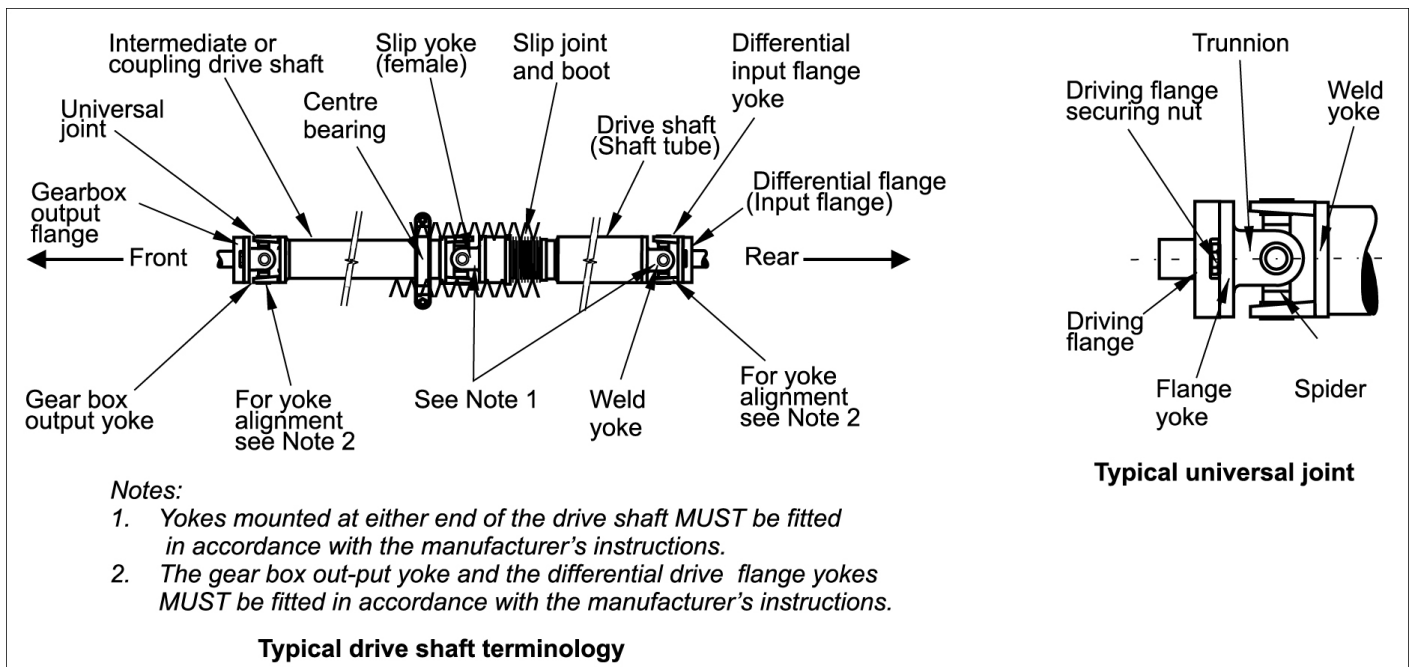
Externally venting wastegates (screamer pipes) are not permitted as they are not adequately muffled and the exhaust gasses passing through the wastegate are not directed through the vehicle's exhaust system. However, wastegates that have their own exhaust system or exhaust pipe exiting behind the passenger compartment are permitted.

Table 13-1-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is not required provided that:
Substitution of engines	<ul style="list-style-type: none"> when compared with the OE engine, the replacement engine: <ul style="list-style-type: none"> – is of the same or less cubic capacity, and – has equal or less weight, and – has the same or less power output, and – uses the same fuel (petrol, diesel, LPG, CNG), and – uses the same unmodified attachment points and system (ie bolts-in), and – uses the same family of block and cylinder head from the same vehicle manufacturer, and – is of the same configuration.
Minor modifications to OE engine	<ul style="list-style-type: none"> the modifications result in not more than 20% more power than the OE engine, which may include the fitting of: <ul style="list-style-type: none"> – extractor or free-flow exhaust manifolds, or big bore exhaust systems – changed intake manifolds – changed or multiple carburettors – modified fuel injection systems – changed ignition systems – alternative cold air box induction systems. See (Note 2).
Gearbox substitution	<ul style="list-style-type: none"> the OE gearbox cross-member has not been heated, cut or welded, and the OE gearbox cross-member mounting to the OE body or chassis members is unchanged, and no replacement gearbox cross-member is used, and the OE driveshaft(s) is unmodified, and no substantial modifications have occurred to the floor or gearbox tunnel area, other than provision for gear-shift mechanism.
Change from 4WD to permanent 2WD (removal of drive train components in 4WD vehicles)	<ul style="list-style-type: none"> the vehicle was originally manufactured with selectable 4WD and a solid/live front axle.

Fitting of or modification to:	LVV certification is never required:
Any modification for the purposes of law enforcement or the provision of emergency services	<ul style="list-style-type: none"> in-service requirements for condition and performance must be met.

Figure 13-1-1. A typical driveshaft assembly



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Standards Compliance Rule 2002](#), section 7.4

Condition and performance

1. The vehicle must be safe to be operated.
2. The components and materials must be fit for their purpose and within safe tolerance of their state when manufactured or modified.

Modifications

3. A modification that affects the engine and transmission must be inspected and certified by an LVV specialist certifier, unless the vehicle:

- a) is excluded from the requirement for LVV specialist certification (**Table 13-1-1**), and
- b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

13-2 Fuel system

Reasons for rejection

Condition

1. There is a noticeable fuel leak from the fuel system.
2. The security of the fuel tank is affected by:
 - a) corrosion damage ([Note 1](#)), or
 - b) cracking or other damage, or
 - c) insecure or loose tank mountings.
3. A fuel line is insecure or loose so that it is likely to be damaged during normal use of the vehicle.
4. A fuel pipe is severely damaged or excessively corroded.
5. A fuel hose is damaged or perished.
6. The fuel pump is insecure.
7. The fuel filler cap or capless fuel filler seal is missing, insecure or likely to allow fuel spillage when the vehicle is in normal use.
8. The fuel tank is fitted with a 'temporary use' fuel filler cap.

Modification

9. A modification affects the fuel system, and:

- a) is not excluded from the requirements for LVV specialist certification (**Table 13-2-1**), or
- b) is missing proof of LVV specialist certification, that is:
 - i. the vehicle is not fitted with a valid low volume vehicle certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward signs of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by corrosion damage will fall out and leave a hole.

Table 13-2-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is not required provided that:
Fuel system changes and modifications	<ul style="list-style-type: none">• no structural modifications have occurred to the vehicle during the installation or modification, and• the filling location remains the same as at original manufacture, and• the fuel type (petrol, diesel) has not changed (other than a change to LPG/CNG).

Fitting of or modification to:	LVV certification is never required:
Any modification for the purposes of law enforcement or the provision of emergency services	<ul style="list-style-type: none">• in-service requirements for condition and performance must be met.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004](#).

Condition and performance

1. Fuel tanks, fuel lines and associated components must be:

- a) securely mounted, and
- b) made of suitable materials, and
- c) in good condition, and
- d) free from significant leaks, and
- e) positioned so that the risk of mechanical damage or heat gain is minimised.

Modification

2. A modification that affects the fuel tank and fuel lines must be inspected and certified by a Low Volume Vehicle Specialist Certifier, unless the vehicle:

- a) is excluded from the requirement for LVV certification (**Table 13-2-1**), and
- b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

13-3 LPG/CNG fuel system

Reasons for rejection

Mandatory equipment

1. A vehicle that is equipped with an LPG or CNG fuel system that is in working order does not have a current alternative fuel inspection certificate ([Note 1](#)) ([Note 2](#)) (**Figure 13-3-1**).

Condition

2. An LPG or CNG fuel system component is:

- a) loose, or
- b) significantly corroded, distorted or cracked.

3. A gas line:

- a) shows signs of corrosion damage ([Note 3](#)), such as pitting, or
- b) is bulging, or
- c) is insecure, or
- d) is damaged, eg cut or crimping.

4. There is a noticeable gas leak.

5. There is corrosion damage, distortion or fracture within 300mm of a tank mounting

Note 1 Definitions

Alternative fuel inspection certificate means evidence of vehicle inspection relating to the periodic in-service inspection and certification of an LPG or CNG fuel system.

Alternative fuel installation certificate means an inspection and certification document relating to the installation of an LPG or CNG fuel system. It is not required for the issue of a WoF or CoF.

LPG/CNG fuel system means a fuel storage and conducting system that is used to provide liquid petroleum gas (LPG) or compressed natural gas (CNG) for the purpose of propulsion of a vehicle.

Note 2

An LPG or CNG fuel system with all the necessary components is deemed to be in working order, whether or not it is charged. A system that has had the filler connection removed is deemed to be not in working order.

Note 3

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward signs of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Figure 13-1-1. Alternative fuels certificate label



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Standards Compliance 2002](#)
- [Land Transport Rule: Vehicle Equipment 2004](#).

Mandatory equipment

1. A motor vehicle equipped with an LPG or CNG fuel system that is in working order must display a current alternative fuel inspection certificate.

Condition

2. An LPG or CNG fuel system must be in safe working condition.

Modification

3. The installation of an LPG or CNG fuel system is not a modification that requires certification by a LVV specialist certifier.

4. A modification to an existing LPG or CNG fuel system must be inspected and certified by an approved LPG or CNG fuel inspector or inspecting organisation.

Motorcycles

1 Vehicle identification

1-1 VIN and chassis number

Important Ensure that the VIN or chassis number is recorded in full on the checksheet. This number must be:

- the VIN if fitted – not the chassis number (locally allocated VIN)
- the stamped VIN on the VIN plate – not the VIN etched on any glazing.

Reasons for rejection

Mandatory requirements

1. A vehicle first registered or re-registered in New Zealand before 1 April 1994 does not have a VIN or chassis number ([Note 1](#)).
2. A vehicle first registered or re-registered in New Zealand from 1 April 1994 does not have a VIN number ([Note 1](#)).
3. A VIN number is not valid ([Note 2](#)).

Condition

4. A VIN or chassis number has been ([Note 1](#)) ([Note 3](#)):
 - a) removed, or
 - b) erased, or
 - c) altered, or
 - d) defaced, or
 - e) obscured, or
 - f) destroyed, or
 - g) obliterated, or
 - h) affixed unlawfully or by unauthorised persons ([Note 3](#)).

Note 1

A vehicle must be referred to a VIN issuing agent ([VTNZ](#), [VINZ](#), [NZAA](#)) to have a VIN attached if:

- a) the vehicle does not have a VIN or chassis number, or
- b) the VIN or chassis number has become illegible.

Note 2

A valid VIN is a unique number that has been assigned to the vehicle in the vehicle’s country of origin or by a person appointed by the NZTA. It consists of 17 characters that never contain the letters I, O or Q, and that is capable of being decoded to provide identifying information about the vehicle.

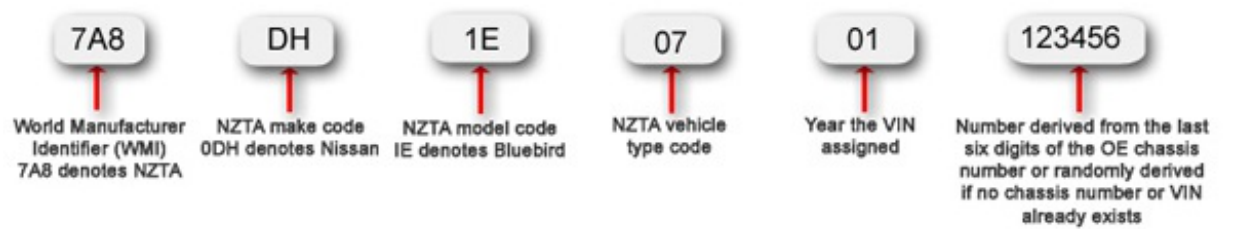
Note 3

The vehicle inspector must advise the local police if there is reason to believe that the VIN or chassis number has been tampered with in any way.

Table 1-1-1. Location of VIN numbers

Vehicle	Permitted VIN Locations
Motorcycles	<ul style="list-style-type: none">On the frame under the rider’s seat, ora non-removable part of the mainframe in a position where it is visible but not prone to damage.

Figure 1-1-1. Structure of a VIN issued by the NZ Transport Agency
Pre-29 November 2009



Post-29 November 2009

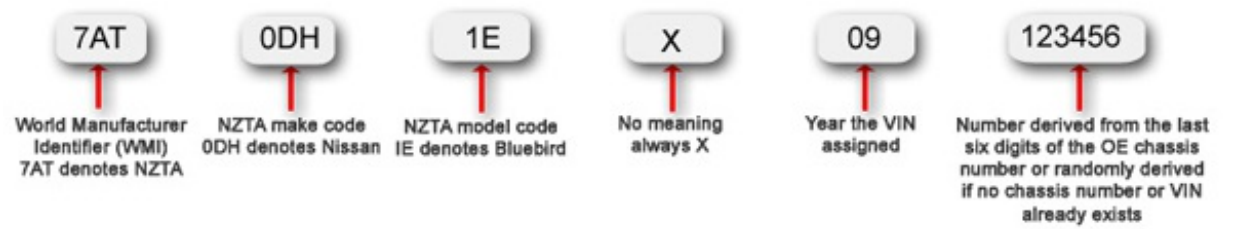
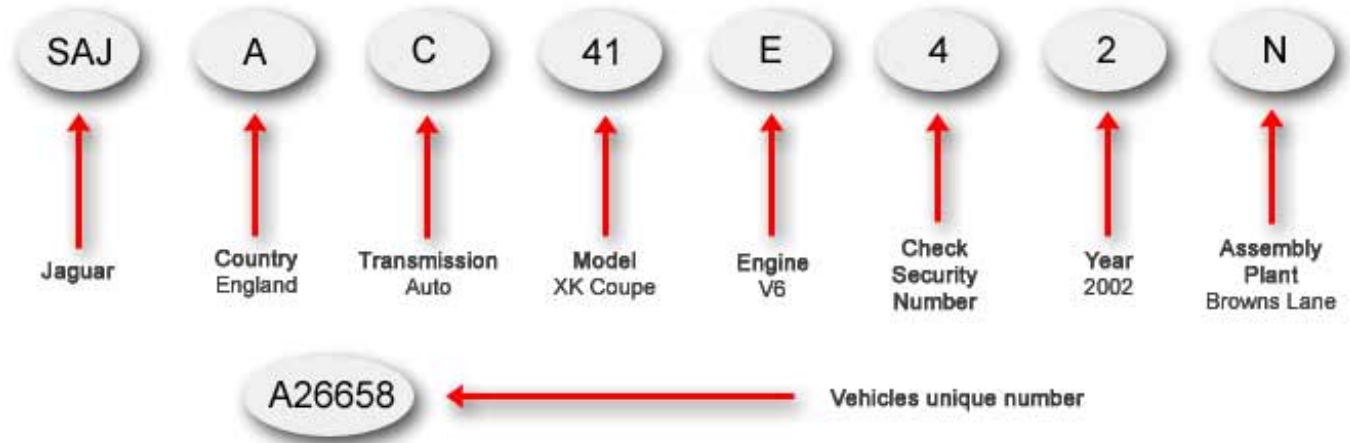
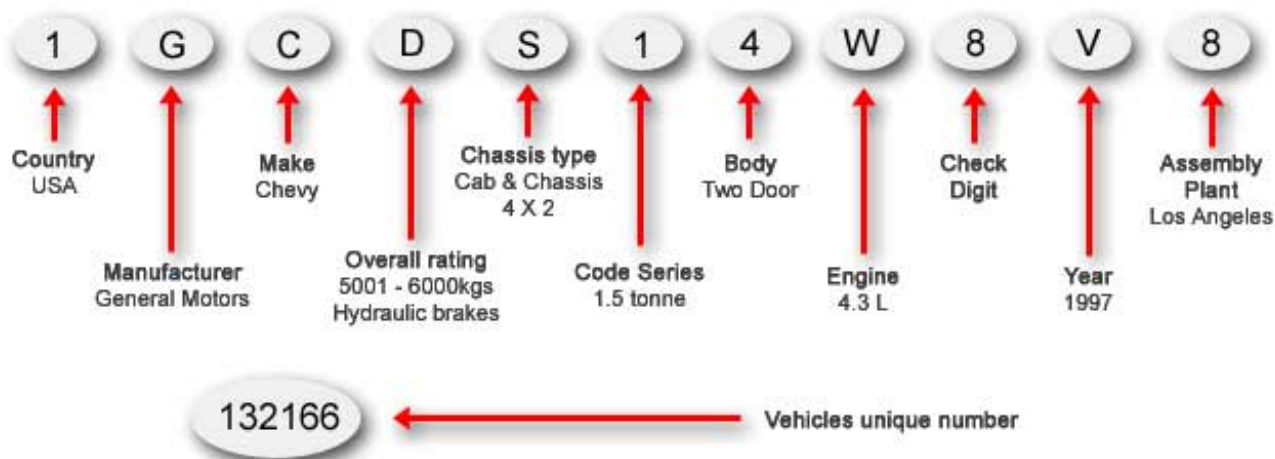


Figure 1-1-2. Structure of a VIN issued by the vehicle manufacturer
Car



Truck



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Standards Compliance 2002](#).

Mandatory requirements

1. A vehicle first registered or re-registered in New Zealand before 1 April 1994 must have a chassis number or VIN.
2. A vehicle first registered or re-registered in New Zealand from 1 April 1994 must have a VIN.

Condition

3. A VIN or chassis number must not have been removed, erased, altered, defaced, obscured, destroyed, obliterated or affixed unlawfully, or be unauthorised.

2 Vehicle Exterior

2-1 External projections

Reasons for rejection

Condition and performance ([Note 1](#))

1. The risk of a component ([Note 5](#)) hooking a vehicle, or hooking or grazing a person, has not been minimised.
2. An ornamental object or fitting ([Note 2](#)) protrudes in such a way that it is likely to injure a person.
3. A protruding object or fitting that has a functional purpose ([Note 3](#)) is not installed so that the risk of causing injury to a person is minimised, eg the object or fitting:
 - a) is of excessively heavy construction for the purpose for which it has been fitted, or
 - b) has sharp corners, or
 - c) slopes forward, unless this is necessary to fit the contours of the vehicle, or
 - d) has an unnecessarily wide gap between the object or fitting and the front of the vehicle, or
 - e) exceeds the vehicle's width by more than 100mm on either side.
4. A protruding component, object or fitting is not securely fitted.
5. A protruding object or fitting adversely affects the rider's vision or control.

Modification ([Note 4](#))

6. A modification affects an external projection – including a protruding object or fitting that has a functional purpose and affects the driver's vision or control of the vehicle, and:
 - a) is not excluded from the requirements for LVV specialist certification (**Table 2-1-1**), and
 - b) is missing proof of LVV specialist certification, ie:

- i. the vehicle is not fitted with a valid LVV certification plate, or
- ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1

The external projections requirements relate to the design and maintenance of objects and fittings that protrude from the exterior of the motor vehicle with regard to the safety of other motor vehicles, pedestrians and cyclists. The attachment of such objects and fittings to the vehicle is addressed in the Vehicle structure section of this manual.

Note 2

Ornamental object or fitting means an object or fitting that does not have a practical purpose, eg bonnet emblems.

Note 3

Functional object or fitting means an object or fitting that has a practical purpose, eg panniers, pack racks, spare wheel carriers, and so on.

Note 4

Modify means to change a vehicle from its original state by altering, substituting, adding or removing any structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with equivalent undamaged or new structures, systems, components or equipment.

Note 5

Components include damaged, corroded and exposed body panels.

Table 2-1-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is never required:
Any modification for the purposes of law enforcement or the provision of emergency services	<ul style="list-style-type: none"> in-service requirements for condition and performance must be met.
Towbars	

Summary of legislation

Applicable legislation

- [Land Transport Rule: External Projections 2001](#).

Permitted equipment

- A motor vehicle may be fitted with a protruding ornamental or functional object or fitting.

Condition and performance

- A protruding ornamental object or fitting must not be likely to injure a person.
- A protruding object or fitting that has a functional purpose must be installed so that the risk of the object or fitting causing injury to a person is minimised.
- Components of a motor vehicle, including damaged or corroded body panels, must be such that the risk of their hooking a vehicle, or hooking or grazing a person, is minimised.
- A protruding object or fitting must not adversely affect driver vision or driver control.

Modification

- A modification that affects an external projection must be inspected and certified by an LVV specialist certifier, unless the vehicle:
 - is excluded from the requirement for LVV specialist certification (**Table 2-1-1**), and
 - has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

2-2 Footrests

Reasons for rejection

Mandatory equipment

- 1. A motorcycle is not fitted with adequate footrests for:
 - a) the rider, or
 - b) the pillion passenger where there is a pillion passenger seating position.

Condition

- 2. A footrest or footrest mounting is:
 - a) insecure, or
 - b) weakened by corrosion or other damage.

Modification

- 3. A modification affects the footrest, and is:
 - a) not excluded from the requirements for LVV specialist certification (**Table 2-2-1**), or
 - b) missing proof of LVV specialist certification, ie:
 - i. the vehicle is not fitted with a valid low volume vehicle certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Table 2-2-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is never required:
Any modification for the purposes of law enforcement or the provision of emergency services	<ul style="list-style-type: none">in-service requirements for condition and performance must be met.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004.](#)

Mandatory equipment

- 1. A motorcycle must have:
 - a) footrests for the rider, and
 - b) footrests for the pillion passenger if provision is made for pillion riding.

Condition

- 2. Footrests must be adequate.

Modification

- 3. A modification that affects a footrest must be inspected and certified by an LVV specialist certifier, unless the vehicle:
 - a) is excluded from the requirement for LVV certification (**Table 2-2-1**), and
 - b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

2-3 Dimensions

Note The vehicle inspector need only inspect dimensions in detail if there is doubt about the vehicle's compliance.

Reasons for rejection

Mandatory equipment

- 1. A vehicle does not meet the dimension requirements set out in **Table 2-3-1** (see also **Figure 2-3-1**, **Figure 2-3-2**, and **Figure 2-3-3**).

Table 2-3-1. Dimension requirements(see also **Figure 2-3-1**, **Figure 2-3-2**, and **Figure 2-3-3**)

Dimension	Maximum distance	Comments
Width	1m (motorcycle without sidecar) 2.5m (motorcycle with sidecar or motor tricycle)	Measurement does not include: <ul style="list-style-type: none"> • collapsible mirrors which extend no more than 240 mm from the body • direction indicators and side-marker lamps • ropes, lashings, straps, chains, and related connectors and tensioning devices that extend no more than 25mm from either side, and that are not permanently or rigidly fixed to the vehicle • the bulge towards the bottom of a tyre.
Overall length	12.6m (no tow coupling fitted) 11.5m (tow coupling fitted)	Measurement does not include collapsible mirrors.
Height	4.25m	Measurement does not include: <ul style="list-style-type: none"> • load-restraining devices (ropes, lashings, straps, chains, covers and related connectors and tensioning devices) that extend no more than 25mm above the vehicle, and that are not permanently or rigidly fixed to the vehicle.
Forward distance	9.5m (no tow coupling fitted) 8.5m (tow coupling fitted)	Forward distance is measured from the centre of the rear axle to the front of the vehicle. Measurement does not include collapsible mirrors.
Rear overhang	4m	Rear overhang is measured from the centre of the rear axle to the rear of the vehicle.
Front overhang	3m	Front overhang is measured from the front edge of the driver's seat to the front of the vehicle.

Table 2-3-2. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is never required:
Any modification for the purposes of law enforcement or the provision of emergency services	<ul style="list-style-type: none"> • in-service requirements for condition and performance must be met.

Figure 2-3-1. Maximum width for a motorcycle

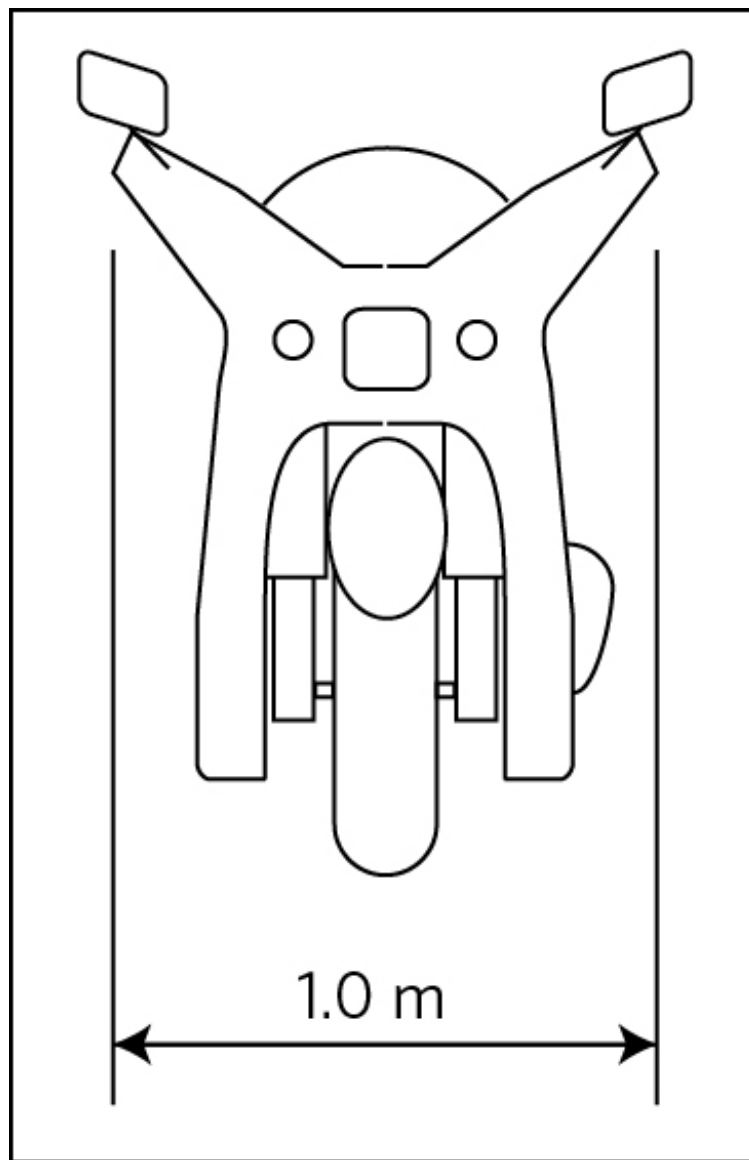


Figure 2-3-2. Maximum width for a motorcycle with sidecar or a motor tricycle

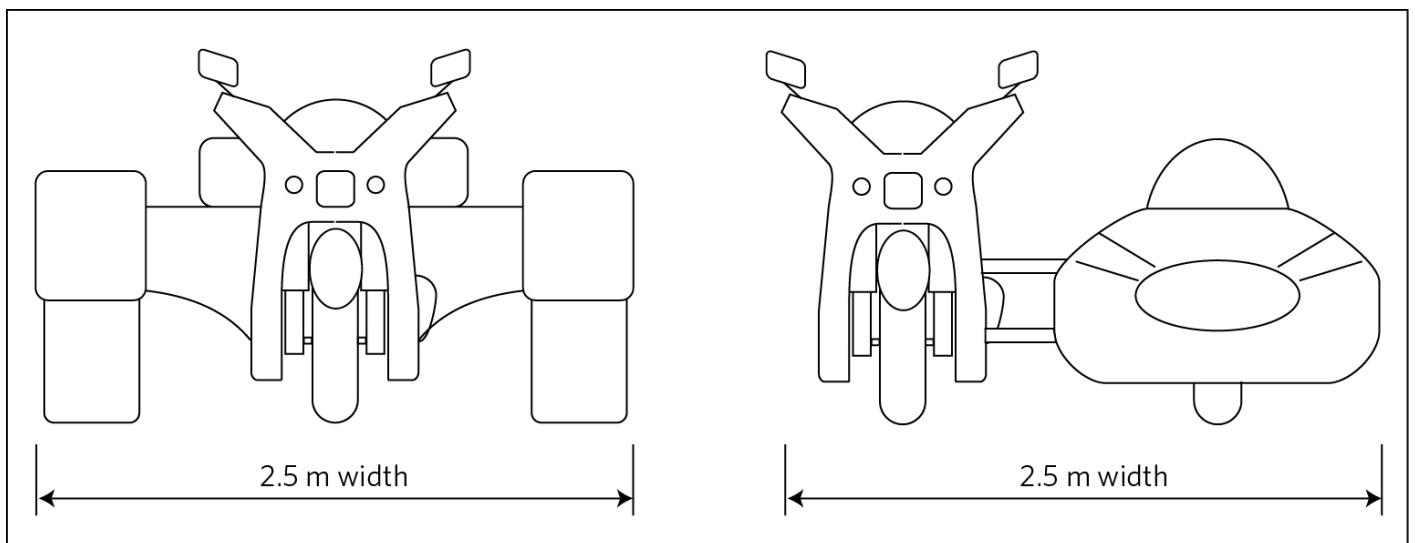
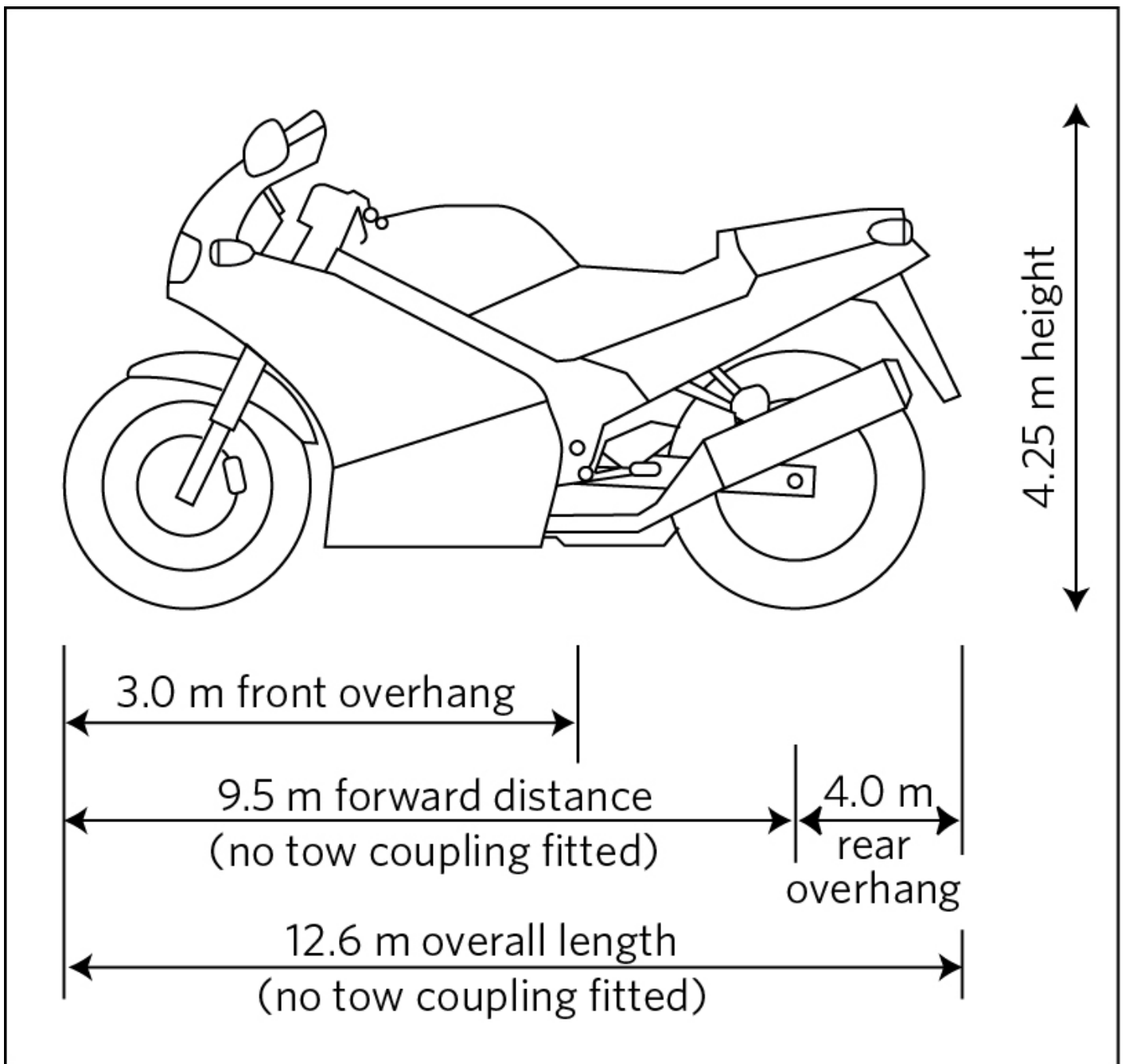


Figure 2-3-3. Other dimensions for a motorcycle, motorcycle with sidecar, or motor tricycle



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Dimensions and Mass 2002](#).

Mandatory equipment

1. A vehicle must meet the dimensions in **Table 2-3-1**.

3 Vehicle Structure

3-1 Structure

Reasons for rejection

Condition

1. The structure of the motorcycle has visible:
 - a) deformation from the original shape that has affected the vehicle's structural integrity ([Note 2](#)), or

- b) cracking, or
- c) fracture, or
- d) corrosion damage ([Note 1](#)) that affects its strength, or
- e) poor repairs that have not returned the structure to within a safe tolerance of when it was manufactured ([Note 2](#)), such as:
 - i. filler has been used in an attempt to conceal corrosion damage or deformation of a component.
 - ii. a high strength steel component has been heated.
 - iii. a component has been strengthened.

Modification

2. A modification affects the vehicle structure, and:
- a) is not excluded from the requirements for LVV specialist certification (**Table 3-1-1**), and
 - b) is missing proof of LVV specialist certification, ie:
 - i. the vehicle is not fitted with a valid LVV certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward signs of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases the area affected by the corrosion damage will fall out and leave a hole.

Note 2

The vehicle inspector may request additional relevant information from a repairer or other relevant person.

Note 3

Modify means to change a vehicle from its original state by altering, substituting, adding or removing any structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with equivalent undamaged or new structures, systems, components or equipment.

Table 3-1-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is never required:
Any modification for the purposes of law enforcement or the provision of emergency services	<ul style="list-style-type: none"> in-service requirements for condition and performance must be met.
Towbars	

Summary of legislation

Applicable legislation

- [Land Transport Rule: Frontal Impact 2001.](#)

Condition

- A vehicle must not be affected by corrosion or weakening of its structure, that is apparent by visual examination, so that the vehicle is unsafe to operate.
- The performance of a frontal impact occupant protection system must not be affected by any factor, including corrosion, structural damage, material degradation, inadequate repair, the fitting of additional equipment, or the removal of equipment.

Modification

- A modification that affects the integrity of the vehicle structure must be inspected and certified by an LVV specialist certifier, unless the vehicle:

- a) is excluded from the requirement for LVV specialist certification (**Table 3-1-1**), and
- b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

4 Lighting

4-1 Headlamps

Reasons for rejection

Mandatory and permitted equipment

1. A motorcycle is not fitted with one dipped-beam headlamp.
2. A motorcycle is fitted with more than:
 - a) two dipped-beam headlamps, or
 - b) two main-beam headlamps.
3. A motorcycle (eg a vintage or veteran motorcycle) does not meet standard headlamp requirements, and:
 - a) does not have a valid vehicle identity card with a lighting equipment endorsement, or
 - b) does not meet the conditions of the lighting equipment endorsement in its vehicle identity card.
4. A retrofitted pair of headlamps is not fitted:
 - a) symmetrically, or
 - b) as far towards each side of the motorcycle as practicable.
5. A retrofitted dipped-beam headlamp is positioned at a height exceeding 1.2m from the ground.
6. A device that allows the headlamps to flash alternately is fitted to a motorcycle that is not an emergency vehicle or a pilot vehicle.
7. A motorcycle is fitted with a dipped-beam headlamp that projects the maximum intensity of the beam to the right.

Condition ([Note 4](#))

8. A lamp is insecure, obscured, or contains moisture in the form of large droplets, runs or puddles.
9. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
10. A reflector is damaged or has deteriorated so that light output is reduced.
11. A main-beam headlamp warning device is obscured from the driver's vision.

Performance

12. When switched on, a headlamp emits light that is:
 - a) not substantially white or amber, or
 - b) different in colour or intensity from the other lamp in a pair, or
 - c) not steady, or
 - d) not bright enough to illuminate the road ahead, eg due to modification, deterioration or an incorrect light source, or
 - e) too bright causing significant dazzle to other road users, eg due to an incorrect light source, or
 - f) altered, eg due to damage or modification.
13. When the dipped-beam headlamps are switched on (with wheels pointing straight ahead):
 - a) a lamp does not operate, or
 - b) more than the two lamps operate on dipped beam, or
 - c) more than four lamps operate on dipped beam on a motorcycle first registered anywhere between 1 January 1977 and 31 March 1980, or
 - d) the light beam produces an incorrect beam pattern, is not focused, or is reduced or altered, or

e) the centreline of the light beam is too far to the left or slopes down too far so that the headlamp is no longer capable of illuminating the road at least 50m ahead (**Figure 4-1-1**), or

f) the centreline of a lamp's beam projects to the right of the motorcycle's centreline, or projects down from the lamp at an angle other than:

- i. as specified by the motorcycle or lamp manufacturer, or
- ii. as specified in **Table 4-1-1**.

14. When the main-beam headlamps are switched on (with wheels pointing straight ahead):

- a) a lamp does not operate, or
- b) more than two lamps operate on main beam, or
- c) the centreline of a lamp's beam projects to the right of the motorcycle's centreline or up from the horizontal, or
- d) the lightbeam produces an incorrect beam pattern, is not focused, or is reduced or altered, or
- e) the lamps are not capable of being switched to dipped beam or switched off from the driver's seating position, or
- f) a main-beam headlamp warning device does not indicate to the driver that the main-beam headlamps are switched on.

15. A device fitted to a motorcycle that allows the headlamps to flash alternately:

- a) does not indicate to the driver that the device is activated, or
- b) flashes:
 - i. faster than two flashes per second, or
 - ii. slower than one flash per second, or
 - iii. at a varying frequency.

Note 1

If the dipped-beam headlamps are able to be adjusted from the driver's seating position, the alignment must be checked with the adjustment at its highest position.

Note 2

If the motorcycle is fitted with self-levelling suspension, the alignment must be checked with the suspension at its normal level.

Note 3 Definitions

Headlamp means a lamp designed to illuminate the road ahead of a vehicle, and that is a:

- a) dipped-beam headlamp (single lamp), or
- b) main-beam (high-beam) headlamp (single lamp), and includes a driving lamp, or
- c) combination of a dipped-beam headlamp and a main-beam headlamp (dual lamp unit).

Dipped-beam headlamp means a headlamp that is designed to emit a dipped beam, which is a beam of light that is angled downwards in such a way that it prevents undue dazzle or discomfort to oncoming drivers and other road users.

Main-beam headlamp means a headlamp that is designed to illuminate the road over a long distance ahead of the vehicle.

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component, or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

An **original equipment (OE) lamp** is one that is fitted by the vehicle manufacturer in the original position, or is an equivalent replacement or aftermarket lamp suitable for the position provided by the vehicle manufacturer for that lamp.

All other lamps are considered retrofitted (non-OE).

Note 4

If a headlamp is fitted with a readily removable cover, other than a clear plastic cover, this must be removed for inspection of the headlamp.

Note 5

A vehicle originally manufactured with a headlamp arrangement that differs from what is required or permitted in this section

may retain the original headlamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Note 6

A forward-facing permitted lamp that does not comply with the equipment, condition and performance requirements must be made to comply or be removed from the vehicle.

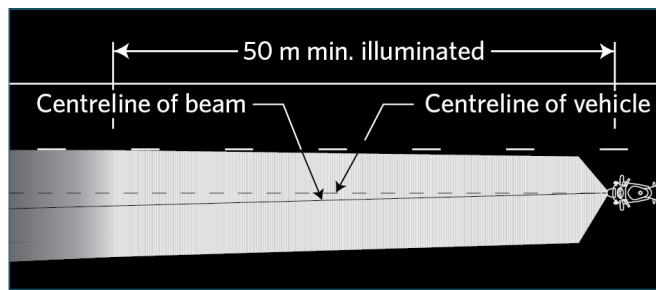
Table 4-1-1. Allowable dipped-beam headlamp alignment

	Headlamp type	Distance from ground to centre of light source	Dip rate of beam centre: lower and upper limits		
			Percent (%)	mm/3 m	Degrees (°)
EITHER	Any headlamp dipped beam	N/A	That specified by the motorcycle or headlamp manufacturer		
OR	Headlamp with symmetric dipped-beam pattern	N/A	3.0–3.5	90–105	1.7–2.0
OR	Headlamp with asymmetric dipped-beam pattern and distance from ground to centre of light source	less than 0.8m	1.0–1.5	30–45	0.57–0.85
		0.8–1.2m	1.0–2.0	30–60	0.57–1.15
		more than 1.2m	2.0–2.5	60–75	1.15–1.43

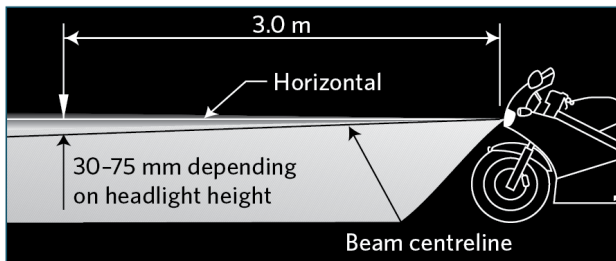
Table 4-1-2. Dipped-beam angle conversions

Percent (%)	mm/3 m	Degrees (°)		Percent (%)	mm/3 m	Degrees (°)
1.0	30	0.6		2.3	69	1.3
1.1	33	0.6		2.4	72	1.4
1.2	36	0.7		2.5	75	1.4
1.3	39	0.7		2.6	78	1.5
1.4	42	0.8		2.7	81	1.5
1.5	45	0.9		2.8	84	1.6
1.6	48	0.9		2.9	87	1.7
1.7	51	1.0		3.0	90	1.7
1.8	54	1.0		3.1	93	1.8
1.9	57	1.1		3.2	96	1.8
2.0	60	1.1		3.3	99	1.9
2.1	63	1.2		3.4	102	1.9
2.2	66	1.3		3.5	105	2.0

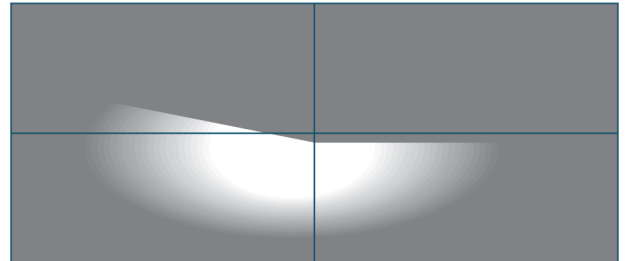
Figure 4-1-1. Dipped beams



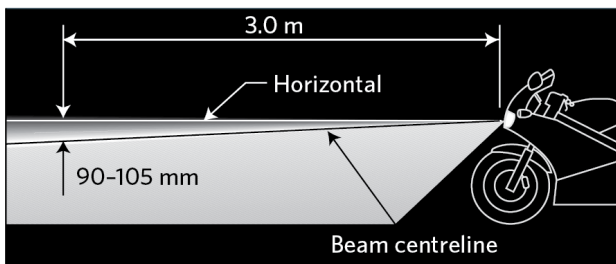
Minimum illuminated area



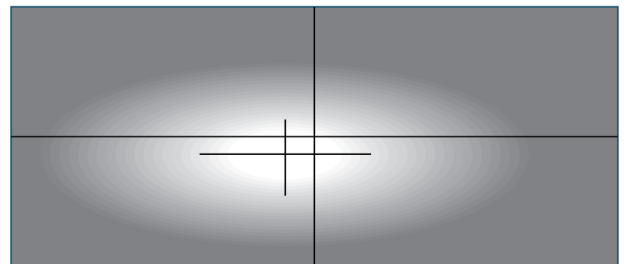
Asymmetric dipped beam



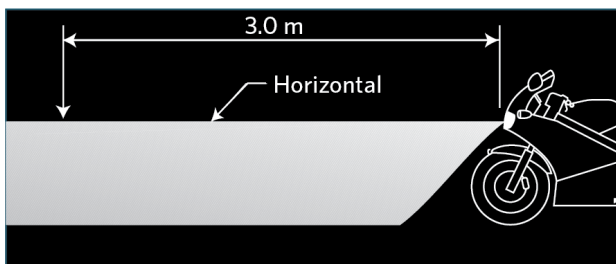
**Asymmetric dipped-beam
headlamp pattern on light board**



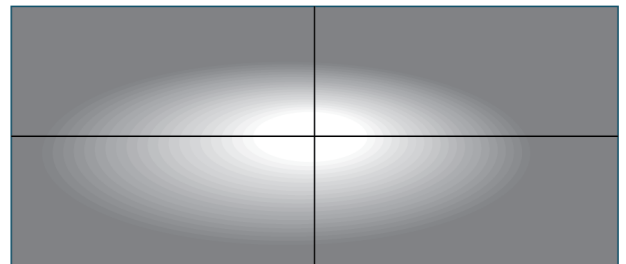
Symmetric dipped beam



**Symmetric dipped-beam
headlamp pattern on light board**



Main (high) beam



**Main-beam (high-beam)
headlamp pattern on light board**

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#)
- New Zealand Gazette, 28 August 1980, issue 108, page 2569.

Mandatory and permitted equipment

1. A motorcycle:

- a) must be fitted with one or two dipped-beam headlamps, and
- b) may be fitted with one or two main-beam headlamps.

2. A motorcycle (eg a vintage or veteran motorcycle) manufactured without lamps, or with lamps that cannot meet specified

requirements, may obtain a WoF if:

- a) the motorcycle has a valid vehicle identity card with a lighting equipment endorsement, and
- b) the motorcycle meets the conditions of that endorsement.

3. A warning device may be fitted that indicates that the main-beam headlamps are switched on.

4. An emergency vehicle or a pilot vehicle may be fitted with a device that allows the headlamps to flash alternately, provided it is also fitted with equipment that indicates to the driver that the device is activated.

5. A retrofitted pair of headlamps must be symmetrically mounted as far towards each side of the motorcycle as is practicable.

6. A retrofitted dipped-beam headlamp must be positioned at a height not exceeding 1.2 m from the ground.

Prohibited equipment

7. A dipped-beam headlamp designed solely for a left-hand drive vehicle, where the maximum intensity of the beam is dispersed to the right, must not be fitted.

Condition

8. A headlamp must:

- a) be in sound condition, and
- b) not be obscured.

Performance

9. A headlamp must operate in a way that is appropriate for the lamp and the vehicle.

10. A headlamp must emit a steady light.

11. A headlamp must provide sufficient illumination and light output to illuminate the road ahead.

12. If fitted with a device that allows headlamps to flash alternately, the lamps must flash at a fixed frequency.

13. A pair of headlamps must emit light that is approximately of equal colour and intensity when switched on.

14. A headlamp must emit a beam that is substantially white or amber.

15. A main-beam headlamp must be capable of being dipped or turned off from the driver's position.

16. A warning device that indicates that the main-beam lamps are in operation must be in good working order.

17. When the headlamps are switched on and the motorcycle's front wheel is pointing in the straight ahead position:

- a) the headlamp beam must be either parallel to or to the left of the longitudinal centreline of the motorcycle, and
- b) the centre of a main-beam headlamp beam must be either parallel to or dipping down from the horizontal, and
- c) the centre of a dipped-beam headlamp beam must dip at an angle specified by the motorcycle or lamp manufacturer, or
 - i. 3–3.5% for a symmetric beam pattern, or
 - ii. 1–1.5% for an asymmetric beam pattern where the centre of the light source is less than 0.8m from the ground, or
 - iii. 1–2% for an asymmetric beam pattern where the centre of the light source is 0.8–1.2m from the ground, or
 - iv. 2–2.5% for an asymmetric beam pattern where the centre of the light source is above 1.2m from the ground.

18. The dipped beam headlamps must illuminate the road ahead for 50m in normal darkness.

19. A device fitted to a motorcycle that allows the headlamps to flash must:

- a) make the headlamps flash alternately at a frequency of 1–2 Hertz, and
- b) incorporate equipment that indicates to the driver that the device is activated.

20. A headlamp must be fitted with a light source that is specified by the motorcycle manufacturer or the headlamp manufacturer.

Modifications

21. A headlamp that is affected by a modification must meet equipment, condition and performance requirements.

4-2 Front and rear fog lamps

Reasons for rejection

Permitted equipment

1. A motorcycle is fitted with more than:
 - a) two front fog lamps, or
 - b) two rear fog lamps.
2. A retrofitted pair of fog lamps is not:
 - a) fitted symmetrically, or
 - b) fitted as far towards each side of the motorcycle as is practicable, or
 - c) positioned higher than the dipped-beam headlamps.

Condition ([Note 1](#))

3. A lamp is insecure or contains moisture in the form of large droplets, runs or puddles.
4. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
5. A reflector is damaged or has deteriorated so that light output is reduced.
6. A fog lamp warning device, if fitted, is obscured from the driver's vision.

Performance

7. When switched on, a front fog lamp does not operate.
8. When switched on, a front fog lamp emits light that:
 - a) is not projected to the front, or
 - b) produces an incorrect beam pattern (**Figure 4-2-1**), or
 - c) is not substantially white or amber to the front, or
 - d) is a different colour or intensity from the other lamp in the pair, or
 - e) is not steady, or
 - f) is not bright enough to illuminate the road ahead in conditions of severely reduced visibility, eg due to modification, deterioration, dirt or an incorrect light source, or
 - g) is too bright, and could dazzle other road users, eg due to an incorrect light source, or
 - h) is altered, eg due to damage or modification, or
 - i) has a beam centre to the right of the motorcycle's centreline, or
 - j) has a beam that is not permanently dipped, or
 - k) has a beam centre that dips at an angle of less than 3% (**Figure 4-2-1**).
9. When switched on, a rear fog lamp emits light that is:
 - a) not projected to the rear, or
 - b) not diffuse, or
 - c) not substantially red, or
 - d) different in colour or intensity from the other lamp when fitted in a pair, or
 - e) not steady, or
 - f) not bright enough to indicate the presence of the motorcycle from the rear in conditions of severely reduced visibility, eg due to modification, deterioration, dirt or an incorrect light source, or
 - g) is altered, eg due to damage or modification.
10. A fog lamp cannot be switched off from the driver's seating position.
11. Where a fog lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.
12. A fog lamp warning device, if fitted, does not operate.

Note 1

If a front fog lamp is fitted with a readily removable cover, other than a clear protective cover, this must be removed for

inspection of the fog lamp.

Note 2 Definition

Fog lamp means a front or rear lamp designed to aid the driver or other road users in conditions of severely reduced visibility, including fog or snow, but not including clear atmospheric conditions under the hours of darkness.

Note 3

A rear fog lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

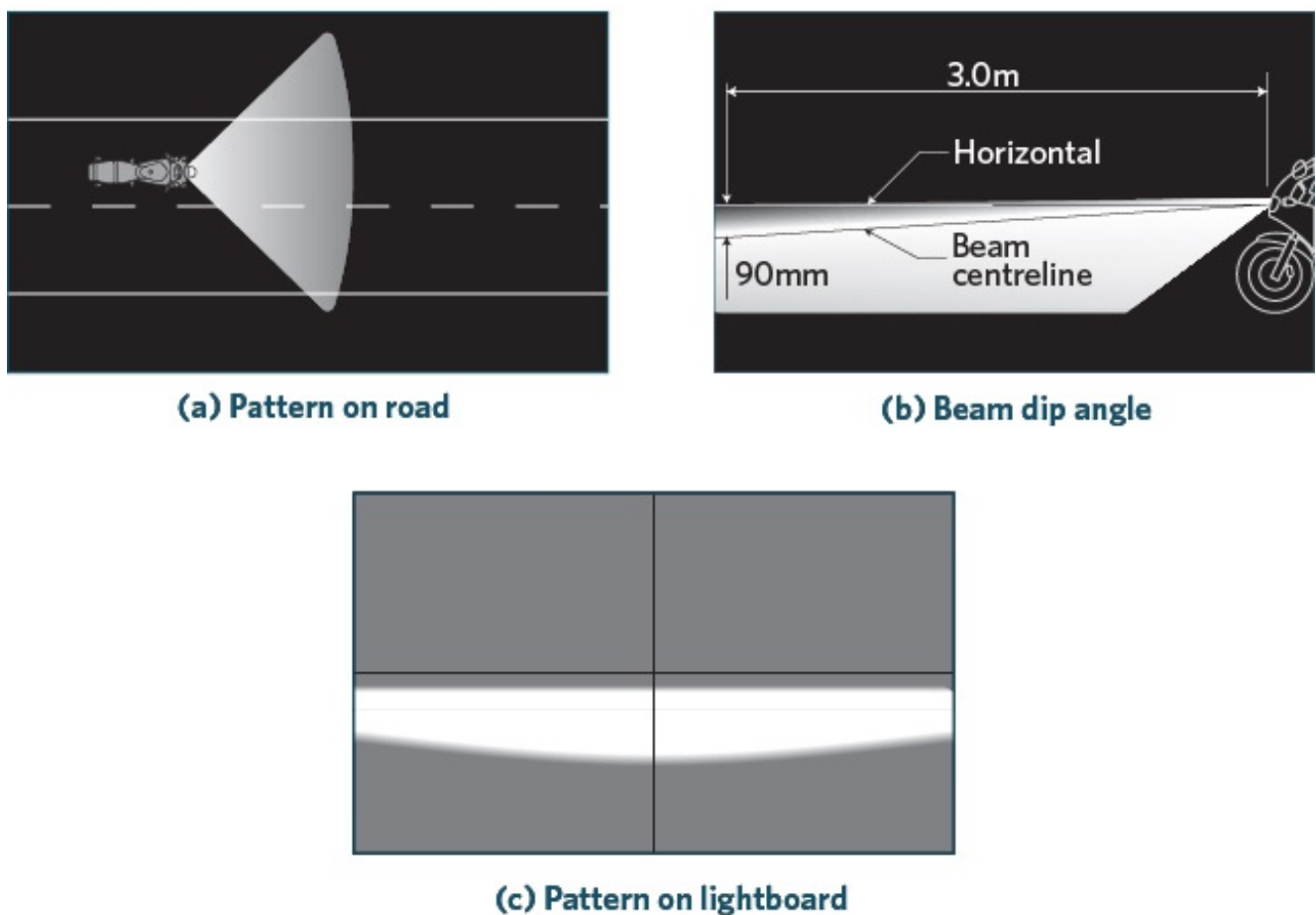
Note 4

A vehicle originally manufactured with a front or rear fog lamp arrangement that differs from what is required or permitted in this section may retain the original fog lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Note 5

A forward-facing permitted lamp that does not comply with the equipment, condition and performance requirements must be made to comply or be removed from the vehicle.

Figure 4-2-1. Front fog lamp light characteristics



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Permitted equipment

1. One or two front fog lamps.
2. One or two rear fog lamps.
3. A retrofitted pair of fog lamps must be symmetrically mounted as far as practicable towards each side of the motorcycle.
4. A retrofitted front fog lamp must not be positioned higher than the dipped-beam headlamps.
5. A motorcycle may be fitted with a warning device that indicates that a front or rear fog lamp is in operation.

Condition

6. A front fog lamp must be in sound condition.
7. A rear fog lamp must be in sound condition if it emits a light.

Performance

8. A fog lamp must operate in a way that is appropriate for the lamp and the vehicle.
9. A fog lamp must emit a steady light.
10. A front fog lamp must provide sufficient light output to illuminate the road ahead in conditions of severely reduced visibility.
11. A rear fog lamp must provide sufficient light output to indicate the presence of the vehicle on the road in conditions of severely reduced visibility.
12. The light emitted from a front fog lamp must be substantially white or amber.
13. The light emitted from a rear fog lamp must be diffuse and substantially red in colour.
14. A pair of fog lamps must emit light that is approximately equal in colour and intensity.
15. The centre of a front fog lamp beam must be parallel to or to the left of the longitudinal centreline of the motorcycle.
16. The centre of a front fog lamp beam must be permanently dipped at an angle of at least 3%.
17. A fog lamp must be able to be turned off from the driver's seating position.
18. A front or rear fog lamp warning device must be in good working order.
19. Where a fog lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Modifications

20. A fog lamp that is affected by a modification:
 - a) must meet equipment, condition and performance requirements, and
 - b) does not require LVV specialist certification.

4-3 Cornering lamps

Reasons for rejection

Permitted equipment

1. A motorcycle is fitted with:
 - a) only one lamp, or
 - b) more than one pair of lamps, or
 - c) a lamp that:
 - i. was not originally fitted by the motorcycle manufacturer, or
 - ii. is not fitted in the original position.

Condition

2. A lamp is insecure.
3. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
4. A lamp's reflector is damaged or has deteriorated so that light output is reduced.

Performance

5. When activated by switching on the direction indicator lamp or by turning the handle bars, a cornering lamp:
 - a) does not operate, or
 - b) does not operate in the direction of the turn.
6. A cornering lamp emits light that is:
 - a) not substantially white or amber, or
 - b) different in colour or intensity from the other lamp in the pair, or

c) not steady, or

d) not bright enough to illuminate the road ahead in the direction of the turn, eg due to modification, deterioration, dirt or an incorrect light source, or

e) too bright, causing dazzle to other road users, eg due to an incorrect light source or misalignment, or

f) altered, eg due to damage or modification.

7. Where a cornering lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1 Definitions

Cornering lamp means a lamp designed to emit light at the front of a vehicle to supplement the vehicle's headlamps by illuminating the road ahead in the direction of the turn.

An **original equipment (OE) lamp** is one that is fitted by the vehicle manufacturer in the original position, or is an equivalent replacement or aftermarket lamp suitable for the position provided by the vehicle manufacturer for that lamp. All other lamps are considered retrofitted (non-OE).

Note 2

A vehicle originally manufactured with a cornering lamp arrangement that differs from what is required or permitted in this section may retain the original cornering lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Note 3

A forward-facing permitted lamp that does not comply with the equipment, condition and performance requirements must be made to comply or be removed from the vehicle.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Permitted equipment

1. One pair of cornering lamps fitted as OE.

Condition

2. A cornering lamp must be in sound condition.

Performance

3. A cornering lamp must operate in a way that is appropriate for the lamp and the vehicle.

4. A cornering lamp must emit light that is substantially white or amber.

5. A pair of cornering lamps must emit light that is approximately equal in colour and intensity.

6. A cornering lamp must emit a steady light.

7. A cornering lamp must provide sufficient light output to illuminate the road ahead in the direction of the turn.

8. A cornering lamp must be correctly aligned.

9. Where a cornering lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Modifications

10. A cornering lamp that is affected by a modification:

- a) must meet equipment, condition and performance requirements, and
- b) does not require LVV specialist certification.

4-4 Daytime running lamps

Reasons for rejection

Permitted equipment

1. A motorcycle is fitted with more than two lamps.

2. A lamp is fitted in a position other than at the front of the motorcycle.

3. A retrofitted lamp is not:

- a) symmetrically mounted, or
- b) mounted as far towards each side of the vehicle as practicable.

Condition

4. A lamp is insecure.

5. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.

6. A lamp's reflector is damaged or has deteriorated so that light output is reduced.

Performance

7. When switched on, a daytime running lamp does not operate.

8. When switched on, a daytime running lamp emits light that is:

- a) projected in a direction other than to the front, or
- b) not substantially white or amber, or
- c) different in colour or intensity from the other lamp in the pair, or
- d) not steady, or
- e) not bright enough to make the motorcycle more easily seen during the daytime, eg due to modification, deterioration, dirt or an incorrect light source, or
- f) too bright causing significant dazzle to other road users, eg due to an incorrect light source, or
- g) altered, eg due to damage or modification.

9. Where a daytime running lamp comprises an array of light sources, fewer than 75% of these operate.

10. A daytime running lamp continues to operate when the headlamps or fog lamps are switched on.

Note 1 Definition

Daytime running lamp means a lamp designed to emit a low-intensity light forward of a vehicle to make it more easily seen in daytime.

Note 2

A vehicle originally manufactured with a daytime running lamp arrangement that differs from what is required or permitted in this section may retain the original daytime running lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Note 3

A forward-facing permitted lamp that does not comply with the equipment, condition and performance requirements must be made to comply or be removed from the vehicle.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Permitted equipment

1. One or two daytime running lamps fitted to the front of the motorcycle.

Condition

2. A daytime running lamp must be in sound condition.

3. Where a daytime running lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Performance

4. A daytime running lamp must operate in a way that is appropriate for the lamp and the vehicle.

5. A daytime running lamp must emit light that is substantially white or amber.

6. A pair of daytime running lamps must emit light that is of approximately equal colour and intensity.

7. A daytime running lamp must emit a steady light.

8. A daytime running lamp must provide sufficient light output to make the motorcycle more easily seen during the daytime.
9. A daytime running lamp must be correctly aligned.
10. A daytime running lamp must not operate when a front fog lamp or a headlamp is in use.

Modifications

11. A daytime running lamp that is affected by a modification:
 - a) must meet equipment, condition and performance requirements, and
 - b) does not require LVV specialist certification.

4-5 Direction indicator lamps

Reasons for rejection

Mandatory and permitted equipment

1. A motorcycle first registered in New Zealand on or after 1 January 1978, other than one that is exempted (**Table 4-5-1**) is not fitted with:
 - a) one pair of lamps to the front, and
 - b) one pair of lamps to the rear.
2. A motorcycle first registered in New Zealand before 1 January 1978 is fitted with more than:
 - a) one pair of lamps to the front, or
 - b) one pair of lamps to the rear, or
 - c) two side-facing lamps on each side of the motorcycle.
3. A motorcycle first registered in New Zealand on or after 1 January 1978 is fitted with more than:
 - a) two pairs of lamps to the front, or
 - b) two pairs of lamps to the rear, or
 - c) two side-facing lamps on each side of the motorcycle.
4. A motorcycle is fitted with a lamp that is not in a pair.
5. A motorcycle is not fitted with a suitable device that indicates to the driver that a lamp has failed.
6. A retrofitted lamp:
 - a) is not symmetrically mounted, or
 - b) is not mounted as far towards each side of the motorcycle as is practicable, or
 - c) is fitted at a height from the ground exceeding 1.5m (or 2.1m where fitting below 1.5 m is not practicable due to the shape of the bodywork of the motorcycle).
7. A motorcycle (eg a vintage or veteran motorcycle) does not meet standard direction indicator lamp requirements, and:
 - a) does not have a valid vehicle identity card with a lighting equipment endorsement, or
 - b) does not meet the conditions of the lighting equipment endorsement in its vehicle identity card.

Condition

8. A lamp is insecure or, if a mandatory lamp, contains moisture in the form of large droplets, runs or puddles.
9. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
10. A lamp's reflector is damaged or has deteriorated so that light output is reduced.
11. A visual lamp failure warning device is obscured from the driver's vision.

Performance

12. When switched on, a direction indicator lamp:
 - a) does not operate, or
 - b) does not begin flashing within one second of switching on, or

c) flashes:

- i. faster than two flashes per second, or
- ii. slower than one flash per second, or
- iii at a different rate from other lamps on the same side.

13. When switched on, a direction indicator lamp emits a light that is:

- a) not substantially white or amber to the front, or
- b) not substantially amber or red to the rear, or
- c) not substantially amber to the side, or
- d) different in colour or intensity from the other lamp in a pair, or
- e) not bright enough to be visible from 100m in normal daylight and from 200m in normal darkness, eg due to modification, deterioration, dirt or an incorrect light source, or
- f) too bright, causing significant dazzle to other road users, eg due to an incorrect light source, or
- g) altered, eg due to damage or modification.

14. A mandatory lamp that is not OE and not mounted in the original position emits a light that is not visible within:

- a) 15° above and below the horizontal, or
- b) 45° inboard and 80° outboard.

15. A mandatory lamp's visibility angles are reduced due to modification of the motorcycle so that emitted light is not visible within:

- a) 15° above and below the horizontal (**Figure 4-5-1**), or
- b) 45° inboard and 80° outboard (**Figure 4-5-2**).

16. On a lamp of American origin fitted with combined stop and indicator lamps, the stop lamp function is not overridden by the indicator function.

17. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

18. A lamp-failure warning device does not operate.

Note 1 Definitions

Direction indicator lamp means a lamp designed to emit a flashing light to signal the intention of the driver to change the direction of the vehicle to the right or to the left.

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component, or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

An original equipment (OE) lamp is one that is fitted by the vehicle manufacturer in the original position, or is an equivalent replacement or aftermarket lamp suitable for the position provided by the vehicle manufacturer for that lamp. All other lamps are considered retrofitted (non-OE).

Note 2

A permitted (ie non-mandatory) rear or a non-OE side-facing direction indicator lamp that does not comply with equipment, condition and performance requirements must be made to comply or disabled so that it does not emit a light.

Note 3

A vehicle originally manufactured with a direction indicator lamp arrangement that differs from what is required or permitted in this section may retain the original direction indicator lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Note 4

Motorcycles first registered in New Zealand before 27 February 2005 may have rear direction indicator lamps that also function as reversing lamps.

Note 5

A forward-facing permitted lamp that does not comply with the equipment, condition and performance requirements must be made to comply or be removed from the vehicle.

Table 4-5-1. Motorcycles exempted from direction indicator lamp requirements

Bajaj Super 150	Honda XR250 Enduro	Montesa 348	Yamaha IT175
Bultaco Sherpa T250	Honda XR500 Enduro	Suzuki DS80	Yamaha IT400
Bultaco Sherpa T350	Kawasaki KLX 250 Enduro	Suzuki DR 370	Yamaha Trials TY175
Bultaco Frontera 250	Kawasaki KV75	Suzuki DR400	Yamaha Trials TY250
Bultaco Frontera 370	Kawasaki KT250	Suzuki PE 175	Yamaha TT250
DKW 125 Enduro	Mini Buffalo	Suzuki PE 250	Yamaha TT500 Enduro
Gemini MA 50	Montesa 250H6	Suzuki RL 250	Zundapp K 550
Honda NC50 Express	Montesa 360H6	Suzuki TF 100	
Honda XR185 Enduro	Montesa 247T	Suzuki TF 125	
Honda XR200 Enduro	Montesa 247	Suzuki TF 185	

Figure 4-5-1. Direction indicator vertical beam angles

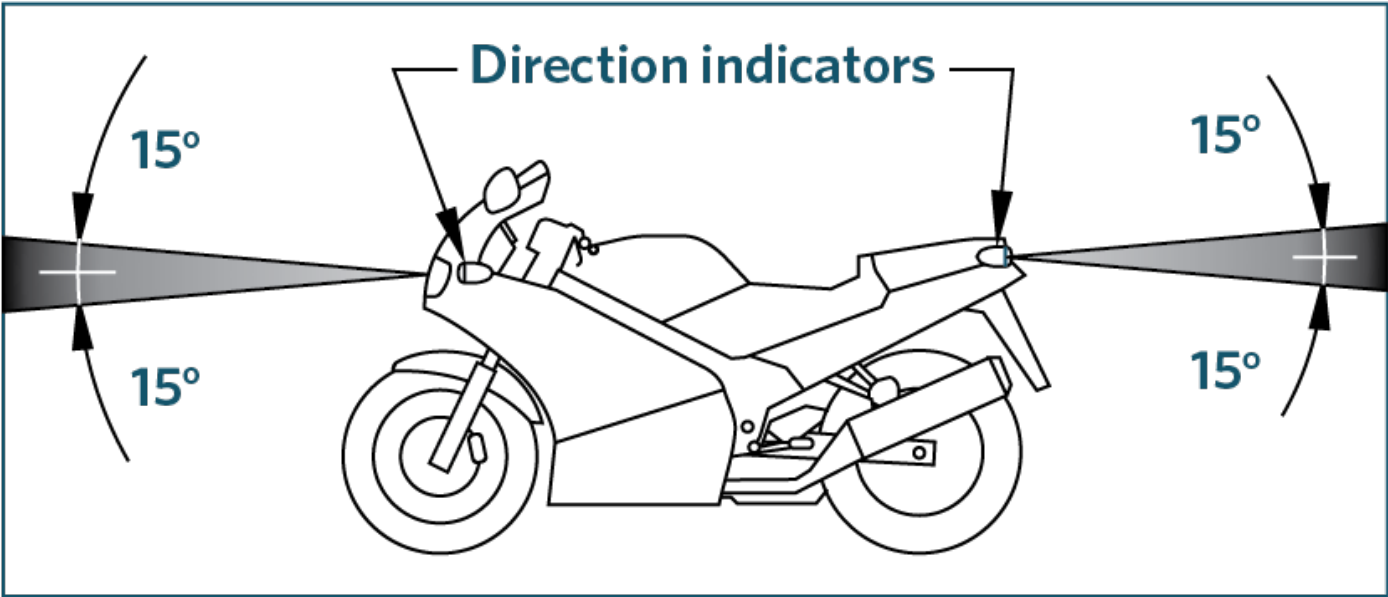
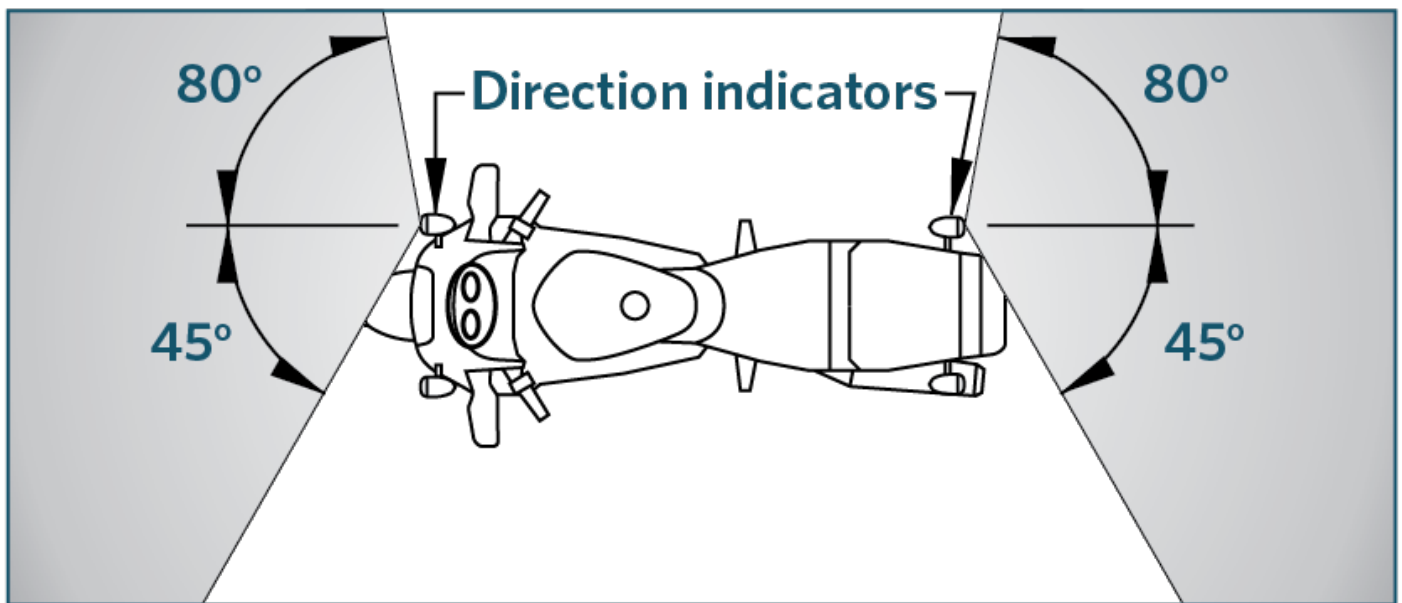


Figure 4-5-2. Direction indicator horizontal beam angles



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Mandatory and permitted equipment

1. A motorcycle first registered in New Zealand before 1 January 1978 may be fitted with one pair to the front and one pair to the rear of the vehicle.
2. A motorcycle first registered in New Zealand on or after 1 January 1978 must be fitted with one or two pairs of lamps to the front and one or two pairs of lamps to the rear of the vehicle.
3. A retrofitted pair of lamps must be:
 - a) symmetrically mounted as far towards each side of the motorcycle as is practicable, and
 - b) at a height from the ground not exceeding 1.5m, or if this is not practicable due to the shape of the bodywork, not exceeding 2.1m.
4. A suitable device must be fitted that indicates to the driver the failure of a mandatory lamp.
5. A motorcycle (eg a vintage or veteran motorcycle) manufactured without lamps, or with lamps that cannot meet specified requirements, may obtain a WoF if:
 - a) the motorcycle has a valid vehicle identity card with a lighting equipment endorsement, and
 - b) the motorcycle meets the conditions of that endorsement.
6. On motorcycles of American origin, the stop lamp and direction indicator lamp functions may be combined in one lamp.

Condition

7. A direction indicator lamp must:
 - a) be in sound condition, and
 - b) not be obscured (if a mandatory lamp).

Performance

8. A direction indicator lamp must operate in a way that is appropriate for the lamp and the vehicle.
9. A direction indicator lamp must emit a light that is substantially:
 - a) white or amber to the front, and
 - b) red or amber to the rear, and
 - c) amber to the side.
10. A lamp must flash at a fixed frequency in the range of 1–2 Hertz.
11. Each lamp in a pair must, when operated, emit a light of approximately equal intensity, colour and frequency.

12. The lamp-failure indicating device must function.
13. A lamp must emit a light that is visible from 100 m during normal daylight and 200 m in normal darkness.
14. A retrofitted mandatory lamp must emit a light that is visible within angles of:
 - a) 15° above and below the horizontal, and
 - b) 45° inboard, and
 - c) 80° outboard.
15. If a motorcycle of American origin is fitted with combined stop and indicator lamps, the indicator lamps must override the stop lamps so that the stop lamps operate as direction indicators.
16. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Modifications

17. A direction indicator lamp that is affected by a modification must meet equipment, condition and performance requirements.

4-6 Forward-facing position lamps

Reasons for rejection

Mandatory and permitted equipment

1. One pair of lamps is not fitted to:
 - a) a motorcycle first registered in new Zealand on or after 1 January 1978 that exceeds 1.5m in width, or
 - b) a motorcycle that exceeds 2m in width.
2. A motorcycle is fitted with more than:
 - a) one pair of lamps, or
 - b) two single lamps.
3. A motorcycle (eg a vintage or veteran motorcycle) does not meet standard forward-facing position lamp requirements, and:
 - a) does not have a valid vehicle identity card with a lighting equipment endorsement, or
 - b) does not meet the conditions of the lighting equipment endorsement in its vehicle identity card.
4. A retrofitted lamp is mounted at a height from the ground exceeding 1.5m (or 2.1m where fitting below 1.5m is not practicable due to the shape of the bodywork of the motorcycle).
5. A retrofitted pair of lamps is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards each side of the motorcycle as is practicable.

Condition

6. A lamp is insecure or, if a mandatory lamp, contains moisture in the form of large droplets, runs or puddles.
7. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
8. A lamp's reflector is damaged or has deteriorated so that light output is reduced.

Performance

9. When switched on, a forward-facing position lamp does not operate.
10. When switched on, a forward-facing position lamp emits a light that is:
 - a) not substantially white or amber, or
 - b) not diffuse, or
 - c) not projected to the front, or
 - d) different in colour or intensity from the other lamp in a pair, or
 - e) not steady, or
 - f) not bright enough to be visible from 200m in normal darkness, eg due to modification, deterioration, dirt or an incorrect

light source

g) is altered, eg due to damage or modification.

11. A mandatory lamp that is not OE and not mounted in the original position emits a light that is not visible within (**Figure 4-6-1**):

- a) 15° above and below the horizontal, or
- b) 45° inboard and 80° outboard.

12. A mandatory lamp's visibility angles are reduced due to modification of the motorcycle so that emitted light is not visible within:

- a) 15° above and below the horizontal, or
- b) 45° inboard and 80° outboard.

13. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1 Definitions

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

An original equipment (OE) lamp is one that is fitted by the vehicle manufacturer in the original position, or is an equivalent replacement or aftermarket lamp suitable for the position provided by the vehicle manufacturer for that lamp.

All other lamps are considered retrofitted (ie non-OE).

Position lamp means a low-intensity lamp that is designed to indicate to road users the presence and dimensions of a vehicle, being:

- a) a forward-facing position lamp (front side lamp), or
- b) a rearward-facing position lamp (rear side lamp or tail lamp), or
- c) a side-marker lamp, or
- d) an end-outline marker lamp (including cab roof lamp).

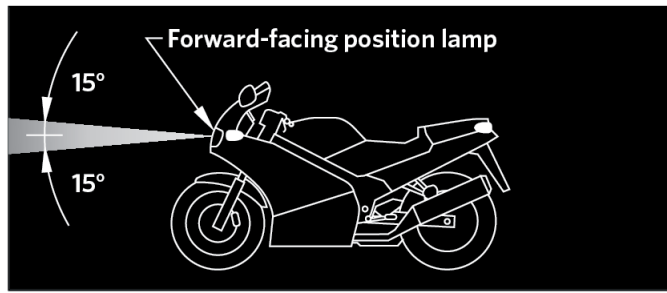
Note 2

A vehicle originally manufactured with a forward-facing position lamp arrangement that differs from what is required or permitted in this section may retain the original forward-facing position lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

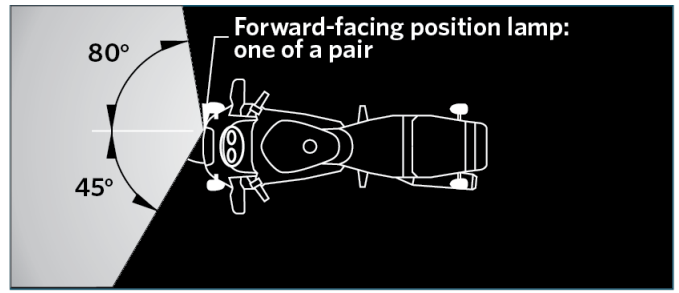
Note 3

A forward-facing permitted lamp that does not comply with the equipment, condition and performance requirements must be made to comply or be removed from the vehicle.

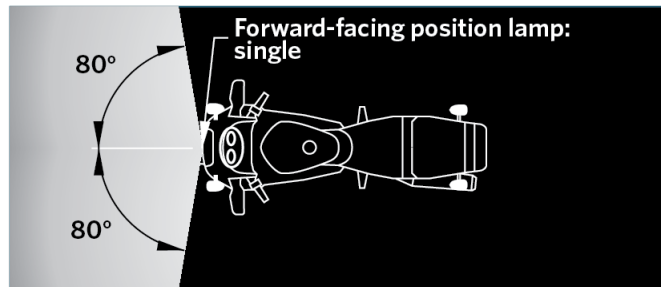
Figure 4-6-1. Forward-facing position lamp beam angles



(a) Vertical beam angles



(b) Horizontal beam angles: one of a pair



(c) Horizontal beam angles: single lamp

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Mandatory and permitted equipment

- One pair of lamps must be fitted to:
 - a motorcycle first registered in New Zealand on or after 1 January 1978 that exceeds 1.5m in width
 - a motorcycle that exceeds 2m in width.
- One or two lamps may be fitted to:
 - a motorcycle that does not exceed 1.5m in width
 - a motorcycle first registered in New Zealand before 1 January 1978 that does not exceed 2m in width.
- A motorcycle (eg a vintage or veteran motorcycle) manufactured without lamps, or with lamps that cannot meet specified requirements, may obtain a WoF if:
 - the motorcycle has a valid vehicle identity card with a lighting equipment endorsement, and
 - the motorcycle meets the conditions of that endorsement.
- A retrofitted pair of lamps must be symmetrically mounted as far towards each side of the motorcycle as practicable.
- A retrofitted lamp must be mounted at a height from the ground not exceeding 1.5m, or if this is not practicable due to the shape of the bodywork of the motorcycle, not exceeding 2.1m.

Condition

- A forward-facing position lamp must:
 - be in sound condition, and
 - not be obscured (if a mandatory lamp).

Performance

- A forward-facing position lamp must operate in a way that is appropriate for the lamp and the vehicle.
- A lamp must emit a light that is:
 - diffuse, and
 - substantially white or amber, and

- c) steady, and
- d) sufficient to indicate to other road users the presence and dimensions of the motorcycle, and
- e) visible from 200 m in normal darkness, and
- f) of approximately equal intensity and colour to the other lamp of a pair.

9. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Modifications

10. A forward-facing position lamp that is affected by a modification must meet the equipment, condition and performance requirements.

4-7 Rearward-facing position lamps

Reasons for rejection

Mandatory and permitted equipment

1. A motorcycle first registered in New Zealand on or after 1 January 1978 that is more than 1.5m wide:
 - a) is not fitted with one pair of lamps, or
 - b) is fitted with more than two pairs of lamps, or
 - c) is fitted with a lamp that is not in a pair.
2. A motorcycle first registered in New Zealand before 1 January 1978 or that is less than 1.5m wide is not fitted with at least one lamp.
3. A motorcycle (eg avintage or veteran motorcycle) does not meet standard rearward-facing position lamp requirements, and:
 - a) does not have a valid vehicle identity card with a lighting equipment endorsement, or
 - b) does not meet the conditions of the lighting equipment endorsement in its vehicle identity card.
4. A retrofitted lamp is mounted at a height from the ground exceeding 1.5m (or 2.1m where fitting below 1.5m is not practicable due to the shape of the bodywork of the motorcycle).
5. A retrofitted pair of lamps is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards each side of the motorcycle as is practicable.

Condition

6. A lamp is insecure or, if a mandatory lamp, contains moisture in the form of large droplets, runs or puddles.
7. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
8. A lamp's reflector is damaged or has deteriorated so that light output is reduced.

Performance

9. When switched on, a mandatory lamp does not operate.
10. When switched on, a lamp emits a light that is:
 - a) not substantially red, or
 - b) not diffuse, or
 - c) not projected to the rear, or
 - d) different in colour or intensity from that of the other lamp in a pair, or
 - e) not steady, or
 - f) not bright enough to be visible from 200m in normal darkness, eg due to modification, deterioration, dirt or an incorrect light source
 - g) is altered, eg due to damage or modification.
11. A non-OE mandatory lamp not mounted in the original position, emits a light that is not visible within (**Figure 4-7-1**):
 - a) 15° above and below the horizontal, or

b) 45° inboard and 80° outboard.

12. A modification to the motorcycle has reduced the mandatory lamp's angles to less than (**Figure 4-7-1**):

a) 15° above and below the horizontal, or

b) 45° inboard and 80° outboard.

13. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1 Definitions

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

An **original equipment (OE) lamp** is one that is fitted by the vehicle manufacturer in the original position, or is an equivalent replacement or aftermarket lamp suitable for the position provided by the vehicle manufacturer for that lamp.

All other lamps are considered retrofitted (non-OE).

Position lamp means a low-intensity lamp that is designed to indicate to road users the presence and dimensions of a vehicle, being:

a) a forward-facing position lamp (front side lamp), or

b) a rearward-facing position lamp (rear side lamp or tail lamp), or

c) a side-marker lamp, or

d) an end-outline marker lamp (including cab roof lamp).

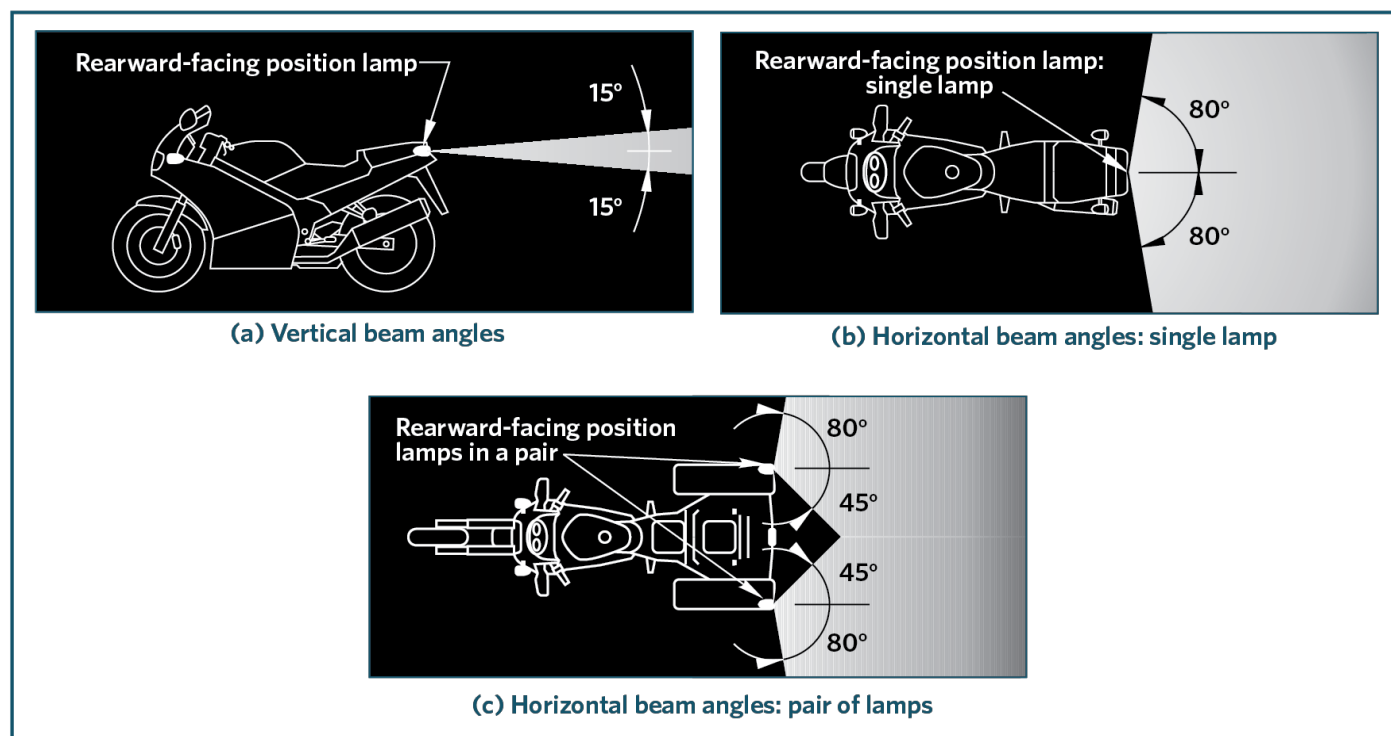
Note 2

A permitted rearward-facing position lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Note 3

A vehicle originally manufactured with a rearward-facing position lamp arrangement that differs from what is required or permitted in this section may retain the original rearward-facing position lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Figure 4-7-1. Rearward-facing position lamp beam angles



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Mandatory and permitted equipment

1. A motorcycle first registered in New Zealand on or after 1 January 1978 and that is more than 1.5m wide must be fitted with one or two pairs of rearward-facing position lamps.
2. A motorcycle that was first registered in New Zealand before 1 January 1978 or that does not exceed 1.5m in width must be fitted with at least one rearward-facing position lamp.
3. A motorcycle (eg a vintage or veteran motorcycle) manufactured without lamps, or with lamps that cannot meet specified requirements, may obtain a WoF if:
 - a) the motorcycle has a valid vehicle identity card with a lighting equipment endorsement, and
 - b) the motorcycle meets the conditions of that endorsement.
4. A retrofitted pair of lamps must be:
 - a) symmetrically mounted as far towards each side of the motorcycle as is practicable, and
 - b) mounted at a height from the ground not exceeding 1.5m, or if this is not practicable due to the shape of the bodywork of the motorcycle, not exceeding 2.1m.

Condition

5. A rearward-facing position lamp must:
 - a) be in sound condition, and
 - b) not be obscured (if a mandatory lamp).

Performance

6. A rearward-facing position lamp must operate in a way that is appropriate for the lamp and the vehicle.
7. A lamp must emit a diffuse light that is substantially red.
8. A lamp must emit a steady light.
9. A lamp must provide sufficient light output to indicate to other road users the presence and dimensions of the motorcycle.
10. A lamp must emit light that is visible from a distance of 200m in normal darkness.
11. A retrofitted mandatory lamp must be visible within angles of 15° above and below the horizontal, and within 45° inboard and 80° outboard.
12. Each lamp in a pair must, when operated, emit a light of approximately equal intensity and colour.
13. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Modifications

14. A rearward-facing position lamp that is affected by a modification must meet equipment, condition and performance requirements.

4-8 Side-marker lamps

Reasons for rejection

Prohibited equipment

1. A motorcycle is fitted with a side-marker lamp ([Note 1](#)).

Note 1

Only certain heavy trailers and vehicles with a length of 6 m or more may be fitted with side-marker lamps.

Note 2 Definitions

Position lamp means a low-intensity lamp that is designed to indicate to road users the presence and dimensions of a vehicle, being:

- a) a forward-facing position lamp (front side lamp), or
- b) a rearward-facing position lamp (rear side lamp or tail lamp), or

- c) a side-marker lamp, or
- d) an end-outline marker lamp (including cab roof lamp).

Side-marker lamp means a position lamp designed to be fitted to the side of a vehicle or its load.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#)

Prohibited equipment

1. A motorcycle must not be fitted with side-marker lamps ([Note 1](#)).

4-9 End-outline marker lamps

Reasons for rejection

Prohibited equipment

1. A motorcycle is fitted with an end-outline marker lamp ([Note 1](#)).

Note 1

End-outline marker lamps may be fitted only to certain heavy motor vehicles, and to light vehicles with an overall width exceeding 1.8 m.

Note 2 Definitions

End-outline marker lamp means a position lamp designed to be fitted near the outer extremity of a vehicle in addition to forward-facing and rearward-facing position lamps; and includes a cab roof lamp.

Position lamp means a low-intensity lamp that is designed to indicate to road users the presence and dimensions of a vehicle, being:

- a) a forward-facing position lamp (front side lamp), or
- b) a rearward-facing position lamp (rear side lamp or tail lamp), or
- c) a side-marker lamp, or
- d) an end-outline marker lamp (including cab roof lamp).

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#)

Prohibited equipment

1. A motorcycle must not be fitted with end-outline marker lamps ([Note 1](#)).

4-10 Stop lamps

Reasons for rejection

Mandatory and permitted equipment

1. A motorcycle first registered in New Zealand on or after 1 January 1978 is not fitted with one stop lamp.
2. A motorcycle is fitted with more than two stop lamps.
3. A motorcycle (eg a vintage or veteran motorcycle) does not meet standard stop lamp requirements, and does not:
 - a) have a valid vehicle identity card with a lighting equipment endorsement, or
 - b) meet the conditions of the lighting equipment endorsement in its vehicle identity card.
4. A retrofitted stop lamp is fitted at a height from the ground exceeding 1.5m (or 2.1m where fitting below 1.5m is not practicable due to the shape of the bodywork of the motorcycle).
5. A retrofitted pair of lamps is not:
 - a) symmetrically mounted, or

b) mounted as far towards each side of the motorcycle as is practicable.

Condition

6. A lamp is insecure or, if a mandatory lamp, contains moisture in the form of large droplets, runs or puddles.

7. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.

8. A reflector is damaged or has deteriorated so that light output is reduced.

Performance

9. When the service brake is activated:

a) a mandatory lamp does not operate, or

b) a lamp does not remain steadily illuminated.

10. A lamp operates when the service brake is not activated.

11. A lamp emits a light that is:

a) not substantially red, or

b) not diffuse, or

c) not projected to the rear, or

d) different in intensity from the other lamp in a pair, or

e) not bright enough to produce a light that is visible from 100m in normal daylight, eg due to modification, deterioration, dirt or an incorrect light source, or

f) is altered, eg due to damage or modification.

12. A non-OE mandatory lamp not mounted in the original position, emits a light that is not visible within **(Figure 4-10-1)**:

a) 15° above and below the horizontal, and

b) 45° either side of the vertical.

13. A modification to the motorcycle has reduced the mandatory lamp's angles to less than **(Figure 4-10-1)**:

a) 15° above and below the horizontal, or

b) 45° either side of the vertical.

14. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

15. On a motorcycle of American origin fitted with combined stop and direction indicator lamps, the stop-lamp function is not overridden by the indicator function.

Note 1 Definitions

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component, or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

An **original equipment (OE) lamp** is one that is fitted by the vehicle manufacturer in the original position, or is an equivalent replacement or aftermarket lamp suitable for the position provided by the vehicle manufacturer for that lamp. All other lamps are considered retrofitted (non-OE).

Stop lamp means a lamp that is designed to operate when the service brake is activated, that is when either the front service brake, the rear service brake, or both the front and rear service brakes are activated.

Note 2

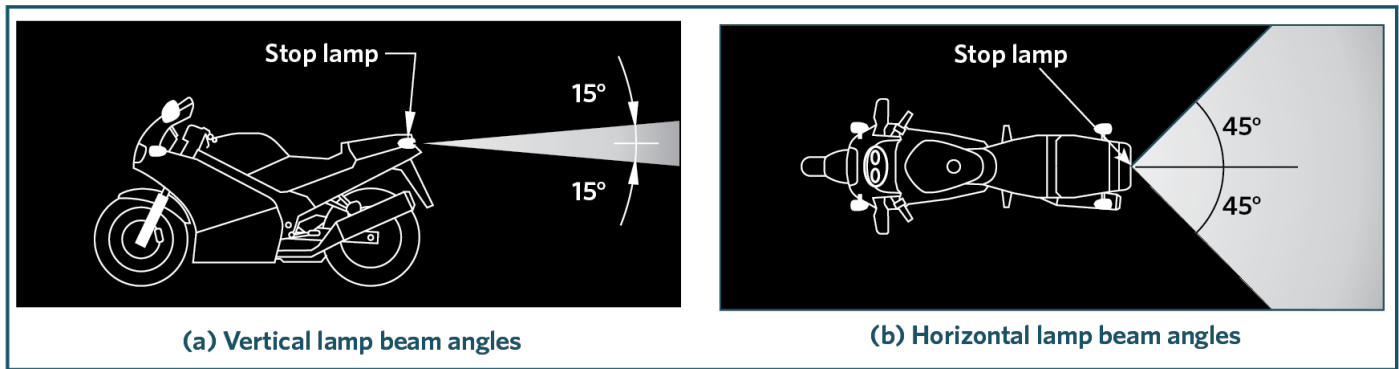
A permitted stop lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Note 3

A vehicle originally manufactured with a stop-lamp arrangement that differs from what is required or permitted in this section may retain the original stop lamps provided they remain fitted in their original position and perform as intended by the vehicle

manufacturer.

Figure 4-10-1. Stop-lamp beam angles



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Mandatory and permitted equipment

1. A motorcycle first registered in New Zealand before 1 January 1978 may be fitted with one or two stop lamps.
2. A motorcycle first registered in New Zealand on or after 1 January 1978 must be fitted with one or two stop lamps.
3. A motorcycle (eg a vintage or veteran motorcycle) manufactured without lamps, or with lamps that cannot meet specified requirements, may obtain a WoF if:
 - a) the motorcycle has a valid vehicle identity card with a lighting equipment endorsement, and
 - b) the motorcycle meets the conditions of that endorsement.
4. A retrofitted pair of stop lamps must be symmetrically mounted as far towards each side of the motorcycle as is practicable.
5. A retrofitted stop lamp must be fitted at a height from the ground not exceeding 1.5m, or if this is not practicable due to the shape of the bodywork of the motorcycle, not exceeding 2.1m.

Condition

6. A stop lamp must:
 - a) be in sound condition.
 - b) not be obscured (if a mandatory lamp).

Performance

7. A stop lamp must operate in a way that is appropriate for the lamp and the vehicle.
8. The light emitted from a stop lamp must be diffuse light that is substantially red.
9. A mandatory stop lamp must operate when a service brake is activated.
10. A mandatory stop lamp must provide sufficient light output to fulfill its intended purpose.
11. A stop lamp must emit a steady light.
12. A retrofitted mandatory stop lamp must emit a light that is visible within the angles of 15° above and below the horizontal, and 45° inboard and outboard.
13. If a motorcycle of American origin is fitted with combined stop and direction indicator lamps, the indicator lamps must override the stop lamps so that the stop lamps will operate as direction indicators.
14. Where a stop lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Modifications

15. A stop lamp that is affected by a modification must meet equipment, condition and performance requirements.

4-11 High-mounted stop lamps

Reasons for rejection

Permitted equipment

1. A motorcycle is fitted with more than two high-mounted stop lamps.
2. A lamp is not fitted in a central high-mounted position.

Condition

3. A lamp is insecure.
4. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
5. A reflector is damaged or has deteriorated so that light output is reduced.

Performance

6. When the service brake is activated, a lamp does not remain steadily illuminated.
7. A lamp operates when the service brake is not activated.
8. A lamp emits a light that:
 - a) is not substantially red, or
 - b) is not diffuse, or
 - c) is not projected to the rear, or
 - d) has insufficient light output to produce a light that is visible from 100 m in normal daylight, eg due to modification, deterioration or an incorrect light source.
9. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1 Definitions

High-mounted stop lamp means a stop lamp that is designed to be fitted in a central, high-mounted position at the rear of the vehicle.

Stop lamp means a lamp that is designed to operate when the service brake is activated.

Note 2

A high-mounted stop lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Note 3

A vehicle originally manufactured with a high-mounted stop lamp arrangement that differs from what is required or permitted in this section may retain the original high-mounted stop lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Permitted equipment

1. A motorcycle may be fitted with one or two high-mounted stop lamps.
2. A lamp must be fitted in a central high-mounted position at the rear of the motorcycle.

Condition

3. A high-mounted stop lamp must be in good condition.

Performance

4. A high-mounted stop lamp must operate in a way that is appropriate for the lamp and the vehicle.
5. The light emitted from a high-mounted stop lamp must be diffuse light that is substantially red.
6. A high-mounted stop lamp must emit a steady light.
7. At least one unobscured lamp must operate when the motorcycle's service brakes are activated.
8. Where a high-mounted stop lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Modifications

9. A high-mounted stop lamp that is affected by a modification:
- a) must meet equipment, condition and performance requirements, and
 - b) does not require LVV specialist certification.

4-12 Rear-reg.-plate illumination lamps

Reasons for rejection

Mandatory equipment

1. A motorcycle is not fitted with at least one rear-registration-plate illumination lamp.

Performance

2. The lamp emits a light that is not:
- a) substantially white, or
 - b) steady, or
 - c) diffuse.
3. The lamps are not bright enough to show up the registration-plate text from 20 m in normal darkness.
4. The light source of a lamp is visible from the rear of the motorcycle.
5. A motorcycle (eg a vintage or veteran motorcycle) does not meet standard rear-registration-plate illumination lamp requirements, and does not:
- a) have a valid vehicle identity card with a lighting equipment endorsement, or
 - b) meet the conditions of the lighting equipment endorsement in its vehicle identity card.

Note 1 Definitions

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component, or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Rear registration-plate illumination lamp means a lamp designed to illuminate the rear registration plate of a vehicle.

Note 2

A vehicle originally manufactured with a rear registration-plate illumination lamp arrangement that differs from what is required or permitted in this section may retain the original rear registration-plate illumination lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Mandatory equipment

1. At least one rear-registration-plate illumination lamp.
2. A motorcycle (eg a vintage or veteran motorcycle) manufactured without lamps, or with lamps that cannot meet lamp requirements, may obtain a WoF if:
- a) the motorcycle has a valid vehicle identity card with a lighting equipment endorsement, and
 - b) the motorcycle meets the conditions of that endorsement.

Performance

3. A rear-registration-plate illumination lamp must operate in a way that is appropriate for the lamp and the vehicle.
4. A lamp must emit a diffused light that is substantially white.
5. A rear-registration-plate illumination lamp must emit a steady light.
6. The light source of the lamp must not be visible from the rear of the motorcycle.

7. A lamp must illuminate the figures and letters of the plate so that they are visible from 20 m during normal darkness.
8. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Modifications

9. A rear-registration-plate illumination lamp that is affected by a modification must meet equipment, condition and performance requirements.

4-13 Rear reflectors

Reasons for rejection

Mandatory and permitted equipment

1. A motorcycle is not fitted with at least one red rearward-facing reflector.
2. A reflector is not positioned to the rear of the motorcycle.
3. A retrofitted reflector is fitted at a height from the ground exceeding 1.5m, or if this is not practicable due to the shape of the bodywork of the motorcycle, exceeding 2.1m.
4. A retrofitted pair of reflectors is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards each side of the motorcycle as is practicable.

Condition

5. A mandatory reflector's ability to reflect light is affected by excessive:
 - a) fading, or
 - b) scratching or other damage.
6. A mandatory reflector is obscured.

Performance

7. The reflected light from a mandatory reflector is not visible from 100m.
8. The reflected light from a reflector is not red.

Note 1 Definitions

Reflector means a distinct item of lighting equipment that is designed to reflect incident light back towards the light source, but does not include reflective material (such as reflective tape).

Reflective material means any material that is designed to reflect incident light back towards the light source, and includes reflective tape, but does not include a reflector.

Note 2

A vehicle originally manufactured with a rear-reflector arrangement that differs from what is required or permitted in this section may retain the original rear reflectors provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Mandatory and permitted equipment

1. A motorcycle must be fitted with at least one rearward-facing reflector that reflects light that is visible from 100m.
2. A rearward-facing reflector must be positioned to the rear of the motorcycle.
3. A reflector must be of an area that allows it to reflect light to improve the visibility of the motorcycle to other road users without causing undue dazzle or discomfort.
4. A retrofitted pair of reflectors must be symmetrically mounted as far towards each side of the motorcycle as is practicable.

Condition

5. A mandatory reflector must be in good condition and not be obscured.

Performance

6. A reflector must operate in a way that is appropriate for the reflector and the vehicle.
7. A reflector must reflect white light as substantially red light.
8. A reflector must provide sufficient light reflection to fulfil its intended purpose.

Modifications

9. A rear reflector that is affected by a modification:
 - a) must meet equipment, condition and performance requirements, and
 - b) does not require LVV specialist certification.

4-14 Reversing lamps

Reasons for rejection

Permitted equipment

1. A motorcycle is fitted with more than two reversing lamps at the rear of the motorcycle.
2. A retrofitted pair of reversing lamps is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards each side of the motorcycle as practicable.

Condition

3. A lamp is insecure.
4. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
5. A reflector is damaged or has deteriorated so that light output is reduced.

Performance

6. A lamp controlled by gear engagement continues to display a light to the rear when the reverse gear is disengaged.
7. A lamp controlled by a manual switch continues to display a light to the rear while the headlamps are switched on.
8. When engaged, a lamp emits light that is not:
 - a) substantially white ([Note 3](#)), or
 - b) steady, or
 - c) diffuse or a dipped beam.
9. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1 Definition

Reversing lamp means a lamp designed to illuminate the area behind the vehicle while it is reversing and to warn other road users that the vehicle is reversing or about to reverse.

Note 2

A reversing lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Note 3

Vehicles first registered in New Zealand before 27 February 2005 were allowed to use rear indicator lamps as reversing lamps. Although the light emitted is amber rather than white, this arrangement is still permitted for these vehicles.

Note 4

A vehicle originally manufactured with a reversing-lamp arrangement that differs from what is required or permitted in this section may retain the original reversing lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Permitted equipment

1. One or two reversing lamps fitted at the rear of the motorcycle.
2. A retrofitted pair of reversing lamps must be symmetrically mounted as far towards each side of the motorcycle as is practicable.

Condition

3. A reversing lamp must be in good condition.

Performance

4. A reversing lamp must operate in a way that is appropriate for the lamp and the vehicle.
5. A reversing lamp, when operated, must emit a diffuse light or a dipped beam of light that is substantially white ([Note 3](#)).
6. A reversing lamp must emit a steady light.
7. A reversing lamp may operate only when the reverse gear is engaged or the headlamps are turned off.
8. Where a reversing lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Modifications

9. A reversing lamp that is affected by a modification:
 - a) must meet equipment, condition and performance requirements, and
 - b) does not require LVV specialist certification.

4-15 Cosmetic lamps

Reasons for rejection

Permitted equipment

1. A cosmetic lamp (ie one not listed in **Table 4-15-1**) that is fitted to a vehicle:
 - a) has a part of its light-emitting surface positioned within 250 mm of any mandatory lamp, or
 - b) is not mounted in a fixed position.
 - c) is positioned so that its light-emitting surface is visible within the shaded areas in **Figure 4-15-1**.

Performance

2. When switched on, a lamp with a light-emitting surface not visible within the shaded areas in **Figure 4-15-1** emits a light that:
 - a) is not diffuse, or
 - b) flashes or otherwise varies in intensity or colour, or
 - c) revolves, rotates or otherwise moves, or
 - d) is too bright, and likely to dazzle other road users, or
 - e) is likely to cause confusion about the orientation of the vehicle, or
 - f) is red when seen directly from the front, or
 - g) is not red or amber when seen directly from the rear.

Note 1

A rear or side cosmetic lamp that does not comply with requirements for condition or performance must be made to comply, or be disabled so that it does not emit a light.

Note 2 Definitions

Lamp means a device designed to emit light, and includes an array of separate light sources that appear as a continuous illuminated surface.

Cosmetic lamp means any lamp that is not listed in **Table 4-15-1**.

Note 3

A vehicle originally manufactured with a headlamp arrangement that differs from what is required or permitted in this section may retain the original headlamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

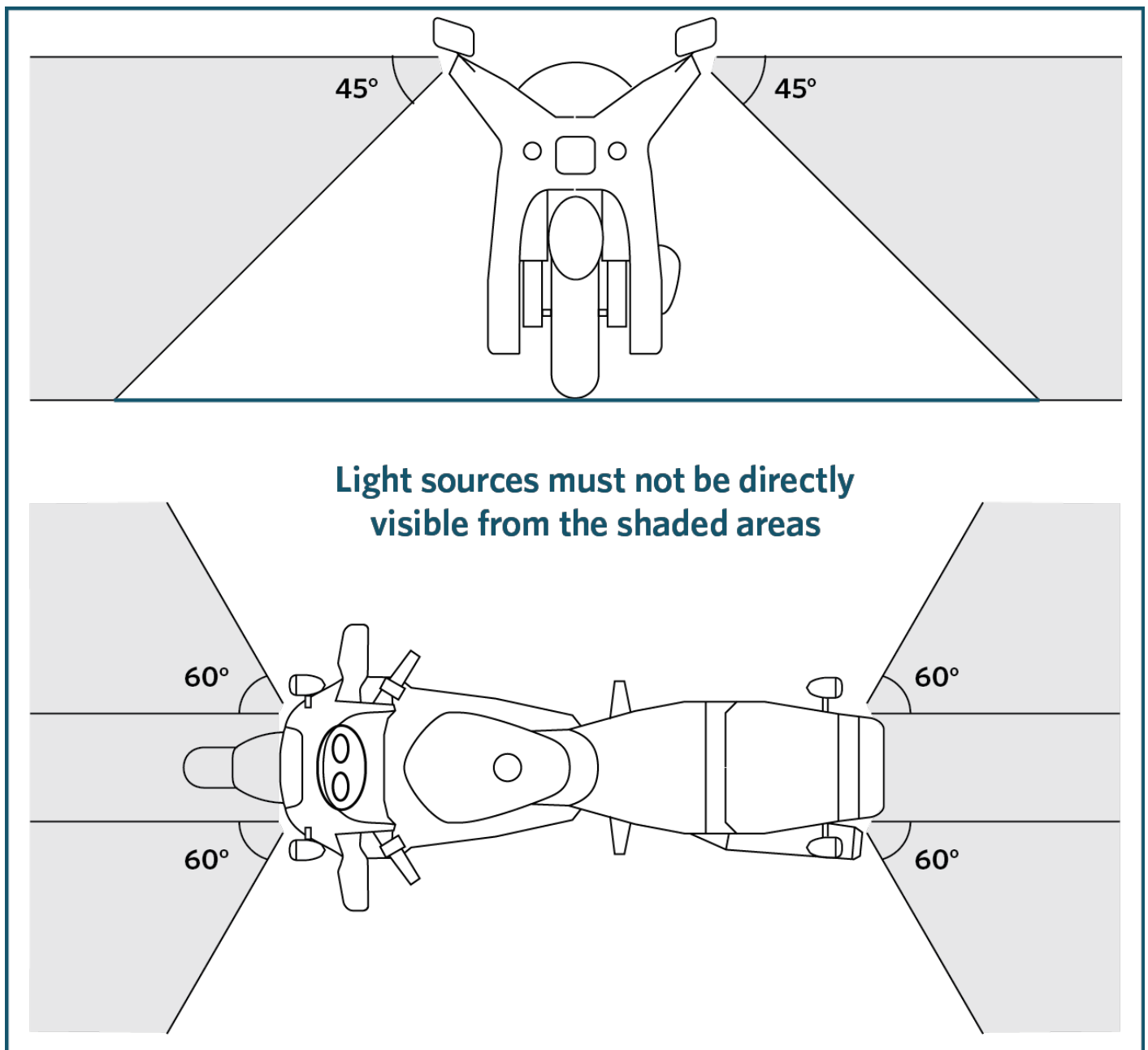
Note 4

A forward-facing permitted lamp that does not comply with the equipment, condition and performance requirements must be made to comply or be removed from the vehicle.

Table 4-15-1. Lamps that are not cosmetic lamps

Lamps covered in the VIRM	Other lighting equipment not requiring inspection
Headlamps	Reflective material
Stop lamps	Interior lamps - <i>Designed to illuminate the interior of the vehicle for the convenience of passengers.</i>
High-mounted stop lamps	Work lamps - <i>White or amber high-intensity lamps that are not necessary for the operation of the vehicle but are designed to illuminate the area around the vehicle or the vehicle itself.</i>
Direction indicator lamps	Scene lamps - <i>Work lamps designed to provide a fixed or movable beam of light to illuminate the area around the vehicle or the vehicle itself.</i>
Position lamps (includes side-marker lamps and end-outline marker lamps)	Alley lamps - <i>Work lamps designed primarily to provide a fixed or movable beam of light to the side of the vehicle it is fitted to.</i>
Rear registration-plate illumination lamps	Flashing or revolving beacons
Rear reflectors	Illuminated vehicle-mounted signs - <i>Includes PSV destination signs, taxi signs, and variable message signs operated by enforcement officers, under a traffic management plan or permitted by other legislation.</i>
Fog lamps	
Daytime running lamps	
Cornering lamps	
Reversing lamps	
PSV interior lamps	

Figure 4-15-1. Visibility angles for cosmetic lamps



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Permitted equipment

1. A vehicle may be fitted with one or more lamps not specified in **Table 4-15-1**, provided they are fitted so that light sources are not visible in those regions specified in **Figure 4-15-1**.
2. A lamp must be fitted in a fixed position on the vehicle and positioned so that no part of the light source is situated within 250 mm of a mandatory lamp.

Performance

3. A lamp must:
 - a) only emit light that is diffuse, and
 - b) not emit light that flashes or otherwise varies in intensity or colour, and
 - c) be fitted in a way, and be of a luminance that ensures, that it does not dazzle, confuse or distract other road users, and
 - d) not emit a light that revolves, rotates or otherwise moves, and
 - e) not cause confusion as to the orientation of the vehicle, and
 - f) not emit a red light that is directly visible from the front of the vehicle, and

g) not emit a light other than red or amber if the light is directly visible from the rear of the vehicle.

5 Vision

5-1 Glazing

Reasons for rejection

Permitted equipment

1. Any glazing is not a transparent material that does not shatter.

Glazing condition

2. A piece of glazing is not mechanically sound, or is not securely affixed to the vehicle.

3. A windscreen ([Note 1](#)) (not a wind deflector) or front side window is so dirty or obstructed that the driver's vision is impaired.

4. A windscreen (not a wind deflector) has damage that prevents the wiper blades from working properly.

5. A windscreen has scratches, discolouration or other defects that unreasonably impair the driver's vision or compromise the strength of the windscreen.

Condition within the critical vision area (CVA)

6. The critical vision area (CVA) of a windscreen (**Figure 5-1-1**) is damaged ([Note 2](#)) (apart from scratching and surface pitting that does not affect the driver's vision such as small stone marks).

Condition outside the CVA ([Note 10](#))

7. A windscreen (not a wind deflector) has damage of a type and exceeding the dimensions in **Figure 5-1-2**.

8. Any damage to a windscreen (not a wind deflector) that extends through more than one layer of glass.

Glazing performance

9. The overall visible light transmittance (VLT) ([Note 4](#)) of a windscreen is less than 70%.

10. The overall VLT of a front side window is less than 35%.

11. Glazing has a mirrored effect sufficient to dazzle other road users (unless it is OE and has an approved standard marking).

12. A modification:

- a) unreasonably impairs the rider's vision through the windscreen or front side window, or
- b) adversely affects the strength or mechanical performance of the glazing on the vehicle.

Permitted modifications

13. A modification that affects glazing is not within the limits in **Table 5-1-1**.

Windscreen repair

14. A windscreen that has been rejected for a WoF or CoF has been repaired and re-presented without the required documentation ([Note 5](#))

Note 1

Windscreen means all glazing extending across the front of a vehicle that is not parallel to the vehicle's centreline but does not include a wind deflector.

Note 2

Damage includes any unrepaired damage and attempted visible repairs.

Note 3

Laminated glass means glazing consisting of two or more pieces of sheet glass, plate glass or float glass bonded together by one or more intervening layers of plastic material.

Note 4

Visible light transmittance (VLT) is the proportion of visible light that passes through glazing, measured perpendicular to the glazing. Overall VLT is the VLT of the glazing together with any overlays.

Note 5

When a windscreen has been rejected for a WoF or CoF, repaired, and then re-presented for inspection, the repair must be certified to AS/NZS2366 1999, AS2366 1990 or NZS5470 1993. Proof of certification is the receipt issued in accordance with the relevant standard by the repairer. For AS/NZS2366 1999, the windscreen repair invoice must include:

- a) invoice number
- b) date of repair
- c) date of invoice (if different from date of repair)
- d) trading name and address of repairer
- e) name or identification of person performing the repair
- f) make of vehicle
- g) registration number of vehicle, or if registration number is unavailable, then the vehicle identification number (VIN) or chassis number
- h) details of work carried out
- i) type and location of repaired damage on the windscreen (it is recommended that this be marked on a schematic windscreen on the invoice form)
- j) in the case of repairs performed to this standard, a statement that the repairs have been made in accordance and comply with AS/NZS 2366.1 using a repair system that complies with AS/NZS 2366.2

Note 6

Overlay means a transparent, translucent or opaque self-adhesive or clinging film that is applied to large areas, or the whole, of a piece of glazing, including anti-glare band overlays, stoneguard overlays.

Note 7

Sticker means a self-adhesive or clinging film, with or without print on it, that is applied for purposes such as advertising, identification, information, or for aesthetic or legal reasons.

Note 8

Anti-glare band overlay means a tinted overlay that is transparent and that is applied along the top edge of the windscreen for the purpose of reducing glare from the sun.

Note 9

Stoneguard overlay means a clear overlay that is transparent and that is applied along the bottom edge of the windscreen for the purpose of preventing damage to the windscreen from stones and other debris thrown up by other vehicles.

Note 10

Any OE opaque edging (usually black) is not considered part of the windscreen when determining the boundaries of the CVA, or the areas permitted for stickers, print on an anti-glare band, or radio antennae.

Table 5-1-1. Permitted modifications

Fitting of or modification to:	Modification permitted provided that:
Overlays (Note 6) (see also below for overlays on windscreens, front side windows, rear and rear side windows, and sun roofs)	<ul style="list-style-type: none"> overlays do not: <ul style="list-style-type: none"> have any bubbling or other defects that could unreasonably impair vision, or have a mirrored effect that is sufficient to dazzle other road users, or affect the performance of any high-mounted stop lamps fitted to the vehicle.
Windscreens (Note 1):	
Stickers (Note 7)	<ul style="list-style-type: none"> stickers are wholly within 100 mm of the top or bottom edge, or 50 mm of the side edges, unless required or permitted by legislation, eg: <ul style="list-style-type: none"> a licence label a road user licence label a WoF label an alternative fuel sticker a parking permit or other document issued by the local authority learner L-plates (in sticker format) provided the driver's vision is not unreasonably affected.
Anti-glare band overlay (Note 8)	<ul style="list-style-type: none"> the overlay is transparent, and <ul style="list-style-type: none"> does not extend below the bottom edge of the vehicle's OE sun visors when they are folded down as far as possible towards the windscreen, and does not contain print below a line that is 100 mm below and parallel to the top edge of the windscreen.
Radio antennae	<ul style="list-style-type: none"> antennae are wholly within 100 mm of any edge.
Front side windows:	
Transparent overlays	<ul style="list-style-type: none"> the overall visible light transmittance (VLT) is not reduced to below 35%.
Stickers	<ul style="list-style-type: none"> stickers are wholly within 100 mm of the bottom edge, or 50 mm of any other edge, unless required or permitted by legislation.
Radio antennae	<ul style="list-style-type: none"> antennae are wholly within 100 mm of any edge.
Rear and rear side windows (behind the driver's seat):	
Overlays and other modifications	<ul style="list-style-type: none"> the vehicle is equipped on both sides with external rear-view mirrors.

Stickers	<ul style="list-style-type: none"> stickers may be applied anywhere on the glazing, but if not wholly within 100 mm of any edge, the vehicle must be equipped on both sides with external rear-view mirrors.
Radio antennae	<ul style="list-style-type: none"> in-service requirements for condition and performance are met.
Monsoon shields	<ul style="list-style-type: none"> in-service requirements for condition and performance are met.
Electric demisters	
Sunroofs: overlays and stickers applied anywhere on the glazing, radio antennae and electric demisters	
Any modification for the purposes of law enforcement or the provision of emergency services	

Figure 5-1-1. Windscreen critical vision area (CVA)

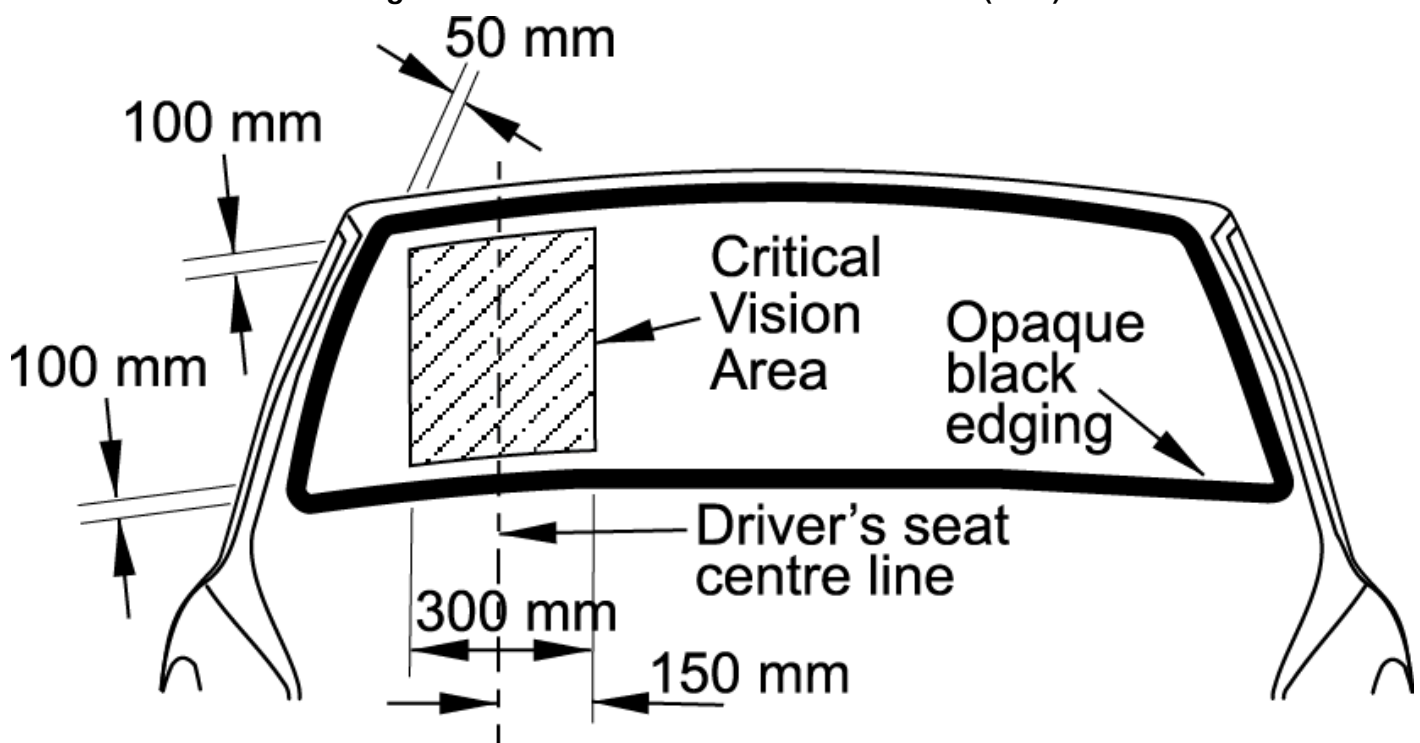


Figure 5-1-2. Types and maximum sizes of windscreen damage ([Note 2](#)).

(see also Figure 5-1-3)









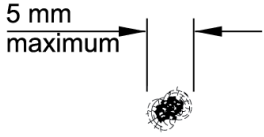
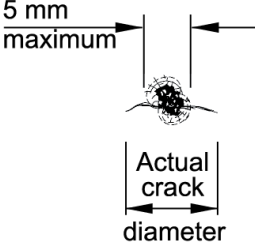
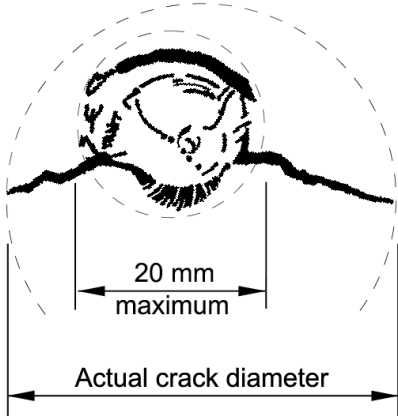
CRATER  Maximum diameter 5 mm	HORSESHOE  Maximum diameter 25 mm	STAR  Maximum diameter 30 mm	BULLSEYE  Maximum diameter 20 mm	CRACK  Maximum diameter 100 mm
COMBINATION SAME TYPE  Diameter of the smallest circle around all incidences is measured and maximum diameter applied.		COMBINATION DIFFERENT TYPES  Each type measured and maximum diameter applied separately.		COMBINATION SAME + DIFFERENT  Diameters of the smallest circles around all incidences of same types are measured and maximum diameter applied.

Figure 5-1-3. Types and maximum sizes of windscreen damage (incl. actual maximum sizes)

Note Due to different screen resolutions and sizes the image may not be displayed at actual size.

COMBINATION DAMAGE	
<p>Combination: same type</p> <p>Diameter of the smallest circle around all incidences is measured and maximum diameter applied.</p> <p>Example: Two craters: Maximum diameter 5 mm for both craters together.</p> 	<p>Combination: same + different types</p> <p>Each type is measured and maximum diameter applied separately.</p> <p>Example: Two craters + crack: Maximum diameter 5 mm for two craters; 100 mm for the crack, whichever applies.</p> 
<p>Combination: different types</p> <p>Each type measured and maximum diameter applied.</p> <p>Example: Bullseye + crack: Maximum diameter 20 mm for the bullseye; 100 mm for the crack, whichever applies.</p> 	

Summary of legislation

Applicable legislation

- [Land Transport Rule: Glazing, Windscreen Wipe and Wash, and Mirrors 1999](#).

Permitted glazing

Glazing markings

1. All glazing must be transparent material of a kind that does not shatter.

Glazing condition

2. Glazing must be mechanically sound, strong, and securely affixed to the vehicle.
3. A windscreen and front side windows must be clean and free of obstruction to ensure the driver has sufficient vision through the glazing to operate the vehicle safely.
4. A windscreen must not have scratches and other defects that:
 - a) unreasonably impair vision, or
 - b) compromise its strength.

5. A laminated windscreen must not show signs of discolouration that could unreasonably impair the driver's vision.

Glazing performance

6. A windscreen visible light transmittance (VLT) must be at least 70%.
7. Front side windows VLT must be at least 35%.
8. Glazing must not have a mirrored effect sufficient to dazzle other road users.
- 9 A modification must not:
 - a) unreasonably impair vision through the windscreen or a front side window, or
 - b) adversely affect the strength or mechanical performance of the glazing on the vehicle.

Permitted modifications

10. A modification that affects glazing is permitted if within the limits in **Table 5-1-1**.

Windscreen repair

11. A repair to a windscreen carried out on or after 1 January 1997 must comply with whichever of the following standards is applicable at the date of repair:
 - a) New Zealand Standard 5470: 1993, Code of Practice for Automotive Windscreen Repair (superseded by Australian Standard/New Zealand Standard 2366: 1999, Windscreen Repairs), or
 - b) Australian Standard 2366-1990, Repair of Laminated Glass Windscreens Fitted to Road Vehicles (superseded by Australian Standard/New Zealand Standard 2366: 1999, Windscreen Repairs).

5-2 Sun visors

Reasons for rejection

Condition

1. A sun visor ([Note 1](#)):
 - a) is insecurely mounted, or
 - b) cannot maintain its adjusted position, or
 - c) has been modified ([Note 1](#)) or has deteriorated, and the likelihood of injury to vehicle occupants has not been minimised.

Note 1 Definitions

Sun visor means any attachment mounted above the inside of the windscreen and provided for the purpose of shielding the eyes of the driver and other front seat passengers from solar glare.

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004](#)
- [Land Transport Rule: Interior Impact 2002.](#)

Permitted equipment

1. A motorcycle may be fitted with one or more sun visors.

Condition

2. The condition of a sun visor must be such that the likelihood of injury to occupants is minimised.

Modification

3. A sun visor that is not OE or that is affected by a modification:
 - a) must meet the requirements for condition, and
 - b) does not require LVV specialist certification.

5-3 Windscreen wipe and wash

Reasons for rejection

Mandatory equipment

1. A vehicle of class LC or LD manufactured on or after 1 January 2000 that is fitted with a windscreen (not a wind deflector) is not fitted with a windscreen wipe and wash system.

Condition

Windscreen wipe system

2. The wiper operating device is missing.
3. A wiper arm or wiper blade is:
 - a) missing, or
 - b) insecure, or
 - c) damaged so as to affect the performance of the wipers.
4. The wiper operating mechanism is:
 - a) missing, or
 - b) insecure, or
 - c) damaged so as to affect the performance of the wipers.

Windscreen wash system

5. A wash system component is missing or insecure.
6. The wash operating device is missing.

Performance

Windscreen wipe system

7. A windscreen wiper does not wipe the windscreen effectively, preventing adequate forward vision by the driver.
8. The wipe operating device is unable to activate the wipe system.

Windscreen wash system

9. A windscreen wash nozzle does not discharge washer liquid directly onto the windscreen.
10. The wash operating device is unable to activate the wash system.

Modifications

11. A modification affects a windscreen wipe system, and:

- a) is not excluded from the requirements for LVV specialist certification (**Table 5-3-1**), and
- b) is missing proof of LVV specialist certification:
 - i. the vehicle is not fitted with a valid LVV certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Table 5-3-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is never required:
Any modification for the purposes of law enforcement or the provision of emergency services	<ul style="list-style-type: none">• in-service requirements for condition and performance must be met.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Glazing, Windscreen Wipe and Wash, and Mirrors 1999.](#)

Mandatory equipment

1. A vehicle of class LC or LD manufactured on or after 1 January 2000 that is fitted with a windscreen must have a windscreen wipe and wash system.

Permitted equipment

2. A vehicle may be fitted with a wash system when this is not required.

Condition

3. A windscreen wipe and wash system that is fitted to a vehicle of class LC or LD manufactured on or after 1 January 2000 must be efficient and within the vehicle manufacturer's operating limits.

Performance

4. A windscreen wipe and wash system that is fitted to a vehicle of class LC or LD manufactured on or after 1 January 2000 must be capable of keeping an adequate area of the windscreen clean and clear so that the vehicle may be operated safely under all reasonably foreseeable conditions.

Modifications

5. An OE windscreen washing or wiping system may be removed from a vehicle manufactured before 1 January 2000.

6. A modification to the windscreen wipe system must be inspected and certified by an LVV specialist certifier unless the vehicle:

- a) is excluded from the requirement for LVV specialist certification (**Table 5-3-1**), and
- b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition, and performance.

5-4 Rear-view mirrors

Reasons for rejection

Mandatory equipment

1. The vehicle is not fitted with at least one rear-view mirror.

Condition

2. A rear-view mirror:

- a) is not mounted securely, or
- b) cannot be adjusted, or
- c) cannot maintain its adjusted position, or
- d) is corroded or dirty, or

e) is damaged so that it increases the risk of injury to vehicle occupants.

Performance

3. A rear-view mirror:

- a) does not provide a clear view to the rear of the vehicle, or
- b) is not sufficiently isolated from vibrations.

Modifications

4. Additional rear-view mirrors have been fitted or a modification affects rear-view mirrors, and:

- a) is not excluded from the requirements for LVV specialist certification (**Table 5-4-1**), and
- b) is missing proof of LVV specialist certification, eg:
 - i. the vehicle is not fitted with a valid LVV certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Table 5-4-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is never required:
Additional or substituted rear-view mirrors, or removal of a non-mandatory mirror	<ul style="list-style-type: none">• in-service requirements for condition and performance must be met.
Any modification for the purposes of law enforcement or the provision of emergency services	

Summary of legislation

Applicable legislation

- [Land Transport Rule: Glazing, Windscreen Wipe and Wash, and Mirrors 1999](#).

Mandatory equipment

1. A vehicle must be fitted with at least one rear-view mirror.

Permitted equipment

2. Additional rear-view mirrors may be fitted.

Condition

3. A rear-view mirror must be:

- a) securely attached so that the risk of injury is minimised, and
- b) mounted so that vibration does not inhibit the driver's required clear view to the rear, and
- c) sufficiently adjustable, and able to maintain its position.

Performance

4. A rear-view mirror must provide a clear view to the rear of:

- a) the motor vehicle itself, and
- b) the vehicle's load, and
- c) any towed trailer and its load.

5. A rear-view mirror must be sufficiently isolated from vibrations.

Modifications

6. The fitting of additional rear-view mirrors, or a modification that affects rear-view mirrors must be inspected and certified by an LVV specialist certifier, unless the vehicle:

- a) is excluded from the requirement for LVV specialist certification (**Table 5-4-1**), and
- b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition and

performance.

6 Entrance and exit

6-1 Door and hinged panel retention systems

Reasons for rejection

Mandatory equipment

1. A motor vehicle fitted with doors used by the driver or passengers for entrance and exit of the motor vehicle do not have a door retention system.

Equipment condition

2. A hinge for a door or other hinge panel is not securely attached to both the vehicle body and to the door or other hinged panel due to loose connections, corrosion or other damage.
3. A door used for entrance and exit cannot be opened from the inside.
4. A child safety lock or similar safety device cannot be de-activated.
5. There is corrosion damage within 150mm of the hinge of a door or other hinged panel (**Figure 6-1-1**).
6. There is corrosion damage (**Note 1**) within 150mm of the latch of a door or other hinged panel (**Figure 6-1-1**).

Equipment performance

7. A door used for entrance and exit does not open or close easily.
8. A door or other hinged panel does not remain secure in a closed or locked position.

Modifications

9. A modification (**Note 1**) affects the door retention system, and:
- a) is not excluded from the requirements for LVV specialist certification (**Table 6-1-1**), and
 - b) has not been inspected and certified by a low volume vehicle specialist certifier and is missing proof of LVV specialist certification, ie:
 - i. the vehicle is not fitted with a valid low volume vehicle certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1 Definitions

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward signs of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

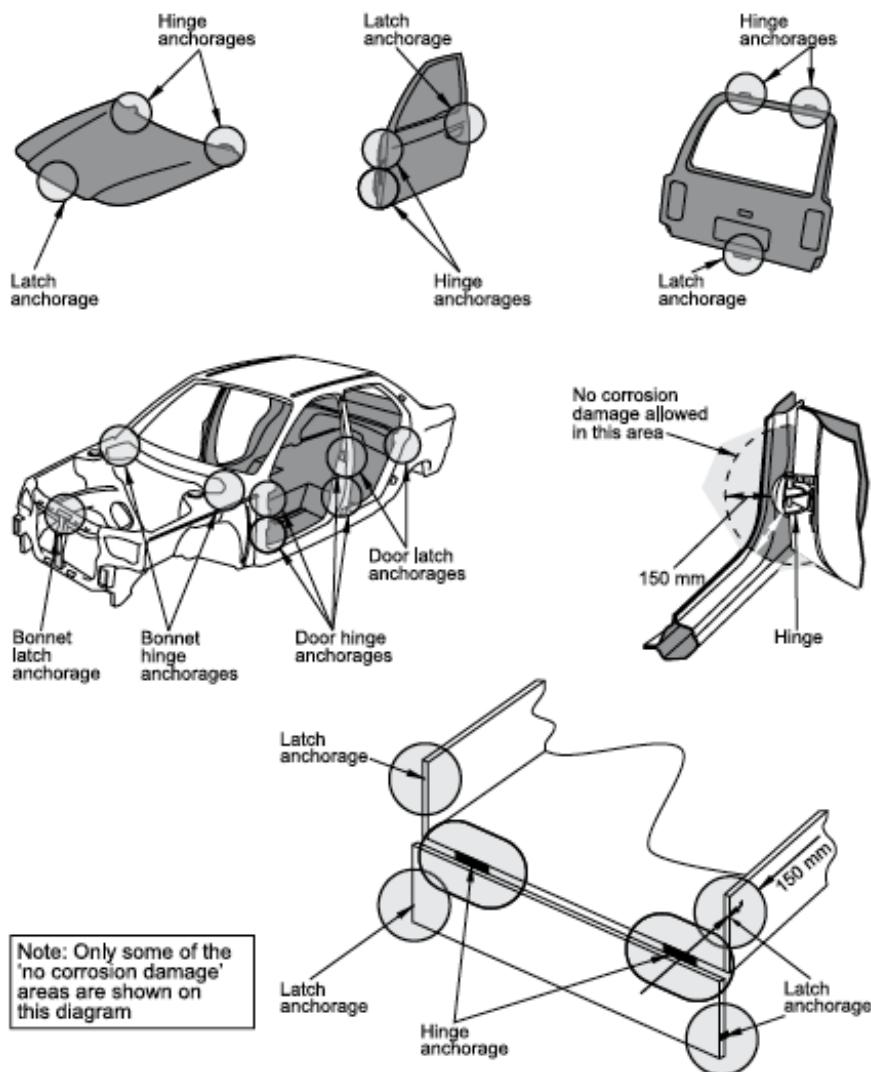
Table 6-1-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is never required:
Any modification for the purposes of law enforcement or the provision of emergency services	<ul style="list-style-type: none">in-service requirements for condition and performance must be met.

Figure 6-1-1. Hinge and latch anchorages

No corrosion damage is allowed within 150mm of a circle around the outside of hinge or latch components.

Note Image is indicative only.



Summary of legislation

Applicable legislation

- [Land Transport Rule: Door Retention Systems 2001](#)
- [Land Transport Rule: Vehicle Standards Compliance 2002, section 7.4.](#)

Mandatory equipment

1. A motor vehicle fitted with doors used by the driver or passengers for entrance and exit of the motor vehicle must have a door retention system.

Permitted equipment

2. The door retention system on doors to the rear of the driver's seat may incorporate safety devices installed during the manufacture of the vehicle to prevent the doors from being opened from the inside of the vehicle (eg child safety locks).

Equipment condition

3. A door retention system and its mountings must be safe and structurally sound.

4. A door used for the entrance and exit of the driver or passengers must be operable by any occupant seated by the door from inside the motor vehicle.

5. The vehicle must be designed and constructed using components and materials that are fit for their purpose, and within safe tolerance of its state when manufactured or modified.

Equipment performance

6. A door retention system must be in good working order.

7. A door used for entrance and exit must open and close easily.

8. A door used for entrance and exit must remain secure in a closed position during the operation of the motor vehicle.

Modifications

9. A modification that affects the door retention system must be inspected and certified by a low volume vehicle specialist certifier, unless the vehicle:

- a) is excluded from the requirement for LVV specialist certification (**Table 6-1-1**), and
- b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

7 Vehicle interior

7-1 Seats and seat anchorages

Reasons for rejection

Mandatory equipment

1. The vehicle is not fitted with a driver's seat.
2. A seat is not attached to the vehicle structure by seat anchorages.

Condition and performance

3. A seat frame or seat structure has been weakened, eg due to damage, corrosion or excessive wear.
4. The adjustment mechanism of a driver's seat:
 - a) does not operate, or
 - b) is worn, causing excessive movement of the seat.
5. The attachment of the seat to the seat anchorage is loose or weakened by damage.
6. The attachment of the seat anchorage to the vehicle structure is loose or weakened by damage.
7. There is corrosion damage ([Note 1](#)) within 150mm of a seat anchorage.
8. There is corrosion damage within 300mm of the anchorage of a seat with integrated seatbelt anchorages.
9. A driver's seat is in such a condition that it does not allow the driver to have proper control of the vehicle.

Modification

10. A modification ([Note 1](#)) carried out after 1 March 1999 affects a seat or seat anchorage, and:
 - a) is not excluded from the requirements for LVV specialist certification (**Table 7-1-1**), and
 - b) is missing proof of LVV specialist certification, ie:
 - i. the vehicle is not fitted with a valid low volume vehicle certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1 Definitions

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward signs of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Table 7-1-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is not required provided that:
A replacement seat that is similar to the OE seat	<ul style="list-style-type: none"> the seat is fitted to unmodified OE seat anchorages, and the relationship between the seat, seat occupant and location of the seatbelt anchorages is not affected.

Fitting of or modification to:	LVV certification is never required:
Any modification for the purpose of law enforcement or the provision of emergency services	<ul style="list-style-type: none"> in-service requirements for condition and performance must be met.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Seats and Seat Anchorages 2002.](#)

Mandatory equipment

- A motor vehicle must be fitted with a driver's seat.
- A seat in a motor vehicle must be fitted to the vehicle structure by means of seat anchorages.

Condition and performance

- Seats and seat anchorages must be safe, strong, in sound condition and compatible in strength with each other and with the vehicle structure.
- The driver's seat and its anchorages must be designed, constructed and maintained to enable the driver to have proper control of the vehicle.
- Seats and seat anchorages must be securely attached to the vehicle structure.

Modification

- A modification on or after 1 March 1999 to a seat or seat anchorage must be inspected and certified by an LVV specialist certifier, unless the vehicle:
 - is excluded from the requirement for LVV specialist certification (**Table 7-1-1**), and
 - has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

7-3 Head restraints

Reasons for rejection

Condition and performance

- The external surfaces and padding of a head restraint have deteriorated to the extent that they are likely to injure a vehicle occupant.
- An adjustable head restraint is unable to remain locked in its adjusted position.

Modification

- A modification ([Note 1](#)) affects a head restraint, and:
 - is not excluded from the requirements for LVV specialist certification (**Table 7-3-1**), and
 - is missing proof of LVV specialist certification, ie:
 - the vehicle is not fitted with a valid LVV certification plate, or
 - the operator is not able to produce a valid modification declaration or authority card.

Note 1 Definitions

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Table 7-3-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is never required:
Head restraint removal	<ul style="list-style-type: none">in-service requirements for condition and performance must be met.
Any modification for the purpose of law enforcement or the provision of emergency services	

Summary of legislation

Applicable legislation

- [Land Transport Rule: Head Restraints 2002](#).

Permitted equipment

- A motor vehicle may be fitted with head restraints.

Condition and performance

- The external surfaces and padding of a head restraint must not have deteriorated to the extent that the likelihood of injury to an occupant of the vehicle is increased.
- An adjustable head restraint must remain able to be adjusted and locked into position.

Modification

- A modification that affects a head restraint must be inspected and certified by an LVV specialist certifier, unless the vehicle:
 - is excluded from the requirement for LVV specialist certification (**Table 7-3-1**), and
 - has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

7-6 Frontal impact airbags

Reasons for rejection

Mandatory equipment

- A deployed frontal impact airbag has not been replaced.
- An OE airbag warning light system has been removed from a vehicle fitted with airbags.
- A motor vehicle has a sign, light or other device that indicates the vehicle is fitted with an airbag when it is not fitted with an airbag.

Condition and performance

- An airbag cover:
 - is damaged, or
 - has deteriorated, or
 - shows signs of tampering or inadequate repair.
- Additional equipment has been fitted that may affect the proper performance of the airbag.
- The airbag warning light:
 - does not operate, or
 - indicates a fault in the system.

Modification

7. A modification ([Note 2](#)) affects an airbag system (eg an airbag has been removed, or made inoperable, including retro-fitting a switch), and:

- a) is not excluded from the requirements for LVV specialist certification (**Table 7-6-1**), and
- b) is missing proof of LVV specialist certification, ie:
 - i. the vehicle is not fitted with a valid LVV certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

8. A motor vehicle that has had an airbag system removed or made inoperable and been certified as above does not:

- a) have all OE signs, lights, or other devices that indicated the vehicle was fitted with an airbag removed, or
- b) if the signs, lights, or other devices cannot be readily removed, have a label that indicates an airbag has been removed permanently attached in a prominent location where it is clearly visible to any occupant of the seating position that was previously protected by the airbag.

Note 1 Definitions

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Note 2

Some modifications are permitted, but they must always be LVV certified. The only modifications permitted are:

- fitting a switch to render an airbag temporarily inoperable, and
- the removal or permanent deactivation of an airbag in a vehicle that:
 - is at least 14 years old, or
 - has been adapted for a person with a disability, or
 - has been extensively modified for motorsport use.

Table 7-6-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is never required:
Any modification for the purposes of law enforcement or the provision of emergency services	<ul style="list-style-type: none">• in-service requirements for condition and performance must be met.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Frontal Impact 2001](#).

Mandatory equipment

1. A frontal impact airbag and its operating system must remain operational if the vehicle was originally manufactured with a frontal impact airbag.
2. An airbag warning light system must remain operational if it was fitted by the vehicle manufacturer.
3. A motor vehicle must not have a sign, light, or other device that indicates the vehicle is fitted with an airbag if it is not fitted with an airbag.
4. A motor vehicle must not have a light or other device indicating an airbag operating system is operable if it is inoperable.

Permitted equipment

5. A switch may be installed as OE to render an airbag temporarily inoperable.

Condition and performance

6. An airbag and its operating system must be safe and in good condition.
7. An airbag warning light fitted by the manufacturer must remain operational.

Modification

8. A motor vehicle that has had an airbag removed or made inoperable must either:
- a) have all OE signs, lights, or other devices that indicated the vehicle was fitted with an airbag removed, or
 - b) if the signs, lights, or other devices cannot be readily removed, have a label that indicates an airbag has been removed permanently attached in a prominent location where it is clearly visible to any occupant of the seating position that was previously protected by the airbag.
9. A modification that affects an airbag system must be inspected and certified by an LVV Specialist Certifier, unless the vehicle is:
- a) excluded from the requirement for LVV specialist certification (**Table 7-6-1**), and
 - b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

7-7 Interior impact

Reasons for rejection

Condition and performance

1. Where an interior fitting, control or surface has been added, removed, substituted or has deteriorated, the likelihood of injury to occupants has not been minimised.

Modification

2. A modification ([Note 1](#)) affects an interior fitting, control or surface, and:
- a) is not excluded from the requirements for LVV specialist certification (**Table 7-7-1**), and
 - b) is missing proof of LVV specialist certification, ie:
 - i. the vehicle is not fitted with a valid LVV certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1 Definitions

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward signs of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Table 7-1-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is not required provided that:
Stereo equipment and speakers	<ul style="list-style-type: none">there was only minimal removal of material, andthe structure has not been weakened as a result, especially near seatbelt moorings.
After-market instruments and switches; cell-phone installations	<ul style="list-style-type: none">they are mounted flush with or protected by the dashboard surface.

Fitting of or modification to:	LVV certification is never required:
Any modification for the purpose of law enforcement or the provision of emergency services	<ul style="list-style-type: none"> in-service requirements for condition and performance must be met.

Summary of legislation

- [Land Transport Rule: Interior Impact 2001.](#)

Condition and performance

1. Interior fittings, controls and surfaces in the passenger compartments must be such that the likelihood of injury to occupants is minimised.

Modification

2. A modification that affects the interior fittings, controls, or surfaces must be inspected and certified by an LVV specialist certifier, unless the vehicle:

- a) is excluded from the requirement for LVV specialist certification (**Table 7-7-1**), and
- b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

7-12 Speedometer

Reasons for rejection

Mandatory equipment

1. A motorcycle first registered in New Zealand on or after 1 December 1951 that is capable of a speed exceeding 50km/h is not fitted with a speedometer, and the vehicle operator cannot produce acceptable written evidence ([Note 2](#)) that:

- a) the speedometer has been removed for repair, or
- b) there are no undue delays by the vehicle owner in having the speedometer replaced.

Condition and performance

2. The speedometer:

- a) does not operate as intended when the vehicle is moving forward, or
- b) is obscured from the driver's position, or
- c) does not indicate the vehicle's speed in km/h or mph, or:

3. Reason for rejection 2(a), 2(b) or 2(c) applies, and the vehicle operator cannot produce acceptable written evidence ([Note 2](#)) that repair of the speedometer or associated equipment is impracticable or that a suitable replacement is not available.

Note 1

Speedometer means an instrument in a motor vehicle that continuously indicates to the driver the forward speed of the vehicle in either kilometres per hour (km/h) or miles per hour (mph). *For clarification, this definition **does not** include the speed provided by a GPS system.*

Note 2

Acceptable written evidence is documentation provided by the speedometer repairer or supplier. A copy of the documentation must be kept on file with the checksheet.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004.](#)

Mandatory equipment

1. A motorcycle first registered in New Zealand on or after 1 December 1951 that is capable of a speed exceeding 50km/h must be fitted with a speedometer.

2. A vehicle is not required to have a speedometer if the speedometer or associated equipment:
 - a) has been removed for repair and there are no undue delays by the vehicle owner in having it replaced, or
 - b) is out of repair, repair is impracticable and a suitable replacement is not available.

Speedometer performance

3. The speedometer must be in good working order and operate while the vehicle is moving forward.

Modification

4. A speedometer that is affected by a modification:
 - a) must meet the requirements for equipment, condition and performance, and
 - b) does not require LVV specialist certification.

7-13 Audible warning devices

Reasons for rejection

Mandatory equipment

1. A motorcycle:
 - a) is not fitted with a horn, or
 - b) is fitted with a bell or whistle ([Note 2](#)), or
 - c) is not an emergency vehicle ([Note 1](#)) and is fitted with a siren ([Note 2](#)).
2. A horn cannot be easily operated from the driver's seating position.

Performance

3. The horn does not operate when activated.
4. The horn operates when not activated.
5. The sound from the horn is not steady and continuous, eg the horn plays a tune.
6. The horn is not audible at a distance of 100m.
7. A siren fitted to an emergency vehicle operates when not activated.

Note 1 Definition

Emergency vehicle means a vehicle used for the attendance of emergencies and operated:

- a) by an enforcement officer, or
- b) by an ambulance service, or
- c) as a fire service vehicle, or
- d) as a civil defence emergency vehicle, or
- e) as a New Zealand Defence Force emergency vehicle.

Note 2

A vehicle may be fitted with a bell, whistle or siren that is part of an anti-theft car alarm, personal security alarm or reversing warning device.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004](#).

Mandatory equipment

1. A motorcycle must be fitted with a device (horn) that is audible to other road users.

Permitted equipment

2. A motorcycle may be fitted with a bell, whistle or siren, only as follows:
 - a) a siren fitted to an emergency vehicle ([Note 1](#)), or

- b) a siren, bell or whistle that is part of an anti-theft car alarm, personal security alarm or a reversing warning device.

Performance

- 3. The device must be in good working order.
- 4. The device must be capable of giving a warning that is audible under normal traffic conditions from a distance of at least 100m.

Modification

- 5. An audible warning device that is affected by a modification:
 - a) must meet the requirements for equipment and performance, and
 - b) does not require LVV specialist certification.

8 Brakes

8-1 Service brake and parking brake

Reasons for rejection

Mandatory equipment

Service brake ([Note 1](#))

- 1. A motor cycle does not have a service brake.
- 2. A vehicle of class LC and LE first registered anywhere on or after 1 February 1977 does not have a service brake that is designed to act on each wheel.
- 3. A vehicle of class LD first registered anywhere on or after 1 February 1977 does not have a service brake acting on both wheels of the motor cycle.
- 4. A vehicle of class LC or LD first registered anywhere before 1 February 1977 does not have a service brake that is designed to act on at least the rear wheel.
- 5. A vehicle first registered in New Zealand after 1 November 1990 that does not have a dual circuit service brake does not have a parking brake that is capable of bringing the vehicle to a controlled stop.

Parking brake ([Note 1](#))

- 6. A vehicle of class LE first registered anywhere on or after 1 April 2002 does not have a parking brake.
- 7. A parking brake does not act on at least one complete axle.
- 8. A parking brake does not act on at least one axle that has dual wheels fitted.

Condition

Service brake

- 9. There is corrosion damage within 150 mm of a brake component mounting point.
- 10. The service brake pedal or lever:
 - a) is insecure, or
 - b) is spongy (indicating air in the system), or
 - c) creeps, or
 - d) has a non-slip surface which has deteriorated to such an extent that the brake cannot be safely applied, or
 - e) has excessive travel.
- 11. A brake cable:
 - a) is knotted, frayed or excessively corroded, or
 - b) has an auxiliary tensioner fitted, or
 - c) has otherwise deteriorated so that it may affect the service brake performance.
- 12. A brake actuating rod or guide:
 - a) is excessively corroded, or

- b) is excessively worn, or
- c) has otherwise deteriorated so that it may affect the service brake performance.

13. A vacuum hose or pipe (including connections) is:

- a) insecure, or
- b) leaking, or
- c) damaged (cracked, chafed, twisted, stretched or corroded, eg showing signs of pitting or a noticeable decrease in the pipe's outside diameter).

14. The brake vacuum servo (brake booster) is:

- a) not functioning fully or adequately, or
- b) leaking, or
- c) insecure.

15. The brake master cylinder is:

- a) leaking brake fluid, or
- b) insecure, or
- c) excessively corroded.

16. A brake valve is:

- a) not operating (eg a seized load sensing valve), or
- b) leaking brake fluid, or
- c) insecure, or
- d) excessively corroded.

17. A brake pipe (including connections) is:

- a) leaking brake fluid, or
- b) insecure, or
- c) deformed from its original shape, or
- d) chafed, or
- e) corrosion damaged, eg there are signs of pitting or a noticeable increase in the pipe's outside diameter.

18. A flexible hydraulic brake hose (including connections):

- a) is leaking brake fluid, or
- b) is insecure, or
- c) bulges under pressure, or
- d) is twisted, stretched or chafed, or
- e) has external sheathing which is cracked to the extent that the reinforcing cords are exposed, or
- f) has metal connections that are excessively corroded, or
- g) has an end fitting that is not attached to the hose by means of swaging, machine crimping or a similar process ([Note 2](#)).

19. A brake calliper:

- a) shows visible signs of leaking, or
- b) is insecure, or
- c) is seized.

20. A brake backing plate is:

- a) insecure, or
- b) severely corroded, or

- c) deformed from its original shape, or
 - d) cracked, or
 - e) contaminated by brake fluid, oil or grease.
21. A wheel cylinder:
- a) shows visible signs of leaking, or
 - b) is insecure, or
 - c) is seized.
22. An ABS system component is damaged, insecure or missing.
23. A brake disc or drum is:
- a) worn beyond manufacturer's specifications (where visible without removing vehicle components) ([Note 3](#)), or
 - b) fractured or otherwise damaged (where visible without removing vehicle components) ([Note 3](#)), or
 - c) contaminated by brake fluid, oil or grease.
24. Brake friction material (where visible without removing vehicle components) ([Note 3](#)) is:
- a) worn below manufacturer's specifications, or
 - b) separating from the brake pad backing plate or brake shoe, or
 - c) contaminated by brake fluid, oil or grease.
25. A gap between the brake shoe and the brake drum exceeds manufacturer's specifications (where visible without removing vehicle components) ([Note 3](#)).

Parking brake

26. The parking brake lever:
- a) travel is excessive, or
 - b) is insecure, or
 - c) is damaged, corroded, distorted or fractured within 150 mm of the handle mounting, or
 - d) mechanism or lever pivot bearing is worn or damaged so that the parking brake could be easily released by accident.
27. The parking brake cable:
- a) is knotted, frayed or excessively corroded, or
 - b) has an auxiliary tensioner fitted, or
 - c) has otherwise deteriorated so that it may affect the parking brake performance.
28. A parking brake actuating rod or guide:
- a) is excessively corroded, or
 - b) is excessively worn, or
 - c) has otherwise deteriorated so that it may affect the parking brake performance.

Performance

Service brake

29. The service brake is not able to be applied in a controlled and progressive manner.
30. When the service brake is applied:
- a) the vehicle does not stop within 7 m from a speed of 30 km/h (average brake efficiency of 50%) for a vehicle which has a service brake designed to act on each wheel, or
 - b) the vehicle does not stop within a distance of 9 m from a speed of 30 km/h (average brake efficiency of 40%) for a vehicle of class LC or LD that has a service brake designed to act on the rear wheel only, or
 - c) the vehicle does not stop within a distance of 9 m from a speed of 30 km/h (average brake efficiency of 40%) for a vehicle of class LE that has a service brake designed to act on fewer than three wheels.
31. Where the service brake is applied:

- a) the vehicle vibrates under braking to the extent that the control of the vehicle is adversely affected, or
- b) the brake fails to release immediately after the brake pedal has been released, or
- c) the directional control is affected (eg there is swerving to one side, or the brakes on one side apply more slowly than on the other side), or
- d) the brake balance varies by more than 20% between wheels on a common axle.

32. The ABS or brake system warning lamp or self-check system, if fitted, indicates a defect in the ABS or brake system (does not apply to brake pad wear warning systems).

Parking brake

33. When the parking brake is fully applied:

- a) the vehicle does not stop within 18 m from a speed of 30 km/h (average brake efficiency of 20%), or
- b) it does not hold the vehicle at rest on a slope of 1 in 5, or
- c) it does not hold all the wheels on a common axle stationary against attempts to drive the vehicle away.

34. The directional control of the vehicle is affected when the parking brake is being applied on a vehicle first registered in New Zealand on or after 1 November 1990 that does not have a dual circuit service brake.

Modification

35. A modification to a brake or vehicle affects the braking performance, and:

- a) is not excluded from the requirements for LVV specialist certification (**Table 8-1-1**), and
- b) is missing proof of LVV specialist certification, ie:
 - i. the vehicle is not fitted with a valid LVV certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1 Definitions

Service brake means a brake for intermittent use that is normally used to slow down and stop a vehicle.

Parking brake means a brake readily applicable and capable of remaining applied for an indefinite period without further attention.

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward signs of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Note 2

Hose end fittings that can be undone using hand tools are unacceptable.

Note 3

If a brake is fitted with an inspection port plug, this must be removed for inspection of the brake components.

Table 8-1-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is not required provided that:
Aftermarket brake pedal pads or covers	<ul style="list-style-type: none"> the fitment of the pads or covers does not: <ul style="list-style-type: none"> necessitate any modification to the pedal arm, or significantly affect the safe operation of the brake pedal or other pedals (eg a brake pad or cover significantly wider than the original brake pad may not be acceptable, depending on fitment).
Aftermarket or custom brake pedal extensions (for unusually short people)	<ul style="list-style-type: none"> The extension: <ul style="list-style-type: none"> does not exceed 100mm length when measured from the surface of the original brake pedal, and is securely clamped to the original pedal by mechanical means, and is sufficiently strong and rigid to withstand emergency brake loads, and does not involve any modification to, or compromise the strength of, the original brake pedal, and does not significantly change the sideways load or leverage against the pedal, and does not significantly increase the weight of the pedal.
Aftermarket brake rotors	<ul style="list-style-type: none"> the substitute rotors are: <ul style="list-style-type: none"> the same size as the OE rotors, and catalogued aftermarket items for that make and model of vehicle (and can include cross-drilled and/or slotted types), and attached to unmodified OE parts.

Fitting of or modification to:	LVV certification is never required:
Aftermarket brake pads, linings and hoses (including stainless steel braided brake hoses (Note 2))	<ul style="list-style-type: none"> in-service requirements for condition and performance must be met.
Any modifications for the purposes of law enforcement or the provision of emergency services	

Summary of legislation

Applicable legislation

- [Land Transport Rule: Light-vehicle Brakes 2002.](#)

Mandatory equipment

Service brakes

1. Motorcycles must have a service brake that acts on each wheel, except in the following cases:

- a vehicle of class LD first registered anywhere on or after 1 February 1977 must have a service brake acting on both wheels of the motorcycle
- a vehicle of class LC or LD first registered anywhere before 1 February 1977 may have a service brake that is designed to act on the rear wheel only
- a vehicle of class LE first registered anywhere before 1 February 1977 may have a service brake that is designed to act on fewer than three wheels.

2. A vehicle of class LE first registered in New Zealand from 1 November 1990 that does not have a dual circuit service brake must have a parking brake that is capable of bringing the vehicle to a controlled stop if the service brake fails.

Parking brake

3. A vehicle of class LE first registered anywhere on or after 1 April 2002 must have a parking brake that:

- a) acts on at least one complete axle, or
- b) if the vehicle has dual wheels on an axle, acts on that axle.

4. A vehicle of class LE first registered in New Zealand from 1 November 1990 without dual circuit service brakes must have a parking brake that is capable of bringing the vehicle to a controlled stop if the service brake fails.

Permitted equipment

5. A vehicle may be fitted with a warning system that is part of, or associated with, the use of a brake component or system.

Condition

6. A brake must be in good condition.

7. The brake friction surfaces must be within safe tolerance of their state when manufactured, and must not be scored, weakened or damaged to the extent that the safety performance of the brake is adversely affected.

Performance

8. The service brake must be able to be applied in a controlled and progressive manner.

9. When a vehicle's brake is applied:

- a) the vehicle or its controls must not vibrate to the extent that control of the vehicle is adversely affected, and
- b) the braking effort on each wheel must provide stable and efficient braking without adverse effect on the directional control of the vehicle, and
- c) if the vehicle is equipped with an anti-lock braking system (ABS), the wheels must not lock, other than when the speed of the vehicle falls below the ABS activation parameters set by the vehicle manufacturer.

10. A brake warning system, if fitted, must function correctly (this does not apply to a brake pad wear system).

Service brake

11. The service brake of a vehicle or vehicle combination that is operated on a hard, dry, level surface that is free of loose material and without assistance from the compression of the engine or other retarders must operate in the following manner:

- a) a service brake that acts on each wheel must stop the vehicle within a distance of 7m from a speed of 30km/h (average brake efficiency of 50%)
- b) a service brake that is designed to act on the rear wheel only on a vehicle of class LC or LD first registered anywhere before 1 February 1977 must stop the vehicle within a distance of 9m from a speed of 30km/h (average brake efficiency of 40%)
- c) the service brake on a vehicle manufactured before 31 December 1918 not capable of exceeding 30 km/h must stop the vehicle within a distance of 20m from a speed of 30km/h (average brake efficiency of 18%).

Parking brake

12. A parking brake must

- a) stop the vehicle within 18m from a speed of 30km/h (average brake efficiency of 20%), or
- b) hold the vehicle at rest on a slope of 1 in 5.

Modification

13. A modification to a brake or vehicle that affects the braking performance must be inspected and certified by an LVV specialist certifier, unless the vehicle:

- a) is excluded from the requirement for LVV specialist certification (**Table 8-1-1**), and
- b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

9 Steering and suspension

9-1 Steering and suspension systems

Reasons for rejection

Condition

1. The handle bars:
 - a) are insecure, or
 - b) are damaged, significantly corroded, distorted or cracked, or
 - c) show signs of welding or heating after original manufacture.
2. The steering head:
 - a) is insecure, or
 - b) is damaged, significantly corroded, distorted or cracked, or
 - c) shows signs of welding or heating after original manufacture, or
 - d) has play beyond manufacturer's specifications, or
 - e) does not operate smoothly without roughness or stiffness.
3. A steering lock-stop is loose or damaged.
4. A front or rear suspension component:
 - a) is insecure or missing, or
 - b) is damaged, significantly corroded, distorted or cracked, or
 - c) shows signs of welding or heating after original manufacture, or
 - d) has play beyond manufacturer's specifications, or
 - e) does not operate smoothly without roughness or stiffness, or
 - f) has excessive leakage of damping fluid (**Technical bulletin 9**), or
 - g) is a flexible bush that is significantly cracked, damaged or perished.

Performance

5. During operation:
 - a) the vehicle veers significantly to one side, or
 - b) the vehicle requires unreasonable force to steer, or
 - c) the steering is unreasonably stiff, rough or light.

Modifications

6. A modification to a component or system directly or indirectly affects the directional control of the vehicle, and:
 - a) is not excluded from the requirements for LVV specialist certification (**Table 9-1-1**), and
 - b) is missing proof of LVV specialist certification, ie:
 - i. the vehicle is not fitted with a valid low volume vehicle certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1 Definition

Steering system means those components, parts and systems that connect the driver's controls to a vehicle's wheels or tracks by means of which the direction of motion of a vehicle is controlled.

Note 2

A damaged boot on a steering joint is not a ground for rejection; however, the vehicle's owner should be advised.

Note 3

A damaged boot on a suspension joint is not a ground for rejection; however, the vehicle's owner should be advised.

Table 9-1-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is not required provided that:
Urethane suspension bushes	<ul style="list-style-type: none"> the bush is a direct substitute and fits directly into the OE housing.
Aftermarket shock absorbers	<ul style="list-style-type: none"> the shock absorbers are direct replacements, and the shock absorbers fit unmodified OE mountings.
Aftermarket springs	<ul style="list-style-type: none"> the springs are direct replacements, and the springs fit into unmodified OE seats and are self-retaining, and the springs and seats are not height adjustable, and suspension maintains sufficient travel for safe operation when fully laden and does not make contact with the unmodified OE bump stops, and there is no evidence of heating or cutting the springs, and the springs maintain contact with their seats when the vehicle suspension is fully extended, and no non-standard methods of retaining springs have been used, eg wire ties, external spring locators, and the normal relationship between front and rear suspension height is not unduly affected, and there is sufficient suspension travel.
Handle bars	<ul style="list-style-type: none"> the handle bar is a direct substitution without head stock modification, and the handlebar is a non-OE item of a reputable brand or an OE item from another motorcycle, and the substitution does not affect an airbag.

Fitting of or modification to:	LVV certification is never required:
Any modification for the purposes of law enforcement or the provision of emergency services	<ul style="list-style-type: none"> in-service requirements for condition and performance must be met.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Steering Systems 2001](#)
- Traffic Regulations 1976, Regulation 70.

Condition

1. The steering system ([Note 1](#)) and associated systems and components that directly or indirectly affect the directional control of the vehicle must be:

- sound and in good condition, and
- strong, durable and fit for their purpose, taking into account whether adverse effects have resulted from a loss of integrity of any protective system used by a relevant component.

Performance

2. The steering system and associated systems and components that directly or indirectly affect the directional control of the vehicle must provide the vehicle with safe, efficient, convenient and sensitive control.

Modifications

3. A modification that affects the steering system must be inspected and certified by an LVV specialist certifier, unless the vehicle:

- a) is excluded from the requirement for LVV specialist certification (**Table 9-1-1**), and
- b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

Page amended **14 October 2013** (see [amendment details](#)).

10 Tyres, wheels and hubs

10-1 Tyres and wheels

Reasons for rejection

Mandatory equipment

Tyres

1. Tyres on the same axle are not of the same:
 - a) size designation, or
 - b) carcass type (ie mixed steel ply, fabric radial ply, bias/cross ply), or
 - c) tread pattern type (mixed asymmetric, directional, normal highway, traction).
2. An asymmetric tyre is fitted to a vehicle with the 'inside' tyre wall facing outwards.
3. A unidirectional tyre is fitted contrary to its correct direction of rotation.
4. A tyre has a speed category that is less than the speed limit for the vehicle or less than the vehicle's maximum speed if this is less than the speed limit ([Note 3](#)).
5. The vehicle has one or more of the following types of tyre fitted:
 - a) a space-saver tyre, or
 - b) a non-pneumatic tyre, or
 - c) a tyre with studs, cleats, lugs or other gripping devices, or
 - d) a tyre that is not compatible with the vehicle to which it is fitted, eg a tyre is marked with any of the following:
 - i. 'NOT FOR HIGHWAY USE'
 - ii. 'NHS' (Not for Highway Service)
 - iii. 'FOR TRAILER USE ONLY'
 - iv. 'ADV' (Agricultural Drawn Vehicle)
 - v. 'RACING PURPOSES ONLY'.
 - e) a tyre that has had all its manufacturer/brand/model information removed so that the tyre can no longer be identified.

Wheels

6. A wheel is not compatible with the tyre fitted to it for rim profile, flange height, or valve fitment.
7. A wheel is:
 - a) not compatible with the vehicle to which it is fitted. or
 - b) not correctly attached to the vehicle.

Condition

Tyres (excluding spare tyres and space-saver tyres)

8. There are signs that a tyre is fouling on another part of the vehicle.
9. A tyre shows damage that it is likely to compromise its ability to operate in a safe manner or lead to premature tyre failure, such as:
 - a) a lump or bulge that is likely to be caused by separation or partial failure of the tyre structure, or
 - b) a cut in a sidewall or tread more than 25mm long that reaches the cords, or
 - c) exposed or cut cords, or

- d) the tread of a retreaded tyre shows signs of separation, or
- e) nails or other sharp objects embedded in the tyre, or
- f) significant perishing, eg due to age, moisture or exposure.

10. A tyre has a string type repair visible from the outside.

11. A tyre fitted to a vehicle capable of exceeding 30km/h does not have a tread pattern depth ([Technical bulletin 7](#)) of at least 1.5mm (excluding any tie-bar or tread depth indicator strip) around the whole circumference of the tyre:

- a) within all the principal grooves that normally contain moulded tread depth indicators, or
- b) if the tyre does not normally have moulded tread depth indicators (such as some retreaded or vintage tyres), across at least three-quarters of the tread width.

12. A tyre not identified as designed for re-grooving has had its tread depth increased by regrooving.

13. A tyre is noticeably under- or over-inflated.

Spare tyres

14. A spare tyre, if carried, is not:

- a) securely attached by a device that is in good condition and correctly applied, or
- b) stowed in a closed compartment separate from the occupant space (eg if the manufacturer's attachment device is missing or faulty) .

Wheels

15. There are signs that a wheel is fouling on another part of the vehicle.

16. A wheel is:

- a) cracked, or
- b) significantly damaged, distorted or has deteriorated, or
- c) not securely attached to the hub.

17. An alloy wheel has poor visible repairs.

18. A wheel or axle nut:

- a) is missing, or
- b) is loose, or
- c) is deteriorated, or
- d) is of the incorrect type, or
- e) has insufficient thread engagement to the wheel stud.

Modifications

19. A modification affects the wheels or tyres, and:

- a) is not excluded from the requirements for LVV specialist certification (**Table 10-1-1**), and
- b) is missing proof of LVV specialist certification, ie:
 - i. the vehicle is not fitted with a valid LVV certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1

Tread pattern and tread depth requirements do not apply to vehicles that are not capable of exceeding 30 km/h.

Note 2 Definitions

Asymmetric tyre: tyre which, through tread pattern, is required to be fitted to a vehicle so that one particular side-wall faces outwards.

Construction *in relation to a tyre:*

- a) for a pneumatic tyre, the type of tyre carcass (including ply orientation and ply rating or load index), or
- b) for any other tyre, characteristics relating to size, shape and material.

Cross-ply: a pneumatic tyre structure in which the ply cords in the tyre carcass extend to the beads and are laid at alternate angles, which are substantially less than 90 degrees, to the centreline of the tread. This tyre structure is also referred to as 'bias ply' or 'diagonal ply'.

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component, or equipment, but does not include repair.

Pneumatic tyre means a tyre that, when in use, is inflated by air or gas introduced from time to time under pressure so as to enclose under normal inflation, a cushion of air or gas forming altogether at least half of the total area of an average cross-section of a tyre so inflated.

Principal grooves means the wide grooves in the tyre tread which have the tread wear indicators located inside them. Any other grooves are secondary grooves which may wear out during the service life of the tyre.

Radial-ply means a pneumatic tyre structure in which the ply cords, which extend from bead to bead, are laid at approximately 90 degrees to the centreline of the tread, the carcass being stabilised by an essentially inextensible circumferential belt.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Rim means that part of the wheel on which the tyre is mounted and supported.

Space saver tyre (temporary-use spare tyre) means a combination tyre and wheel designed and constructed solely for temporary use under restricted driving conditions, and not intended for use under normal driving conditions.

Speed category means a code allocated to a tyre by a tyre manufacturer that indicates the maximum vehicle speed for which the use of the tyre is rated.

Tread means that part of a pneumatic tyre which comes into contact with the ground.

Tread-depth indicator (or tread-wear indicator) means the projections within the principal grooves designed to give a visual indication of the degree of wear of the tread. To help locate these on a tyre, inspectors should look for a '△' or 'TWI' mark on the outer edge of the tyre side wall (most tyres have these marks).

Tube means an inflatable elastic liner, in the form of a hollow ring fitted with an inflation valve assembly, designed for insertion into certain tyre assemblies to provide a cushion of air or gas, that, when inflated, supports the wheel (also known as an 'inner tube').

Tyre carcass means that structural part of a pneumatic tyre other than the tread and outermost rubber of the side-walls that, when inflated, contains the gas that supports the load.

Tyre load rating means the maximum load a tyre can carry at the corresponding cold inflation pressure prescribed by the tyre manufacturer and the speed indicated by its speed category symbol.

Unidirectional tyre means a tyre with a tread pattern designed to operate in one direction only.

Wheel means a rotating load-carrying member between the tyre and the hub, which usually consists of two major parts, the rim and the wheel disc, and which may be manufactured as one part, or permanently attached to each other, or detachable from each other.

Wheel centre-disc means that part of the wheel that is the supporting member between the hub and the rim.

Wheel spacer means an additional component used for the purpose of positioning the wheel centre-disc relative to the hub or, in multiple wheel sets, for the purpose of positioning the wheel centre-disc relative to another wheel.

Note 3

The speed category is usually marked on the tyre. Where the tyre is not marked, the speed rating information must be obtained from the tyre manufacturer or a reference guide of tyre ratings before the tyre can be passed.

Table 10-1-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is not required provided that:
Aftermarket wheel fitments	<ul style="list-style-type: none"> the wheels: <ul style="list-style-type: none"> are a non-OE item of known and reputable brand, and would be considered an appropriate fitment for the vehicle type by the wheel manufacturer, and are not modified, and do not have spacers or adaptors fitted. the tyre tread: <ul style="list-style-type: none"> does not protrude beyond the unmodified original body panels (including unmodified factory-fitted mudguard extensions), or protrudes beyond the unmodified original body panels, but is covered by aftermarket or modified mudguard extensions or modified body panels, and the track width has increased by no more than 25mm from OE.
Tyre size changes	<ul style="list-style-type: none"> the tyres: <ul style="list-style-type: none"> have an outer circumference that is no more than 5% greater than OE, and are an appropriate selection for rim width, and have tread that does not extend beyond the original or modified body panels or guard extension (see Figure 10-1-1).

Fitting of or modification to:	LVV certification is never required:
Any modification for the purposes of law enforcement or the provision of emergency services	<ul style="list-style-type: none"> in-service requirements for condition and performance must be met.

Table 10-1-2. Tyre speed symbol categories

Speed symbol – speed category (km/h)							
A1 – 5	A5 – 25	B – 50	F – 80	L – 120	Q – 160	U – 200	Y – 300
A2 – 10	A6 – 30	C – 60	G – 90	M – 130	R – 170	H – 210	ZR – over 240
A3 – 15	A7 – 35	D – 65	J – 100	N – 140	S – 180	V – 240	
A4 – 20	A8 – 40	E – 70	K – 110	P – 150	T – 190	W – 270	

Table 10-1-3. Tyre interchangeability – imperial and metric

Imperial sizing	Metric sizing
10/70R22.5	255/70R22.5
11/70R22.5	275/70R22.5
12/70R22.5	305/70R22.5
15R22.5	385/65R22.5
16.5R22.5	425/65R22.5

Figure 10-1-1. Tyre and body panel position

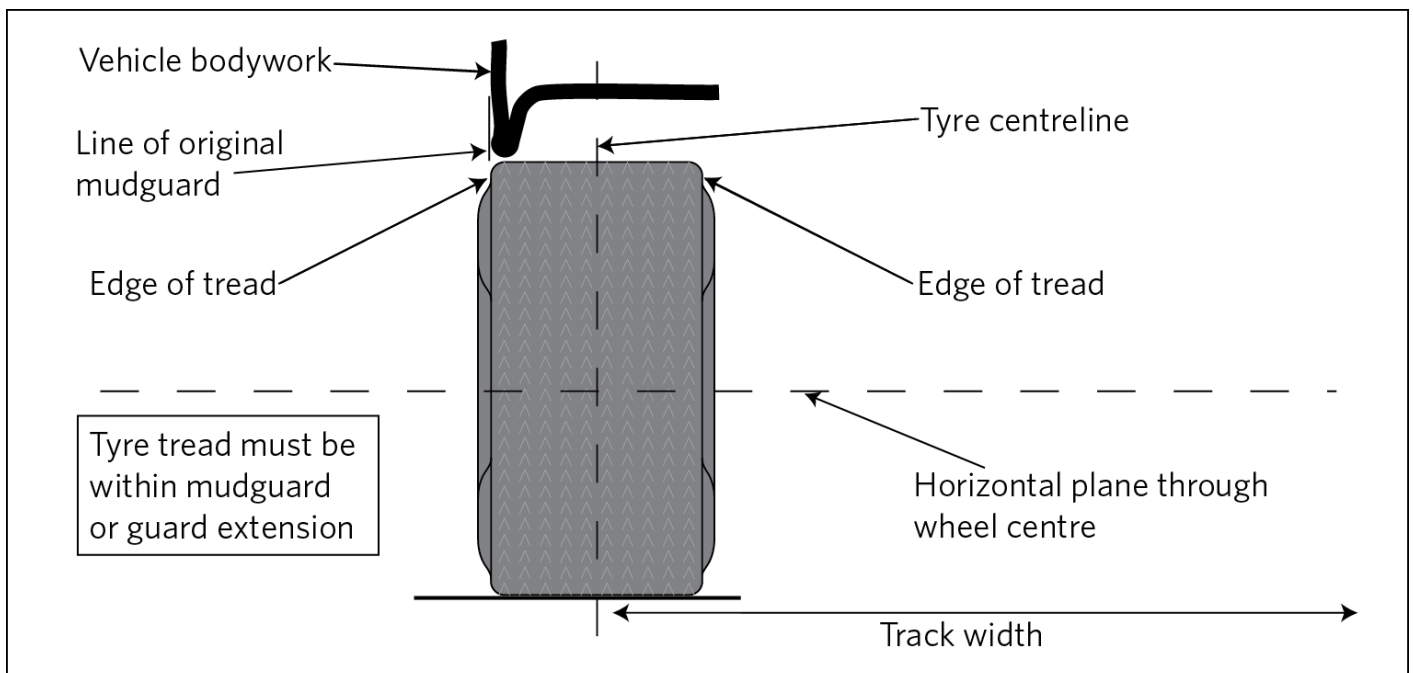


Figure 10-1-2. Tyre markings

Aspect ratio	Rim diameter	Speed symbol
[]	[]	[]
185/60R15 91H		
[]	[]	[]
Section width (mm)	Radial construction	Load index

Summary of legislation

Applicable legislation

- [Land Transport Rule: Tyres and Wheels 2001.](#)

Mandatory equipment

Tyres

1. Tyres must be compatible with the vehicle to which they are fitted.
2. Tyres on the same axle must be of the same size designation and construction, and of the same tread pattern type.
3. Asymmetric tyres must be fitted in axle sets in accordance with manufacturer's instructions.
4. A unidirectional tyre must be fitted to a wheel position corresponding to its direction of rotation.
5. The speed category of a tyre must be compatible with the maximum legal speed limit for the vehicle, or the vehicle's maximum speed ([Note 3](#)).
6. A vehicle must not be fitted with a metal tyre or other non-pneumatic tyre, or with a tyre with studs, cleats, lugs or other gripping devices.

Wheels

7. A wheel must:
 - a) be sufficiently strong for the type of vehicle to which it is fitted, and
 - b) be compatible with the vehicle to which it is fitted, and
 - c) be compatible with the tyre rim profile, flange height and valve fitment.
8. There must be adequate clearance for the brake, hub, suspension and steering mechanism, and body parts.

Permitted equipment

9. A vehicle may be fitted with retreaded tyres.

Condition

Tyres (excluding spare tyres and space-saver tyres)

10. A tyre must be of good quality and construction, fit for its purpose, and maintained in a safe condition.
11. A tyre must not have worn, damaged or visible cords apparent by external examination.
12. A tyre must have a tread pattern depth of not less than 1.5mm (excluding any tie-bar or tread-depth indicator strip) around the whole circumference of the tyre:
 - a) within all principal grooves that contain tread-depth indicators, or
 - b) if the tyre does not normally have tread-depth indicators, across at least three-quarters of the tyre tread width.
13. The regrooving of a tyre is permitted only if the tyre is identified as being specifically designed for regrooving after manufacture.
14. A tyre that is fitted to a vehicle must be maintained at a safe inflation pressure.

Spare tyre

15. If the vehicle carries a spare tyre, the tyre must be securely attached on or in the vehicle.

Space saver tyres

16. A space-saver tyre carried in a vehicle must have a safety warning label that:
 - a) has safety instructions that are printed clearly in English, and
 - b) identifies that the tyre is for temporary use only, and
 - c) specifies that the vehicle must not be operated with a space-saver tyre at a speed of more than 80km/h or at a lesser speed specified by the tyre manufacturer, and
 - d) contains information on the recommended inflation pressure of the tyre when in use, and
 - e) is permanently attached to the outside of the wheel.

10-2 Hubs and axles

Reasons for rejection

Condition

1. A hub ([Note 1](#)):

- a) is not securely attached to the vehicle, or
- b) has a visible crack, or
- c) is significantly damaged, distorted or has deteriorated, or
- d) has a broken or missing wheel stud.

2. A wheel bearing:

- a) has play beyond the manufacturer's specifications, or
- b) is over-tight or sounds rough.

3. An axle:

- a) is insecure, or
- b) is visibly cracked, or
- c) is significantly damaged, distorted or has deteriorated, or
- d) shows signs of welding or heating after original manufacture, or
- e) shows signs of fouling the vehicle structure or a brake, suspension or steering component.

Performance

4. The geometry of a hub or axle causes:

- a) the vehicle to veer significantly to one side, or
- b) the front wheel not to self-centre.

Modification

5. A modification ([Note 1](#)) affects the hubs or axles, and:

- a) is not excluded from the requirements for LVV specialist certification (**Table 10-2-1**), and
- b) is missing proof of LVV specialist certification, ie:
 - i. the vehicle is not fitted with a valid low volume vehicle certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1 Definitions

Hub means that part of a vehicle that is attached to the axle and rotates on, or with, the axle, and to which the wheel is attached, and includes any bearings.

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Table 10-2-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is not required provided that:
Axle housing replacement	<ul style="list-style-type: none"> • the axle housing fits the vehicle without adaptation, and • no change to the OE suspension geometry occurs, and • no changes are made to the OE brake system.

Fitting of or modification to:	LVV certification is never required:
Any modification for the purposes of law enforcement or the provision of emergency services	<ul style="list-style-type: none"> • in-service requirements for condition and performance must be met.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Tyres and Wheels 2001](#).

Condition

1. The components of the assembly must be in good condition.
2. The hub and axle must be sufficiently strong for the type of vehicle to which they are fitted.
3. The hub and axle must have a suitable and correctly adjusted geometry.

Modification

4. A modification that affects the hubs or axles must be inspected and certified by a low volume vehicle specialist certifier, unless the vehicle is:
 - a) excluded from the requirement for LVV specialist certification (**Table 10-2-1**) and has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance, or
 - b) modified for the purposes of law enforcement or the provision of emergency services.

10-3 Mudguards

Reasons for rejection

Mandatory equipment

1. A mudguard ([Note 1](#)) over a road wheel is missing where it is reasonable and practicable to fit a mudguard, unless the vehicle is:
 - a) in an unfinished condition legally used under the authority of trade plates, or
 - b) not capable of exceeding a speed of 30km/h.
2. A mudguard does not cover the full width of the tread of the tyre or tyres fitted to a road wheel (**Figure 10-3-1** and **Figure 10-3-2**).

Condition

3. A mudguard is not securely fixed to the vehicle.
4. A mudguard is so constructed or damaged that it is likely to present a hazard to road users.

Modification

5. A modification affects a mudguard, and:
 - a) is not excluded from the requirements for LVV specialist certification (**Table 10-3-1**), and
 - b) is missing proof of LVV certification, ie:
 - i. the vehicle is not fitted with a valid low volume vehicle certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1 Definitions

Mudguard means a fitting, inclusive of any portion of the vehicle and of any mudflaps attached, that serves to intercept material thrown up by a wheel more or less on the plane of the wheel.

Tyre tread means the portion of a tyre that contacts the road.

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Table 10-3-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is never required:
Modified mudguards, including flared wheel arches or the addition of mudguard extensions *	<ul style="list-style-type: none"> in-service requirements for condition and performance must be met (see also Table 10-1-1).
Any modification for the purposes of law enforcement or the provision of emergency services	

* Some vehicles fitted with flared wheel arches or mudguard extensions will require LVV certification as a result of aftermarket wheel fitments and tyre size changes. See [Table 10-1-1](#).

Figure 10-3-1. Size and position of mudguards which are incorporated into the body

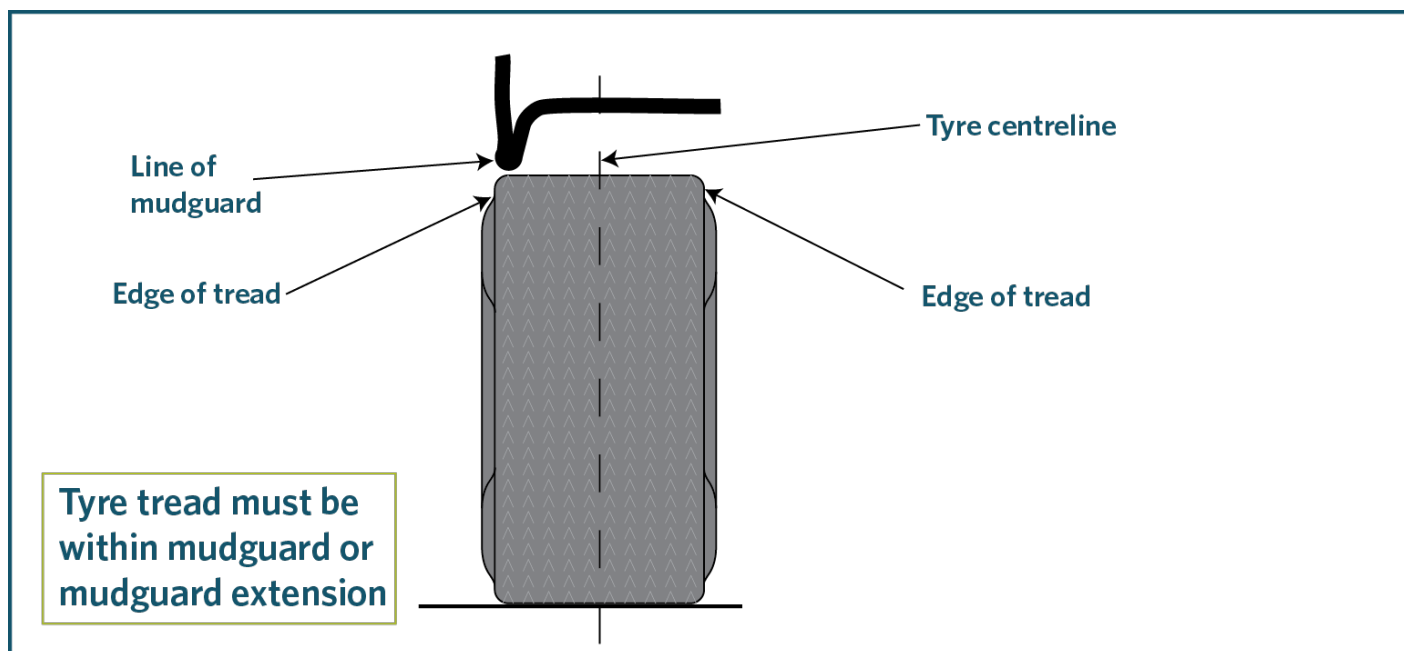
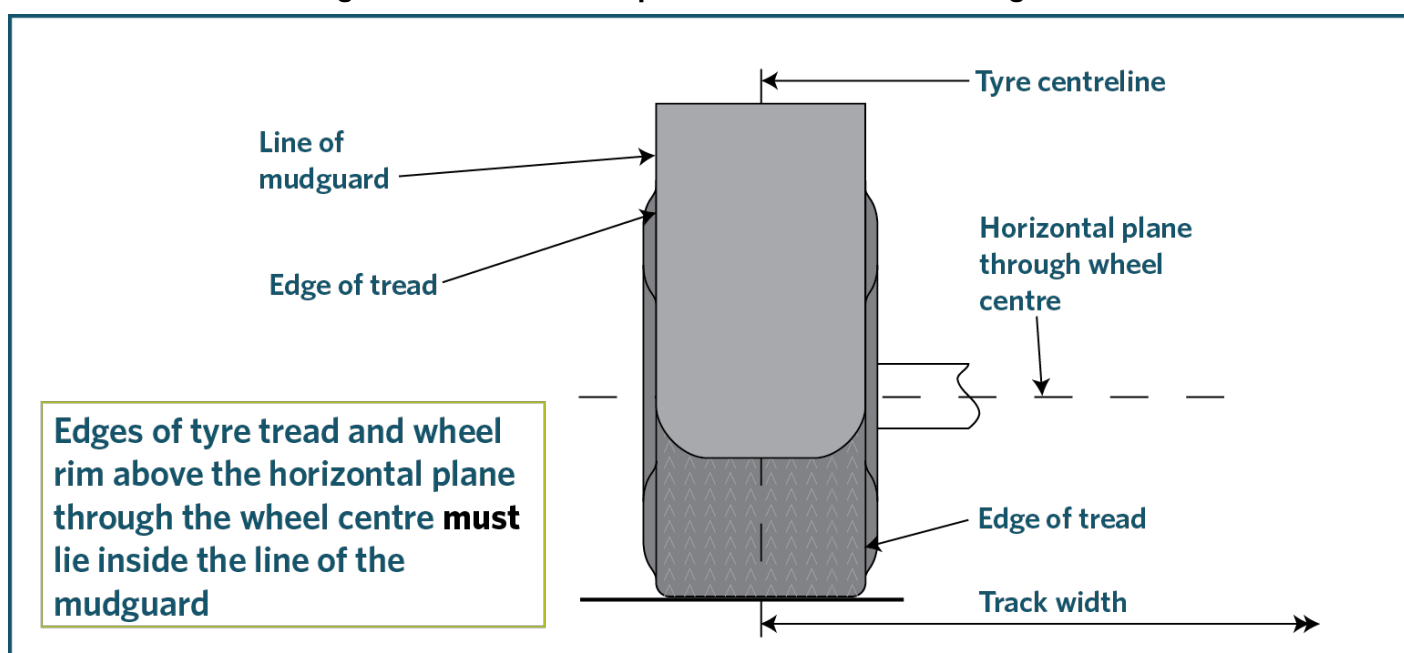


Figure 10-3-2. Size and position of individual mudguards



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004](#).

Mandatory equipment

1. A motorcycle must be fitted with a mudguard over each road wheel if it is reasonable and practicable to do so.
2. A mudguard must cover no less than the width of the tyre tread on each road wheel.
3. A motorcycle fitted with twin tyres or close-spaced multiple tyres must be fitted with a mudguard over each wheel on the rear axle that provides continuous protection from a horizontal line tangent to the top of the tyre tread to a line with a slope of 1 in 3 rising rearward from the tyre's contact point on the road.
4. The following vehicles are not required to be fitted with mudguards:
 - a) a vehicle in an unfinished condition used under the authority of trade plates and operated in accordance with the Compliance Rule
 - b) a vehicle not capable of exceeding a speed of 30km/h.

Condition

5. A mudguard must be securely fixed to the vehicle and must be constructed so that it does not present a hazard to road users.

Modification

6. A modification that affects a mudguard must be inspected and certified by a low volume vehicle specialist certifier, unless the vehicle:
 - a) is excluded from the requirement for LVV certification (**Table 10-3-1**), and
 - b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

11 Exhaust

11-1 Exhaust system

Reasons for rejection

Mandatory equipment

1. A vehicle is not fitted with an exhaust system that includes a means of sound reduction ([Note 1](#)).
2. A vehicle is presented for a WoF or CoF because it has been ordered off the road (pink- or green-stickered) by an enforcement officer for non-compliant exhaust noise, and there is no evidence that the vehicle has passed an LVVTA objective noise test since the vehicle was ordered off the road, ie:
 - a) the owner cannot produce a valid objective exhaust noise emissions test certificate (**Figure 11-1-1**) issued after the vehicle was ordered off the road ([Note 5](#)), and
 - b) the exhaust system tail pipe is not fitted with a valid LVVTA noise test label (**Figure 11-1-2**).

Condition

3. An exhaust system is not securely mounted.
4. The exhaust system is so constructed or modified that its operation or effectiveness can be readily interfered with, eg the driver is able to interfere with the exhaust system by operating a manual switch or the exhaust is fitted with a flame-thrower kit.
5. The exhaust system is so constructed that emitted heat or fumes are likely to harm vehicle occupants.

Performance

6. There is a leak of exhaust fumes from the exhaust system.
7. The exhaust noise output from a class LC, LD or LE vehicle is not less than or similar to the noise output the vehicle (or a vehicle of a similar type – see Note 2) would have had when it was manufactured with its original exhaust system, and:
 - a) the increased noise output exceeds the relevant noise limit in **Table 11-1-1** when assessed by the vehicle inspector:
 - i. using their own experience, or
 - ii. using the Noise Quick Check specified in Technical bulletin 1, or
 - b) there is no evidence that the vehicle has passed an LVVTA objective noise test, ie:

- i. the owner cannot produce a valid objective exhaust noise emission test certificate (**Figure 11-1-1**), and
- ii. the exhaust system tail pipe is not fitted with a valid LVVTA noise test label (**Figure 11-1-2**).

Note 1 Definition

Exhaust system means a pipe assembly through which the engine exhaust gases pass to the atmosphere and includes some means of sound reduction such as a silencer or resonator.

Note 2

For the purpose of reason for rejection, a vehicle of a similar type means a vehicle of similar age, vehicle size, body type, engine size and power output, and may be of a different make and model.

Note 3

The noise limits in **Table 11-1-1** are lower than the noise limits specified in legislation, and considered to be 'clearly below' the legal noise limits. Vehicles with an exhaust noise output clearly below the legal limits do not require an Objective Noise Test.

Note 4

A new objective noise test is required every time the vehicle is ordered off the road for non-compliant exhaust noise, even if the vehicle is presented for WoF or CoF with a quieter or original exhaust system.

Note 5

Sight the ordering-off-the-road notice or phone the NZ Police to find out when the ordering off the notice was issued.

Table 11-1-1. Noise limits for the Noise Quick Check

Vehicle	Noise limit (decibels) (Note 3)
Class LC, LD, LE with an engine capacity of 125 cc or less	93 dBA
Class LC, LD, LE with an engine capacity of more than 125 cc	97 dBA

Figure 11-1-1. Objective exhaust noise emission test certificate

Objective Exhaust Noise Emission Test Certificate

Vehicle and owner details:				(white copy for vehicle owner)
Owner: (Name)			(Contact Ph #) ()	
Vehicle: (Make)		(Model)		(Sub-model)
(Year)	(Colour)	(VIN)		
Engine: (Make)		(Code if known)		(Modified?)
(Cylinder configuration & #)		(Camshaft & valve arrangement)		

Exhaust system description & details:
(a) Exhaust manifold(s): (make/type)
(b) Front pipe(s): (OD/material/length)
(c) Muffler(s)/resonator(s) #1: (make/material/length/OD)
(d) Intermediate pipe(s): (OD/material/length)
(e) Muffler(s)/resonator(s) #2: (make/material/length/OD)
(f) Tail-pipe(s): (OD/material/length)
(g) Other exhaust system details: (catalytic converter(s)/balance pipe/additional mufflers/other)

Low Volume Vehicle Certifier's declaration:		
LVV Certifier: (Name)	(ID)	(Contact Ph #) ()
<input type="checkbox"/> PASS:	Approval label: (Number)	(Location of label)
<p>I, the above-named Low Volume Vehicle Certifier appointed by the Low Volume Vehicle Technical Association (Inc) for the purpose of Objective Exhaust Noise Emission Testing, declare that, I carried out an objective exhaust noise emission test on the above-described vehicle in accordance with the procedures specified by Low Volume Vehicle Standard 90-20, and confirm that at the time of testing the vehicle complied with all requirements of, and emitted exhaust noise emissions not exceeding that specified by, Low Volume Vehicle Standard 90-20. (Signed)..... (Date).....</p>		<p>LVV certifier's authentication (only if pass is recorded):</p> <p>[Authenticity sticker with hologram security feature]</p>
<input type="checkbox"/> FAIL: Recommendations to vehicle owner on bringing the exhaust system into compliance (expert advice is offered without any guarantees of a pass as a result of the advice given or implied):		


Vehicle exhaust system schematic:


Figure 11-1-2. Objective noise test label



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004](#)
- [Land Transport Act 1998](#), section 115.

Mandatory equipment

1. A motorcycle with an internal combustion engine must be fitted with an exhaust system.
2. A vehicle that is presented for a WoF or CoF because it has been ordered off the road by an enforcement officer for non-compliant exhaust noise must pass an LVVTA objective noise test before the vehicle may be issued with a WoF or CoF ([Note 4](#)).

Condition

3. An exhaust system must not be constructed or modified in a way that allows a person to interfere readily with its operation or reduce its effectiveness.
4. An exhaust system must be designed, constructed, positioned and maintained in a way that minimises the risk of heat or fumes emitted from the system harming the vehicle's occupants.

Performance

5. An exhaust system must be effective and in good working order.
6. The noise output from the exhaust system of a class LC, LD or LE vehicle:
 - a) must be less than or similar to the noise output from the vehicle's original exhaust system at the time of the vehicle's manufacture, or
 - b) must not, if the noise output of the vehicle's original exhaust system at the time of the vehicle's manufacture is not known, exceed the applicable maximum decibel level when tested and certified by an LVV specialist certifier in accordance with the LVVTA objective noise test.

Modification

7. A class LC, LD or LE vehicle that has been modified so as to increase its exhaust noise output must have the exhaust system inspected, tested and certified by an LVV specialist certifier as having passed the LVVTA objective noise test, unless:
 - a) the increased noise output is clearly below the applicable noise limits ([Note 3](#)), and
 - b) it has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.
8. When a vehicle has been certified by an LVV specialist certifier as having passed the LVVTA objective noise test:
 - a) the owner must produce a valid objective exhaust noise emissions test certificate (**Figure 11-1-1**), and
 - b) the exhaust system tailpipe must be fitted with a valid LVVTA noise test label (**Figure 11-1-2**).

11-2 Visible exhaust smoke

Reasons for rejection

Performance

1. A vehicle with the engine at normal operating temperature ([Note 1](#)) emits clearly visible smoke ([Technical bulletin 8](#)) from the exhaust tailpipe ([Note 2](#)):

- a) for a continuous period of five seconds when the engine is idling and does not meet the additional requirements in **Table 11-2-1**, or
- b) as the engine is being rapidly accelerated to approximately 2500 rpm or approximately half the maximum engine speed (whichever is lower) and does not meet the additional requirements in **Table 11-2-1**.

Note 1 Test procedure

a) Carry out the idling and acceleration tests in Reason for rejection 1. A vehicle that passes both tests with the engine below normal operating temperature is deemed to have passed with the engine at normal operating temperature.

b) If the vehicle has failed either test, ensure the engine is at normal operating temperature. Then purge the system by increasing the engine speed to 2500 rpm (or half the maximum engine speed if this is lower) and holding it there for about five seconds. Repeat the idling and acceleration tests in Reason for rejection 1.

Note 2

Visible emissions caused by the condensation of water vapour do not count as smoke.

Note 3

Acceptable evidence is:

- a) a letter on the letterhead of the manufacturer or manufacturer's representative, or
- b) a letter on the letterhead of an appropriate motorcycle club, or
- c) evidence of equal authority to (a) or (b) above, eg from an appropriate expert.

Note 4

The vehicle inspector may need to take into account further information about unusual or older vehicles, eg from an appropriate expert such as an office holder in a vintage vehicle club.

Table 11-2-1. Additional requirements

Type of vehicle	Additional requirements
First registered on or after 1 January 1960 with four-stroke engine, or First registered before 1 January 1960 with four-stroke engine manufactured on or after 1 January 1960.	1. Document produced by the vehicle operator that proves that (Note 3): a) the engine is original equipment for the vehicle, and b) its design means that the vehicle cannot reasonably comply with the visible smoke emission requirements. 2. The smoke produced is not noticeably and significantly more visible than it would have been when the vehicle was manufactured and supplied with the fuel recommended by the manufacturer.
First registered before 1 January 1960 with four-stroke engine manufactured before 1 January 1960, or Vehicle with two-stroke engine or rotary engine.	The smoke produced is not noticeably and significantly more visible than it would have been when the vehicle was manufactured and supplied with the fuel recommended by the manufacturer (Note 4).

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Exhaust Emissions 2007](#).

Performance

1. A motor vehicle must not emit clearly visible smoke ([Note 2](#)) when the vehicle's engine is running at its normal operating temperature, under either of the following conditions:
- a) for a continuous period of five seconds when the engine is idling
 - b) as the engine is being accelerated rapidly to approximately 2500 revolutions per minute or approximately half the maximum engine speed (whichever is lower).
2. Performance requirement 1 above does not apply if the driver of the vehicle produces documentation that proves that the engine is original equipment for the vehicle and the engine's design means the vehicle cannot reasonably comply ([Note 3](#)).

12 Towing connections

12-1 Towbar

Reasons for rejection

Mandatory equipment

1. A towbar fitted to a vehicle does not have provision for securely fitting the safety chain from a trailer coupling, except for:
- a) New Zealand Defence Force vehicles
 - b) fire-fighting vehicles.

Condition

2. The towbar or towbar mounting:
- a) is not securely attached, or
 - b) has a bolt or nut that is missing or significantly corroded, or
 - c) has corrosion damage ([Note 1](#)) within 150mm of the mounting points, or
 - d) is cracked or distorted, or
 - e) has any other damage that the vehicle inspector considers has affected the structural integrity of the towbar or its attachment to the vehicle.
3. The towbar coupling (towball):
- a) is not securely attached, or
 - b) is worn beyond manufacturer's specifications, or
 - c) is significantly corroded, distorted or cracked, or
 - d) has a nut that is missing or significantly corroded.

Note 1

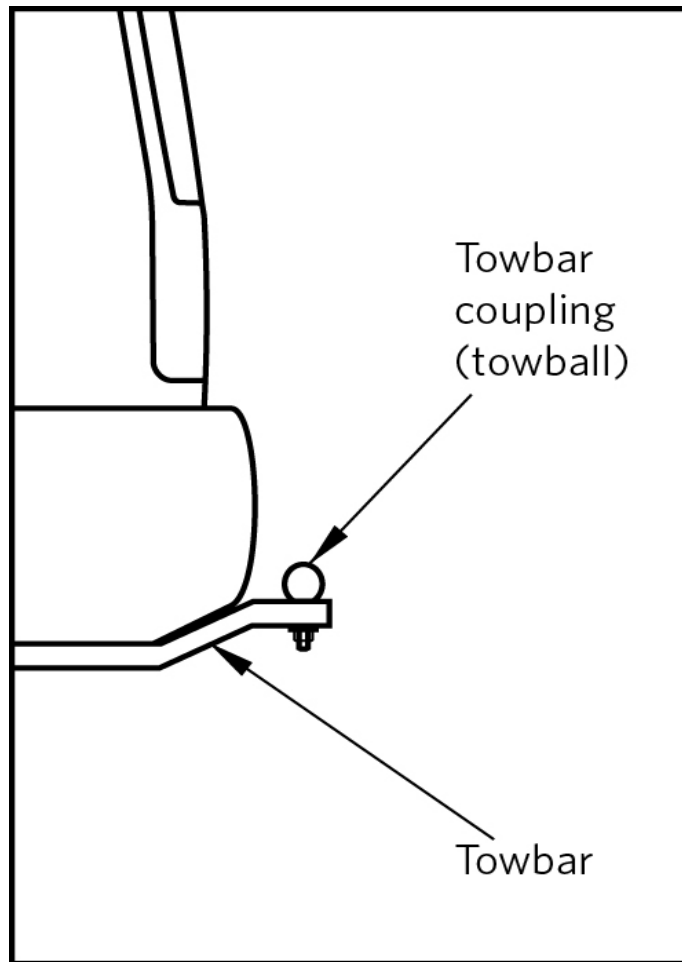
Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward signs of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Table 12-1-1. Requirements for certification (Motorcycle light PSV only)

Towbar/vehicle date	Evidence of certification
<p>Vehicle entered service as a PSV in New Zealand before 1 September 1999 and fitted with a towbar before 1 September 1999</p>	<p>1. A permanently attached plate, indelibly marked with:</p> <ul style="list-style-type: none"> a) manufacturer's name, and b) towbar model number or part number, and c) rating – maximum towed mass (MTM) not exceeding 2000kg <p>Note An uncertified towbar must be identified for private use only, eg on the checksheet.</p>
<p>Vehicle entered service as a PSV in New Zealand on or after 1 September 1999 and fitted with a towbar, or vehicle entered service as a PSV in New Zealand before 1 September 1999 and fitted with a towbar on or after 1 September 1999.</p>	<p>1. A permanently attached plate, indelibly marked with:</p> <ul style="list-style-type: none"> a) manufacturer's name or trademark which clearly identifies the agency or person who has built the towbar, and b) the maximum towed mass (MTM) not exceeding 3500kg, and c) the maximum vertical load applied at the towing ball, and d) vehicle make, model or part number which identifies the vehicle(s) for which the towbar has been designed.

Note An unrated towbar may be assessed, rated and plated by an appropriately qualified engineer.

12-1-1. Towbar and towbar coupling



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Standards Compliance 2002](#), section 7.4.

Mandatory equipment

1. A towbar, if fitted to a vehicle, must have provision for securing the safety chain or cable from a trailer coupling, except if the vehicle is likely to tow any of the following trailers:

- a) a trailer designed for armament purposes by the New Zealand Defence Force
- b) a trailer pump for fire-fighting purposes.

Condition

2. A trailer must be securely attached to the towing vehicle by an adequate coupling.

3. A vehicle must:

- a) be safe to be operated, and
- b) have been constructed using components and materials that are fit for the purpose, and
- c) be within safe tolerance of its state when manufactured or modified.

13 Miscellaneous items

13-1 Engine and transmission

Reasons for rejection

Condition

1. The engine or gearbox is insecurely mounted.
2. A chain sprocket:
 - a) is loose, or
 - b) has excessively worn teeth.
3. A drive chain:
 - a) is excessively loose, or
 - b) has excessively worn links.
4. A driveshaft is bent or severely damaged.
5. A driveshaft flange:
 - a) is insecure, or
 - b) has a bolt or nut missing.
6. A rubber doughnut-type driveshaft coupling:
 - a) is worn or damaged beyond manufacturer's specifications, or
 - b) is split or delaminated so that its mechanical integrity is affected, or
 - c) securing bolt is loose or missing.
7. A driveshaft universal joint spider (cross) bearing:
 - a) is worn so that the movement in the joint is beyond manufacturers specifications, or
 - b) caps have loose or missing cap bolts or circlips, or
 - c) is damaged, displaced or the seals between the spider journals and bearing caps are missing.
8. A driveshaft slip joint (spline) is worn beyond manufacturer's specifications.
9. The universals in the driveshaft are not fitted in accordance with manufacturer's specifications.

Modifications

10. A modification ([Note 1](#)) affects the engine and transmission, and:
 - a) is not excluded from the requirements for LVV specialist certification (**Table 13-1-1**), and
 - b) is missing proof of LVV specialist certification, ie:
 - i. the vehicle is not fitted with a valid LVV certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1 Definitions

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Table 13-1-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is not required provided that:
Substitution of engines	<ul style="list-style-type: none"> when compared with the OE engine, the replacement engine: <ul style="list-style-type: none"> – is of the same or less cubic capacity, and – has equal or less weight, and – has the same or less power output, and – uses the same fuel (petrol, diesel), and – uses the same unmodified attachment points, ie it bolts in, and – uses the same ancillary equipment (accelerator linkages etc).
Minor modifications to OE engine	<ul style="list-style-type: none"> the modifications result in not more than 20% more power than the OE engine, which may include the fitting of: <ul style="list-style-type: none"> – extractor or free-flow exhaust manifolds, or big bore exhaust systems – changed intake manifolds – changed or multiple carburettors – modified fuel injection systems – changed ignition systems – alternative cold air box induction systems
Gearbox substitution	<ul style="list-style-type: none"> the gearbox cross member has not been heated, cut or welded, and the OE gearbox cross member mounting to the OE body or chassis members is unchanged, and no replacement gearbox cross member is used, and the OE driveshaft or drive chains are unmodified.

Fitting of or modification to:	LVV certification is never required:
Any modification for the purposes of law enforcement or the provision of emergency services	<ul style="list-style-type: none"> in-service requirements for condition and performance must be met.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Standards Compliance Rule 2002, Section 7.4.](#)

Condition and performance

- The vehicle must be safe to be operated.
- The components and materials must be fit for their purpose and within safe tolerance of their state when manufactured or modified.

Modifications

- A modification that affects the engine and transmission must be inspected and certified by an LVV specialist certifier, unless the vehicle:

- a) is excluded from the requirement for LVV specialist certification (**Table 13-1-1**), and
- b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition and

performance.

13-2 Fuel system

Reasons for rejection

Condition

1. There is a noticeable fuel leak from the fuel system.
2. The security of the fuel tank is affected by:
 - a) corrosion damage ([Note 1](#)), or
 - b) cracking or other damage, or
 - c) insecure or loose tank mountings.
3. A fuel line is insecure or loose so that it is likely to be damaged during normal use of the vehicle.
4. A fuel pipe is severely damaged or excessively corroded.
5. A fuel hose is damaged or perished.
6. The fuel pump is insecure.
7. The fuel filler cap or capless fuel filler seal is missing, insecure, or likely to allow fuel spillage when the vehicle is in normal use.
8. The fuel tank is fitted with a 'temporary use' fuel filler cap.

Modification

9. A modification ([Note 1](#)) affects the fuel system, and:
 - a) is not excluded from the requirements for LVV specialist certification (**Table 13-2-1**), or
 - b) is missing proof of LVV specialist certification, ie:
 - i. the vehicle is not fitted with a valid low volume vehicle certification plate, or
 - ii. the operator is not able to produce a valid modification declaration or authority card.

Note 1 Definitions

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward signs of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases the area affected by corrosion damage will fall out and leave a hole.

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Table 13-1-1. Modifications that do not require LVV certification

Fitting of or modification to:	LVV certification is not required provided that:
Fuel system changes and modifications	<ul style="list-style-type: none">• no structural modifications have occurred to the vehicle during the installation or modification, and• the fuel type (petrol, diesel) has not changed.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004](#).

Condition and performance

1. Fuel tanks, fuel lines and associated components must be:
 - a) securely mounted, and
 - b) made of suitable materials, and
 - c) in good condition, and
 - d) free from significant leaks, and
 - e) positioned so that the risk of mechanical damage or heat gain is minimised.

Modification

2. A modification that affects the fuel tank and fuel lines must be inspected and certified by a low volume vehicle specialist certifier, unless the vehicle:
 - a) is excluded from the requirement for LVV certification (**Table 13-2-1**), and
 - b) has been inspected in accordance with the requirements in this manual, including those for equipment, condition and performance.

General trailers

2 Vehicle Exterior

2-1 External projections

Reasons for rejection

Condition and performance ([Note 1](#))

1. The risk of a component ([Note 2](#)) hooking a vehicle, or hooking or grazing a person, has not been minimised.
2. An ornamental object or fitting ([Note 3](#)) protrudes in such a way that it is likely to injure a person.
3. A protruding object or fitting ([Note 4](#)) that has a functional purpose is not installed so that the risk of causing injury to a person is minimised, eg the object or fitting:
 - a) is of excessively heavy construction for the purpose for which it has been fitted, or
 - b) has sharp corners, or
 - c) exceeds the vehicle's width by more than 100mm on either side.
4. A protruding component, object or fitting is not securely fitted.
5. A protruding object or fitting adversely affects the driver's vision or control.

Note 1

The external projections requirements relate to the design and maintenance of objects and fittings that protrude from the exterior of the motor vehicle with regard to the safety of other motor vehicles, pedestrians and cyclists. The attachment of such objects and fittings to the vehicle is addressed in the Vehicle structure section of this manual.

Note 2

Components include damaged, corroded and exposed body panels.

Note 3

Ornamental object or fitting means any object or fitting that does not have a practical purpose.

Note 4

Functional object or fitting means an object or fitting that has a practical purpose, eg load restraints.

Summary of legislation

Applicable legislation

- [Land Transport Rule: External Projections 2001](#).

Permitted equipment

1. A motor vehicle may be fitted with a protruding ornamental or functional object or fitting.

Condition and performance

2. A protruding ornamental object or fitting must not be likely to injure a person.
3. A protruding object or fitting that has a functional purpose must be installed so that the risk of the object or fitting causing injury to a person is minimised.
4. Components of a motor vehicle, including damaged or corroded body panels, must be such that the risk of their hooking a vehicle, or hooking or grazing a person, is minimised.
5. A protruding object or fitting must not adversely affect driver vision or driver control.

2-2 Dimensions

Reasons for rejection

Mandatory equipment

1. A trailer with a GVM of 3500kg or less exceeds the dimension requirements set out in **Table 2-2-1** and is not fitted with the appropriate hazard warning equipment set out in **Table 2-2-2**.
2. A trailer exceeds the dimensions set out in **Table 2-2-1** and is not:
 - a) a specialist overdimension trailer ([Note 6](#)), or
 - b) a trailer designed primarily to transport an overdimension load, or
 - c) a trailer operating on a valid permit, exemption or approval.

Note 1

Definitions of trailer types:

- **simple trailer** means a trailer (other than a semi-trailer) that has only one axle set
- **full trailer** means a trailer with two axles sets, the foremost of which is steered by a drawbar, and includes a semi-trailer with non-steering axles ([Note 4](#)) coupled to a converter dolly
- **semi-trailer** means a trailer with only one axle set where the point of attachment to the towing vehicle or leading trailer:
 - a) is no further rearward than the rearmost axle of the towing vehicle or rearmost axle of the leading trailer, or
 - b) if the towing vehicle is a rigid vehicle ([Note 5](#)) and has more than one axle in its rear axle set, is no more than 300mm rearward of the rear axis of the towing vehicle.

Note 2

A **permitted over-dimension trailer** is one that is either:

- a) fitted with an over-dimension piece of equipment, or
- b) designed to carry an over-dimension load that cannot be divided, eg glider trailers and large boat trailers.

Operational requirements for such trailers are given in [Factsheet 53 – Overdimension vehicles and loads](#).

Note 3

Rear axis of a vehicle means:

- a) *trailers with one non-steering axle*: centre of that axle
- b) *trailers with a non-steering axle set consisting of two axles*: midway between those two axles if each axle has an equal number of tyres on it, or two-thirds of the distance from the lesser-tyred axle towards the greater-tyred axle, if one axle has twice as many tyres on it as the other axle.

Note 4

Non-steering axle means any axle of a vehicle, the wheels of which remain substantially parallel with the longitudinal

centreline of the vehicle while the vehicle is turning.

Note 5

Rigid vehicle means a vehicle with motive power, driver’s position and steering system, that does not have any pivot points to allow any part of the vehicle chassis to move or rotate in relation to any other part of the vehicle chassis, but includes a pivot steer vehicle.

Note 6

Specialist overdimension trailer means a trailer where its primary purpose is to carry out a specialist function that requires overdimension equipment, and the dismantling of the equipment would make it unusable for its intended purpose, or it would take more than four hours to dismantle the equipment.

Table 2-2-1. Dimension requirements

Note All measurements must be taken with the vehicle combination in a straight line.

Dimension	Maximum distance	Comments
Width	1.25m from each side of the longitudinal centreline of the trailer 2.5m	Measurement does not include: <ul style="list-style-type: none"> • direction indicators • ropes, lashings, straps, chains and related connectors and tensioning devices that extend no more than 25mm from either side, and that are not permanently or rigidly fixed to the vehicle • the bulge towards the bottom of a tyre.
Overall length	12.5m (simple trailers) 11.5m (full trailers) 19m (towing vehicle and one semi-trailer combination)	For a full trailer, measurement is to the centre of the towing eye.
Height	4.25m	Measurement does not include load restraining devices (ropes, lashings, straps, chains, covers and related connectors and tensioning devices) that extend no more than 25mm above the trailer, and that are not permanently or rigidly fixed to the vehicle.
Forward distance	8.5m (simple and full trailers) 9.2m (semi-trailer)	Forward distance is measured from: <ul style="list-style-type: none"> • simple trailer: from the rear axis (Note 3) to the centre of the point of attachment to towing vehicle • full trailer: from the rear axis to front of trailer body/chassis (excludes drawbar) • semi-trailer: from the rear axis to centre of kingpin.
Rear overhang	4m	Rear overhang is measured from the rear axis to the rear of the vehicle.
Front overhang	2.04m radius arc ahead of: <ul style="list-style-type: none"> • tow coupling centre (simple trailer) • turntable centre (full trailer) • kingpin centre (semi-trailer) 	Front overhang (Figure 2-2-5) is measured from: <ul style="list-style-type: none"> • simple trailer: tow coupling centre • full trailer: turntable centre to front of trailer body (excludes drawbar) • semi-trailer: kingpin centre to front of trailer

Table 2-2-2. Hazard warning equipment requirements for vehicles that exceed the dimensions in Table 2-2-1 (see Figure 2-2-3 for vehicle category thresholds)

Vehicle category (See Figure 2-2-5)	Dimension	Limits (up to and including)	Required hazard warning equipment
Category 1	Width/forward distance Length Front overhang Rear overhang	2.5m/11.4m, or 3.1m/10.5m, or 3.7m/8.5m, or 25m, or 7m, or 7m	1. Flags ¹ or panels ² fitted on each side at the front and rear as close as practica to the outside edge
Category 2 (not including category 1)	Width/forward distance Length Front overhang Rear overhang	2.5m/13.3m, or 4.5m/8.5m, or 35m, or 10m, or 10m	1. Panels ² fitted on each side at the front and rear as close as practica to the outside edge 2. OVERSIZE sign ³ fitted at the front and rear if more than 3.1m wide
Category 3 (not including category 2)	Width/forward distance	2.5m/20m 5m/20m 5m/8.5m	1. Panels ² fitted on each side at the front and rear as close as practica to the outside edge 2. OVERSIZE sign ³ fitted at the front and rear
Category 4 (not including category 3)	Width/forward distance	11 m/20m 11 m/8.5m	1. Panels ² fitted on each side at the front and rear as close as practica to the outside edge 2. OVERSIZE sign ³ fitted at the front and rear

- Additional operational requirements may apply, eg if operated at night.

¹ Flags:

- must be fluorescent yellow
- must be at least 400mm long x 300mm wide

² Hazard warning panels:

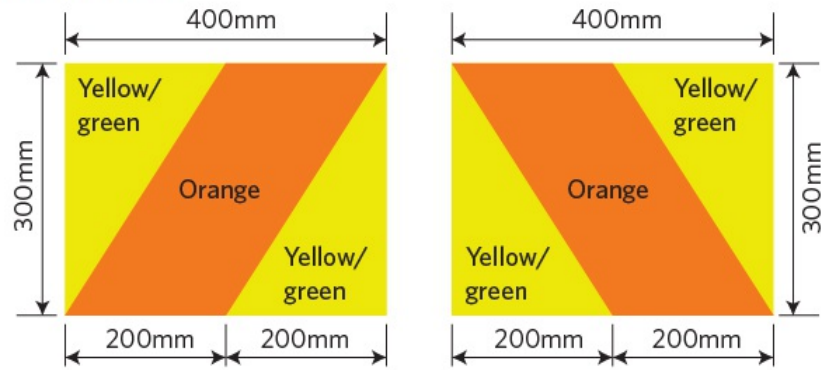
- must be reflective yellow-green with a reflective orange diagonal stripe
- must be of at least of the minimum dimensions and the colours specified in **Figure 2-2-1**

³ OVERSIZE sign:

- must be black lettering on a yellow-green background
- must be at least 300mm x 1100mm in size
- may be in two parts: OVER and SIZE.

Figure 2-2-1. Hazard panel details

Display these panels



or these panels

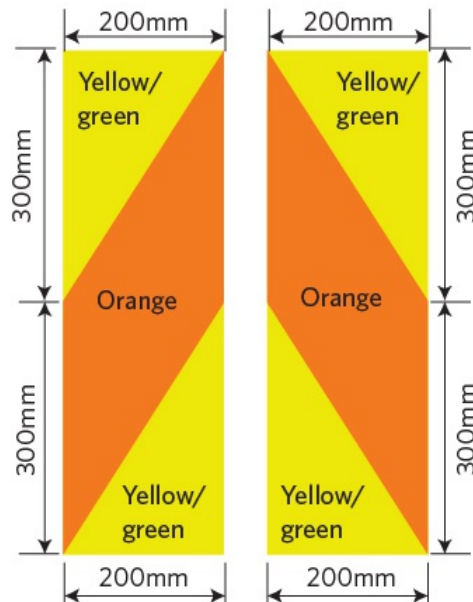


Figure 2-2-2. Hazard panel location and orientation

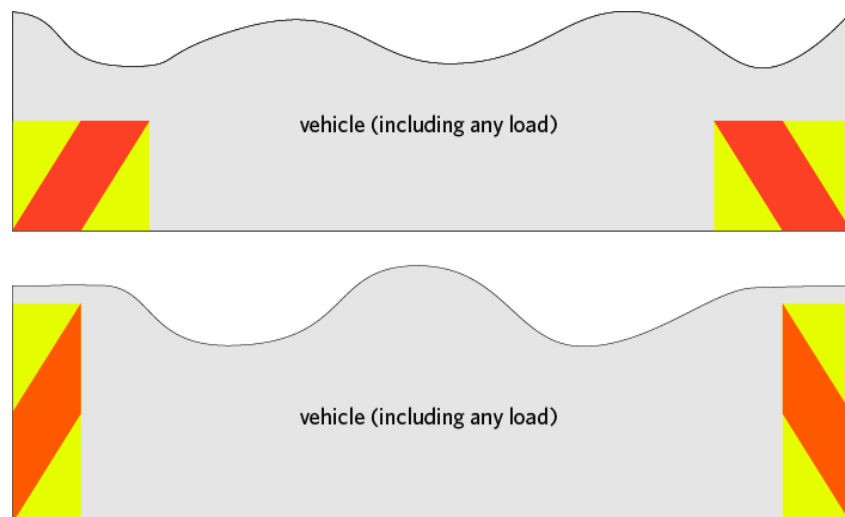
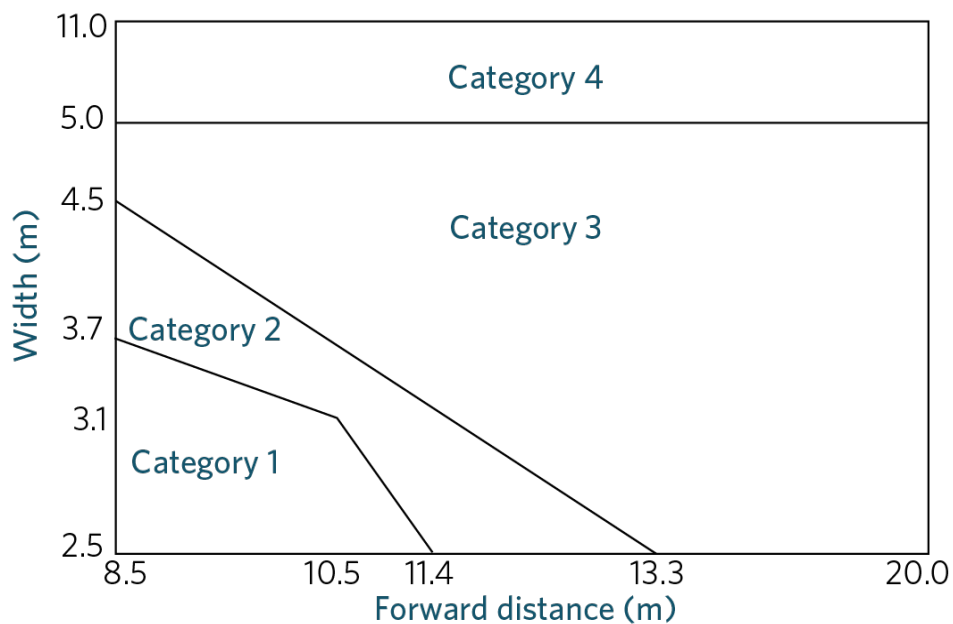
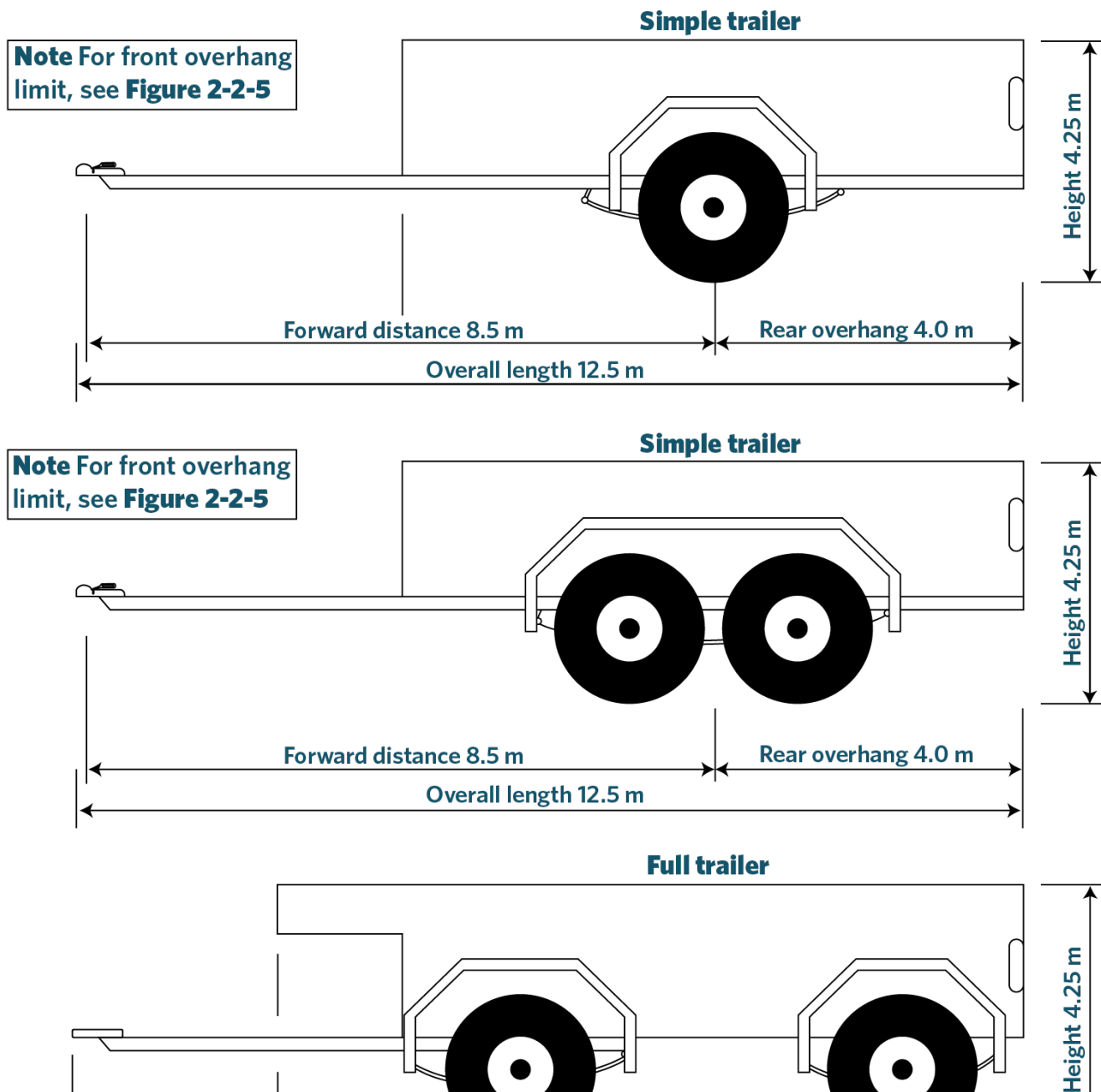


Figure 2-2-3. Vehicle categories and width/forward-distance thresholds.



Use this figure to determine the correct category referred to in **Table 2-2-2**.

Figure 2-2-4. Trailer dimensions



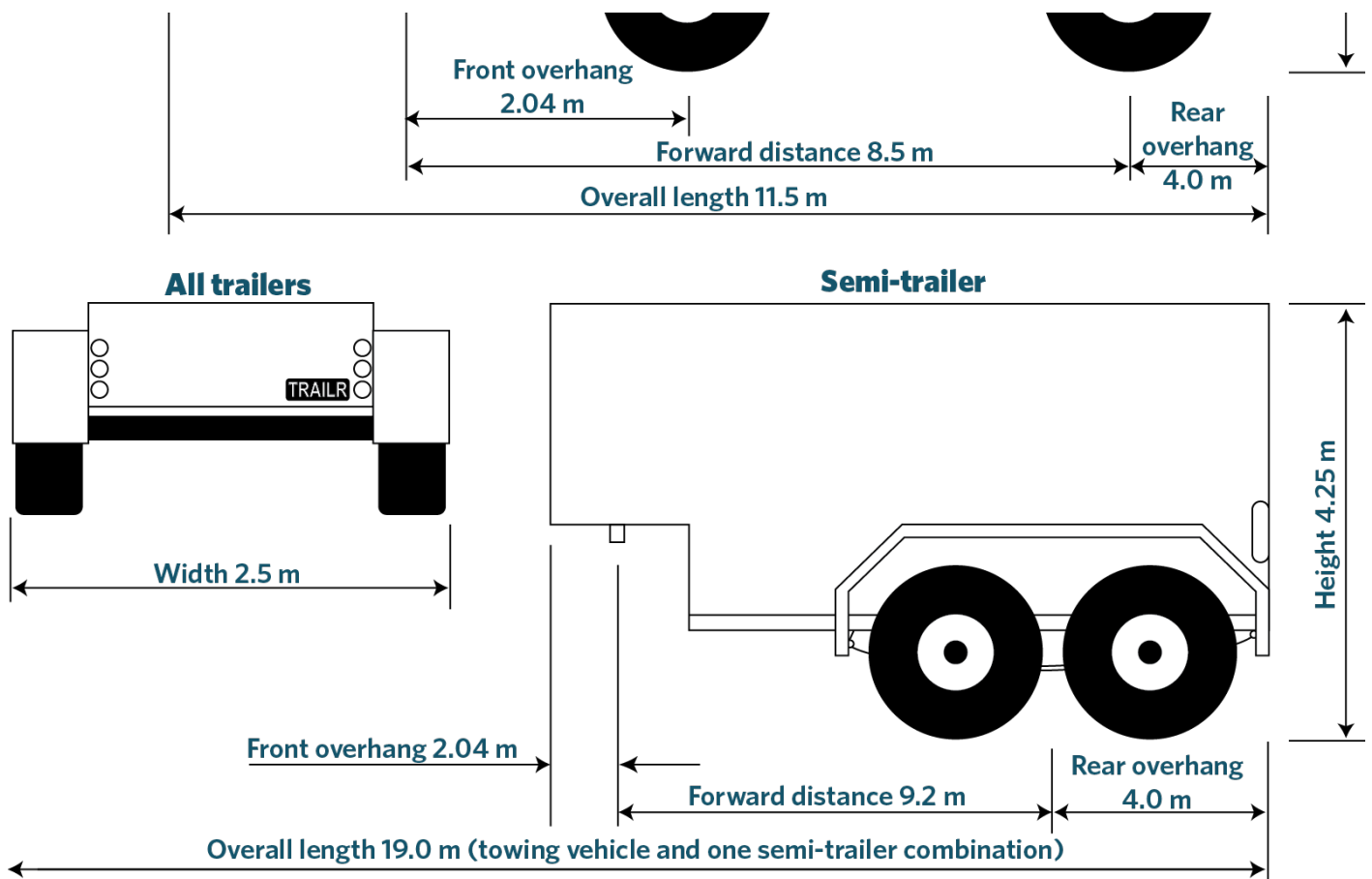
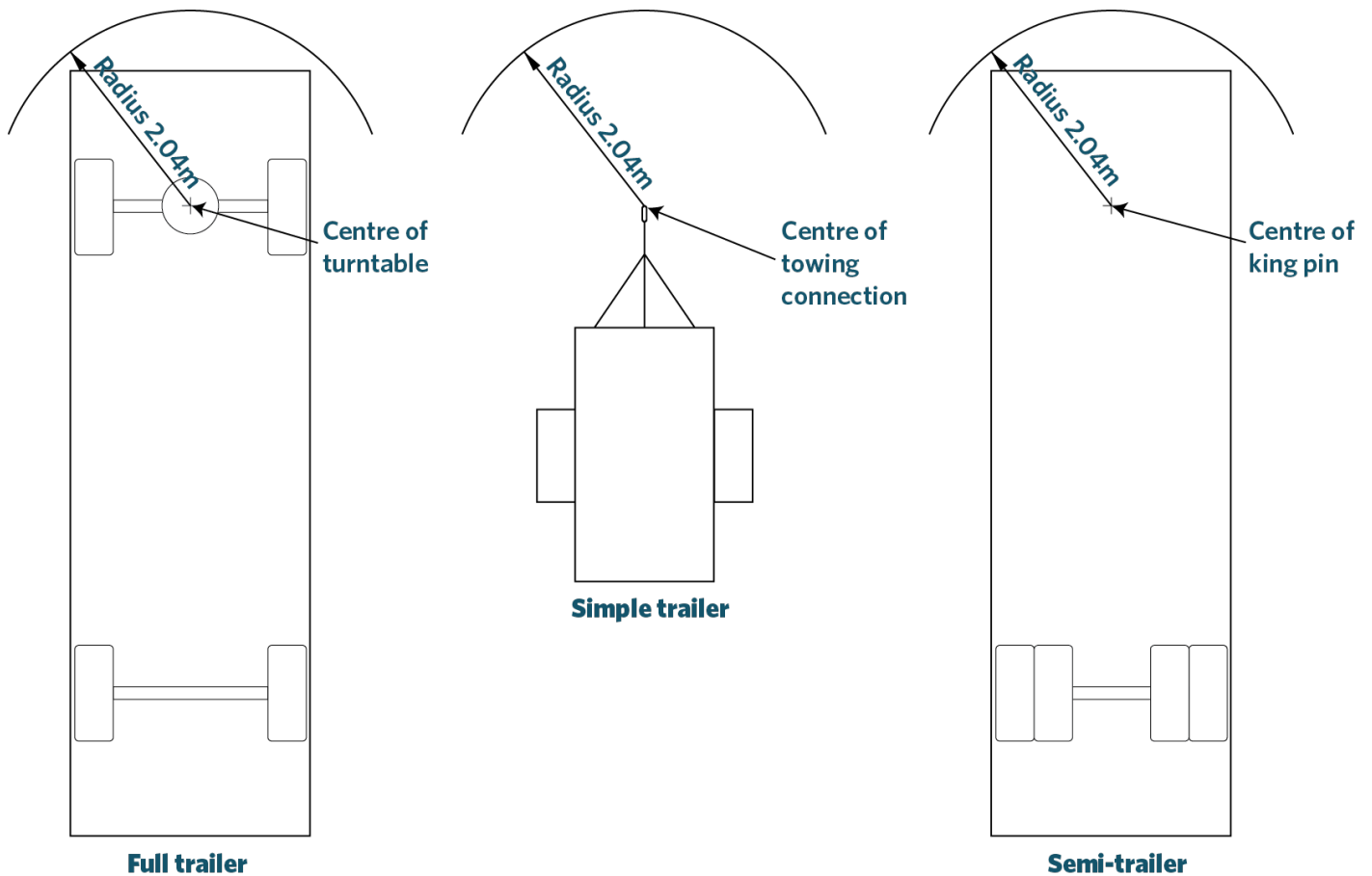


Figure 2-2-5. Measurement of front overhang



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Dimensions and Mass 2002](#).

Mandatory equipment

1. A trailer with a GVM of 3500kg or less that exceeds the dimensions in **Table 2-2-1** must meet the requirements in **Table 2-2-2**.
2. A trailer with a GVM of 3500kg or more may exceed the dimensions in **Table 2-2-2** only if it is:
 - a) a specialist overdimension trailer ([Note 6](#)), or
 - b) a trailer designed primarily to transport overdimension loads, or
 - c) a vehicle operating on a valid permit, exemption or approval.

Page amended **1 June 2013** (see [amendment details](#)).

2-3 Glazing

Reasons for rejection

Glazing condition

1. Glazing is damaged ([Note 1](#)), has deteriorated or is modified ([Note 2](#)) so that its strength or mechanical performance is adversely affected.
2. Glazing is not securely affixed to the vehicle.
3. Glazing has a mirrored effect sufficient to dazzle other road users.

Note 1

Damage includes any unrepaired damage and attempted visible repairs.

Note 2 Definitions

Modify means to change a vehicle from its original state by altering, substituting, adding or removing any structure, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with equivalent undamaged new structures, systems, components or equipment.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Glazing, Windscreen Wipe and Wash, and Mirrors 1999](#).

Permitted glazing

1. Trailers may be fitted with any type of glazing, including plastic glazing.

Glazing condition

2. Glazing must be mechanically sound, strong and securely affixed to the vehicle.
3. Glazing must not have a mirrored effect sufficient to dazzle other road users.

3 Vehicle Structure

3-1 Structure

Reasons for rejection

Condition

1. The structure of the vehicle (shaded areas of **Figure 3-1-2**) has visible:
 - a) deformation from the original shape that has affected the vehicle's structural integrity ([Note 2](#)), or
 - b) cracking, or
 - c) fracture, or
 - d) corrosion damage ([Note 1](#)) that is individually larger than 50mm in diameter (**Figure 3-1-1**), or

- e) any corrosion that the inspector considers has caused weakening of the load-bearing structure, or
- f) poor repairs ([Note 1](#)) that have not returned the structure to within a safe tolerance of when it was manufactured ([Note 2](#)), such as:
 - i. filler has been used in an attempt to conceal corrosion damage or deformation of a component, or
 - ii. a high strength steel component has been heated.

2. A hinge for a panel is not securely attached to both the vehicle body and to the door or other hinged panel due to loose connections, corrosion or other damage.
3. There is corrosion damage within 150mm of the hinge of a hinged panel (**Figure 3-1-3**).
4. There is corrosion damage within 150mm of the latch of a hinged panel (**Figure 3-1-3**).
5. A hinged panel does not remain secure in a closed or locked position.

Note 1

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward signs of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases the area affected by the corrosion damage will fall out and leave a hole.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with equivalent undamaged or new structures, systems, components or equipment.

Note 2

The vehicle inspector may request additional relevant information from a repairer or other relevant person.

Figure 3-1-1. Corrosion damage 50mm diameter limit

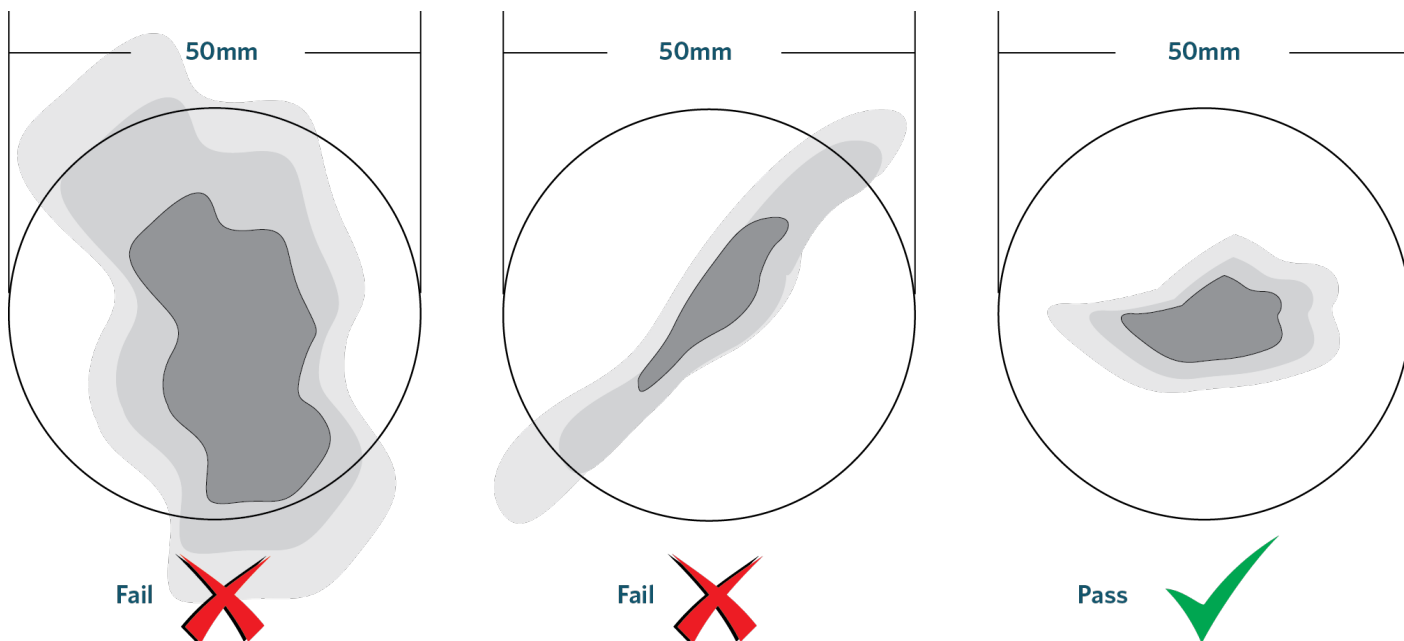
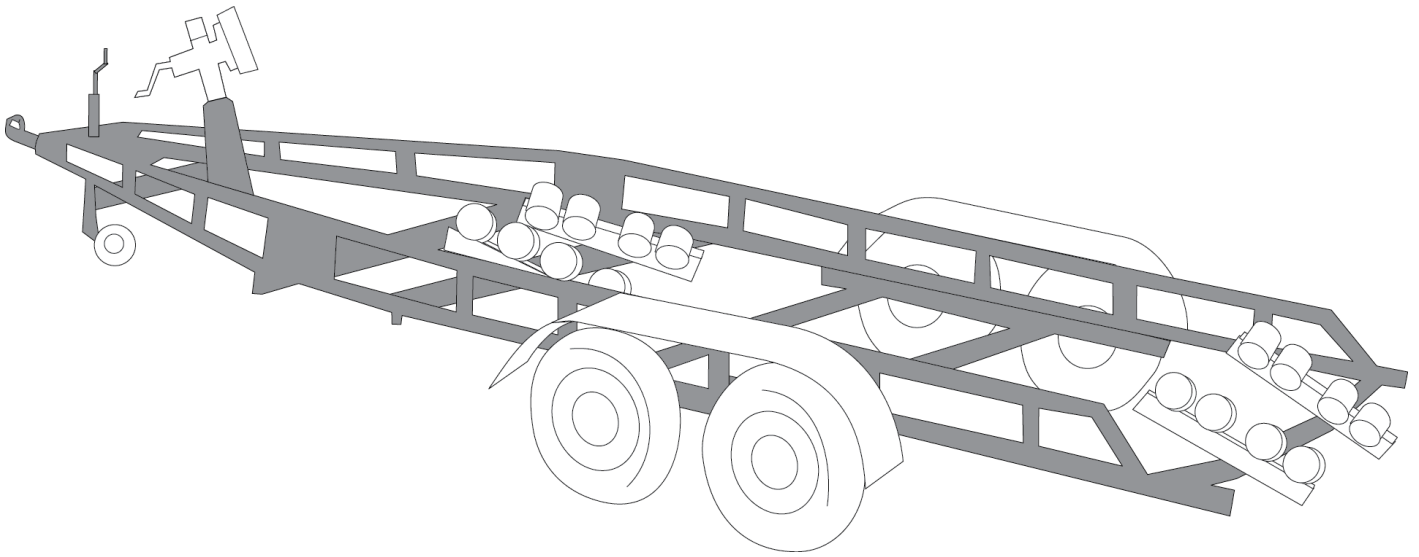
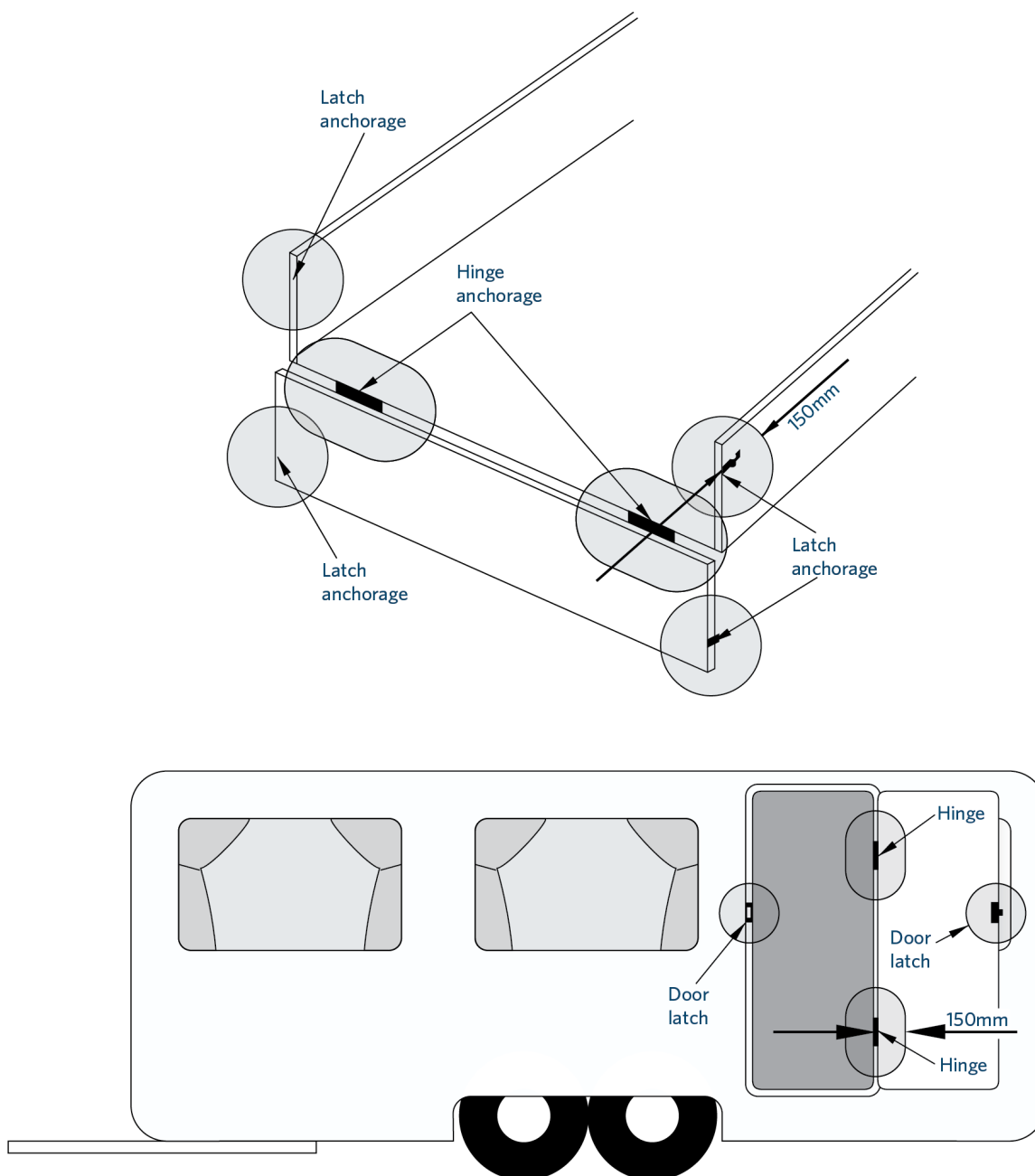


Figure 3-1-2. Shaded areas referred to in 'Condition' above



These include chassis, cross members and subframes, load-bearing monocoque body structures, body mounts, and the body on a trailer with a separate chassis. Other sections also contain reasons for rejection and diagrams relating to specific vehicle components.

Figure 3-1-3. Hinge and latch anchorages



No corrosion damage is allowed within 150mm of a circle around the outside of hinge or latch components.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Standards Compliance 2002](#), section 7.4
- Traffic Regulations 1976: regulation 80.

Permitted equipment

1. A trailer may be fitted with hinged panels.

Condition

2. A vehicle must:

- a) not be so affected by corrosion or weakening of its structure, that is apparent by visual examination, so that the vehicle is unsafe to operate, and
- b) be safe to be operated, and
- c) have been constructed using components and materials that are fit for the purpose, and

d) be within safe tolerance of its state when manufactured or modified.

4 Lighting

4-1 Headlamps

Reasons for rejection

Prohibited equipment

1. A trailer is fitted with headlamps ([Note 1](#)).

Note 1

Headlamp means a lamp designed to illuminate the road ahead of a vehicle, and that is a:

- a) dipped-beam headlamp (single lamp), or
- b) main-beam (high-beam) headlamp (single lamp), and includes a driving lamp, or
- c) combination of a dipped-beam headlamp and a main-beam headlamp (dual-lamp unit).

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Prohibited equipment

1. A trailer must not be fitted with a headlamp ([Note 1](#)).

4-2 Front and rear fog lamps

Reasons for rejection

Permitted equipment

1. A trailer is fitted with:
 - a) a front fog lamp ([Note 1](#)), or
 - b) more than two rear fog lamps.
2. A pair of fog lamps is not fitted:
 - a) symmetrically, or
 - b) as far towards each side of the trailer as practicable.

Condition ([Note 2](#))

3. A lamp is insecure or contains moisture in the form of large droplets, runs or puddles.
4. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.

Performance ([Note 2](#))

5. When switched on, a rear fog lamp emits light that is:
 - a) not projected to the rear, or
 - b) not diffuse, or
 - c) not substantially red, or
 - d) different in colour or intensity from the other lamp in a pair, or
 - e) not steady, or
 - f) not bright enough to indicate the presence of the trailer from the rear in conditions of severely reduced visibility, eg due to modification, deterioration, dirt or an incorrect light source, or
 - g) altered, eg due to damage or modification.

6. A fog lamp cannot be switched off from the driver's seating position.

7. Where a fog lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1

Fog lamp means a front or rear lamp designed to aid the driver or other road users in conditions of severely reduced visibility, including fog or snow, but not including clear atmospheric conditions under the hours of darkness.

Note 2

A rear fog lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Permitted equipment

1. One or two rear fog lamps ([Note 1](#)).
2. A pair of lamps must be symmetrically mounted as far as is practicable towards each side of the vehicle.

Prohibited equipment

3. A trailer must not be fitted with front fog lamps.

Condition

4. A rear fog lamp must be in sound condition if it emits a light.

Performance

5. A rear fog lamp must operate in a way that is appropriate for the lamp and the vehicle.
6. A rear fog lamp must emit a steady light.
7. A rear fog lamp must provide sufficient light output to indicate the presence of the trailer on the road in conditions of severely reduced visibility.
8. The light emitted from a rear fog lamp must be diffused and substantially red in colour.
9. A pair of fog lamps must emit light that is approximately equal in colour and intensity.
10. A fog lamp must be able to be turned off from the driver's seating position.
11. Where a fog lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-3 Cornering lamps

Reasons for rejection

Prohibited equipment

1. A trailer is fitted with cornering lamps ([Note 1](#)).

Note 1

Cornering lamp means a lamp that is designed to emit light at the front of a vehicle to supplement the vehicle's headlamps by illuminating the road ahead in the direction of the turn.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Prohibited equipment

1. A trailer must not be fitted with cornering lamps ([Note 1](#)).

4-4 Daytime running lamps

Reasons for rejection

Prohibited equipment

1. A trailer is fitted with daytime running lamps ([Note 1](#)).

Note 1

Daytime running lamp means a lamp designed to emit a low-intensity light forward of a vehicle to make it more easily seen in the daytime.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Prohibited equipment

1. A trailer must not be fitted with daytime running lamps ([Note 1](#)).

4-5 Direction indicator lamps

Reasons for rejection

Mandatory and permitted equipment

1. A trailer is not fitted with one pair of lamps at the rear if the trailer is one of the following:
 - a) a trailer first registered in New Zealand on or after 1 April 2012, or
 - b) a trailer first registered in New Zealand before 1 April 2012 that is so constructed that the driver's arm signals cannot be seen from behind the trailer.
2. A trailer is fitted with more than:
 - a) two pairs of lamps at the front, or
 - b) two pairs of lamps at the rear, or
 - c) two side-facing lamps on each side of the trailer.
3. A trailer is fitted with a lamp that is not in a pair.
4. A lamp is fitted at a height from the ground exceeding 1.5m (or 2.1m where fitting below 1.5m is not practicable due to the shape of the bodywork of the trailer).
5. A pair of lamps is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards each side of the trailer as practicable.

Condition

6. A lamp is insecure or, if a mandatory lamp, contains moisture in the form of large droplets, runs or puddles.
7. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
8. A reflector is damaged or has deteriorated so that light output is reduced.

Performance

9. When switched on, a direction indicator lamp:
 - a) does not operate, or
 - b) does not begin flashing within one second of switching on, or
 - c) flashes:
 - i. faster than two flashes per second, or
 - ii. slower than one flash per second, or
 - iii. at a different rate from other lamps on the same side.
10. When switched on, a direction indicator lamp emits a light that is:
 - a) not substantially white or amber to the front, or

- b) not substantially amber or red to the rear, or
- c) not substantially amber to the side, or
- d) different in colour or intensity from the other lamp in a pair, or
- e) not bright enough to be visible from 100m in normal daylight and from 200m in normal darkness, eg due to modification, deterioration, dirt or an incorrect light source, or
- f) too bright causing significant dazzle to other road users, eg due to an incorrect light source, or
- g) altered, eg due to damage or modification.

11. A mandatory lamp emits a light that is not visible within (**Figure 4-5-1**):

- a) 15° above and below the horizontal, or
- b) 45° inboard and 80° outboard.

12. On a trailer of American origin fitted with combined stop and indicator lamps, the stop lamp function is not overridden by the indicator function.

13. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1

Direction indicator lamp means a lamp designed to emit a flashing light to signal the intention of the driver to change the direction of the vehicle to the right or to the left.

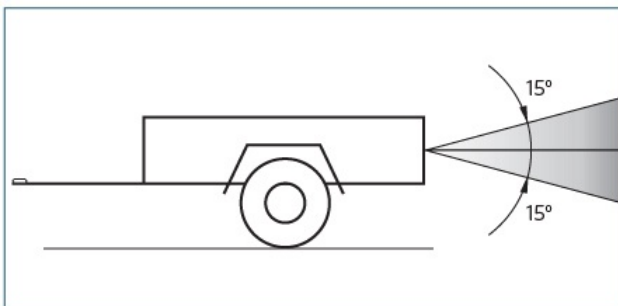
Note 2

A permitted (ie non-mandatory) rear- or side-facing direction indicator lamp that does not comply with condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

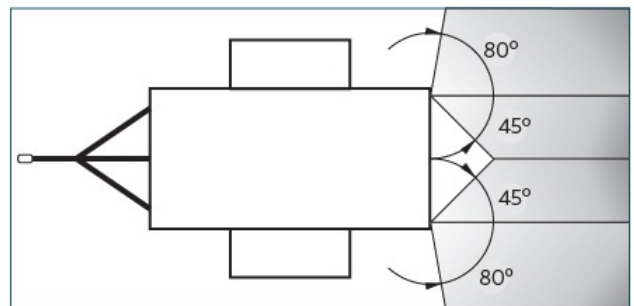
Note 3

A forward-facing permitted lamp that does not comply with the equipment, condition and performance requirements must be made to comply or be removed from the vehicle.

Figure 4-5-1. Direction indicator beam angles



(a) Vertical beam angles



(b) Horizontal beam angles

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Mandatory and permitted equipment

1. A trailer may be fitted with:

- a) one or two pairs of lamps at the front, and
- b) one or two pairs of lamps at the rear, and
- c) one or two side-facing lamps at each side.

2. One or two pairs of lamps must be fitted to the rear of the trailer if the trailer:

- a) was first registered in New Zealand on or after 1 April 2012, or
- b) was first registered before 1 April 2012 and is so constructed that it prevents an arm signal given by the driver from being seen from behind the vehicle combination.

3. A pair of lamps must be symmetrically mounted as far towards each side of the trailer as is practicable.
4. A lamp must be fitted at a height from the ground not exceeding 1.5m, or if this is not possible due to the shape of the bodywork, not exceeding 2.1m.
5. On trailers of American origin, the stop lamp and direction indicator lamp functions may be combined in one lamp.

Condition

6. A direction indicator lamp must:
 - a) be in sound condition, and
 - b) not be obscured (if a mandatory lamp).

Performance

7. A direction indicator lamp must operate in a way that is appropriate for the lamp and the vehicle.
8. A direction indicator lamp must emit a light that is substantially:
 - a) white or amber to the front, and
 - b) red or amber to the rear, and
 - c) amber to the side.
9. A lamp must flash at a fixed frequency in the range of 1–2 Hertz.
10. Each lamp in a pair must, when operated, emit a light of approximately equal intensity, colour and frequency.
11. A lamp must emit a light that is visible from 100m during normal daylight and 200 m in normal darkness.
12. A retrofitted mandatory lamp must emit a light that is visible within angles of:
 - a) 15° above and below the horizontal, and
 - b) 45° inboard, and
 - c) 80° outboard.
13. If a trailer of American origin is fitted with combined stop and indicator lamps, the indicator lamps must override the stop lamps so that the stop lamps operate as direction indicators.
14. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-6 Forward-facing position lamps

Reasons for rejection

Mandatory and permitted equipment

1. A trailer that is more than 2m wide is not fitted with one pair of lamps.
2. A trailer is fitted with more than two lamps.
3. A trailer less than 2m wide is fitted with a single lamp on the left side of the vehicle.
4. A pair of lamps is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards each side of the trailer as practicable.

Condition

5. A lamp is insecure or, if a mandatory lamp, contains moisture in the form of large droplets, runs or puddles.
6. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
7. A lamp's reflector is damaged or has deteriorated so that light output is reduced.

Performance

8. When switched on, a forward-facing position lamp does not operate.
9. When switched on, a forward-facing position lamp emits a light that is:
 - a) not substantially white or amber, or
 - b) not diffuse, or

- c) not projected to the front, or
- d) different in colour or intensity from the other lamp in a pair, or
- e) not steady, or
- f) not bright enough to be visible from 200m in normal darkness, eg due to modification, deterioration, dirt or an incorrect light source.

10. A mandatory lamp emits a light that is not visible within (**Figure 4-6-1**):

- a) 15° above and below the horizontal, or
- b) 80° outboard.

11. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1

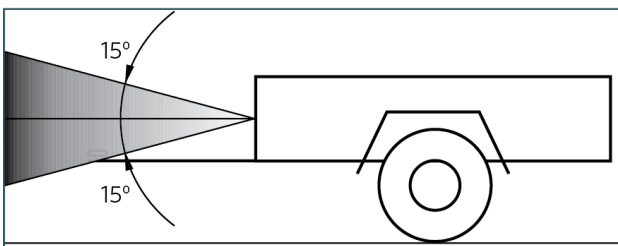
Position lamp means a low-intensity lamp that is designed to indicate to road users the presence and dimensions of a vehicle, being:

- a) a forward-facing position lamp (front side lamp), or
- b) a rearward-facing position lamp (rear side lamp or tail lamp), or
- c) a side-marker lamp, or
- d) an end-outline marker lamp (including cab roof lamp).

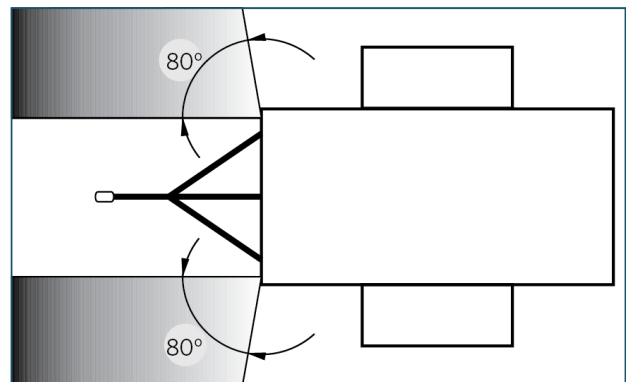
Note 2

A forward-facing permitted lamp that does not comply with the equipment, condition and performance requirements must be made to comply or be removed from the vehicle.

Figure 4-6-1. Forward-facing position lamp beam angles



(a) Vertical beam angles



(b) Horizontal beam angles

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Mandatory and permitted equipment

1. A trailer more than 2m wide must be fitted with one pair of forward-facing position lamps.
2. A trailer 2m wide or less may be fitted with:
 - a) one forward-facing position lamp on the right side of the trailer, or
 - b) two forward-facing position lamps.
3. A lamp must be positioned to the front of the vehicle.

Condition

4. A forward-facing position lamp must:
 - a) be in sound condition, and

- b) not be obscured (if a mandatory lamp).

Performance

5. A forward-facing position lamp must operate in a way that is appropriate for the lamp and the vehicle.
6. A lamp must emit a light that is:
 - a) diffuse, and
 - b) substantially white or amber, and
 - c) steady, and
 - d) sufficient to indicate to other road users the presence and dimensions of the trailer, and
 - e) of approximately equal intensity and colour to the other lamp in a pair.
7. A mandatory lamp must be visible within angles of:
 - a) 15° above and below the horizontal, and
 - b) 80° outboard.
8. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-7 Rearward-facing position lamps

Reasons for rejection

Mandatory and permitted equipment

1. A trailer first registered in New Zealand before 1 January 1978 is not fitted with:
 - a) one single rearward-facing position lamp ([Note 1](#)) in the centre or to the right of the centre of the trailer, or
 - b) one pair of rearward-facing position lamps.
2. A trailer first registered in New Zealand on or after 1 January 1978:
 - a) that is less than 1.5m wide is not fitted with one single rearward-facing position lamp in the centre or to the right of the centre of the trailer, or with one pair of rearward-facing position lamps, or
 - b) that is more than 1.5m wide is not fitted with one pair of rearward-facing position lamps.
3. A trailer is fitted with more than:
 - a) one single lamp, or
 - b) two pairs of lamps.
4. A lamp is mounted at a height from the ground exceeding 1.5m (or 2.1m where fitting below 1.5m is not practicable due to the shape of the bodywork of the trailer).
5. A pair of lamps is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards each side of the trailer as is practicable.

Condition

6. A lamp is insecure or, if a mandatory lamp, contains moisture in the form of large droplets, runs or puddles.
7. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
8. A reflector is damaged or has deteriorated so that light output is reduced.

Performance

9. When switched on, a mandatory lamp does not operate.
10. When switched on, a lamp emits a light that is:
 - a) not substantially red, or
 - b) not diffuse, or
 - c) not projected to the rear, or

d) different in colour or intensity from the other lamp in a pair, or

e) not steady, or

f) not bright enough to be visible from 200m in normal darkness, eg due to modification, deterioration, dirt or an incorrect light source.

11. A mandatory lamp emits a light that is not visible within (**Figure 4-7-1**):

a) 15° above and below the horizontal, or

b) 45° inboard or 80° outboard

12. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1

Position lamp means a low-intensity lamp that is designed to indicate to road users the presence and dimensions of a vehicle, being:

a) a forward-facing position lamp (front side lamp), or

b) a rearward-facing position lamp (rear side lamp or tail lamp), or

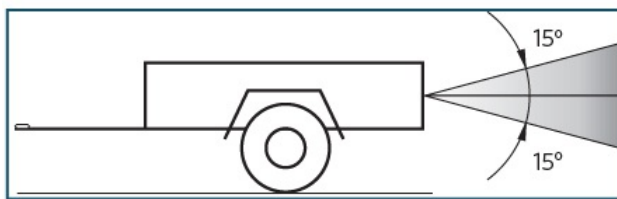
c) a side-marker lamp, or

d) an end-outline marker lamp (including cab roof lamp).

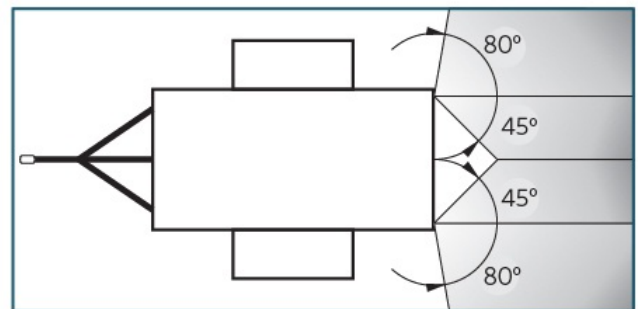
Note 2

A permitted (ie non-mandatory) rearward-facing position lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Figure 4-7-1. Rearward-facing position lamp beam angles



(a) Vertical beam angles



(b) Horizontal beam angles

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Mandatory and permitted equipment

1. A trailer first registered in New Zealand on or after 1 January 1978 and that is more than 1.5m wide must be fitted with one or two pairs of rearward-facing position lamps ([Note 1](#)).

2. A trailer first registered in New Zealand before 1 January 1978 or that does not exceed 1.5m in width must be fitted with:

- a) one single rearward-facing position lamp in the centre or on the right side of the trailer, or
- b) one or two pairs of rearward-facing position lamps.

3. A pair of lamps must be symmetrically mounted as far towards each side of the trailer as is practicable.

4. A lamp must be fitted at a height from the ground not exceeding 1.5m, or if this is not practicable due to the shape of the bodywork of the trailer, not exceeding 2.1m.

Condition

5. A rearward-facing position lamp must:

- a) be in sound condition, and
- b) not be obscured (if a mandatory lamp).

Performance

6. A rearward-facing position lamp must operate in a way that is appropriate for the lamp and the vehicle.
7. A lamp must emit a diffuse light that is substantially red.
8. A lamp must emit a steady light.
9. A lamp must provide sufficient light output to indicate to other road users the presence and dimensions of the trailer.
10. A lamp must emit light that is visible from a distance of 200m in normal darkness.
11. A retrofitted mandatory lamp must be visible within angles of 15° above and below the horizontal, and within 45° inboard and 80° outboard.
12. Each lamp in a pair must, when operated, emit a light of approximately equal intensity and colour.
13. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-8 Side-marker lamps

Reasons for rejection

Permitted equipment

1. A side-marker lamp is not positioned so that it gives an indication of the vehicle's dimensions.

Condition

2. A lamp is insecure.
3. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
4. A reflector is damaged or has deteriorated so that light output is reduced.

Performance

5. When switched on, a mandatory lamp does not operate.
6. When switched on, a side-marker lamp emits a light that:
 - a) is not substantially white or amber to the front, or
 - b) is not substantially red or amber to the rear, or
 - c) is not diffuse, or
 - d) is not approximately of the same colour and intensity on each side of the vehicle, or
 - e) does not remain steadily illuminated, or
 - f) is not bright enough to produce light that is visible from 100m in normal daylight and from 200m in normal darkness, eg due to modification, deterioration, dirt or an incorrect light source.
7. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1 Definitions

Side-marker lamp means a position lamp designed to be fitted to the side of a vehicle or its load.

Position lamp means a low-intensity lamp that is designed to indicate to road users the presence and dimensions of a vehicle, being:

- a) a forward-facing position lamp (front side lamp), or
- b) a rearward-facing position lamp (rear side lamp or tail lamp), or
- c) a side-marker lamp, or
- d) an end-outline marker lamp.

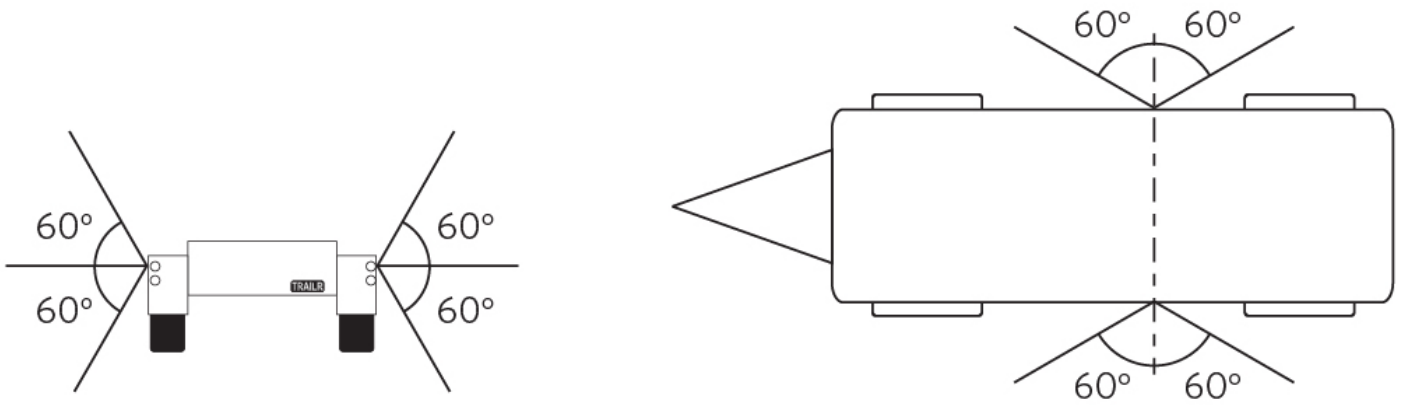
Note 2

The position of a mandatory side-marker lamp need only be approximate as long as it indicates the vehicle's presence and approximate dimensions when viewed from the side.

Note 3

A permitted side-marker lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Figure 4-8-1. Visibility angles for side-marker lamps



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Permitted equipment

1. A light trailer may be fitted with side-marker lamps.
2. A side-marker lamp must be positioned so that it gives an indication of the vehicle's dimensions.

Condition

3. A side-marker lamp must be in sound condition.

Performance

4. A side-marker lamp must operate in a way that is appropriate for the lamp and the vehicle.
5. A lamp must emit a light that is:
 - a) diffuse, and
 - b) substantially white or amber to the front, and
 - c) substantially red or amber to the rear.
6. A lamp must emit a steady light.
7. A side-marker lamp must provide sufficient light output to indicate to other road users the presence and dimensions of the vehicle.
8. A side-marker lamp must emit a light that is visible from a distance of 100m in daylight and 200m during the hours of darkness.
9. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Modifications

10. A side-marker lamp that is affected by a modification must meet equipment, condition and performance requirements.

4-9 End-outline marker lamps

Reasons for rejection

Permitted and prohibited equipment

1. A light trailer with an overall width of 1.8m or more is fitted with more than:
 - a) four forward-facing lamps, or
 - b) two rearward-facing lamps.
2. A light trailer with an overall width of less than 1.8m is fitted with end-outline marker lamps.
3. An end-outline marker lamp is not positioned so that it gives an indication of the vehicle's dimensions, ie lamps are fitted other than around the outline of the vehicle.

Condition

4. A lamp is insecure.
5. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
6. A reflector is damaged or has deteriorated so that light output is reduced.

Performance

7. When switched on, a forward-facing end-outline marker lamp does not operate ([Note 2](#)).
8. When switched on, an end-outline marker lamp emits a light that is:
 - a) not substantially white or amber to the front, or
 - b) not substantially red to the rear, or
 - c) not diffuse, or
 - d) not projected to the front or rear, or
 - e) not approximately of the same colour and intensity as the other lamp if fitted in a pair, or
 - f) not steady, or
 - g) not bright enough to indicate the presence and dimensions of the vehicle to other road users.
9. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1

End-outline marker lamp means a position lamp designed to be fitted near the outer extremity of the vehicle in addition to forward-facing and rearward-facing position lamps, and includes a cab roof lamp.

Position lamp means a low-intensity lamp that is designed to indicate the presence and dimensions of a vehicle to other road users, being:

- a) a forward-facing position lamp (front side or park lamp), or
- b) a rearward-facing position lamp (rear side lamp or tail lamp), or
- c) a side-marker lamp, or
- d) an end-outline marker lamp (including cab roof lamps).

Note 2

A forward-facing permitted lamp that does not comply with the equipment, condition and performance requirements must be made to comply or be removed from the vehicle. A rearward-facing end-outline marker lamp that does not comply with the equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Permitted and prohibited equipment

1. A light trailer with an overall width of 1.8m or more may be fitted with a maximum of:
 - a) four forward-facing lamps, and
 - b) two rearward-facing lamps.
2. A light trailer with an overall width of less than 1.8m is fitted with end-outline marker lamps.
3. An end-outline marker lamp must be positioned so that it gives an indication of the vehicle's dimensions.

Condition

4. An end-outline marker lamp must be in sound condition.

Performance

5. An end-outline marker lamp must operate in a way that is appropriate for the lamp and the vehicle.
6. A lamp must emit a light that is:
 - a) diffuse, and

b) substantially white or amber to the front, and

c) substantially red to the rear.

7. A lamp must emit a steady light.

8. An end-outline marker lamp must provide sufficient light output to indicate to other road users the presence and dimensions of the vehicle.

9. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Modifications

10. An end-outline marker lamp that is affected by a modification must meet equipment, condition and performance requirements.

4-10 Stop lamps

Reasons for rejection

Mandatory and permitted equipment

1. A trailer first registered in NZ on or after 1 April 2012:

a) is not fitted with one pair of stop lamps, or

b) is fitted with more than two pairs of stop lamps, or

c) is fitted with a stop lamp that is not in a pair.

2. A trailer first registered in New Zealand on or after 1 January 1978:

a) is not fitted with one pair of stop lamps ([Note 1](#)) if the trailer is so constructed that the driver's arm signals or the towing vehicle's stop lamps cannot be seen from behind the trailer, or

b) is fitted with more than two pairs of stop lamps, or

c) is fitted with a stop lamp that is not in a pair.

3. A trailer first registered in New Zealand before 1 January 1978:

a) is not fitted with one stop lamp if the trailer is so constructed that the driver's arm signals or the towing vehicle's stop lamps cannot be seen from behind the trailer, or

b) is fitted with more than four stop lamps.

4. A stop lamp is fitted at a height from the ground exceeding 1.5m (or 2.1m where fitting below 1.5m is not practicable due to the shape of the bodywork of the trailer).

5. A pair of lamps is not:

a) symmetrically mounted, or

b) mounted as far towards each side of the trailer as practicable.

Condition

6. A lamp is insecure or, if a mandatory lamp, contains moisture in the form of large droplets, runs or puddles.

7. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.

8. A reflector is damaged or has deteriorated so that light output is reduced.

Performance

9. When the service brake is activated:

a) a mandatory lamp does not operate, or

b) a lamp does not remain steadily illuminated.

10. A lamp operates when the service brake is not activated.

11. A lamp emits a light that is:

a) not substantially red, or

b) not diffuse, or

c) not projected to the rear, or

d) different in intensity from the other lamp in a pair, or not bright enough to produce a light that is visible from 100m in normal daylight, eg due to modification, deterioration, dirt or an incorrect light source.

12. A mandatory lamp emits a light that is not visible within (**Figure 4-10-1**):

a) 15° above and below the horizontal, or

b) 45° inboard and outboard

13. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

14. On a trailer of American origin fitted with combined stop and direction indicator lamps, the stop lamp function is not overridden by the indicator function.

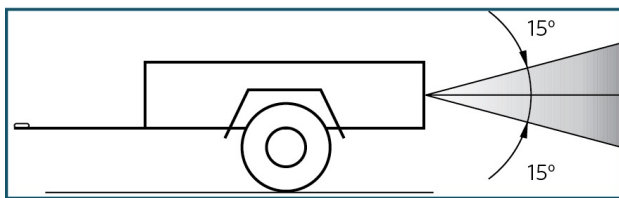
Note 1

Stop lamp means a lamp that is designed to operate when the service brake is activated.

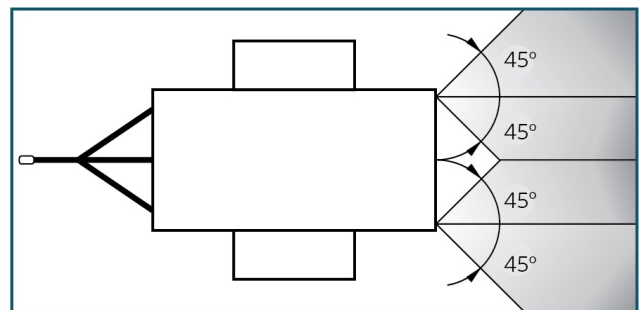
Note 2

A permitted (ie non-mandatory) stop lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Figure 4-10-1. Stop lamp beam angles



(a) Vertical beam angles



(b) Horizontal beam angles

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Mandatory and permitted equipment

1. A trailer first registered in NZ before 1 January 1978 must be fitted with one stop lamp, or one or two pairs of stop lamps, if the trailer is so constructed that the driver's arm signals or the towing vehicle's stop lamps cannot be seen from behind the trailer.
2. A trailer first registered in NZ between 1 January 1978 and 31 March 2012 must be fitted with one or two pairs of stop lamps if the trailer is so constructed that the driver's arm signals or the towing vehicle's stop lamps cannot be seen from behind the trailer.
3. A trailer first registered in NZ on or after 1 April 2012 must be fitted with one or two pairs of stop lamps.
4. A pair of stop lamps must be symmetrically mounted as far towards each side of the trailer as is practicable.
5. A stop lamp must be fitted at a height from the ground not exceeding 1.5m, or if this is not practicable due to the shape of the bodywork of the trailer, not exceeding 2.1m.

Condition

6. A stop lamp must:

- a) be in sound condition, and
- b) not be obscured (if a mandatory lamp).

Performance

7. A stop lamp must operate in a way that is appropriate for the lamp and the vehicle.
8. The light emitted from a stop lamp must be diffuse light that is substantially red.

9. A required stop lamp must operate when a service brake is activated.
10. A required stop lamp must provide sufficient light output to fulfil its intended purpose.
11. A stop lamp must emit a steady light.
12. A mandatory stop lamp must emit a light that is visible within the angles of 15° above and below the horizontal, and 45° inboard and outboard.
13. If a trailer of American origin is fitted with combined stop and direction indicator lamps, the indicator lamps must override the stop lamps so that the stop lamps will operate as direction indicators.
14. Where a stop lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-11 High-mounted stop lamps

Reasons for rejection

Permitted equipment

1. A trailer is fitted with more than two high-mounted stop lamps ([Note 1](#)).
2. A lamp is not fitted in a central high-mounted position.

Condition

3. A lamp is insecure.
4. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
5. A reflector is damaged or has deteriorated so that light output is reduced.

Performance

6. When the service brake is activated, a lamp does not remain steadily illuminated.
7. A lamp operates when the service brake is not activated.
8. A lamp emits a light that:
 - a) is not substantially red, or
 - b) is not diffuse, or
 - c) is not projected to the rear, or
 - d) has insufficient light output to produce a light that is visible from 100m in normal daylight, eg due to modification, deterioration, dirt or an incorrect light source.
9. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1

Stop lamp means a lamp that is designed to operate when the service brake is activated.

High-mounted stop lamp means a stop lamp that is designed to be fitted in a central, high-mounted position at the rear of the vehicle.

Note 2

A high-mounted stop lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Permitted equipment

1. A trailer may be fitted with one or two high-mounted stop lamps ([Note 1](#)).
2. A lamp must be fitted in a central high-mounted position at the rear of the trailer.

Condition

3. A high-mounted stop lamp must be in good condition.

Performance

4. A high-mounted stop lamp must operate in a way that is appropriate for the lamp and the vehicle.
5. The light emitted from a high-mounted stop lamp must be diffuse light that is substantially red.
6. A high-mounted stop lamp must emit a steady light.
7. Where a high-mounted stop lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-12 Rear-registration-plate illumination lamps

Reasons for rejection

Mandatory equipment

1. A trailer is not fitted with at least one rear-registration-plate illumination lamp ([Note 1](#)).

Performance

2. The lamp emits a light that is not:
 - a) substantially white, or
 - b) steady, or
 - c) diffuse.
3. The lamps are not bright enough to show up the registration plate text from 20 m in normal darkness.
4. The light source of a lamp is visible from the rear of the trailer.

Note 1

Rear-registration-plate illumination lamp means a lamp designed to illuminate the rear registration plate of a vehicle.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Mandatory equipment

1. At least one rear-registration-plate illumination lamp ([Note 1](#)).

Performance

2. A rear-registration-plate illumination lamp must operate in a way that is appropriate for the lamp and the vehicle.
3. A lamp must emit a diffuse light that is substantially white.
4. A rear-registration-plate illumination lamp must emit a steady light.
5. The light source of the lamp must not be visible from the rear of the trailer.
6. A lamp must illuminate the figures and letters of the plate so that they are visible from 20 m during normal darkness.
7. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-13 Rear reflectors

Reasons for rejection

Mandatory and permitted equipment

1. A trailer:
 - a) is not fitted with at least one red rearward-facing reflector on each side ([Note 1](#)), or
 - b) is fitted with a red rearward-facing reflector that is not in a pair.
2. A reflector is not positioned to the rear of the trailer.
3. A reflector is fitted at a height from the ground exceeding 1.5m, or if this is not practicable due to the shape of the bodywork of the trailer, exceeding 2.1m.
4. A trailer equipped with a jinker pole that extends behind its rear lamps is not fitted with one red rearward-facing reflector at the rear extremity of the pole.

5. A pair of reflectors is not:

- a) symmetrically mounted, or
- b) mounted as far towards each side of the trailer as is practicable.

Condition

6. A mandatory reflector's ability to reflect light is affected by excessive:

- a) fading, or
- b) scratching or other damage.

7. A mandatory reflector is obscured.

Performance

8. The reflected light from a mandatory reflector is not visible from 100m.

9. The reflected light from a reflector is not red.

Note 1

Reflector means a distinct item of lighting equipment that is designed to reflect incident light back towards the light source, but does not include reflective material (such as reflective tape).

Reflective material means any material that is designed to reflect incident light back towards the light source, and includes reflective tape, but does not include a reflector.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Mandatory and permitted equipment

1. A trailer must be fitted with at least one pair of rearward-facing reflectors ([Note 1](#)) at a height from the ground not exceeding 1.5m, or if this is not practicable due to the shape of the bodywork of the trailer, not exceeding 2.1m.
2. A trailer equipped with a jinker pole that extends behind its rear lamps must also be fitted with one red reflector at the rear extremity of the pole.
3. A rearward-facing reflector must be positioned to the rear of the trailer.
4. A reflector must be of an area that allows it to reflect light to improve the visibility of the trailer to other road users without causing undue dazzle or discomfort.
5. A pair of reflectors must be symmetrically mounted as far towards each side of the trailer as is practicable.

Condition

6. A reflector must be in good condition and not be obscured.

Performance

7. A reflector must operate in a way that is appropriate for the reflector and the vehicle.
8. A reflector must reflect white light as substantially red light.
9. A reflector must provide sufficient light reflection to fulfil its intended purpose.

4-14 Reversing lamps

Reasons for rejection

Permitted equipment

1. A trailer is fitted with more than two reversing lamps at the rear of the trailer ([Note 1](#)).
2. A pair of reversing lamps is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards each side of the trailer as practicable.

Condition

3. A lamp is insecure.
4. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
5. A reflector is damaged or has deteriorated so that light output is reduced.

Performance

6. A lamp controlled by gear engagement continues to display a light to the rear when the reverse gear is disengaged.
7. A lamp controlled by a manual switch continues to display a light to the rear while the headlamps are switched on.
8. When engaged, a lamp emits light that is not:
 - a) substantially white, or
 - b) steady, or
 - c) diffuse or a dipped beam.
9. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1

Reversing lamp means a lamp designed to illuminate the area behind the vehicle while it is reversing and to warn other road users that the vehicle is reversing or about to reverse.

Note 2

A reversing lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Permitted equipment

1. One or two reversing lamps fitted at the rear of the trailer ([Note 1](#)).
2. A pair of reversing lamps must be symmetrically mounted as far towards each side of the trailer as is practicable.

Condition

3. A reversing lamp must be in good condition.

Performance

4. A reversing lamp must operate in a way that is appropriate for the lamp and the vehicle.
5. A reversing lamp, when operated, must emit a diffuse light or a dipped beam of light that is substantially white.
6. A reversing lamp must emit a steady light.
7. A reversing lamp may operate only when the reverse gear is engaged or the headlamps are turned off.
8. Where a reversing lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-15 Cosmetic lamps

Reasons for rejection

Permitted equipment

1. A cosmetic lamp (ie one not listed in **Table 4-15-1**) that is fitted to a vehicle:
 - a) has a part of its light-emitting surface positioned within 250mm of any mandatory lamp, or
 - b) is not mounted in a fixed position, or
 - c) is positioned so that its light-emitting surface is visible within the shaded areas in **Figure 4-15-1**.

Performance

2. When switched on, a cosmetic lamp with a light-emitting surface not visible within the shaded areas in **Figure 4-15-1** emits a light that:
 - a) is not diffuse, or

- b) flashes or otherwise varies in intensity or colour, or
- c) revolves, rotates or otherwise moves, or
- d) is too bright and likely to dazzle other road users, or
- e) is likely to cause confusion about the orientation of the vehicle, or
- f) is red when seen directly from the front, or
- g) is not red or amber when seen directly from the rear.

Note 1

A rear or side cosmetic lamp that does not comply with requirements for condition or performance must be made to comply, or be disabled so that it does not emit a light.

Note 2

Lamp means a device designed to emit light, and includes an array of separate light sources that appear as a continuous illuminated surface.

Cosmetic lamp means any lamp that is not listed in **Table 4-15-1**.

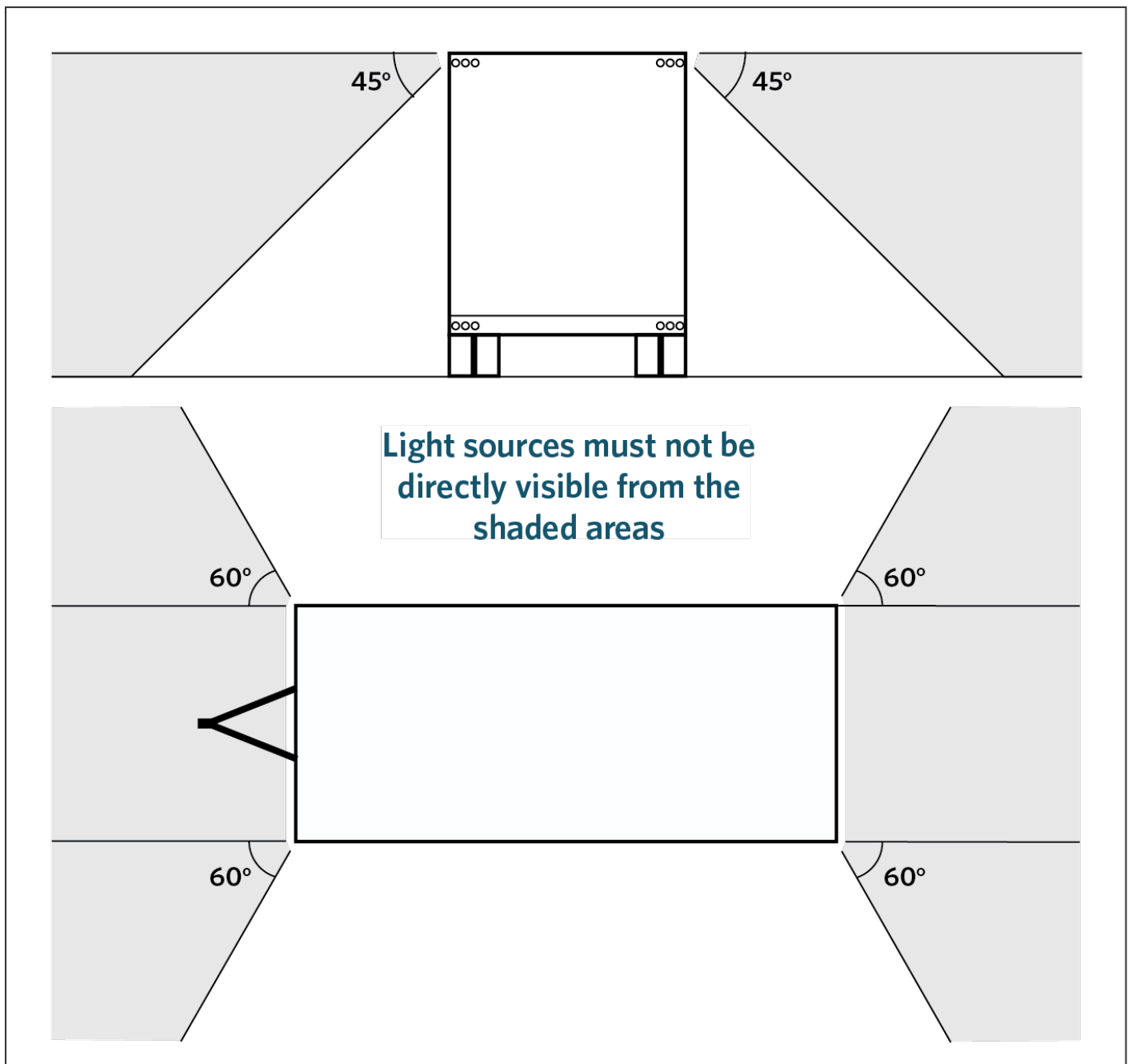
Note 3

A forward-facing cosmetic lamp that does not comply with the equipment, condition and performance requirements must be made to comply or be removed from the vehicle.

Table 4-15-1. Lamps that are not cosmetic lamps

Lamps covered in the VIRM	Other lighting equipment not requiring inspection
Headlamps	Reflective material
Stop lamps	Interior lamps
High-mounted stop lamps	Designed to illuminate the interior of the vehicle for the convenience of passengers
Direction indicator lamps	Work lamps
Position lamps	White or amber high-intensity lamps that are not necessary for the operation of the vehicle but are designed to illuminate the area around the vehicle or the vehicle itself
(includes side-marker lamps and end-outline marker lamps)	Scene lamps
Rear-registration-plate illumination lamps	Work lamps designed to provide a fixed or movable beam of light to illuminate the area around the vehicle or the vehicle itself
Rear reflectors	Alley lamps
Fog lamps	Work lamps designed primarily to provide a fixed or movable beam of light to the side of the vehicle it is fitted to
Daytime running lamps	Flashing or revolving beacons
Cornering lamps	Illuminated vehicle-mounted signs
Reversing lamps	Includes PSV destination signs, taxi signs, and variable message signs operated by enforcement officers, under a traffic management plan or permitted by other legislation
PSV interior lamps	

Figure 4-15-1. Visibility angles for cosmetic lamps



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Permitted equipment

1. A vehicle may be fitted with one or more lamps not specified in **Table 4-15-1**, provided they are fitted so that light sources are not visible in those regions specified in **Figure 4-15-1**.
2. A lamp must be fitted in a fixed position on the vehicle and positioned so that no part of the light source is situated within 250mm of a mandatory lamp.

Performance

3. A lamp must:
 - a) only emit light that is diffuse, and
 - b) not emit light that flashes or otherwise varies in intensity or colour, and
 - c) be fitted in a way, and be of a luminance that ensures that it does not dazzle, confuse or distract other road users, and
 - d) not emit a light that revolves, rotates or otherwise moves, and

- e) not cause confusion as to the orientation of the vehicle, and
- f) not emit a red light that is directly visible from the front of the vehicle, and
- g) not emit a light other than red or amber if the light is directly visible from the rear of the vehicle.

5 Brakes

5-1 Service brake, parking brake, emergency brake and breakaway brake

Reasons for rejection

Mandatory equipment

1. If fitted to a trailer:
 - a) a service brake does not act on each road wheel of at least one axle, or
 - b) a parking brake does not act on each wheel of at least one axle.
2. Where the vehicle inspector is able to identify the laden weight ([Note 5](#)) of the trailer and its load, the trailer is not fitted with a service brake, parking brake, or breakaway brake, as required by **Table 5-1-1**.
3. An agricultural trailer with a laden weight ([Note 5](#)) of more than 2000kg that does not comply with braking requirements is not fitted with two safety chains that cross each other when the trailer is connected (refer to [section 8, Towing connections](#)).

Condition

Service brake

4. There is corrosion damage ([Note 1](#)) within 150mm of a brake component mounting point.
5. A vacuum hose or pipe (including connections) is:
 - a) insecure, or
 - b) leaking, or
 - c) damaged (cracked, chafed, twisted, stretched or corroded, eg showing signs of pitting or a noticeable decrease in the pipe's outside diameter)
6. The brake vacuum servo (brake booster) is:
 - a) not functioning fully or adequately, or
 - b) leaking, or
 - c) insecure.
7. The brake master cylinder is:
 - a) leaking brake fluid, or
 - b) insecure, or
 - c) excessively corroded.
8. A brake valve is:
 - a) not operating (eg has a seized load sensing valve), or
 - b) leaking brake fluid, or
 - c) insecure, or
 - d) excessively corroded.
9. A brake pipe (including connections) is:
 - a) leaking brake fluid, or
 - b) insecure, or
 - c) deformed from its original shape, or
 - d) chafed, or
 - e) corrosion damaged, eg there are signs of pitting or a noticeable increase in the pipe's outside diameter.

10. A flexible hydraulic brake hose (including connections):

- a) is leaking brake fluid, or
- b) is insecure, or
- c) bulges under pressure, or
- d) is twisted, stretched or chafed, or
- e) external sheathing is cracked to the extent that the reinforcing cords are exposed, or
- f) has metal connections that are excessively corroded, or
- g) has an end fitting that is not attached to the hose by means of swaging, machine crimping or a similar process ([Note 2](#)).

11. The service brake cable:

- a) is knotted, frayed or excessively corroded, or
- b) has an auxiliary tensioner fitted, or
- c) has otherwise deteriorated so that it may affect the parking brake performance.

12. A service brake actuating rod or guide:

- a) is excessively corroded, or
- b) is excessively worn, or
- c) has otherwise deteriorated so that it may affect the parking brake performance.

13. A brake calliper:

- a) shows visible signs of leaking, or
- b) is insecure, or
- c) is seized.

14. A brake backing plate is:

- a) insecure, or
- b) severely corroded, or
- c) deformed from its original shape, or
- d) cracked, or
- e) contaminated by brake fluid, oil or grease.

15. A wheel cylinder:

- a) shows visible signs of leaking, or
- b) is insecure, or
- c) is seized.

16. An ABS system component is damaged, insecure or missing.

17. A brake disc or drum is:

- a) worn beyond manufacturer's specifications (where visible without removing vehicle components) ([Note 3](#)), or
- b) fractured or otherwise damaged (where visible without removing vehicle components) ([Note 3](#)), or
- c) contaminated by brake fluid, oil or grease.

18. A brake friction material (where visible without removing vehicle components) ([Note 3](#)) is:

- a) worn below manufacturer's specifications, or
- b) is separating from the brake pad backing plate or brake shoe, or
- c) is contaminated by brake fluid, oil or grease.

19. A service brake component shows signs of heating or welding after original manufacture.

Parking brake

20. The parking brake lever:

- a) travels excessively, or
- b) is insecure, or
- c) mounting is damaged, corroded, distorted or fractured within 150mm of the lever mounting, or
- d) mechanism or lever pivot bearing is worn or damaged so that the parking brake could be easily released by accident.

21. The parking brake cable:

- a) is knotted, frayed or excessively corroded, or
- b) has an auxiliary tensioner fitted, or
- c) has otherwise deteriorated so that it may affect the parking brake performance.

22. A parking brake actuating rod or guide:

- a) is excessively corroded, or
- b) is excessively worn, or
- c) has otherwise deteriorated so that it may affect the parking brake performance.

23. A parking brake component shows signs of heating or welding after original manufacture.

Performance

Service brake

24. The service brake is not able to be applied in a controlled and progressive manner.

25. When the service brake is applied and without assistance from the towing vehicle's engine:

- a) the combined effort of the trailer and towing vehicle brakes does not stop the vehicle combination within 7m from a speed of 30km/h (average brake efficiency of 50%), or
- b) the vehicle vibrates under braking to the extent that control of the vehicle is adversely affected, or
- c) (direct trailer brake) the brake fails to release immediately after the towing vehicle's brakes are released, or
- d) (indirect trailer brake) the brake fails to release when the towing vehicle stops decelerating, or the directional control is affected, eg swerving to one side, or the brakes on one side apply more slowly than on the other side, or
- e) the brake balance, during the entire brake application, varies by more than 20% between wheels on a common axle.

26. The ABS or brake system warning lamp or self-check system, if fitted, indicates a defect in the ABS or brake system (this does not apply to brake pad wear warning systems).

Parking brake

27. When the park brake is applied:

- a) the vehicle does not stop within 18m from a speed of 30km/h (average brake efficiency of 20%), or
- b) it does not hold the vehicle at rest on a slope of 1 in 5, or
- c) it does not hold all the wheels on a common axle stationary against attempts to drive the vehicle away.

Breakaway brake

28. The breakaway brake does not automatically and immediately apply when the trailer is disconnected from the towing vehicle ([Note 4](#)).

Note 1

Agricultural trailer means a trailer that is used exclusively for agricultural or land management purposes, and that is operated on the road only for the following purposes:

- a) during delivery from a manufacturer to the manufacturer's representative, or
- b) while being delivered to or from an agricultural show for display or demonstration purposes, or
- c) while being taken to or from a farm, or from one part of a farm to another part of that farm.

Axle means a transverse shaft or housing on which a vehicle's wheels are mounted.

Brake friction material means a brake component having a friction surface that is designed to be preferentially sacrificed.

Breakaway brake means a service brake or parking brake fitted to a trailer that ensures, under all conditions of use, that, if the trailer is unintentionally disconnected from its towing vehicle, the brake will automatically and immediately apply and will remain applied for at least 15 minutes.

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward signs of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Direct trailer service brake means a service brake fitted to a trailer that allows the driver of a towing vehicle, by operating the service brake of the towing vehicle, to directly and progressively regulate the trailer brake effort.

Engine brake is a modification to a diesel engine used to increase the retardation force provided by the engine on deceleration.

Friction surface means any surface of a brake component that is designed to convert kinetic energy to heat.

Indirect trailer service brake means a service brake fitted to a trailer where the action of the driver of a towing vehicle applying the brakes of that vehicle results in a reaction by the trailer that is used to progressively regulate the trailer brake effort.

Laden weight means the weight of the vehicle and its load for the time being carried.

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Parking brake means a brake readily applicable and capable of remaining applied for an indefinite period without further attention.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Service brake means a brake for intermittent use that is normally used to slow down and stop a vehicle.

Note 2

Hose end fittings that can be undone using hand tools are unacceptable.

Note 3

If a brake is fitted with an inspection port plug, this must be removed for inspection of the brake components.

Note 4

A breakaway brake, if fitted, must be tested, but is not required to be functional on a trailer with a laden weight of 2500kg or less that is fitted with one or two compliant safety chains as required in **Table 5-1-1**. The vehicle inspector should advise the vehicle operator if the breakaway brake is not functional.

Note 5

Laden weight means the weight of the trailer and its load, if any, for the time being carried. A vehicle inspector may be presented with a trailer (usually unladen, such as a boat, car or horse trailer) that has a laden weight below 2000kg, but that is likely to have a laden weight exceeding 2000kg when it carries its normal load. In such a case, he should make the vehicle operator aware, for example by putting a note on the checksheet, that the trailer may not comply with safety chain or brake requirements when the trailer carries its normal load.

Table 5-1-1. Trailer brake requirements

Type of brake required	Laden weight (Note 5) of the trailer		
	2000 kg or less	2001–2500 kg	2501 kg or more
Service brake	Not required but, if fitted, must act on each wheel of at least one axle	Required; either direct or indirect service brake must act on each wheel of at least one axle	Required; direct service brake must act on each wheel of at least one axle
Parking brake	Not required	Not required	Required; must act on at least one complete axle
Breakaway brake (Notes 1) (Note 4)	Required unless fitted with an appropriate coupling and safety chain	Required, unless fitted with an appropriate coupling and two safety chains	Required

Summary of legislation

Applicable legislation

- [Land Transport Rule: Light-Vehicle Brakes 2002](#).

Mandatory equipment

1. A trailer must be fitted with a service brake, parking brake, or breakaway brake depending on the laden weight (Note 5) of the trailer, as listed in **Table 5-1-1**.
2. An agricultural trailer with a laden weight (Note 5) of more than 2000kg that does not comply with brake requirements must be fitted with two safety chains that cross each other when the trailer is connected (refer to section 8, Towing connections).

Permitted equipment

3. A trailer may be fitted with a type of brake that is not required to be fitted to the trailer.

Condition

4. A brake must be in good condition.
5. The brake friction surfaces must be within safe tolerance of their state when manufactured, and must not be scored, weakened or damaged to the extent that the safety performance of the brake is adversely affected.

Performance

6. The service brake must be able to be applied in a controlled and progressive manner.
7. When a vehicle's brake is applied:
 - a) the vehicle or its controls must not vibrate to the extent that control of the vehicle is adversely affected, and
 - b) the braking effort on each wheel must provide stable and efficient braking without adverse effect on the directional control of the vehicle, and
 - c) if the vehicle is equipped with an anti-lock braking system (ABS), the wheels must not lock, other than when the speed of the vehicle falls below the ABS activation parameters set by the vehicle manufacturer.
8. The trailer's and towing vehicle's service brakes must together stop the vehicle combination within a distance of 7m from a speed of 30km/h without damage to, or permanent deformation of, either the coupling system or the structure of either vehicle, and without assistance from the compression of the towing vehicle's engine or other retarders.
9. A trailer parking brake must stop the trailer within a distance of 18m from a speed of 30km/h, or hold the trailer at rest on a slope of 1 in 5.
10. A breakaway brake must automatically and immediately apply when the trailer unintentionally disconnects from the towing vehicle, and must remain applied for at least 15 minutes.

Page amended **14 October 2013** (see [amendment details](#)).

6 Steering and suspension

6-1 Steering and suspension systems

Reasons for rejection

Condition

1. A ballrace turntable is:
 - a) not securely fastened, eg bolts or fasteners are loose, or
 - b) worn beyond manufacturer's tolerances, or
 - c) cracked or distorted, or
 - d) corroded or has deteriorated so that it is no longer safe.
2. A steering linkage or joint:
 - a) is insecure, or
 - b) is damaged, significantly corroded, distorted or cracked, or
 - c) shows signs of welding or heating after original manufacture, or
 - d) has play beyond manufacturer's specifications, or
 - e) does not operate smoothly without roughness or stiffness, or
 - f) is fouling on the vehicle structure, wheel tyre or brake system component.
3. A steering arm or associated component:
 - a) is insecure, or
 - b) is damaged, significantly corroded, distorted or cracked, or
 - c) shows signs of welding or heating after original manufacture.
4. A kingpin or outer ball joint:
 - a) is insecure, or
 - b) is damaged, significantly corroded, distorted or cracked, or
 - c) shows signs of welding or heating after original manufacture, or
 - d) has play beyond the manufacturer's specifications, or
 - e) does not operate smoothly without roughness or stiffness.
5. A lock stop is loose or damaged.
6. A steering or suspension component mounting point:
 - a) is insecure, or
 - b) has corrosion damage ([Note 2](#)), buckling or fractures within 150mm of a mounting point (**Figure 6-1-1**).
7. A suspension component:
 - a) is insecure, or
 - b) is damaged, significantly corroded, distorted or cracked, or
 - c) shows signs of welding or heating after original manufacture, or
 - d) has play beyond manufacturer's specifications, or
 - e) does not operate smoothly without roughness or stiffness, or
 - f) has excessive leakage of damping fluid (**Technical bulletin 9**), or
 - g) shows excessive play, roughness or stiffness in a strut upper support bearing, or
 - h) is a flexible bush that is significantly cracked, damaged or perished.
8. There is corrosion damage ([Note 2](#)) within 150mm of a suspension component mounting point.

Performance

9. During operation:

- a) the vehicle veers significantly to one side, or
- b) the vehicle requires unreasonable force to steer, or
- c) the steering is unreasonably stiff or rough.

Note 1

Steering system means those components, parts and systems that connect the driver's controls to the vehicle's wheels or tracks by means of which the direction of motion of a vehicle is controlled.

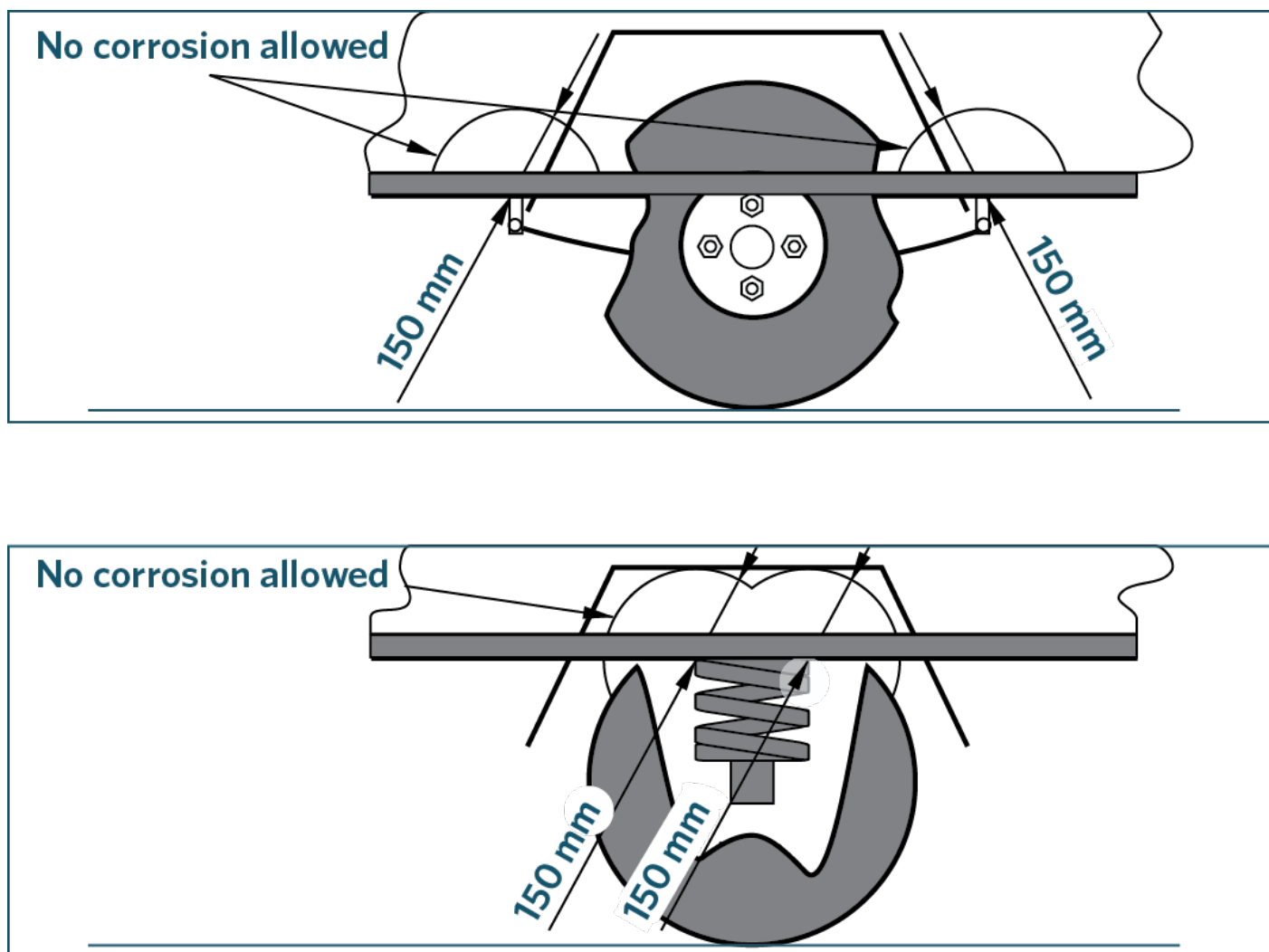
Note 2

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward signs of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Note 3

Ballrace turntable means a device incorporating a low friction ball bearing fitted between two substantial structural components of a vehicle to enable rotational motion between those components about a vertical axis.

Figure 6-1-1. Corrosion limits around front or rear suspension anchorages



Summary of legislation

Applicable legislation

- [Land Transport Rule: Steering Systems 2001](#).

Condition

1. The steering system ([Note 1](#)) and associated systems and components that directly or indirectly affect the directional control

of the vehicle must be:

- a) sound and in good condition, and
- b) strong, durable and fit for their purpose, taking into account whether adverse effects have resulted from a loss of integrity of any protective system used by a relevant component.

Performance

2. The steering system and associated systems and components that directly or indirectly affect the directional control of the vehicle must provide the vehicle with safe, efficient, convenient and sensitive control.

Page amended **14 October 2013** (see [amendment details](#)).

7 Tyres, wheels and hubs

7-1 Tyres and wheels

Reasons for rejection

Mandatory equipment

Tyres

1. Tyres on the same axle are not of the same:
 - a) size designation, or
 - b) carcass type (ie mixed steel ply, fabric radial ply, bias/cross ply, run-flat), or
 - c) same tread pattern type (mixed asymmetric, directional, normal highway, traction, winter tyre tread (**Figure 7-1-2**)).
2. The tyres on an axle of a light trailer do not meet at least one of the following:
 - a) the tyre ply ratings are the same, or
 - b) the tyre load indices differ by no more than 2 ([Note 3](#)).
3. An asymmetric tyre is fitted to a vehicle with the 'inside' tyre wall facing outwards.
4. A directional tyre is fitted contrary to its correct direction of rotation.
5. A tyre has a speed category that is less than the speed limit for the vehicle or less than the vehicle's maximum speed if this is less than the speed limit ([Note 3](#)) ([Note 34](#))
6. The vehicle has one or more of the following types of tyre fitted:
 - a) a space-saver tyre, or
 - b) a non-pneumatic tyre, or
 - c) a tyre with studs, cleats, lugs or other gripping devices, or
 - d) a tyre that is not compatible with the vehicle to which it is fitted, eg a tyre is marked with any of the following:
 - i. 'NOT FOR HIGHWAY USE'
 - ii. 'NHS' (Not for Highway Service)
 - iii. 'ADV' (Agricultural Drawn Vehicle)
 - iv. 'RACING PURPOSES ONLY'.
 - e) a tyre that has had all its manufacturer / brand / model information removed so that the tyre can no longer be identified (**Figure 7-1-3**).

Wheels

7. A wheel is not compatible with the tyre fitted to it for rim profile, flange height or valve fitment.
8. A wheel is:
 - a) not compatible with the vehicle to which it is fitted, or
 - b) not correctly attached to the vehicle.

Condition

Tyres (excluding spare tyres and space-saver tyres)

9. There are signs that a tyre is fouling on another part of the vehicle.

10. A tyre shows damage that is likely to compromise its ability to operate in a safe manner or lead to premature tyre failure, such as:

- a) a lump or bulge that is likely to be caused by separation or partial failure of the tyre structure, or
- b) a cut or crack in a sidewall or tread more than 25mm long that reaches the cords, or
- c) exposed or cut cords, or
- d) the tread of a retreaded tyre shows signs of separation, or
- e) nails or other sharp objects embedded in the tyre, or
- f) significant perishing, eg due to age, moisture or exposure.

11. A tyre has a string-type repair visible from the outside.

12. A tyre, other than a winter tyre ([Note 2](#)), does not have a tread pattern depth ([Technical bulletin 7](#)) of at least 1.5mm (excluding any tie-bar or tread-depth indicator strip) around the whole circumference of the tyre:

- a) within all the principal grooves that normally contain moulded tread depth indicators, or
- b) if the tyre does not normally have moulded tread-depth indicators (such as some retreaded or vintage tyres), across at least three-quarters of the tread width.

13. A winter tyre ([Note 2](#)) does not have a tread depth of at least 4mm (excluding any tie-bar or tread-depth indicator strip) within all principal grooves that normally contain moulded tread-depth indicators and around the whole circumference of the tyre.

14. A tyre not identified as designed for regrooving has had its tread depth increased by regrooving.

15. A tyre is noticeably under- or over-inflated.

Spare tyres

16. A spare tyre, if carried, is not:

- a) securely attached by a device that is in good condition and correctly applied, or
- b) stowed in a closed compartment separate from the occupant space (eg if the manufacturer's attachment device is missing or faulty) .

Wheels

17. There are signs that a wheel is fouling on another part of the vehicle.

18. A wheel is:

- a) cracked, or
- b) significantly damaged, distorted or has deteriorated, or
- c) not securely attached to the hub.

19. An alloy wheel has poor visible repairs.

20. A wheel nut is:

- a) missing, or
- b) loose, or
- c) deteriorated, or
- d) the incorrect type, or
- e) has insufficient thread engagement to the wheel stud.

Note 1

Asymmetric tyre means a tyre which, through tread pattern, is required to be fitted to a vehicle so that one particular sidewall faces outwards.

Construction in relation to a tyre:

a) for a pneumatic tyre, the type of tyre carcass (including ply orientation and ply rating or load index) [does not include tyre

tread], or

b) for any other tyre, characteristics relating to size, shape and material.

Cross ply means a pneumatic tyre structure in which the ply cords in the tyre carcass extend to the beads and are laid at alternate angles, which are substantially less than 90 degrees, to the centreline of the tread. This tyre structure is also referred to as 'bias ply' or 'diagonal ply'.

Directional tyre, also known as **unidirectional tyre**, means a tyre with a tread pattern that is designed to run in only one direction. A directional tyre usually has an arrow marked on the side wall indicating the direction it is designed to run.

Load index is an assigned number ranging from 0 to 279 that corresponds with the maximum load-carrying capacity of the tyre. Most passenger car tyre load indices range from 62 (= 265kg) to 126 (= 1700kg).

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Pneumatic tyre means a tyre that, when in use, is inflated by air or gas introduced from time to time under pressure so as to enclose, under normal inflation, a cushion of air or gas forming altogether at least half of the total area of an average cross-section of a tyre so inflated.

Ply rating is an index of tyre strength used to identify a given tyre with its recommended maximum permitted load when used for a specific service. It does not necessarily represent the actual number of plies in a tyre. Common ply ratings are 2, 4, 6, 8, 10 and 12. Commercial (eg truck) tyres often have a ply rating rather than a load index.

Principal grooves means the wide grooves in the tyre tread which have the tread wear indicators located inside them. Any other grooves are secondary grooves which may wear out during the service life of the tyre.

Radial ply means a pneumatic tyre structure in which the ply cords, which extend from bead to bead, are laid at approximately 90 degrees to the centreline of the tread, the carcass being stabilised by an essentially inextensible circumferential belt.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Rim means that part of the wheel on which the tyre is mounted and supported.

Run-flat tyre (also known as self-supporting tyre) means a tyre that is so constructed that in case of a puncture the basic tyre functions are still provided for a short distance (at least 80km) and at a reduced speed (usually 80km/h), allowing the vehicle to be safely driven to a place of repair. Some run-flat tyres are identified by an 'F' within the size designation.

Space saver tyre (temporary-use spare tyre) means a combination tyre and wheel designed and constructed solely for temporary use under restricted driving conditions, and not intended for use under normal driving conditions.

Speed category means a code allocated to a tyre by a tyre manufacturer that indicates the maximum vehicle speed for which the use of the tyre is rated.

Tread means that part of a pneumatic tyre which comes into contact with the ground.

Tread-depth indicator (or tread-wear indicator) means the projections within the principal grooves designed to give a visual indication of the degree of wear of the tread. To help locate these on a tyre, inspectors should look for a '△' or 'TWI' mark on the outer edge of the tyre side wall (most tyres have these marks).

Tube means an inflatable elastic liner, in the form of a hollow ring fitted with an inflation valve assembly, designed for insertion into certain tyre assemblies to provide a cushion of air or gas that, when inflated, supports the wheel (also known as an 'inner tube').

Tyre carcass means that structural part of a pneumatic tyre other than the tread and outermost rubber of the sidewalls that, when inflated, contains the gas that supports the load.

Tyre load rating means the maximum load a tyre can carry at the corresponding cold inflation pressure prescribed by the tyre manufacturer and the speed indicated by its speed category symbol. It is usually indicated by the load index or ply rating.

Wheel means a rotating load-carrying member between the tyre and the hub, which usually consists of two major parts, the rim and the wheel disc, and which may be manufactured as one part, or permanently attached to each other or detachable from each other.

Wheel centre-disc means that part of the wheel that is the supporting member between the hub and the rim.

Wheel spacer means an additional component used for the purpose of positioning the wheel centre-disc relative to the hub, or in multiple wheel sets, for the purpose of positioning the wheel centre-disc relative to another wheel.

Note 2

Winter tyre means a tyre which is principally designed to be operated at temperatures of less than 7 °C. A winter tyre can be identified by its distinctive tyre tread pattern consisting of deep tread blocks with wavy sipes and is always marked with the word ‘STUDLESS’ and/or a symbol of a snowflake and mountain on the sidewall (see **Figure 7-1-2**).

Note 3

The tyre load index and speed category are usually marked on the tyre. Where the tyre is not marked, the load and speed rating information must be obtained from the tyre manufacturer or a reference guide of tyre ratings before the tyre can be passed.

Note 4

Sometimes a retreaded or repaired tyre has had its speed rating removed. Where a tyre has been repaired or retreaded in accordance with standard NZS 5423 (Repairing and retreading car, truck and bus tyres), the tyre must be marked with NZS 5423 and, if a car tyre, have the speed rating removed. In such a case, a missing speed rating is acceptable for WoF/CoF (unless the inspector believes on reasonable grounds that the tyre would not have had the required minimum speed rating for the vehicle in the first place).

Table 7-1-1. Tyre speed symbol categories

Speed symbol – speed category (km/h)							
A1 – 5	A5 – 25	B – 50	F – 80	L – 120	Q – 160	U – 200	Y – 300
A2 – 10	A6 – 30	C – 60	G – 90	M – 130	R – 170	H – 210	ZR – over 240
A3 – 15	A7 – 35	D – 65	J – 100	N – 140	S – 180	V – 240	
A4 – 20	A8 – 40	E – 70	K – 110	P – 150	T – 190	W – 270	

Table 7-1-2. Tyre interchangeability – imperial and metric

Imperial sizing	Metric sizing
10/70R22.5	255/70R22.5
11/70R22.5	275/70R22.5
12/70R22.5	305/70R22.5
15R22.5	385/65R22.5
16.5R22.5	425/65R22.5

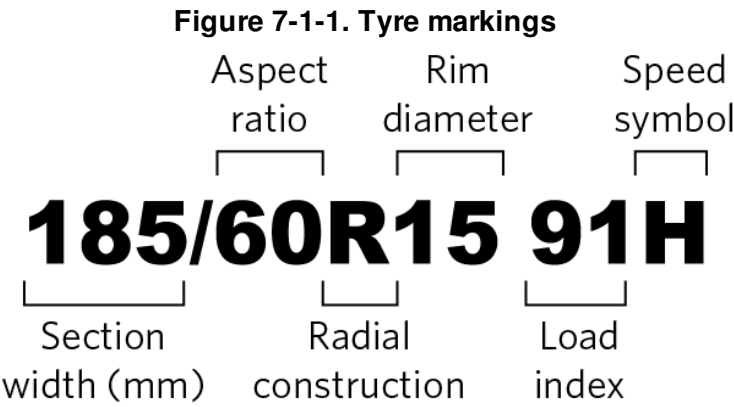
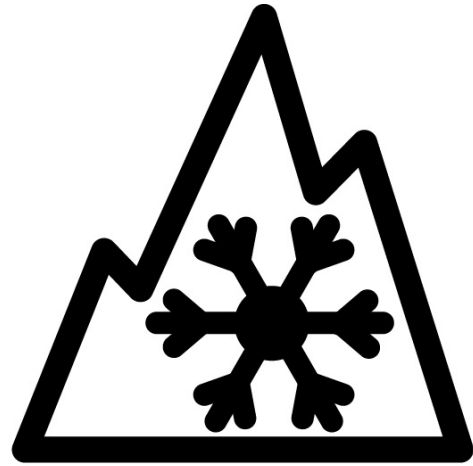


Figure 7-1-2. How to identify a winter tyre



Sample winter tyre tread



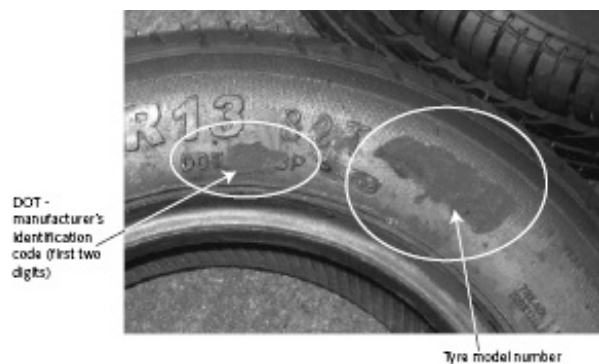
Mountain and snowflake symbol



Example of 'Studless' on a tyre sidewall

Note For WoF purposes, a tyre is considered to be a winter tyre only if it has BOTH a winter tyre tread AND a studless marking and/or mountain/snowflake symbol.

Figure 7-1-3. Example of tyre with manufacturer/brand/model information removed



The circled areas show where information has been removed so that the tyre can no longer be identified.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Tyres and Wheels 2001](#).

Mandatory equipment

Tyres

1. Tyres must be compatible with the vehicle to which they are fitted.
2. Tyres on the same axle must be of the same size designation and construction, and of the same tread pattern type.
3. Asymmetric tyres must be fitted in axle sets in accordance with manufacturer's instructions.
4. A directional tyre must be fitted to a wheel position corresponding to its direction of rotation.
5. The speed category of a tyre must be compatible with the maximum legal speed limit for the vehicle, or the vehicle's maximum speed ([Note 3](#)) ([Note 4](#)).
6. A vehicle must not be fitted with a metal tyre or other non-pneumatic tyre, or with a tyre with studs, cleats, lugs or other gripping devices.

Wheels

7. A wheel must be:
 - a) sufficiently strong for the type of vehicle to which it is fitted, and
 - b) compatible with the vehicle to which it is fitted, and
 - c) compatible with the tyre rim profile, flange height and valve fitment.
8. There must be adequate clearance for the brake, hub, suspension and steering mechanism and body parts.

Permitted equipment

9. A vehicle may be fitted with retreaded tyres.

Condition

Tyres (excluding spare tyres and space-saver tyres)

10. A tyre must be of good quality and construction, fit for its purpose, and maintained in a safe condition.
11. A tyre must not have worn, damaged or visible cords apparent by external examination.
12. A tyre must have a tread pattern depth of not less than 1.5mm (excluding any tie-bar or tread-depth indicator strip) around the whole circumference of the tyre:
 - a) within all principal grooves that contain tread-depth indicators, or
 - b) if the tyre does not normally have tread-depth indicators, across at least three-quarters of the tyre tread width.
13. A winter tyre ([Note 2](#)) must have a tread pattern depth of not less than 4mm (excluding any tie-bar or tread-depth indicator strip) within all principal grooves that contain moulded tread-depth indicators and around the circumference of the tyre.
14. The regrooving of a tyre is permitted only if the tyre is identified as having been specifically designed for regrooving after manufacture.
15. A tyre that is fitted to a vehicle must be maintained at a safe inflation pressure.

Spare tyre

16. If the vehicle carries a spare tyre, the tyre must be securely attached on or in the vehicle.

Wheels

17. The components of the wheel assembly must be in good condition.
18. The wheel must be securely attached to the hub.

7-2 Hubs and axles

Reasons for rejection

Condition

1. A hub ([Note 1](#)):

- a) is not securely attached to the vehicle, or
- b) has a visible crack, or
- c) is significantly damaged, distorted or has deteriorated, or
- d) has a broken or missing wheel stud.

2. A wheel bearing:

- a) has play beyond the manufacturer's specifications, or
- b) is over-tight or sounds rough.

3. An axle:

- a) is insecure, eg has loose U-bolts, or
- b) is visibly cracked, or
- c) is significantly damaged, distorted or has deteriorated, or
- d) shows signs of welding or heating after original manufacture, or
- e) shows signs of fouling the vehicle structure or a brake, suspension or steering component.

Performance

4. The geometry of a hub or axle causes the vehicle to veer significantly to one side.

Note 1

Hub means that part of a vehicle that is attached to the axle and rotates on, or with, the axle, and to which the wheel is attached, and includes any bearings.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Tyres and Wheels 2001](#).

Condition

1. The components of the assembly must be in good condition.
2. The hub and axle must be sufficiently strong for the type of vehicle to which they are fitted.
3. The hub and axle must have suitable and correctly adjusted geometry.

7-3 Mudguards

Reasons for rejection

Mandatory equipment

1. A mudguard ([Note 1](#)) over a road wheel is missing where it is reasonable and practicable to fit a mudguard, unless the trailer is:
 - a) in an unfinished condition legally used under the authority of trade plates, or
 - b) is towed by a vehicle that is not capable of exceeding a speed of 30 km/h.
2. A mudguard does not cover the full tread ([Note 1](#)) width of a tyre or tyres fitted to a road wheel (**Figure 7-3-1**), except on a trailer designed for industrial purposes where it is not practicable to fit a full mudguard due to the vehicle's construction.
3. A trailer used for transporting round timber is not fitted with at least partial mudguards mounted behind the rearmost axle that meet the following requirements (**Figure 7-3-2**):
 - the mudguard must provide continuous protection from a horizontal at the top of the tyre to a line rising rearward with a slope of 1 in 3 from the tyre's contact point on the road, and
 - the distance between the tyre and the mudguard must not be more than twice the distance from the centre of the wheel to the road.
4. On a vehicle with twin or close-spaced multiple tyres a mudguard fitted over a wheel on the rear axle is more than one-third higher than the horizontal distance between the vertical lines of the lowest point of the mudguard and the centre of the wheel (**Figure 7-3-2**), except when the mudguard is fitted to a vehicle designed for industrial purposes and it is not practicable to fit a

full mudguard due to the vehicle's construction.

Mudguard condition

5. A mudguard is not securely fixed to the vehicle.

6. A mudguard is so constructed or damaged that it is likely to present a hazard to road users.

Note 1

Mudguard means a fitting, inclusive of any portion of the vehicle and of any mudflaps attached, that serves to intercept material thrown up by a wheel more or less on the plane of the wheel.

Tyre tread means the portion of a tyre that contacts the road.

Figure 7-3-1. Position of mudguard in relation to tyre tread

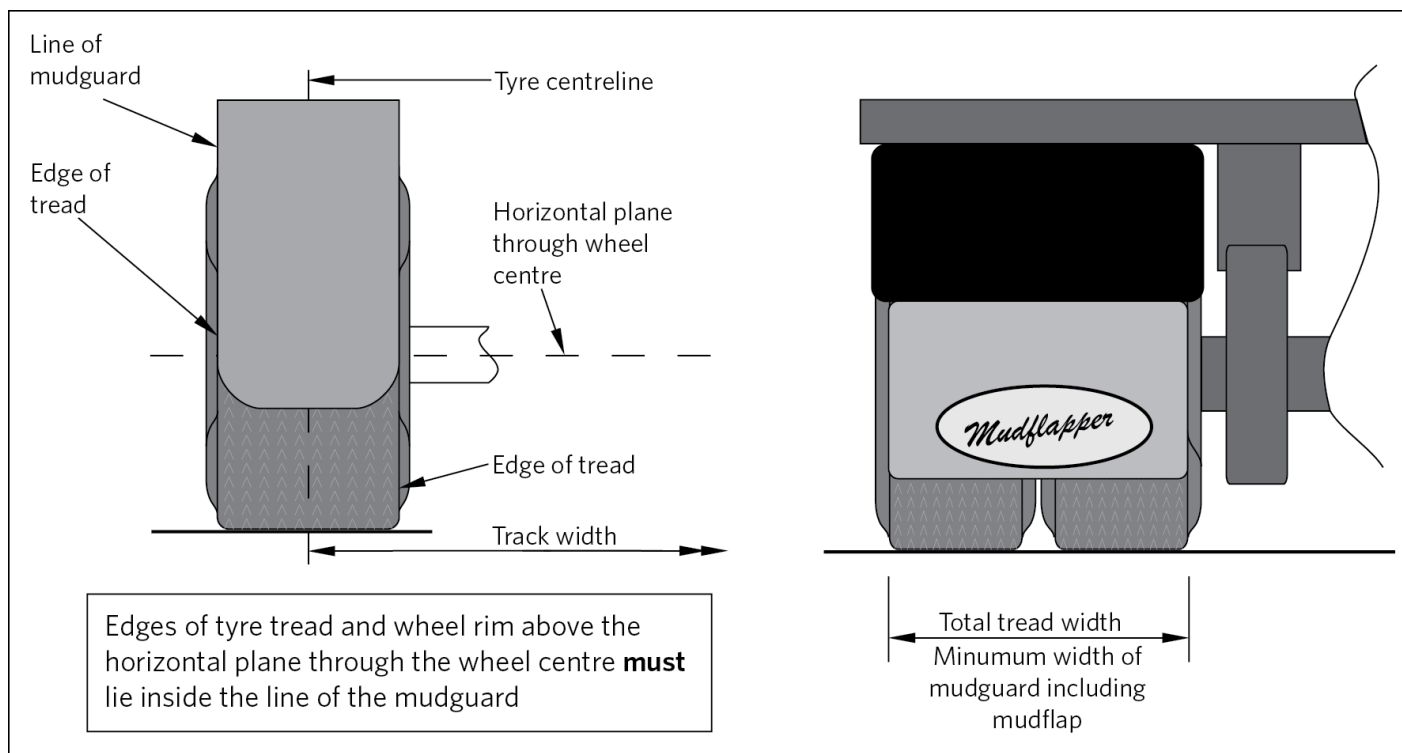
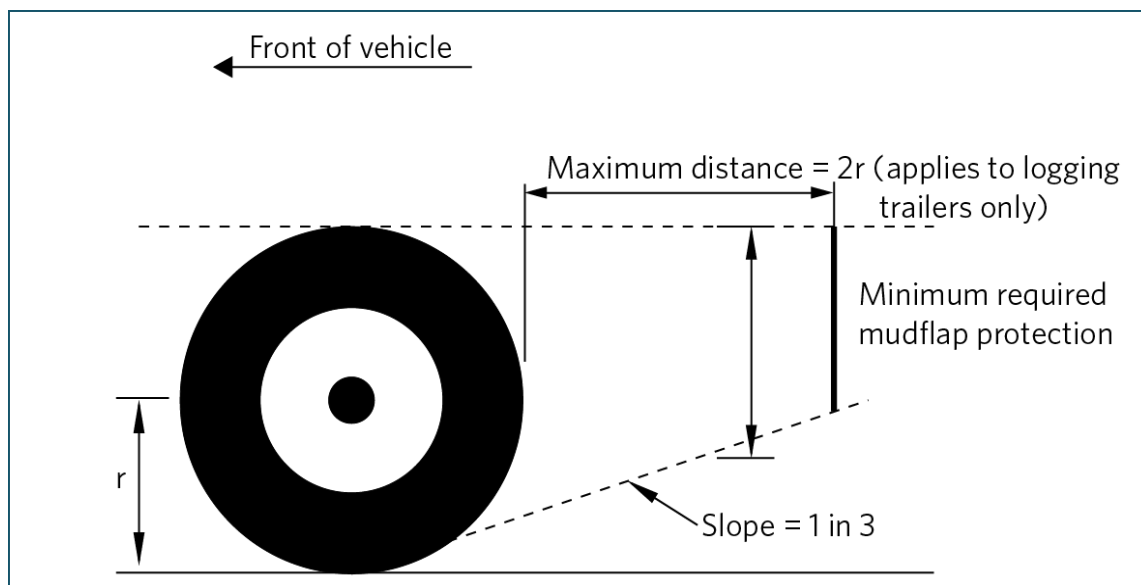


Figure 7-3-2. Size and position of mudguards for the rear wheels of a trailer fitted with dual wheels or close-spaced multiple wheels and logging trailers



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004](#).

Mandatory equipment

1. A trailer must be fitted with a mudguard ([Note 1](#)) over each road wheel if it is reasonable and practicable to do so.
2. A mudguard must cover no less than the width of the tyre tread on each road wheel (**Figure 7-3-1**).
3. A trailer fitted with twin tyres or close-spaced multiple tyres must be fitted with a mudguard over each wheel on the rear axle that provides continuous protection from a horizontal line tangent to the top of the tyre tread ([Note 1](#)) to a line with a slope of 1 in 3 rising rearward from the tyre's contact point on the road (**Figure 7-3-2**).
4. A trailer designed for industrial purposes may be fitted with partial mudguards if the vehicle's construction makes it impracticable to fit full mudguards.
5. A trailer used for transporting round timber that cannot be fitted with mudguards over each road wheel must have at least partial mudguards mounted behind its rearmost axle that comply with the following (**Figure 7-3-2**):
 - a) the mudguard must provide continuous protection from a horizontal line tangent to the top of the tyre tread to a line with a slope of 1 in 3 rising rearward from the tyre's contact point on the road, and
 - b) the distance between the tyre and the mudguard must not be more than twice the tyre rolling radius.
6. The following trailers are not required to be fitted with mudguards:
 - a) a vehicle in an unfinished condition used under the authority of trade plates and operated in accordance with the Compliance Rule
 - b) a trailer towed by a vehicle that is not capable of exceeding a speed of 30 km/h.

Mudguard condition

7. A mudguard must be securely fixed to the vehicle and must be constructed so that it does not present a hazard to road users.

8 Towing connections

8-1 Light trailer drawbar and kingpin

Reasons for rejection

Mandatory equipment

1. A trailer with a laden weight ([Note 2](#)) of 2000kg or less without a compliant breakaway brake, except for the following trailers, does not have a safety chain or cable:
 - a) a trailer designed for armament purposes by the New Zealand Defence Force.
 - b) a trailer pump for fire fighting purposes.
2. A trailer with a laden weight ([Note 2](#)) between 2001kg and 2500kg (where the vehicle inspector is able to determine the laden weight) that does not have a compliant breakaway brake:
 - a) is not fitted with two safety chains that cross each other when connected, or
 - b) has chain links with a material cross-section less than 7.1mm, or there is no evidence that each chain has a breaking strength of at least twice the laden weight of the trailer ([Note 3](#)).

Condition

3. The drawbar or drawbar mounting (or kingpin or kingpin mounting):
 - a) is not securely attached, or
 - b) has a bolt or nut that is missing or significantly corroded, or
 - c) has corrosion damage ([Note 1](#)) within 150mm of a mounting point, or
 - d) is cracked or distorted.
4. The drawbar coupling (or kingpin):
 - a) is not securely attached, or
 - b) is not mounted in accordance with manufacturer's specifications, or

- c) is worn beyond the manufacturer's specifications, or
 - d) is significantly corroded, distorted or cracked, or
 - e) has a nut **or locking pin** that is missing or significantly corroded.
5. A safety chain or cable (including any welded joint, securing bolt or shackle):
- a) is not securely attached to the drawbar, or
 - b) is welded to the drawbar, and
 - i. there is no clear evidence of weld penetration, or
 - ii. the weld metal has not been applied in accordance with good trade practice, or
 - iii. there is no evidence that the chain can be welded without reducing its strength, or
 - iv. the weld is significantly corroded, has deteriorated or is cracked.
 - c) is significantly corroded, distorted or cracked, or
 - d) has a bolt or shackle that is missing, significantly corroded, distorted or cracked, or
 - e) appears to be too weak to withstand a load of about twice the likely maximum laden weight (as far as can be reasonably estimated by the inspector) (**Note 3**).

Note 1

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward signs of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

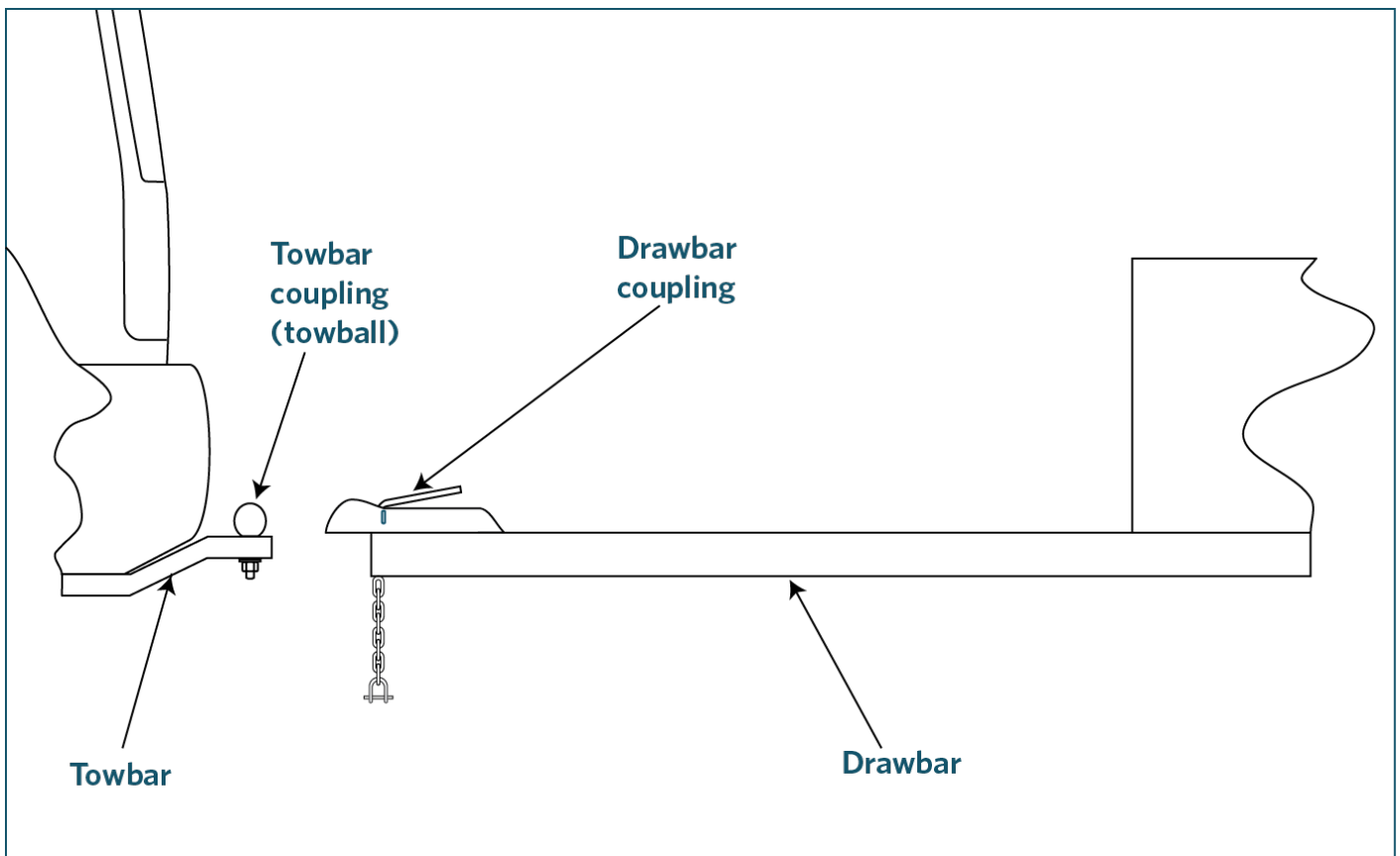
Note 2

Laden weight means the weight of the trailer and its load, if any, for the time being carried. A vehicle inspector may be presented with a trailer (usually unladen, such as a boat, car or horse trailer) that has a laden weight below 2000kg, but that is likely to have a laden weight exceeding 2000kg when it carries its normal load. In such a case, the vehicle inspector should make the vehicle operator aware, for example by putting a note on the checksheet, that the trailer may not comply with safety chain or shackle requirements when the trailer carries its normal load.

Note 3

A safety chain or shackle may be marked as complying with a standard and with a chain designation size that equals the maximum laden weight of the trailer, for example, with 25 or 2500 which denotes 2500kg. This means the chain is suitable for a trailer with a laden weight of up to 2500kg as the standard has already taken into account the required breaking strength.

Figure 8-1-1. Tow coupling components



Summary of legislation

Applicable legislation

- [Land Transport Rule: Light-Vehicle Brakes 2002](#)
- [Land Transport Rule: Vehicle Standards Compliance 2002](#), section 7.4.

Mandatory equipment

1. A trailer must be securely attached to the towing vehicle by an adequate coupling.
2. A trailer with a laden weight ([Note 2](#)) of 2000kg or less without a compliant breakaway brake must have a securely attached safety chain or cable, unless the trailer is one of the following:
 - a) a trailer designed for armament purposes by the New Zealand Defence Force.
 - b) a trailer pump for fire fighting purposes.
3. A trailer with a laden weight ([Note 2](#)) between 2001kg and 2500kg that does not have a compliant breakaway brake must be fitted with two safety chains that comply with standard ADR 62 (determination 2, 1995) and that cross each other when connected.

Condition

4. A trailer must be securely attached to the towing vehicle by an adequate coupling.
5. A safety chain or cable must be of sufficient strength to hold the trailer secure under all conditions of road use.
6. A trailer must:
 - a) be safe to be operated, and
 - b) have been constructed using components and materials that are fit for the purpose, and
 - c) be within safe tolerance of its state when manufactured or modified.

Page amended **14 October 2013** (see [amendment details](#)).

Forklifts

1 Introduction

Inspection and certification of forklifts: Warrant of fitness requirements

This section specifies the requirements that are applicable to the inspection and certification of forklifts for the purpose of issuing a warrant of fitness (WoF).

A forklift is defined as a motor vehicle (not fitted with self-laying tracks) designed principally for lifting, carrying and stacking goods by means of one or more tines, platens or clamps.

General requirements

1. A forklift that is operated on the road, ie that is registered, requires a WoF. Therefore, the vehicle inspector may inspect a forklift only if it has a registration plate attached to it.

Note: A forklift used solely on a road that is a private road is not required to be registered (so no registration plate attached), and therefore a WoF cannot and must not be issued. Private road means a road, place or arcade laid out or formed on private land by the owner of that land. A forklift operated on a private road must still be safe and, if operated at night, must be fitted with headlamps or work lamps and rear position lamps.

2. Forklifts are required to comply with WoF requirements only as far as is practicable for their design and type. The requirements in this section are what the NZTA considers to be practicable in relation to the inspection and certification of forklifts.

3. Modifications that affect a safety requirement do not require low volume vehicle (LVV) or heavy vehicle specialist (HVS) certification unless specified otherwise. However, if the vehicle inspector has concerns about the modification, they must obtain additional information from a relevant person before passing the vehicle for WoF.

4. A forklift is not required to have a permanent vehicle identifier. If the forklift has a permanent vehicle identifier, such as the manufacturer's serial number, it must be recorded on the checksheet and on the NZTA computer system.

5. This section applies to both light and heavy forklifts. Heavy forklifts, that is those with a gross vehicle mass (GVM) greater than 3500kg, may be inspected and certified for a WoF only if the inspecting organisation and vehicle inspector have current 'Heavy vehicle, exempt from CoF' authorisation.

6. For the purpose of this section, the GVM can generally be determined by adding the unladen weight of the forklift (including fuel in the fuel system and any equipment and accessories necessary to operate the forklift), the crew and the forklift's lifting capacity.

Page amended **1 November 2012** (see [amendment details](#)).

2 Vehicle exterior

2-1 External projections

Reasons for rejection

Condition and performance

1. The risk of a component ([Note 1](#)) hooking a vehicle, or hooking or grazing a person, has not been minimised.
2. An ornamental object or fitting ([Note 2](#)) protrudes in such a way that it is likely to injure a person.
3. A protruding object or fitting that has a functional purpose ([Note 2](#)) is fitted in a way that does not reduce the risk of injury to a person.
4. A component, object or fitting is not securely attached to the vehicle.
5. A protruding object or fitting adversely affects the driver's vision or control.

Note 1

Components include damaged, corroded and exposed body panels.

Note 2 Definitions

The **external projections** requirements relate to the design and maintenance of objects and fittings that protrude from the exterior of the motor vehicle with regard to the safety of other motor vehicles, pedestrians and cyclists.

Ornamental object or fitting means an object or fitting that does not have a practical purpose, eg bonnet emblems.

Functional object or fitting means an object or fitting that has a practical purpose.

Summary of legislation

Applicable legislation

- [Land Transport Rule: External Projections 2001](#).

Permitted equipment

1. A forklift may be fitted with a protruding ornamental or functional object or fitting.

Condition and performance

2. A protruding ornamental object or fitting must not be likely to injure a person.
3. A protruding object or fitting that has a functional purpose must be installed so that the risk of the object or fitting causing injury to a person is minimised.
4. Components of a forklift, including damaged or corroded body panels, must be such that the risk of their hooking a vehicle, or hooking or grazing a person, is minimised.
5. A protruding object or fitting must not adversely affect driver vision or driver control.

2-2 Dimensions

Reasons for rejection

Mandatory equipment

1. A forklift exceeds the dimension requirements set out in **Table 2-2-1** and is not fitted with the appropriate hazard warning equipment set out in **Table 2-2-2**.
2. A required revolving amber beacon cannot be activated and deactivated.

Note 1 Definitions

The **rear axis**

- a) in relation to a vehicle with only one non-steering axle, means that axle,
- b) in relation to a vehicle with a non-steering axle set of two axles, means:
 - i. midway between those axles, if each axle has an equal number of tyres on it, or
 - ii. two-thirds of the distance from the lesser-tyred axle towards the greater-tyred axle, if one axle has twice as many tyres on it as the other axle
- c) in relation to a vehicle with a non-steering tri-axle set or a non-steering quad-axle set, or an overdimension vehicle with more than three axles, means midway between the extreme axles of the set
- d) in relation to a vehicle whose rear axle set includes one or more steerable axles in conjunction with one or more non-steering axles, means midway between the extreme non-steering axles of the set.

Front axis means the centre of the foremost axle of a rigid vehicle with motive power.

Wheelbase means the distance from a vehicle's rear axis to its front axis.

Table 2-2-1. Dimension requirements (see Figure 2-2-4)

Dimension	Maximum distance	Comments
Width	2.5m 1.25m from each side of the longitudinal centreline	Measurement does not include: <ul style="list-style-type: none"> • collapsible mirrors which extend no more than 240mm from the body • direction indicators and side-marker lamps • cab exterior grab rails that extend no more than 50mm from the side of the body • ropes, lashings, straps, chains and related connectors and tensioning devices that extend no more than 25mm from either side, and that are not permanently or rigidly fixed to the vehicle • the bulge towards the bottom of a tyre.
Overall length	12.6m (no tow coupling fitted) 11.5m (tow coupling fitted)	Measurement does not include collapsible mirrors.
Height	4.25m	Measurement does not include load restraining devices (ropes, lashings, straps, chains, covers and related connectors and tensioning devices) that extend no more than 25mm above the vehicle, and that are not permanently or rigidly fixed to the vehicle.
Forward distance	8.5m (tow coupling fitted) 9.5m (no tow coupling fitted)	<ul style="list-style-type: none"> • Measured from the rear axis (Note 1) to the front of the vehicle • Measurement does not include collapsible mirrors
Rear overhang	Forklift GVM 3500kg or less: <ul style="list-style-type: none"> • 4m Forklift GVM greater than 3500kg: <ul style="list-style-type: none"> • with rearmost axle being a non-steering axle: 4m or 70% of wheelbase (whichever is less) • with rearmost axle being a steering axle: 4.25m or 70% or wheelbase (whichever is less) 	<ul style="list-style-type: none"> • Rear overhang is measured from the rear axis (Note 1) to the rear of the vehicle
Front overhang	3m	<ul style="list-style-type: none"> • Front overhang is measured from the front edge of the driver's seat in the rearmost position to the front of the vehicle.

Table 2-2-2. Hazard warning equipment requirements for vehicles that exceed the dimensions in Table 2-2-1

Vehicle category	Dimension	Limits (up to and including)	Required hazard warning equipment
Category 1	Width/forward distance (see Figure 2-2-3)	2.5m/11.4m, or	<ul style="list-style-type: none"> Flags¹ or panels² fitted on each side at the front and rear as close as practical to the outside edge
		3.1m/10.5m, or	
		3.7m/8.5m, or	
	Length	25m, or	
	Front overhang	7m, or	
	Rear overhang	7m	
Category 2 (not including category 1)	Width/forward distance (see Figure 2-2-3)	2.5m/13.3m, or	1. Panels ² fitted on each side at the front and rear as close as practical to the outside edge 2. OVERSIZE sign ³ fitted at the front and rear if more than 3.1m wide 3. Revolving amber beacon fitted to the cab roof if more than 3.7m wide
		4.5m/8.5m, or	
	Length	35m	
	Front overhang	10m, or	
	Rear overhang	10m	
Category 3 (not including category 2)	Width/forward distance (see Figure 2-2-3)	2.5m/20m	1. Panels ² fitted on each side at the front and rear as close as practical to the outside edge 2. OVERSIZE sign ³ fitted at the front and rear if more than 3.1m wide 3. Revolving amber beacon fitted to the cab roof if more than 3.7m wide
		5m/20m	
		5m/8.5m	
Category 4 (not including category 3)	Width/forward distance (see Figure 2-2-3)	11m/20m	1. Panels ² fitted on each side at the front and rear as close as practical to the outside edge 2. OVERSIZE sign ³ fitted at the front and rear if more than 3.1m wide 3. Revolving amber beacon fitted to the cab roof if more than 3.7m wide

¹ Flags:

- must be fluorescent yellow
- must be at least 400mm long × 300mm wide.

² Hazard warning panels

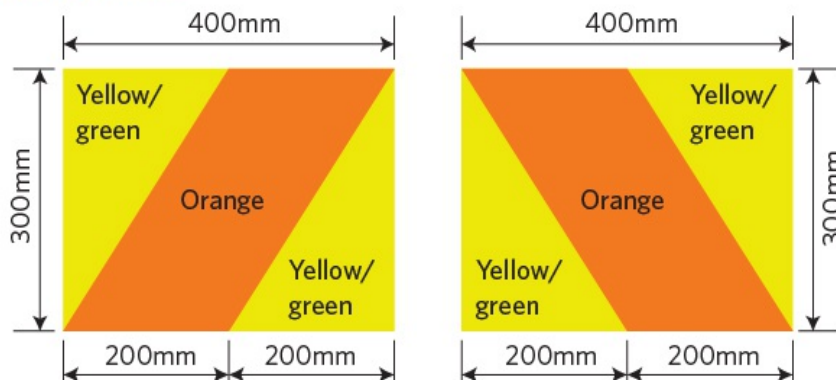
- must be reflective yellow-green with a reflective orange diagonal stripe
- must be of at least the minimum dimensions and of the colours specified in **Figure 2-2-1**:

³ OVERSIZE sign

- must be black lettering on a yellow-green background
- must be at least 300mm × 1100mm in size
- may be in two parts: OVER and SIZE.

Figure 2-2-1. Hazard panel details

Display these panels



or these panels

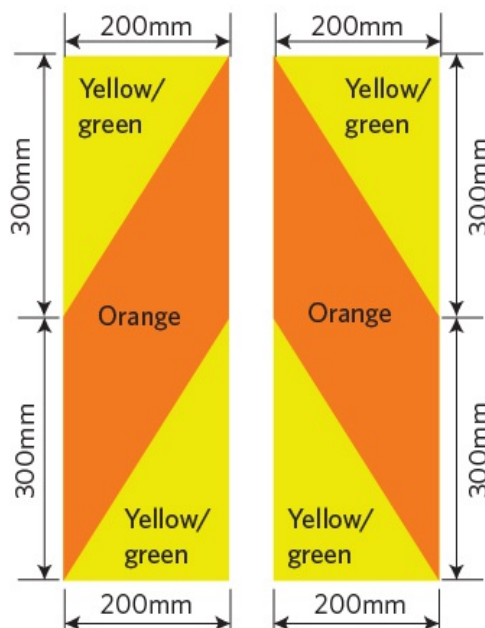


Figure 2-2-2. Hazard panel location and orientation

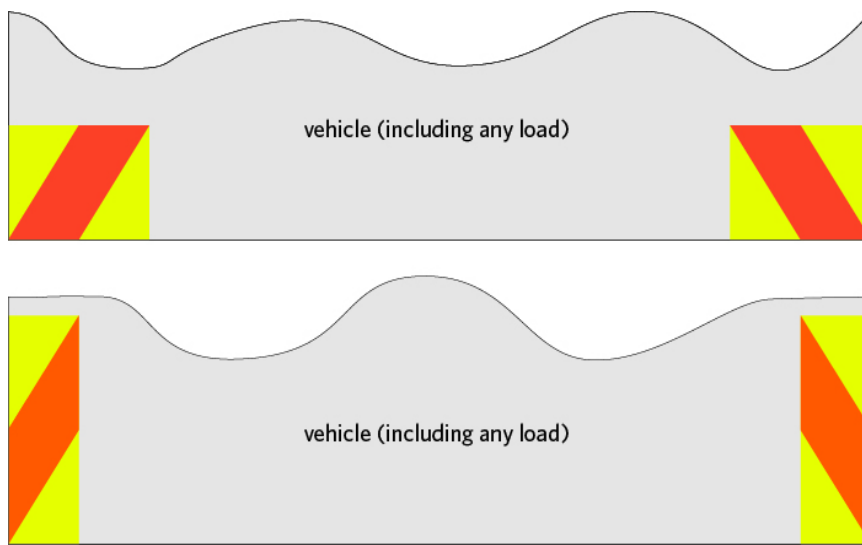
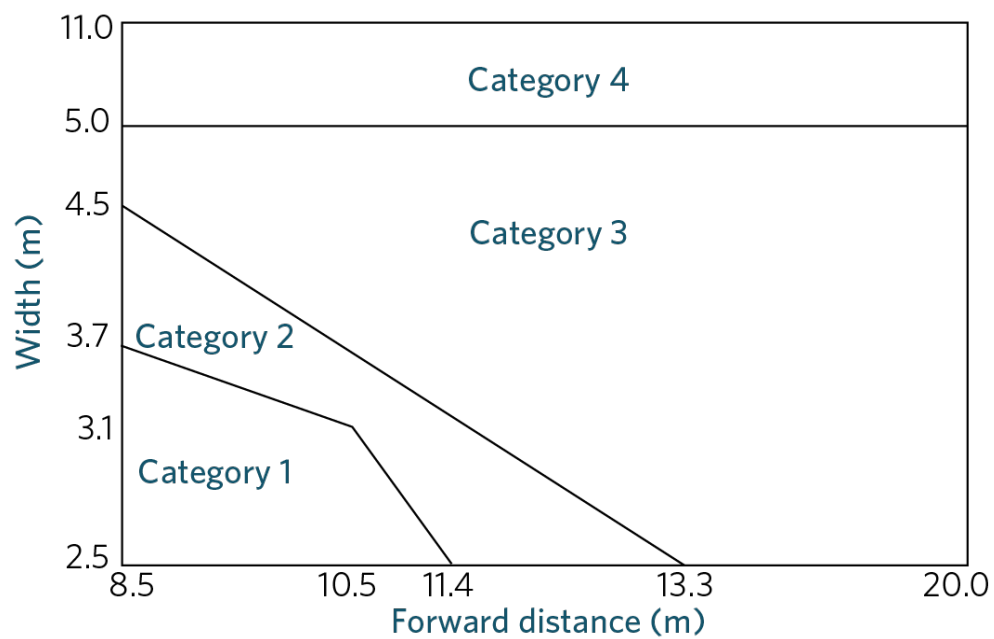
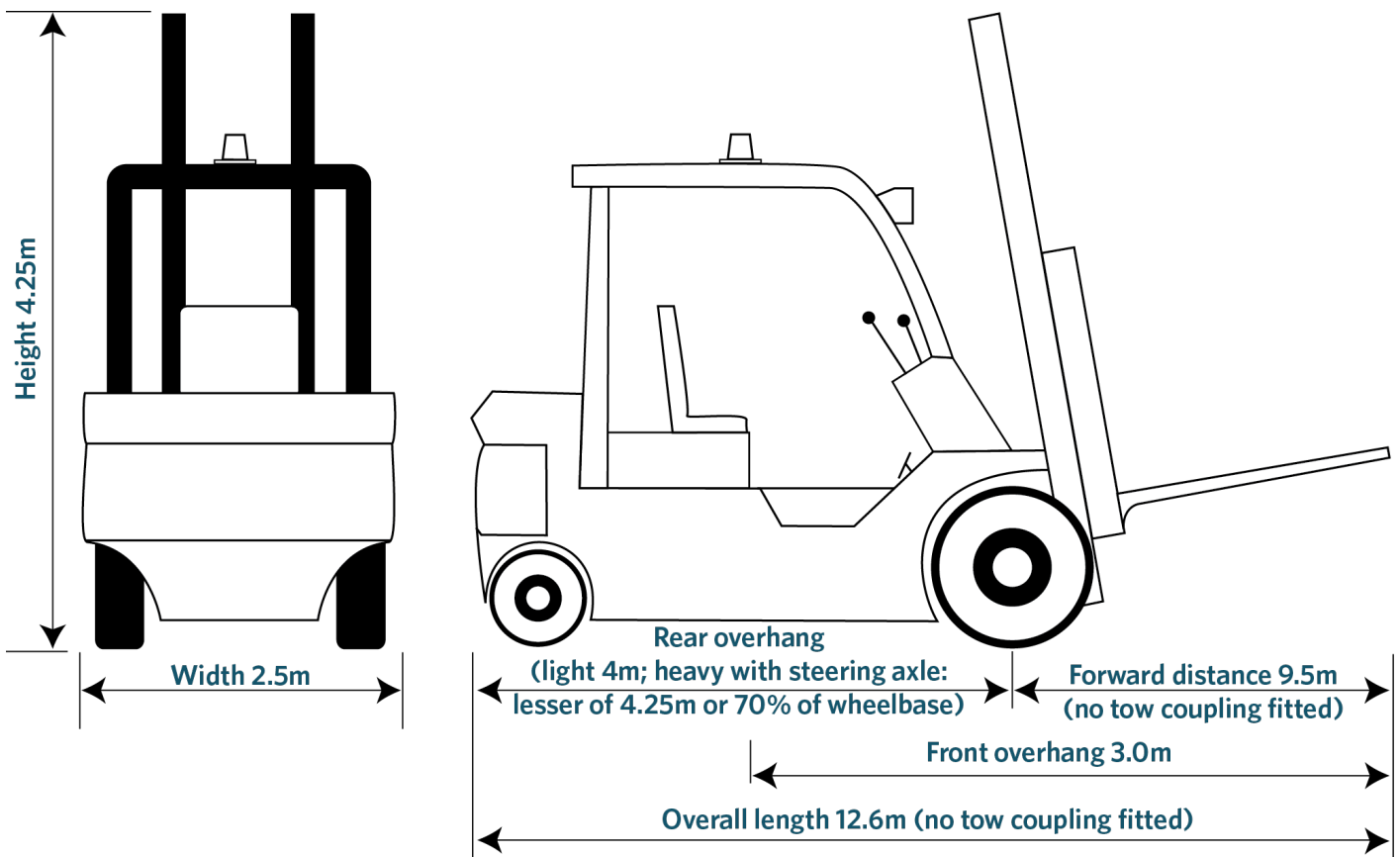


Figure 2-2-3. Overdimension vehicle categories for width/forward distance thresholds



Use this figure to determine vehicle category in **Table 2-2-2**.

Figure 2-2-4. Dimension requirements



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Dimensions and Mass 2002](#).

Mandatory equipment

1. A forklift that exceeds the dimensions in **Table 2-2-1** must be fitted with additional equipment set out in **Table 2-2-2**.

Page amended **1 June 2013** (see [amendment details](#)).

3 Vehicle structure

3-1 Vehicle structure

Reasons for rejection

Condition

1. The structure of the forklift has visible:
 - a) deformation from the original shape that has affected the vehicle's structural integrity ([Note 1](#)) ([Note 3](#)), or
 - b) cracking, or
 - c) fracture, or
 - d) any corrosion, damage or repair that the inspector considers has caused weakening of a load-bearing structure.
2. A rollover protection structure, or overhead protection structure or cab is not securely attached to the forklift.

Note 1

The structural inspection of a forklift does not include the occupant safety frame, except for its attachment to the vehicle body or chassis.

Note 2

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward sign of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage

will fall out and leave a hole.

Note 3

The vehicle inspector may request additional relevant information from a repairer or other relevant person. The vehicle inspector should withhold the WoF if there is reason to believe that the vehicle has:

- a) structural damage, or
- b) inadequate structural repair(s), or
- c) corrosion damage

to the extent that it could affect the vehicle's structural strength or one of the vehicle's safety requirements. If the owner questions the decision, the vehicle inspector should recommend the vehicle owner obtain further written assessment from the equipment manufacturer or other suitable person.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Standards Compliance 2002](#), clause 7.4.

Condition

1. The forklift must be safe to be operated.
2. The components and materials must be fit for their purpose and within safe tolerance of their state when manufactured or modified.

4 Lighting

4-1 Headlamps

Reasons for rejection

Mandatory and permitted equipment ([Note 6](#))

1. A forklift **that is likely to be operated during the hours of darkness (where the vehicle inspector can determine that)** is not fitted with either:
 - a) one pair of dipped-beam headlamps, or
 - b) one pair of forward-facing work lamps ([Note 1](#)).
2. A forklift is fitted with more than:
 - a) one pair of dipped-beam headlamps, or
 - b) two pairs of main-beam headlamps.
3. A forklift is fitted with a headlamp that is not in a pair.
4. A retrofitted pair of headlamps is:
 - a) not fitted symmetrically, or
 - b) not fitted as far towards each side of the vehicle as is practicable.
5. A forklift is fitted with a dipped-beam headlamp where the maximum intensity of the beam is projected to the right.

Condition

6. A lamp is insecure.
7. A lens is missing or has a hole, crack or other damage that allows moisture or dirt to enter.
8. A lens or reflector is damaged or has deteriorated so that light output is reduced.
9. A mandatory lamp is obscured or contains dirt or moisture in the form of large droplets, runs or puddles.
10. A main-beam headlamp warning device is obscured from the driver's vision.

Performance

11. When switched on, a headlamp emits a light that is:

- a) not substantially white or amber, or
 - b) not approximately equal in colour or intensity to the other lamp in a pair, or
 - c) not steady, or
 - d) not bright enough to illuminate the road ahead or be visible from 100m during the hours of darkness, eg due to modification, deterioration or an incorrect light source, or
 - e) too bright, causing significant dazzle to other road users, eg due to an incorrect light source.
12. When the dipped-beam headlamps are switched on (with wheels pointing straight ahead):
- a) a lamp does not operate, or
 - b) more than two lamps operate on dipped beam, or
 - c) the light beam produces an incorrect beam pattern, is not focused, or is reduced or altered, or
 - d) the centreline of the light beam (**Figure 4-1-1**, **Table 4-1-1**):
 - i. projects too far to the left, or
 - ii. projects to the right of the vehicle's centreline, or
 - iii. slopes down too far so that the headlamp is no longer capable of illuminating the road ahead for safe vehicle operation, or
 - iv. is too high causing dazzling to other road users.
13. When the main-beam headlamps are switched on (with wheels pointing straight ahead):
- a) a lamp does not operate, or
 - b) more than four lamps operate on main beam, or
 - c) the centreline of the light beam projects to the right of the vehicle's centreline or up from the horizontal (**Figure 4-1-2**), or
 - d) the lamps are not capable of being switched to dipped beam or turned off from the driver's seating position, or
 - e) a main-beam headlamp warning device does not indicate to the driver that the main-beam headlamps are switched on.
14. On a forklift with no headlamps, when the forward-facing work lamps are switched on a mandatory lamp does not operate.
15. On a forklift with no headlamps, when the forward-facing work lamps are switched on a lamp emits a light that is:
- a) not substantially white or amber, or
 - b) not approximately equal in colour or intensity to the other lamp in a pair, or
 - c) not steady, or
 - d) not bright enough to illuminate the road ahead, eg due to modification, deterioration or an incorrect light source, or
 - e) not aligned appropriately, causing dazzling to other road users or insufficient light illuminating the road ahead for safe vehicle operation (**Figure 4-1-3**).

Note 1 Definitions

Work lamp means a high-intensity lamp, which is not necessary for the operation of the vehicle but is designed to illuminate a work area or scene, and includes a scene lamp, a spot lamp and an alley lamp. In the case of a forklift without headlamps, forward-facing work lamps must be fitted to illuminate the road ahead during the hours of darkness.

Headlamp means a lamp designed to illuminate the road ahead of a vehicle, and that is a:

- a) dipped-beam headlamp (single lamp), or
- b) main-beam (high-beam) headlamp (single lamp), and includes a driving lamp, or
- c) combination of a dipped-beam headlamp and a main-beam headlamp (dual-lamp unit).

Note 2

If the dipped-beam headlamps are able to be adjusted from the driver's seating position, the alignment must be checked with the adjustment at its highest position.

Note 3

If the vehicle is fitted with self-levelling suspension, the alignment must be checked with the suspension at its normal level.

Note 4

If a headlamp is fitted with a readily removable cover, other than a clear protective cover, this must be removed for inspection of the headlamp.

Note 5

A vehicle originally manufactured with a headlamp arrangement that differs from what is required or permitted in this section may retain the original headlamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Note 6

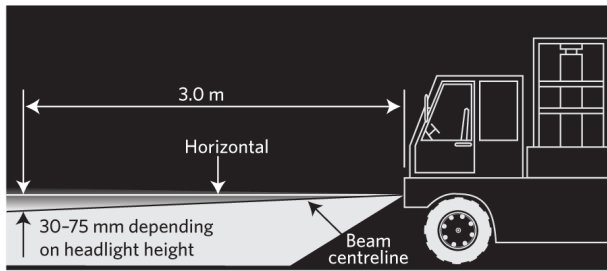
A forklift that has no or non-compliant headlamps may be issued with a WoF provided the forklift:

- a) complies with all other applicable WoF requirements, and
- b) is not operated during the hours of darkness.

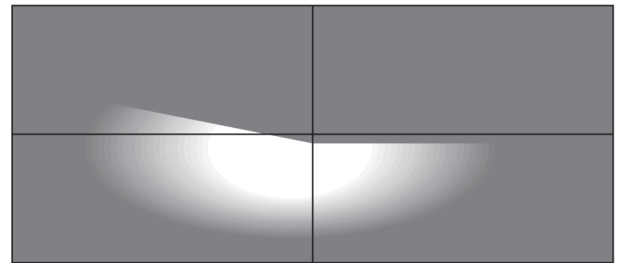
Table 4-1-1. Recommended dipped-beam headlamp alignment

	Headlamp type	Distance from ground to centre of light source	Dip rate of beam centre: lower and upper limits		
			Percent (%)	mm/3m	Degrees (°)
EITHER	Any headlamp dipped beam	N/A	That specified by the vehicle or headlamp manufacturer		
OR	Headlamp with symmetric dipped-beam pattern	N/A	3.0–3.5	90–105	1.7–2.0
OR	Headlamp with asymmetric dipped-beam pattern and distance from ground to centre of light source	less than 0.8m	1.0–1.5	30–45	0.57–0.85
		0.8–1.2m	1.0–2.0	30–60	0.57–1.15
		more than 1.2m	2.0–2.5	60–75	1.15–1.43

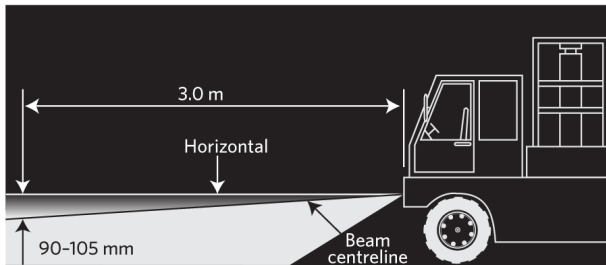
Figure 4-1-1. Headlamp dipped beam patterns and recommended dip-rates



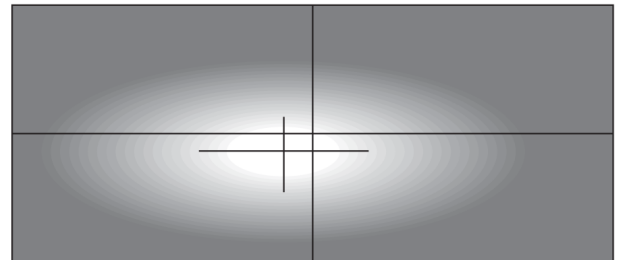
Asymmetric dipped beam



Asymmetric dipped-beam headlamp pattern on light board

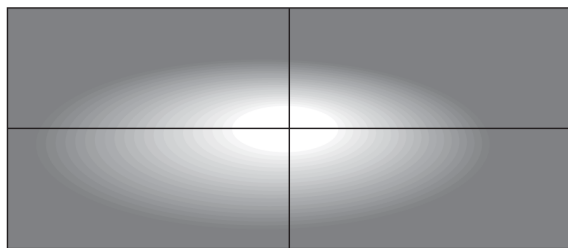


Symmetric dipped beam

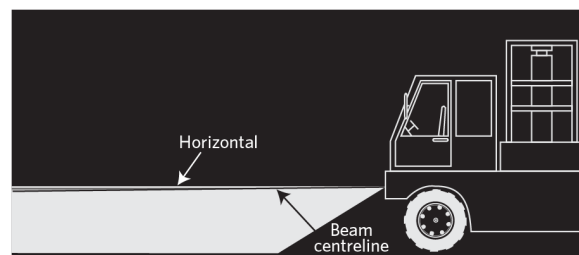


Symmetric dipped-beam headlamp pattern on light board

Figure 4-1-2. Headlamp high-beam pattern

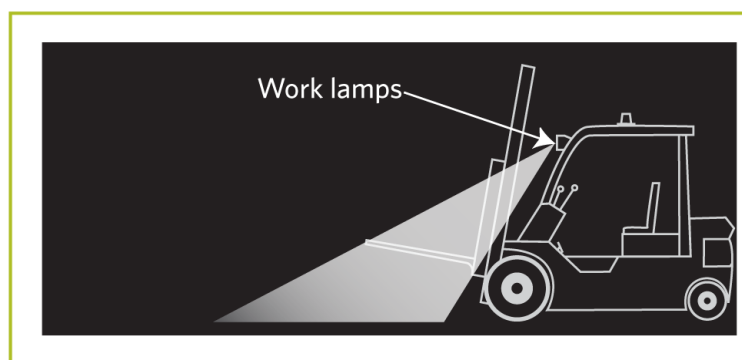


Main- (high-) beam headlamp pattern on light board



Main (high) beam

Figure 4-1-3. Work lamp beam pattern



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Mandatory and permitted equipment ([Note 6](#))

1. A forklift that is operated in the hours of darkness must be fitted with
 - a) one pair of dipped-beam headlamps, or

b) one pair of forward-facing work lamps ([Note 1](#)).

2. A forklift may be fitted with one or two pairs of main-beam headlamps.

3. A warning device may be fitted that indicates that the main-beam headlamps are switched on.

4. A retrofitted pair of headlamps must be symmetrically mounted as far towards each side of the vehicle as is practicable.

Prohibited equipment

5. A dipped-beam headlamp designed solely for a left-hand drive vehicle, where the maximum intensity of the beam is dispersed to the right, must not be fitted.

Condition

6. A headlamp or a mandatory forward-facing work lamp must:

a) be in sound condition, and

b) not be obscured.

Performance

7. A lamp must operate in a way that is appropriate for the lamp and the vehicle.

8. A lamp must emit a steady light.

9. A lamp must provide sufficient illumination and light output to illuminate the road ahead.

10. A pair of lamps must emit light that is approximately of equal colour and intensity when switched on.

11. A lamp must emit a beam that is substantially white or amber.

12. A main-beam headlamp must be capable of being dipped or turned off from the driver's position.

13. A warning device that indicates that the main-beam lamps are in operation must be in good working order.

14. When the headlamps are switched on and the vehicle's front wheels are pointing in the straight-ahead position:

a) the centre of a headlamp beam must be either parallel to or to the left of the longitudinal centreline of the vehicle, and

b) the centre of a main-beam headlamp beam must be either parallel to or dipping down from the horizontal.

15. The dipped-beam headlamps must **be visible from 100m** in normal darkness.

16. A headlamp must be fitted with a light source that is specified by the vehicle manufacturer or the headlamp manufacturer.

Page amended **1 November 2012** (see [amendment details](#)).

4-2 Front and rear fog lamps

Reasons for rejection

Permitted equipment

1. A forklift is fitted with:

a) only one front fog lamp, or

b) more than one pair of front fog lamps.

2. A forklift is fitted with more than two rear fog lamps.

3. A retrofitted pair of fog lamps is:

a) not fitted symmetrically, or

b) not fitted as far towards each side of the vehicle as is practicable, or

c) positioned higher than the dipped-beam headlamps.

Condition

4. A lamp is insecure or contains moisture in the form of large droplets, runs or puddles.

5. A lens is missing or has a hole, crack or other damage that allows moisture or dirt to enter.

6. A reflector is damaged or has deteriorated so that light output is reduced.

7. A fog lamp warning device, if fitted, is obscured from the driver's vision.

Performance

8. When switched on, a front fog lamp does not operate.
9. When switched on, a front fog lamp emits light that:
 - a) is not projected to the front, or
 - b) produces an incorrect beam pattern (**Figure 4-2-1**), or
 - c) is not substantially white or amber to the front, or
 - d) is not approximately equal in colour or intensity to the other lamp in the pair, or
 - e) is not steady, or
 - f) is not bright enough to illuminate the road ahead in conditions of severely reduced visibility, eg due to modification, deterioration, dirt or an incorrect light source, or
 - g) is too bright, and could dazzle other road users, eg due to an incorrect light source, or
 - h) has a beam centre to the right of the vehicle's centreline, or
 - i) has a beam that is not permanently dipped, or
 - j) has a beam centre that dips at an angle of less than 3% (**Figure 4-2-1**).
10. When switched on, a rear fog lamp emits light that is not:
 - a) projected to the rear, or
 - b) diffuse, or
 - c) substantially red, or
 - d) approximately equal in colour or intensity to the other lamp in a pair, or
 - e) steady, or
 - f) bright enough to indicate the presence of the vehicle from the rear in conditions of severely reduced visibility, eg due to modification, deterioration or an incorrect light source.
11. A fog lamp cannot be switched off from the driver's seating position.
12. Where a fog lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.
13. A fog lamp warning device, if fitted, does not operate.

Note 1

Fog lamp means a front or rear lamp designed to aid the driver or other road users in conditions of severely reduced visibility, including fog or snow, but not including clear atmospheric conditions under the hours of darkness.

Note 2

A rear fog lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

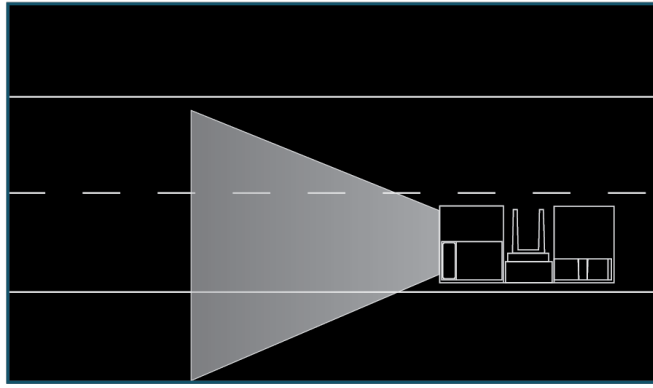
Note 3

If a front fog lamp is fitted with a readily removable cover, other than a clear protective cover, this must be removed for inspection of the fog lamp.

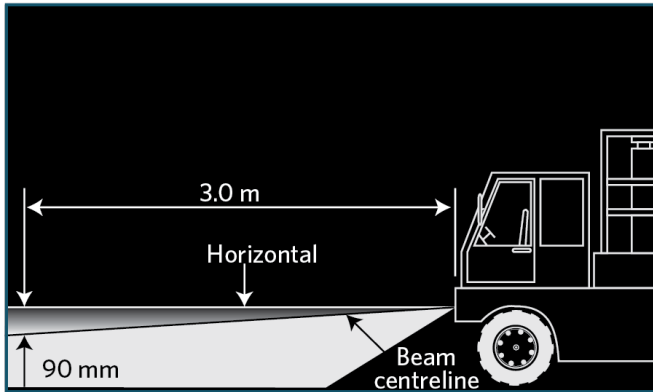
Note 4

A vehicle originally manufactured with a front- or rear-fog lamp arrangement that differs from what is required or permitted in this section may retain the original front or rear fog lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

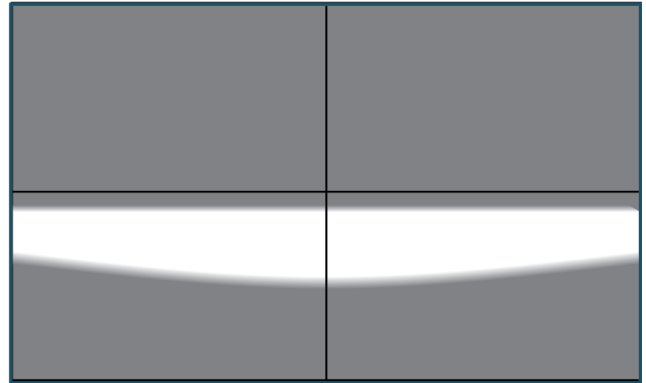
Figure 4-2-1. Front fog lamp characteristics



(a) Pattern on the road



(b) Beam dip angle



(c) Pattern on light board

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Permitted equipment

1. A forklift may be fitted with:
 - a) one pair of front fog lamps, and
 - b) one or two rear fog lamps.
2. A retrofitted pair of fog lamps must be symmetrically mounted as far as is practicable towards each side of the vehicle.
3. A retrofitted front fog lamp must not be positioned higher than the dipped-beam headlamps.
4. A vehicle may be fitted with a warning device that indicates that a front or rear fog lamp is in operation.

Condition

5. A front fog lamp must be in sound condition.
6. A rear fog lamp must be in sound condition if it emits a light.

Performance

7. A fog lamp must operate in a way that is appropriate for the lamp and the vehicle.
8. A fog lamp must emit a steady light.
9. A front fog lamp must provide sufficient light output to illuminate the road ahead in conditions of severely reduced visibility.
10. A rear fog lamp must provide sufficient light output to indicate the presence of the vehicle on the road in conditions of severely reduced visibility.
11. The light emitted from a front fog lamp must be substantially white or amber.
12. The light emitted from a rear fog lamp must be diffuse and substantially red in colour.
13. A pair of fog lamps must emit light that is approximately equal in colour and intensity.

14. The centre of a front fog lamp beam must be parallel to or to the left of the longitudinal centreline of the vehicle.
15. The centre of a front fog lamp beam must be permanently dipped at an angle of at least 3%.
16. A fog lamp must be able to be turned off from the driver's seating position.
17. A front or rear fog lamp warning device must be in good working order.
18. Where a fog lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-3 Cornering lamps

Reasons for rejection

Permitted equipment

1. A forklift is fitted with:
 - a) only one lamp, or
 - b) more than one pair of lamps, or
 - c) a lamp that either:
 - i. was not originally fitted by the forklift manufacturer, or
 - ii. is not fitted in the original position.

Condition

2. A lamp is insecure.
3. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
4. A lamp's reflector is damaged or has deteriorated so that light output is reduced.

Performance

5. When activated by switching on the direction indicator lamp or by turning the steering wheel, a cornering lamp does not:
 - a) operate, or
 - b) project in the direction of the turn.
6. A cornering lamp emits light that is:
 - a) not substantially white or amber, or
 - b) not approximately equal in colour or intensity to the other lamp in a pair, or
 - c) not steady, or
 - d) not bright enough to illuminate the road ahead in the direction of the turn, eg due to modification, deterioration, dirt or an incorrect light source, or
 - e) too bright, causing dazzle to other road users, eg due to an incorrect light source or misalignment.
7. Where a cornering lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1

Cornering lamp means a lamp that is designed to emit light at the front of a vehicle to supplement the vehicle's headlamps by illuminating the road ahead in the direction of the turn.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Permitted equipment

1. One pair of cornering lamps fitted by the forklift manufacturer.

Condition

2. A cornering lamp must be in sound condition.

Performance

3. A cornering lamp must operate in a way that is appropriate for the lamp and the vehicle.
4. A cornering lamp must emit light that is substantially white or amber.
5. A pair of cornering lamps must emit light that is approximately equal in colour and intensity.
6. A cornering lamp must emit a steady light.
7. A cornering lamp must provide sufficient light output to illuminate the road ahead in the direction of the turn.
8. A cornering lamp must be correctly aligned.
9. Where a cornering lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-4 Daytime running lamps

Reasons for rejection

Prohibited equipment

1. A forklift is fitted with daytime running lamps.

Note 1

Daytime running lamp means a lamp designed to emit a low-intensity light forward of a vehicle to make it more easily seen in the daytime.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Prohibited equipment

1. A forklift must not be fitted with daytime running lamps.

4-5 Direction indicator lamps

Reasons for rejection

Permitted equipment

1. A forklift is fitted with more than:
 - a) two pairs of lamps at the rear, or
 - b) two pairs of lamps at the front, or
 - c) two side-facing lamps on each side.
2. A forklift is fitted with a lamp that is not in a pair.
3. A retrofitted pair of lamps is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards each side of the forklift as is practicable.

Condition

4. A lamp is insecure.
5. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
6. A reflector is damaged or has deteriorated so that light output is reduced.

Performance ([Note 2](#))

7. When switched on, a direction indicator lamp:
 - a) does not operate, or
 - b) does not begin flashing within one second of switching on, or
 - c) flashes:
 - i. faster than two flashes per second, or

- ii. slower than one flash per second, or
- iii. at a different rate from other lamps on the same side.

8. When switched on, a direction indicator lamp emits a light that is:

- a) not substantially amber or red to the rear, or
- b) not substantially white or amber to the front, or
- c) not substantially amber to the side, or
- d) not approximately equal in colour or intensity to the other lamp in a pair, or
- e) not bright enough to be visible from 100m in normal daylight and from 200m in normal darkness, eg due to modification, deterioration, dirt or an incorrect light source, or
- f) too bright causing significant dazzle to other road users, eg due to an incorrect light source, or
- g) altered, eg due to damage or modification.

9. On a forklift of American origin fitted with combined stop and indicator lamps, the stop lamp function is not overridden by the indicator function.

10. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1

Direction indicator lamp means a lamp designed to emit a flashing light to signal the intention of the driver to change the direction of the vehicle to the right or to the left.

Note 2

A rear- or side-facing direction indicator lamp that does not comply with equipment, condition and performance requirements must be made to comply or disabled so that it does not emit a light.

Note 3

A vehicle originally manufactured with a direction-indicator-lamp arrangement that differs from what is required or permitted in this section may retain the original direction indicator lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Permitted equipment

1. A forklift may be fitted with one or two pairs of lamps to the front and rear of the vehicle.
2. A forklift may be fitted with one or two side-facing lamps on each side.
3. A suitable device may be fitted that indicates to the driver the failure of a mandatory lamp.
4. A retrofitted pair of lamps must be mounted symmetrically as far towards each side of the forklift as is practicable.
5. On forklifts of American origin, the stop lamp and direction indicator lamp function may be combined in one lamp.

Condition

6. A direction indicator lamp must be in sound condition.

Performance

7. A direction indicator lamp must operate in a way that is appropriate for the lamp and the vehicle.
8. A direction indicator lamp must emit a light that is substantially:
 - a) red or amber to the rear, and
 - b) white or amber to the front, and
 - c) amber to the side.
9. A lamp must flash at a fixed frequency in the range of 1 to 2 Hertz.
10. Each lamp in a pair must, when operated, emit a light of approximately equal intensity, colour and frequency.

11. The lamp-failure indicating device, if fitted, must function.
12. A lamp must emit a light that is visible from 100m during normal daylight and 200m in normal darkness.
13. If a vehicle of American origin is fitted with combined stop and indicator lamps, the indicator lamps may override the stop lamps so that the stop lamps operate as direction indicators.
14. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-6 Forward-facing position lamps

Reasons for rejection

Permitted equipment

1. A forklift is fitted with more than two pairs of lamps.
2. A retrofitted pair of lamps is:
 - a) not symmetrically mounted, or
 - b) not mounted as far towards each side of the vehicle as is practicable, or
 - c) mounted at a height from the ground exceeding 2.1m.
3. A pair of top-mounted lamps, if fitted, is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards the top corners of the bodywork as is practicable.
4. A lamp is not positioned to the front of the vehicle.

Condition

5. A lamp is insecure or, if a mandatory lamp, contains moisture in the form of large droplets, runs or puddles.
6. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
7. A lamp's reflector is damaged or has deteriorated so that light output is reduced.

Performance

8. When switched on, a forward-facing position lamp does not operate.
9. When switched on, a forward-facing position lamp emits a light that is not:
 - a) substantially white or amber, or
 - b) diffuse, or
 - c) projected to the front, or
 - d) approximately equal in colour or intensity to the other lamp in a pair, or
 - e) steady, or
 - f) bright enough to be visible from a reasonable distance in normal darkness, eg due to modification, deterioration, dirt or an incorrect light source.

Note 1

Position lamp means a low-intensity lamp that is designed to indicate to road users the presence and dimensions of a vehicle, being:

- a) a forward-facing position lamp (front side lamp), or
- b) a rearward-facing position lamp (rear side lamp or tail lamp), or
- c) a side-marker lamp, or
- d) an end-outline marker lamp (including cab roof lamp).

Note 2

A vehicle originally manufactured with a forward-facing position lamp arrangement that differs from what is required or permitted in this section may retain the original forward-facing position lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Permitted equipment

1. A forklift may be fitted with one or two pairs of forward-facing position lamps.
2. A retrofitted pair of lamps must be symmetrically mounted as far towards each side of the vehicle as is practicable.
3. A retrofitted lamp must be mounted at a height from the ground not exceeding 2.1m.
4. A forklift may be fitted with one additional pair of forward-facing position lamps that must be symmetrically mounted as far towards the top corners of the vehicle as is practicable (top-mounted lamps).
5. A lamp must be positioned to the front of the vehicle.

Condition

6. A forward-facing position lamp must:
 - a) be in sound condition,
 - b) not be obscured (if a mandatory lamp).

Performance

7. A forward-facing position lamp must operate in a way that is appropriate for the lamp and the vehicle.
8. A lamp must emit a light that is:
 - a) diffuse, and
 - b) substantially white or amber, and
 - c) steady, and
 - d) sufficient to indicate to other road users the presence and dimensions of the vehicle, and
 - e) of approximately equal intensity and colour to the other lamp of a pair.
9. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Page amended **1 November 2012** (see [amendment details](#)).

4-7 Rearward-facing position lamps

Reasons for rejection

Mandatory and permitted equipment

1. A forklift **that is likely to be operated during the hours of darkness (where the vehicle inspector can determine that) is not fitted with at least one lamp**.
2. A retrofitted pair of lamps is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards each side of the vehicle as is practicable.

Condition

3. A lamp is insecure or, if a mandatory lamp, contains moisture in the form of large droplets, runs or puddles.
4. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
5. A lamp's reflector is damaged or has deteriorated so that light output is reduced.
6. A mandatory lamp is obscured.

Performance

7. When switched on, a mandatory lamp does not operate.
8. When switched on, a lamp emits a light that is not:
 - a) substantially red, or

- b) diffuse, or
- c) projected to the rear, or
- d) approximately equal in colour or intensity to the other lamp in a pair, or
- e) steady, or
- f) bright enough to be visible from 100m in normal darkness (if a mandatory lamp), eg due to modification, deterioration, dirt or an incorrect light source.

9. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1 Definition

Position lamp means a low-intensity lamp that is designed to indicate to road users the presence and dimensions of a vehicle, being:

- a) a forward-facing position lamp (front side lamp), or
- b) a rearward-facing position lamp (rear side lamp or tail lamp), or
- c) a side-marker lamp, or
- d) an end-outline marker lamp (including cab roof lamp).

Note 2

A permitted rearward-facing position lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Note 3

A vehicle originally manufactured with a rearward-facing position lamp arrangement that differs from what is required or permitted in this section may retain the original rearward-facing position lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Mandatory and permitted equipment

1. A forklift operated during the hours of darkness must be fitted with at least one rearward-facing position lamp.
2. A forklift may be fitted with one or more rearward-facing position lamps.
3. A retrofitted pair of lamps must be mounted symmetrically as far towards each side of the vehicle as is practicable.
4. A lamp must be positioned to the rear of the vehicle.

Condition

5. A rearward-facing position lamp must:
 - a) be in sound condition, and
 - b) not be obscured (if a mandatory lamp).

Performance

6. A rearward-facing position lamp must operate in a way that is appropriate for the lamp and the vehicle.
7. A lamp must emit a light that is:
 - a) diffuse, and
 - b) substantially red, and
 - c) steady, and
 - d) sufficient to indicate to other road users the presence and dimensions of the vehicle, and
 - e) visible from a distance of 100m in normal darkness (if a mandatory lamp), and
 - f) of approximately equal intensity and colour to the other lamp of the pair.
8. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-8 Side-marker lamps

Reasons for rejection

Prohibited equipment

1. A forklift that has a length of less than 6m is fitted with side-marker lamps.

Condition

2. A lamp is insecure.
3. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
4. A reflector is damaged or has deteriorated so that light output is reduced.

Performance

5. When switched on, a lamp emits a light that is not:
 - a) diffuse, or
 - b) substantially red or amber to the rear, or
 - c) substantially white or amber to the front, or
 - d) steady.
6. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1 Definitions

Side-marker lamp means a position lamp designed to be fitted to the side of a vehicle or its load.

Position lamp means a low-intensity lamp that is designed to indicate to road users the presence and dimensions of a vehicle being:

- a) a forward-facing position lamp (front side lamp), or
- b) a rearward-facing position lamp (rear side lamp or tail lamp), or
- c) a side-marker lamp, or
- d) an end-outline marker lamp (including cab roof lamp).

Note 2

A side-marker lamp that does not comply with the equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Permitted and prohibited equipment

1. A forklift with a length of 6m or more may be fitted with one or more side-marker lamps.
2. A forklift with a length of less than 6m must not be fitted with side-marker lamps.

Condition

3. A lamp must be in good condition.

Performance

4. A side-marker lamp must operated in a way that is appropriate for the lamp and the vehicle.
5. A side-marker lamp must emit light that is:
 - a) diffuse, and
 - b) substantially red or amber to the rear, and
 - c) substantially white or amber to the front, and

d) steady.

6. Where a side-marker lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-9 End-outline marker lamps

Reasons for rejection

Mandatory, permitted and prohibited equipment

1. A vehicle listed in **Table 4-9-1**:

- a) is not fitted with lamps required in **Table 4-9-1**, or
- b) is fitted with lamps that exceed the numbers permitted in **Table 4-9-1**.

2. A vehicle not listed in **Table 4-9-1** is fitted with end-outline marker lamps.

3. An end-outline marker lamp is so positioned that it does not indicate the dimensions of the vehicle.

Condition

4. A lamp is insecure.

5. A lens is missing or has a hole, crack or other damage that allows moisture or dirt to enter.

6. A reflector is damaged or has deteriorated so that light output is reduced.

7. A mandatory lamp is obscured.

Performance

8. When switched on, a mandatory lamp does not operate.

9. When switched on, a lamp emits a light that is not:

- a) substantially red to the rear, or
- b) substantially white or amber to the front, or
- c) diffuse, or
- d) steady, or
- e) bright enough to be visible from 100m in normal daylight and 200m in normal darkness, eg due to modification, deterioration, dirt or an incorrect light source.

9. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1 Definitions

End-outline marker lamp means a position lamp designed to be fitted near the outer extremity of a vehicle in addition to forward-facing and rearward-facing position lamps, and includes a cab roof lamp.

Position lamp means a low-intensity lamp that is designed to indicate to road users the presence and dimensions of a vehicle, being:

- a) a forward-facing position lamp (front side lamp), or
- b) a rearward-facing position lamp (rear side lamp or tail lamp), or
- c) a side-marker lamp, or
- d) an end-outline marker lamp (including cab roof lamp).

Note 2

A permitted end-outline marker lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Table 4-9-1. Fitting requirements for end-outline marker lamps

If the vehicle was:	Row	Characteristics of the heavy vehicle	Front		Rear
			Mandatory lamps ³	Maximum permitted lamps ¹	Maximum permitted lamps ²
Vehicle manufactured before 1/4/2011 ³	A	<ul style="list-style-type: none"> • A vehicle with a GVM exceeding 11,300 kg • A vehicle with a towing connection where the vehicle combination is likely to have a total length exceeding 9.2m 	2	12 (No Limit if first registered before 27/2/2005)	6
	B	A vehicle with an overall width of 1.8 m or more (other than a vehicle in row A)	Not required	6	4
Vehicle manufactured from 1/4/2011	C	A vehicle with an overall width exceeding 2.1m and with a GVM or GCM exceeding 12,000kg	2	12	6
	D	A vehicle with an overall width exceeding 2.1m (other than a vehicle in row C)	2	6	4
	E	A vehicle with an overall width of 1.8 m or more (other than a vehicle in row C or D).	Not required	6	4

¹ Maximum permitted lamps are the maximum number of lamps allowed to be fitted, including mandatory lamps.

² A vehicle manufactured before 1/4/2011 also has the option of complying with the requirements applicable to vehicles manufactured from 1/4/2011.

³ Mandatory lamps must be positioned at a height no lower than the top edge of the windscreen

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Mandatory, permitted and prohibited equipment

1. A vehicle in **Table 4-9-1** must or may be fitted with end-outline marker lamps as specified in the table.
2. A vehicle not listed in **Table 4-9-1** must not be fitted with end-outline marker lamps.
3. The position of the lamps must be such that it gives an indication of the vehicle's dimensions.

Condition

4. A end-outline marker lamp must be:
 - a) in good condition, and
 - b) not obscured (if a mandatory lamp).

Performance

5. An end-outline marker lamp must operate in a way that is appropriate for the lamp and the vehicle.
6. Cab roof lamps must emit a light that is visible from 100m in normal daylight and from 200 in normal darkness.
7. A lamp must emit a light that is diffuse and substantially red to the rear and white or amber to the front.
8. A lamp must provide sufficient light output so that the vehicle's dimensions are easily indicated to other road users.
9. Where an end-outline marker lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-10 Stop lamps

Reasons for rejection

Permitted equipment

1. A forklift is:
 - a) is fitted with more than three pairs of stop lamps (including top-mounted stop lamps), or
 - b) is fitted with a stop lamp that is not in a pair.
2. A retrofitted stop lamp, other than a top-mounted lamp, is fitted at a height from the ground exceeding 2.1 m.
3. A retrofitted pair of lamps is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards each side of the vehicle as is practicable.
4. A pair of top-mounted lamps is not mounted as far as is practicable to the top of the bodywork of the vehicle.

Condition

5. A lamp is insecure.
6. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
7. A reflector is damaged or has deteriorated so that light output is reduced.

Performance

8. A lamp operates when the service brake is not applied.
9. A lamp emits a light that is not:
 - a) substantially red, or
 - b) diffuse, or
 - c) steady, or
 - d) projected to the rear, or
 - e) approximately equal in colour or intensity to the other lamp in a pair, or
 - f) bright enough to produce a light that is visible from a reasonable distance in normal daylight, eg due to modification, deterioration, dirt or an incorrect light source.
10. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.
12. On a vehicle of American origin fitted with combined stop and direction indicator lamps, the stop lamp function is not overridden by the indicator function.

Note 1

Stop lamp means a lamp that is designed to operate when the service brake is activated.

Note 2

A permitted stop lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Note 3

A vehicle originally manufactured with a stop-lamp arrangement that differs from what is required or permitted in this section may retain the original stop lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Permitted equipment

1. A forklift may be fitted with one or two pairs of stop lamps at the rear which emit a light that is visible from a reasonable

distance.

2. A retrofitted pair of stop lamps must be symmetrically mounted as far towards each side of the vehicle as is practicable.
3. A retrofitted stop lamp must be fitted at a height from the ground not exceeding 2.1 m.
4. A forklift may be fitted at the rear with an additional pair of stop lamps provided they are positioned as close as is practicable to the top of the bodywork of the vehicle (top-mounted lamps).

Condition

5. A stop lamp must be in sound condition.

Performance

6. A stop lamp must operate in a way that is appropriate for the lamp and the vehicle.
7. The light emitted from a stop lamp must be diffuse light that is substantially red.
8. A stop lamp must operate when a service brake is activated.
9. A stop lamp must emit a steady light.
10. If a vehicle of American origin is fitted with combined stop and direction indicator lamps, the indicator lamps may override the stop lamps so that the stop lamps will operate as direction indicators.
11. Where a stop lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

Page amended **1 November 2012** (see [amendment details](#)).

4-11 High-mounted stop lamps

Reasons for rejection

Permitted equipment

1. A forklift is fitted with more than two high-mounted stop lamps.
2. A lamp is not fitted in a central high-mounted position.

Condition

3. A lamp is insecure.
4. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
5. A reflector is damaged or has deteriorated so that light output is reduced.

Performance

6. When the service brake is activated a lamp does not remain steadily illuminated.
7. A lamp operates when the service brake is not activated.
8. A lamp emits a light that is not:
 - a) substantially red, or
 - b) diffuse, or
 - c) projected to the rear, or
 - d) bright enough to be visible from 100m in normal daylight, eg due to modification, deterioration, dirt or an incorrect light source.
9. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1 Definitions

High-mounted stop lamp means a stop lamp that is designed to be fitted in a central, high-mounted position at the rear of a vehicle.

Stop lamp means a lamp that is designed to operate when the service brake is activated.

Note 2

A high-mounted stop lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Note 3

A vehicle originally manufactured with a high-mounted-stop-lamp arrangement that differs from what is required or permitted in this section may retain the original high-mounted stop lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Permitted equipment

1. A forklift may be fitted with one or two high-mounted stop lamps.
2. A lamp must be fitted in a central high-mounted position at the rear of the vehicle.

Condition

3. A high-mounted stop lamp must be in good condition.

Performance

4. A high-mounted stop lamp must operate in a way that is appropriate for the lamp and the vehicle.
5. The light emitted from a high-mounted stop lamp must be diffuse light that is substantially red.
6. A high-mounted stop lamp must emit a steady light.
7. Where a high-mounted stop lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-12 Rear-reg.-plate illumination lamps

Reasons for rejection

Performance

1. The lamp emits a light that is not:
 - a) substantially white, or
 - b) steady, or
 - c) diffuse.
2. The lamps are not bright enough to show up the registration plate text from 20m in normal darkness.
3. The light source of a lamp is visible from the rear of the vehicle.

Note 1

Rear-registration-plate illumination lamp means a lamp designed to illuminate the rear registration plate of a vehicle.

Note 2

A vehicle originally manufactured with a rear-registration-plate-illumination-lamp arrangement that differs from what is required or permitted in this section may retain the original rear-registration-plate illumination lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Permitted equipment

1. A forklift may be fitted with one or more rear-registration-plate illumination lamps.

Performance

2. A rear-registration-plate illumination lamp must operate in a way that is appropriate for the lamp and the vehicle.
3. A lamp must emit a diffuse light that is substantially white.
4. A rear-registration-plate illumination lamp must emit a steady light.
5. The light source of the lamp must not be visible from the rear of the vehicle.
6. A lamp must illuminate the figures and letters of the plate so that they are visible from 20m during normal darkness.

7. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-13 Rear reflectors

Reasons for rejection

Permitted equipment

1. A forklift is fitted with a rearward-facing reflector that is not in a pair.
2. A retrofitted reflector is fitted at a height from the ground exceeding 1.5m (or 2.1m where fitting below 1.5m is not practicable due to the shape of the bodywork of the vehicle).
3. A reflector is not positioned to the rear of the vehicle.
4. A retrofitted pair of reflectors is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards each side of the vehicle as is practicable.

Performance

8. The reflected light from a reflector is not red.

Note 1 Definitions

Reflector means a discreet item of lighting equipment that is designed to reflect incident light back towards the light source, but does not include reflective material (such as reflective tape).

Reflective material means any material that is designed to reflect incident light back towards the light source, and includes reflective tape, but does not include a reflector.

Note 2

A vehicle originally manufactured with a rear reflector arrangement that differs from what is required or permitted in this section may retain the original rear reflectors provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Permitted equipment

1. A forklift **may** be fitted with one or more pairs of rearward-facing reflectors at a height from the ground not exceeding 1.5m, or if this is not practicable due to the shape of the bodywork of the vehicle, not exceeding 2.1m.
2. A rearward-facing reflector must be positioned to the rear of the vehicle.
3. A reflector must be of an area that allows it to reflect light to improve the visibility of the vehicle to other road users, but it must not cause them undue dazzle or discomfort.
4. A retrofitted pair of reflectors must be symmetrically mounted as far towards each side of the vehicle as is practicable.

Performance

7. A reflector must reflect white light as substantially red light.

Page amended **1 November 2012** (see [amendment details](#)).

4-14 Reversing lamps

Reasons for rejection

Permitted equipment

1. A forklift is fitted with more than two reversing lamps at the rear of the vehicle.
2. A retrofitted pair of reversing lamps is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards each side of the vehicle as is practicable.

Condition

3. A lamp is insecure or contains visible moisture or dirt.
4. A lens is missing, or has a hole, crack or other damage that allows moisture or dirt to enter.
5. A reflector is damaged or has deteriorated so that light output is reduced.

Performance

6. A lamp controlled by gear engagement continues to display a light to the rear when the reverse gear is disengaged.
7. A lamp controlled by a manual switch continues to display a light to the rear while the headlamps are switched on.
8. When engaged, a lamp emits light that is not:
 - a) substantially white ([Note 3](#)), or
 - b) steady, or
 - c) diffuse or a dipped beam.
9. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1

Reversing lamp means a lamp designed to illuminate the area behind the vehicle while it is reversing and to warn other road users that the vehicle is reversing or about to reverse.

Note 2

A reversing lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Note 3

Vehicles first registered in New Zealand before 27 February 2005 were allowed to use rear indicator lamps as reversing lamps. Although the light emitted is amber instead of white, this arrangement is still permitted for these vehicles.

Note 4

A vehicle originally manufactured with a reversing lamp arrangement that differs from what is required or permitted in this section may retain the original reversing lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Permitted equipment

1. A forklift may be fitted with one or two reversing lamps fitted at the rear of the vehicle.
2. A retrofitted pair of reversing lamps must be symmetrically mounted as far towards each side of the vehicle as is practicable.

Condition

3. A reversing lamp must be in good condition.

Performance

4. A reversing lamp must operate in a way that is appropriate for the lamp and the vehicle.
5. A reversing lamp, when operated, must emit a diffuse light or a dipped beam of light that is substantially white ([Note 3](#)).
6. A reversing lamp must emit a steady light.
7. A reversing lamp may operate only when the reverse gear is engaged or the headlamps are turned off.
8. Where a reversing lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-15 Cosmetic lamps

Reasons for rejection

Permitted equipment

1. A cosmetic lamp (ie one not listed in **Table 4-15-1**) that is fitted to a vehicle:

- a) has a part of its light-emitting surface positioned within 250mm of any mandatory lamps, or
- b) is not mounted in a fixed position, or
- c) is positioned so that its light-emitting surface is visible within the shaded areas in **Figure 4-15-1**.

Performance

2. When switched on, a cosmetic lamp with a light-emitting surface not visible within the shaded areas in **Figure 4-15-1** emits a light that:

- a) is not diffuse, or
- b) flashes or otherwise varies in intensity or colour, or
- c) revolves, rotates or otherwise moves, or
- d) is too bright and likely to dazzle other road users, or
- e) is likely to cause confusion about the orientation of the vehicle, or
- f) is red when seen directly from the front, or
- g) is not red or amber when seen directly from the rear.

Note 1

A rear or side cosmetic lamp that does not comply with requirements for condition or performance must be made to comply, or be disabled so that it does not emit a light.

Note 2 Definitions

Lamp means a device designed to emit light, and includes an array of separate light sources that appear as a continuous illuminated surface.

Cosmetic lamp means any lamp that is not listed in **Table 4-15-1**.

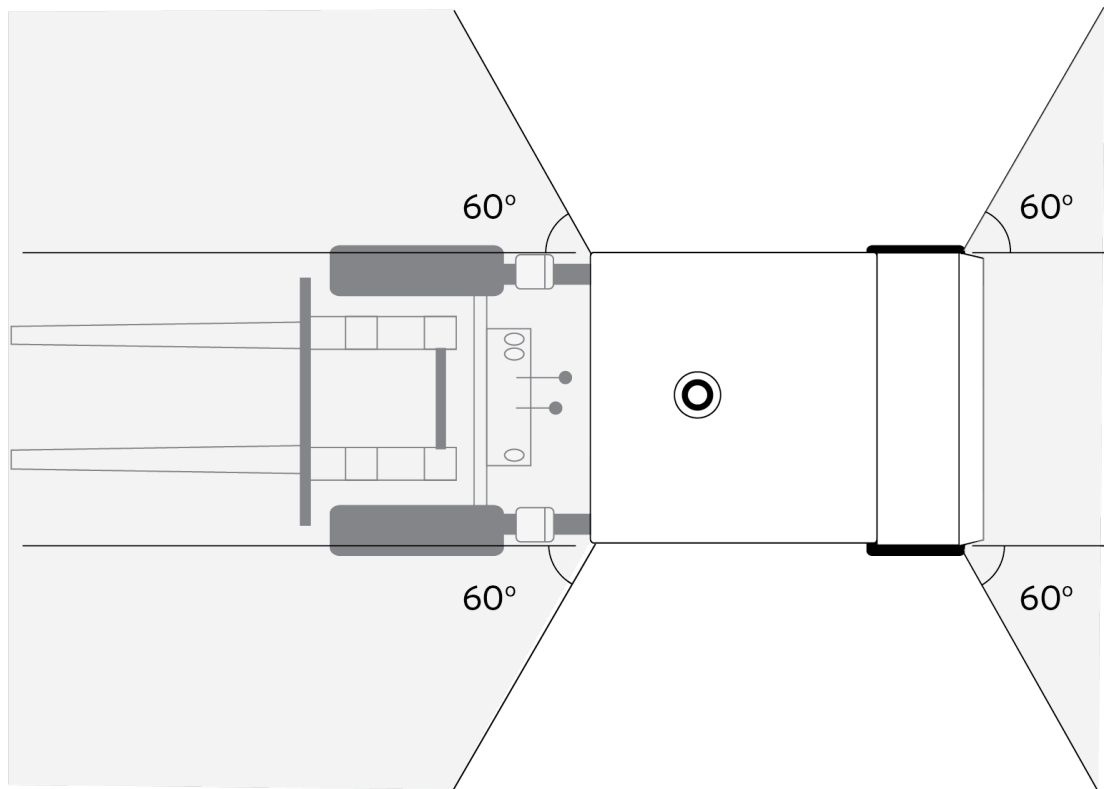
Note 3

A forward-facing cosmetic lamp that does not comply with the equipment, condition and performance requirements must be made to comply or be removed from the vehicle.

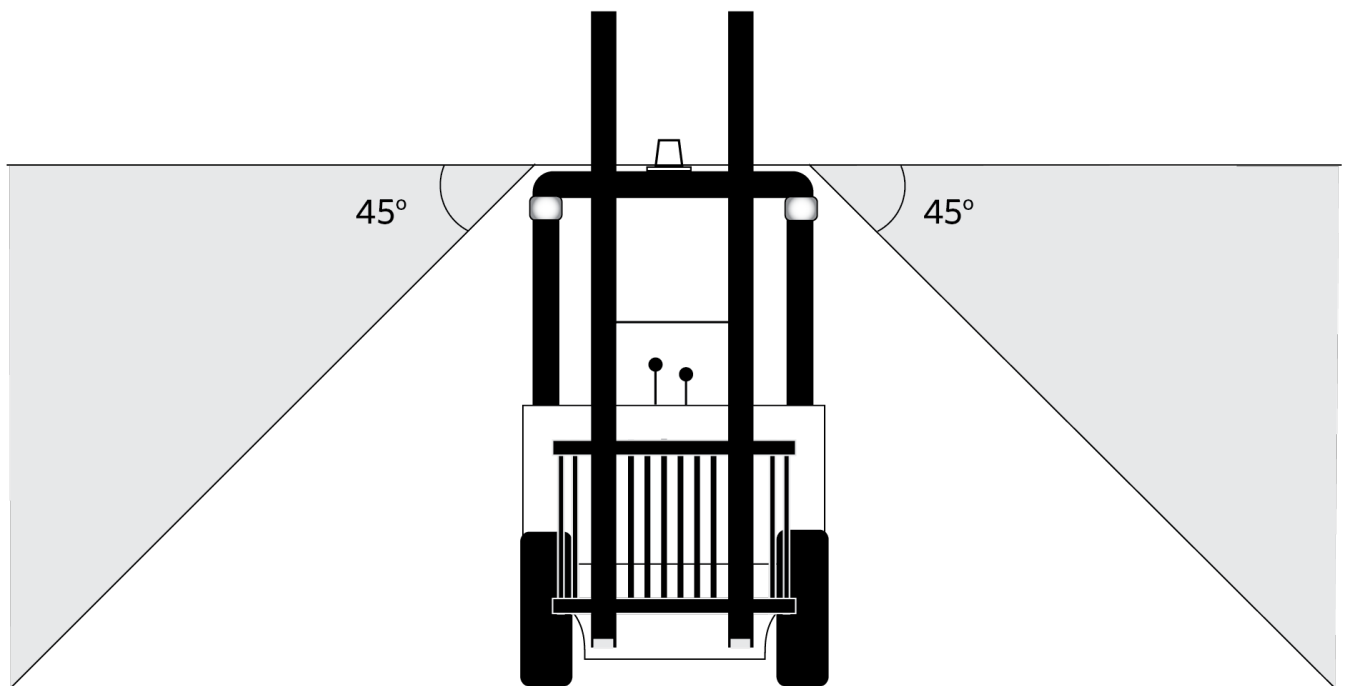
Table 4-15-1. Lamps that are not cosmetic lamps

Lamps covered in the VIRM	Other lighting equipment not requiring inspection
Headlamps	Reflective material
Stop lamps	Interior lamps
High-mounted stop lamps	Designed to illuminate the interior of the vehicle for the convenience of passengers
Direction indicator lamps	Work lamps
Position lamps (includes side-marker lamps and end-outline marker lamps)	White or amber high-intensity lamps that are not necessary for the operation of the vehicle but are designed to illuminate the area around the vehicle or the vehicle itself
Rear-registration-plate illumination lamps	Scene lamps
Rear reflectors	Work lamps designed to provide a fixed or movable beam of light to illuminate the area around the vehicle or the vehicle itself
Fog lamps	Alley lamps
Daytime running lamps	Work lamps designed primarily to provide a fixed or movable beam of light to the side of the vehicle it is fitted to
Cornering lamps	Flashing or revolving beacons (except a mandatory beacon required for some overdimension vehicles)
Reversing lamps	Illuminated vehicle-mounted signs
PSV interior lamps	Includes PSV destination signs, taxi signs, and variable message signs operated by enforcement officers, under a traffic management plan or permitted by other legislation

Figure 4-15-1. Visibility angles for cosmetic lamps



**Light sources must not be directly visible
from the shaded areas**



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Permitted equipment

1. A vehicle may be fitted with one or more lamps not specified in **Table 4-15-1**, provided they are fitted so that light sources are not visible in those regions specified in **Figure 4-15-1**.
2. A lamp must be fitted in a fixed position on the vehicle and positioned so that no part of the light source is situated within 250mm of a mandatory lamp.

Performance

3. A lamp must:

- a) only emit light that is diffuse, and
- b) not emit light that flashes or otherwise varies in intensity or colour, and
- c) be fitted in a way, and be of a luminance that ensures, that it does not dazzle, confuse or distract other road users, and
- d) not emit a light that revolves, rotates or otherwise moves, and
- e) not cause confusion as to the orientation of the vehicle, and
- f) not emit a red light that is directly visible from the front of the vehicle, and
- g) not emit a light other than red or amber if the light is directly visible from the rear of the vehicle.

5 Vision

5-1 Glazing

Reasons for rejection

Glazing condition

1. A piece of glazing is not mechanically sound, or is not securely affixed to the vehicle.
2. A windscreen or front side window is so dirty or obstructed that the driver's vision is unreasonably impaired.
3. A windscreen has damage that prevents the wiper blades from working properly.
4. A windscreen has scratches, discolouration or other defects that unreasonably impair the driver's vision or compromise the strength of the windscreen.
5. A modification:
 - a) unreasonably impairs driver's vision through the windscreen or a front side window, or
 - b) adversely affects the strength or mechanical performance of the glazing.

Glazing performance

6. The overall visible light transmittance (VLT) ([Note 2](#)) of a windscreen is less than 70%.
7. The overall VLT of a front side window is less than 35%.
8. Glazing has a mirrored effect sufficient to dazzle other road users.

Permitted modifications

9. A modification that affects glazing is not within the limits in **Table 5-1-1**.

Note 1 Definitions

Windscreen means all glazing extending across the front of the vehicle that is not parallel to the vehicle's centreline but does not include a wind deflector. No fitting or overlays of stickers are permitted to the windscreen except those previously mentioned.

Overlay means a transparent, translucent or opaque self-adhesive or clinging film that is applied to large areas, or the whole, of a piece of glazing, including anti-glare band overlays and stoneguard overlays.

Sticker means a self-adhesive or clinging film, with or without print on it, that is applied for purposes such as advertising, identification, information, decoration or legal reasons.

Anti-glare band overlay means a tinted overlay that is transparent and that is applied along the top edge of the windscreen for the purpose of reducing glare from the sun.

Damage includes any unrepaired damage and attempted visible repairs.

Note 2

Visible light transmittance (VLT) is the proportion of visible light that passes through glazing, measured perpendicular to the glazing. Overall VLT is the VLT of the glazing together with any overlays.

Note 3

Any OE opaque edging (usually black) is not considered part of the windscreen when determining the boundaries permitted for stickers, print on an anti-glare band or radio antennae.

Table 5-1-1. Permitted modifications

Fitting of or modification to:	Modification permitted provided that:
Windscreens	
Stickers	<ul style="list-style-type: none"> stickers are wholly within 100mm of the top or bottom edge, or 50mm of the side edges, unless required or permitted by legislation, eg: <ul style="list-style-type: none"> a licence label a road user licence label a WoF label an alternative fuel sticker a current parking permit or other document issued by the local authority learner L-plates (in sticker format) provided the driver's vision is not unreasonably affected.
Anti-glare band overlay	<ul style="list-style-type: none"> the overlay is transparent, and the overlay does not extend below the bottom edge of the vehicle's OE sun visors when they are folded down as far as possible towards the windscreen, and the overlay does not contain print below a line that is 100mm below and parallel to the top edge of the windscreen.
Radio antennae	<ul style="list-style-type: none"> antennae are wholly within 100mm of any edge.
Front side windows	
Transparent overlays	<ul style="list-style-type: none"> the overall visible light transmittance (VLT) is not reduced to below 35%.
Stickers	<ul style="list-style-type: none"> stickers are wholly within 100mm of the bottom edge, or 50mm of any other edge, unless required or permitted by legislation. manufacturer's operating instructions may be applied to or incorporated in the glazing.
Radio antennae	<ul style="list-style-type: none"> antennae are wholly within 100mm of any edge.
Rear and rear side windows (behind the driver's seat)	
Overlays and other modifications	<ul style="list-style-type: none"> the vehicle is equipped on both sides with external rear-view mirrors.
Stickers	<ul style="list-style-type: none"> stickers may be applied anywhere on the glazing, but if not wholly within 100mm of any edge, the vehicle must be equipped on both sides with external rear-view mirrors.
Radio antennae	<ul style="list-style-type: none"> in-service requirements for condition and performance are met.

Fitting of or modification to:	Modification always permitted:
Monsoon shields	<ul style="list-style-type: none"> in-service requirements for condition and performance must be met.
Electric demisters	
Sunroofs (overlays and stickers applied anywhere on the glazing, radio antennae, and electric demisters)	

Summary of legislation

Applicable legislation

- [Land Transport Rule: Glazing, Windscreen Wipe and Wash, and Mirrors 1999.](#)

Glazing condition

- Glazing must be mechanically sound, strong and securely affixed to the vehicle.
- A windscreen and front side windows must be clean and free of obstruction to ensure the driver has sufficient vision through the glazing to operate the vehicle safely.
- A windscreen must not have scratches and other defects that:
 - unreasonably impair vision, or
 - compromise its strength.
- A laminated windscreen must not show signs of discoloration that could unreasonably impair the driver's vision.
- Glazing in roof panels may be tinted.

Glazing performance

- A windscreen must have an overall visible light transmittance (VLT) of at least 70%.
- A front side window must have an overall VLT of at least 35%.
- Glazing must not have a mirrored effect sufficient to dazzle other road users.
- A modification must not:
 - unreasonably impair vision through a windscreen or a front side window, or
 - adversely affect the strength or mechanical performance of the glazing or the vehicle.

Permitted modifications

- A modification that affects glazing is permitted if within the limits in **Table 5-1-1**.

5-2 Sun visors

Reasons for rejection

Condition

- A sun visor ([Note 1](#)):
 - is insecurely mounted, or
 - for the driver, cannot be adjusted from the normal driving position, or
 - cannot maintain its adjusted position, or
 - has been modified or has deteriorated, and the likelihood of injury to vehicle occupants has not been minimised.

Performance

- A driver's sun visor does not effectively aid the driver's vision by intercepting the glare from the sun.

Note 1

Sun visor means any attachment mounted above the inside of the windscreen and provided for the purpose of shielding the

eyes of the driver and other front seat passengers from solar glare.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004](#)
- [Land Transport Rule: Interior Impact 2002](#).

Permitted equipment

1. A forklift may be fitted with sun visors ([Note 1](#)).

Performance

2. The condition of sun visors must be such that the likelihood of injury to occupants is minimised.
3. A driver's sun visor must be effective.

5-3 Windscreen wipe and wash

Reasons for rejection

Mandatory equipment

1. A forklift that has a windscreen is not fitted with a windscreen wipe system.
2. A forklift manufactured on or after 1 January 1960 is fitted with wipers that are not power driven.

Condition

Windscreen wipe system

3. The wiper operating device is missing.
4. A wiper arm or wiper blade is:
 - a) missing, or
 - b) insecure, or
 - c) damaged so as to affect the performance of the wipers.
5. The wiper operating mechanism is:
 - a) missing, or
 - b) insecure, or
 - c) damaged so as to affect the performance of the wipers.

Windscreen wash system

6. A wash system component is missing or insecure.
7. The wash operating device is missing.

Performance

Windscreen wipe system

8. A windscreen wiper does not wipe the windscreen effectively, preventing adequate forward vision by the driver.
9. The wipe operating device is unable to activate the wipe system.

Windscreen wash system

10. A windscreen wash nozzle does not discharge washer liquid directly onto the windscreen.
11. The wash operating device is unable to activate the wash system.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Glazing, Windscreen Wipe and Wash, and Mirrors 1999](#).

Mandatory equipment

1. A forklift that is fitted with a windscreen must have a windscreen wipe system.

2. Windscreen wipers must be power driven, unless they follow OE specifications in a vehicle manufactured before 1 January 1960.

Permitted equipment

3. A forklift may be fitted with a wash system.

Condition

4. A forklift's windscreen wipe and wash system must be efficient and within the vehicle manufacturer's operating limits.

Performance

5. The equipment fitted must be capable of keeping an adequate area of the windscreen clean and clear so that the vehicle may be operated safely under all reasonably foreseeable conditions.

5-4 Rear-view mirrors

Mandatory equipment

1. A forklift is not fitted with at least one rear-view mirror.

Condition

2. A rear-view mirror:

- a) is not mounted securely, or
- b) cannot be adjusted, or
- c) cannot maintain its adjusted position, or
- d) is corroded or dirty, or
- e) is damaged so that it increases the risk of injury to vehicle occupants.

Performance

3. A rear-view mirror:

- a) does not provide a clear view to the rear of the vehicle, or
- b) is not sufficiently isolated from vibrations.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Glazing, Windscreen Wipe and Wash, and Mirrors 1999.](#)

Mandatory equipment

1. A forklift must be fitted with a rear-view mirror.

Permitted equipment

2. Additional rear-view mirrors may be fitted.

Condition

3. A rear-view mirror must be:

- a) securely attached so that the risk of injury is minimised, and
- b) mounted so that vibration does not inhibit the driver's required clear view to the rear, and
- c) sufficiently adjustable, and able to maintain its position.

Performance

4. A rear-view mirror must provide a clear view to the rear of:

- a) the forklift itself, and
- b) the forklift's load, and
- c) any towed trailer and its load.

5. A rear-view mirror must be sufficiently isolated from vibrations.

6 Entrance and exit

6-1 Door and hinged panel retention systems

Reasons for rejection

Mandatory equipment

1. A forklift fitted with doors used by the driver or passengers for entrance and exit of the vehicle does not have a door retention system.

Condition

2. A hinge for a door or other hinged panel is not securely attached to both the vehicle body and to the door or other hinged panel, eg due to loose connections, corrosion or other damage.

3. A door used for entrance and exit of the driver or passengers cannot be opened from the inside.

Performance

4. A door used for entrance and exit of the driver or passengers does not open or close easily, eg a door is sticking or requires unreasonable force to open.

5. A door or other hinged panel does not remain secure in a closed or locked position.

Note 1

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward sign of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Door Retention Systems 2001](#)
- [Land Transport Rule: Vehicle Standards Compliance 2002](#), section 7.4.

Mandatory equipment

1. A forklift fitted with doors used by the driver or passengers for entrance and exit of the vehicle must have a door retention system.

Condition

2. A door retention system and its mountings must be safe and structurally sound.

3. A door used for the entrance and exit of the driver or passengers must be operable by any occupant seated by the door from inside the vehicle.

4. The forklift must be designed and constructed using components and materials that are fit for their purpose, and within safe tolerance of their state when manufactured or modified.

Performance

5. A door retention system must be in good working order.

6. A door used for entrance and exit must open and close easily.

7. A door used for entrance and exit must remain secure in a closed position during the operation of the vehicle.

7 Vehicle interior

7-1 Seats and seat anchorages

Reasons for rejection

Mandatory equipment

1. A driver's seat is not fitted in a forklift that was originally fitted with a driver's seat.

2. A seat is not attached to the vehicle structure by seat anchorages.

Condition and performance

3. A seat frame or structure has been weakened, eg due to damage, corrosion or excessive wear.
4. The adjustment mechanism of a driver's seat:
 - a) does not operate, or
 - b) is worn ,causing excessive movement of the seat.
5. The attachment of the seat to the seat anchorage is loose or weakened by damage.
6. The attachment of the seat anchorage to the vehicle structure is loose or weakened by damage.
7. The driver's seat is in such a condition that it does not allow the driver to have proper control of the vehicle.

Note 1

A seat may be capable of being rotated or placed to face in different directions.

Note 2

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward sign of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Seats and Seat Anchorages 2002.](#)

Mandatory equipment

1. A driver's seat in a forklift must remain fitted.
2. A seat in a forklift must be fitted to the vehicle structure by means of seat anchorages.

Condition and performance

3. Seats and seat anchorages must be safe, strong, in sound condition and compatible in strength with each other and with the vehicle structure.
4. The driver's seat and its anchorages must be designed, constructed and maintained to enable the driver to have proper control of the vehicle.
5. Seats and seat anchorages must be securely attached to the vehicle structure.
6. When a seatbelt or any part of the seatbelt is integral to a seat, the seat and seat anchorages must be compatible in strength with the seatbelt or with that part of the seatbelt attached to the seat.

7-3 Head restraints

Reasons for rejection

Condition and performance

1. The external surfaces and padding of a head restraint have deteriorated to the extent that they are likely to injure a vehicle occupant.
2. An adjustable head restraint is unable to remain locked in its adjusted position.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Head Restraints 2001.](#)

Permitted equipment

1. A forklift may be fitted with head restraints.

Condition and performance

2. The external surfaces and padding of a head restraint must not have deteriorated to the extent that the likelihood of injury to an occupant of the vehicle is increased.
3. An adjustable head restraint must remain able to be adjusted and locked into position.

7-7 Interior impact

Reasons for rejection

Condition and performance

1. Where an interior fitting, control or surface has been modified or has deteriorated, the likelihood of injury to occupants has not been minimised.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Interior Impact 2001.](#)

Condition and performance

1. Interior fittings, controls and surfaces in the passenger compartments must be such that the likelihood of injury to occupants is minimised.

7-12 Speedometer

Reasons for rejection

Mandatory equipment

1. A forklift first registered in New Zealand on or after 1 December 1951 that is capable of a speed exceeding 50 km/h is not fitted with a speedometer, and the vehicle operator cannot produce acceptable written evidence ([Note 2](#)) that:

- a) the speedometer has been removed for repair, or
- b) there are no undue delays by the vehicle owner in having the speedometer replaced.

Condition and performance

2. The speedometer:

- a) does not operate as intended when the vehicle is moving forward, or
- b) is obscured from the driver's vision, or
- c) does not indicate the vehicle's speed in km/h or mph.

3. Reason for rejection 2(a), 2(b) or 2(c) applies and the vehicle operator cannot produce acceptable written evidence ([Note 2](#)) that repair of the speedometer or associated equipment is impracticable or that a suitable replacement is not available.

Note 1

Speedometer means an instrument in a motor vehicle that is used to determine forward speed of the vehicle in kilometres per hour (km/h) or miles per hour (mph).

Note 2

Acceptable written evidence is documentation provided by the speedometer repairer or supplier. A copy of the documentation must be kept on file with the checksheet.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004.](#)

Mandatory equipment

1. A forklift first registered in New Zealand on or after 1 December 1951 that is capable of a speed exceeding 50km/h must be fitted with a speedometer ([Note 1](#)).

2. A vehicle is not required to have a speedometer if the speedometer or associated equipment:

- a) has been removed for repair and there are no undue delays by the vehicle owner in having it replaced, or
- b) is out of repair, repair is impracticable and a suitable replacement is not available.

Performance

3. The speedometer must be in good working order and operate while the vehicle is moving forward.

7-13 Audible warning devices

Reasons for rejection

Mandatory equipment

1. A forklift is:
 - a) not fitted with a horn, or
 - b) fitted with a bell or whistle that is not part of an anti-theft car alarm, personal security alarm or a reversing warning device.

Performance

2. The horn does not operate when activated.
3. The horn operates when not activated.
4. The sound from the horn is not steady and continuous, eg the horn plays a tune.
5. The horn is not audible at a distance of 100m.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004.](#)

Mandatory equipment

1. A forklift must be fitted with a device (horn) that is audible to other road users.

Permitted equipment

2. A forklift may be fitted with a bell, whistle or siren that is part of an anti-theft car alarm, personal security alarm or a reversing warning device.

Performance

3. The device must be in good working order.
4. The device must be capable of giving a warning that is audible under normal traffic conditions from a distance of at least 100m.

8 Brakes

8-1 Service brake and parking brake

Reasons for rejection

Mandatory equipment

1. A forklift does not have a service brake.
2. A forklift does not have a parking brake.

Condition

Service brake

3. There is corrosion damage ([Note 2](#)) within 150mm of a brake component mounting point.
4. The service brake pedal:
 - a) is insecure, or
 - b) is spongy (indicating air in the system), or
 - c) creeps, or
 - d) has a non-slip surface which has deteriorated to such an extent that the brake cannot be safely applied, or
 - e) has excessive travel.
5. A vacuum hose or pipe (including connections) is:

a) insecure, or

b) leaking, or

c) damaged (cracked, chafed, twisted, stretched, or corroded, eg showing signs of pitting or a noticeable decrease in the pipe's outside diameter).

6. The brake vacuum servo (brake booster) is:

a) not functioning fully or adequately, or

b) leaking, or

c) insecure.

7. The brake master cylinder is:

a) leaking brake fluid, or

b) insecure, or

c) excessively corroded.

8. A brake valve is:

a) not operating (has eg a seized load sensing valve), or

b) leaking brake fluid, or

c) insecure, or

d) excessively corroded.

9. A brake pipe (including connections) is:

a) leaking brake fluid, or

b) insecure, or

c) deformed from its original shape, or

d) chafed, or

e) corrosion damaged, eg there are signs of pitting or a noticeable increase in the pipe's outside diameter.

10. A flexible hydraulic brake hose (including connections):

a) is leaking brake fluid, or

b) is insecure, or

c) bulges under pressure, or

d) is twisted, stretched or chafed, or

e) has an external sheathing which is cracked to the extent that the reinforcing cords are exposed, or

f) has metal connections which are excessively corroded, or

g) has an end fitting that is not attached to the hose by means of swaging, machine crimping or a similar process ([Note 3](#)).

11. A brake calliper:

a) shows visible signs of leaking, or

b) is insecure.

12. A brake backing plate is:

a) insecure, or

b) severely corroded, or

c) deformed from its original shape, or

d) cracked, or

e) contaminated by brake fluid, oil or grease.

13. A wheel cylinder:

- a) shows visible signs of leaking, or
 - b) is insecure, or
 - c) is seized.
14. An ABS system component is damaged, insecure or missing.
15. A brake disc or drum is:
- a) worn beyond manufacturer's specifications (where visible without removing vehicle components), or
 - b) fractured or otherwise damaged (where visible without removing vehicle components), or
 - c) contaminated by brake fluid, oil or grease.
16. Brake friction material (where visible without removing vehicle components) is:
- a) worn below manufacturer's specifications, or
 - b) separating from the brake pad backing plate or brake shoe, or
 - c) contaminated by brake fluid, oil or grease.
17. A service brake component shows signs of heating or welding after original manufacture.

Parking brake

18. The parking brake lever:
- a) has excessive travel, or
 - b) is insecure, or
 - c) has mounting which is damaged, corroded, distorted or fractured within 150mm of the lever mounting, or
 - d) mechanism or lever pivot bearing is worn or damaged so that the parking brake could be easily released by accident.
19. The parking brake cable:
- a) is knotted, frayed or excessively corroded, or
 - b) has an auxiliary tensioner fitted, or
 - c) has otherwise deteriorated so that it may affect the parking brake performance.
20. A parking brake actuating rod or guide:
- a) is excessively corroded, or
 - b) is excessively worn, or
 - c) has otherwise deteriorated so that it may affect the parking brake performance.
21. A parking brake component shows signs of heating or welding after original manufacture.

Performance

Service brake

22. The service brake cannot be applied in a controlled and progressive manner.
23. When the service brake is applied without assistance from the engine:
- a) the unladen forklift (GVM 3500kg or less) does not stop within 9m from a speed of 30 km/h (average brake efficiency of 40%), or
 - b) the unladen forklift (GVM more than 3500kg) does not stop within 7m from a speed of 30 km/h (average brake efficiency of 50%), or
 - c) the unladen forklift (maximum speed 20–29km/h) does not stop within 4m from a speed of 20 km/h (average brake efficiency of 40%), or
 - d) the unladen forklift (maximum speed less than 20km/h) does not stop within 4m from its maximum speed.
24. When the service brake is applied:
- a) the vehicle vibrates under braking to the extent that the control of the vehicle is adversely affected, or
 - b) the brake fails to release immediately after the brake pedal has been released, or

c) the directional control is affected (eg there is swerving to one side, or the brakes on one side apply more slowly than on the other side).

25. The brake system warning lamp or self-check system, if fitted, indicates a defect in the brake system (this does not apply to brake pad wear warning systems).

Parking brake

26. When the parking brake is applied it does not hold:

- a) the vehicle at rest on a slope of one in six (ie a 17% or 9° slope), or
- b) the wheels on a common axle stationary against attempts to drive the vehicle away.

Note 1 Definitions

Service brake means a brake for intermittent use that is normally used to slow down and stop a vehicle.

Parking brake means a brake readily applicable and capable of remaining applied for an indefinite period without further attention. A parking brake may be lever operated, or may be a transmission lock or a service brake that is capable of being locked in the applied position.

Note 2

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward sign of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Note 3

Hose end fittings that can be undone using hand tools are unacceptable.

Note 4

If a brake is fitted with an inspection port plug, this must be removed for inspection of the brake components.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Light-Vehicle Brakes 2002](#)
- [Land Transport Rule: Heavy-Vehicle Brakes 2006](#).

Mandatory equipment

1. A forklift must have:

- a) a service brake, and
- b) a parking brake.

Permitted equipment

2. A forklift may be fitted with a warning system that is part of, or associated with, the use of a brake component or system.

Condition

3. A brake must be in good condition and within safe tolerance of its state when manufactured.

4. The brake friction surfaces must be within safe tolerance of their state when manufactured, and must not be scored, weakened or damaged to the extent that the safety performance of the brake is adversely affected.

Performance

5. The service brake must be able to be applied in a controlled and progressive manner.

6. When the brake is applied:

- a) the vehicle or its controls must not vibrate to the extent that control of the vehicle is adversely affected, and
- b) the braking effort on each wheel must provide stable and efficient braking without adverse effect on the directional control of the vehicle, and
- c) if the vehicle is equipped with an anti-lock braking system (ABS), the wheels must not lock, other than when the speed of the vehicle falls below the ABS activation parameters set by the vehicle manufacturer.

7. A brake warning system must function correctly (does not apply to a brake pad wear warning system).

Service brake

8. The service brake of a forklift that is operated on a hard, dry, level surface that is free of loose material and without assistance from the compression of the engine or other retarders, must operate in the following manner:

- a) the service brake must stop the unladen forklift (GVM 3500kg or less) within a distance of 9m from a speed of 30km/h (average brake efficiency of 40%), or
- b) the service brake must stop the unladen forklift (GVM more than 3500kg) within a distance of 7m from a speed of 30km/h (average brake efficiency of 50%), or
- c) the service brake must stop the unladen forklift (with a maximum speed of 20–29km/h) within a distance of 4m from a speed of 20km/h (average brake efficiency of 40%), or
- d) the service brake must stop the unladen forklift (with a maximum speed of less than 20km/h) within a distance of 4m from its maximum speed.

Parking brake

9. A parking brake must hold the unladen forklift at rest on a slope of one in six.

9 Steering and suspension

9-1 Steering and suspension systems

Reasons for rejection

Mandatory equipment

1. A forklift capable of exceeding a speed of 50 km/h equipped with a modified or aftermarket steering system with no direct mechanical connection between the driver's means of control and the wheels, or other means of changing the vehicle's direction, does not have at least one additional means of steering.

Condition

2. The steering wheel:

- a) is insecurely attached to the steering shaft, or
- b) shows excessive movement indicating unacceptable wear or looseness in the steering box or rack or steering column bearings, or
- c) has a rim covering which is insecure so that the directional control of the vehicle is affected.

3. The steering column is insecure.

4. The power steering:

- a) has been disconnected, or
- b) system does not operate correctly, requiring unreasonable force to steer the vehicle, or
- c) has a hose, pump drive, drive belt or pump mounting that is insecure, damaged, or has significantly deteriorated, or
- d) has a significant fluid leak.

5. The hydrostatic steering system:

- a) has been disconnected, or
- b) does not operate correctly, eg requiring unreasonable force to steer the vehicle, or
- c) has a hose, pump drive, drive belt, cylinder, including their mountings, that is insecure, damaged or significantly deteriorated, or
- d) has any fluid leakage, except for minor seepage.

6. A linkage or joint between the steering column shaft and steering box or rack:

- a) is insecure, or
- b) is damaged, significantly corroded, distorted or cracked, or
- c) shows signs of welding or heating after original manufacture, or
- d) has play beyond manufacturer's specifications, or does not operate smoothly without roughness or stiffness, or
- e) is fouling on the vehicle structure, wheel, tyre or brake system component.

7. The steering box or rack:

- a) is insecure, or
- b) is damaged, significantly corroded, distorted or cracked, or
- c) shows signs of welding or heating after original manufacture, or
- d) has play beyond manufacturer's specifications, or
- e) does not operate smoothly without roughness or stiffness, or
- f) has an excessive fluid leak.

8. A steering rack gaiter is missing, insecure or split.

9. A steering linkage or joint ([Note 2](#)):

- a) is insecure, or
- b) is damaged, significantly corroded, distorted or cracked, or
- c) shows signs of welding or heating after original manufacture, or
- d) has play beyond manufacturer's specifications, or
- e) does not operate smoothly without roughness or stiffness, or
- f) is fouling on the vehicle structure, wheel tyre or brake system component, or
- g) shows signs of plastic injection.

10. A steering arm or associated component:

- a) is insecure, or
- b) is damaged, significantly corroded, distorted or cracked, or
- c) shows signs of welding or heating after original manufacture.

11. A kingpin or suspension joint ([Note 2](#)):

- a) is insecure, or
- b) is damaged, significantly corroded, distorted or cracked, or
- c) shows signs of welding or heating after original manufacture, or
- d) has play beyond the manufacturer's specifications, or
- e) does not operate smoothly without roughness or stiffness, or
- f) shows signs of plastic injection.

12. A lock stop is loose or damaged.

13. A steering or suspension component mounting point:

- a) is insecure, or
- b) has corrosion damage, buckling or fractures within 150mm of a mounting point.

14. Any other suspension component:

- a) is insecure or missing, or
- b) is damaged, significantly corroded, distorted or cracked, or
- c) shows signs of welding or heating after original manufacture, or
- d) has play beyond manufacturer's specifications, or
- e) does not operate smoothly without roughness or stiffness, or
- f) has excessive leakage of damping fluid ([Technical bulletin 9](#)), or
- g) shows excessive play, roughness or stiffness in a strut upper support bearing, or
- h) is a replacement urethane suspension bush that is not voided or shaped to allow for similar movement to an OE bush.

15. There is corrosion damage ([Note 3](#)) within 150mm of a suspension component mounting point.

Performance

16. During operation the forklift cannot be controlled in a safe, efficient convenient and sensitive manner, eg:

- a) the vehicle veers significantly to one side, or
- b) the vehicle requires unreasonable force to steer, or
- c) the steering is unreasonably stiff, rough or light, or
- d) the vehicle does not handle safely under normal conditions of road use, eg the suspension is excessively hard or soft, or there is excessive body roll.

Note 1 Definition

Steering system means those components, parts and systems that connect the driver's controls to the vehicle's wheels or tracks by means of which the direction of motion of a vehicle is controlled.

Note 2

A damaged boot on a steering or suspension joint is not a ground for rejection; however, the vehicle's owner should be advised.

Note 3

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward sign of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Steering Systems 2001](#).

Mandatory equipment

1. A forklift capable of a speed of more than 50 km/h and equipped with a modified or aftermarket steering system with no direct mechanical connection between the driver's means of control and the wheels, or other means of changing the vehicle's direction, must have at least one additional means of steering.

Condition

2. The steering system and associated systems and components that directly or indirectly affect the directional control of the vehicle must be:

- a) sound and in good condition, and
- b) strong, durable and fit for their purpose, taking into account whether adverse effects have resulted from a loss of integrity of any protective system used by a relevant component.

Performance

3. The steering system and associated systems and components that directly or indirectly affect the directional control of the vehicle must provide the vehicle with safe, efficient, convenient and sensitive control.

Page amended **14 October 2013** (see [amendment details](#)).

10 Tyres, wheels and hubs

10-1 Tyres and wheels

Reasons for rejection

Mandatory equipment

Tyres

1. Tyres on the same axle are not of the same:

- a) size designation, or
- b) construction type (ie mixed steel ply, fabric radial ply, bias/cross ply), or
- c) tread pattern type (mixed asymmetric, directional, normal highway, traction).

2. An asymmetric tyre is fitted to a vehicle with the 'inside' tyre wall facing outwards.
3. A unidirectional tyre is fitted contrary to its correct direction of rotation.
4. A tyre has a speed category (**Table 10-1-1**) that is less than the speed limit for the vehicle or less than the vehicle's maximum speed if this is less than the speed limit ([Note 3](#)) ([Note 4](#)).
5. The forklift has one or more of the following types of tyre fitted ([Note 1](#)):
 - a) a space-saver tyre, or
 - b) a metal tyre, or
 - c) a tyre with studs, cleats, lugs or other gripping devices.
6. A tyre is not compatible with the vehicle to which it is fitted, eg a tyre that is marked with any of the following:
 - a) 'FOR TRAILER USE ONLY'
 - b) 'ADV' (Agricultural Drawn Vehicle)
 - c) 'RACING PURPOSES ONLY'.

Wheels

7. A wheel is not compatible with the tyre fitted to it for rim profile, flange height or valve fitment.
8. A wheel is:
 - a) not compatible with the vehicle to which it is fitted. or
 - b) not correctly attached to the vehicle.

Condition

Tyres (excluding spare tyres)

9. There are signs that a tyre is fouling on another part of the vehicle.
10. A pneumatic tyre shows damage that is likely to compromise its ability to operate in a safe manner or lead to premature tyre failure, such as:
 - a) a lump or bulge that is likely to be caused by separation of the tyre structure, or
 - b) a cut or crack in a side wall or tread more than 25mm long that reaches the cords (see Note 5 for visible cords in the tread area of heavy vehicle radial-ply tyres), or
 - c) exposed or cut cords (see Note 5 for visible cords in the tread area of heavy vehicle radial-ply tyres), or
 - d) the tread of a retreaded tyre shows signs of separation, or
 - e) nails or other sharp objects embedded in the tyre, or
 - f) significant perishing, eg due to age, moisture or exposure.
11. A pneumatic tyre has a string type repair visible from the outside.
12. A tyre is noticeably under- or over-inflated.
13. A non-pneumatic tyre is significantly disintegrated or shows signs that are likely to be the result of separation or partial failure of the tyre structure.
14. Tyre repairs have not been carried out in accordance with acceptable industry practice.
15. A tyre has insufficient tread to allow safe operation of the vehicle.

Spare tyres

16. A spare tyre, if carried, is not securely attached to or stored in the vehicle.

Wheels

17. There are signs that a wheel is fouling on another part of the vehicle.
18. A wheel is:
 - a) cracked, or
 - b) significantly damaged, distorted or has deteriorated, or
 - c) not securely attached to the hub.

19. A wheel nut is:

- a) missing, or
- b) loose, or
- c) deteriorated, or
- d) the incorrect type, or
- e) has insufficient thread engagement to the wheel stud.

Note 1

A forklift may be fitted with non-pneumatic tyres such as solid rubber tyres or tyres filled with polyurethane.

Note 2 Definitions:

Asymmetric tyre means a tyre which, through tread pattern or construction, is required to be fitted to a vehicle so that one particular sidewall faces outwards.

Construction, in relation to a tyre, means

- a) for a pneumatic tyre, the type of carcass (including ply orientation and ply rating or load index)
- b) for any other tyre, characteristics relating to size, shape and material.

Cross ply means a pneumatic tyre structure in which the ply cords in the tyre carcass extend to the beads and are laid at alternate angles, which are substantially less than 90 degrees, to the centreline of the tread. This tyre structure is also referred to as 'bias ply' or 'diagonal ply'.

Directional tyre means a tyre with a tread pattern designed to operate in one direction only, and marked accordingly.

Pneumatic tyre means a tyre that, when in use, is inflated by air or gas introduced from time to time under pressure so as to enclose under normal inflation a cushion of air or gas forming altogether at least half of the total area of an average cross-section of a tyre so inflated.

Protective belt, sometimes called a **protective ply or breaker**, means an optional layer of ply material (cords) located immediately under the tread to minimise damage to the structural belts beneath.

Radial ply means a pneumatic tyre structure in which the ply cords, which extend from bead to bead, are laid at approximately 90 degrees to the centreline of the tread, the carcass being stabilised by an essentially inextensible circumferential belt.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Rim means that part of the wheel on which the tyre is mounted and supported.

Speed category means a code allocated to a tyre by a tyre manufacturer that indicates the maximum vehicle speed for which the use of the tyre is rated. It is either marked on the tyre or can be obtained from the tyre manufacturer or a reference guide.

Tube means an inflatable elastic liner, in the form of a hollow ring fitted with an inflation valve assembly, designed for insertion into certain tyre assemblies to provide a cushion of air or gas that, when inflated, supports the wheel (also known as an 'inner tube').

Tyre carcass means that structural part of a pneumatic tyre other than the tread and outermost rubber of the sidewalls that, when inflated, contains the gas that supports the load.

Tyre load rating means the maximum load a tyre can carry at the corresponding cold inflation pressure prescribed by the tyre manufacturer and the speed indicated by its speed category symbol.

Wheel means a rotating load-carrying member between the tyre and the hub, which usually consists of two major parts, the rim and the wheel disc, and which may be manufactured as one part, or permanently attached to each other, or detachable from each other.

Wheel centre-disc means that part of the wheel that is the supporting member between the hub and the rim.

Note 3

The tyre load index and speed category are usually marked on the tyre. Where the tyre is not marked, the load and speed rating information must be obtained from the tyre manufacturer or a reference guide of tyre ratings before the tyre can be passed.

Note 4

Sometimes a retreaded or repaired tyre has had its speed rating removed. Where a tyre has been repaired or retreaded in

accordance with standard NZS 5423 (Repairing and retreading car, truck and bus tyres), the tyre must be marked with NZS 5423 and, if a car tyre, have the speed rating removed. In such a case, a missing speed rating is acceptable for WoF/CoF (unless the inspector believes on reasonable grounds that the tyre would not have had the required minimum speed rating for the vehicle in the first place).

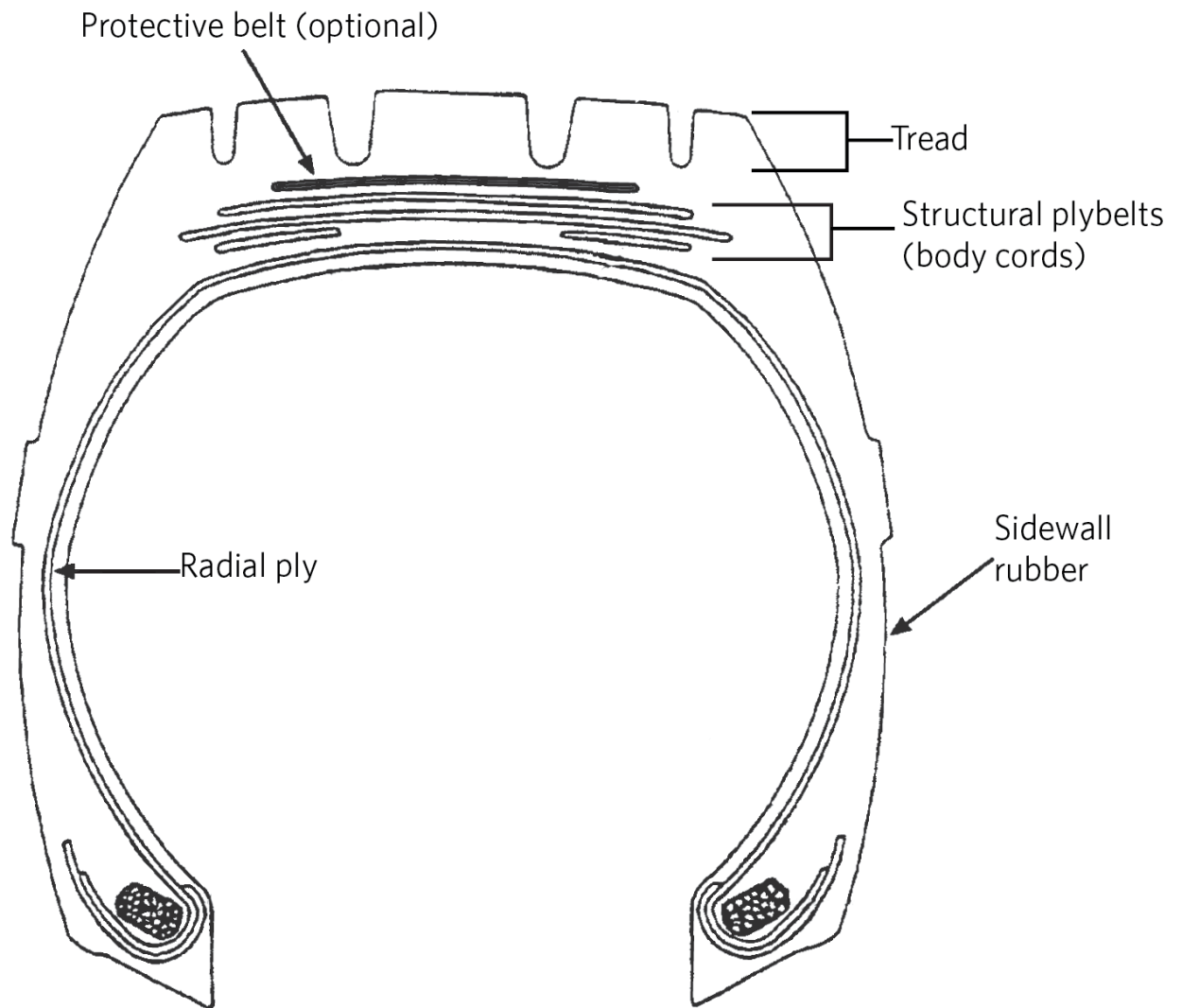
Note 5

Where a heavy vehicle radial-ply tyre has visible cords in the tread area, the vehicle inspector may pass such a tyre for CoF provided the tyre is in a safe condition, eg only the protective cord layer (protective belt, see **Figure 10-1-1**) is visible. When determining whether such a tyre is in a safe condition, the vehicle inspector may take into account written evidence from a person who has current specialist tyre knowledge and experience, particularly in heavy vehicle tyre inspection.

Table 10-1-1. Tyre speed symbol categories

Speed symbol – speed category (km/h)							
A1 – 5	A5 – 25	B – 50	F – 80	L – 120	Q – 160	U – 200	Y – 300
A2 – 10	A6 – 30	C – 60	G – 90	M – 130	R – 170	H – 210	ZR – over 240
A3 – 15	A7 – 35	D – 65	J – 100	N – 140	S – 180	V – 240	
A4 – 20	A8 – 40	E – 70	K – 110	P – 150	T – 190	W – 270	

Figure 10-1-1. Cross-sectional representation of a heavy vehicle radial-ply tyre



Summary of legislation

Applicable legislation

- [Land Transport Rule: Tyres and Wheels 2001](#).

Mandatory equipment

Tyres

1. Tyres must be compatible with the vehicle to which they are fitted.
2. Tyres on the same axle must be of the same size designation and construction, and of the same tread pattern type.
3. Asymmetric tyres must be fitted in axle sets in accordance with manufacturer's instructions.
4. A unidirectional tyre must be fitted to a wheel position corresponding to its direction of rotation.
5. The speed category of a tyre must be compatible with the maximum legal speed limit for the vehicle, or the vehicle's maximum speed.
6. A forklift must not be fitted with a metal tyre or other non-pneumatic tyre ([Note 1](#)), or with a tyre with studs, cleats, lugs or other gripping devices.

Wheels

7. A wheel must be:

- a) sufficiently strong for the type of vehicle to which it is fitted, and
- b) compatible with the vehicle to which it is fitted, and
- c) compatible with the tyre rim profile, flange height and valve fitment.

8. There must be adequate clearance for the brake, hub, suspension and steering mechanism, and body parts.

Permitted equipment

9. A forklift may be fitted with retreaded tyres.

Condition

Tyres (excluding spare tyres and space-saver tyres)

10. A tyre must be of good quality and construction, fit for its purpose and maintained in a safe condition.

11. A tyre must not have worn, damaged or visible cords apparent by external examination.

12. A heavy vehicle radial-ply tyre may have visible cords in the tyre tread area provided the tyre is in a safe condition. To assess whether such a tyre is in safe condition, the vehicle inspector may take into account written evidence from a person who has current specialist tyre knowledge and experience, particularly in heavy vehicle tyre inspection.

13. A tyre must have a tread pattern depth of not less than 1.5mm (excluding any tie-bar or tread-depth indicator strip) around the whole circumference of the tyre:

- a) within all principal grooves that contain tread-depth indicators, or
- b) if the tyre does not normally have tread-depth indicators, across at least three-quarters of the tyre tread width.

14. The regrooving of a tyre is permitted only if the tyre is identified as being specifically designed for regrooving after manufacture.

15. A tyre that is fitted to a forklift must be maintained at a safe inflation pressure.

Spare tyre

16. If the forklift carries a spare tyre, the tyre must be securely attached on or in the vehicle.

Wheels

17. The components of the wheel assembly must be in good condition.

18. The wheel must be securely attached to the hub.

10-2 Hubs and axles

Reasons for rejection

Condition

1. A hub ([Note 1](#)):

- a) is not securely attached to the vehicle, or
- b) has a visible crack, or
- c) is significantly damaged, distorted or has deteriorated, or
- d) has a broken or missing wheel stud.

2. A wheel bearing:

- a) has play beyond the manufacturer's specifications, or
- b) is over-tight or sounds rough.

3. An axle:

- a) is insecure, eg has loose U-bolts, or
- b) is visibly cracked, or
- c) is significantly damaged, distorted or has deteriorated, or
- d) shows signs of welding or heating after original manufacture, or

e) shows signs of fouling the vehicle structure or a brake, suspension or steering component.

Note 1

Hub means that part of a vehicle that is attached to the axle and rotates on, or with, the axle, and to which the wheel is attached, and includes any bearings.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Tyres and Wheels 2001](#).

Condition

1. The components of the assembly must be in good condition.
2. The hub and axle must be sufficiently strong for the type of vehicle to which they are fitted.
3. The hub and axle must have a suitable and correctly adjusted geometry.

10-3 Mudguards

Reasons for rejection

Mudguard condition

1. A mudguard is not securely fixed to the vehicle.
2. A mudguard is so constructed or damaged that it is likely to present a hazard to road users.

Note 1

Mudguard means a fitting, inclusive of any portion of the vehicle and of any mudflaps attached, that serves to intercept material thrown up by a wheel more or less on the plane of the wheel.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004](#).

Permitted equipment

1. A forklift may be fitted with mudguards.

Condition

2. A mudguard must be securely fixed to the vehicle and must be constructed so that it does not present a hazard to road users.

11 Exhaust

11-1 Exhaust system

Reasons for rejection

Mandatory equipment

1. A forklift is not fitted with an exhaust system that includes a means of sound reduction ([Note 1](#)).

Condition

2. An exhaust system is not securely mounted.
3. The exhaust system is so constructed or modified that its operation or effectiveness can be readily interfered with.
4. The exhaust system is so constructed that emitted heat or fumes are likely to harm vehicle occupants, eg the exhaust gases are not directed away from the perimeter of the vehicle's passenger compartment.

Performance

5. There is a leak of exhaust fumes from the exhaust system.
6. The noise output is noticeably and significantly louder than it would have been when the vehicle was manufactured with its original exhaust system.

Note 1

Exhaust system means a pipe assembly through which the engine exhaust gases pass to the atmosphere and includes some means of sound reduction such as a silencer or resonator.

Note 2

A spark arrestor is not required to be checked.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004](#).

Mandatory equipment

1. A forklift with an internal combustion engine must be fitted with an exhaust system ([Note 1](#)).

Condition

2. An exhaust system must not be constructed or modified in a way that allows a person to interfere readily with its operation or reduce its effectiveness.
3. An exhaust system must be designed, constructed, positioned and maintained in a way that minimises the risk of heat or fumes emitted from the system harming the vehicle's occupants.

Performance

4. An exhaust system must be effective and in good working order.
5. Noise from an exhaust system must not be noticeably and significantly louder than it would have been when the vehicle was manufactured with its original exhaust system.

11-2 Visible exhaust smoke

Reasons for rejection

Performance

1. A forklift with the engine at normal operating temperature ([Note 1](#)), other than a forklift in Reason for rejection 2, emits clearly visible smoke ([Technical bulletin 8](#)) from the exhaust tail pipe ([Note 2](#)):
 - a) for a continuous period of five seconds when the engine is idling, or
 - b) as the engine is being rapidly accelerated to approximately 2500rpm or approximately half the maximum engine speed (whichever is lower) ([Note 3](#)).
2. A forklift fitted with an engine that is designed in a way that the forklift cannot reasonably comply with Reason for rejection 1 emits smoke that is noticeably and significantly more visible than it would have been when the vehicle was manufactured and supplied with the recommended fuel ([Note 4](#)).

Note 1 Test procedure

- a) Carry out the idling and acceleration tests in Reason for rejection 1. A vehicle that passes both tests with the engine below normal operating temperature is deemed to have passed with the engine at normal operating temperature.
- b) If the vehicle has failed either test, ensure the engine is at normal operating temperature. Then purge the system by increasing the engine speed to 2500rpm (or half the maximum engine speed if this is lower) and holding it there for about five seconds. Repeat the idling and acceleration tests in Reason for rejection 1.

Note 2

Visible emissions caused by the condensation of water vapour do not count as smoke.

Note 3

During the acceleration test, a diesel-powered vehicle may emit a moderate amount of smoke if this is caused by turbo lag.

Note 4

The vehicle inspector may need to take into account information from the vehicle manufacturer or their representative or other appropriate expert, eg about older or unusual forklifts.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Exhaust Emissions 2007](#).

Performance

1. A forklift must not emit clearly visible smoke ([Note 2](#)) when the engine is running at its normal operating temperature, under either of the following conditions:

- a) for a continuous period of five seconds when the engine is idling, or
- b) as the engine is being accelerated rapidly to approximately 2500 revolutions per minute or approximately half the maximum engine speed (whichever is lower).

2. Requirement 1 above does not apply if the driver of the forklift produces documentation that proves that the engine is original equipment for the vehicle and the engine's design does not allow the vehicle to reasonably comply.

12 Towing connections

12-1 Towing connections

Reasons for rejection

Condition

1. A towing connection component is:

- a) not securely attached, or
- b) missing, or
- c) cracked, distorted or significantly corroded, or
- d) worn beyond manufacturer's specifications.

2. A coupling mechanism or safety locking device does not operate smoothly or efficiently, or fasten securely.

Note 1

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward sign of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Note 2

Towing connection means the combination of components that enables one vehicle to tow or be towed by another vehicle; it includes a towbar, drawbar, drawbeam and coupling.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Heavy Vehicles 2004](#)
- [Land Transport Rule: Vehicle Standards Compliance 2002](#), section 7.4.

Permitted equipment

1. A forklift may be fitted with a towing connection.

Condition

2. Towing connection components fitted to a vehicle must ensure that a secure connection can be maintained between the towing and towed vehicles under all conditions of loading and operations for which the vehicle was constructed.

3. A vehicle must:

- a) be safe to be operated, and
- b) have been constructed using components and materials that are fit for purpose, and
- c) be within safe tolerance of their state when manufactured.

13 Miscellaneous items

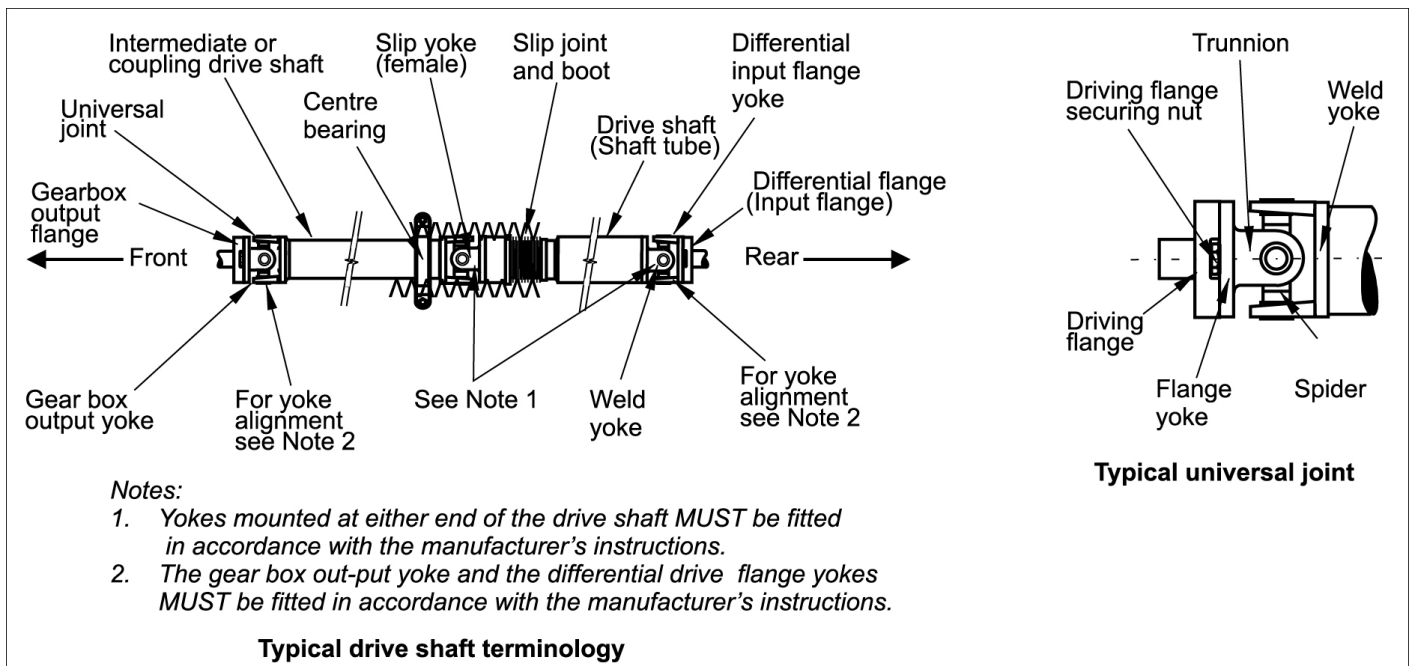
13-1 Engine and drive train

Reasons for rejection

Condition

1. The engine or gearbox is insecurely mounted.
2. A driveshaft is bent or severely damaged.
3. A driveshaft flange:
 - a) is insecure, or
 - b) has a bolt or nut missing.
4. A driveshaft support bearing is:
 - a) insecure, or
 - b) worn beyond manufacturer's specifications.
5. A driveshaft universal joint spider (cross) bearing:
 - a) is worn so that the movement in the joint is beyond manufacturer's specifications, or
 - b) caps have loose or missing cap bolts or circlips, or
 - c) is damaged, displaced or the seals on the spider journals are missing.
6. A rubber doughnut-type driveshaft coupling:
 - a) is worn or damaged beyond manufacturer's specifications, or
 - b) is split or delaminated so that its mechanical integrity is affected, or
 - c) securing bolt is loose or missing.
7. A driveshaft slip joint (spline) is worn beyond manufacturer's specifications.
8. The universals in the driveshaft are not fitted in accordance with manufacturer's specifications.

Figure 13-1-1. A typical driveshaft assembly



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Standards Compliance Rule 2002](#), section 7.4.

Condition and performance

1. The vehicle must be safe to be operated.
2. The components and materials must be fit for their purpose and within safe tolerance of their state when manufactured or modified.

13-2 Fuel system

Reasons for rejection

Condition

1. There is a noticeable fuel leak from the fuel system.
2. The security of the fuel tank is affected by:
 - a) corrosion damage ([Note 1](#)), or
 - b) cracking or other damage, or
 - c) insecure or loose tank mountings.
3. A fuel line is insecure or loose so that it is likely to get damaged during normal use of the vehicle.
4. A fuel pipe is severely damaged or excessively corroded.
5. A fuel hose is damaged or perished.
6. The fuel pump is insecure.
7. The fuel filler cap is missing, insecure or likely to allow fuel spillage when the vehicle is in normal use.
8. The fuel tank is fitted with a 'temporary use' fuel filler cap.

Note 1

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward sign of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases the area affected by corrosion damage will fall out and leave a hole.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004](#).

Condition and performance

1. Fuel tanks, fuel lines and associated components must be:
 - a) securely mounted, and
 - b) made of suitable materials, and
 - c) in good condition, and
 - d) free from significant leaks, and
 - e) positioned so that the risk of mechanical damage or heat gain is minimised.

13-3 LPG/CNG fuel system

Reasons for rejection

Condition

1. An LPG or CNG fuel system component is:
 - a) loose, or
 - b) significantly corroded, distorted or cracked.
2. A gas line:
 - a) shows signs of corrosion damage ([Note 1](#)), such as pitting, or
 - b) is bulging, or
 - c) is insecure, or

d) is damaged, such as cut or crimped.

3. There is a noticeable gas leak.

4. There is corrosion damage, distortion or fracture within 300mm of a tank mounting (this requirement is not applicable where the tank is mounted on the counterweight).

Note 1

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward sign of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Note 2

LPG/CNG fuel system means a fuel storage and conducting system that is used to provide liquid petroleum gas (LPG) or compressed natural gas (CNG) for the purpose of propulsion of a vehicle.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Standards Compliance 2002](#)
- [Land Transport Rule: Vehicle Equipment 2004](#).

Permitted equipment

1. A forklift may be fitted with an alternative fuel (LPG or CNG) system.

Condition

2. An LPG or CNG fuel system must be in safe working condition.

Tractors

1 Introduction

Inspection and certification of tractors and self-propelled machines used in agricultural, land management and roading operations: Warrant of fitness requirements

This section specifies the requirements that are applicable to the inspection and certification of the following tractors and machines for the purpose of issuing a warrant of fitness (WoF).

1. Agricultural tractors:

- An agricultural tractor is defined as a vehicle that is designed and constructed principally for the purposes of towing an agricultural trailer or towing or powering an agricultural implement.
- An agricultural tractor may be capable of any speed, and includes a JCB Fastrac.

2. Tractors (other than agricultural tractors):

- A tractor is defined as a motor vehicle (other than a traction engine) that is designed exclusively for traction at speeds not exceeding 50km/h.
- A vehicle capable of traction at speeds exceeding 50km/h is not defined as a tractor. Such a vehicle requires a certificate of fitness (CoF) and is therefore not covered in this section.

3. Self-propelled agricultural machines (eg a combine or grape harvester):

- These vehicles are defined as being designed, constructed or adapted for agricultural purposes.
- Agricultural purposes only includes land cultivation, growing and harvesting crops, rearing livestock, operation or management of a farm, and any land management operations undertaken in connection with these, but does not include any purposes related to forestry.

4. Self-propelled machines used in non-agricultural land management or roading operations.

General requirements

1. This section applies to both light and heavy tractors and machines. Heavy tractors and machines are those that have a gross

vehicle mass (GVM) exceeding 3500kg.

2. The table below specifies:

- a. What tractors and machines may be inspected for WoF, and
- b. What WoF expiry dates apply (refer to [Introduction section 3.8.1](#) for full details), and
- c. What inspecting organisation and vehicle inspector authorisations are required.

Tractor or machine that may be inspected for WoF ¹	WoF expiry	IO/VI authorisation required (inspection group)
1. An agricultural tractor capable of exceeding a speed of 40km/h	12 months ²	Agricultural motor vehicle (6) ^{3, 4}
2. A tractor (other than an agricultural tractor) capable of exceeding a speed of 30km/h but not exceeding 50km/h	12 months – vehicle is less than 6 years old from date of first registration 6 months – vehicle is 6 or more years old from date of first registration	Heavy vehicle exempt from CoF (5)
3. A self-propelled agricultural machine capable of exceeding 40km/h	12 months ²	Agricultural motor vehicle (6) ^{3, 4}
4. A self-propelled machine used in non-agricultural land management or roading operations capable of exceeding a speed of 30km/h.	12 months – vehicle is less than 6 years old from date of first registration 6 months – vehicle is 6 or more years old from date of first registration	Heavy vehicle exempt from CoF (5)

¹ A tractor or machine requires a WoF only if it is operated above the 30km/h or 40km/h as specified in the table.

² **IMPORTANT:** An agricultural tractor or machine only qualifies for a 12-month WoF if it is on inspection group 6 (agricultural motor vehicle). The vehicle inspector may need to tick the appropriate inspection group when prompted on the inspection screen. The prompt will only appear if the vehicle is correctly licensed as an agricultural motor vehicle. If a vehicle is not correctly licensed as an agricultural motor vehicle, it does not qualify for inspection group 6 and 12-month WoF, and the WoF expiry will default to 12 or 6 month WoFs applicable to non-agricultural tractors and machines. The owner should contact the NZTA on 0800 108 809 to get the vehicle correctly licensed as an agricultural motor vehicle.

³ Inspecting organisations and vehicle inspectors that have inspection group 5 authorisation will automatically qualify for inspection group 6 authorisation.

⁴ Most light agricultural tractors or machines cannot exceed 40km/h so cannot be inspected for WoF. If you are presented with a light agricultural tractor or machine that can exceed 40km/h, and you don't have inspection group 5 or 6 authorisation, please contact the NZTA on 0800 587 287 to get the correct authorisation.

3. Only a tractor or machine that has a registration plate attached to it may be inspected for a WoF.

4. Modifications that affect a safety requirement do not require low volume vehicle (LVV) or heavy vehicle specialist (HVS) certification unless otherwise specified. However, if the vehicle inspector has concerns about the modification, he must obtain additional information from a relevant person before passing the vehicle for WoF.

5. A tractor or machine is not required to have a vehicle identifier. If the tractor or machine has a vehicle identifier, such as the manufacturer's serial number, it must be recorded on the checksheet and on the NZ Transport Agency computer system.

Page amended **11 November 2013** (see [amendment details](#)).

2 Vehicle exterior

2-1 External projections

Reasons for rejection

Condition and performance

1. The risk of a component ([Note 1](#)) hooking a vehicle, or hooking or grazing a person, has not been minimised.
2. An ornamental object or fitting ([Note 2](#)) protrudes in such a way that it is likely to injure a person.
3. A protruding object or fitting that has a functional purpose ([Note 2](#)) is fitted in a way that does not reduce the risk of injury to a person.
4. A component, object or fitting is not securely attached to the vehicle.
5. A protruding object or fitting adversely affects the driver's vision or control.

Note 1

Components include damaged, corroded and exposed body panels.

Note 2 Definitions

Ornamental object or fitting means an object or fitting that does not have a practical purpose, eg bonnet emblems. The external projections requirements relate to the design and maintenance of objects and fittings that protrude from the exterior of the motor vehicle with regard to the safety of other motor vehicles, pedestrians and cyclists.

Functional object or fitting means an object or fitting that has a practical purpose, eg counterweights, front-end loader attachments and so on.

Summary of legislation

Applicable legislation

- [Land Transport Rule: External Projections 2001](#).

Permitted equipment

1. A vehicle may be fitted with a protruding ornamental or functional object or fitting.

Condition and performance

2. A protruding ornamental object or fitting must not be likely to injure a person.
3. A protruding object or fitting that has a functional purpose must be installed so that the risk of the object or fitting causing injury to a person is minimised.
4. Components of a motor vehicle, including damaged or corroded body panels, must be such that the risk of their hooking a vehicle, or hooking or grazing a person, is minimised.
5. A protruding object or fitting must not adversely affect driver vision or driver control.

2-2 Dimensions

The vehicle inspector only need inspect dimensions if there is doubt about the vehicle's compliance.

Reasons for rejection

Mandatory equipment

1. A vehicle that exceeds the dimension requirements set out in **Table 2-2-1** is not fitted with the appropriate hazard warning equipment set out in **Table 2-2-2**.
2. A required revolving amber beacon cannot be activated and deactivated.

Note 1 Definitions

The **rear axis of a vehicle** means:

- if the vehicle is fitted with only one non-steering axle: the centre of that axle
- if the vehicle is fitted with a non-steering axle set of two axles: midway between those two axles if each axle has an equal number of tyres on it, or two-thirds of the distance from the lesser-tyred axle towards the greater-tyred axle, if one axle has twice as many tyres on it as the other axle
- if the rear axle set includes a steering axle: midway between the extreme non-steering axles of the set.

Wheelbase means the distance from the rear axis to the front axis (centre of the foremost axle)

Note 2

Agricultural motor vehicle:

- a) means a motor vehicle that is designed, constructed, or adapted for agricultural purposes, and includes:
 - i) an agricultural trailer, and
 - ii) an agricultural tractor, but
- b) does not include any vehicle that is:
 - i) of a class specified in [section 3-2](#) of the Introduction, and
 - ii) designed or constructed for general road use.

Agricultural purpose includes:

- a) land cultivation
- b) growing and harvesting crops (including horticulture and viticulture)
- c) rearing livestock
- d) any land management operation undertaken in connection with the operation or management of a farm.
 - Agricultural purpose **does not** include forestry, or any land management operation not referred to in (a) to (d) above.

Agricultural tractor means a vehicle that is designed and constructed principally for the purposes of:

- a) towing an agricultural trailer, or
- b) drawing, or powering, an implement ordinarily used for an agricultural purpose.

Note 3

Agricultural motor vehicles with excess front overhang (over 4m): Instead of fitting flags or panels, front parts of the vehicle or front attachments may be painted with high-visibility paint.

Table 2-2-1. Dimension requirements (see Figure 2-2-4)

Dimension	Maximum distance	Comments
Width	2.5m 1.25m from each side of the longitudinal centreline of the vehicle	Measurement does not include: <ul style="list-style-type: none"> • collapsible mirrors which extend no more than 240mm from the body • direction indicators and side-marker lamps • cab exterior grab rails that extend no more than 50mm from the side of the body • ropes, lashings, straps, chains and related connectors and tensioning devices that extend no more than 25mm from either side, and that are not permanently or rigidly fixed to the vehicle • the bulge towards the bottom of a tyre.
Overall length	12.6m (no tow coupling fitted) 11.5m (tow coupling fitted)	Measurement does not include collapsible mirrors.
Height	4.25m	Measurement does not include load restraining devices (ropes, lashings, straps, chains, covers and related connectors and tensioning devices) that extend no more than 25mm above the vehicle, and that are not permanently or rigidly fixed to the vehicle.
Forward distance	9.5m (no tow coupling fitted) 8.5m (including tow coupling if fitted)	<ul style="list-style-type: none"> • Forward distance is measured from the rear axis (Note 1) to the front of the vehicle. • Measurement does not include collapsible mirrors.
Rear overhang	Vehicle GVM 3500kg or less: 4m Vehicle GVM greater than 3500 kg: <ul style="list-style-type: none"> • with rearmost axle being a non-steering axle: 4m or 70% of wheelbase (whichever is less) • with rearmost axle being a steering axle: 4.25m or 75% of wheelbase (whichever is less) 	Rear overhang is measured from the rear axis (Note 1) to the rear of the vehicle.
Front overhang	Rigid non-agricultural motor vehicle: 3m Rigid agricultural motor vehicle: 4m	Front overhang is measured from the front edge of the driver's seat in the rearmost position to the front of the vehicle.
Ground clearance for vehicles with GVM greater than 3500kg.	Minimum is the greater of 100mm OR 6% of the distance from the nearest axle to the point where the ground clearance is measured.	Except when the vehicle is loading or unloading. Items excluded from ground clearance measurement are: <ul style="list-style-type: none"> • flexible mudflaps • wheels and tyres • devices designed to discharge static electricity.

Table 2-2-2. Hazard warning equipment requirements for vehicles that exceed the dimensions in Table 2-2-1

Vehicle category	Dimension	Limits (up to and including)	Required hazard warning equipment
Category 1	Width/forward distance (see Figure 2-2-3)	2.5m/11.4m, or 3.1m/10.5m, or 3.7m/8.5m, or	Flags ¹ or panels ² fitted on each side at the front and rear as close as practicable to the outside edge (for agricultural motor vehicles with excess front overhang, see (Note 3)).
	Length	25m, or	
	Front overhang	7m, or	
	Rear overhang	7m	
Category 2 (not including category 1)	Width/forward distance (see Figure 2-2-3)	2.5m/13.3m, or 4.5m/8.5m, or	<ul style="list-style-type: none"> • Panels² fitted on each side at the front and rear as practicable to the outside edge (for agricultural motor vehicles with excess front overhang, see (Note 3)) • OVERSIZE sign³ fitted at the front and rear if more than 3.1m wide • Amber beacon fitted to the cab roof if more than 3.7m wide.
	Length	35m, or	
	Front overhang	10m, or	
	Rear overhang	10m	
Category 3 (not including category 2)	Width/forward distance (see Figure 2-2-3)	2.5m/20m 5m/20m 5m/8.5m	<ul style="list-style-type: none"> • Panels² fitted on each side at the front and rear as practicable to the outside edge (for agricultural vehicles motor with excess front overhang, see (Note 3)) • OVERSIZE sign³ fitted at the front and rear • Amber beacon fitted to the cab roof if more than 3.7m wide.
Category 4 (not including category 3)	Width/forward distance (see Figure 2-2-3)	11m/20m 11m/8.5m	<ul style="list-style-type: none"> • Panels² fitted on each side at the front and rear as practicable to the outside edge (for agricultural motor vehicles with excess front overhang, see (Note 3)) • OVERSIZE sign³ fitted at the front and rear • Amber beacon fitted to the cab roof if more than 3.7m wide.

* Additional operational requirements may apply, eg if operated at night.

¹ Flags:

- must be fluorescent yellow
- must be at least 400mm long × 300mm wide.

² Hazard warning panels:

- must be reflective yellow green with a reflective orange diagonal stripe

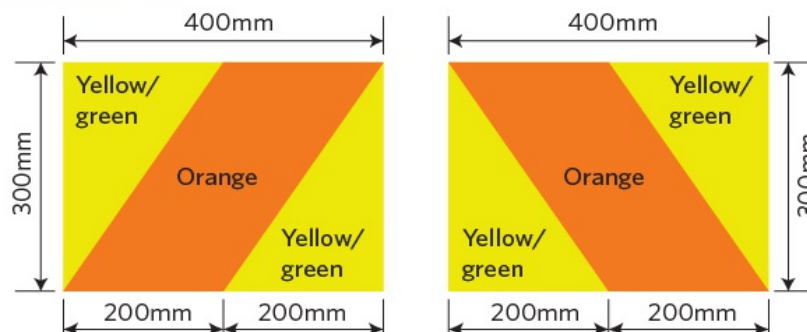
- must be of at least the minimum dimensions and the colours specified in **Figure 2-2-1**:

³ OVERSIZE sign:

- must be black lettering on yellow-green background
- must be at least 300mm × 1100mm in size
- may be in two parts: OVER and SIZE.

Figure 2-2-1. Hazard panel details

Display these panels



or these panels

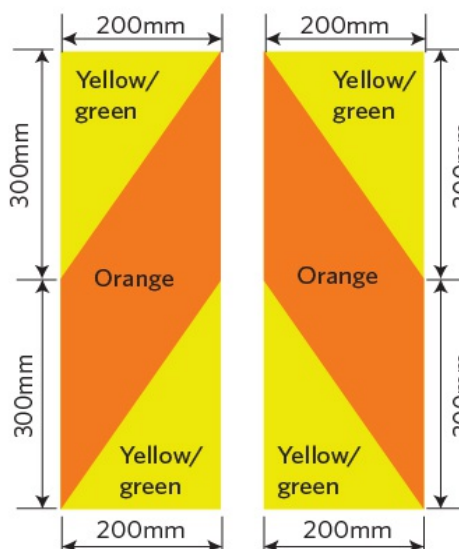


Figure 2-2-2. Hazard panel location and orientation

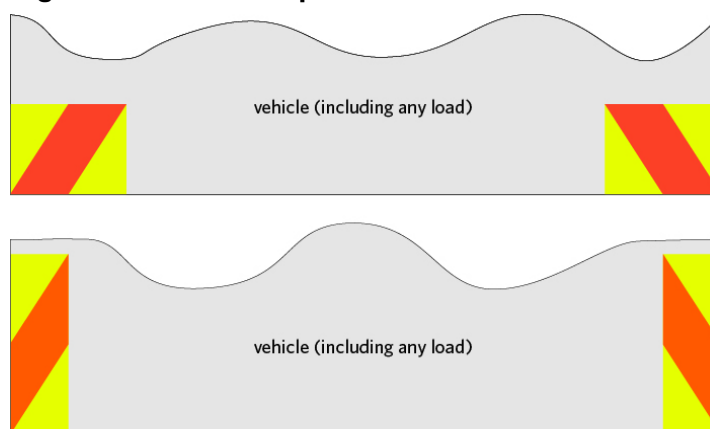


Figure 2-2-3. Vehicle categories and width/forward distance thresholds

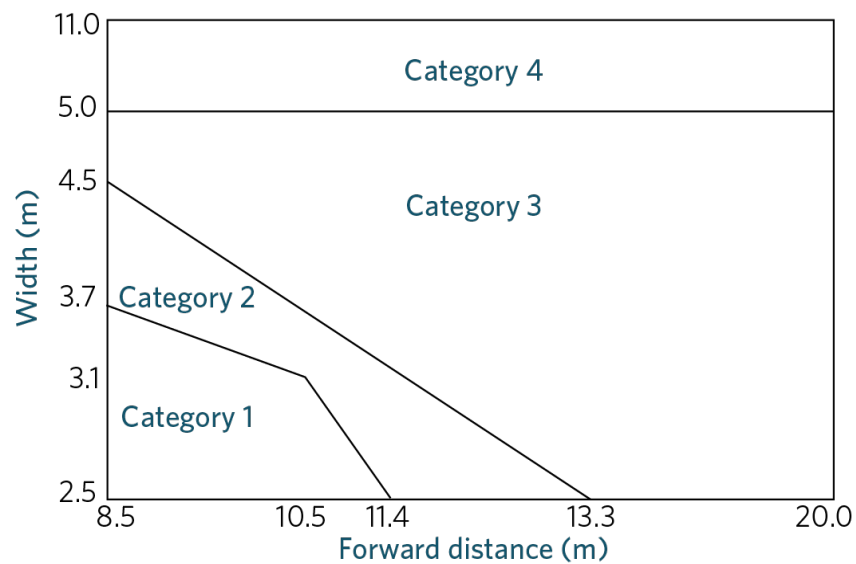
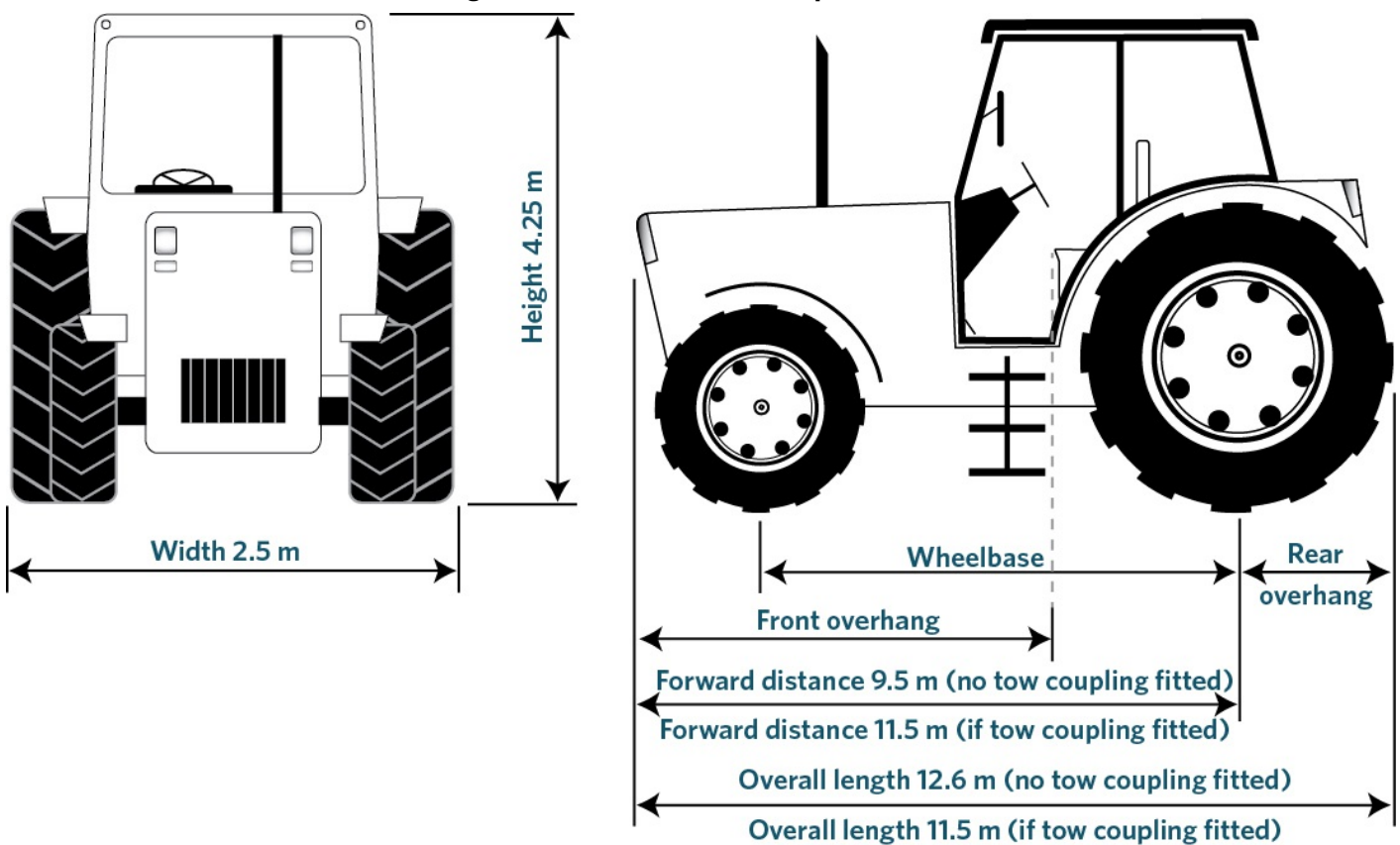


Figure 2-2-4. Dimension requirements



Front overhang:

- Non-agricultural motor vehicle: 3.0m.
- Agricultural motor vehicle: 4.0m.

Rear overhang:

- For a heavy rigid vehicle with rearmost axle non-steering – the lesser of 4 m or 70% of wheelbase.
- For a heavy rigid vehicle with rearmost axle steering – the lesser of 4.25 m or 70% of wheelbase.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Dimensions and Mass 2002.](#)

Mandatory equipment

1. A vehicle that exceeds the dimensions in **Table 2-2-1** must be fitted with the equipment set out in **Table 2-2-2**.

Page amended 1 June 2013 (see [amendment details](#)).

3 Vehicle structure

3-1 Vehicle structure

Reasons for rejection

Condition

1. The structure of the tractor has visible:

- a) deformation from the original shape that has affected the vehicle's structural integrity ([Note 1](#)) ([Note 3](#)), or
- b) cracking, or
- c) fracture, or
- d) corrosion, damage or repair that the inspector considers has caused weakening of a load-bearing structure.

2. A rollover protection structure or cab is not securely attached to the tractor.

Note 1

The structural inspection of a tractor or machine does not include the rollover protection structure (ROPS), which may be a roll bar or may be incorporated into the cab, except for its attachment to the vehicle body or chassis.

Note 2

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward signs of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Note 3

The vehicle inspector may request additional relevant information from a repairer or other relevant person. The vehicle inspector should withhold the WoF if there is reason to believe that the vehicle has:

- a) structural damage, or
- b) inadequate structural repair(s), or
- c) corrosion damage

to the extent that it could affect the vehicle's structural strength or one of the vehicle's safety requirements. If the owner questions the decision, the vehicle inspector should recommend the vehicle owner obtain further written assessment from the equipment manufacturer or other suitable person.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Standards Compliance 2002](#), clause 7.4.

Condition

1. The vehicle must be safe to be operated.

2. The components and materials must be fit for their purpose and within safe tolerance of their state when manufactured or modified.

4 Lighting

Page amended 1 June 2013 (see [amendment details](#)).

4-1 Headlamps

Reasons for rejection

Mandatory and permitted equipment

1. A vehicle is not fitted with one pair of dipped-beam headlamps.
2. A vehicle is fitted with more than:
 - a) one pair of dipped-beam headlamps, or
 - b) two pairs of main-beam headlamps.
3. A vehicle is fitted with a headlamp that is not in a pair.
4. A retrofitted pair of headlamps is not fitted:
 - a) symmetrically, or
 - b) as far towards each side of the vehicle as is practicable.
5. A vehicle is fitted with a dipped-beam headlamp where the maximum intensity of the beam is projected to the right.

Condition

6. A lamp is insecure.
7. A lens is missing or has a hole, crack or other damage that allows moisture or dirt to enter.
8. A lens or reflector is damaged or has deteriorated so that light output is reduced.
9. A main-beam headlamp warning device is obscured from the driver's vision.
10. A mandatory lamp is obscured or contains dirt or moisture in the form of large droplets, runs or puddles.

Performance

11. When switched on, a headlamp emits a light that is:
 - a) not substantially white or amber, or
 - b) not approximately equal in colour or intensity to the other lamp in a pair, or
 - c) not steady, or
 - d) not bright enough to illuminate the road ahead, eg due to modification, deterioration or an incorrect light source, or
 - e) too bright causing significant dazzle to other road users, eg due to an incorrect light source.
12. When the dipped-beam headlamps are switched on (with wheels pointing straight ahead):
 - a) a lamp does not operate, or
 - b) more than two lamps operate on dipped beam, or
 - c) the light beam produces an incorrect beam pattern, is not focused, or is reduced or altered, or
 - d) the centreline of the light beam is too far to the left or slopes down too far so that the headlamp is no longer capable of illuminating the road at least 50 m ahead (**Figure 4-1-1**), or
 - e) the centreline of the light beam:
 - i. projects to the right of the vehicle's centreline, or
 - ii. does not dip at an angle specified in **Table 4-1-1**.
13. When the main-beam headlamps are switched on (with wheels pointing straight ahead):
 - a) a lamp does not operate, or
 - b) more than four lamps operate on main beam, or
 - c) the centreline of the light beam projects to the right of the vehicle's centreline or up from the horizontal, or
 - d) the lamps are not capable of being switched to dipped beam or turned off from the driver's seating position, or
 - e) a main-beam headlamp warning device does not indicate to the driver that the main-beam headlamps are switched on.

Note 1

If the dipped-beam headlamps are able to be adjusted from the driver's seating position, the alignment must be checked with the adjustment at its highest position.

Note 2

If the vehicle is fitted with self-levelling suspension, the alignment must be checked with the suspension at its normal level.

Note 3 Definition

Headlamp means a lamp designed to illuminate the road ahead of a vehicle, and that is:

- a) a dipped-beam headlamp (single lamp), or
- b) a main-beam (high-beam) headlamp (single lamp), and includes a driving lamp, or
- c) a combination of a dipped-beam headlamp and a main-beam headlamp (dual-lamp unit).

Note 4

If a headlamp is fitted with a readily removable cover, other than a clear protective cover, this must be removed for inspection of the headlamp.

Note 5

A vehicle originally manufactured with a headlamp arrangement that differs from what is required or permitted in this section may retain the original headlamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

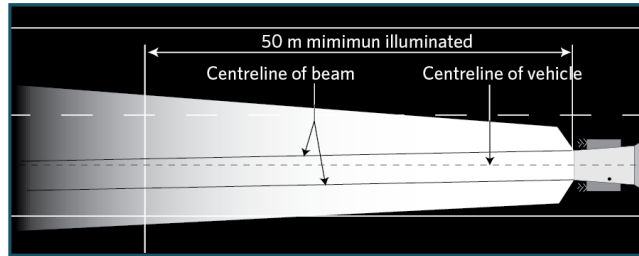
Table 4-1-1. Allowable dipped-beam headlamp alignment

	Headlamp type	Distance from ground to centre of light source	Dip rate of beam centre: lower and upper limits		
			Percent (%)	mm/3m	Degrees (°)
EITHER	Any headlamp dipped beam	N/A	As specified by the vehicle or headlamp manufacturer		
OR	Headlamp with symmetric dipped-beam pattern	N/A	3.0–3.5	90–105	1.7–2.0
OR	Headlamp with asymmetric dipped-beam pattern and distance from ground to centre of light source	less than 0.8m	1.0–1.5	30–45	0.57–0.85
		0.8–1.2m	1.0–2.0	30–60	0.57–1.15
		more than 1.2m	2.0–2.5	60–75	1.15–1.43

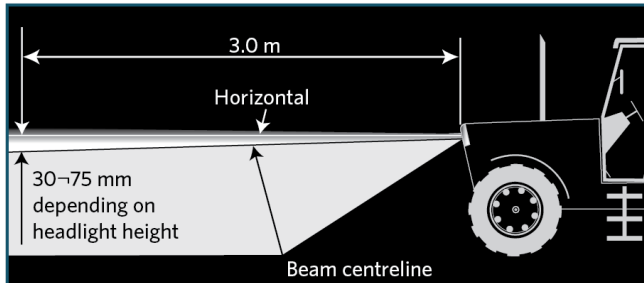
Table 4-1-2. Dipped-beam angle conversions

Percent (%)	mm/3m	Degrees (°)		Percent (%)	mm/3m	Degrees (°)
1.0	30	0.6		2.3	69	1.3
1.1	33	0.6		2.4	72	1.4
1.2	36	0.7		2.5	75	1.4
1.3	39	0.7		2.6	78	1.5
1.4	42	0.8		2.7	81	1.5
1.5	45	0.9		2.8	84	1.6
1.6	48	0.9		2.9	87	1.7
1.7	51	1.0		3.0	90	1.7
1.8	54	1.0		3.1	93	1.8
1.9	57	1.1		3.2	96	1.8
2.0	60	1.1		3.3	99	1.9
2.1	63	1.2		3.4	102	1.9
2.2	66	1.3		3.5	105	2.0

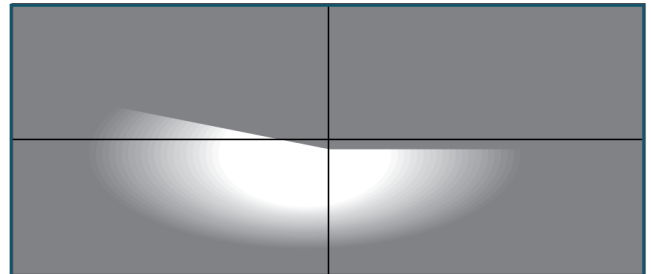
Figure 4-1-1. Headlamp beams



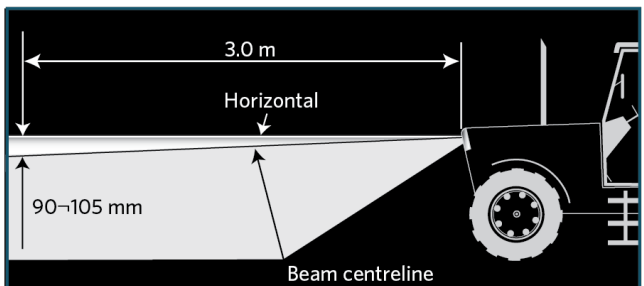
Minimum illuminated area



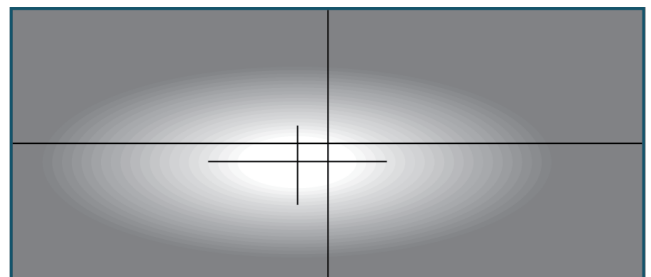
Asymmetric dipped beam



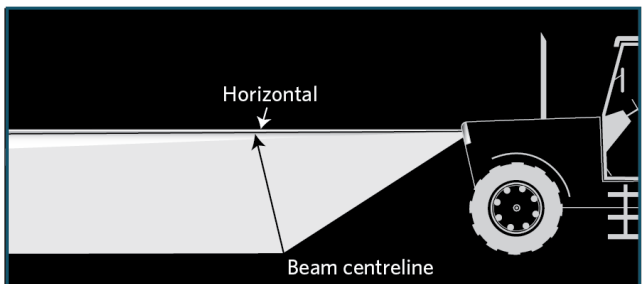
Asymmetric dipped-beam headlamp pattern on light board



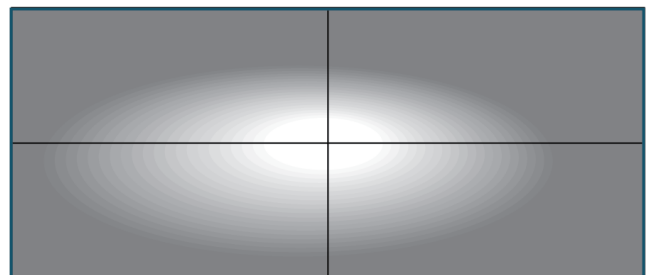
Symmetric dipped beam



Symmetric dipped-beam headlamp pattern on light board



Main (high) beam



Main- (high-) beam headlamp pattern on light board

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Mandatory and permitted equipment

1. A vehicle:
 - a) must be fitted with one pair of dipped-beam headlamps, and
 - b) may be fitted with one or two pairs of main-beam headlamps.
2. A warning device may be fitted that indicates that the main beam headlamps are switched on.
3. A retrofitted pair of headlamps must be symmetrically mounted as far towards each side of the vehicle as is practicable.

Prohibited equipment

4. A dipped-beam headlamp designed solely for a left-hand drive vehicle, where the maximum intensity of the beam is dispersed to the right, must not be fitted.

Condition

5. A headlamp must:

- a) be in sound condition, and
- b) not be obscured.

Performance

6. A headlamp must operate in a way that is appropriate for the lamp and the vehicle.

7. A headlamp must emit a steady light.

8. A headlamp must provide sufficient illumination and light output to illuminate the road ahead.

9. A pair of headlamps must emit light that is approximately of equal colour and intensity when switched on.

10. A headlamp must emit a beam that is substantially white or amber.

11. A main-beam headlamp must be capable of being dipped or turned off from the driver's position.

12. A warning device that indicates that the main-beam lamps are in operation must be in good working order.

13. When the headlamps are switched on and the vehicle's front wheels are pointing in the straight ahead position:

- a) the centre of a headlamp beam must be either parallel to or to the left of the longitudinal centreline of the vehicle, and
- b) the centre of a main-beam headlamp beam must be either parallel to or dipping down from the horizontal, and
- c) the centre of a dipped beam headlamp beam must dip at an angle specified in **Table 4-1-1**.

14. The dipped-beam headlamps must illuminate the road ahead for 50 m in normal darkness.

15. A headlamp must be fitted with a light source that is specified by the vehicle manufacturer or the headlamp manufacturer.

4-5 Direction indicator lamps

Reasons for rejection

Mandatory and permitted equipment

1. A vehicle first registered in New Zealand before 1 January 2006 that is so constructed that the driver's arm signals cannot be seen from behind the vehicle is not fitted with one pair of rear direction indicator lamps.

2. A vehicle first registered on or after 1 January 2006 is not fitted with one pair of rear direction indicator lamps.

3. A vehicle is fitted with more than:

- a) two pairs of lamps at the rear (other than top-mounted lamps), or
- b) one pair of top-mounted lamps at the rear, or
- c) two pairs of forward-facing lamps, or
- d) two side-facing lamps on each side of the vehicle.

4. A vehicle is fitted with a lamp that is not in a pair.

5. A retrofitted lamp, other than a top-mounted lamp, is mounted at a height from the ground exceeding 1.5m (or 2.1m where fitting below 1.5m is not practicable due to the shape of the bodywork of the vehicle).

6. A pair of top-mounted lamps is not fitted as close as is practicable to the top corners of the bodywork.

7. A retrofitted pair of lamps is not:

- a) symmetrically mounted, or
- b) mounted as far towards each side of the vehicle as is practicable.

8. A vehicle is not fitted with a suitable device that indicates to the driver that a lamp has failed.

Condition

9. A lamp is insecure or, if a mandatory lamp, contains moisture in the form of large droplets, runs or puddles.

10. A lens is missing or has a hole, crack or other damage that allows moisture or dirt to enter.

11. A lamp's reflector is damaged or has deteriorated so that light output is reduced.
12. A visual lamp-failure warning device is obscured from the driver in the driver's seating position.

Performance

13. When switched on, a direction indicator lamp:
 - a) does not operate, or
 - b) does not begin flashing within one second of switching on, or
 - c) flashes:
 - i. faster than two flashes per second, or
 - ii. slower than one flash per second, or
 - iii. at a different rate from other lamps on the same side.
14. When switched on, a direction indicator lamp emits a light that is:
 - a) not substantially amber or red to the rear, or
 - b) not substantially white or amber to the front, or
 - c) not substantially amber to the side, or
 - d) not approximately equal in colour or intensity to the other lamp in a pair, or
 - e) not bright enough to be visible from 100 m in normal daylight and from 200m in normal darkness, eg due to modification, deterioration, dirt or an incorrect light source, or
 - f) too bright, causing significant dazzle to other road users, eg due to an incorrect light source, or
 - g) altered, eg due to damage or modification.
15. A mandatory lamp mounted outside the original position emits a light that is not visible within (Figure 4-5-1):
 - a) 15° above and below the horizontal, or
 - b) 45° inboard or 80° outboard.
16. A modification to the vehicle has reduced the visibility angles of a mandatory lamp to less than (**Figure 4-5-1**):
 - a) 15° above and below the horizontal, or
 - b) 45° inboard or 80° outboard.
17. On a vehicle of American specification fitted with combined stop and indicator lamps, the stop lamp function is not overridden by the indicator function.
18. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.
19. A lamp failure warning device does not operate.

Note 1

Direction indicator lamp means a lamp designed to emit a flashing light to signal the intention of the driver to change the direction of the vehicle to the right or to the left.

Note 2

A permitted (ie non-mandatory) rear- or a side-facing direction indicator lamp that does not comply with equipment, condition and performance requirements must be made to comply or disabled so that it does not emit a light.

Note 3

An **original equipment (OE) lamp** is one that is fitted by the vehicle manufacturer in the original position, or is an equivalent replacement or aftermarket lamp suitable for the position provided by the vehicle manufacturer for that lamp. All other lamps are considered retrofitted (ie non-OE).

Note 4

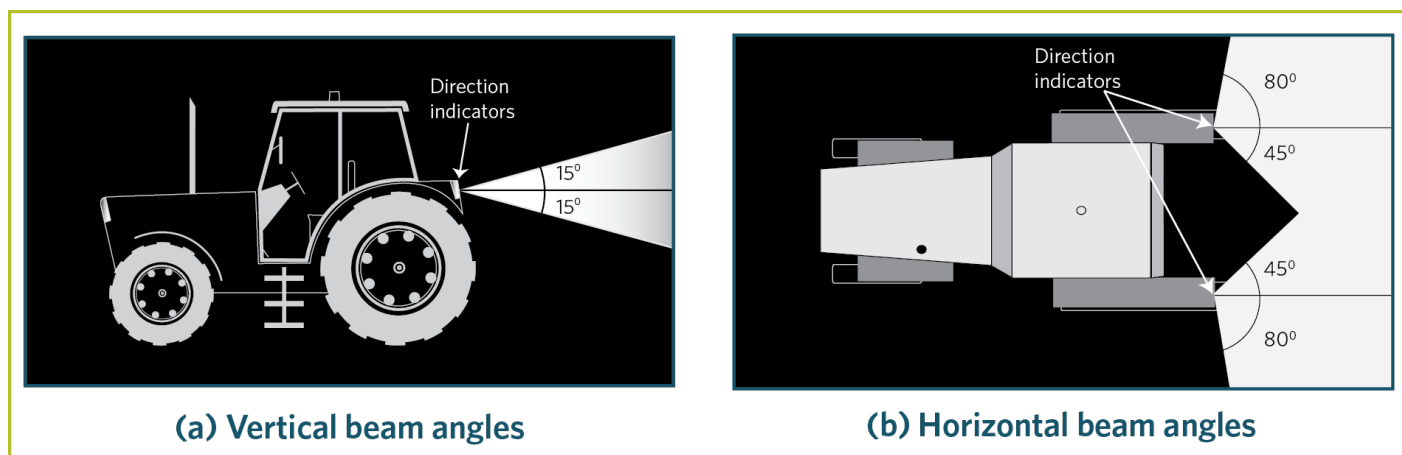
Vehicles first registered in New Zealand before 27 February 2005 may have rear direction indicator lamps that also function as reversing lamps.

Note 5

A vehicle originally manufactured with a direction-indicator-lamp arrangement that differs from what is required or permitted in

this section may retain the original direction indicator lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Figure 4-5-1. Direction indicator beam angles



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Mandatory and permitted equipment

1. A vehicle first registered in New Zealand before 1 January 2006 must be fitted with one or two pairs of rearward-facing lamps if the vehicle is so constructed that it prevents an arm signal given by the driver from being seen behind the vehicle.
2. A vehicle first registered anywhere on or after 1 January 2006 must be fitted with one or two pairs of lamps fitted to the rear of the vehicle.
3. A vehicle may be fitted with an additional pair of lamps at the rear of the vehicle that must be symmetrically mounted as far towards the top corners of the bodywork of the vehicle as is practicable (top-mounted lamps).
4. A vehicle may be fitted with one or two pairs of forward-facing lamps.
5. A vehicle may be fitted with one or two side-facing lamps on each side.
6. A suitable device must be fitted that indicates to the driver the failure of a mandatory lamp.
7. A retrofitted pair of lamps must be mounted:
 - a) symmetrically as far towards each side of the vehicle as is practicable, and
 - b) at a height from the ground not exceeding 1.5m, or if this is not practicable due to the shape of the bodywork of the vehicle, not exceeding 2.1m.
8. On vehicles of American specification, the stop lamp and direction indicator lamp function may be combined in one lamp.

Condition

9. A direction indicator lamp must:
 - a) be in sound condition, and
 - b) not be obscured (if a mandatory lamp).

Performance

10. A direction indicator lamp must operate in a way that is appropriate for the lamp and the vehicle.
11. A direction indicator lamp must emit a light that is substantially:
 - a) red or amber to the rear, and
 - b) white or amber to the front, and
 - c) amber to the side.
11. A lamp must flash at a fixed frequency in the range of 1 to 2 Hertz.
12. Each lamp in a pair must, when operated, emit a light of approximately equal intensity, colour and frequency.

13. The lamp-failure indicating device must function.
14. A lamp must emit a light that is visible from 100 m during normal daylight and 200 m in normal darkness.
15. A mandatory lamp must emit a light that is visible within angles of:
 - a) 15° above and below the horizontal, and
 - b) 45° inboard, and
 - c) 80° outboard.
16. If a vehicle of American specification is fitted with combined stop and indicator lamps, the indicator lamps must override the stop lamps so that the stop lamps operate as direction indicators.
17. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-6 Forward-facing position lamps

Reasons for rejection

Mandatory and permitted equipment

1. One pair of lamps is not fitted to:
 - a) a vehicle first registered in New Zealand on or after 1 January 1978 that exceeds 1.5m in width, or
 - b) a vehicle that exceeds 2m in width.
2. A vehicle is fitted with more than:
 - a) one pair of lamps (other than top-mounted lamps), or
 - b) two single lamps, or
 - c) one pair of top-mounted lamps.
3. A retrofitted lamp, other than a top-mounted lamp, is mounted at a height from the ground exceeding 1.5m (or 2.1m where fitting below 1.5m is not practicable due to the shape of the bodywork of the vehicle).
4. A pair of top-mounted lamps is not fitted as close as is practicable to the top corners of the bodywork.
5. A retrofitted pair of lamps is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards each side of the vehicle as is practicable.

Condition

6. A lamp is insecure or, if a mandatory lamp, contains moisture in the form of large droplets, runs or puddles.
7. A lens is missing or has a hole, crack or other damage that allows moisture or dirt to enter.
8. A lamp's reflector is damaged or has deteriorated so that light output is reduced.
9. A mandatory lamp is obscured.

Performance

10. When switched on, a forward-facing position lamp does not operate.
11. When switched on, a forward-facing position lamp emits a light that is not:
 - a) substantially white or amber, or
 - b) diffuse, or
 - c) projected to the front, or
 - d) approximately equal in colour or intensity to the other lamp in a pair, or
 - e) steady, or
 - f) bright enough to be visible from 200m in normal darkness, eg due to modification, deterioration, dirt or an incorrect light source.
12. A non-OE mandatory lamp mounted outside the original position emits a light that is not visible within (Figure 4-6-1):
 - a) 15° above and below the horizontal, or

b) 45° inboard or 80° outboard.

13. A modification to the vehicle has reduced the visibility angles of a mandatory lamp to less than (**Figure 4-6-1**):

a) 15° above and below the horizontal, or

b) 45° inboard or 80° outboard.

14. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1

Position lamp means a low intensity lamp that is designed to indicate to road users the presence and dimensions of a vehicle, being:

a) a forward-facing position lamp (front side lamp), or

b) a rearward-facing position lamp (rear side lamp or tail lamp), or

c) a side-marker lamp, or

d) an end-outline marker lamp (including cab roof lamp).

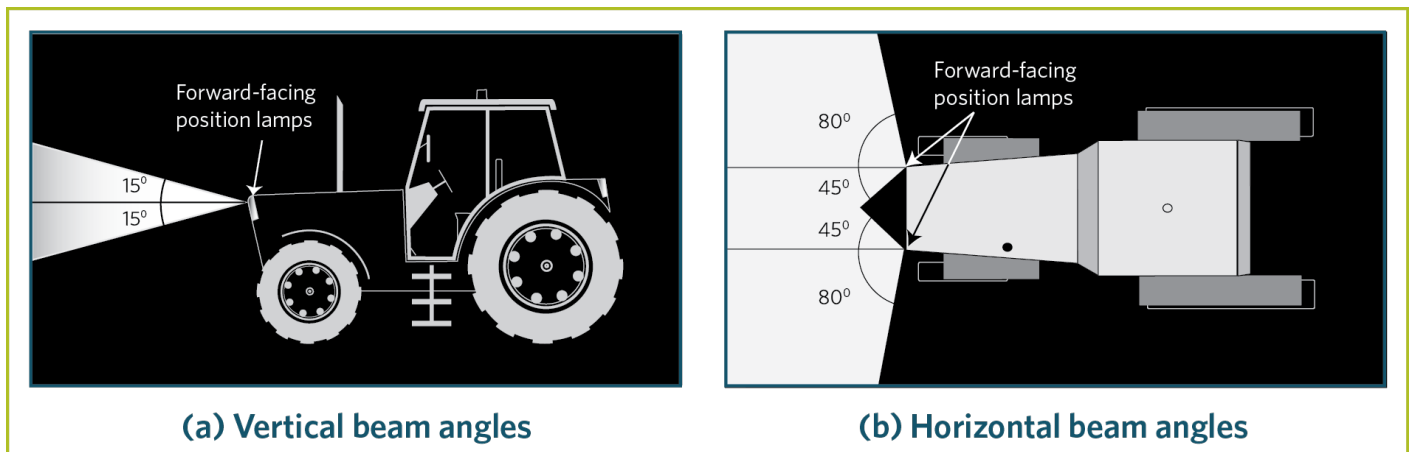
Note 2

An **original equipment (OE) lamp** is one that is fitted by the vehicle manufacturer in the original position, or is an equivalent replacement or aftermarket lamp suitable for the position provided by the vehicle manufacturer for that lamp. All other lamps are considered retrofitted (ie non-OE).

Note 3

A vehicle originally manufactured with a forward-facing position lamp arrangement that differs from what is required or permitted in this section may retain the original forward-facing position lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Figure 4-6-1. Forward-facing position lamp beam angles



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Mandatory and permitted equipment

1. One pair of lamps must be fitted to:

- a) a vehicle first registered in new Zealand on or after 1 January 1978 that exceeds 1.5m in width, or
- b) a vehicle that exceeds 2m in width.

2. One or two lamps may be fitted to:

- a) a vehicle that does not exceed 1.5m in width, or
- b) a vehicle first registered in New Zealand before 1 January 1978 that does not exceed 2m in width.

3. A retrofitted pair of lamps must be symmetrically mounted as far towards each side of the vehicle as is practicable.

4. A retrofitted lamp must be mounted at a height from the ground not exceeding 1.5m, or if this is not practicable due to the

shape of the bodywork of the vehicle, not exceeding 2.1m.

5. A vehicle may be fitted with one additional pair of forward-facing position lamps that must be symmetrically mounted as far towards the top corners of the vehicle as is practicable (top-mounted lamps).

Condition

6. A forward-facing position lamp must:

- a) be in sound condition, and
- b) not be obscured (if a mandatory lamp).

Performance

7. A forward-facing position lamp must operate in a way that is appropriate for the lamp and the vehicle.

8. A lamp must emit a light that is:

- a) diffuse, and
- b) substantially white or amber, and
- c) steady, and
- d) sufficient to indicate to other road users the presence and dimensions of the vehicle, and
- e) visible from 200m in normal darkness, and
- f) of approximately equal intensity and colour to the other lamp of a pair.

9. A mandatory lamp must be visible within angles of:

- a) 15° above and below the horizontal, and
- b) 45° inboard, and
- c) 80° outboard.

10. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-7 Rearward-facing position lamps

Reasons for rejection

Mandatory and permitted equipment

1. A vehicle first registered in New Zealand on or after 1 January 1978 that is more than 1.5m wide is:

- a) not fitted with one pair of lamps, or
- b) fitted with more than two pairs of lamps (other than top-mounted lamps), or
- c) fitted with a lamp that is not in a pair.

2. A vehicle first registered in New Zealand before 1 January 1978 or is less than 1.5m wide is:

- a) not fitted with a single lamp or one pair of lamps, or
- b) fitted with more than one single lamp, or
- c) fitted with more than two pairs of lamps (other than top-mounted lamps).

3. A vehicle is fitted with more than one pair of top-mounted lamps.

4. A single lamp is fitted to the left of the centre of the vehicle.

5. A pair of top-mounted lamps is not fitted as close as is practicable towards the top corners of the bodywork.

6. A retrofitted lamp, other than a top-mounted lamp, is mounted at a height from the ground exceeding 1.5m (or 2.1m where fitting below 1.5m is not practicable due to the shape of the bodywork of the vehicle).

7. A retrofitted pair of lamps is not:

- a) symmetrically mounted, or
- b) mounted as far towards each side of the vehicle as is practicable.

Condition

8. A lamp is insecure or, if a mandatory lamp, contains moisture in the form of large droplets, runs or puddles.
9. A lens is missing or has a hole, crack or other damage that allows moisture or dirt to enter.
10. A lamp's reflector is damaged or has deteriorated so that light output is reduced.
11. A mandatory lamp is obscured.

Performance

12. When switched on, a mandatory lamp does not operate.
13. When switched on, a lamp emits a light that is not:
 - a) substantially red, or
 - b) diffuse, or
 - c) projected to the rear, or
 - d) approximately equal in colour or intensity to that of the other lamp in a pair, or
 - e) steady, or
 - f) bright enough to be visible from 200m in normal darkness, eg due to modification, deterioration, dirt or an incorrect light source.
14. A non-OE mandatory lamp mounted outside the original position emits a light that is not visible within (**Figure 4-7-1**):
 - a) 15° above and below the horizontal, or
 - b) 45° inboard or 80° outboard.
15. A modification to the vehicle has reduced the visibility angles of a mandatory lamp to less than (**Figure 4-7-1**):
 - a) 15° above and below the horizontal, or
 - b) 45° inboard or 80° outboard.
14. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1

Position lamp means a low-intensity lamp that is designed to indicate to road users the presence and dimensions of a vehicle, being:

- a) a forward-facing position lamp (front side lamp), or
- b) a rearward-facing position lamp (rear side lamp or tail lamp), or
- c) a side-marker lamp, or
- d) an end-outline marker lamp (including cab roof lamp).

Note 2

A permitted rearward-facing position lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

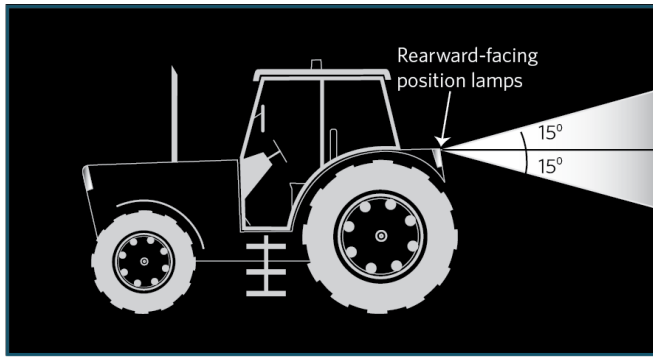
Note 3

An **original equipment (OE) lamp** is one that is fitted by the vehicle manufacturer in the original position, or is an equivalent replacement or aftermarket lamp suitable for the position provided by the vehicle manufacturer for that lamp. All other lamps are considered retrofitted (ie non-OE).

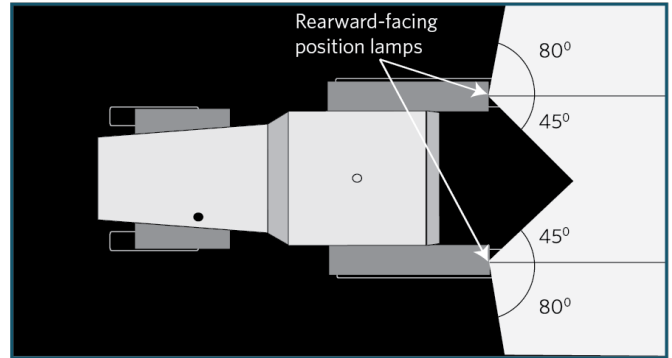
Note 4

A vehicle originally manufactured with a rearward-facing position lamp arrangement that differs from what is required or permitted in this section may retain the original rearward-facing position lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Figure 4-7-1. Rearward-facing position lamp beam angles



(a) Vertical beam angles



(b) Horizontal beam angles

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Mandatory and permitted equipment

1. A vehicle first registered in New Zealand on or after 1 January 1978 and that is more than 1.5m wide must be fitted with one or two pairs of rearward-facing position lamps.
2. A vehicle that was first registered in New Zealand before 1 January 1978 or that does not exceed 1.5m in width must be fitted with:
 - a) one single rearward-facing position lamp in the centre or to the right of the centre of the vehicle, or
 - b) one or two pairs of rearward-facing position lamps.
3. A retrofitted pair of lamps must be mounted:
 - a) symmetrically as far towards each side of the vehicle as is practicable, and
 - b) at a height from the ground not exceeding 1.5m, or if this is not practicable due to the shape of the bodywork of the vehicle, not exceeding 2.1m.
4. A vehicle may be fitted with an additional pair of rearward-facing position lamps symmetrically mounted as far towards each side and top of the bodywork of the vehicle as possible (top-mounted lamps).

Condition

5. A rearward-facing position lamp must:
 - a) be in sound condition, and
 - b) not be obscured (if a mandatory lamp).

Performance

6. A rearward-facing position lamp must operate in a way that is appropriate for the lamp and the vehicle.
7. A lamp must emit a light that is:
 - a) diffuse, and
 - b) substantially red.
8. A lamp must emit a steady light.
9. A lamp must provide sufficient light output to indicate to other road users the presence and dimensions of the vehicle.
10. A lamp must emit light that is visible from a distance of 200m in normal darkness.
11. A mandatory lamp must be visible within angles of 15° above and below the horizontal, and within 45° inboard and 80° outboard.
12. Each lamp in a pair must, when operated, emit a light of approximately equal intensity and colour.
13. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-8 Side-marker lamps

Reasons for rejection

Permitted and prohibited equipment

1. A vehicle that has a length of less than 6m is fitted with a side-marker lamp.
2. A vehicle is fitted with side-marker lamps that do not give an indication of the vehicle's dimensions.

Condition

3. A lamp is insecure.
4. A lens is missing or has a hole, crack or other damage that allows moisture or dirt to enter.
5. A reflector is damaged or has deteriorated so that light output is reduced.

Performance

6. When switched on, a lamp emits a light that is not:
 - a) steady, or
 - b) diffuse, or
 - c) substantially red or amber to the rear, or
 - d) substantially white or amber to the front.
7. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1 Definitions

Side-marker lamp means a position lamp designed to be fitted to the side of a vehicle or its load.

Position lamp means a low-intensity lamp that is designed to indicate to road users the presence and dimensions of a vehicle, being:

- a) a forward-facing position lamp (front side lamp), or
- b) a rearward-facing position lamp (rear side lamp or tail lamp), or
- c) a side-marker lamp, or
- d) an end-outline marker lamp (including cab roof lamp).

Note 2

A permitted side-marker lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Note 3

A vehicle originally manufactured with a side-marker lamp arrangement that differs from what is required or permitted in this section may retain the original side-marker position lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Permitted and prohibited equipment

1. A vehicle with a length of 6m or more may be fitted with one or more side-marker lamps on each side.
2. A vehicle with a length of less than 6m must not be fitted with side-marker lamps.
3. The position of the lamps must be such that it gives an indication of the vehicle's dimensions.

Condition

4. A side-marker lamp must be in good condition.

Performance

5. A side-marker lamp must operate in a way that is appropriate for the lamp and for the vehicle.
6. A lamp must emit a light that is:

- a) steady, and
- b) diffuse, and
- c) substantially red or amber to the rear, and
- d) substantially white or amber to the front.

7. Where a side-marker lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-10 Stop lamps

Reasons for rejection

Mandatory and permitted equipment

1. A vehicle first registered in New Zealand on or after 1 January 1978 is:

- a) not fitted with one pair of stop lamps, or
- b) fitted with a stop lamp that is not in a pair.

2. A vehicle first registered in New Zealand before 1 January 1978 is:

- a) not fitted with one single lamp or one pair of lamps, or
- b) fitted with more than one single lamp.

3. A vehicle is fitted with more than:

- a) two pairs of lamps other than top-mounted lamps, or
- b) one pair of top-mounted lamps.

4. A retrofitted stop lamp other than a top-mounted lamp is fitted at a height from the ground exceeding 1.5m (or 2.1m where fitting below 1.5m is not practicable due to the shape of the bodywork of the vehicle).

5. A pair of top-mounted lamps is not fitted as far as is practicable towards the top corners of the bodywork of the vehicle.

6. A retrofitted pair of lamps is not:

- a) symmetrically mounted, or
- b) mounted as far towards each side of the vehicle as is practicable.

Condition

7. A lamp is insecure.

8. A lens is missing or has a hole, crack or other damage that allows moisture or dirt to enter.

9. A reflector is damaged or has deteriorated so that light output is reduced.

10. A mandatory lamp is obscured, or contains moisture in the form of large droplets, runs or puddles.

Performance

11. When the service brake is activated:

- a) a mandatory lamp does not operate, or
- b) a lamp does not remain steadily illuminated.

12. A lamp operates when the service brake is not applied.

13. A lamp emits a light that is:

- a) not substantially red, or
- b) not diffuse, or
- c) not projected to the rear, or
- d) different in intensity from the other lamp in a pair, or
- e) not bright enough to produce a light that is visible from 100m in normal daylight, eg due to modification, deterioration, dirt or an incorrect light source.

14. A non-OE mandatory lamp mounted outside the original position emits a light that is not visible within (**Figure 4-10-1**):

- a) 15° above and below the horizontal, or
- b) 45° inboard and outboard.

15. A modification to the vehicle has reduced the visibility angles of a mandatory lamp to less than (**Figure 4-10-1**):

- a) 15° above and below the horizontal, or
- b) 45° inboard and outboard.

16. On a vehicle of American specification fitted with combined stop and direction indicator lamps, the stop lamp function is not overridden by the indicator function.

17. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1

Stop lamp means a lamp that is designed to operate when the service brake is applied.

Note 2

A permitted stop lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Note 3

An **original equipment (OE) lamp** is one that is fitted by the vehicle manufacturer in the original position, or is an equivalent replacement or aftermarket lamp suitable for the position provided by the vehicle manufacturer for that lamp. All other lamps are considered retrofitted (ie non-OE).

Note 4

A vehicle originally manufactured with a stop-lamp arrangement that differs from what is required or permitted in this section may retain the original stop lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

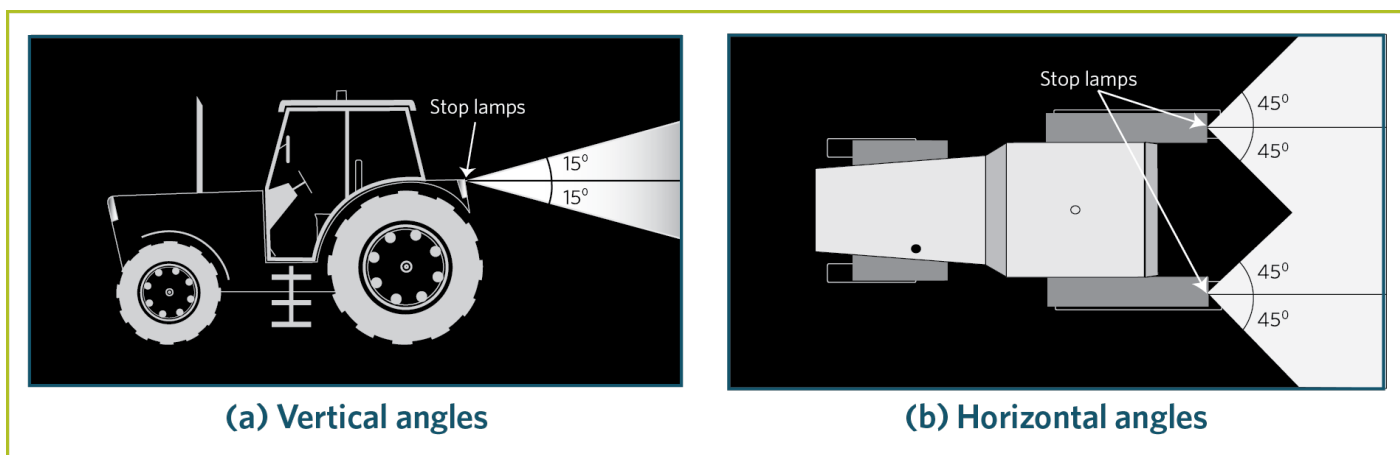


Figure 4-10-1. Stop lamp visibility angles

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Mandatory and permitted equipment

1. A vehicle first registered in New Zealand on or after 1 January 1978 must be fitted with one or two pairs of stop lamps.
2. A vehicle first registered in New Zealand before 1 January 1978:
 - a) may be fitted with one stop lamp or one or two pairs of stop lamps, or
 - b) must be fitted with one stop lamp or one or two pairs of stop lamps if the vehicle is so constructed that it prevents the driver's arm signal from being seen from behind the vehicle.
3. A retrofitted pair of stop lamps must be symmetrically mounted as far towards each side of the vehicle as is practicable.
4. A retrofitted stop lamp must be fitted at a height from the ground not exceeding 1.5m, or if this is not practicable due to the shape of the bodywork of the vehicle, not exceeding 2.1m.

5. A vehicle may be fitted at the rear with an additional pair of stop lamps provided they are positioned as close as is practicable to the top of the bodywork of the vehicle (top-mounted lamps).

Condition

6. A stop lamp must:

- a) be in sound condition, and
- b) not be obscured (if a mandatory lamp).

Performance

7. A stop lamp must operate in a way that is appropriate for the lamp and the vehicle.

8. The light emitted from a stop lamp must be diffuse light that is substantially red.

9. A required stop lamp must operate when a service brake is activated.

10. A required stop lamp must provide sufficient light output to be visible from 100m.

11. A stop lamp must emit a steady light.

12. A retrofitted mandatory stop lamp must emit a light that is visible within the angles of 15° above and below the horizontal, and 45° inboard and outboard.

13. If a vehicle of American specification is fitted with combined stop and direction indicator lamps, the indicator lamps must override the stop lamps so that the stop lamps will operate as direction indicators.

14. Where a stop lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-12 Rear-reg.-plate illumination lamps

Reasons for rejection

Mandatory equipment

1. A vehicle is not fitted with at least one rear-registration-plate illumination lamp.

Performance

2. The lamp emits a light that is not:

- a) substantially white, or
- b) steady, or
- c) diffuse.

3. The lamps are not bright enough to show up the registration plate text from 20m in normal darkness.

4. The light source of a lamp is visible from the rear of the vehicle.

Note 1

Rear-registration-plate illumination lamp means a lamp designed to illuminate the rear registration plate of a vehicle.

Note 2

A vehicle originally manufactured with a rear-registration-plate illumination lamp arrangement that differs from what is required or permitted in this section may retain the original rear-registration-plate illumination lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Mandatory equipment

1. A vehicle must be fitted with at least one rear-registration-plate illumination lamp.

Performance

2. A rear-registration-plate illumination lamp must operate in a way that is appropriate for the lamp and the vehicle.

3. A lamp must emit a diffuse light that is substantially white.

4. A rear-registration-plate illumination lamp must emit a steady light.
5. The light source of the lamp must not be visible from the rear of the vehicle.
6. A lamp must illuminate the figures and letters of the plate so that they are visible from 20m during normal darkness.
7. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-13 Rear reflectors

Reasons for rejection

Mandatory and permitted equipment

1. A vehicle is:
 - a) not fitted with at least one rearward-facing reflector on each side, or
 - b) fitted with a rearward-facing reflector that is not in a pair.
2. A reflector is not positioned to the rear of the vehicle.
3. A retrofitted reflector is fitted at a height from the ground exceeding 1.5m (or 2.1m where fitting below 1.5 m is not practicable due to the shape of the bodywork of the vehicle).
4. A retrofitted pair of reflectors is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards each side of the vehicle as is practicable.

Condition

5. A mandatory reflector's ability to reflect light is affected by excessive:
 - a) fading, or
 - b) scratching or other damage.
6. A mandatory reflector is obscured.

Performance

7. The reflected light from a mandatory reflector is not visible from 100m.
8. The reflected light from a reflector is not red.

Note 1 Definitions

Reflector means a discreet item of lighting equipment that is designed to reflect incident light back towards the light source, but does not include reflective material (such as reflective tape).

Reflective material means any material that is designed to reflect incident light back towards the light source, and includes reflective tape, but does not include a reflector.

Note 2

A vehicle originally manufactured with a rear reflector arrangement that differs from what is required or permitted in this section may retain the original rear reflectors provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Mandatory and permitted equipment

1. A vehicle must be fitted with at least one pair of rearward-facing reflectors at a height from the ground not exceeding 1.5m, or if this is not practicable due to the shape of the bodywork of the vehicle, not exceeding 2.1m.
2. A rearward-facing reflector must be positioned to the rear of the vehicle.
3. A reflector must be of an area that allows it to reflect light to improve the visibility of the vehicle to other road users, but it must not cause them undue dazzle or discomfort.
4. A retrofitted pair of reflectors must be symmetrically mounted as far towards each side of the vehicle as is practicable.

Condition

5. A mandatory reflector must be in good condition and not be obscured.

Performance

6. A reflector must operate in a way that is appropriate for the reflector and the vehicle.

7. A reflector must reflect white light as substantially red light.

8. A reflector must provide sufficient light reflection to fulfil its intended purpose.

5 Vision

5-1 Glazing

Reasons for rejection

Glazing condition

1. A piece of glazing is not mechanically sound, or is not securely affixed to the vehicle.

2. A windscreen or front-side window is so dirty or obstructed that the driver's vision is unreasonably impaired.

3. A windscreen has damage that prevents the wiper blades from working properly.

4. A windscreen has scratches, discoloration or other defects that unreasonably impair the driver's vision or compromise the strength of the windscreen.

Glazing performance

5. A modification has:

- a) unreasonably impaired vision through a windscreen or a front-side window, or
- b) adversely affected the strength or mechanical performance of the glazing.

Note 1

Damage includes any unrepaired damage and attempted visible repairs.

Note 2

Windscreen means all glazing extending across the front of the vehicle that is not parallel to the vehicle's centreline but does not include a wind deflector.

Summary of legislation

Glazing condition

1. Glazing must be mechanically sound, strong and securely affixed to the vehicle.

2. A windscreen and front-side windows must be clean and free of obstruction to ensure the driver has sufficient vision through the glazing to operate the vehicle safely.

3. A windscreen must not have scratches and other defects that:

- a) unreasonably impair vision, or
- b) compromise its strength.

4. A laminated windscreen must not show signs of discoloration that could unreasonably impair the driver's vision.

5. Glazing in roof panels may be tinted.

6. Overlays must not have any bubbling or other defects that could unreasonably impair vision.

Glazing performance

7. A modification must not:

- a) unreasonably impair vision through a windscreen or a front-side window, nor
- b) adversely affect the strength or mechanical performance of the glazing or the vehicle.

5-2 Sun visors

Reasons for rejection

Mandatory equipment

1. A vehicle with a windscreen is not fitted with a sun visor for the driver's use if it is reasonable and practical to do so ([Note 1](#)).

Condition

2. A sun visor:

- a) is insecurely mounted, or
- b) for the driver cannot be adjusted from the normal driving position, or
- c) cannot maintain its adjusted position, or
- d) has been modified or has deteriorated, and the likelihood of injury to vehicle occupants has not been minimised.

Performance

3. A driver's sun visor does not effectively aid the driver's vision by intercepting the glare from the sun.

Note 1

Sun visor means any attachment mounted above the inside of the windscreen and provided for the purpose of shielding the eyes of the driver and other front passengers from solar glare.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004](#)
- [Land Transport Rule: Interior Impact 2002](#).

Mandatory equipment

1. A vehicle with a windscreen must be fitted with a sun visor for the driver's use if it is reasonable and practicable to do so ([Note 1](#)).

Permitted equipment

2. Additional sun visors may be fitted in other positions.

Sun visor performance

3. A driver's sun visor must be effective.

5-3 Windscreen wipe and wash

Reasons for rejection

Mandatory equipment

1. A vehicle that has a windscreen is not fitted with a windscreen wipe system.

2. A vehicle manufactured on or after 1 January 2001 that is fitted with a windscreen is not fitted with a windscreen wash system.

3. A vehicle manufactured on or after 1 January 1960 is fitted with wipers that are not power driven.

Condition

Windscreen wipe system

4. The wiper operating device is missing.

5. A wiper arm or wiper blade is:

- a) missing, or
- b) insecure, or
- c) damaged so as to affect the performance of the wipers.

6. The wiper operating mechanism is:

- a) missing, or
- b) insecure, or
- c) damaged so as to affect the performance of the wipers.

Windscreen wash system

- 7. A wash system component is missing or insecure.
- 8. The wash operating device is missing.

Performance

Windscreen wipe system

- 9. A windscreen wiper does not wipe the windscreen effectively, preventing adequate forward vision by the driver.
- 10. The wipe operating device is unable to activate the wipe system.

Windscreen wash system

- 11. A windscreen wash nozzle does not discharge washer liquid directly onto the windscreen.
- 12. The wash operating device is unable to activate the wash system.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Glazing, Windscreen Wipe and Wash, and Mirrors 1999.](#)

Mandatory equipment

- 1. A vehicle manufactured before 1 January 2001 that is fitted with a windscreen must have a windscreen wipe system.
- 2. A vehicle manufactured on or after 1 January 2001 that is fitted with a windscreen must have a windscreen wipe and wash system.
- 3. Windscreen wipers must be power driven, unless they follow OE specifications in a vehicle manufactured before 1 January 1960.

Permitted equipment

- 4. A vehicle may be fitted with a wash system when this is not required.

Condition

- 5. A vehicle's windscreen wipe system must be efficient and within the vehicle manufacturer's operating limits.

Performance

- 6. The equipment fitted must be capable of keeping an adequate area of the windscreen clean and clear so that the vehicle may be operated safely under all reasonably foreseeable conditions.

5-4 Rear-view mirrors

Reasons for rejection

Mandatory equipment

- 1. A vehicle fitted with a permanent cab is not fitted with a rear-view mirror.
- 2. A vehicle with tint film overlays on a rear or rear-side window is not fitted with an exterior rear-view mirror on each side.

Condition

- 3. A rear-view mirror:
 - a) is not mounted securely, or
 - b) cannot be adjusted, or
 - c) cannot maintain its adjusted position, or
 - d) is corroded or dirty, or
 - e) is damaged so that it increases the risk of injury to vehicle occupants.

Performance

4. A rear-view mirror:

- a) does not provide a clear view to the rear of the vehicle, or
- b) is not sufficiently isolated from vibrations.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Glazing, Windscreen Wipe and Wash, and Mirrors 1999](#).

Mandatory equipment

1. A vehicle must be fitted with a rear-view mirror.
2. A vehicle with tint film overlays on the rear or rear -side windows must be fitted with a left-hand and a right-hand exterior mirror.

Permitted equipment

3. Additional rear-view mirrors may be fitted.

Condition

4. A rear-view mirror must be:
 - a) securely attached so that the risk of injury is minimised, and
 - b) mounted so that vibration does not inhibit the driver's required clear view to the rear, and
 - c) sufficiently adjustable, and able to maintain its position.

Performance

5. A rear-view mirror must provide a clear view to the rear of:
 - a) the motor vehicle itself, and
 - b) the vehicle's load, and
 - c) any towed trailer and its load.
6. A rear-view mirror must be sufficiently isolated from vibrations.

6 Entrance and exit

6-1 Door and hinged panel retention systems

Summary of legislation

Applicable legislation

- [Land Transport Rule: Door Retention Systems 2001](#)
- [Land Transport Rule: Vehicle Standards Compliance 2002](#), section 7.4.

Mandatory equipment

1. A motor vehicle fitted with doors used by the driver or passengers for entrance and exit of the motor vehicle must have a door retention system.

Condition

2. A door retention system and its mountings must be safe and structurally sound.
3. A door used for the entrance and exit of the driver or passengers must be operable by any occupant seated by the door from inside the motor vehicle.
4. The vehicle must be designed and constructed using components and materials that are fit for their purpose, and within safe tolerance of their state when manufactured or modified.

Performance

5. A door retention system must be in good working order.
6. A door used for entrance and exit must open and close easily.

7. A door used for entrance and exit must remain secure in a closed position during the operation of the vehicle.

Note 1

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward sign of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Reasons for rejection

Mandatory equipment

1. A vehicle fitted with doors used by the driver or passengers for entrance and exit of the vehicle does not have a door retention system.

Equipment condition

2. A hinge for a door or other hinged panel is not securely attached to both the vehicle body and to the door or other hinged panel, eg due to loose connections, corrosion or other damage.

3. A door used for entrance and exit of the driver or passengers cannot be opened from the inside.

Equipment performance

4. A door used for entrance and exit of the driver or passengers does not open or close easily, eg a door is sticking or requires unreasonable force to open.

5. A door or other hinged panel does not remain secure in a closed or locked position.

7 Vehicle interior

Page amended **1 June 2013** (see [amendment details](#)).

7-1 Seats and seat anchorages

Reasons for rejection

Mandatory equipment

1. The vehicle is not fitted with a driver's seat.

2. A seat is not attached to the vehicle structure by seat anchorages.

Condition and performance

3. A seat frame or structure has been weakened, eg due to damage, corrosion or excessive wear.

4. The adjustment mechanism of a driver's seat:

a) does not operate, or

b) is worn, causing excessive movement of the seat.

5. The attachment of the seat to the seat anchorage is loose or weakened by damage.

6. The attachment of the seat anchorage to the vehicle structure is loose or weakened by damage.

7. The driver's seat is in such a condition that it does not allow the driver to have proper control of the vehicle.

Note 1

A seat may be capable of being rotated or placed to face in different directions.

Note 1

A seat may be capable of being rotated or placed to face in different directions.

Note 2

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward sign of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Seats and Seat Anchorages 2002.](#)

Mandatory equipment

1. A motor vehicle must be fitted with a driver's seat.
2. A seat in a motor vehicle must be fitted to the vehicle structure by means of seat anchorages.

Condition and performance

3. Seats and seat anchorages must be safe, strong, in sound condition and compatible in strength with each other and with the vehicle structure.
4. The driver's seat and its anchorages must be designed, constructed and maintained to enable the driver to have proper control of the vehicle.
5. Seats and seat anchorages must be securely attached to the vehicle structure.
6. When a seatbelt or any part of the seatbelt is integral to a seat, the seat and seat anchorages must be compatible in strength with the seatbelt or with that part of the seatbelt attached to the seat.

7-12 Speedometer

Reasons for rejection

Mandatory equipment

1. A vehicle first registered in New Zealand on or after 1 December 1951 that is capable of a speed exceeding 50km/h is not fitted with a speedometer, and the vehicle operator cannot produce acceptable written evidence ([Note 2](#)) that:
 - a) the speedometer has been removed for repair, or
 - b) there are no undue delays by the vehicle owner in having the speedometer replaced.

Condition and performance

2. A mandatory speedometer:
 - a) does not operate as intended when the vehicle is moving forward, or
 - b) is obscured from the driver's position, or
 - c) does not indicate the vehicle's speed in km/h or mph.
3. Reason for rejection 2(a), 2(b) or 2(c) applies and the vehicle operator cannot produce acceptable written evidence ([Note 2](#)) that repair of the speedometer or associated equipment is impracticable or that a suitable replacement is not available.

Note 1

Speedometer means an instrument in a motor vehicle that is used to determine forward speed of the vehicle in kilometres per hour (km/h) or miles per hour (mph).

Note 2

Acceptable written evidence is documentation provided by the speedometer repairer or supplier. A copy of the documentation must be kept on file with the checksheet.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004.](#)

Mandatory equipment

1. A vehicle first registered in New Zealand on or after 1 December 1951 that is capable of a speed exceeding 50km/h must be fitted with a speedometer ([Note 1](#)).
2. A vehicle is not required to have a speedometer if the speedometer or associated equipment:
 - a) has been removed for repair and there are no undue delays by the vehicle owner in having it replaced, or
 - b) is out of repair, repair is impracticable and a suitable replacement is not available.

Performance

3. A mandatory speedometer must be in good working order and operate while the vehicle is moving forward.

7-13 Audible warning devices

Reasons for rejection

Mandatory equipment

1. A motor vehicle is:
 - a) not fitted with a horn, or
 - b) fitted with a bell, whistle or siren that is not part of an anti-theft car alarm, personal security alarm or a reversing warning device.

Performance

2. The horn does not operate when activated.
3. The horn operates when not activated.
4. The sound from the horn is not steady and continuous, eg the horn plays a tune.
5. The horn is not audible at a distance of 100m.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004](#).

Mandatory equipment

1. A vehicle must be fitted with a device (horn) that is audible to other road users.

Permitted equipment

2. A vehicle may be fitted with a bell, whistle or siren that is part of an anti-theft car alarm, personal security alarm or a reversing warning device.

Performance

3. The device must be in good working order.
4. The device must be capable of giving a warning that is audible under normal traffic conditions from a distance of at least 100m.

8 Brakes

8-1 Service brake and parking brake

Reasons for rejection

Mandatory equipment

Service brake ([Note 1](#))

1. A vehicle does not have a service brake that acts on the wheels as designed by the vehicle manufacturer.
2. A light tractor manufactured on or after 1 January 1990 and not capable of exceeding a speed of 40km/h does not have a service brake designed to act on the wheels that are intended to provide traction.

Parking brake ([Note 1](#))

3. A vehicle does not have a parking brake.
4. A parking brake does not act on at least one complete axle.
5. Where dual wheels are fitted, a parking brake does not act on at least one axle that has dual wheels fitted.

Condition

Service brake

6. There is corrosion damage ([Note 2](#)) within 150mm of a brake component mounting point.
7. The service brake pedal:
 - a) is insecure, or

- b) is spongy (indicating air in the system), or
- c) creeps, or
- d) has a non-slip surface which has deteriorated to such an extent that the brake cannot be safely applied, or
- e) has excessive travel (pedal travel reduces after one or two applications).

8. The brake pedal locking attachment on a tractor with split brake pedals is insecure, damaged or has deteriorated to such an extent that it is no longer fit for purpose.

9. The brake master cylinder is:

- a) leaking brake fluid, or
- b) insecure, or
- c) excessively corroded.

10. A brake valve is:

- a) not operating (eg has a seized-load sensing valve), or
- b) leaking brake fluid, or
- c) insecure, or
- d) excessively corroded.

11. A brake pipe (including connections) is:

- a) leaking brake fluid, or
- b) insecure, or
- c) deformed from its original shape, or
- d) chafed, or
- e) excessively corroded, eg there are signs of pitting or a noticeable increase in the pipe's outside diameter.

12. A flexible hydraulic brake hose (including connections):

- a) is leaking brake fluid, or
- b) is insecure, or
- c) bulges under pressure, or
- d) is twisted, stretched or chafed, or
- e) has external sheathing which is cracked to the extent that the reinforcing cords are exposed, or
- f) has metal connections that are excessively corroded, or
- g) has an end fitting that is not attached to the hose by means of swaging, machine crimping or a similar process ([Note 3](#)).

13. A brake calliper:

- a) shows visible signs of leaking, or
- b) is insecure.

14. A brake backing plate is:

- a) insecure, or
- b) severely corroded, or
- c) deformed from its original shape, or
- d) cracked, or
- e) contaminated by brake fluid, oil or grease.

15. A wheel cylinder:

- a) shows visible signs of leaking, or
- b) is insecure, or

c) is seized.

16. An ABS system component is damaged, insecure or missing.

17. A brake disc or drum is:

- a) worn beyond manufacturer's specifications (where visible without removing vehicle components), or
- b) fractured or otherwise damaged (where visible without removing vehicle components), or
- c) contaminated by brake fluid, oil or grease.

18. Brake friction material (where visible without removing vehicle components) is:

- a) worn below manufacturer's specifications, or
- b) separating from the brake pad backing plate or brake shoe, or
- c) contaminated by brake fluid, oil or grease.

19. A service brake component shows signs of heating or welding after original manufacture.

Parking brake

20. The parking brake lever:

- a) has excessive travel, or
- b) is insecure, or
- c) mounting is damaged, corroded, distorted or fractured within 150mm of the lever mounting, or
- d) mechanism or lever pivot bearing is worn or damaged so that the parking brake could be easily released by accident.

21. The parking brake cable:

- a) is knotted, frayed or excessively corroded, or
- b) has an auxiliary tensioner fitted, or
- c) has otherwise deteriorated so that it may affect the parking brake performance.

22. A parking brake actuating rod or guide:

- a) is excessively corroded, or
- b) is excessively worn, or
- c) has otherwise deteriorated so that it may affect the parking brake performance.

23. A parking brake component shows signs of heating or welding after original manufacture.

24. The locking mechanism on a service brake that is designed to be locked in applied position ([Note 1](#)):

- a) is missing a component, or
- b) does not operate, or operates incorrectly, or
- c) is insecure, damaged or has significantly deteriorated.

Performance

Service brake

25. The service brake cannot be applied in a controlled and progressive manner.

26. When the service brake is applied without assistance from the engine, a vehicle does not stop within 7m from a speed of 30km/h (50% efficiency) except in the following cases:

- a) a heavy vehicle manufactured before 1 February 1977 with a service brake that is designed to act on fewer than 4 wheels does not stop within 9m from a speed of 30km/h (40% average brake efficiency), or
- b) a light tractor manufactured before 1 January 1990 does not stop in a manner that is reasonable for the type of service brake fitted.

27. When the service brake is applied:

- a) the vehicle vibrates under braking to the extent that the control of the vehicle is adversely affected, or
- b) the brake fails to release immediately after the brake pedal has been released, or

c) the directional control is affected (eg there is swerving to one side, or the brakes on one side apply more slowly than on the other side).

28. The ABS or brake system warning lamp or self-check system, if fitted, indicates a defect in the ABS or brake system (does not apply to brake pad wear warning systems).

Parking brake

29. When the parking brake is applied:

- a) the vehicle does not stop within 18m from a speed of 30km/h (average brake efficiency of 20%), or
- b) it does not hold the vehicle at rest on a slope of 1 in 5, or
- c) it does not hold all the wheels on a common axle stationary against attempts to drive the vehicle away.

Note 1 Definitions

Service brake means a brake for intermittent use that is normally used to slow down and stop a vehicle. The service brake of a tractor which acts directly on the transmission or the rear wheels only is considered to act on all wheels if the transmission shifts automatically from two-wheel drive to four-wheel drive when the service brake is applied.

Parking brake means a brake readily applicable and capable of remaining applied for an indefinite period without further attention. A parking brake may be lever operated, or may be a transmission lock or a service brake that is capable of being locked in the applied position.

Note 2

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward signs of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Note 3

Hose end fittings that can be undone using hand tools are unacceptable.

Note 4

If a brake is fitted with an inspection port plug, this must be removed for inspection of the brake components.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Light-Vehicle Brakes 2002](#)
- [Land Transport Rule: Heavy-Vehicle Brakes 2008](#).

Mandatory equipment

Service brake

1. Vehicles must have a service brake that acts on the wheels as designed by the vehicle manufacturer, except that a light tractor manufactured on or after 1 January 1990 with a maximum speed of 40km/h or less must have a service brake that acts on the wheels that are intended to provide traction.

Parking brake

2. A light vehicle must have a parking brake that:

- a) acts on at least one complete axle, or
- b) if the vehicle has dual wheels on an axle, acts on that axle.

3. A heavy vehicle must have a parking brake.

Permitted equipment

4. A vehicle may be fitted with a warning system that is part of, or associated with, the use of a brake component or system.

Condition

5. A brake must be in good condition and within safe tolerance of its state when manufactured.

6. The brake friction surfaces must be within safe tolerance of their state when manufactured, and must not be scored, weakened or damaged to the extent that the safety performance of the brake is adversely affected.

Performance

7. The service brake must be able to be applied in a controlled and progressive manner.

8. When the brake on a vehicle is applied:

- a) the vehicle or its controls must not vibrate to the extent that control of the vehicle is adversely affected, and
- b) the braking effort on each wheel must provide stable and efficient braking without adverse effect on the directional control of the vehicle, and
- c) if the vehicle is equipped with an anti-lock braking system (ABS), the wheels must not lock, other than when the speed of the vehicle falls below the ABS activation parameters set by the vehicle manufacturer.

9. A brake warning system must function correctly (does not apply to a brake pad wear warning system).

Service brake

10. The service brake of a vehicle or vehicle combination that is operated on a hard, dry, level surface that is free of loose material and without assistance from the compression of the engine or other retarders must operate in the following manner:

- a) a service brake must stop the vehicle within a distance of 7m from a speed of 30km/h (average brake efficiency of 50%), with the exception of:
 - i. a service brake, that is designed to act on less than four wheels on a heavy vehicle first registered anywhere before 1 February 1977, must stop the vehicle within a distance of 9m from a speed of 30km/h (average brake efficiency of 40%), and
 - ii. a service brake on a light tractor manufactured before 1 January 1990 must stop the vehicle in a manner that is reasonable for the type of service brake fitted.

Parking brake

11. A parking brake must:

- a) stop the vehicle within 18m from a speed of 30km/h (average brake efficiency of 20%), or
- b) hold the vehicle at rest on a slope of 1 in 5.

Page amended **1 June 2013** (see [amendment details](#)).

9 Steering and suspension

9-1 Steering and suspension systems

Reasons for rejection

Condition

1. The steering wheel:

- a) is insecurely attached to the steering shaft, or
- b) shows excessive movement, indicating unacceptable wear or looseness in the steering box or rack or steering column bearings, or
- c) rim covering is insecure so that the directional control of the vehicle is affected.

2. The steering column is insecure.

3. The power steering:

- a) has been disconnected, or
- b) system does not operate correctly, requiring unreasonable force to steer the vehicle, or
- c) has a hose, pump drive, drive belt or pump mounting that is insecure, damaged, has significantly deteriorated, or
- d) has a significant fluid leak.

4. The hydrostatic steering system:

- a) has been disconnected, or
- b) does not operate correctly, eg requiring unreasonable force to steer the vehicle, or
- c) has a hose, pump drive, drive belt or cylinder, including their mountings, that is insecure, damaged or has significantly deteriorated, or
- d) has fluid leakage, except for minor seepage.

5. A linkage or joint between the steering column shaft and steering box or rack:

- a) is insecure, or
- b) is damaged, significantly corroded, distorted or cracked, or
- c) shows signs of welding or heating after original manufacture, or
- d) has play beyond manufacturer's specifications, or does not operate smoothly without roughness or stiffness, or
- e) is fouling on the vehicle structure, wheel, tyre or brake system component.

7. The steering box or rack:

- a) is insecure, or
- b) is damaged, significantly corroded, distorted or cracked, or
- c) shows signs of welding or heating after original manufacture, or
- d) has play beyond manufacturer's specifications, or
- e) does not operate smoothly without roughness or stiffness, or
- f) has an excessive fluid leak.

7. A steering rack gaiter is missing, insecure or split.

8. A steering linkage or joint ([Note 2](#)):

- a) is insecure, or
- b) is damaged, significantly corroded, distorted or cracked, or
- c) shows signs of welding or heating after original manufacture, or
- d) has play beyond manufacturer's specifications, or
- e) does not operate smoothly without roughness or stiffness, or
- f) is fouling on the vehicle structure, wheel tyre or brake system component, or
- g) shows signs of plastic injection.

9. A steering arm or associated component:

- a) is insecure, or
- b) is damaged, significantly corroded, distorted or cracked, or
- c) shows signs of welding or heating after original manufacture.

10. A kingpin or suspension joint ([Note 2](#)):

- a) is insecure, or
- b) is damaged, significantly corroded, distorted or cracked, or
- c) shows signs of welding or heating after original manufacture, or
- d) has play beyond the manufacturer's specifications, or
- e) does not operate smoothly without roughness or stiffness, or
- f) shows signs of plastic injection.

11. A lock stop is loose or damaged.

12. A steering or suspension component mounting point:

- a) is insecure, or
- b) has corrosion damage, buckling or fractures within 150mm of a mounting point.

13. Any other suspension component:

- a) is insecure or missing, or
- b) is damaged, significantly corroded, distorted or cracked, or
- c) shows signs of welding or heating after original manufacture, or

- d) has play beyond manufacturer's specifications, or
- e) does not operate smoothly without roughness or stiffness, or
- f) has excessive leakage of damping fluid ([Technical bulletin 9](#)), or
- g) shows excessive play, roughness or stiffness in a strut upper support bearing, or
- h) is a replacement urethane suspension bush that is not voided or shaped to allow for similar movement to an OE bush.

14. There is corrosion damage ([Note 3](#)) within 150mm of a suspension component mounting point.

Performance

15. During operation the vehicle cannot be controlled in a safe, efficient, convenient and sensitive manner, eg:

- a) the vehicle veers significantly to one side, or
- b) the vehicle requires unreasonable force to steer, or
- c) the steering is unreasonably stiff, rough or light, or
- d) the vehicle does not handle safely under normal conditions of road use, eg the suspension is excessively hard or soft, or there is excessive body roll.

Note 1

Steering system means those components, parts and systems that connect the driver's controls to a vehicle's wheels or tracks by means of which the direction of motion of a vehicle is controlled.

Note 2

A damaged boot on a steering joint is not a ground for rejection; however, the vehicle's owner should be advised.

Note 3

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward signs of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Steering Systems 2001](#).

Condition

1. The steering system and associated systems and components that directly or indirectly affect the directional control of the vehicle must be:

- a) sound and in good condition, and
- b) strong, durable and fit for their purpose, taking into account whether adverse effects have resulted from a loss of integrity of any protective system used by a relevant component.

Performance

2. The steering system and associated systems and components that directly or indirectly affect the directional control of the vehicle must provide the vehicle with safe, efficient, convenient and sensitive control.

10 Tyres, wheels and hubs

10-1 Tyres and wheels

Reasons for rejection

Mandatory equipment

Tyres

1. A tyre has a speed category (**Table 10-1-1**) that is less than the speed limit for the vehicle or less than the vehicle's maximum speed if this is less than the speed limit ([Note 2](#)) ([Note 3](#)).
2. A tyre is not compatible with the vehicle to which it is fitted, eg a tyre that is marked with any of the following:

- a) 'FOR TRAILER USE ONLY'
- b) 'ADV' (Agricultural Drawn Vehicle)
- c) 'RACING PURPOSES ONLY'.

Wheels

3. A wheel is:

- a) not compatible with the vehicle to which it is fitted, or
- b) not correctly attached to the vehicle.

Condition

Tyres (excluding spare tyres)

4. There are signs that a tyre is fouling on another part of the vehicle.

5. A tyre shows damage that is likely to compromise its ability to operate in a safe manner or lead to premature tyre failure, such as:

- a) a lump or bulge that is likely to be caused by separation of the tyre structure, or
- b) a cut or crack in a side wall or tread more than 25mm long that reaches the cords (see [\(Note 5\)](#) for visible cords in the tread area of heavy vehicle radial-ply tyres), or
- c) exposed or cut cords (see [\(Note 5\)](#) for visible cords in the tread area of heavy vehicle radial-ply tyres), or
- d) the tread of a retreaded tyre shows signs of separation, or
- e) nails or other sharp objects embedded in the tyre, or
- f) significant perishing, eg due to age, moisture or exposure.

6. A tyre has a string type repair visible from the outside.

7. Tyre repairs have not been carried out in accordance with acceptable industry practice.

8. A tyre has insufficient tread to allow safe operation of the vehicle.

Wheels

9. There are signs that a wheel is fouling on another part of the vehicle.

10. A wheel is:

- a) cracked, or
- b) significantly damaged, distorted or has deteriorated, or
- c) not securely attached to the hub.

11. A device used to attach dual-wheel sets is insecure, damaged, significantly deteriorated or cannot be locked or remain locked.

12. A wheel weight is not securely attached to the wheel.

13. A wheel nut:

- a) is missing, or
- b) is loose, or
- c) has deteriorated, or
- d) is the incorrect type, or
- e) has insufficient thread engagement to the wheel stud.

Note 1

A vehicle may be fitted with non-pneumatic tyres such as solid rubber tyres or tyres filled with polyurethane.

Note 2 Definitions:

Construction, in relation to a tyre, means

- a) for a pneumatic tyre, the type of carcass (including ply orientation and ply rating or load index)
- b) for any other tyre, characteristics relating to size, shape and material.

Pneumatic tyre means a tyre that, when in use, is inflated by air or gas introduced from time to time under pressure so as to enclose under normal inflation a cushion of air or gas forming altogether at least half of the total area of an average cross-section of a tyre so inflated.

Protective belt, sometimes called a **protective ply or breaker**, means an optional layer of ply material (cords) located immediately under the tread to minimise damage to the structural belts beneath.

Radial ply means a pneumatic tyre structure in which the ply cords, which extend from bead to bead, are laid at approximately 90 degrees to the centreline of the tread, the carcass being stabilised by an essentially inextensible circumferential belt.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Rim means that part of the wheel on which the tyre is mounted and supported.

Speed category means a code allocated to a tyre by a tyre manufacturer that indicates the maximum vehicle speed for which the use of the tyre is rated. It is either marked on the tyre or can be obtained from the tyre manufacturer or a reference guide.

Tube means an inflatable elastic liner, in the form of a hollow ring fitted with an inflation valve assembly, designed for insertion into certain tyre assemblies to provide a cushion of air or gas that, when inflated, supports the wheel (also known as an 'inner tube').

Tyre carcass means that structural part of a pneumatic tyre other than the tread and outermost rubber of the sidewalls that, when inflated, contains the gas that supports the load.

Tyre load rating means the maximum load a tyre can carry at the corresponding cold inflation pressure prescribed by the tyre manufacturer and the speed indicated by its speed category symbol.

Wheel means a rotating load-carrying member between the tyre and the hub, which usually consists of two major parts, the rim and the wheel disc, and which may be manufactured as one part, or permanently attached to each other, or detachable from each other.

Wheel centre-disc means that part of the wheel that is the supporting member between the hub and the rim.

Note 3

The tyre load index and speed category are usually marked on the tyre. Where the tyre is not marked, the load and speed rating information must be obtained from the tyre manufacturer or a reference guide of tyre ratings before the tyre can be passed.

Note 4

Sometimes a retreaded or repaired tyre has had its speed rating removed. Where a tyre has been repaired or retreaded in accordance with standard NZS 5423 (Repairing and retreading car, truck and bus tyres), the tyre must be marked with NZS 5423 and, if a car tyre, have the speed rating removed. In such a case, a missing speed rating is acceptable for WoF/CoF (unless the inspector believes on reasonable grounds that the tyre would not have had the required minimum speed rating for the vehicle in the first place).

Note 5

Where a heavy vehicle radial-ply tyre has visible cords in the tread area, the vehicle inspector may pass such a tyre for CoF provided the tyre is in a safe condition, eg only the protective cord layer (protective belt, see **Figure 10-1-1**) is visible. When determining whether such a tyre is in a safe condition, the vehicle inspector may take into account written evidence from a person who has current specialist tyre knowledge and experience, particularly in heavy vehicle tyre inspection.

Figure 10-1-1. Cross-sectional representation of a heavy vehicle radial-ply tyre

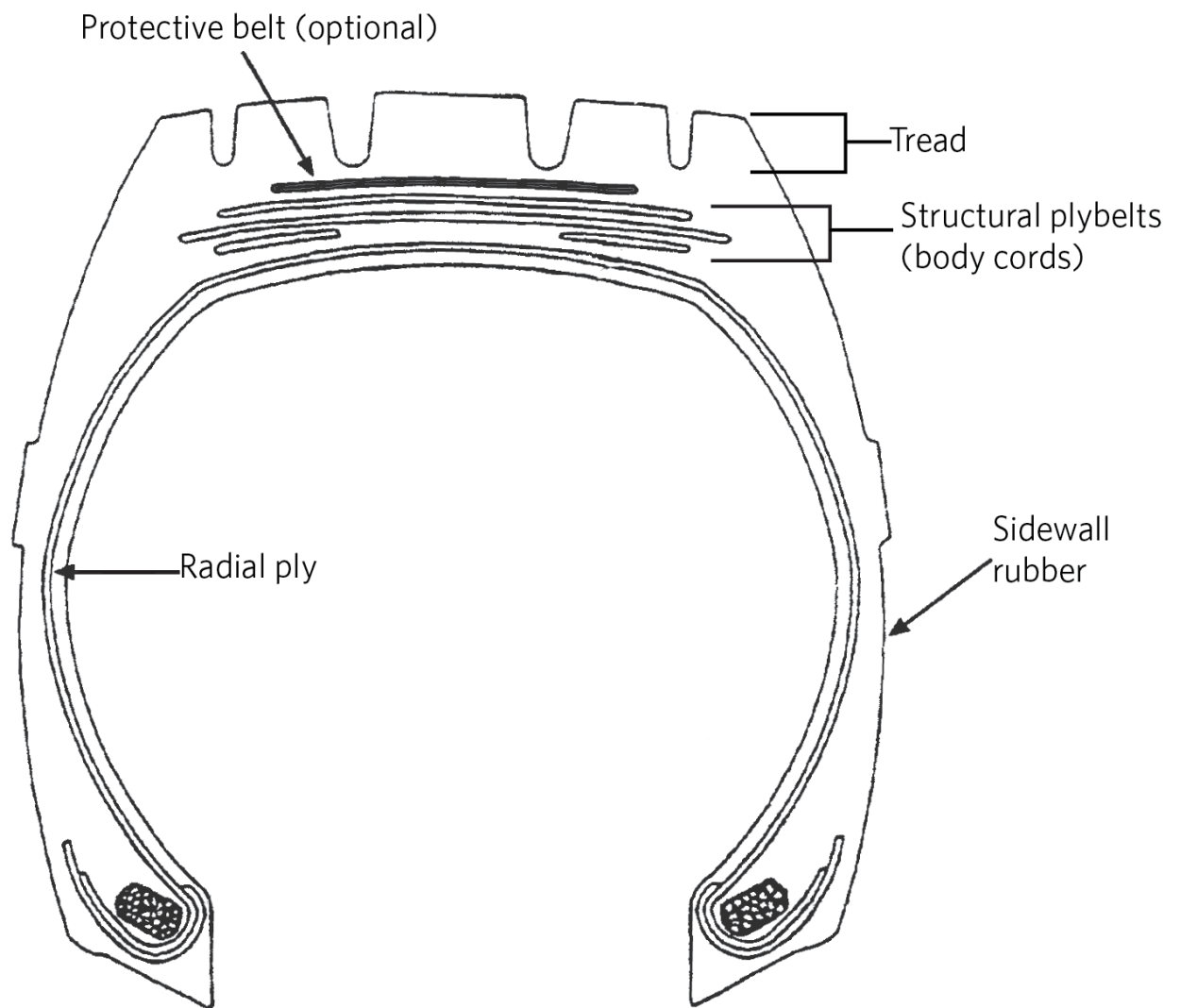


Table 10-1-1. Tyre speed symbol categories

Speed symbol – speed category (km/h)							
A1 – 5	A5 – 25	B – 50	F – 80	L – 120	Q – 160	U – 200	Y – 300
A2 – 10	A6 – 30	C – 60	G – 90	M – 130	R – 170	H – 210	ZR – over 240
A3 – 15	A7 – 35	D – 65	J – 100	N – 140	S – 180	V – 240	
A4 – 20	A8 – 40	E – 70	K – 110	P – 150	T – 190	W – 270	

Summary of legislation

Applicable legislation

- [Land Transport Rule: Tyres and Wheels 2001.](#)

Mandatory equipment

Tyres

1. Tyres must be compatible with the vehicle to which they are fitted.
2. The speed category of a tyre must be compatible with the maximum legal speed limit for the vehicle, or the vehicle's maximum speed.

Wheels

3. A wheel must be:
 - a) securely attached to the hub, and
 - b) sufficiently strong for the type of vehicle to which it is fitted, and
 - c) compatible with the vehicle to which it is fitted, and
 - d) compatible with the tyre rim profile, flange height and valve fitment.
4. There must be adequate clearance for the brake, hub, suspension and steering mechanism, and body parts.

Permitted equipment

5. A vehicle may be fitted with retreaded tyres.

Condition

Tyres (excluding spare tyres)

6. A tyre must be of good quality and construction, fit for its purpose and maintained in a safe condition.
7. A tyre must not have worn, damaged or visible cords apparent by external examination.
8. A heavy vehicle radial-ply tyre may have visible cords in the tyre tread area provided the tyre is in a safe condition. To assess whether such a tyre is in a safe condition, the vehicle inspector may take into account written evidence from a person who has current specialist tyre knowledge and experience, particularly in heavy vehicle tyre inspection.
9. A tyre must have a tread pattern depth of not less than 1.5mm (excluding any tie-bar or tread-depth indicator strip):
 - a) within all principal grooves that contain tread-depth indicators, or
 - b) if the tyre does not normally have tread-depth indicators, across at least three-quarters of the tyre tread width.
10. The regrooving of a tyre is permitted only if the tyre is identified as having been specifically designed for regrooving after manufacture.
11. A tyre that is fitted to a vehicle must be maintained at a safe inflation pressure.

Wheels

12. The components of the wheel assembly must be in good condition.
13. The wheel must be securely attached to the hub.

Page amended **1 June 2013** (see [amendment details](#)).

10-2 Hubs and axles

Reasons for rejection

Condition

1. A hub ([Note 1](#)):
 - a) is not securely attached to the vehicle, or
 - b) has a visible crack, or
 - c) is significantly damaged, distorted or has deteriorated, or
 - d) has a broken or missing wheel stud.
2. A wheel bearing:
 - a) has play beyond the manufacturer's specifications, or
 - b) is over-tight or sounds rough.
3. An axle:

- a) is insecure, eg has loose U-bolts, or
- b) is visibly cracked, or
- c) is significantly damaged, distorted or has deteriorated, or
- d) shows signs of welding or heating after original manufacture, or
- e) shows signs of fouling the vehicle structure or a brake, suspension or steering component.

Note 1

Hub means that part of a vehicle that is attached to the axle and rotates on, or with, the axle, and to which the wheel is attached, and includes any bearings.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Tyres and Wheels 2001](#).

Condition

1. The components of the assembly must be in good condition.
2. The hub and axle must be sufficiently strong for the type of vehicle to which they are fitted.
3. The hub and axle must have a suitable and correctly adjusted geometry.

10-3 Mudguards

Reasons for rejection

Mudguard condition

1. A mudguard is not securely fixed to the vehicle.
2. A mudguard is so constructed or damaged that it is likely to present a hazard to road users.

Note 1

Mudguard means a fitting, inclusive of any portion of the vehicle and of any mudflaps attached, that serves to intercept material thrown up by a wheel more or less on the plane of the wheel.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004](#).

Permitted equipment

1. A vehicle may be fitted with a mudguard over each road wheel ([Note 1](#)).

Mudguard condition

2. A mudguard must be securely fixed to the vehicle and must be constructed so that it does not present a hazard to road users.

11 Exhaust

11-1 Exhaust system

Reasons for rejection

Mandatory equipment

1. A vehicle is not fitted with an exhaust system that includes a means of sound reduction ([Note 1](#)).

Condition

2. An exhaust system is not securely mounted.
3. The exhaust system is so constructed or modified that its operation or effectiveness can be readily interfered with.
4. The exhaust system is so constructed that emitted heat or fumes are likely to harm vehicle occupants, eg the exhaust gases

are not directed away from the perimeter of the vehicle's passenger compartment.

Performance

5. There is a leak of exhaust fumes from the exhaust system.

6. The noise output is noticeably and significantly louder than it would have been when the vehicle was manufactured with its original exhaust system.

Note 1

Exhaust system means a pipe assembly through which the engine exhaust gases pass to the atmosphere and includes some means of sound reduction such as a silencer or resonator.

Note 2

A spark arrestor is not required to be checked.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004](#).

Mandatory equipment

1. A forklift with an internal combustion engine must be fitted with an exhaust system ([Note 1](#)).

Condition

2. An exhaust system must not be constructed or modified in a way that allows a person to interfere readily with its operation or reduce its effectiveness.

3. An exhaust system must be designed, constructed, positioned and maintained in a way that minimises the risk of heat or fumes emitted from the system harming the vehicle's occupants.

Performance

4. An exhaust system must be effective and in good working order.

5. Noise from an exhaust system must not be noticeably and significantly louder than it would have been when the vehicle was manufactured with its original exhaust system.

11-2 Exhaust emissions

Reasons for rejection

Performance

1. A vehicle with the engine at normal operating temperature emits clearly visible smoke ([Note 2](#)) from the exhaust tail pipe during a rapid acceleration test ([Note 1](#)).

Note 1 Test procedure

Rapid acceleration test

While the engine is accelerated quickly from idle to 2500rpm (or half the maximum engine speed if this is lower), observe the tailpipe emissions. To avoid engine damage do not over-accelerate the engine. A vehicle that passes this test below normal operating temperature is deemed to have passed with the engine at normal operating temperature.

Note 2

Visible exhaust smoke does not include:

- emissions that are largely water vapour, or
- smoke that is barely visible, or
- a moderate amount of smoke caused by turbo lag, or
- some normal visible smoke caused by the engine's design (with the engine in good condition and running the correct fuel). The inspector may require documentary evidence that the engine produces some visible smoke because of its design.

Note 3

The vehicle inspector may need to take into account information from the vehicle manufacturer or their representative or other appropriate expert, eg about older or unusual vehicles.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Exhaust Emissions 2007](#).

Performance

1. A tractor must not emit clearly visible smoke when the engine is running at its normal operating temperature, under the following condition:

- as the engine is being accelerated rapidly to approximately 2500 revolutions per minute or approximately half the maximum engine speed (whichever is lower).

Page amended **1 June 2013** (see [amendment details](#)).

12 Towing connections

12-1 Towing connections

Reasons for rejection

Mandatory equipment

1. A tractor with a towing connection other than a three-point linkage does not have an attachment point to which a safety chain can be securely attached.

Condition

2. A towing connection component:

- a) is not securely attached, or
- b) is missing, or
- c) is cracked, distorted or significantly corroded, or
- d) has corrosion damage within 150mm of the mounting points, or
- e) is worn beyond manufacturer's specifications.

3. A coupling pin:

- a) has a diameter that is:
 - i. not appropriate for the diameter of the coupling, or
 - ii. less than 75% of the diameter of the larger of the coupling holes, or
- b) does not have a retaining mechanism, or
- c) is welded or repaired.

4. A coupling mechanism or safety locking device does not operate smoothly or effectively, or fasten securely.

5. A towing hook is:

- a) welded or repaired, or
- b) is worn at any point beyond the lesser of:
 - i. the coupling manufacturer's wear limits (if available), or
 - ii. 10% of the original dimensions.

Note 1

Towing connection means the combination of components that enables one vehicle to tow or be towed by another vehicle; it includes a towbar, drawbar, drawbeam, coupling and a safety chain attachment point.

Note 2

Coupling means that part of a vehicle that is specifically designed to enable it to be connected to another vehicle; it does not include a structural member of the towing or towed vehicle.

Note 3

Three-point linkage means, for a tractor or agricultural trailer, a towing connection that has three points of attachment.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Heavy Vehicles 2004](#)
- [Land Transport Rule: Vehicle Standards Compliance 2002](#), section 7.4.

Mandatory equipment

1. A tractor used to tow an agricultural trailer must have an attachment point to which a safety chain can be securely connected.

Permitted equipment

2. A tractor may be fitted with a towing connection that is a three-point linkage.

3. A vehicle other than a tractor may be fitted with a towing connection.

4. A tractor used to tow an agricultural trailer must have an attachment point to which a safety chain can be securely connected.

5. A coupling pin must:

- a) be of a diameter that is appropriate for the diameter of the tractor or trailer coupling, whichever has the smaller diameter hole, and
- b) have a diameter that is not less than 75% of the diameter of the larger of the coupling holes, and
- c) have a retaining mechanism.

Condition

6. Towing connection components fitted to a vehicle must ensure that a secure connection can be maintained between the towing and towed vehicles under all conditions of loading and operations for which the vehicle was constructed.

7. Towing connection components must be fit for purpose and in sound condition.

8. A vehicle must:

- a) be safe to be operated, and
- b) have been constructed using components and materials that are fit for that purpose, and
- c) be within safe tolerance of their state when manufactured.

Page amended 1 June 2013 (see [amendment details](#)).

13 Miscellaneous items

Page amended 1 June 2013 (see [amendment details](#)).

13-2 Fuel system

Reasons for rejection

Condition

1. There is a noticeable fuel leak from the fuel system.

2. The security of the fuel tank is affected by:

- a) corrosion damage ([Note 1](#)), or
- b) cracking or other damage, or
- c) insecure or loose tank mountings.

3. A fuel line is insecure or loose so that it is likely to be damaged during normal use of the vehicle.

4. A fuel pipe is severely damaged or excessively corroded.

5. A fuel hose is damaged or perished.

6. The fuel pump is insecure.

7. The fuel filler cap is missing, insecure or likely to allow fuel spillage when the vehicle is in normal use.

8. The fuel tank is fitted with a 'temporary use' fuel filler cap.

Note 1

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward sign of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases the area affected by corrosion damage will fall out and leave a hole.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004.](#)

Condition and performance

1. Fuel tanks, fuel lines and associated components must be:

- a) securely mounted, and
- b) made of suitable materials, and
- c) in good condition, and
- d) free from significant leaks, and
- e) positioned so that the risk of mechanical damage or heat gain is minimised.

Unclassified vehicles

1 Introduction

Inspection and certification of unclassified vehicles: Warrant of fitness requirements

This section specifies the requirements that are applicable to the inspection and certification of unclassified vehicles for the purpose of issuing a warrant of fitness (WoF).

Unclassified vehicles are light and heavy vehicles (including trailers) of the following types:

- a) vehicles propelled and supported solely by self-laying tracks
- b) motor vehicles exclusively designed and used on a road for driving, carrying or propelling any of the following, which must be permanently attached to the vehicle:
 - i. aerodrome runway sweepers
 - ii. electrical substations
 - iii. filters for transformer oil
 - iv. log haulers that are stationary when hauling logs
 - v. aero engine test benches
- c) mobile or movable huts, galleys or similar vehicles that are used on a road solely in connection with the construction or maintenance of roads
- d) aerodrome crash fire tenders that are used on a road only in emergencies
- e) trailers while being drawn by a vehicle as stated in b) to d) above
- f) motor vehicles used exclusively in connection with the embarking and disembarking of ships' passengers or for loading and unloading ships' mail, cargo and passengers' baggage, and used on a public highway only when proceeding unladen from one wharf to another wharf or from its usual place of storage to a wharf and returning to that place of storage
- g) cable jinkers
- h) front-end loaders

- i) log skidders
- j) tractor cranes
- k) rough-terrain cranes
- l) mobile crushing and screening plant machines which are mounted on trailers
- m) motor graders
- n) motor scrapers
- o) trailer scrapers
- p) plant for servicing oil-filled cables
- q) post debarkers
- r) saw bench apparatus
- s) forestry chippers
- t) tree feller bunchers
- u) trench diggers and excavators
- v) vehicles that are always used unladen on the road and that are designed exclusively for carrying earth or other bulk materials
- w) mobile concrete mixers that are mounted on tractors
- x) a vehicle that is similar in design, construction or purpose to a vehicle listed above that cannot be categorised by vehicle class

yy) all-terrain vehicles.

- Tractors for any use and self-propelled machines used solely in agricultural, land management or roading operations are covered in the [Tractors](#) section. Forklifts are covered in the [Forklifts](#) section.

General requirements

1. An unclassified vehicle that is operated on the road (ie that is registered) requires a WoF. Therefore, the vehicle inspector may inspect the vehicle only if it has a registration plate attached to it.
2. Unclassified vehicles are required to comply with WoF requirements only as far as is practicable for their design and type. The requirements in this section are what the NZTA considers to be practicable in relation to the inspection and certification of specialist vehicles.
3. Due to the large variety of vehicles covered in this section, some requirements have been kept general, and the vehicle inspector is expected to make a judgement call in line with the general requirements.
4. Modifications that affect a safety requirement do not require low volume vehicle (LVV) or heavy vehicle specialist (HVS) certification. However, if the vehicle inspector has concerns about the modification, he or she must obtain additional information from a relevant person before passing the vehicle for WoF.
5. An unclassified vehicle is not required to have a permanent vehicle identifier. However, if the vehicle has a permanent vehicle identifier, such as the manufacturer's serial number, it must be recorded on the checksheet and on the NZTA computer system.
6. This section applies to both light and heavy unclassified vehicles. Heavy vehicles, that is those with a gross vehicle mass (GVM) greater than 3500kg, may be inspected and certified for WoF only if the inspecting organisation and the vehicle inspector have current 'Heavy Vehicle, Exempt from CoF' authorisation.
7. For the purposes of this section, the GVM can generally be determined by adding the unladen weight of the vehicle (including fuel in the fuel system and any equipment and accessories necessary to operate the vehicle or equipment), crew and any carrying or lifting capacity the vehicle may have.
8. As this section applies to both self-propelled vehicles and trailers, separate requirements have been indicated where appropriate.

Page amended **14 October 2013** (see [amendment details](#)).

2 Vehicle exterior

2-1 External projections

Reasons for rejection

Condition and performance

1. The risk of a component ([Note 1](#)) hooking a vehicle, or hooking or grazing a person, has not been minimised.
2. An ornamental object or fitting ([Note 2](#)) protrudes in such a way that it is likely to injure a person.
3. A protruding object or fitting that has a functional purpose ([Note 3](#)) is fitted in a way that does not reduce the risk of injury to a person.
4. A component, object or fitting is not securely attached to the vehicle.
5. A protruding object or fitting adversely affects the driver's vision or control.

Note 1

Components include damaged, corroded and exposed body panels.

Note 2

Ornamental object or fitting means an object or fitting that does not have a practical purpose, for example bonnet emblems. The external projections requirements relate to the design and maintenance of objects and fittings that protrude from the exterior of the motor vehicle with regard to the safety of other motor vehicles, pedestrians and cyclists.

Note 3

Functional object or fitting means an object or fitting that has a practical purpose.

Summary of legislation

Applicable legislation

- [Land Transport Rule: External Projections 2001](#).

Permitted equipment

1. A vehicle may be fitted with a protruding ornamental or functional object or fitting.

Condition and performance

2. A protruding ornamental object or fitting ([Note 2](#)) must not be likely to injure a person.
3. A protruding object or fitting that has a functional purpose ([Note 3](#)) must be installed so that the risk of the object or fitting causing injury to a person is minimised.
4. Components of a vehicle, including damaged or corroded body panels, must be such that the risk of their hooking a vehicle, or hooking or grazing a person, is minimised.
5. A protruding object or fitting must not adversely affect driver vision or driver control.

2-2 Dimensions

The vehicle inspector need only inspect dimensions in detail if there is doubt about the vehicle's compliance.
--

Reasons for rejection

Mandatory equipment

1. A rigid vehicle or trailer ([Note 1](#)) exceeds the dimension requirements set out in **Table 2-2-1** and is not fitted with the appropriate hazard warning equipment set out in **Table 2-2-2**.
2. A required revolving amber beacon cannot be activated and deactivated.

Note 1

Rigid vehicle means a vehicle with motive power, driver's position and steering system, that does not have any pivot points to allow any part of the chassis of the vehicle to move or rotate in relation to any other part of the chassis of the vehicle; includes a pivot steer vehicle.

Note 2

Front axis means:

- a) the centre point of the front axle set of a trailer that has two axle sets and is steered by the front axle set, or
- b) the centre of the foremost axle of a rigid vehicle with motive power.

Rear axis:

- a) in relation to a vehicle with only one non-steering axle, means that axle
- b) in relation to a vehicle with a non-steering axle set of two axles, means
 - i. midway between those axles, if each axle has an equal number of tyres on it
 - ii. two-thirds of the distance from the lesser-tyred axle towards the greater-tyred axle, if one axle has twice as many tyres on it as the other axle
- c) in relation to a vehicle with a non-steering tri-axle set or a non-steering quad-axle set, or an overdimension vehicle with more than three axles, means midway between the extreme axles of the set
- d) except as specified in (e) below, in relation to a vehicle whose rear axle set includes one or more steerable axles in conjunction with one or more non-steering axles, means midway between the extreme non-steering axles of the set
- e) in relation to a semi-trailer with two non-steering axles at the front and two steering axles at the rear, means the centre line of the second non-steering axle
- f) in relation to a vehicle whose rear axle set includes one or more retracted axles in conjunction with one or more non-retracted axles, means midway between the extreme non-retracted axles of the set
- g) in relation to a vehicle that does not have an axle arrangement that is in paragraphs (a) to (f), means a position determined by the NZTA.

Pivot steer vehicle means a vehicle with a chassis that is split into two dependent parts that are connected by a permanent steering pivot.

Wheelbase means the distance from a vehicle's rear axis to its front axis.

Note 3

Full trailer means a trailer with two axle sets, the foremost of which is steered by a drawbar; includes a semi-trailer with non-steering axles coupled to a converter dolly.

Note 4

Simple trailer means a trailer (other than a semi-trailer) that has only one axle set.

Note 5

Semi-trailer means a trailer with only one axle set where the point of attachment to the towing vehicle or leading trailer:

- a) is no further rearward than the rearmost axle of the towing vehicle or rearmost axle of the leading trailer, or
- b) if the towing vehicle is a rigid vehicle and has more than one axle in its rear axle set, is no more than 300mm rearward of the rear axis of the towing vehicle.

Table 2-2-1. Dimension requirements (see Figure 2-2-4, Figure 2-2-5, Figure 2-2-6)

Dimension	Maximum distance	Comments
Width	2.5m 1.25m from each side of the longitudinal centreline of the vehicle	Measurement does not include: <ul style="list-style-type: none"> • collapsible mirrors which extend no more than 240mm from the body • direction indicators and side-marker lamps • cab exterior grab rails that extend no more than 50mm from the side of the body • ropes, lashings, straps, chains and related connectors and tensioning devices that extend no more than 25mm from either side, and that are not permanently or rigidly fixed to the vehicle • the bulge towards the bottom of a tyre.
Overall length	Rigid vehicle without tow coupling: 12.6m Rigid vehicle with tow coupling, full trailer: 11.5m Towing vehicle and semi-trailer combination: 19m (or 18m where the semi-trailer has a quad axle set with two steering axles) Towing vehicle and simple trailer: 22m Any other vehicle combination: 20m	Measurement does not include collapsible mirrors.
Height	4.25m	Measurement does not include load restraining devices (ropes, lashings, straps, chains, covers and related connectors and tensioning devices) that extend no more than 25mm above the vehicle, and that are not permanently or rigidly fixed to the vehicle.
Forward distance	Any trailer (other than a simple trailer): 8.5m Semi-trailer: 9.2m Rigid vehicle with tow coupling: 8.5m Rigid vehicle without tow coupling: 9.5m	Forward distance is measured as follows: <ul style="list-style-type: none"> • rigid vehicle: from the rear axis (Note 2) to the front of the vehicle (not including collapsible mirrors) • full trailer: from the rear axis (Note 2) to the front of the trailer (excluding the drawbar and front axle set with its associated carriage) • simple trailer: from the rear axis (Note 2) to the centre of the tow coupling • semi-trailer: from the rear axis (Note 2) to the centre of the kingpin.
Rear overhang	Vehicle with GVM 3500kg or less: <ul style="list-style-type: none"> • 4m Vehicle with GVM greater than 3500 kg: <ul style="list-style-type: none"> • rigid vehicle with rearmost axle being a non-steering axle: 4m or 70% of wheelbase (whichever is less) • rigid vehicle with rearmost axle being a steering axle: 4.25m or 70% or wheelbase (whichever is 	<ul style="list-style-type: none"> • Rear overhang is measured from the rear axis (Note 2) to the rear of the vehicle.

	<p>less)</p> <ul style="list-style-type: none"> • semi-trailer, simple trailer: 4.3m or 50% of forward distance (whichever is less) • full trailer: 4m or 50% of wheelbase (whichever is less) • Vehicle first registered anywhere before 1 December 1989: 4m. 	
Front overhang	<p>Rigid vehicle: 3m</p> <p>Simple trailer: 2.04m radius arc ahead of tow coupling centre</p> <p>Full trailer: 2.04m radius arc ahead of turntable centre</p> <p>Semi-trailer: 2.04m radius arc ahead of kingpin centre</p>	<p>Front overhang is measured as follows:</p> <ul style="list-style-type: none"> • rigid vehicle: from the front edge of the driver's seat in the rearmost position to the front of the vehicle • semi-trailer: from the centre of the kingpin to the front of the trailer • full trailer: from the centre of the turntable to the front of the trailer (excluding the drawbar) • simple trailer: from the centre of the tow coupling to ahead of the trailer.

Table 2-2-2. Hazard warning equipment requirements for vehicles that exceed the dimensions in Table 2-2-1

Vehicle category (see Figure 2-2-4)	Dimension	Limits (up to and including)	Required hazard warning equipment
Category 1	Width/forward distance Length Front overhang Rear overhang	2.5m/11.4m, or 3.1m/10.5m, or 3.7m/8.5m, or 25m, or 7m, or 7m	Flags ¹ or panels ² fitted on each side at the front and rear as close as practical to the outside edge
Category 2 (not including category 1)	Width/forward distance Length Front overhang Rear overhang	2.5m/13.3m, or 4.5m/8.5m, or 35m, or 10m, or 10m	1. Panels ² fitted on each side at the front and rear as close as practical to the outside edge 2. OVERSIZE sign ³ fitted at the front and rear if more than 3.1m wide 3. Revolving amber beacon fitted so that it is visible to approaching traffic if the vehicle is more than 3.7m wide
Category 3 (not including category 2)	Width/forward distance	2.5m/20m 5m/20m 5m/8.5m	1. Panels ² fitted on each side at the front and rear as close as practical to the outside edge 2. OVERSIZE sign ³ fitted at the front and rear 3. Revolving amber beacon fitted so that it is visible to approaching traffic if the vehicle is more than 3.7m wide
Category 4 (not including category 3)	Width/forward distance	11m/20m 11m/8.5m	1. Panels ² fitted on each side at the front and rear as close as practical to the outside edge 2. OVERSIZE sign ³ fitted at the front and rear 3. Revolving amber beacon fitted so that it is visible to approaching traffic if the vehicle is more than 3.7m wide

¹ Flags:

- must be fluorescent yellow
- must be at least 400mm long x 300mm wide.

² Hazard warning panels:

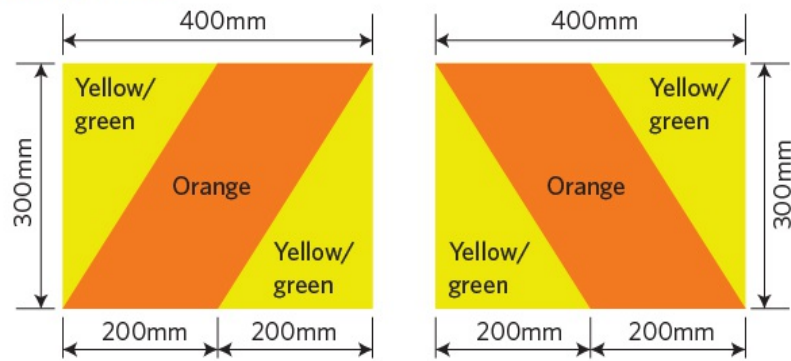
- must be reflective yellow-green with a reflective orange diagonal stripe
- must be of at least the minimum dimensions and the colours specified in **Figure 2-2-2**.

³ OVERSIZE sign:

- must be black lettering on a yellow-green background
- must be at least 300mm x 1100mm in size
- may be in two parts: OVER and SIZE.

Figure 2-2-1. Hazard panel details

Display these panels



or these panels

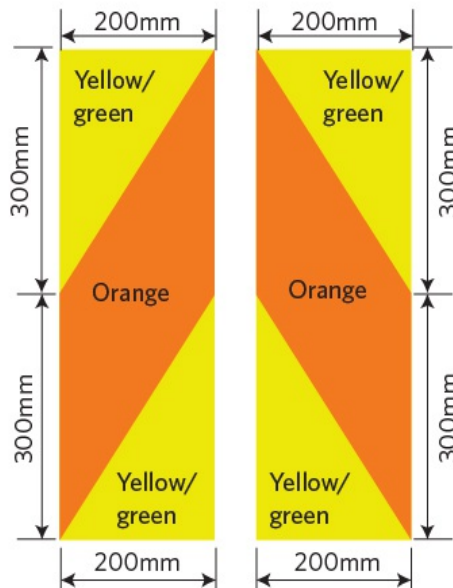


Figure 2-2-2. Hazard panel location and orientation

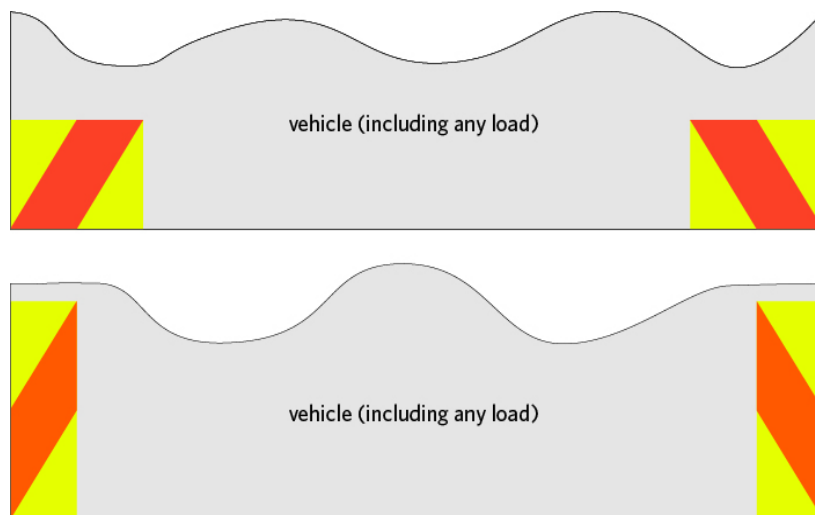


Figure 2-2-3. Overdimension vehicle categories for width/forward distance thresholds

Use this figure to determine vehicle category in **Table 2-2-2**.

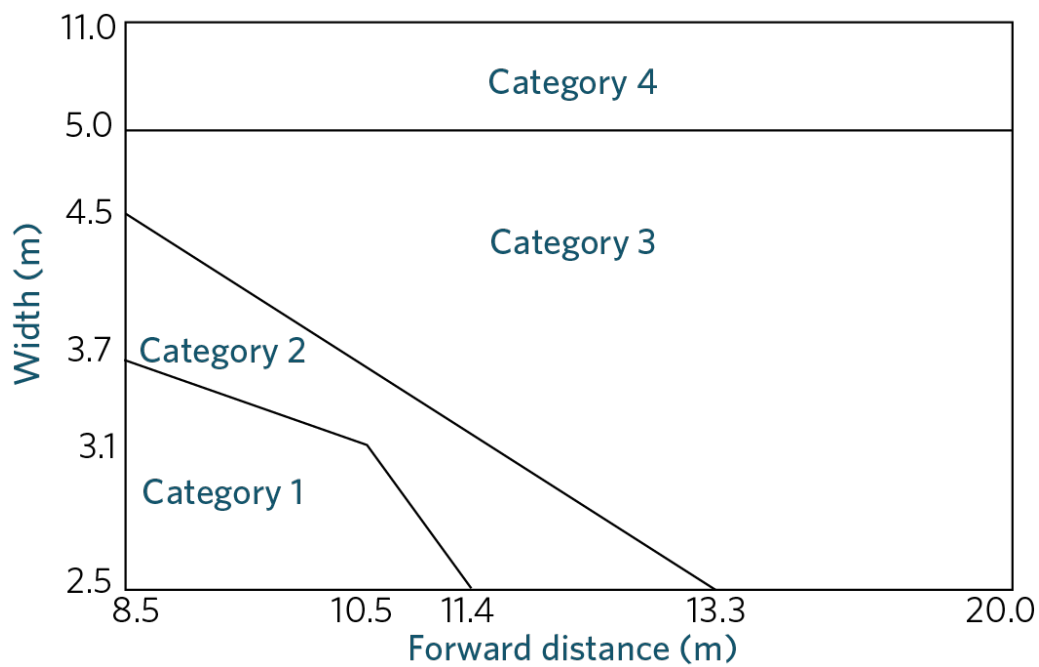
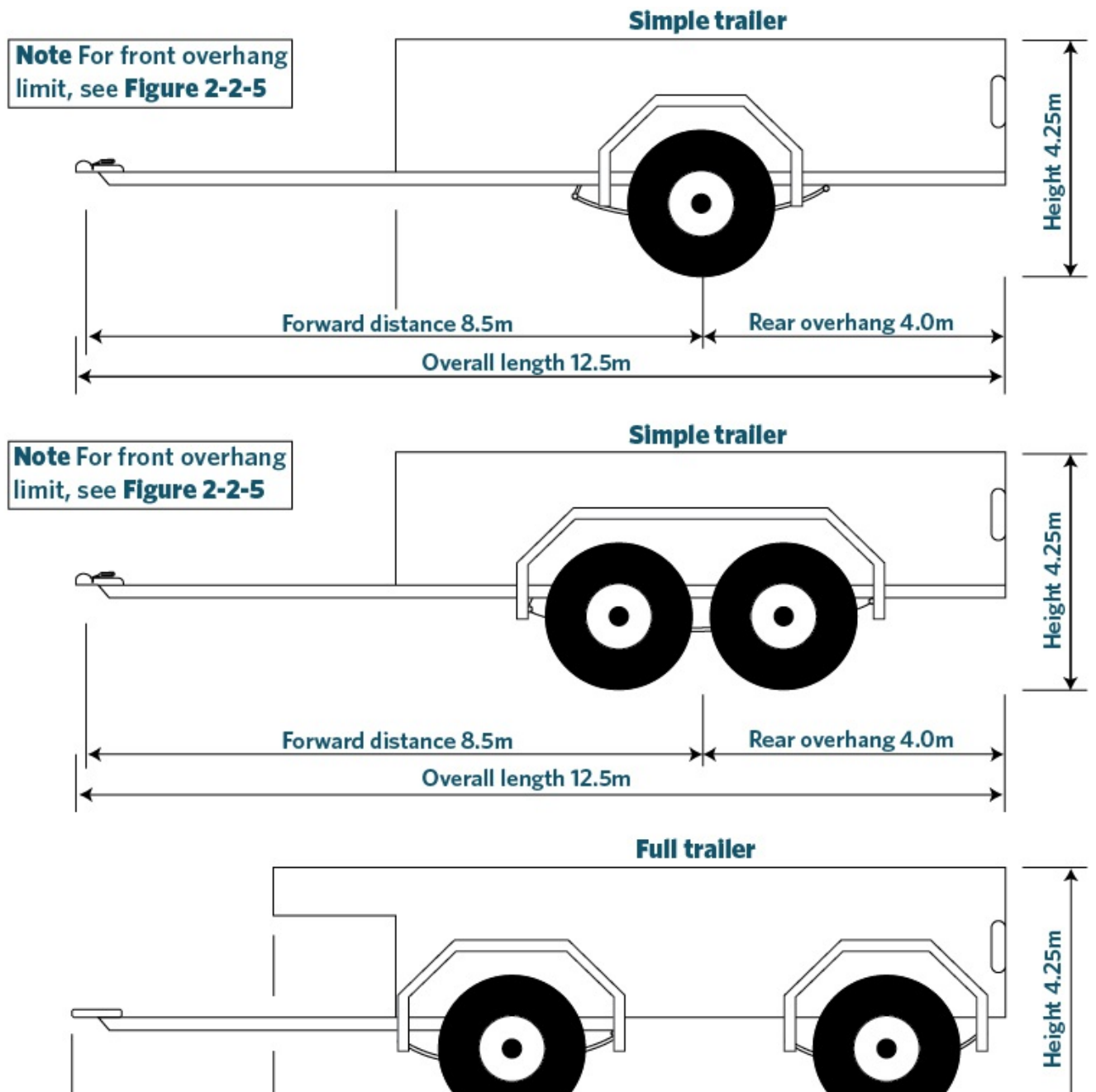


Figure 2-2-4. Trailer dimensions



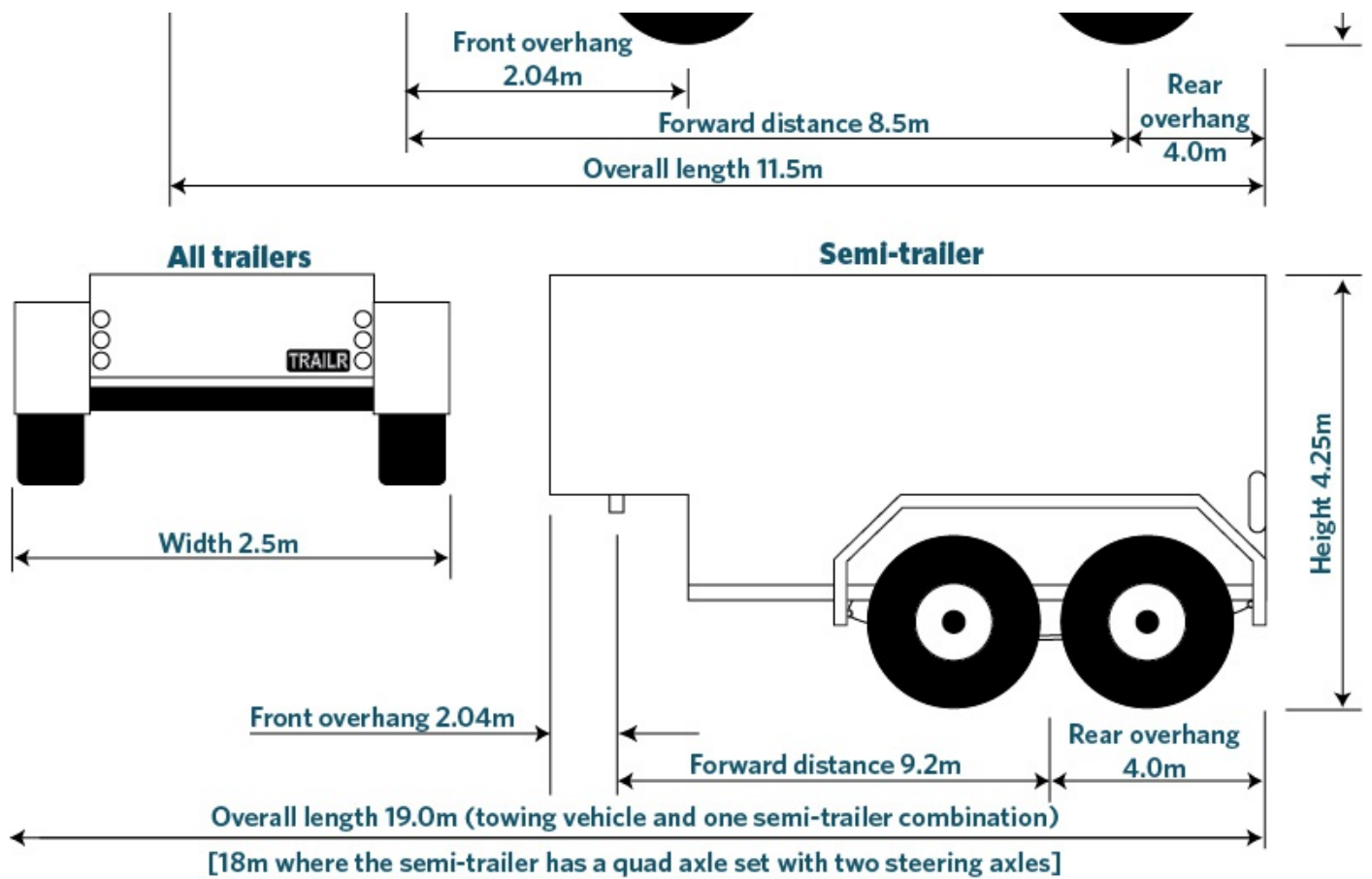


Figure 2-2-5. Measurement of front overhang

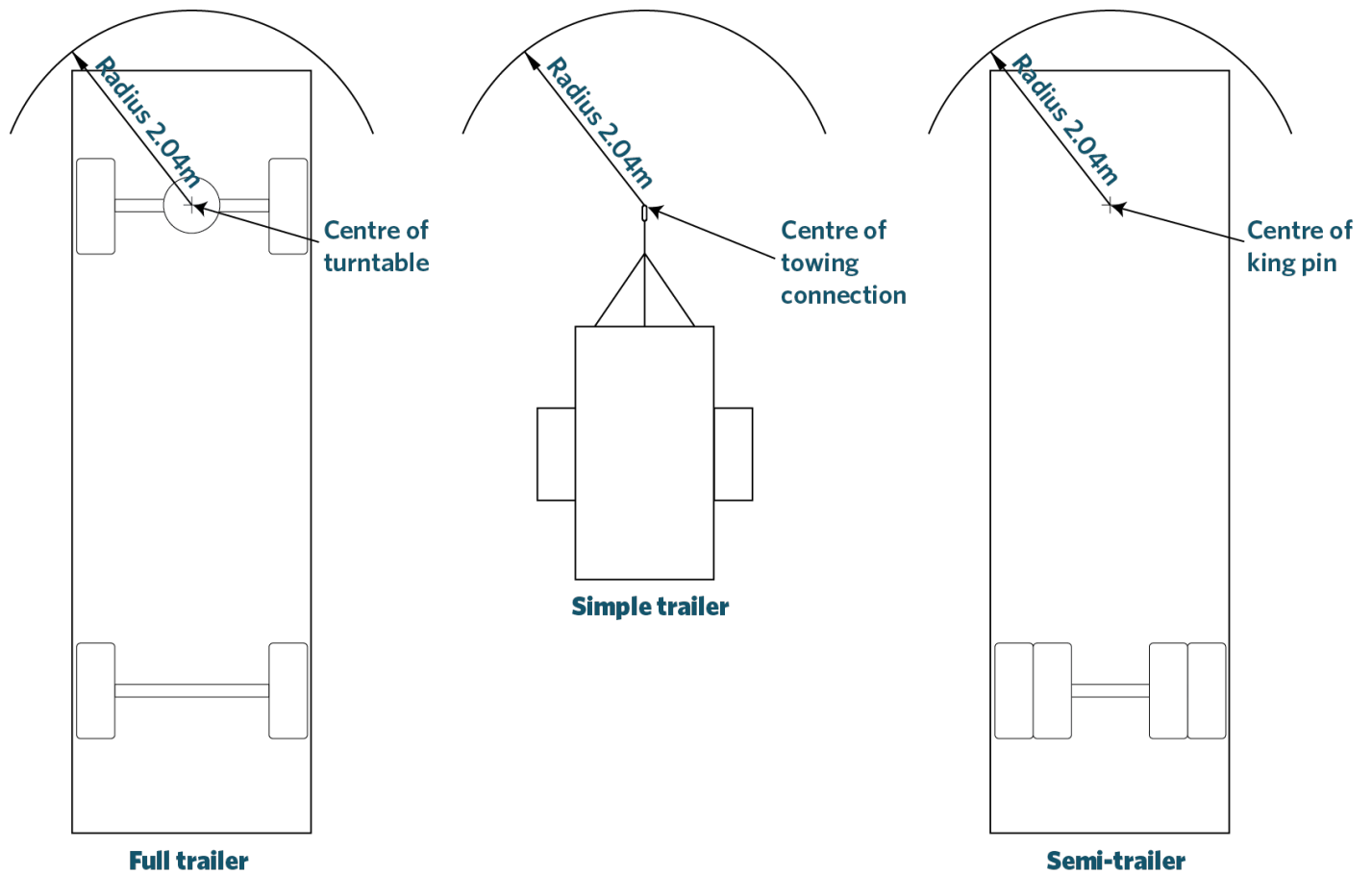
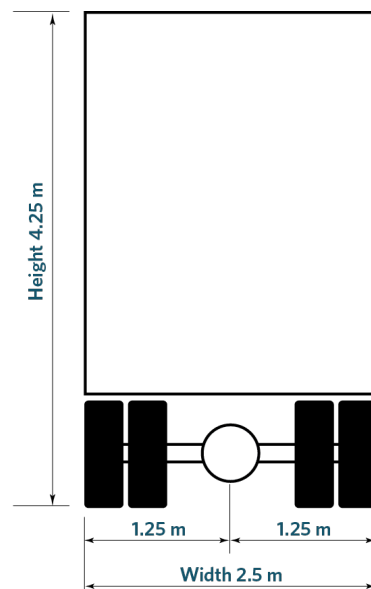
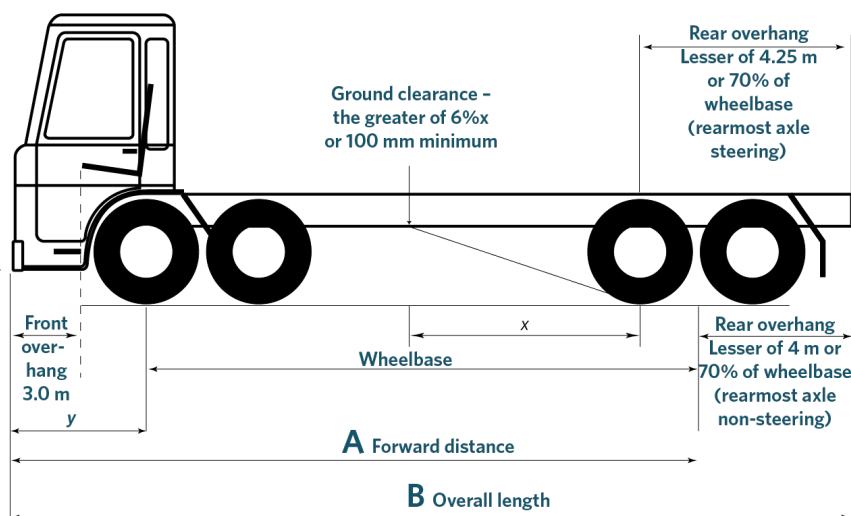


Figure 2-2-6. Dimensions for rigid heavy vehicles

Ground clearance – the greater of 6%y or 100 mm minimum



A 9.5 m – no tow coupling
8.5 m – with tow coupling

B 13.5 m – Rigid bus with 3 axles where the rearmost axle is a single-tired steering axle (11.5m with tow coupling)
12.6 m – all other vehicles (11.5m with tow coupling)

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Dimensions and Mass 2002](#).

Mandatory equipment

1. A rigid vehicle or trailer ([Note 1](#)) that exceeds the dimensions in **Table 2-2-1** must be fitted with additional equipment set out in **Table 2-2-2**.

Page amended **1 June 2013** (see [amendment details](#)).

3 Vehicle structure

3-1 Vehicle structure

Reasons for rejection

Condition

- The structure of the vehicle has visible:
 - deformation from the original shape that has affected the vehicle's structural integrity ([Note 1](#)) ([Note 3](#)), or
 - cracking, or
 - fracture, or
 - any corrosion, damage or repair that the inspector considers has caused weakening of a load-bearing structure.
- A protection structure, specialist equipment or a cab is not securely attached to the vehicle body or chassis.

Note 1

The structure of the vehicle includes the chassis, body mounting points and the body frame, but not any specialist equipment or protection structure, except for their attachment to the vehicle.

Note 2

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward sign of such corrosion

damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Note 3

The vehicle inspector may request additional relevant information from a repairer or other relevant person. The vehicle inspector should withhold the WoF if there is reason to believe that the vehicle has:

- a) structural damage, or
- b) inadequate structural repair(s), or
- c) corrosion damage

to the extent that it could affect the vehicle's structural strength or one of the vehicle's safety requirements. If the owner questions the decision, the vehicle inspector should recommend the vehicle owner obtain further written assessment from the equipment manufacturer or other suitable person.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Standards Compliance 2002](#), clause 7.4.

Condition

1. The vehicle must be safe to be operated.
2. The components and materials must be fit for their purpose and within safe tolerance of their state when manufactured or modified.

4 Lighting

4-1 Headlamps

Reasons for rejection

Mandatory, permitted and prohibited equipment

1. A self-propelled vehicle is not fitted with either:
 - a) one pair of dipped-beam headlamps, or
 - b) one pair of forward-facing work lamps.
2. A self-propelled vehicle is fitted with more than:
 - a) one pair of dipped-beam headlamps, or
 - b) two pairs of main-beam headlamps.
3. A self-propelled vehicle is fitted with a headlamp that is not in a pair.
4. A retrofitted pair of headlamps is not fitted:
 - a) symmetrically, or
 - b) as far towards each side of the vehicle as is practicable.
5. A self-propelled vehicle is fitted with a dipped-beam headlamp where the maximum intensity of the beam is projected to the right.
6. A trailer is fitted with headlamps.

Condition

7. A lamp is insecure.
8. A lens is missing or has a hole, crack or other damage that allows moisture or dirt to enter.
9. A reflector or reflector is damaged or has deteriorated so that light output is reduced.
10. A mandatory lamp is obscured or contains dirt or moisture in the form of large droplets, runs or puddles.
11. A main-beam headlamp warning device is obscured from the driver's vision.

Performance

12. When switched on, a headlamp emits a light that is:

- a) not substantially white or amber, or
- b) not approximately equal in colour or intensity to the other lamp in a pair, or
- c) not steady, or
- d) not bright enough to illuminate the road ahead, eg due to modification, deterioration or an incorrect light source, or
- e) too bright, causing significant dazzle to other road users, eg due to an incorrect light source.

13. When the dipped-beam headlamps are switched on (with wheels pointing straight ahead):

- a) a lamp does not operate, or
- b) more than two lamps operate on dipped beam, or
- c) the light beam produces an incorrect beam pattern, is not focused, or is reduced or altered, or
- d) the centreline of the light beam is too far to the left or slopes down too far so that the headlamp is no longer capable of illuminating the road at least 50m ahead (Figure 4-1-1), or
- e) the centreline of the light beam:
 - i. projects to the right of the vehicle's centreline, or
 - ii. does not dip at an angle specified in Table 4-1-1.

14. When the main-beam headlamps are switched on (with wheels pointing straight ahead):

- a) a lamp does not operate, or
- b) more than four lamps operate on main beam, or
- c) the centreline of the light beam projects to the right of the vehicle's centreline or up from the horizontal (Figure 4-1-2), or
- d) the lamps are not capable of being switched to dipped beam or turned off from the driver's seating position, or
- e) a main-beam headlamp warning device does not indicate to the driver that the main-beam headlamps are switched on.

15. On a self-propelled vehicle with no headlamps, when the forward-facing work lamps are switched on a mandatory lamp does not operate.

16. On a self-propelled vehicle with no headlamps, when the forward-facing work lamps are switched on a lamp emits a light that is:

- a) not substantially white or amber, or
- b) not approximately equal in colour or intensity to the other lamp in a pair, or
- c) not steady, or
- d) not bright enough to illuminate the road ahead, eg due to modification, deterioration or an incorrect light source, or
- e) dazzling to other road users, eg due to inappropriate alignment (Figure 4-1-2 - Work lamp beam pattern).

Note 1 Definitions

Work lamp means a high-intensity lamp that is not necessary for the operation of the vehicle but is designed to illuminate a work area or scene, and includes a scene lamp, a spot lamp and an alley lamp. In the case of a vehicle without headlamps, forward-facing work lamps must be fitted to illuminate the road ahead during the hours of darkness.

Headlamp means a lamp designed to illuminate the road ahead of a vehicle, and that is:

- a) a dipped-beam headlamp (single lamp), or
- b) a main-beam (high-beam) headlamp (single lamp), and includes a driving lamp, or
- c) a combination of a dipped-beam headlamp and a main-beam headlamp (dual-lamp unit).

Note 2

If the dipped-beam headlamps are able to be adjusted from the driver's seating position, the alignment must be checked with the adjustment at its highest position.

Note 3

If the vehicle is fitted with self-levelling suspension, the alignment must be checked with the suspension at its normal level.

Note 4

If a headlamp is fitted with a readily removable cover, other than a clear protective cover, this must be removed for inspection of the headlamp.

Note 5

A vehicle originally manufactured with a headlamp arrangement that differs from what is required or permitted in this section may retain the original headlamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Table 4-1-1. Allowable dipped-beam headlamp alignment

	Headlamp type	Distance from ground to centre of light source	Dip rate of beam centre: lower and upper limits		
			Percent (%)	mm/3m	Degrees (°)
EITHER	Any headlamp dipped beam	N/A	As specified by the vehicle or headlamp manufacturer		
OR	Headlamp with symmetric dipped-beam pattern	N/A	3.0–3.5	90–105	1.7–2.0
OR	Headlamp with asymmetric dipped-beam pattern and distance from ground to centre of light source	less than 0.8m	1.0–1.5	30–45	0.57–0.85
		0.8–1.2m	1.0–2.0	30–60	0.57–1.15
		more than 1.2m	2.0–2.5	60–75	1.15–1.43

Table 4-1-2. Dipped-beam angle conversions

Percent (%)	mm/3m	Degrees (°)		Percent (%)	mm/3m	Degrees (°)
1.0	30	0.6		2.3	69	1.3
1.1	33	0.6		2.4	72	1.4
1.2	36	0.7		2.5	75	1.4
1.3	39	0.7		2.6	78	1.5
1.4	42	0.8		2.7	81	1.5
1.5	45	0.9		2.8	84	1.6
1.6	48	0.9		2.9	87	1.7
1.7	51	1.0		3.0	90	1.7
1.8	54	1.0		3.1	93	1.8
1.9	57	1.1		3.2	96	1.8
2.0	60	1.1		3.3	99	1.9
2.1	63	1.2		3.4	102	1.9
2.2	66	1.3		3.5	105	2.0

Figure 4-1-1. Minimum illuminated area

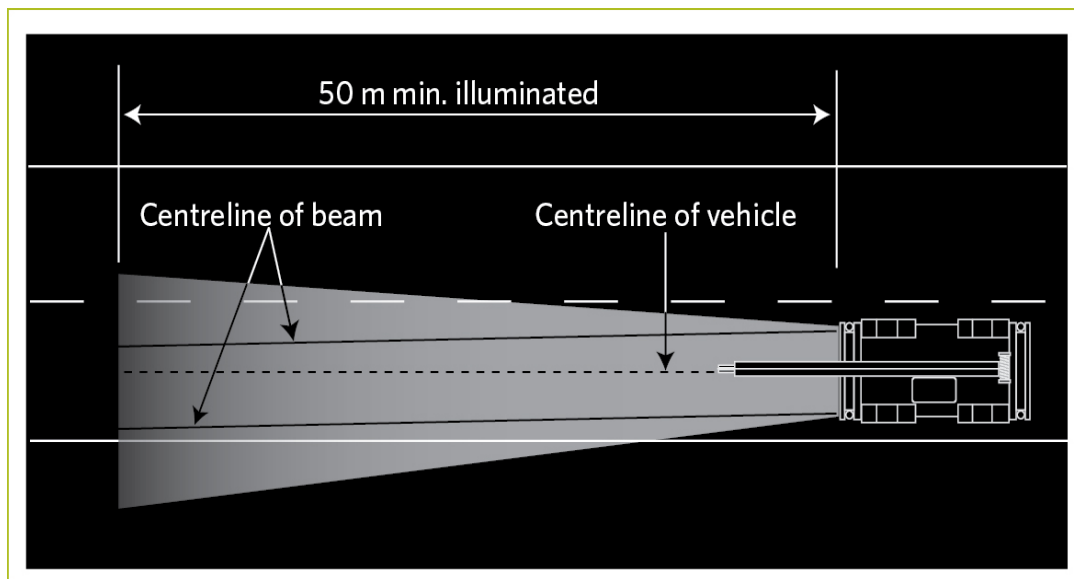
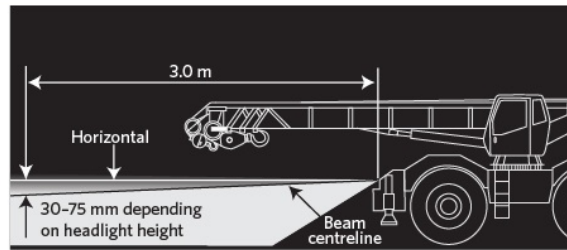
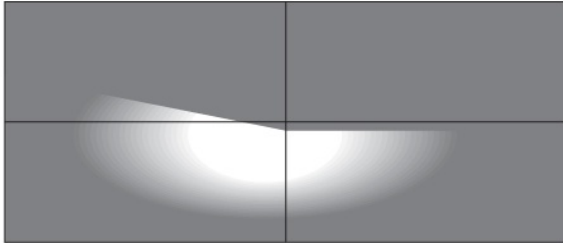


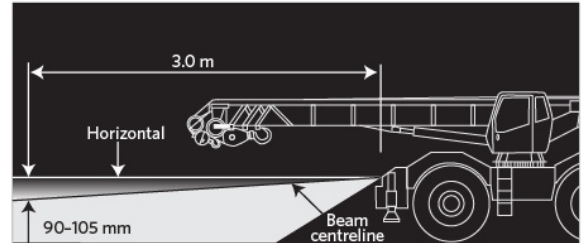
Figure 4-1-2. Dipped beams



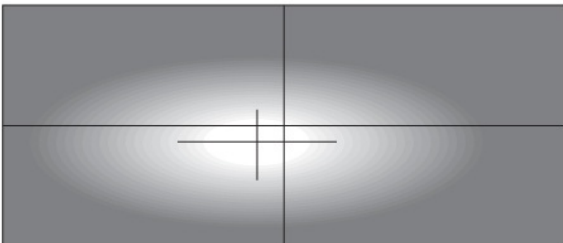
Asymmetric dipped beam



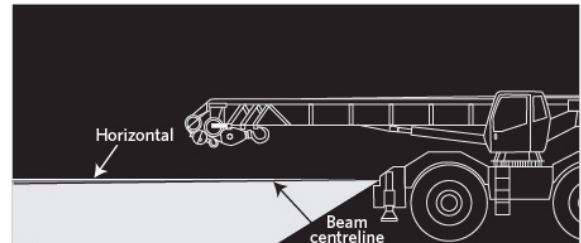
Asymmetric dipped-beam headlamp pattern on light board



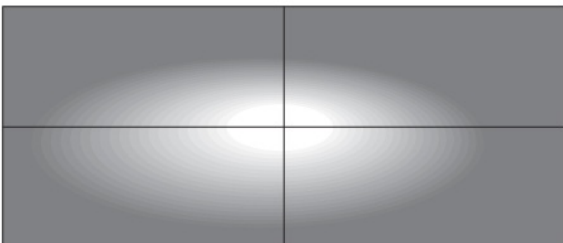
Symmetric dipped beam



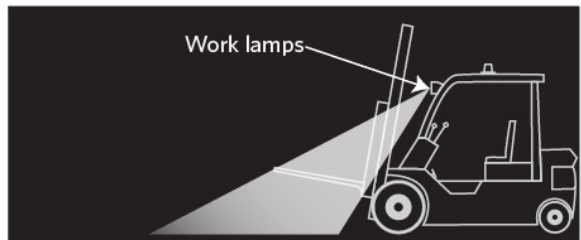
Symmetric dipped-beam headlamp pattern on light board



Main (high) beam



Main- (high-) beam headlamp pattern on light board



Work lamp beam pattern

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Mandatory and permitted equipment

1. A self-propelled vehicle must be fitted with one pair of dipped-beam headlamps (Note 1).
2. A self-propelled vehicle may be fitted with one or two pairs of main-beam headlamps.
3. A warning device may be fitted that indicates that the main-beam headlamps are switched on.
4. A retrofitted pair of headlamps must be symmetrically mounted as far towards each side of the vehicle as is practicable.

Prohibited equipment

5. A dipped-beam headlamp designed solely for a left-hand drive vehicle, where the maximum intensity of the beam is dispersed to the right, must not be fitted.
6. A trailer must not be fitted with headlamps.

Condition

7. A headlamp must:

- a) be in sound condition, and
- b) not be obscured.

Performance

8. A lamp must operate in a way that is appropriate for the lamp and the vehicle.

9. A lamp must emit a steady light.

10. A lamp must provide sufficient illumination and light output to illuminate the road ahead.

11. A pair of lamps must emit light that is approximately of equal colour and intensity when switched on.

12. A lamp must emit a beam that is substantially white or amber.

13. A main-beam headlamp must be capable of being dipped or turned off from the driver's position.

14. A warning device that indicates that the main-beam lamps are in operation must be in good working order.

15. When the headlamps are switched on and the vehicle's front wheels are pointing in the straight-ahead position:

- a) the centre of a headlamp beam must be either parallel to or to the left of the longitudinal centreline of the vehicle, and
- b) the centre of a main-beam headlamp beam must be either parallel to or dipping down from the horizontal and
- c) the centre of a dipped-beam headlamp beam must dip at an angle specified in Table 4-1-1.

16. The dipped-beam headlamps must illuminate the road ahead for 50m in normal darkness.

17. A headlamp must be fitted with a light source that is specified by the vehicle manufacturer or the headlamp manufacturer.

4-2 Front and rear fog lamps

Reasons for rejection

Permitted equipment

1. A self-propelled vehicle is fitted with:

- a) only one front fog lamp, or
- b) more than one pair of front fog lamps.

2. A trailer is fitted with:

- a) a front fog lamp, or
- b) more than two rear fog lamps.

3. A vehicle is fitted with more than two rear fog lamps.

4. A retrofitted pair of fog lamps is:

- a) not fitted symmetrically, or
- b) not fitted as far towards each side of the vehicle as is practicable, or
- c) positioned higher than the dipped-beam headlamps.

Condition

5. A lamp is insecure or contains moisture in the form of large droplets, runs or puddles.

6. A lens is missing or has a hole, crack or other damage that allows moisture or dirt to enter.

7. A reflector is damaged or has deteriorated so that light output is reduced.

8. A fog lamp warning device, if fitted, is obscured from the driver's vision.

Performance

9. When switched on, a front fog lamp does not operate.

10. When switched on, a front fog lamp emits light that:

- a) is not projected to the front, or

- b) produces an incorrect beam pattern (Figure 4-2-1), or
- c) is not substantially white or amber to the front, or
- d) is not approximately equal in colour or intensity to the other lamp in the pair, or
- e) is not steady, or
- f) is not bright enough to illuminate the road ahead in conditions of severely reduced visibility, eg due to modification, deterioration, dirt or an incorrect light source, or
- g) is too bright, and could dazzle other road users, eg due to an incorrect light source, or
- h) has a beam centre to the right of the vehicle's centreline, or
- i) has a beam that is not permanently dipped, or
- j) has a beam centre that dips at an angle of less than 3% (Figure 4-2-1).

11. When switched on, a rear fog lamp emits light that is not:

- a) projected to the rear, or
- b) diffuse, or
- c) not substantially red, or
- d) not approximately equal in colour or intensity to the other lamp in a pair, or
- e) steady, or
- f) bright enough to indicate the presence of the vehicle from the rear in conditions of severely reduced visibility, eg due to modification, deterioration or an incorrect light source.

12. A fog lamp cannot be switched off from the driver's seating position.

13. Where a fog lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

14. A fog lamp warning device, if fitted, does not operate.

Note 1

Fog lamp means a front or rear lamp designed to aid the driver or other road users in conditions of severely reduced visibility, including fog or snow but not including clear atmospheric conditions under the hours of darkness.

Note 2

A rear fog lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

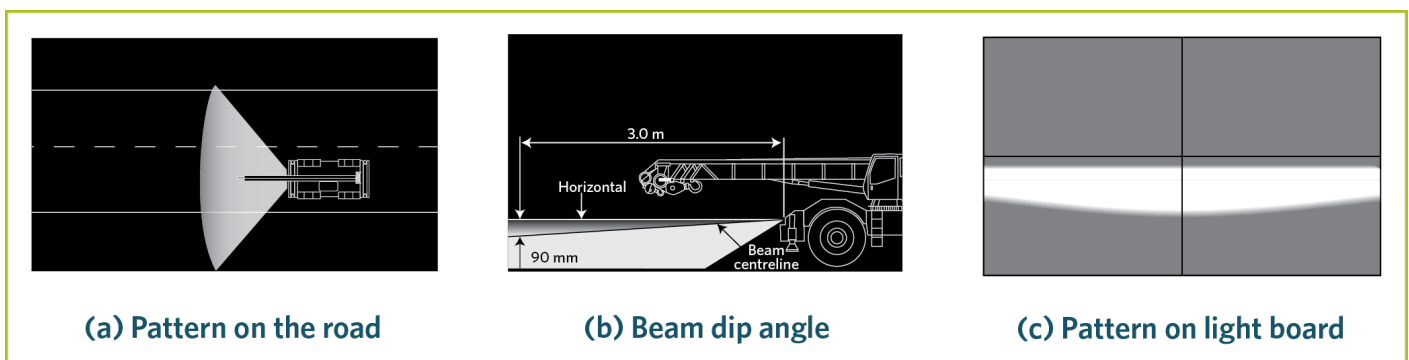
Note 3

If a front fog lamp is fitted with a readily removable cover, other than a clear protective cover, this must be removed for inspection of the fog lamp.

Note 4

A vehicle originally manufactured with a front or rear fog lamp arrangement that differs from what is required or permitted in this section may retain the original front or rear fog lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Figure 4-2-1. Front fog lamp characteristics



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Permitted and prohibited equipment

1. A self-propelled vehicle may be fitted with:
 - a) one pair of front fog lamps, and
 - b) one or two rear fog lamps.
2. A trailer:
 - a) may be fitted with one or two rear fog lamps, and
 - b) must not be fitted with a front fog lamp.
3. A retrofitted pair of fog lamps must be symmetrically mounted as far as is practicable towards each side of the vehicle.
4. A retrofitted front fog lamp must not be positioned higher than the dipped-beam headlamps.
5. A vehicle may be fitted with a warning device that indicates that a front or rear fog lamp is in operation.

Condition

6. A front fog lamp must be in sound condition.
7. A rear fog lamp must be in sound condition if it emits a light.

Performance

8. A fog lamp must operate in a way that is appropriate for the lamp and the vehicle.
9. A fog lamp must emit a steady light.
10. A front fog lamp must provide sufficient light output to illuminate the road ahead in conditions of severely reduced visibility.
11. A rear fog lamp must provide sufficient light output to indicate the presence of the vehicle on the road in conditions of severely reduced visibility.
12. The light emitted from a front fog lamp must be substantially white or amber.
13. The light emitted from a rear fog lamp must be diffuse and substantially red in colour.
14. A pair of fog lamps must emit light that is approximately equal in colour and intensity.
15. The centre of a front fog lamp beam must be parallel to or to the left of the longitudinal centreline of the vehicle.
16. The centre of a front fog lamp beam must be permanently dipped at an angle of at least 3%.
17. A fog lamp must be able to be turned off from the driver's seating position.
18. A front or rear fog lamp warning device must be in good working order.
19. Where a fog lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-3 Cornering lamps

Reasons for rejection

Permitted and prohibited equipment

1. A self-propelled vehicle is fitted with:
 - a) only one lamp, or
 - b) more than one pair of lamps, or
 - c) a lamp that either:
 - i. was not originally fitted by the vehicle manufacturer, or
 - ii. is not fitted in the original position.
2. A trailer is fitted with cornering lamps.

Condition

3. A lamp is insecure.

4. A lens is missing or has a hole, crack or other damage that allows moisture or dirt to enter.
5. A lamp's reflector is damaged or has deteriorated so that light output is reduced.

Performance

6. When activated by switching on the direction indicator lamp or by turning the steering wheel, a cornering lamp does not:
 - a) operate, or
 - b) project in the direction of the turn.
7. A cornering lamp emits light that is:
 - a) not substantially white or amber, or
 - b) not approximately equal in colour or intensity to the other lamp in a pair, or
 - c) not steady, or
 - d) not bright enough to illuminate the road ahead in the direction of the turn, eg due to modification, deterioration, dirt or an incorrect light source, or
 - e) too bright, causing dazzle to other road users, eg due to an incorrect light source or misalignment.
8. Where a cornering lamp comprises an array of light sources (eg LEDs), less than 75% of these operate.

Note 1

Cornering lamp means a lamp that is designed to emit light at the front of a vehicle to supplement the vehicle's headlamps by illuminating the road ahead in the direction of the turn.

Note 2

An original equipment (OE) lamp is one that is fitted by the vehicle manufacturer in the original position, or is an equivalent replacement or aftermarket lamp suitable for the position provided by the vehicle manufacturer for that lamp. All other lamps are considered retrofitted (ie non-OE).

Note 3

A vehicle originally manufactured with a cornering-lamp arrangement that differs from what is required or permitted in this section may retain the original cornering lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Permitted and prohibited equipment

1. A self-propelled vehicle may have one pair of cornering lamps fitted as OE.
2. A trailer must not be fitted with cornering lamps.

Condition

3. A cornering lamp must be in sound condition.

Performance

4. A cornering lamp must operate in a way that is appropriate for the lamp and the vehicle.
5. A cornering lamp must emit light that is substantially white or amber.
6. A pair of cornering lamps must emit light that is approximately equal in colour and intensity.
7. A cornering lamp must emit a steady light.
8. A cornering lamp must provide sufficient light output to illuminate the road ahead in the direction of the turn.
9. A cornering lamp must be correctly aligned.
10. Where a cornering lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-4 Daytime running lamps

Reasons for rejection

Prohibited equipment

1. A vehicle is fitted with daytime running lamps.

Note 1

Daytime running lamp means a lamp designed to emit a low-intensity light forward of a vehicle to make it more easily seen in the daytime.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Prohibited equipment

1. A vehicle must not be fitted with daytime running lamps.

4-5 Direction indicator lamps

Reasons for rejection

Mandatory and permitted equipment

1. A self-propelled vehicle first registered in New Zealand before 1 January 2006, that is so constructed that the driver's arm signals cannot be seen from behind the vehicle, is not fitted with one pair of rear direction indicator lamps.
2. A self-propelled vehicle first registered on or after 1 January 2006 is not fitted with one pair of rear direction indicator lamps.
3. A trailer that is so constructed that the driver's arm signals cannot be seen from behind the trailer is not fitted with one pair of lamps at the rear.
4. A self-propelled vehicle is fitted with more than:
 - a) two pairs of lamps at the rear (other than top-mounted lamps), or
 - b) two pairs of lamps at the front, or
 - c) two side-facing lamps on each side of the vehicle.
5. A heavy trailer or a self-propelled vehicle is fitted with more than one pair of top-mounted lamps at the rear.
6. A vehicle is fitted with a lamp that is not in a pair.
7. A pair of top-mounted lamps is not fitted as close as is practicable to the top corners of the bodywork.
8. A retrofitted pair of lamps is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards each side of the vehicle as is practicable.

Condition

9. A lamp is insecure or, if a mandatory lamp, is obscured or contains visible moisture in the form of large droplets, runs or puddles.
10. A lens is missing or has a hole, crack or other damage that allows moisture or dirt to enter.
11. A reflector is damaged or has deteriorated so that light output is reduced.

Performance

12. When switched on, a direction indicator lamp:
 - a) does not operate, or
 - b) does not begin flashing within one second of switching on, or
 - c) flashes:
 - i. faster than two flashes per second, or
 - ii. slower than one flash per second, or
 - iii. at a different rate from other lamps on the same side.
13. When switched on, a direction indicator lamp emits a light that is:

- a) not substantially amber or red to the rear, or
- b) not substantially white or amber to the front, or
- c) not substantially amber to the side, or
- d) not approximately equal in colour or intensity to the other lamp in a pair, or
- e) not bright enough to be visible from 100m in normal daylight and from 200m in normal darkness, eg due to modification, deterioration, dirt or an incorrect light source, or
- f) too bright causing significant dazzle to other road users, eg due to an incorrect light source, or
- g) altered, eg due to damage or modification.

14. On a vehicle of American origin fitted with combined stop and indicator lamps, the stop lamp function is not overridden by the indicator function.

15. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

16. A lamp-failure warning device does not operate.

Note 1

Direction indicator lamp means a lamp designed to emit a flashing light to signal the intention of the driver to change the direction of a vehicle to the right or to the left.

Note 2

A permitted (ie non-mandatory) rear- or side-facing direction indicator lamp that does not comply with equipment, condition and performance requirements must be made to comply or disabled so that it does not emit a light.

Note 3

An original equipment (OE) lamp is one that is fitted by the vehicle manufacturer in the original position, or is an equivalent replacement or aftermarket lamp suitable for the position provided by the vehicle manufacturer for that lamp. All other lamps are considered retrofitted (ie non-OE).

Note 4

Vehicles first registered in New Zealand before 27 February 2005 may have rear direction indicator lamps that also function as reversing lamps.

Note 5

A vehicle originally manufactured with a direction-indicator-lamp arrangement that differs from what is required or permitted in this section may retain the original direction indicator lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Mandatory and permitted equipment

1. A self-propelled vehicle, first registered in New Zealand before 1 January 2006, must be fitted with one or two pairs of rearward-facing lamps if the vehicle is so constructed that it prevents an arm signal given by the driver from being seen from behind the vehicle.
2. A self-propelled vehicle first registered anywhere on or after 1 January 2006 must be fitted with one or two pairs of lamps to the rear of the vehicle.
3. A self-propelled vehicle may be fitted with one or two pairs of forward-facing lamps.
4. A trailer must be fitted with one or two pairs of lamps at the rear if the trailer is so constructed that it prevents an arm signal given by the driver from being seen from behind the vehicle combination.
5. A trailer may be fitted with:
 - a) one or two pairs of lamps at the front, and
 - b) one or two pairs of lamps at the rear.
6. A self-propelled vehicle or a heavy trailer may be fitted with an additional pair of lamps at the rear of the vehicle. These must be symmetrically mounted as far towards the top corners of the bodywork of the vehicle as is practicable (top-mounted lamps).

7. A vehicle may be fitted with one or two side-facing lamps on each side.
8. A suitable device may be fitted to a self-propelled vehicle that indicates to the driver the failure of a mandatory lamp.
9. A retrofitted pair of lamps must be mounted:
 - a) symmetrically as far towards each side of the vehicle as is practicable, and
 - b) at a height from the ground not exceeding 1.5m, or if this is not practicable due to the shape of the bodywork of the vehicle, not exceeding 2.1m.
10. On vehicles of American origin the stop lamp and direction indicator lamp function may be combined in one lamp.

Condition

11. A direction indicator lamp must not be obscured (if a mandatory lamp).

Performance

12. A direction indicator lamp must operate in a way that is appropriate for the lamp and the vehicle.
13. A direction indicator lamp must emit a light that is substantially:
 - a) red or amber to the rear, and
 - b) white or amber to the front, and
 - c) amber to the side.
14. A lamp must flash at a fixed frequency in the range of 1 to 2 Hertz.
15. Each lamp in a pair must, when operated, emit a light of approximately equal intensity, colour and frequency.
16. A lamp-failure indicating device, if fitted, must function.
17. A lamp must emit a light that is visible from 100m during normal daylight and 200m in normal darkness.
18. If a vehicle of American origin is fitted with combined stop and indicator lamps, the indicator lamps may override the stop lamps so that the stop lamps operate as direction indicators.
19. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-6 Forward-facing position lamps

Reasons for rejection

Mandatory and permitted equipment

1. A vehicle more than 2m wide is not fitted with one pair of lamps.
2. A self-propelled vehicle first registered in New Zealand on or after 1 January 1978 that is more than 1.5m wide is not fitted with one pair of lamps.
3. A vehicle is fitted with:
 - a) more than one lamp or one pair of lamps, or
 - b) a single lamp that is on the left side of the vehicle.
4. A retrofitted pair of lamps is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards each side of the vehicle as is practicable.
5. A pair of top-mounted lamps, if fitted, is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards the top corners of the bodywork as is practicable.
6. A lamp is not positioned to the front of the vehicle.

Condition

7. A lamp is insecure or, if a mandatory lamp, is obscured or contains visible moisture in the form of large droplets, runs or puddles.
8. A lens is missing or has a hole, crack or other damage that allows moisture or dirt to enter.

9. A lamp's reflector is damaged or deteriorated so that light output is reduced.

Performance

10. When switched on, a forward-facing position lamp does not operate.

11. When switched on, a forward-facing position lamp emits a light that is not:

- a) substantially white or amber, or
- b) diffuse, or
- c) projected to the front, or
- d) approximately equal in colour or intensity to the other lamp in a pair, or
- e) steady, or
- f) bright enough to be visible from 200m in normal darkness, eg due to modification, deterioration, dirt or an incorrect light source.

Note 1

Position lamp means a low-intensity lamp that is designed to indicate to road users the presence and dimensions of a vehicle, being:

- a) a forward-facing position lamp (front side lamp), or
- b) a rearward-facing position lamp (rear side lamp or tail lamp), or
- c) a side-marker lamp, or
- d) an end-outline marker lamp (including cab roof lamp).

Note 2

A vehicle originally manufactured with a forward-facing position lamp arrangement that differs from what is required or permitted in this section may retain the original forward-facing position lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Mandatory and permitted equipment

1. A vehicle exceeding 2m in width must be fitted with one pair of lamps.

2. A self-propelled vehicle first registered in New Zealand on or after 1 January 1978 that is more than 1.5m wide must be fitted with one pair of lamps.

3. A self-propelled vehicle less than 2m wide or first registered in New Zealand before 1 January 1978, or a trailer less than 2m wide, may be fitted with:

- a) one lamp on the right side of the vehicle, or
- b) one pair of lamps.

4. A retrofitted pair of lamps must be symmetrically mounted as far towards each side of the vehicle as is practicable.

5. A retrofitted lamp must be mounted at a height from the ground not exceeding 1.5m, or if this is not practicable due to the shape of the bodywork of the vehicle, not exceeding 2.1m.

6. A self-propelled vehicle or a heavy trailer may be fitted with one additional pair of forward-facing position lamps. These must be symmetrically mounted as far towards the top corners of the vehicle as is practicable (top-mounted lamps).

Condition

7. A forward-facing position lamp must not be obscured (if a mandatory lamp).

Performance

8. A forward-facing position lamp must operate in a way that is appropriate for the lamp and the vehicle.

9. A lamp must emit a light that is:

- a) diffuse, and

- b) substantially white or amber, and
- c) steady, and
- d) sufficient to indicate to other road users the presence and dimensions of the vehicle, and
- e) visible from 200m in normal darkness, and
- f) of approximately equal intensity and colour to the other lamp of a pair.

10. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-7 Rearward-facing position lamps

Reasons for rejection

Mandatory and permitted equipment

1. A vehicle first registered in New Zealand on or after 1 January 1978 that is more than 1.5m wide:
 - a) is not fitted with one pair of lamps, or
 - b) is fitted with more than two pairs of lamps (other than top-mounted lamps), or
 - c) is fitted with a lamp that is not in a pair.
2. A vehicle first registered in New Zealand before 1 January 1978 or that is less than 1.5m wide is:
 - a) not fitted with one pair of lamps, or
 - b) fitted with more than one single lamp, or
 - c) fitted with more than two pairs of lamps (other than top-mounted lamps).
3. A light trailer is fitted with top-mounted lamps.
4. A self-propelled vehicle or heavy trailer is fitted with:
 - a) more than one pair of top-mounted lamps, or
 - b) a top-mounted lamp that is not in a pair.
5. A retrofitted lamp, other than a top-mounted lamp, is mounted at a height from the ground exceeding 1.5m (or 2.1m where fitting below 1.5m is not practicable due to the shape of the bodywork of the vehicle).
6. A single lamp is fitted to the left of the centre of the vehicle.
7. A retrofitted pair of lamps is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards each side of the vehicle as is practicable.
8. A pair of top-mounted lamps is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards the top corners of the bodywork as is practicable.
9. A lamp is not positioned to the rear of the vehicle.

Condition

10. A lamp is insecure or, if a mandatory lamp, is obscured or contains visible moisture in the form of large droplets, runs or puddles.
11. A lens is missing or has a hole, crack or other damage that allows moisture or dirt to enter.
12. A lamp's reflector is damaged or has deteriorated so that light output is reduced.
13. A mandatory lamp is obscured.

Performance

14. When switched on, a mandatory lamp does not operate.
15. When switched on, a lamp emits a light that is not:
 - a) substantially red, or

- b) diffuse, or
- c) projected to the rear, or
- d) approximately equal in colour or intensity to the other lamp in a pair, or
- e) steady, or
- f) bright enough to be visible from 200m in normal darkness, eg due to modification, deterioration, dirt or an incorrect light source.

16. A non-OE mandatory lamp mounted outside the original position emits a light that is not visible within (Figure 4-7-1):

- a) 15° above and below the horizontal, or
- b) 45° inboard or 80° outboard.

17. A modification to the vehicle has reduced the visibility angles of a mandatory lamp to less than (Figure 4-7-1):

- a) 15° above and below the horizontal, or
- b) 45° inboard or 80° outboard.

18. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1

Position lamp means a low-intensity lamp that is designed to indicate to road users the presence and dimensions of a vehicle, being:

- a) a forward-facing position lamp (front side lamp), or
- b) a rearward-facing position lamp (rear side lamp or tail lamp), or
- c) a side-marker lamp, or
- d) an end-outline marker lamp (including cab roof lamp).

Note 2

A permitted rearward-facing position lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

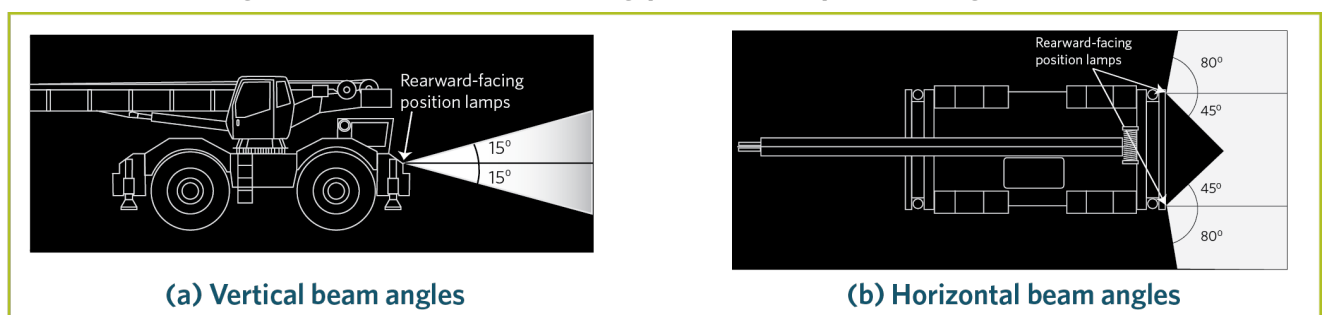
Note 3

An original equipment (OE) lamp is one that is fitted by the vehicle manufacturer in the original position, or is an equivalent replacement or aftermarket lamp suitable for the position provided by the vehicle manufacturer for that lamp. All other lamps are considered retrofitted (ie non-OE).

Note 4

A vehicle originally manufactured with a rearward-facing position lamp arrangement that differs from what is required or permitted in this section may retain the original rearward-facing position lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Figure 4–7–1. Rearward-facing position lamp beam angles



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Mandatory and permitted equipment

1. A vehicle first registered in New Zealand on or after 1 January 1978 and that is more than 1.5m wide must be fitted with one

or two pairs of rearward-facing position lamps.

2. A vehicle that was first registered in New Zealand before 1 January 1978 or that does not exceed 1.5m in width must be fitted with:

- a) one single rearward-facing position lamp in the centre or to the right of the centre of the vehicle, or
- b) one or two pairs of rearward-facing position lamps.

3. A retrofitted pair of lamps, other than top-mounted lamps, must be mounted:

- a) symmetrically as far towards each side of the vehicle as is practicable, and
- b) at a height from the ground not exceeding 1.5m, or if this is not practicable due to the shape of the bodywork of the vehicle, not exceeding 2.1m.

4. A self-propelled vehicle or heavy trailer may be fitted with an additional pair of rearward-facing position lamps symmetrically mounted as far towards each side and top of the bodywork of the vehicle as possible (top-mounted lamps).

5. A lamp must be positioned to the rear of the vehicle.

Condition

6. A rearward-facing position lamp must not be obscured (if a mandatory lamp).

Performance

7. A rearward-facing position lamp must operate in a way that is appropriate for the lamp and the vehicle.

8. A lamp must emit a light that is:

- a) diffuse, and
- b) substantially red, and
- c) steady, and
- d) sufficient to indicate to other road users the presence and dimensions of the vehicle, and
- e) visible from a distance of 200m in normal darkness, and
- f) of approximately equal intensity and colour to the other lamp of the pair.

9. A retrofitted mandatory lamp must be visible within angles of 15° above and below the horizontal, and within 45° inboard and 80° outboard.

10. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-8 Side-marker lamps

Reasons for rejection

Prohibited equipment

1. A vehicle with a length of less than 6m is fitted with side-marker lamps.

Condition

2. A lamp is insecure.

3. A lens is missing or has a hole, crack or other damage that allows moisture or dirt to enter.

4. A reflector is damaged or has deteriorated so that light output is reduced.

Performance

5. When switched on, a lamp emits a light that is not:

- a) diffuse, or
- b) substantially red or amber to the rear, or
- c) substantially white or amber to the front, or
- d) steady.

6. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1 Definitions

Side-marker lamp means a position lamp designed to be fitted to the side of a vehicle or its load.

Position lamp means a low-intensity lamp that is designed to indicate to road users the presence and dimensions of a vehicle being:

- a) a forward-facing position lamp (front side lamp), or
- b) a rearward-facing position lamp (rear side lamp or tail lamp), or
- c) a side-marker lamp, or
- d) an end-outline marker lamp (including cab roof lamp).

Note 2

A side-marker lamp that does not comply with the equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Permitted and prohibited equipment

1. A vehicle with a length of 6m or more may be fitted with one or more side-marker lamps.
2. A vehicle with a length of less than 6m must not be fitted with side-marker lamps.

Condition

3. A lamp must be in good condition.

Performance

4. A side-marker lamp must operate in a way that is appropriate for the lamp and the vehicle.
5. A side-marker lamp must emit light that is:
 - a) diffuse, and
 - b) substantially red or amber to the rear, and
 - c) substantially white or amber to the front, and
 - d) steady.
6. Where a side-marker lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-9 End-outline marker lamps

Reasons for rejection

Mandatory, permitted and prohibited equipment

1. A vehicle listed in Table 4-9-1:
 - a) is not fitted with lamps required in Table 4-9-1, or
 - b) is fitted with lamps that exceed the numbers permitted in Table 4-9-1.
2. A vehicle not listed in Table 4-9-1 is fitted with end-outline marker lamps.
3. An end-outline marker lamp is so positioned that it does not indicate the dimensions of the vehicle.

Condition

4. A lamp is insecure.
5. A lens is missing or has a hole, crack or other damage that allows moisture or dirt to enter.
6. A reflector is damaged or has deteriorated so that light output is reduced.
7. A mandatory lamp is obscured or contains visible moisture in the form of large droplets, runs or puddles.

Performance

8. When switched on, a mandatory lamp does not operate.

9. When switched on, a lamp emits a light that is not:

- a) substantially red to the rear, or
- b) substantially white or amber to the front, or
- c) diffuse, or
- d) steady, or
- e) bright enough to be visible from 100m in normal daylight and 200m in normal darkness, eg due to modification, deterioration, dirt or an incorrect light source.

9. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1 Definitions

End-outline marker lamp means a position lamp designed to be fitted near the outer extremity of a vehicle in addition to forward-facing and rearward-facing position lamps, and includes a cab roof lamp.

Position lamp means a low-intensity lamp that is designed to indicate to road users the presence and dimensions of a vehicle, being:

- a) a forward-facing position lamp (front side lamp), or
- b) a rearward-facing position lamp (rear side lamp or tail lamp), or
- c) a side-marker lamp, or
- d) an end-outline marker lamp (including cab roof lamp).

Note 2

A permitted end-outline marker lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Table 4-9-1. Fitting requirements for end-outline marker lamps

If the vehicle was:	Row	Characteristics of the heavy vehicle	Front		Rear
			Mandatory lamps ³	Maximum permitted lamps ¹	Maximum permitted lamps ¹
Vehicle manufactured before 1/4/2011 ²	A	<ul style="list-style-type: none"> A vehicle with a GVM exceeding 11,300kg A vehicle with a towing connection where the vehicle combination is likely to have a total length exceeding 9.2m 	2	12 (No limit if first registered before 27/2/2005)	6
	B	A vehicle with an overall width of 1.8 m or more (other than a vehicle in row A)	Not required	6	4
Vehicle manufactured from 1/4/2011	C	A vehicle with an overall width exceeding 2.1m and with a GVM or GCM exceeding 12,000kg	2	12	6
	D	A vehicle with an overall width exceeding 2.1m (other than a vehicle in row C)	2	6	4
	E	A vehicle with an overall width of 1.8 m or more (other than a vehicle in row C or D).	Not required	6	4

¹ Maximum permitted lamps are the maximum number of lamps allowed to be fitted, including mandatory lamps.

² A vehicle manufactured before 1/4/2011 also has the option of complying with the requirements applicable to vehicles manufactured from 1/4/2011.

³ Mandatory lamps must be positioned at a height no lower than the top edge of the windscreen.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Mandatory, permitted and prohibited equipment

1. A vehicle in Table 4-9-1 must or may be fitted with end-outline marker lamps as specified in the table.
2. A vehicle not listed in Table 4-9-1 must not be fitted with end-outline marker lamps.
3. The position of the lamps must be such that it gives an indication of the vehicle's dimensions.

Condition

4. A end-outline marker lamp must be:
 - a) in good condition, and
 - b) not obscured (if a mandatory lamp).

Performance

5. An end-outline marker lamp must operate in a way that is appropriate for the lamp and the vehicle.
6. Cab roof lamps must emit a light that is visible from 100m in normal daylight and from 200 in normal darkness.
7. A lamp must emit a light that is diffuse and substantially red to the rear and white or amber to the front.
8. A lamp must provide sufficient light output so that the vehicle's dimensions are easily indicated to other road users.
9. Where an end-outline marker lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-10 Stop lamps

Reasons for rejection

Mandatory and permitted equipment

1. A self-propelled vehicle first registered in New Zealand before 1 January 1978:
 - a) is not fitted with one lamp, or one pair of lamps, if the vehicle is so constructed that the driver's arm signals cannot be seen from behind the vehicle, or
 - b) is fitted with more than two pairs of lamps.
2. A self-propelled vehicle first registered in New Zealand on or after 1 January 1978:
 - a) is not fitted with one pair of lamps, or
 - b) is fitted with more than two pairs of lamps, or
 - c) is fitted with a lamp that is not in a pair.
3. A trailer:
 - a) is not fitted with one pair of stop lamps, or
 - b) is fitted with more than two pairs of stop lamps, or
 - c) is fitted with a stop lamp that is not in a pair.
4. A retrofitted stop lamp, other than a top-mounted lamp, is fitted at a height from the ground exceeding 1.5m (or 2.1m where fitting below 1.5m is not practicable due to the shape of the bodywork of the vehicle).
5. A retrofitted pair of lamps is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards each side of the vehicle as is practicable.
6. A top-mounted stop lamp is:
 - a) fitted to a light trailer, or
 - b) not mounted as far as is practicable to the top of the bodywork of the vehicle, or

- c) not fitted in a pair, or
- d) fitted additional to the maximum of one pair of top-mounted lamps.

Condition

- 7. A lamp is insecure.
- 8. A lens is missing or has a hole, crack or other damage that allows moisture or dirt to enter.
- 9. A reflector is damaged or deteriorated so that light output is reduced.
- 10. A mandatory lamp is obscured or contains visible moisture in the form of large droplets, runs or puddles.

Performance

- 11. When the service brake is activated:
 - a) a mandatory lamp does not operate, or
 - b) a lamp does not remain steadily illuminated.
- 12. A lamp operates when the service brake is not applied.
- 13. A lamp emits a light that is not:
 - a) substantially red, or
 - b) diffuse, or
 - c) projected to the rear, or
 - d) approximately equal in colour or intensity to the other lamp in a pair, or
 - e) bright enough to produce a light that is visible from 100m in normal daylight, eg due to modification, deterioration, dirt or an incorrect light source.
- 14. A non-OE mandatory lamp mounted outside the original position emits a light that is not visible within (Figure 4-10-1):
 - a) 15° above and below the horizontal, or
 - b) 45° inboard and outboard.
- 15. A modification to the vehicle has reduced the visibility angles of a mandatory lamp to less than (Figure 4-10-1):
 - a) 15° above and below the horizontal, or
 - b) 45° inboard and outboard.
- 16. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.
- 17. On a vehicle of American origin fitted with combined stop and direction indicator lamps, the stop lamp function is not overridden by the indicator function.

Note 1

Stop lamp means a lamp that is designed to operate when the service brake is activated.

Note 2

A permitted stop lamp that does not comply with condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

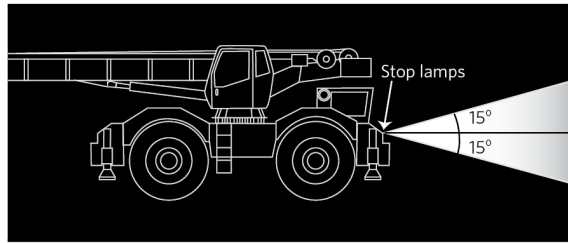
Note 3

An original equipment (OE) lamp is one that is fitted by the vehicle manufacturer in the original position, or is an equivalent replacement or aftermarket lamp suitable for the position provided by the vehicle manufacturer for that lamp. All other lamps are considered retrofitted (ie non-OE).

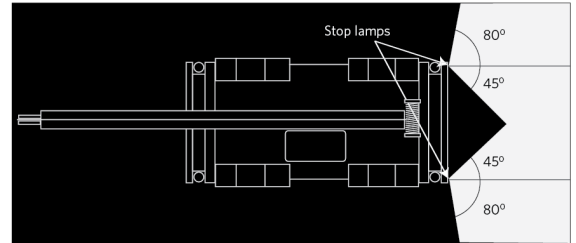
Note 4

A vehicle originally manufactured with a stop lamp arrangement that differs from what is required or permitted in this section may retain the original stop lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Figure 4-10-1. Stop lamp visibility angles



(a) Vertical angles



(b) Horizontal angles

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Mandatory and permitted equipment

1. A self-propelled vehicle first registered in New Zealand before 1 January 1978:
 - a) must have one lamp, or one or two pairs of lamps, if the vehicle is so constructed that the driver's hand signals cannot be seen from behind the vehicle, and
 - b) may have one lamp, or one or two pairs of lamps, fitted.
2. A self-propelled vehicle first registered in New Zealand on or after 1 January 1978 must be fitted with one or two pairs of lamps.
3. A trailer:
 - a) may be fitted with one or two pairs of lamps, and
 - b) must be fitted with one or two pairs of lamps if the driver's arm signals cannot be seen from behind the vehicle combination.
4. A retrofitted pair of stop lamps must be symmetrically mounted as far towards each side of the vehicle as is practicable.
5. A retrofitted stop lamp must be fitted at a height from the ground not exceeding 1.5m, or if this is not practicable due to the shape of the bodywork of the vehicle, not exceeding 2.1m.
6. A self-propelled vehicle or heavy trailer may be fitted at the rear with an additional pair of stop lamps provided they are positioned as close as is practicable to the top of the bodywork of the vehicle (top-mounted stop lamps).

Condition

7. A stop lamp must not be obscured (if a mandatory lamp).

Performance

8. A stop lamp must operate in a way that is appropriate for the lamp and the vehicle.
9. The light emitted from a stop lamp must be diffuse light that is substantially red.
10. A required stop lamp must operate when a service brake is activated.
11. A required stop lamp must provide sufficient light output to fulfil its intended purpose and be visible in daylight from 100m away.
12. A stop lamp must emit a steady light.
13. A mandatory stop lamp must emit a light that is visible within the angles of 15° above and below the horizontal, and 45° inboard and outboard.
14. If a vehicle of American origin is fitted with combined stop and direction indicator lamps, the indicator lamps may override the stop lamps so that the stop lamps will operate as direction indicators.
15. Where a stop lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-11 High-mounted stop lamps

Reasons for rejection

Permitted equipment

1. A vehicle is fitted with more than two high-mounted stop lamps.
2. A lamp is not fitted in a central high-mounted position.

Condition

3. A lamp is insecure.
4. A lens is missing or has a hole, crack or other damage that allows moisture or dirt to enter.
5. A reflector is damaged or has deteriorated so that light output is reduced.

Performance

6. When the service brake is activated a lamp does not remain steadily illuminated.
7. A lamp operates when the service brake is not activated.
8. A lamp emits a light that is not:
 - a) substantially red, or
 - b) diffuse, or
 - c) projected to the rear, or
 - d) bright enough to be visible from 100m in normal daylight, eg due to modification, deterioration, dirt or an incorrect light source.
9. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1 Definitions

High-mounted stop lamp means a stop lamp that is designed to be fitted in a central, high-mounted position at the rear of a vehicle.

Stop lamp means a lamp that is designed to operate when the service brake is activated.

Note 2

A high-mounted stop lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Note 3

A vehicle originally manufactured with a high-mounted-stop-lamp arrangement that differs from what is required or permitted in this section may retain the original high-mounted stop lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Permitted equipment

1. A vehicle may be fitted with one or two high-mounted stop lamps.
2. A lamp must be fitted in a central high-mounted position at the rear of the vehicle.

Condition

3. A high-mounted stop lamp must be in good condition.

Performance

4. A high-mounted stop lamp must operate in a way that is appropriate for the lamp and the vehicle.
5. The light emitted from a high-mounted stop lamp must be diffuse light that is substantially red.
6. A high-mounted stop lamp must emit a steady light.
7. Where a high-mounted stop lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-12 Rear-registration-plate illumination lamps

Reasons for rejection

Mandatory equipment

1. A vehicle is not fitted with at least one rear-registration-plate illumination lamp.

Performance

2. The lamp emits a light that is not:
 - a) substantially white, or
 - b) steady, or
 - c) diffuse.
3. The lamps are not bright enough to show up the registration plate text from 20m in normal darkness.
4. The light source of a lamp is visible from the rear of the vehicle.

Note 1

Rear-registration-plate illumination lamp means a lamp designed to illuminate the rear registration plate of a vehicle.

Note 2

A vehicle originally manufactured with a rear-registration-plate-illumination-lamp arrangement that differs from what is required or permitted in this section may retain the original rear-registration-plate illumination lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Mandatory equipment

1. A vehicle must be fitted with one or more rear-registration-plate illumination lamps.

Performance

2. A rear-registration-plate illumination lamp must operate in a way that is appropriate for the lamp and the vehicle.
3. A lamp must emit a diffuse light that is substantially white.
4. A rear-registration-plate illumination lamp must emit a steady light.
5. The light source of the lamp must not be visible from the rear of the vehicle.
6. A lamp must illuminate the figures and letters of the plate so that they are visible from 20m during normal darkness.
7. Where a lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-13 Rear reflectors

Reasons for rejection

Mandatory equipment

1. A vehicle is:
 - a) not fitted with at least one rearward-facing reflector on each side, or
 - b) fitted with a rearward-facing reflector that is not in a pair.
2. A retrofitted reflector is fitted at a height from the ground exceeding 1.5m (or 2.1m where fitting below 1.5m is not practicable due to the shape of the bodywork of the vehicle).
3. A reflector is not positioned to the rear of the vehicle.
4. A retrofitted pair of reflectors is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards each side of the vehicle as is practicable.

Condition

5. A mandatory reflector's ability to reflect light is affected by excessive:
 - a) fading, or

b) scratching or other damage.

6. A mandatory reflector is obscured.

Performance

7. The reflected light from a mandatory reflector is not visible from 100m.

8. The reflected light from a reflector is not red.

Note 1 Definitions

Reflector means a discreet item of lighting equipment that is designed to reflect incident light back towards the light source, but does not include reflective material (such as reflective tape).

Reflective material means any material that is designed to reflect incident light back towards the light source, and includes reflective tape, but does not include a reflector.

Note 2

A vehicle originally manufactured with a rear reflector arrangement that differs from what is required or permitted in this section may retain the original rear reflectors provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Mandatory equipment

1. A vehicle must be fitted with one or more pairs of rearward-facing reflectors at a height from the ground not exceeding 1.5m, or if this is not practicable due to the shape of the bodywork of the vehicle, not exceeding 2.1m.
2. A rearward-facing reflector must be positioned to the rear of the vehicle.
3. A reflector must be of an area that allows it to reflect light to improve the visibility of the vehicle to other road users, but it must not cause them undue dazzle or discomfort.
4. A retrofitted pair of reflectors must be symmetrically mounted as far towards each side of the vehicle as is practicable.

Condition

5. A mandatory reflector must be in good condition and not be obscured.

Performance

6. A reflector must operate in a way that is appropriate for the reflector and the vehicle.
7. A reflector must reflect white light as substantially red light.
8. A reflector must provide sufficient light reflection to fulfil its intended purpose.

4-14 Reversing lamps

Reasons for rejection

Permitted equipment

1. A vehicle is fitted with more than two reversing lamps at the rear of the vehicle.
2. A retrofitted pair of reversing lamps is not:
 - a) symmetrically mounted, or
 - b) mounted as far towards each side of the vehicle as is practicable.

Condition

3. A lamp is insecure.
4. A lens is missing or has a hole, crack or other damage that allows moisture or dirt to enter.
5. A reflector is damaged or has deteriorated so that light output is reduced.

Performance

6. A lamp controlled by gear engagement continues to display a light to the rear when the reverse gear is disengaged.

7. A lamp controlled by a manual switch continues to display a light to the rear while the headlamps are switched on.
8. When engaged, a lamp emits light that is not:
 - a) substantially white (Note 3), or
 - b) steady, or
 - c) diffuse or a dipped beam.
9. Where a lamp comprises an array of light sources (eg LEDs), fewer than 75% of these operate.

Note 1

Reversing lamp means a lamp designed to illuminate the area behind the vehicle while it is reversing and to warn other road users that the vehicle is reversing or about to reverse.

Note 2

A reversing lamp that does not comply with equipment, condition and performance requirements must be made to comply or be disabled so that it does not emit a light.

Note 3

Vehicles first registered in New Zealand before 27 February 2005 were allowed to use rear indicator lamps as reversing lamps. Although the light emitted is amber rather than white, this arrangement is still permitted for these vehicles.

Note 4

A vehicle originally manufactured with a reversing lamp arrangement that differs from what is required or permitted in this section may retain the original reversing lamps provided they remain fitted in their original position and perform as intended by the vehicle manufacturer.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004.](#)

Permitted equipment

1. A vehicle may be fitted with one or two reversing lamps fitted at the rear of the vehicle.
2. A retrofitted pair of reversing lamps must be symmetrically mounted as far towards each side of the vehicle as is practicable.

Condition

3. A reversing lamp must be in good condition.

Performance

4. A reversing lamp must operate in a way that is appropriate for the lamp and the vehicle.
5. A reversing lamp, when operated, must emit a diffuse light or a dipped beam of light that is substantially white (Note 3).
6. A reversing lamp must emit a steady light.
7. A reversing lamp may operate only when the reverse gear is engaged or the headlamps are turned off.
8. Where a reversing lamp comprises an array of light sources (eg LEDs), at least 75% of these must operate.

4-15 Cosmetic lamps

Reasons for rejection

Permitted equipment

1. A cosmetic lamp (ie one not listed in Table 4-15-1) that is fitted to a vehicle:
 - a) has a part of its light-emitting surface positioned within 250mm of any mandatory lamp, or
 - b) is not mounted in a fixed position, or
 - c) is positioned so that its light-emitting surface is visible within the shaded areas in Figure 4-15-1.

Performance

2. When switched on, a cosmetic lamp with a light-emitting surface not visible within the shaded areas in Figure 4-15-1 emits a light that:

- a) is not diffuse, or
- b) flashes or otherwise varies in intensity or colour, or
- c) revolves, rotates or otherwise moves, or
- d) is too bright and likely to dazzle other road users, or
- e) is likely to cause confusion about the orientation of the vehicle, or
- f) is red when seen directly from the front, or
- g) is not red or amber when seen directly from the rear.

Note 1

A rear or side cosmetic lamp that does not comply with requirements for condition or performance must be made to comply, or be disabled so that it does not emit a light.

Note 2 Definitions

Lamp means a device designed to emit light, and includes an array of separate light sources that appear as a continuous illuminated surface.

Cosmetic lamp means any lamp that is not listed in Table 4-15-1.

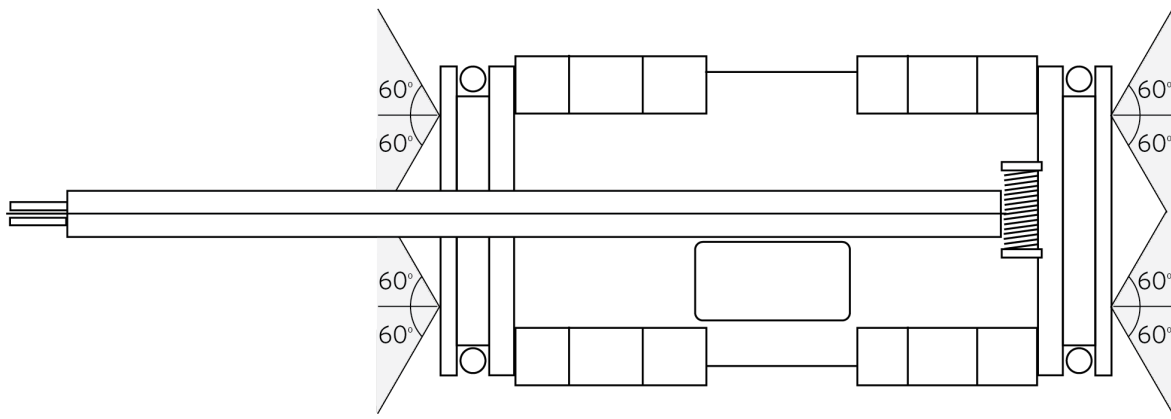
Note 3

A forward-facing cosmetic lamp that does not comply with the equipment, condition and performance requirements must be made to comply or be removed from the vehicle.

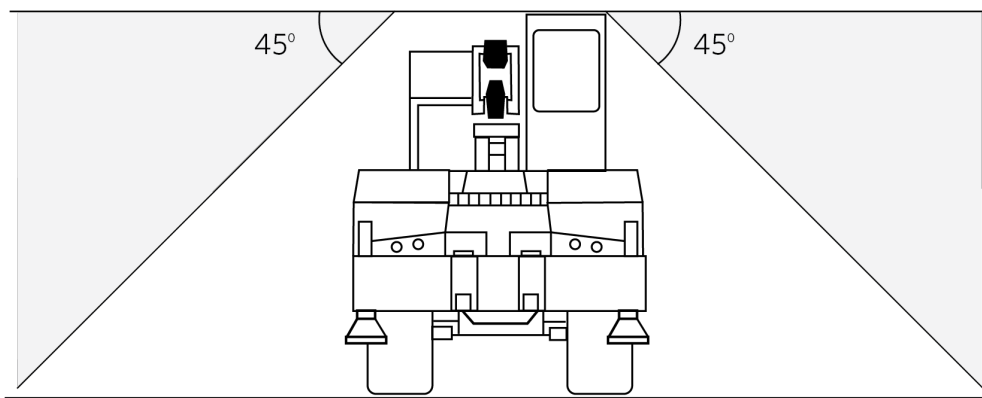
Table 4-15-1. Lamps that are not cosmetic lamps

Lamps covered in the VIRM	Other lighting equipment not requiring inspection
Headlamps	Reflective material
Stop lamps	Interior lamps <i>Designed to illuminate the interior of the vehicle for the convenience of passengers</i>
High-mounted stop lamps	Work lamps
Direction indicator lamps	<i>White or amber high-intensity lamps that are not necessary for the operation of the vehicle but are designed to illuminate the area around the vehicle or the vehicle itself</i>
Position lamps (includes side-marker lamps and end-outline marker lamps)	Scene lamps <i>Work lamps designed to provide a fixed or movable beam of light to illuminate the area around the vehicle or the vehicle itself</i>
Rear-registration-plate illumination lamps	Alley lamps
Rear reflectors	<i>Work lamps designed primarily to provide a fixed or movable beam of light to the side of the vehicle it is fitted to</i>
Fog lamps	Flashing or revolving beacons (except a mandatory beacon required for some overdimension vehicles)
Daytime running lamps	Illuminated vehicle-mounted signs
Cornering lamps	<i>Includes PSV destination signs, taxi signs, and variable message signs operated by enforcement officers, under a traffic management plan or permitted by other legislation</i>
Reversing lamps	
PSV interior lamps	

Figure 4-15-1. Visibility angles for cosmetic lamps



Light sources must not be directly visible from shaded areas



Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Lighting 2004](#).

Permitted equipment

1. A vehicle may be fitted with one or more lamps not specified in Table 4-15-1, provided they are fitted so that light sources are not visible in those regions specified in Figure 4-15-1.
2. A lamp must be fitted in a fixed position on the vehicle and positioned so that no part of the light source is situated within 250mm of a mandatory lamp.

Performance

3. A lamp must:
 - a) only emit light that is diffuse, and
 - b) not emit light that flashes or otherwise varies in intensity or colour, and
 - c) be fitted in a way, and be of a luminance that ensures, that it does not dazzle, confuse or distract other road users, and
 - d) not emit a light that revolves, rotates or otherwise moves, and
 - e) not cause confusion as to the orientation of the vehicle, and
 - f) not emit a red light that is directly visible from the front of the vehicle, and
 - g) not emit a light other than red or amber if the light is directly visible from the rear of the vehicle.

5 Vision

5-1 Glazing

Reasons for rejection

Glazing condition

1. A piece of glazing is not mechanically sound, or is not securely affixed to the vehicle.
2. A windscreen or front side window is so dirty or obstructed that the driver's vision is unreasonably impaired.
3. A windscreen has damage that prevents the wiper blades from working properly.
4. A windscreen has scratches, discoloration or other defects that unreasonably impair the driver's vision or compromise the strength of the windscreen.
5. A modification:
 - a) unreasonably impairs the driver's vision through the windscreen or a front side window, or
 - b) adversely affects the strength or mechanical performance of the glazing.

Glazing performance

6. The overall visible light transmittance (VLT) (Note 4) of a windscreen is less than 70%.
7. The overall VLT of a front side window is less than 35%.
8. Glazing has a mirrored effect sufficient to dazzle other road users.

Permitted modifications

9. A modification that affects glazing is not within the limits in Table 5-1-1.

Note 1 Definitions

Windscreen means all glazing extending across the front of a vehicle that is not parallel to the vehicle's centreline but does not include a wind deflector. No fitting or overlays of stickers are permitted to the windscreen except those previously mentioned.

Overlay means a transparent, translucent or opaque self-adhesive or clinging film that is applied to large areas, or the whole, of a piece of glazing, including anti-glare band overlays and stoneguard overlays.

Sticker means a self-adhesive or clinging film, with or without print on it, that is applied for purposes such as advertising, identification, information, decoration or legal reasons.

Anti-glare band overlay means a tinted overlay that is transparent and that is applied along the top edge of the windscreen for the purpose of reducing glare from the sun.

Note 2

Damage includes any unrepaired damage and attempted visible repairs.

Note 3

Visible light transmittance (VLT) is the proportion of visible light that passes through glazing, measured perpendicular to the glazing. Overall VLT is the VLT of the glazing together with any overlays.

Note 4

Any OE opaque edging (usually black) is not considered part of the windscreen when determining the boundaries permitted for stickers, print on an anti-glare band or radio antennae.

Table 5-1-1. Permitted modifications

Fitting of or modification to:	Modification permitted provided that:
Windscreens	
Stickers	<ul style="list-style-type: none"> stickers are wholly within 100mm of the top or bottom edge, or 50mm of the side edges, unless required or permitted by legislation, eg: a licence label a road user licence label a WoF label an alternative fuel sticker a parking permit or other document issued by the local authority learner L-plates (in sticker format) provided the driver's vision is not unreasonably affected.
Anti-glare band overlay	<ul style="list-style-type: none"> the overlay is transparent, and the overlay does not extend below the bottom edge of the vehicle's OE sun visors when they are folded down as far as possible towards the windscreen, and the overlay does not contain print below a line that is 100mm below and parallel to the top edge of the windscreen.
Radio antennae	<ul style="list-style-type: none"> antennae are wholly within 100mm of any edge.
Front side windows	
Transparent overlays	<ul style="list-style-type: none"> the overall visible light transmittance (VLT) is not reduced to below 35%.
Stickers	<ul style="list-style-type: none"> stickers are wholly within 100mm of the bottom edge, or 50mm of any other edge, unless required or permitted by legislation manufacturer's operating instructions may be applied to or incorporated in the glazing.
Radio antennae	<ul style="list-style-type: none"> antennae are wholly within 100mm of any edge.
Rear and rear side windows (behind the driver's seat)	
Overlays and other modifications	<ul style="list-style-type: none"> the vehicle is equipped on both sides with external rear-view mirrors.
Stickers	<ul style="list-style-type: none"> stickers may be applied anywhere on the glazing, but if not wholly within 100mm of any edge, the vehicle must be equipped on both sides with external rear-view mirrors.
Radio antennae	<ul style="list-style-type: none"> in-service requirements for condition and performance are met.

Fitting of or modification to:	Modification always permitted:
Monsoon shields	<ul style="list-style-type: none"> in-service requirements for condition and performance must be met.
Electric demisters	
Sunroofs (overlays and stickers applied anywhere on the glazing, radio antennae, and electric demisters)	

Summary of legislation

Applicable legislation

- [Land Transport Rule: Glazing, Windscreen Wipe and Wash, and Mirrors 1999.](#)

Glazing condition

- Glazing must be mechanically sound, strong and securely affixed to the vehicle.
- A windscreen and front side windows must be clean and free of obstruction to ensure the driver has sufficient vision through the glazing to operate the vehicle safely.
- A windscreen must not have scratches and other defects that:
 - unreasonably impair vision, or
 - compromise its strength.
- A laminated windscreen must not show signs of discolouration that could unreasonably impair the driver's vision.
- Glazing in roof panels may be tinted.

Glazing performance

- A windscreen must have an overall visible light transmittance (VLT) of at least 70%.
- A front side window must have an overall VLT of at least 35%.
- Glazing must not have a mirrored effect sufficient to dazzle other road users.
- A modification must not:
 - unreasonably impair vision through a windscreen or a front side window, or
 - adversely affect the strength or mechanical performance of the glazing or the vehicle.

Permitted modifications

- A modification that affects glazing is permitted if within the limits in Table 5-1-1.

5-2 Sun visors

Reasons for rejection

Condition

- A sun visor (Note 1):
 - is insecurely mounted, or
 - for the driver, cannot be adjusted from the normal driving position, or
 - cannot maintain its adjusted position, or
 - has been modified or has deteriorated, and the likelihood of injury to vehicle occupants has not been minimised.

Performance

- A driver's sun visor does not effectively aid the driver's vision by intercepting the glare from the sun.

Note 1

Sun visor means any attachment mounted above the inside of the windscreen and provided for the purpose of shielding the eyes of the driver and other front passengers from solar glare.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004](#)
- [Land Transport Rule: Interior Impact 2002.](#)

Permitted equipment

1. A vehicle may be fitted with sun visors (Note 1).

Performance

2. The condition of sun visors must be such that the likelihood of injury to occupants is minimised.
3. A driver's sun visor must be effective.

5-3 Windscreen wipe and wash

Reasons for rejection

Mandatory equipment

1. A vehicle that has a windscreen is not fitted with a windscreen wipe system.
2. A vehicle manufactured on or after 1 January 1960 is fitted with wipers that are not power driven.

Condition

Windscreen wipe system

3. The wiper operating device is missing.
4. A wiper arm or wiper blade is:
 - a) missing, or
 - b) insecure, or
 - c) damaged so as to affect the performance of the wipers.
5. The wiper operating mechanism is:
 - a) missing, or
 - b) insecure, or
 - c) damaged so as to affect the performance of the wipers.

Windscreen wash system

6. A wash system component is missing or insecure.
7. The wash operating device is missing.

Performance

Windscreen wipe system

8. A windscreen wiper does not wipe the windscreen effectively, preventing adequate forward vision by the driver.
9. The wipe operating device is unable to activate the wipe system.

Windscreen wash system

10. A windscreen wash nozzle does not discharge washer liquid directly onto the windscreen.
11. The wash operating device is unable to activate the wash system.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Glazing, Windscreen Wipe and Wash, and Mirrors 1999.](#)

Mandatory equipment

1. A vehicle that is fitted with a windscreen must have a windscreen wipe system.

2. Windscreen wipers must be power driven, unless they follow OE specifications in a vehicle manufactured before 1 January 1960.

Permitted equipment

3. A vehicle may be fitted with a wash system.

Condition

4. A vehicle's windscreen wipe and wash system must be efficient and within the vehicle manufacturer's operating limits.

Performance

5. The equipment fitted must be capable of keeping an adequate area of the windscreen clean and clear so that the vehicle may be operated safely under all reasonably foreseeable conditions.

5-4 Rear-view mirrors

Reasons for rejection

Mandatory equipment

1. A vehicle is not fitted with at least one rear-view mirror.

Condition

2. A rear-view mirror:

- a) is not mounted securely, or
- b) cannot be adjusted, or
- c) cannot maintain its adjusted position, or
- d) is corroded or dirty, or
- e) is damaged so that it increases the risk of injury to vehicle occupants.

Performance

3. A rear-view mirror:

- a) does not provide a clear view to the rear of the vehicle, or
- b) is not sufficiently isolated from vibrations.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Glazing, Windscreen Wipe and Wash, and Mirrors 1999.](#)

Mandatory equipment

1. A vehicle must be fitted with a rear-view mirror.

Permitted equipment

2. Additional rear-view mirrors may be fitted.

Condition

3. A rear-view mirror must be:

- a) securely attached so that the risk of injury is minimised, and
- b) mounted so that vibration does not inhibit the driver's required clear view to the rear, and
- c) sufficiently adjustable, and able to maintain its position.

Performance

4. A rear-view mirror must provide a clear view to the rear of:

- a) the vehicle itself, and
- b) the vehicle's load, and
- c) any towed trailer and its load.

5. A rear-view mirror must be sufficiently isolated from vibrations.

6 Entrance and exit

6-1 Door and hinged panel retention systems

Reasons for rejection

Mandatory equipment

1. A vehicle fitted with doors used by the driver or passengers for entrance and exit of the vehicle does not have a door retention system.

Condition

2. A hinge for a door or other hinged panel is not securely attached to both the vehicle body and to the door or other hinged panel, eg due to loose connections, corrosion or other damage.

3. A door used for entrance and exit of the driver or passengers cannot be opened from the inside.

Performance

4. A door used for entrance and exit of the driver or passengers does not open or close easily, eg a door is sticking or requires unreasonable force to open.

5. A door or other hinged panel does not remain secure in a closed or locked position.

Note 1

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward sign of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Door Retention Systems 2001](#)
- [Land Transport Rule: Vehicle Standards Compliance 2002](#), section 7.4.

Mandatory equipment

1. A vehicle fitted with doors used by the driver or passengers for entrance and exit of the vehicle must have a door retention system.

Condition

2. A door retention system and its mountings must be safe and structurally sound.

3. A door used for the entrance and exit of the driver or passengers must be operable by any occupant seated by the door from inside the vehicle.

4. The vehicle must be designed and constructed using components and materials that are fit for their purpose, and within safe tolerance of their state when manufactured or modified.

Performance

5. A door retention system must be in good working order.

6. A door used for entrance and exit must open and close easily.

7. A door used for entrance and exit must remain secure in a closed position during the operation of the vehicle.

7 Vehicle interior

7-1 Seats and seat anchorages

Reasons for rejection

Mandatory equipment

1. A driver's seat is not fitted in a vehicle that was originally fitted with a driver's seat.

2. A seat in a self-propelled vehicle is not attached to the vehicle structure by seat anchorages.

Condition and performance

3. A seat frame or structure has been weakened, eg due to damage, corrosion or excessive wear.
4. The adjustment mechanism of a driver's seat:
 - a) does not operate, or
 - b) is worn, causing excessive movement of the seat.
5. The attachment of the seat to the seat anchorage is loose or weakened by damage.
6. The attachment of the seat anchorage to the vehicle structure is loose or weakened by damage.
7. The driver's seat is in such a condition that it does not allow the driver to have proper control of the vehicle.

Note 1

A seat may be capable of being rotated or placed to face in different directions.

Note 2

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward sign of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Seats and Seat Anchorages 2002.](#)

Mandatory equipment

1. A driver's seat in a vehicle must remain fitted.
2. A seat in a self-propelled vehicle must be fitted to the vehicle structure by means of seat anchorages.

Condition and performance

3. Seats and seat anchorages must be safe, strong, in sound condition and compatible in strength with each other and with the vehicle structure.
4. The driver's seat and its anchorages must be designed, constructed and maintained to enable the driver to have proper control of the vehicle.
5. Seats and seat anchorages must be securely attached to the vehicle structure.
6. When a seatbelt or any part of the seatbelt is integral to a seat, the seat and seat anchorages must be compatible in strength with the seatbelt or with that part of the seatbelt attached to the seat.

7-3 Head restraints

Reasons for rejection

Condition and performance

1. The external surfaces and padding of a head restraint have deteriorated to the extent that they are likely to injure a vehicle occupant.
2. An adjustable head restraint is unable to remain locked in its adjusted position.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Head Restraints 2001.](#)

Permitted equipment

1. A vehicle may be fitted with head restraints.

Condition and performance

2. The external surfaces and padding of a head restraint must not have deteriorated to the extent that the likelihood of injury to an occupant of the vehicle is increased.
3. An adjustable head restraint must remain able to be adjusted and locked into position.

7-5 Seatbelts and seatbelt anchorages

Reasons for rejection

Condition

Seatbelts (on vehicles capable of exceeding a speed of 50km/h)

1. The seatbelt assembly is not securely attached to a seatbelt anchorage.
2. A seatbelt component (eg protective plastic cover on buckle, tongue or retractor system) is damaged so that foreign objects may enter the interior components, or cause damage to the interior components, mechanisms or webbing.
3. The seatbelt webbing (including webbing attached to the buckle) has:
 - a) damage such as a cut, including a cut on the surface, a rip or tear, fraying, stretching (eg the webbing is deformed) or damaged or loose stitching, or
 - b) damage such as excessive fading (with chalking or stiffness) or contamination from grease, solvents or other damaging products, or
 - c) signs of 'home' repairs, eg stapling, hand stitching, or rivets.
4. A buckle and tongue:
 - a) are mismatched, or
 - b) do not lock, or
 - c) do not remain locked, or
 - d) do not release easily, or
 - e) are insecure when coupled.
5. A component is missing, cracked, distorted or damaged in such a way that:
 - a) its strength or integrity is reduced, or
 - b) it may damage another component or the webbing.
6. A seatbelt stalk:
 - a) (wire-cable type) shows broken wires, or
 - b) (plastic-covered webbing type) webbing has deteriorated, frayed, cut or faded, or
 - c) (solid metal type) is corroded, cracked or buckled.

Seatbelt anchorages

7. A seatbelt anchorage:
 - a) is not securely fixed to the vehicle structure, or
 - b) is not securely fixed to the seat if the seatbelt is an integral part of the seat, or
 - c) is corroded, damaged or shows signs of tampering, or
 - d) has evidence of corrosion damage or structural damage within 300mm of the seatbelt anchorage.

Performance (on vehicles capable of exceeding a speed of 50km/h)

8. The seatbelt webbing of a retractor-type seatbelt does not easily pull out from the retractor.
9. The seatbelt webbing of a retractor-type seatbelt has difficulty retracting, eg is slow or intermittent, or does not fully retract.
10. A static seatbelt cannot be adjusted to fit a variety of persons.
11. The seatbelt is not of sufficient length to fit a variety of persons.
12. A seatbelt is located so that it cannot be readily fastened or released by the wearer.
13. The web and/or vehicle sensitivity of a dual-sensitive retractor type seatbelt fitted in a front outer seating position does not function correctly.
14. The vehicle sensitivity of a single-sensitive retractor-type seatbelt fitted in a front outer seating position does not function correctly.

Note 1

Seatbelt means an assembly of straps made of webbing or metal with a securing buckle, adjusting devices and attachments, including any device for absorbing energy or for retracting the webbing, that is:

- a) able to be anchored to the interior of a vehicle, and
 - b) designed to diminish the risk of injury to its wearer in the event of a collision or abrupt deceleration of the vehicle by limiting the mobility of the wearer's body.
- Safety belts designed to protect a person in case of rollover are not seatbelts for the purpose of WoF inspections, but any defects should be brought to the operator's attention.

Note 2

Retractor means a device to accommodate parts of, or all of the webbing of a seatbelt.

Single sensitive means a seatbelt retractor that, during normal driving conditions, allows freedom of movement by the wearer of the seatbelt by means of length-adjusting components that automatically adjust the seatbelt to the wearer, and that comprises a locking mechanism activated in an emergency by deceleration of the vehicle (ie the seatbelt is vehicle sensitive).

Dual sensitive means a seatbelt retractor that, during normal driving conditions, allows freedom of movement by the wearer of the seatbelt by means of length-adjusting components that automatically adjust the strap to the wearer, and that is activated by two or more of the following:

- a) deceleration of the vehicle, or
- b) acceleration of the strap from the retractor, or
- c) other means of activation.

Seating position means a seat or part of a seat that is of a suitable size and shape for one person.

Outer seating position means a seating position next to a sidewall of a vehicle where there is no more than 500mm between the longitudinal centre of the seat and the sidewall.

Middle seating position means a seating position in a vehicle that is not an outer seating position.

Rear seating position means a seating position in a vehicle behind the driver.

Monocoque in relation to a motor vehicle, means that the chassis of the vehicle is integral to the body.

Retrofit, in relation to a seatbelt or seatbelt anchorage in a motor vehicle, means to fit a seatbelt or seatbelt anchorage in a location where a seatbelt or seatbelt anchorage has not been fitted before.

Seatbelt anchorage means the parts of a vehicle structure, seat structure or any other part of the vehicle to which a seatbelt assembly is attached.

Modify means to change a vehicle from its original state by altering, substituting, adding or removing a structure, system, component or equipment, but does not include repair.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Specialist seatbelt means a seatbelt designed for specialist purposes, and includes a full harness seatbelt used for motorsport activities.

Permanent structure means a non-removable structure capable of sustaining loads associated with seatbelts and seatbelt anchorages.

Note 3

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward signs of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases the area affected by the corrosion damage will fall out and leave a hole.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Seatbelts and Seatbelt Anchorages 2002](#).

Permitted equipment

1. A vehicle may be fitted with seatbelts of any type.

Condition

Seatbelts (Note 1)

2. A seatbelt must be of a design that is suitable for the vehicle and must be strong, secure and in sound condition.
3. Seatbelt webbing must not be cut, stretched, frayed or faded, or have otherwise deteriorated so as to reduce the performance of the seatbelt.
4. Seatbelt webbing must be securely attached to the tongue or the adjusting buckle and to any fittings that secure a seatbelt to the seatbelt anchorages.
5. The strands of the steel cables of a seatbelt stalk must not be damaged or have deteriorated, and the seatbelt stalk must not have any other weaknesses that could reduce its performance.
6. Seatbelt buckles, retractor mechanisms or any other fittings intended to ensure the safe use of the seatbelt, must not have deteriorated below safe tolerance.

Seatbelt anchorages

7. A seatbelt anchorage and its mounting location must:
 - a) be of a strength appropriate to both the motor vehicle and the attached seatbelt, and
 - b) be structurally sound and free of corrosion, and
 - c) not be damaged or distorted.
8. When a seatbelt or part of a seatbelt is integral to a seat, the seat and seat anchorages must be compatible in strength with the seatbelt or with that part of the seatbelt attached to the seat.

Performance

9. A seatbelt must be in good working order.
10. A seatbelt must be able to be adjusted by the wearer.
11. A seatbelt must be able to be readily fastened and released by the wearer.

7-7 Interior impact

Reasons for rejection

Condition and performance

1. Where an interior fitting, control or surface has been modified or has deteriorated, the likelihood of injury to occupants has not been minimised.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Interior Impact 2001](#).

Condition and performance

1. Interior fittings, controls and surfaces in the passenger compartments must be such that the likelihood of injury to occupants is minimised.

7-12 Speedometer

Reasons for rejection

Mandatory equipment

1. A self-propelled vehicle first registered in New Zealand on or after 1 December 1951, that is capable of a speed exceeding 50km/h is not fitted with a speedometer, and the vehicle operator cannot produce acceptable written evidence (Note 2) that:
 - a) the speedometer has been removed for repair, or
 - b) there are no undue delays by the vehicle owner in having the speedometer replaced.

Condition and performance

2. The speedometer:
 - a) does not operate as intended when the vehicle is moving forward, or

- b) is obscured from the driver's vision, or
- c) does not indicate the vehicle's speed in km/h or mph.

3. Reason for rejection 2(a), 2(b) or 2(c) applies and the vehicle operator cannot produce acceptable written evidence (Note 2) that repair of the speedometer or associated equipment is impracticable or that a suitable replacement is not available.

Note 1

Speedometer means an instrument in a motor vehicle that is used to determine forward speed of the vehicle in kilometres per hour (km/h) or miles per hour (mph).

Note 2

Acceptable written evidence is documentation provided by the speedometer repairer or supplier. A copy of the documentation must be kept on file with the checksheet.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004.](#)

Mandatory equipment

1. A self-propelled vehicle first registered in New Zealand on or after 1 December 1951, that is capable of a speed exceeding 50km/h, must be fitted with a speedometer (Note 1).
2. A self-propelled vehicle is not required to have a speedometer if:
 - a) the speedometer or associated equipment has been removed for repair and there are no undue delays by the vehicle owner in having it replaced, or
 - b) the speedometer or associated equipment is out of repair, repair is impracticable and a suitable replacement is not available.

Performance

3. The speedometer must be in good working order and operate while the vehicle is moving forward.

7-13 Audible warning devices

Reasons for rejection

Mandatory equipment

1. A self-propelled vehicle is:
 - a) not fitted with a horn, or
 - b) fitted with a bell, whistle or siren that is not part of an anti-theft car alarm, personal security alarm or a reversing warning device.

Performance

2. The horn does not operate when activated.
3. The horn operates when not activated.
4. The sound from the horn is not steady and continuous, eg the horn plays a tune.
5. The horn is not audible at a distance of 100m.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004.](#)

Mandatory equipment

1. A self-propelled vehicle must be fitted with a device (horn) that is audible to other road users.

Permitted equipment

2. A self-propelled vehicle may be fitted with a bell, whistle or siren that is part of an anti-theft car alarm, personal security alarm or a reversing warning device.

Performance

3. The device must be in good working order.
4. The device must be capable of giving a warning that is audible under normal traffic conditions from a distance of at least 100m.

8 Brakes

8-1 Service brake and parking brake

Reasons for rejection

Mandatory equipment

1. A self-propelled vehicle does not have a service brake or parking brake.
2. A self-propelled vehicle with a brake system that uses compressed air is not fitted with:
 - a) an air compressor, or
 - b) an air reservoir, or
 - c) a pressure gauge, or
 - d) a pressure warning device.
3. A trailer does not have a required service brake, parking brake or breakaway brake as set out in Table 8-1-1.

Condition

Service brake

4. There is corrosion damage (Note 3) within 150mm of a brake component mounting point.
5. The **service brake pedal**:
 - a) is insecure, or
 - b) is spongy (indicating air in the system), or
 - c) creeps, or
 - d) has non-slip surface which has deteriorated to such an extent that the brake cannot be safely applied, or
 - e) has excessive travel.
6. A **vacuum hose or pipe** (including connections) is:
 - a) insecure, or
 - b) leaking, or
 - c) damaged (cracked, chafed, twisted, stretched or corroded, eg showing signs of pitting or a noticeable decrease in the pipe's outside diameter).
7. The **brake vacuum servo** (brake booster) is:
 - a) not functioning fully or adequately, or
 - b) leaking, or
 - c) insecure.
8. The **brake master cylinder** is:
 - a) leaking brake fluid, or
 - b) insecure, or
 - c) excessively corroded.
9. A **brake valve** is:
 - a) not operating (eg has a seized load-sensing valve), or
 - b) leaking brake fluid, or

- c) insecure, or
- d) excessively corroded.

10. A **brake pipe** (including connections) is:

- a) leaking brake fluid, or
- b) insecure, or
- c) deformed from its original shape, or
- d) chafed, or
- e) corroded, eg there are signs of pitting or a noticeable increase in the pipe's outside diameter.

11. A **flexible hydraulic brake hose** (including connections):

- a) is leaking brake fluid, or
- b) is insecure, or
- c) bulges under pressure, or
- d) is twisted, stretched or chafed, or
- e) has an external sheathing that is cracked to the extent that the reinforcing cords are exposed, or
- f) has metal connections that are excessively corroded, or
- g) has an end fitting that is not attached to the hose by means of swaging, machine crimping or a similar process (Note 3).

12. A **brake calliper**:

- a) shows visible signs of leaking, or
- b) is insecure.

13. A **brake backing plate** is:

- a) insecure, or
- b) severely corroded, or
- c) deformed from its original shape, or
- d) cracked, or
- e) contaminated by brake fluid, oil or grease.

14. A **wheel cylinder**:

- a) shows visible signs of leaking, or
- b) is insecure, or
- c) is seized.

15. An **ABS system component** is damaged, insecure or missing.

16. A **brake disc or drum** is:

- a) worn beyond manufacturer's specifications (where visible without removing vehicle components), or
- b) fractured or otherwise damaged (where visible without removing vehicle components), or
- c) contaminated by brake fluid, oil or grease.

17. **Brake friction material** (where visible without removing vehicle components) is:

- a) worn below manufacturer's specifications, or
- b) separating from the brake pad backing plate or brake shoe, or
- c) contaminated by brake fluid, oil or grease.

18. A **service brake component** shows signs of heating or welding after original manufacture.

19. A **compressed air brake component**:

- a) is missing, or

- b) is damaged or has deteriorated, or
- c) is seized or has wear beyond manufacturer's wear limits, or
- d) is leaking, or
- e) does not operate correctly or as intended by the vehicle manufacturer.

Parking brake

20. The **parking brake lever**:

- a) has excessive travel, or
- b) is insecure, or
- c) mounting is damaged, corroded, distorted or fractured within 150mm of the lever mounting, or
- d) mechanism or lever pivot bearing is worn or damaged so that the parking brake could be easily released by accident.

21. The **parking brake cable**:

- a) is knotted, frayed or excessively corroded, or
- b) has an auxiliary tensioner fitted, or
- c) has otherwise deteriorated so that it may affect the parking brake performance.

22. A **parking brake actuating rod or guide**:

- a) is excessively corroded, or
- b) is excessively worn, or
- c) has otherwise deteriorated so that it may affect the parking brake performance.

23. A **parking brake component** shows signs of heating or welding after original manufacture.

Performance

Service brake

24. The service brake cannot be applied in a controlled and progressive manner.

25. When the service brake is applied without assistance from the engine:

- a) the self-propelled vehicle does not stop within 7m from a speed of 30 km/h (average brake efficiency of 50%), or
- b) the combined effort of the trailer and towing vehicle brakes does not stop the vehicle combination within 7m from a speed of 30km/h (average braking efficiency of 50%), or
- c) the vehicle or vehicle combination does not stop within a distance from 30km/h (or the vehicle's maximum speed if this is less than 30km/h) that is appropriate for the vehicle's design, taking into account the vehicle manufacturer's operating limits.

26. When the service brake is applied:

- a) the vehicle vibrates under braking to the extent that the control of the vehicle is adversely affected, or
- b) the brake fails to release immediately after the brake pedal has been released, or
- c) the directional control is affected (eg there is swerving to one side, or the brakes on one side apply more slowly than on the other side).

27. The brake system warning lamp or self-check system, if fitted, indicates a defect in the brake system (this does not apply to brake pad wear warning systems).

Parking brake

28. When the parking brake is applied:

- a) it does not hold the vehicle at rest on a slope of one in six (ie a 17% or 9o slope), or
- b) it does not hold all the wheels on a common axle stationary against attempts to drive the vehicle away.

Breakaway brake

29. The breakaway brake does not automatically and immediately apply when the trailer is disconnected from the vehicle.

Note 1 Definitions

Service brake means a brake for intermittent use that is normally used to slow down and stop a vehicle. The service brake of a vehicle which acts directly on the transmission or the rear wheels only is considered to act on all wheels if the transmission shifts automatically from two-wheel drive to four-wheel drive when the service brake is applied. Lever-operated vehicles do not normally have a dedicated service brake, but the vehicles slow down as the lever is operated, and stop when it is in neutral position.

Parking brake means a brake readily applicable and capable of remaining applied for an indefinite period without further attention. A parking brake may be lever operated, or may be a transmission lock or a service brake that is capable of being locked in the applied position.

Breakaway brake means a service brake or parking brake fitted to a trailer that ensures, under all conditions of use, that, if the trailer is unintentionally disconnected from its towing vehicle, the brake will automatically and immediately apply and will remain applied for at least 15 minutes.

Direct trailer service brake means a service brake fitted to a trailer that allows the driver of a towing vehicle, from their driving position, to directly and progressively regulate the trailer brake effort.

Indirect trailer service brake means a service brake fitted to a trailer where the action of the driver of a towing vehicle applying the brakes of that vehicle results in a reaction by the trailer that is used to progressively regulate the trailer brake effort.

Laden weight means the weight of the vehicle and its load for the time being carried.

Note 2

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward sign of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Note 3

Hose end fittings that can be undone using hand tools are unacceptable.

Note 4

If a brake is fitted with an inspection port plug, this must be removed for inspection of the brake components.

Table 8-1-1. Trailer brake requirements

Type of brake required	Laden weight of the trailer		
	2000kg or less	2001–2500kg	2501kg or more
Service brake	Not required, but if fitted must act on each wheel of at least one axle	Required: either direct or indirect service brake that must act on each wheel of at least one axle	Required: direct service brake that must act on each wheel of at least one axle
Parking brake	Not required	Not required	Required, acting on at least one complete axle
Breakaway brake	Not required	Required, unless fitted with an appropriate coupling and two safety chains	Required

Summary of legislation

Applicable legislation

- [Land Transport Rule: Light-vehicle Brakes 2002](#)
- [Land Transport Rule: Heavy-vehicle Brakes 2006](#).

Mandatory equipment

1. A self-propelled vehicle must have a service brake and a parking brake.
2. A trailer must have a service brake, a parking brake and a breakaway brake, as specified in Table 8-1-1.
3. A vehicle with a brake system that uses compressed air must be fitted with an air compressor, air reservoir, pressure gauge and pressure warning device.

Permitted equipment

4. A vehicle may be fitted with a warning system that is part of, or associated with, the use of a brake component or system.
5. A trailer may be fitted with a type of brake that is not required to be fitted to the trailer.

Condition

6. A brake must be in good condition and within safe tolerance of its state when manufactured.
7. The brake friction surfaces must be within safe tolerance of their state when manufactured, and must not be scored, weakened or damaged to the extent that the safety performance of the brake is adversely affected.

Performance

8. The service brake must be able to be applied in a controlled and progressive manner.
9. When the brake is applied:
 - a) the vehicle or its controls must not vibrate to the extent that control of the vehicle is adversely affected, and
 - b) the braking effort on each wheel must provide stable and efficient braking without adverse effect on the directional control of the vehicle, and
 - c) if the vehicle is equipped with an anti-lock braking system (ABS), the wheels must not lock, other than when the speed of the vehicle falls below the ABS activation parameters set by the vehicle manufacturer.
10. A brake warning system must function correctly (does not apply to a brake pad wear warning system).

Service brake

11. The service brake of a vehicle that is operated on a hard, dry, level surface that is free of loose material and without assistance from the compression of the engine or other retarders must operate in the following manner:
 - a) the service brake must stop the vehicle or vehicle combination within a distance of 7m from a speed of 30km/h (average brake efficiency of 50%), or
 - b) the service brake must stop the vehicle or vehicle combination within a distance from 30km/h (or if the vehicle's maximum speed if this is less than 30 km/h) that is appropriate for the vehicle's design, taking into account the manufacturer's operating limits.

Parking brake

12. A parking brake must hold the vehicle at rest on a slope of 1 in 5 or as appropriate for the vehicle's design taking into account the manufacturer's operating limits.
13. A trailer breakaway brake must automatically and immediately apply when the trailer unintentionally disconnects from the towing vehicle, and must remain applied for at least 15 minutes.

9 Steering and suspension

9-1 Steering and suspension systems

Reasons for rejection

Mandatory equipment

1. A self-propelled vehicle capable of exceeding a speed of 50 km/h and equipped with a modified or aftermarket steering system with no direct mechanical connection between the driver's means of control and the wheels, or other means of changing the vehicle's direction, does not have at least one additional means of steering.

Condition

2. The steering wheel or a control lever:
 - a) is insecurely attached to the steering shaft, or
 - b) shows excessive movement, eg due to unacceptable wear or looseness in the steering box or rack or steering column bearings, or
 - c) rim covering is insecure so that the directional control of the vehicle is affected.
3. The steering column is insecure.
4. The power steering:

- a) has been disconnected, or
- b) system does not operate correctly, eg requiring unreasonable force to steer the vehicle, or
- c) has a hose, pump drive, drive belt or pump mounting that is insecure, damaged, has significantly deteriorated, or
- d) has a significant fluid leak.

5. The hydrostatic steering system:

- a) has been disconnected, or
- b) does not operate correctly, eg requiring unreasonable force to steer the vehicle, or
- c) has a hose, pump drive, drive belt or cylinder, including their mountings, that is insecure, damaged or has significantly deteriorated, or
- d) has any fluid leakage, except for minor seepage.

6. A linkage or joint between the steering column shaft and steering box or rack:

- a) is insecure, or
- b) is damaged, significantly corroded, distorted or cracked, or
- c) shows signs of welding or heating after original manufacture, or
- d) has play beyond manufacturer's specifications, or does not operate smoothly without roughness or stiffness, or
- e) is fouling on the vehicle structure, wheel, tyre or brake system component.

7. The steering box or rack:

- a) is insecure, or
- b) is damaged, significantly corroded, distorted or cracked, or
- c) shows signs of welding or heating after original manufacture, or
- d) has play beyond manufacturer's specifications, or
- e) does not operate smoothly without roughness or stiffness, or
- f) has an excessive fluid leak.

8. A steering rack gaiter is missing, insecure or split.

9. A steering linkage or joint (Note 2):

- a) is insecure, or
- b) is damaged, significantly corroded, distorted or cracked, or
- c) shows signs of welding or heating after original manufacture, or
- d) has play beyond manufacturer's specifications, or
- e) does not operate smoothly without roughness or stiffness, or
- f) is fouling on the vehicle structure, wheel tyre or brake system component, or
- g) shows signs of plastic injection.

10. A steering arm or associated component:

- a) is insecure, or
- b) is damaged, significantly corroded, distorted or cracked, or
- c) shows signs of welding or heating after original manufacture.

11. A kingpin or suspension joint (Note 2):

- a) is insecure, or
- b) is damaged, significantly corroded, distorted or cracked, or
- c) shows signs of welding or heating after original manufacture, or
- d) has play beyond the manufacturer's specifications, or

- e) does not operate smoothly without roughness or stiffness, or
 - f) shows signs of plastic injection.
12. A lock stop is loose or damaged.
13. A steering or suspension component mounting point:
- a) is insecure, or
 - b) has corrosion damage, buckling or fractures within 150mm of a mounting point.
14. Any other suspension component:
- a) is insecure or missing, or
 - b) is damaged, significantly corroded, distorted or cracked, or
 - c) shows signs of welding or heating after original manufacture, or
 - d) has play beyond manufacturer's specifications, or
 - e) does not operate smoothly without roughness or stiffness, or
 - f) has excessive leakage of damping fluid ([Technical bulletin 9](#)), or
 - g) shows excessive play, roughness or stiffness in a strut upper support bearing, or
 - h) is a replacement urethane suspension bush that is not voided or shaped to allow for similar movement to an OE bush.
15. There is corrosion damage (Note 3) within 150mm of a suspension component mounting point.
16. A ballrace turntable is:
- a) not securely fastened, eg bolts or fasteners are loose, or
 - b) worn beyond manufacturer's tolerances, or
 - c) cracked or distorted, or
 - d) corroded or has deteriorated so that it is no longer safe.

Performance

17. During operation the vehicle cannot be controlled in a safe, efficient, convenient and sensitive manner, eg:
- a) the vehicle veers significantly to one side, or
 - b) the vehicle requires unreasonable force to steer, or
 - c) the steering is unreasonably stiff, rough or light, or
 - d) the vehicle does not handle safely under normal conditions of road use, eg the suspension is excessively hard or soft, or there is excessive body roll.

Note 1 Definitions

Steering system means those components, parts and systems that connect the driver's controls to a vehicle's wheels or tracks by means of which the direction of motion of a vehicle is controlled.

Ballrace turntable means a device incorporating a low friction ball bearing fitted between two substantial structural components of a vehicle to enable rotational motion between those components about a vertical axis.

Note 2

A damaged boot on a steering or suspension joint is not a ground for rejection; however, the vehicle's owner should be advised.

Note 3

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward sign of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Steering Systems 2001](#).

Mandatory equipment

1. A self-propelled vehicle capable of a speed of more than 50 km/h and equipped with a modified or aftermarket steering system with no direct mechanical connection between the driver's means of control and the wheels, or other means of changing the vehicle's direction, must have at least one additional means of steering.

Condition

2. The steering system and associated systems and components that directly or indirectly affect the directional control of the vehicle must be:

- a) sound and in good condition, and
- b) strong, durable and fit for their purpose, taking into account whether adverse effects have resulted from a loss of integrity of any protective system used by a relevant component.

Performance

3. The steering system and associated systems and components that directly or indirectly affect the directional control of the vehicle must provide the vehicle with safe, efficient, convenient and sensitive control.

Page amended **14 October 2013** (see [amendment details](#)).

10 Tyres, wheels and hubs

10-1 Tyres and wheels

Reasons for rejection

Mandatory equipment (Note 2)

Tyres

1. Tyres on the same axle are not of the same:
 - a) size designation, or
 - b) construction type (ie mixed steel ply, fabric radial ply, bias/cross ply), or
 - c) tread pattern type (mixed asymmetric, directional, normal highway, traction).
2. An asymmetric tyre is fitted to a vehicle with the 'inside' tyre wall facing outwards.
3. A unidirectional tyre is fitted contrary to its correct direction of rotation.
4. A tyre has a speed category (Table 10-1-1) that is less than the speed limit for the vehicle or less than the vehicle's maximum speed if this is less than the speed limit (Note 3) (Note 4).
5. The vehicle has one or more of the following types of tyre fitted (Note 1):
 - a) a space-saver tyre, or
 - b) a metal tyre, or
 - c) a tyre with studs, cleats, lugs or other gripping devices.
6. A tyre is not compatible with the vehicle to which it is fitted, eg a tyre that is marked with any of the following:
 - a) 'FOR TRAILER USE ONLY'
 - b) 'ADV' (Agricultural Drawn Vehicle)
 - c) 'RACING PURPOSES ONLY'.

Wheels

7. A wheel is not compatible with the tyre fitted to it for rim profile, flange height or valve fitment.
8. A wheel is:
 - a) not compatible with the vehicle to which it is fitted. or
 - b) not correctly attached to the vehicle.

Condition

Tyres (excluding spare tyres)

9. There are signs that a tyre is fouling on another part of the vehicle.
10. A pneumatic tyre shows damage that is likely to compromise its ability to operate in a safe manner or lead to premature tyre failure, such as:
- a) a lump or bulge that is likely to be caused by separation of the tyre structure, or
 - b) a cut or crack in a side wall or tread more than 25mm long that reaches the cords (see Note 5 for visible cords in the tread area of heavy vehicle radial-ply tyres), or
 - c) exposed or cut cords (see Note 5 for visible cords in the tread area of heavy vehicle radial-ply tyres), or
 - d) the tread of a retreaded tyre shows signs of separation, or
 - e) nails or other sharp objects embedded in the tyre, or
 - f) significant perishing, eg due to age, moisture or exposure.
11. A pneumatic tyre has a string-type repair visible from the outside.
12. A tyre is noticeably under- or over-inflated.
13. A non-pneumatic tyre has significantly disintegrated or shows signs that are likely to be the result of separation or partial failure of the tyre structure.
14. Tyre repairs have not been carried out in accordance with acceptable industry practice.
15. A tyre does not have a tread pattern depth ([Technical bulletin 7](#)) of at least 1.5mm (excluding any tie-bar or tread-depth indicator strip) around the whole circumference of the tyre:
- a) within all the principal grooves that normally contain moulded tread depth indicators, or
 - b) if the tyre does not normally have moulded tread-depth indicators (such as some retreaded or vintage tyres), across at least three-quarters of the tread width.

Spare tyres

16. A spare tyre, if carried, is not securely attached to or stored in the vehicle.

Wheels

17. There are signs that a wheel is fouling on another part of the vehicle.
18. A wheel is:
- a) cracked, or
 - b) significantly damaged, distorted or has deteriorated, or
 - c) not securely attached to the hub.
19. A wheel nut is:
- a) missing, or
 - b) loose, or
 - c) deteriorated, or
 - d) the incorrect type, or
 - e) has insufficient thread engagement to the wheel stud.

Self-laying tracks

20. Track plates:
- a) are not securely fitted, or
 - b) are missing, or
 - c) have missing bolts, or
 - d) show excessive damage.
20. Track links, pins and bushes are damaged or worn beyond manufacturer's wear limits.
21. Drive sprockets are not securely fitted or are damaged or worn beyond manufacturer's wear limits.
22. Rollers are not securely fitted or are damaged or worn beyond manufacturer's wear limits.

Note 1

A vehicle may be fitted with non-pneumatic tyres such as solid rubber tyres or tyres filled with polyurethane.

Note 2 Definitions

Asymmetric tyre means a tyre which, through tread pattern or construction, is required to be fitted to a vehicle so that one particular sidewall faces outwards.

Construction, in relation to a tyre, means:

- a) for a pneumatic tyre, the type of carcass (including ply orientation and ply rating or load index)
- b) for any other tyre, characteristics relating to size, shape and material.

Cross ply means a pneumatic tyre structure in which the ply cords in the tyre carcass extend to the beads and are laid at alternate angles, which are substantially less than 90 degrees, to the centreline of the tread. This tyre structure is also referred to as 'bias ply' or 'diagonal ply'.

Directional tyre means a tyre with a tread pattern designed to operate in one direction only, and marked accordingly.

Pneumatic tyre means a tyre that, when in use, is inflated by air or gas introduced from time to time under pressure so as to enclose under normal inflation a cushion of air or gas forming altogether at least half of the total area of an average cross-section of a tyre so inflated.

Principal grooves means the wide grooves in the tyre tread which have the tread-wear indicators located inside them. Any other grooves are secondary grooves which may wear out during the service life of the tyre.

Radial ply means a pneumatic tyre structure in which the ply cords, which extend from bead to bead, are laid at approximately 90 degrees to the centreline of the tread, the carcass being stabilised by an essentially inextensible circumferential belt.

Repair means to restore a damaged or worn vehicle, its structure, systems, components or equipment to within safe tolerance of its condition when manufactured, including replacement with undamaged or new structures, systems, components or equipment.

Rim means that part of the wheel on which the tyre is mounted and supported.

Speed category means a code allocated to a tyre by a tyre manufacturer that indicates the maximum vehicle speed for which the use of the tyre is rated. It is either marked on the tyre, or can be obtained from the tyre manufacturer or a reference guide.

Tread means that part of a pneumatic tyre which comes into contact with the ground.

Tread-depth indicator (or tread-wear indicator) means the projections within the principal grooves designed to give a visual indication of the degree of wear of the tread. To help locate these on a tyre, inspectors should look for a " or 'TWI' mark on the outer edge of the tyre side wall (most tyres have these marks).

Tube means an inflatable elastic liner, in the form of a hollow ring fitted with an inflation valve assembly, designed for insertion into certain tyre assemblies to provide a cushion of air or gas, that, when inflated, supports the wheel (also known as an 'inner tube').

Tyre carcass means that structural part of a pneumatic tyre other than the tread and outermost rubber of the sidewalls that, when inflated, contains the gas that supports the load.

Tyre load rating means the maximum load a tyre can carry at the corresponding cold inflation pressure prescribed by the tyre manufacturer and the speed indicated by its speed category symbol.

Wheel means a rotating load-carrying member between the tyre and the hub, which usually consists of two major parts, the rim and the wheel disc, and which may be manufactured as one part, permanently attached to each other or detachable from each other.

Wheel centre-disc means that part of the wheel that is the supporting member between the hub and the rim.

Note 3

The tyre load index and speed category are usually marked on the tyre. Where the tyre is not marked, the load and speed rating information must be obtained from the tyre manufacturer or a reference guide of tyre ratings before the tyre can be passed.

Note 4

Sometimes a retreaded or repaired tyre has had its speed rating removed. Where a tyre has been repaired or retreaded in accordance with standard NZS 5423 (Repairing and retreading car, truck and bus tyres), the tyre must be marked with NZS 5423 and, if a car tyre, have the speed rating removed. In such a case, a missing speed rating is acceptable for WoF/CoF (unless the inspector believes on reasonable grounds that the tyre would not have had the required minimum speed rating for the vehicle in the first place).

Note 5

Where a heavy vehicle radial-ply tyre has visible cords in the tread area, the vehicle inspector may pass such a tyre for CoF provided the tyre is in a safe condition, eg only the protective cord layer (protective belt, see Figure 10-1-1) is visible. When determining whether such a tyre is in a safe condition, the vehicle inspector may take into account written evidence from a person who has current specialist tyre knowledge and experience, particularly in heavy vehicle tyre inspection.

Table 10-1-1. Tyre speed symbol categories

Speed symbol – speed category (km/h)							
A1 – 5	A5 – 25	B – 50	F – 80	L – 120	Q – 160	U – 200	Y – 300
A2 – 10	A6 – 30	C – 60	G – 90	M – 130	R – 170	H – 210	ZR – over 240
A3 – 15	A7 – 35	D – 65	J – 100	N – 140	S – 180	V – 240	
A4 – 20	A8 – 40	E – 70	K – 110	P – 150	T – 190	W – 270	

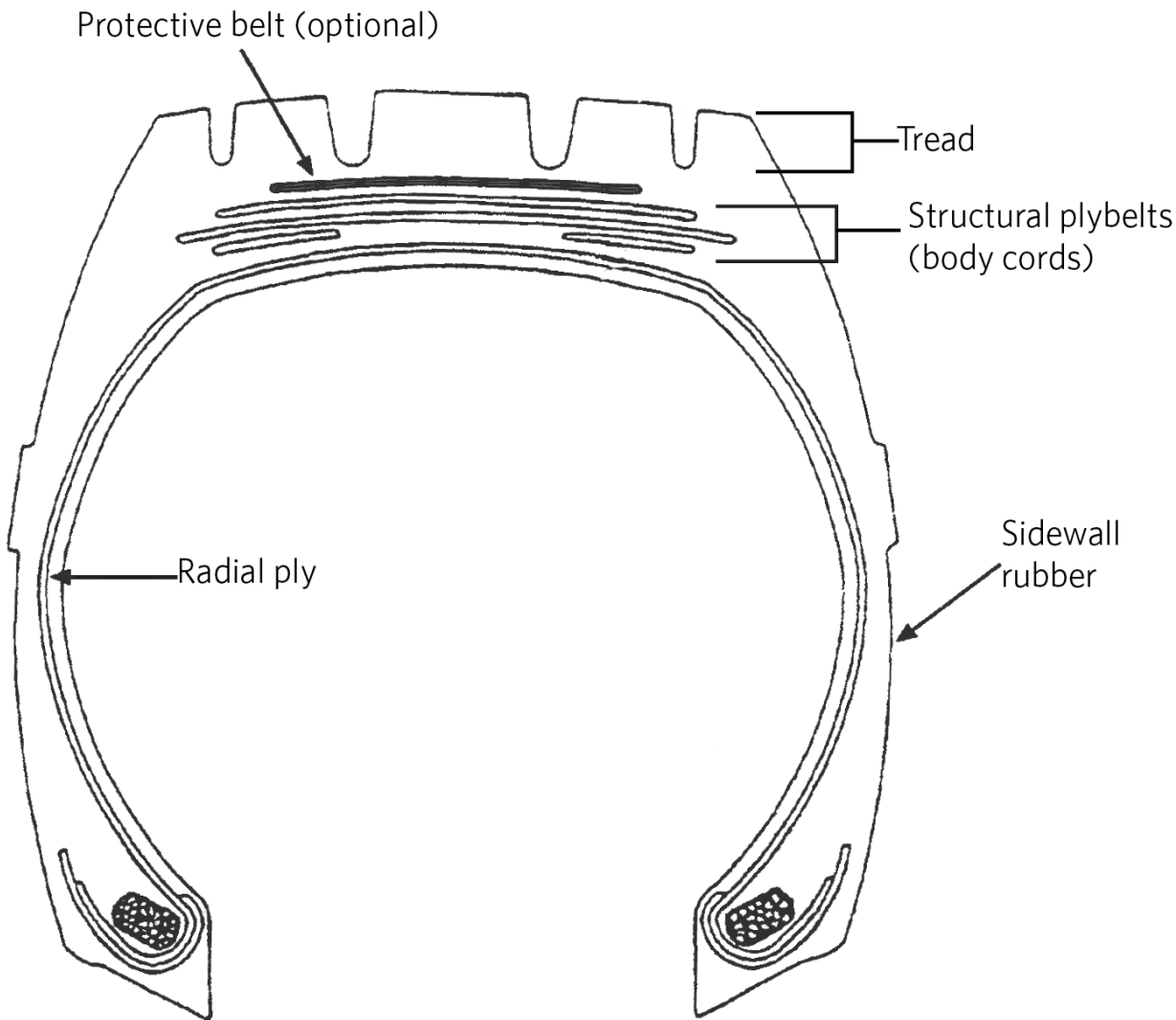


Figure 10-1-1. Cross-sectional representation of a heavy vehicle radial-ply tyre

Summary of legislation

Applicable legislation

- [Land Transport Rule: Tyres and Wheels 2001](#).

Mandatory equipment

Tyres

1. Tyres must be compatible with the vehicle to which they are fitted.
2. Tyres on the same axle must be of the same size designation and construction, and of the same tread pattern type.
3. Asymmetric tyres must be fitted in axle sets in accordance with manufacturer's instructions.
4. A unidirectional tyre must be fitted to a wheel position corresponding to its direction of rotation.
5. The speed category of a tyre must be compatible with the maximum legal speed limit for the vehicle, or the vehicle's maximum speed.
6. A vehicle must not be fitted with a metal tyre or other non-pneumatic tyre, or with a tyre with studs, cleats, lugs or other gripping devices.

Wheels

7. A wheel must be:
 - a) sufficiently strong for the type of vehicle to which it is fitted, and
 - b) compatible with the vehicle to which it is fitted, and
 - c) compatible with the tyre rim profile, flange height and valve fitment.
8. There must be adequate clearance for the brake, hub, body parts and suspension and steering mechanism.

Permitted equipment

9. A vehicle may be fitted with retreaded tyres.

Condition

Tyres (excluding spare tyres and space-saver tyres)

10. A tyre must be of good quality and construction, fit for its purpose and maintained in a safe condition.
11. A tyre must not have worn, damaged or visible cords apparent by external examination.
12. A heavy vehicle radial-ply tyre may have visible cords in the tyre tread area provided the tyre is in a safe condition. To assess whether such a tyre is in a safe condition, the vehicle inspector may take into account written evidence from a person who has current specialist tyre knowledge and experience, particularly in heavy vehicle tyre inspection.
13. A tyre must have a tread pattern depth of not less than 1.5mm (excluding any tie-bar or tread-depth indicator strip) around the whole circumference of the tyre:
 - a) within all principal grooves that contain tread-depth indicators, or
 - b) if the tyre does not normally have tread-depth indicators, across at least three-quarters of the tyre tread width.
14. The regrooving of a tyre is permitted only if the tyre is identified as having been specifically designed for regrooving after manufacture.
15. A tyre that is fitted to a vehicle must be maintained at a safe inflation pressure.

Spare tyre

16. If the vehicle carries a spare tyre, the tyre must be securely attached on or in the vehicle.

Wheels

17. The components of the wheel assembly must be in good condition.
18. The wheel must be securely attached to the hub.

10-2 Hubs and axles

Reasons for rejection

Condition

1. A hub (Note 1):

- a) is not securely attached to the vehicle, or
- b) has a visible crack, or
- c) is significantly damaged, distorted or has deteriorated, or
- d) has a broken or missing wheel stud.

2. A wheel bearing:

- a) has play beyond the manufacturer's specifications, or
- b) is over-tight or sounds rough.

3. An axle:

- a) is insecure, eg has loose U-bolts, or
- b) is visibly cracked, or
- c) is significantly damaged, distorted or has deteriorated, or
- d) shows signs of welding or heating after original manufacture, or
- e) shows signs of fouling the vehicle structure or a brake, suspension or steering component.

Note 1

Hub means that part of a vehicle that is attached to the axle and rotates on, or with, the axle, and to which the wheel is attached, and includes any bearings.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Tyres and Wheels 2001](#).

Condition

1. The components of the assembly must be in good condition.
2. The hub and axle must be sufficiently strong for the type of vehicle to which they are fitted.
3. The hub and axle must have a suitable and correctly adjusted geometry.

10-3 Mudguards

Reasons for rejection

Mudguard condition

1. A mudguard is not securely fixed to the vehicle.
2. A mudguard is so constructed or damaged that it is likely to present a hazard to road users.

Note 1

Mudguard means a fitting, inclusive of any portion of the vehicle and of any mudflaps attached, that serves to intercept material thrown up by a wheel more or less on the plane of the wheel.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004](#).

Permitted equipment

1. A vehicle may be fitted with mudguards.

Condition

2. A mudguard must be securely fixed to the vehicle and must be constructed so that it does not present a hazard to road users.

11 Exhaust

11-1 Exhaust system

Reasons for rejection

Mandatory equipment

1. A vehicle is not fitted with an exhaust system that includes a means of sound reduction (Note 1).

Condition

2. The exhaust system is not securely mounted.
3. The exhaust system is so constructed or modified that its operation or effectiveness can be readily interfered with.
4. The exhaust system is so constructed that emitted heat or fumes are likely to harm vehicle occupants, eg the exhaust gases are not directed away from the perimeter of the vehicle's passenger compartment.

Performance

5. There is a leak of exhaust fumes from the exhaust system.
6. The noise output is noticeably and significantly louder than it would have been when the vehicle was manufactured with its original exhaust system.

Note 1

Exhaust system means a pipe assembly through which the engine exhaust gases pass to the atmosphere and includes some means of sound reduction such as a silencer or resonator.

Note 2

A spark arrestor is not required to be checked.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004](#).

Mandatory equipment

1. A vehicle with an internal combustion engine must be fitted with an exhaust system (Note 1).

Condition

2. An exhaust system must not be constructed or modified in a way that allows a person to interfere readily with its operation or reduce its effectiveness.
3. An exhaust system must be designed, constructed, positioned and maintained in a way that minimises the risk of heat or fumes emitted from the system harming the vehicle's occupants.

Performance

4. An exhaust system must be effective and in good working order.
5. Noise from an exhaust system must not be noticeably and significantly louder than it would have been when the vehicle was manufactured with its original exhaust system.

11-2 Visible exhaust smoke

Reasons for rejection

1. A vehicle with the engine at normal operating temperature (Note 1), other than a vehicle in Reason for rejection 2, emits clearly visible smoke ([Technical bulletin 8](#)) from the exhaust tail pipe (Note 2):

- a) for a continuous period of five seconds when the engine is idling, or
- b) as the engine is being rapidly accelerated to approximately 2500 rpm or approximately half the maximum engine speed (whichever is lower) (Note 3).

2. A vehicle fitted with an engine that is designed in a way that the vehicle cannot reasonably comply with Reason for rejection 1 emits smoke that is noticeably and significantly more visible than it would have been when the vehicle was manufactured and supplied with the recommended fuel (Note 4).

Note 1

Test procedure:

- a) Carry out the idling and acceleration tests in Reason for rejection 1. A vehicle that passes both tests with the engine below normal operating temperature is deemed to have passed with the engine at normal operating temperature.
- b) If the vehicle has failed either test, ensure the engine is at normal operating temperature. Then purge the system by increasing the engine speed to 2500 rpm (or half the maximum engine speed if this is lower) and holding it there for about five seconds. Repeat the idling and acceleration tests in Reason for rejection 1.

Note 2

Visible emissions caused by the condensation of water vapour do not count as smoke.

Note 3

During the acceleration test, a diesel-powered vehicle may emit a moderate amount of smoke if this is caused by turbo lag.

Note 4

The vehicle inspector may need to take into account information from the vehicle manufacturer or their representative or other appropriate expert, eg about older or unusual vehicles.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Exhaust Emissions 2007](#).

Performance

1. A self-propelled vehicle must not emit clearly visible smoke (Note 2) when the engine is running at its normal operating temperature, under either of the following conditions:

- a) for a continuous period of five seconds when the engine is idling, or
- b) as the engine is being accelerated rapidly to approximately 2500 revolutions per minute or approximately half the maximum engine speed (whichever is lower).

2. Requirement 1 above does not apply if the driver of the vehicle produces documentation that proves that the engine is original equipment for the vehicle and the engine's design does not allow the vehicle to reasonably comply.

12 Towing connections

12-1 Towing connections

Reasons for rejection

Condition

1. A towing connection component:

- a) is not securely attached, or
- b) is missing, or
- c) is cracked, distorted or significantly corroded, or
- d) is worn beyond manufacturer's specifications.

2. A coupling mechanism or safety locking device does not operate smoothly or effectively, or fasten securely.

3. A coupling pin or towing hook is:

- a) welded or repaired, or
- b) is worn beyond the coupling manufacturer's wear limits or, if these are not available, by more than 5% of the original dimensions.

Note 1

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward sign of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Note 2

Coupling means that part of a vehicle that is specifically designed to enable it to be connected to another vehicle; it does not include a structural member of the towing or towed vehicle.

Towing connection means the combination of components that enables one vehicle to tow or be towed by another vehicle, and includes a towbar, drawbar, drawbeam and coupling.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Heavy Vehicles 2004](#)
- [Land Transport Rule: Vehicle Standards Compliance 2002](#), section 7.4.

Permitted equipment

1. A vehicle may be fitted with a towing connection.

Condition

2. Towing connection components fitted to a vehicle must ensure that a secure connection can be maintained between the towing and towed vehicles under all conditions of loading and operations for which the vehicle was constructed.

3. A vehicle must:

- a) be safe to be operated, and
- b) have been constructed using components and materials that are fit for purpose, and
- c) be within safe tolerance of their state when manufactured.

13 Miscellaneous items

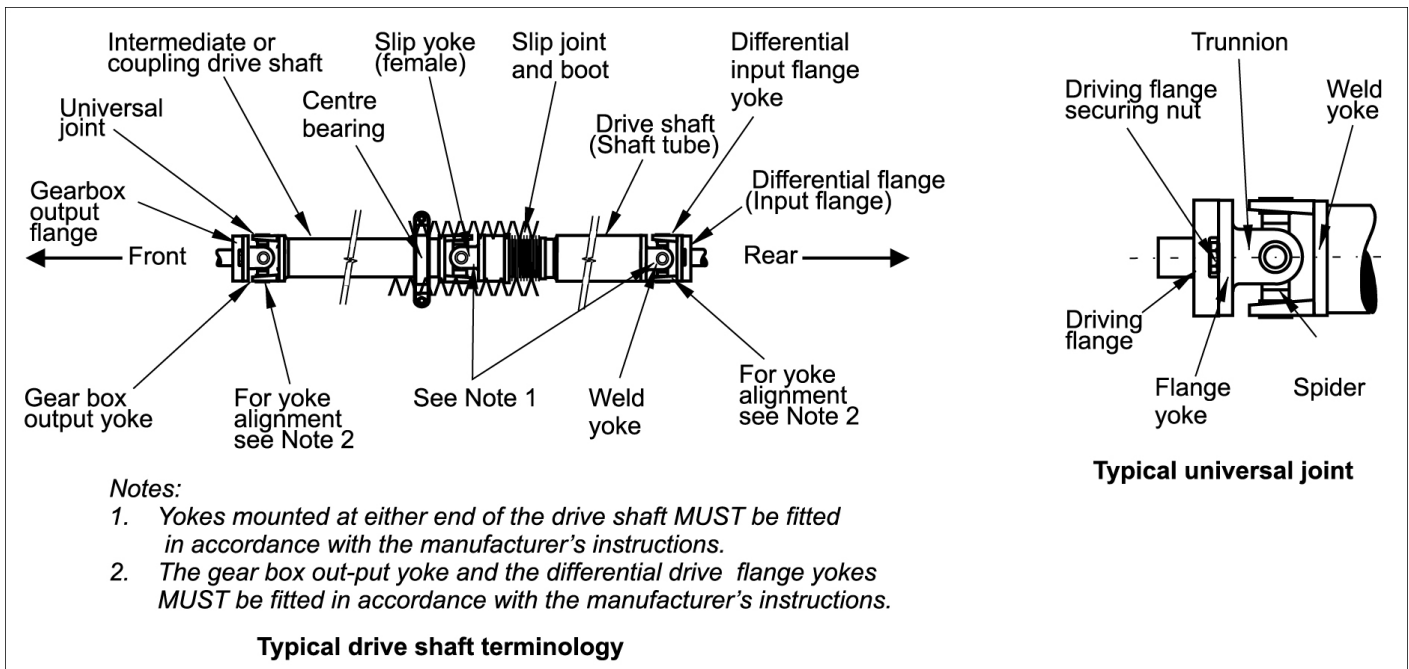
13-1 Engine and drive train

Reasons for rejection

Condition

1. The engine or gearbox is insecurely mounted.
2. A driveshaft is bent or severely damaged.
3. A driveshaft flange:
 - a) is insecure, or
 - b) has a bolt or nut missing.
4. A driveshaft support bearing is:
 - a) insecure, or
 - b) worn beyond manufacturer's specifications.
5. A driveshaft universal joint spider (cross) bearing:
 - a) is worn so that the movement in the joint is beyond manufacturer's specifications, or
 - b) caps have loose or missing cap bolts or circlips, or
 - c) is damaged, displaced or the seals on the spider journals are missing.
6. A rubber doughnut-type driveshaft coupling:
 - a) is worn or damaged beyond manufacturer's specifications, or
 - b) is split or delaminated so that its mechanical integrity is affected, or
 - c) the securing bolt is loose or missing.
7. A driveshaft slip joint (spline) is worn beyond manufacturer's specifications.
8. The universals in the driveshaft are not fitted in accordance with manufacturer's specifications.

See also Figure 13-1-1.



13-1-1. A typical driveshaft assembly

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Standards Compliance Rule 2002](#), section 7.4.

Condition and performance

1. The vehicle must be safe to be operated.
2. The components and materials must be fit for their purpose and within safe tolerance of their state when manufactured or modified.

13-2 Fuel system

Reasons for rejection

Condition

1. There is a noticeable fuel leak from the fuel system.
2. The security of the fuel tank is affected by:
 - a) corrosion damage (Note 1), or
 - b) cracking or other damage, or
 - c) insecure or loose tank mountings.
3. A fuel line is insecure or loose so that it is likely to be damaged during normal use of the vehicle.
4. A fuel pipe is severely damaged or excessively corroded.
5. A fuel hose is damaged or perished.
6. The fuel pump is insecure.
7. The fuel filler cap is missing, insecure or likely to allow fuel spillage when the vehicle is in normal use.
8. The fuel tank is fitted with a 'temporary use' fuel filler cap.

Note 1

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward sign of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases the area affected by corrosion damage will fall out and leave a hole.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Equipment 2004](#).

Condition and performance

1. Fuel tanks, fuel lines and associated components must be:
 - a) securely mounted, and
 - b) made of suitable materials, and
 - c) in good condition, and
 - d) free from significant leaks, and
 - e) positioned so that the risk of mechanical damage or heat gain is minimised.

13-3 LPG/CNG fuel system

Reasons for rejection

Condition

1. An LPG or CNG fuel system component is:
 - a) loose, or
 - b) significantly corroded, distorted or cracked.
2. A gas line:
 - a) shows signs of corrosion damage (Note 1), such as pitting, or
 - b) is bulging, or
 - c) is insecure, or
 - d) is damaged, eg it is cut or crimped.
3. There is a noticeable gas leak.
4. There is corrosion damage, distortion or fracture within 300mm of a tank mounting (this requirement is not applicable where the tank is mounted on the counterweight).

Note 1

Corrosion damage is where the metal has been eaten away, which is evident by pitting. The outward sign of such corrosion damage is typically displayed by the lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

Note 2

LPG/CNG fuel system means a fuel storage and conducting system that is used to provide liquid petroleum gas (LPG) or compressed natural gas (CNG) for the purpose of propulsion of a vehicle.

Summary of legislation

Applicable legislation

- [Land Transport Rule: Vehicle Standards Compliance 2002](#)
- [Land Transport Rule: Vehicle Equipment 2004](#).

Permitted equipment

1. A vehicle may be fitted with an LPG or CNG fuel system.

Condition

2. An LPG or CNG fuel system must be in safe working condition.

Technical bulletins (general)

1 Quick noise check procedure

Reference

- [General vehicles, 11-1 Exhaust system](#)
- [Motorcycles, 11-1 Exhaust system.](#)

What is the purpose of the Noise Quick Check?

The purpose of this test procedure is to enable vehicle inspectors to carry out an exhaust noise check with an acceptable noise meter to ensure that vehicle exhaust systems that have been modified to be noisier than OE remain well below the maximum noise levels specified in law (ie be below the noise limits specified in the VIRM). Any vehicle that fails the Noise Quick Check needs to be made quieter and reinspected and/or referred to an LVV certifier for an Objective Noise Test (ONT).

This quick check test procedure is therefore a simplified version of the ONT to ensure results are comparable to the ONT.

What type of vehicle can be tested?

The quick check may be applied only to a vehicle of class LC, LD, LE, MA, MB, MC, MD1, MD2 or NA that is louder than when it was manufactured with its original exhaust system.

Test site specification

The test environment must be such that exhaust noise readings can be achieved as accurately as possible with as little interference from other noise sources as possible.

To achieve this, the test site must, within at least a 3m radius from the noise meter microphone:

1. be an open outdoor site (if this is not practicable, a canopied site may be used provided the canopy is at least 3m above the microphone)
2. be predominantly flat
3. be free from large sound-reflecting surfaces, including buildings, walls, billboards, vehicles, canopy/roof supports, trees or shrubs
4. have a solid surface, such as concrete or asphalt, that is free of any loose or sound-absorbing material.

It is important that a noisy background, eg due to road traffic or wind, is avoided. If in doubt, use the noise meter to measure the background noise either before or after the Noise Quick Check. The background noise must be at least 10dBA lower than the relevant exhaust noise limit specified in the VIRM. Sharp noise interference such as car doors slamming or loud footsteps must also be avoided to prevent false readings.

Which noise meters are acceptable for this test?

The noise meter must be of 'Type 1' or 'Type 2' (Class 1 or 2) standard to ensure accuracy. The noise meter specifications and a list of other equipment required for noise testing is available on the NZTA website: www.landtransport.govt.nz/certifiers.

The noise meter must be in good operating condition and be maintained within manufacturer's specifications. Regular calibration is required. Make sure you know how to use it correctly by following the manufacturer's instructions.

Note 1

The NZTA does not currently intend to make it mandatory for inspecting organisations to obtain a noise meter. However, if you are often presented with noisy vehicles, we strongly recommend that you have one available.

Vehicle preparation prior to testing

Before the noise test can be carried out, the vehicle must:

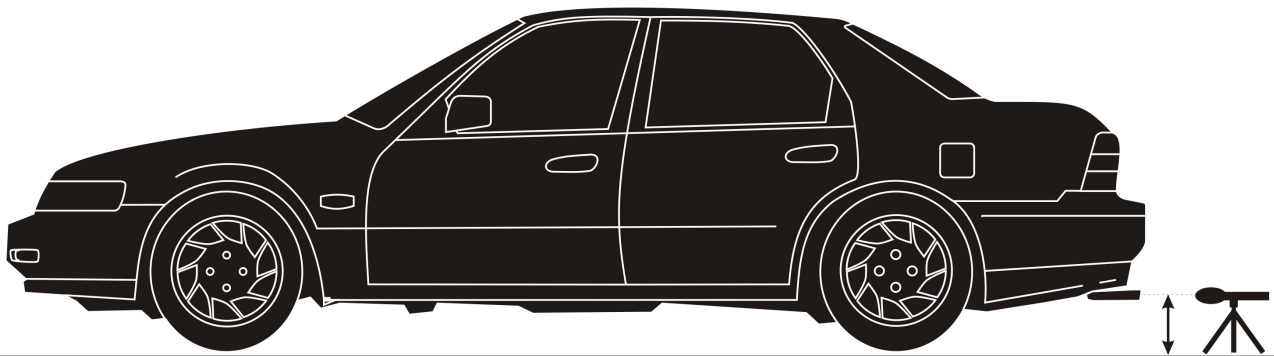
- have its engine at normal operating temperature
- be stationary with park the brake applied
- have the gear selector positioned in neutral (manual) or park (automatic)
- have the air-conditioning system turned off
- have the engine bonnet closed.

Setting up the microphone for testing

1. Ensure the microphone is fitted with the foam wind shield.

2. Height of microphone

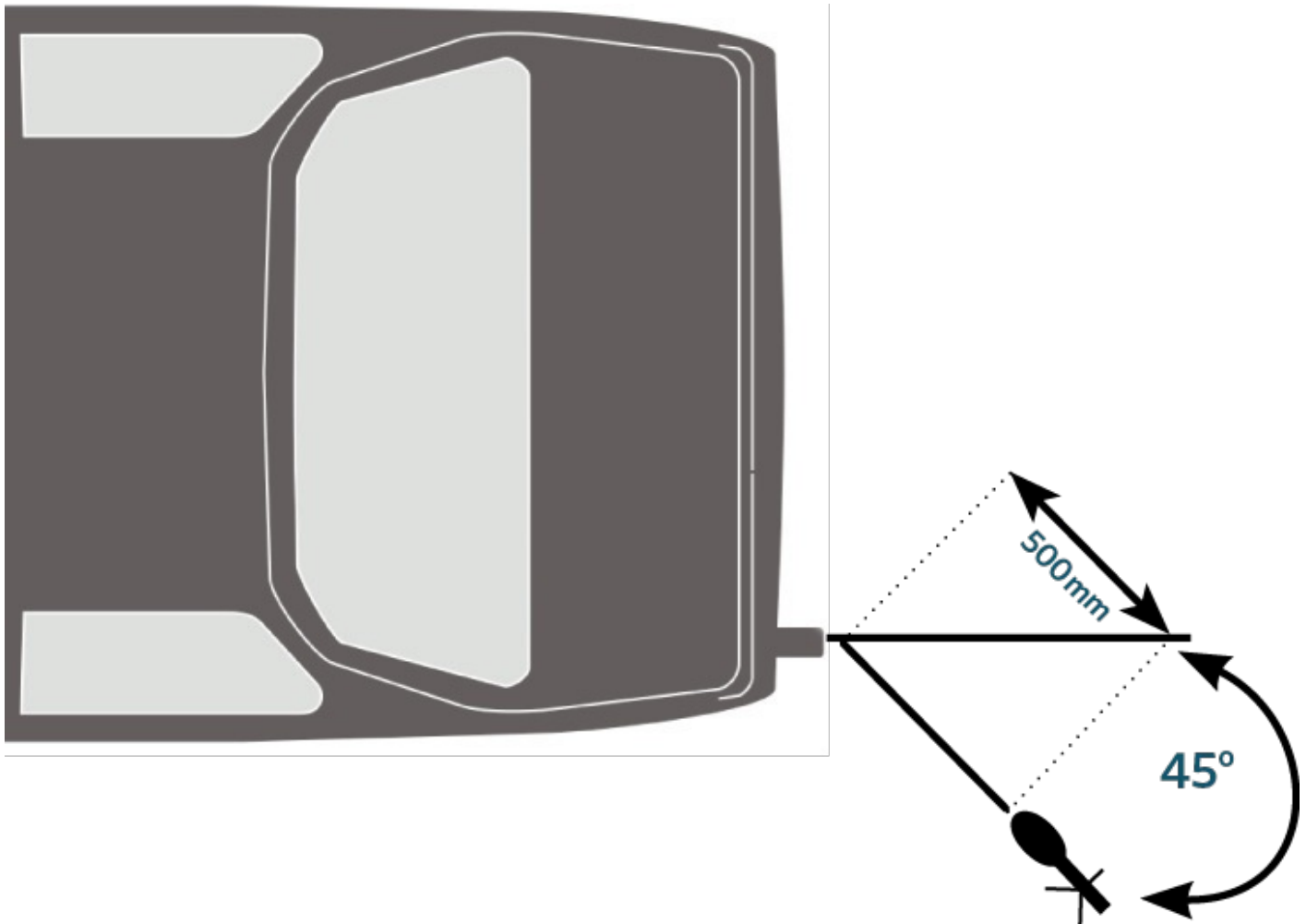
- Mount the noise meter to the tripod. Place it on the ground with the centre of the microphone at about the same height as the centre of the exhaust outlet, but no lower than 200mm from the ground. Make sure the microphone is level, regardless of the angle of the exhaust outlet.



Same height as exhaust or 200 mm from ground, whatever is higher

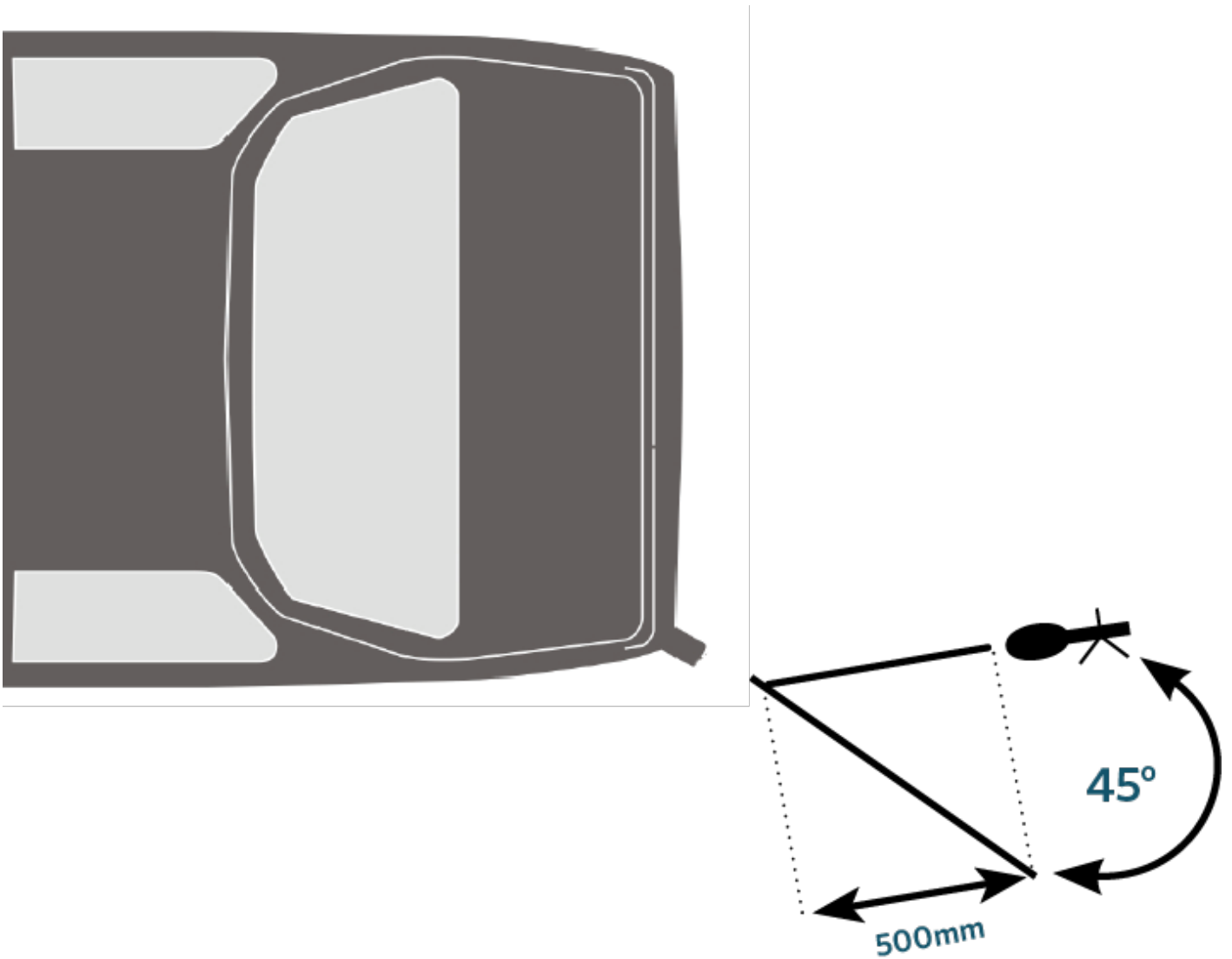
3. Distance of microphone from exhaust outlet

Distance of microphone from exhaust (outlet to the rear)



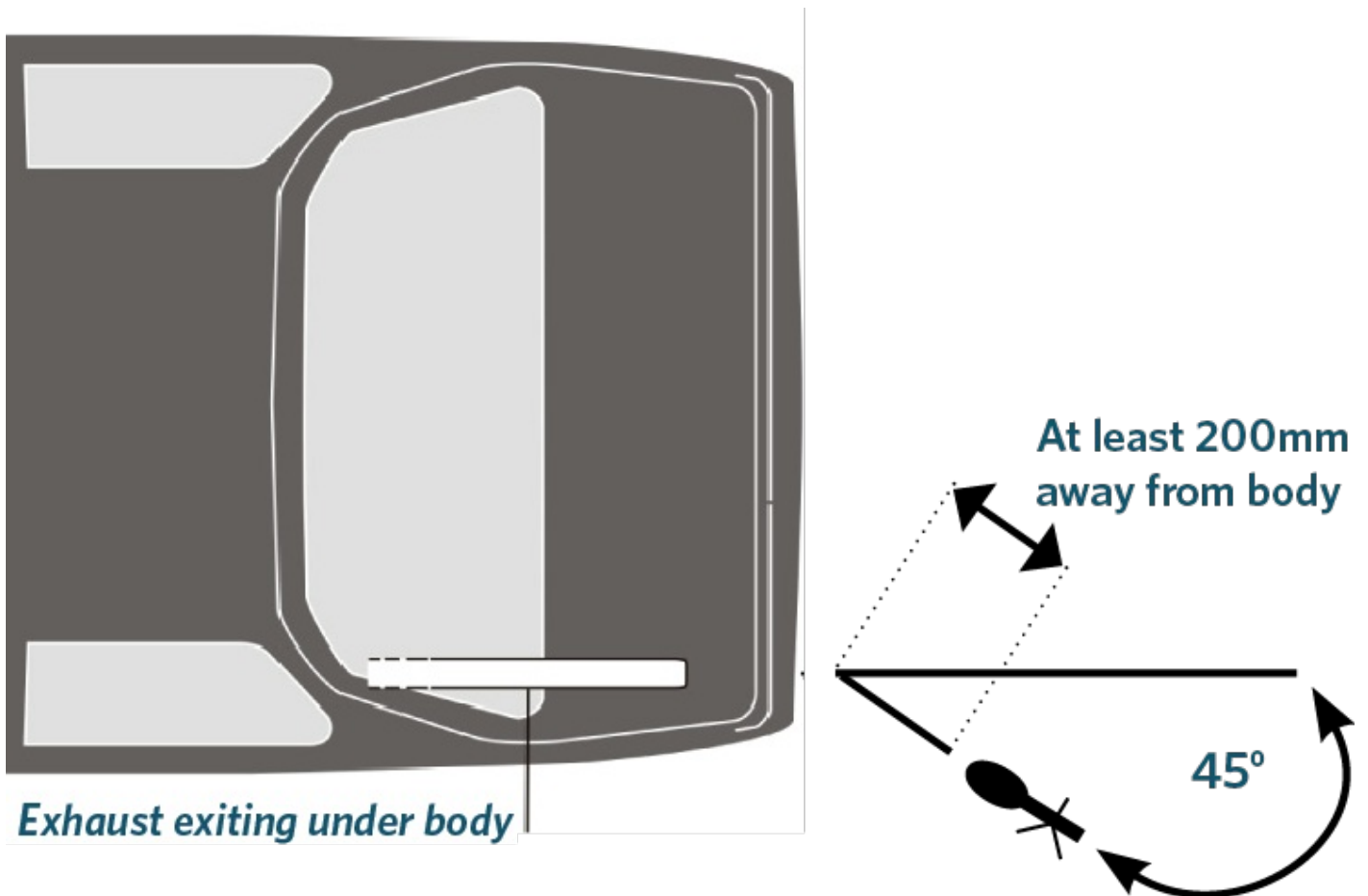
- Position the noise meter 500mm from the exhaust outlet at 45 degrees outboard to the longitudinal centreline of the exhaust outlet.

Distance of microphone from exhaust (outlet to the side)



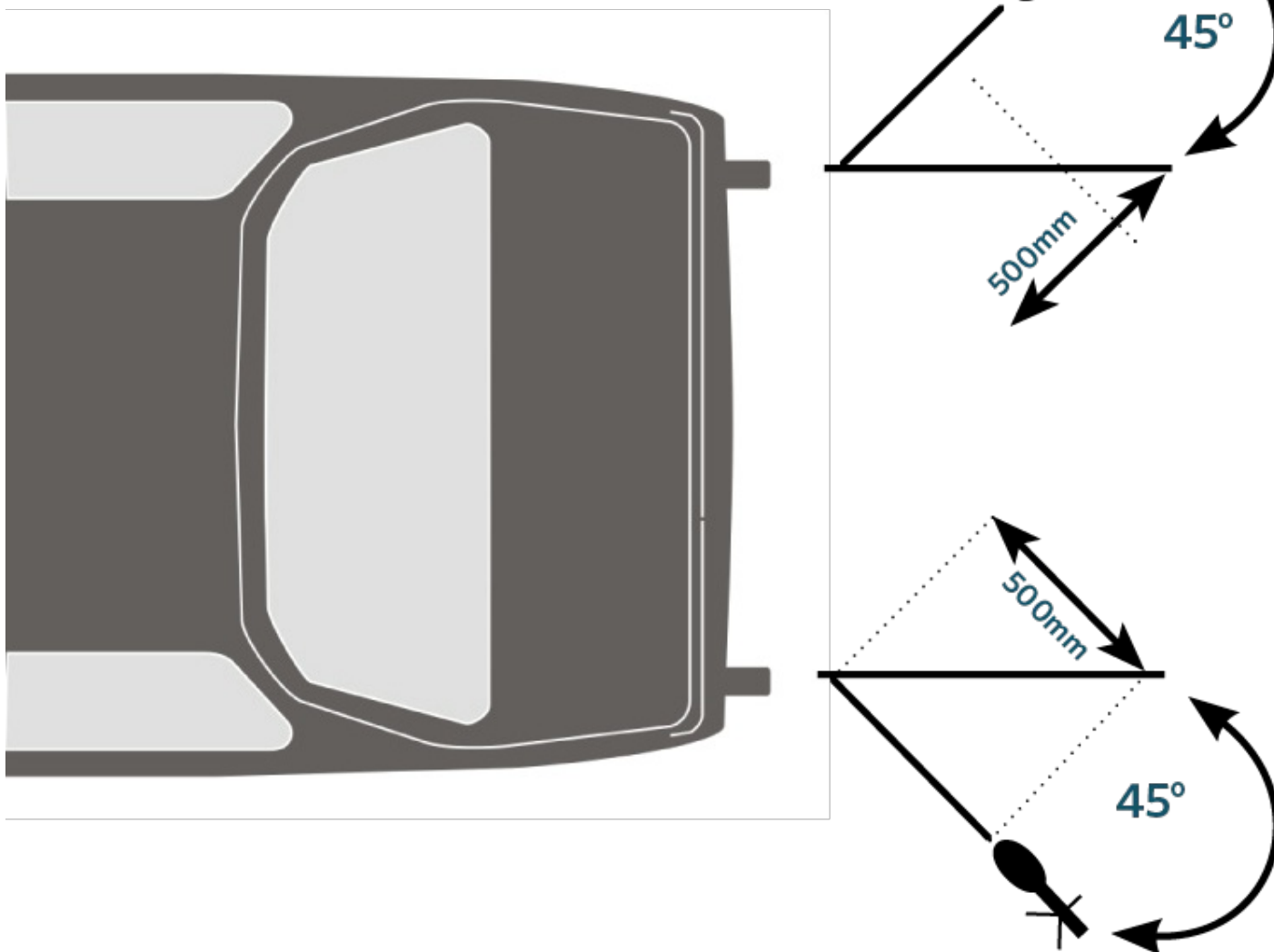
- If the exhaust outlet is at the side of the vehicle, position the noise meter 500mm/45 degrees where it is the furthest from the engine.

Distance of microphone from exhaust (outlet underneath vehicle)



- For exhaust outlets terminating underneath the vehicle body, fit as close as practicable, but no closer than 200mm to the vehicle body. The 45 degree angle may be reduced to ensure a clear path between the microphone and the exhaust outlet.

Distance of microphone from exhaust (two outlets)



- If the vehicle has two exhaust outlets less than 300mm apart, treat them as one outlet with the microphone positioned at the outside outlet. If the two exhaust outlets are more than 300mm apart, measure each one, with the higher of the two taken as the noise level for the vehicle.

Select the test engine speed

Select the appropriate test engine speed from the table on the next page. Use the vehicle's tachometer when doing the test (if no tachometer is fitted, use your judgement).

Motorcycle engines

Type of engine	Required test speed
2-stroke single cylinder	6000 rpm
2-stroke multi-cylinder	5000 rpm
4-stroke single cylinder	3000 rpm
4-stroke twin-cylinder with 2 valves per cylinder	2500 rpm
4-stroke twin-cylinder with 3 or more valves per cylinder	4000 rpm
4-stroke with 3 or more cylinders	4500 rpm

Engines other than motorcycle engines

Type of engine	Required test speed
Rotary engine	4500 rpm
Up to 5 cylinders	4000 rpm
Up to 5 cylinders with DOHC and variable valve timing	4800 rpm
6 cylinders	3200 rpm
8 cylinders	3000 rpm
More than 8 cylinders	4000 rpm
Diesel (any type)	2500 rpm

Testing the noise output

1. Make sure that you (the tester) and one assistant (if you require one) are the only persons in the test area.
2. Position and prepare the meter: switch on – warm-up – calibrate (Note)– set to A-weighting – set to fast response – select the correct noise level range (usually 'High') – press the Peak-hold or Max-hold button when ready to measure the noise output.

Note 2

To calibrate before testing the vehicle, insert the meter into the calibrator. If the reading on the noise meter differs from the calibrator there is no need to adjust the meter, but the difference needs to be taken into account when determining the final noise reading for the vehicle. For example, if the meter reads 2dBa higher than the calibrator, take off 2dBa from the noise test reading to get the final reading.

3. Measure the noise output by increasing the engine speed from idle to the required test speed, holding it there for at least one second, then taking the foot off the accelerator and letting the engine speed return to idle.
4. Make sure that no other noise sources have interfered with the test result, such as planes flying overhead, doors slamming (take care when getting in and out of the test vehicle), dogs barking and so on. Rattling number plates can also be a source of noise interference. If interference occurred, repeat the test (press the Max/hold button first).
5. The noise meter will show the maximum noise output. Record this reading on your checksheet.
6. Measure the background noise level (this can be done before or after the noise test). The microphone must be in the same position and the vehicle's engine switched off. The background noise level must be at least 10dBA below the relevant exhaust noise limit as specified in the VIRM.

If you come across a vehicle you are not sure how to test, then refer it to an LVV certifier who is approved to carry out an Objective Noise Test.

Passing and failing the vehicle

PASS: The noise reading does not exceed the relevant maximum noise limit specified in the [VIRM: In-service certification, Section 11-1 Exhaust system](#).

FAIL: The noise reading exceeds the relevant maximum noise limit in the VIRM. Give the operator the 'Noisy Vehicles' pamphlet.

2 Inspection for corrosion in Nissan Terrano and Mistral rear floorpan assemblies

Reference

General vehicles:

- [3-1 Structure](#)
- [7-1 Seats and seat anchorages](#)

- [7-5 Seatbelt and seatbelt anchorages](#)

Safety concern

There is concern about corrosion that can occur in Nissan Terrano or Nissan Mistral vehicles of the type whose rear floorpan assembly consists of a two-layer (double-skin) panel. If moisture gets trapped between the two layers of the floorpan, corrosion can occur around the seat or seatbelt anchorages, affecting their integrity. Corrosion can also occur where the under-floor reinforcing panel overlaps the top floor skin.

Clarification

The rear floorpan assembly consists of a two-layer (double-skin) panel. The lower layer is a reinforcing panel spot-welded to the upper layer floor section.

The Terrano has a rear seat with three seating positions. Situated in the rear floor, beneath the seat, are four seatbelt anchorages and two seat anchorages.

The Mistral has a stressed bench seat in the rear (the seatbelts are attached to the seat) with two seat anchorages in the floor and two seatbelt anchorages in the wheel well at the sides of the seat.

Inspection

The inspector must lift the rear seat to examine this area effectively. Any carpet and sound insulating material covering the panel that the seats are mounted on must be pulled back far enough to expose the rear seam of the panel (the area most commonly affected by corrosion). It is important to note that damage may be more extensive than can be detected during this inspection.

The vehicle must fail if any signs of corrosion are detected during the inspection, such as:

- bubbling of the paint or surface irregularities in the top floor skin or paint
- a patch repair that has rust around it
- separation of the reinforcement panel and the top skin
- discolouration or rust stains at the edges of the reinforcement panel
- rust holes, or
- the floorpan on a Nissan Terrano has been 'patch' repaired after 8 January 1997, or
- the floorpan on a Nissan Mistral has been 'patch' repaired after 10 November 2003.

A vehicle that has been 'patch' repaired before 8 January 1997 (Nissan Terrano) or 10 November 2003 (Nissan Mistral) may pass the inspection provided that:

- no signs of corrosion are apparent, and
- there is evidence that the repairs were carried out before the above dates, and
- the vehicle inspector considers, or there is evidence provided by a qualified panel beater, that the repair is effective and in sound condition.

Repair options

If any corrosion is detected and the vehicle failed, the floorpan must be replaced.

However, for the following models the Low Volume Vehicle Technical Association (LVVTA) has provided an alternative option to floorpan replacement.

Nissan Terrano Model D21

- installation of the LVVTA rear floor load-bar seatbelt anchorage reinforcement system together with a Low Volume Vehicle certification plate containing the following words in the Body/chassis field: LVVTA 'Rear floor load-bar seatbelt anchorage reinforcement system'.

Nissan Mistral Model R20 5-door

- installation of the LVVTA rear floor load-bar seatbelt anchorage reinforcement system together with a Low Volume Vehicle certification plate containing the following words in the Body/chassis field: 'LVVTA Rear floor load-bar seatbelt anchorage reinforcement system'.

For information about these seatbelt anchorage modifications, and for a list of the LVV certifiers who can certify them, see www.lvvt.org.nz.

3 Detecting wear in spring-loaded ball joints

Reference

- General vehicles, [9-1 Steering and suspension systems](#)
- Motorcycles, [9-1 Steering and suspension systems](#)
- Trailers, [6-1 Steering and suspension systems](#)

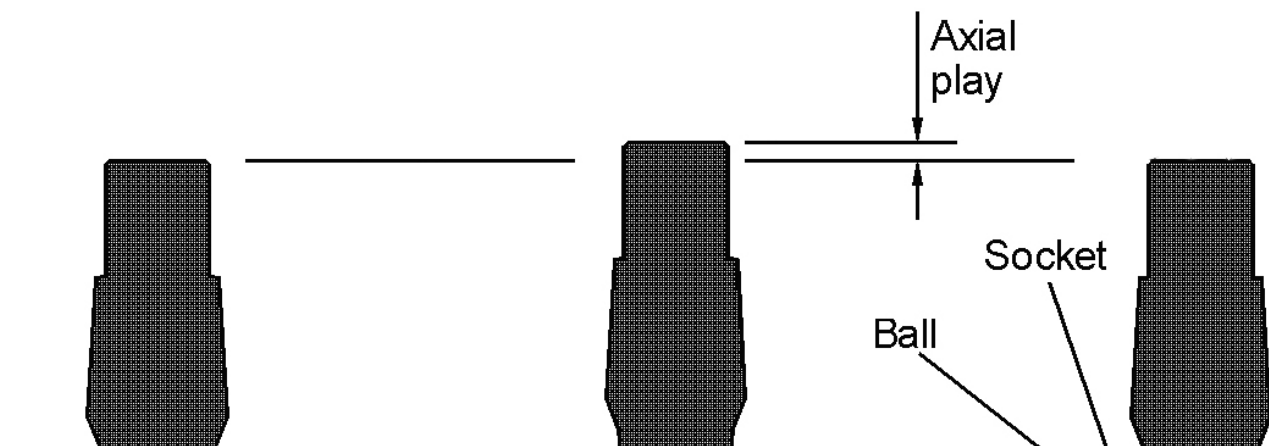
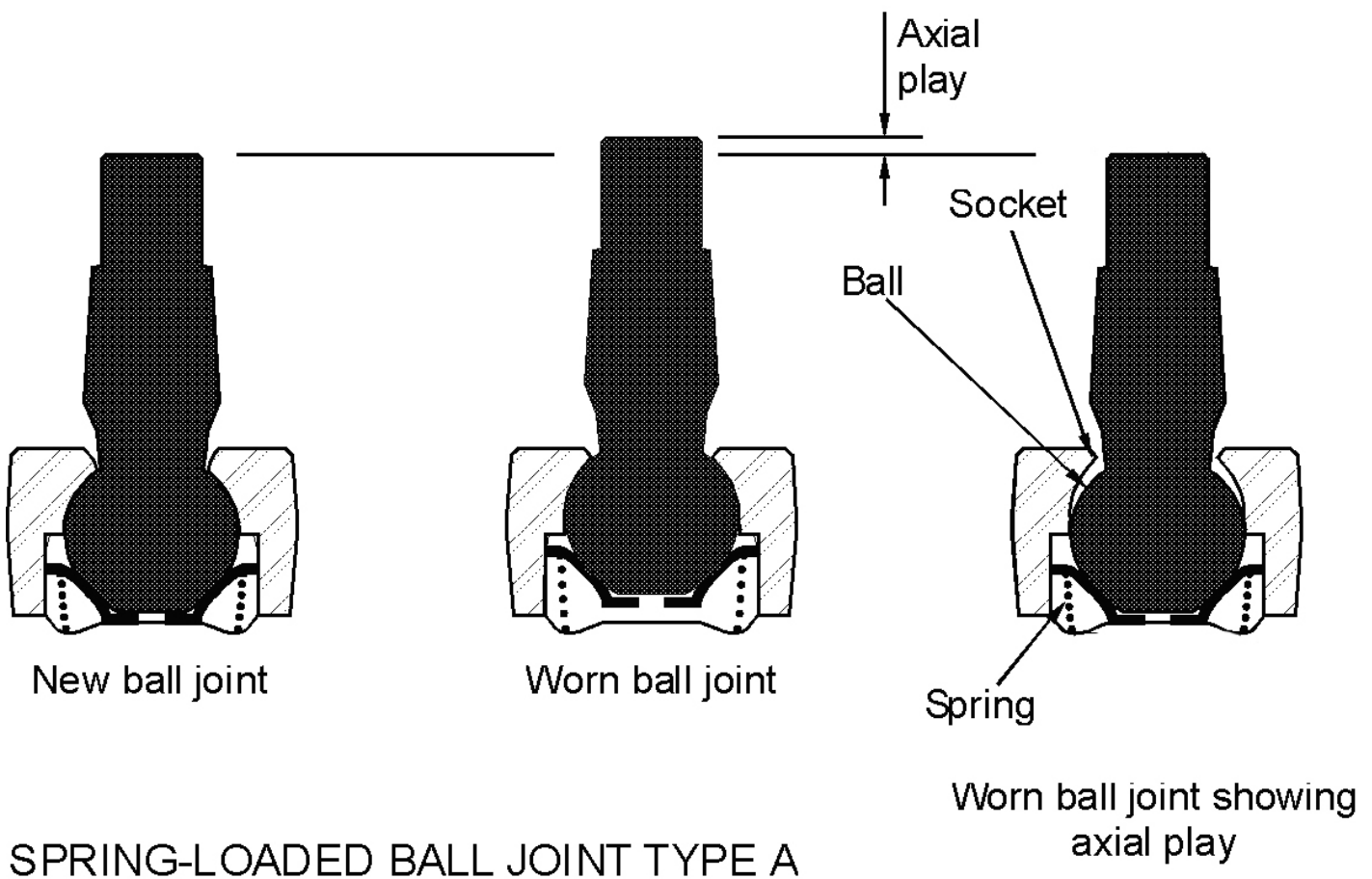
Safety concern

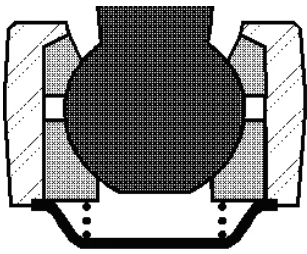
Wear in the ball joint increases axial play (along the axis of the joint). Spring-loaded ball joints are designed to be self-adjusting in order to compensate for the wear that occurs between the ball and the socket. As a result, the traditional method of rocking the steering to check for ball joint wear may not indicate how much axial play there is and therefore how worn the joint is. An excessively worn joint may be at risk of coming apart and causing steering failure.

Inspection

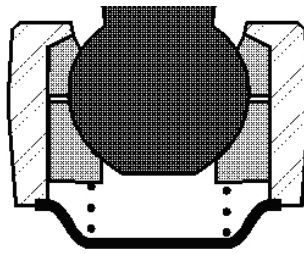
1. Know the correct test method for checking axial wear in ball joints. This is often specified by the vehicle manufacturer. Some manufacturers do not recommend axial testing at all and test instead for radial wear.
2. Know the manufacturer's maximum permitted wear tolerances. These may vary from as little as 2mm up to 6mm.

Figure 3-1-1 shows three examples of common types of spring-loaded ball joints and how to check them for axial wear. If you are not sure of the correct test method or the maximum permitted wear limits, you should seek the information in the vehicle manual or from an authorised dealer for that vehicle (there may be a charge for this). This will ensure that the vehicle is correctly passed or failed during a WoF or CoF inspection.

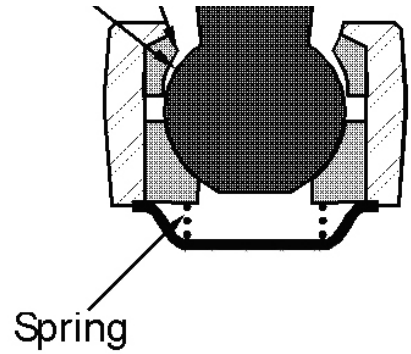




New ball joint

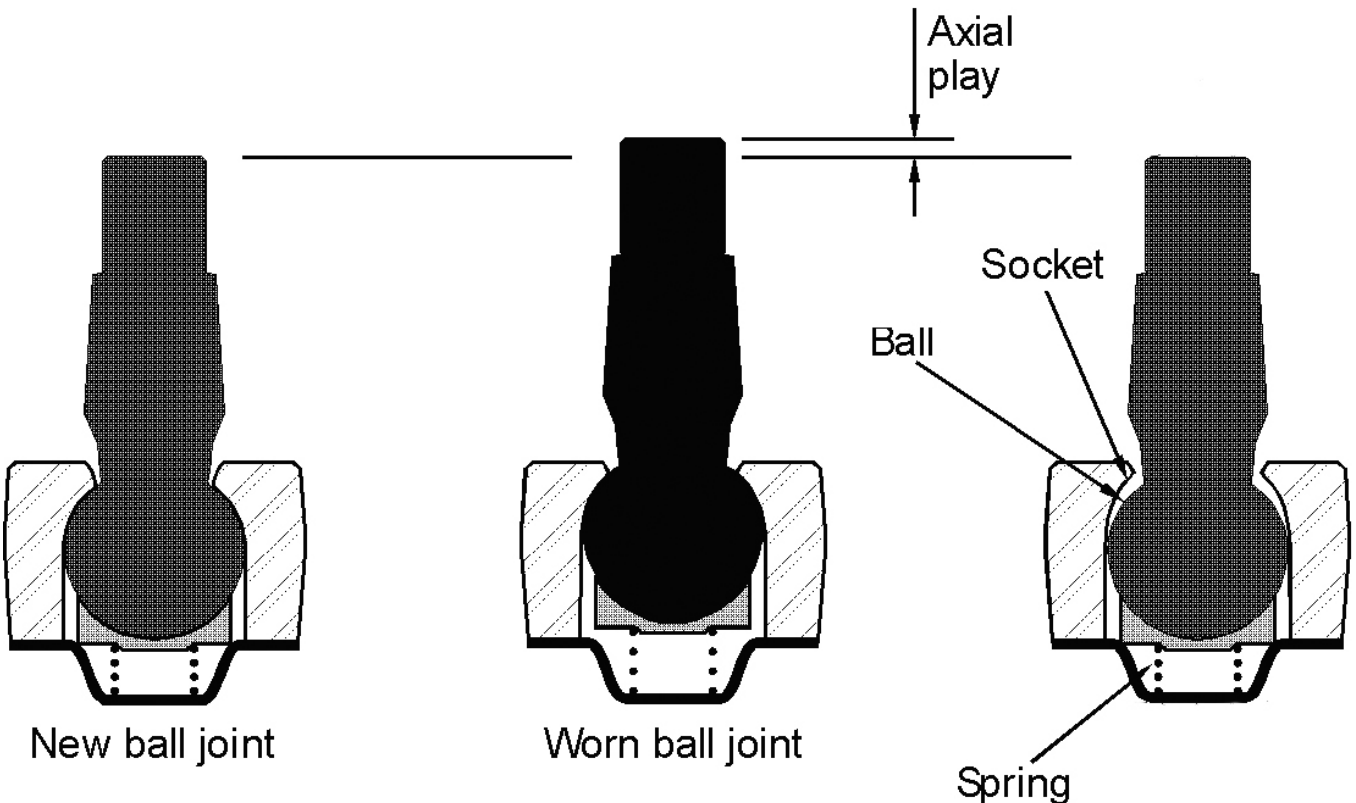


Worn ball joint



Worn ball joint showing axial play

SPRING-LOADED BALL JOINT TYPE B



Worn ball joint showing axial play

SPRING-LOADED BALL JOINT TYPE C more often found on heavy vehicles

Figure 3-1-1. Examples of wear in spring-loaded ball joints

4 Jacking points for common suspension types

Reference

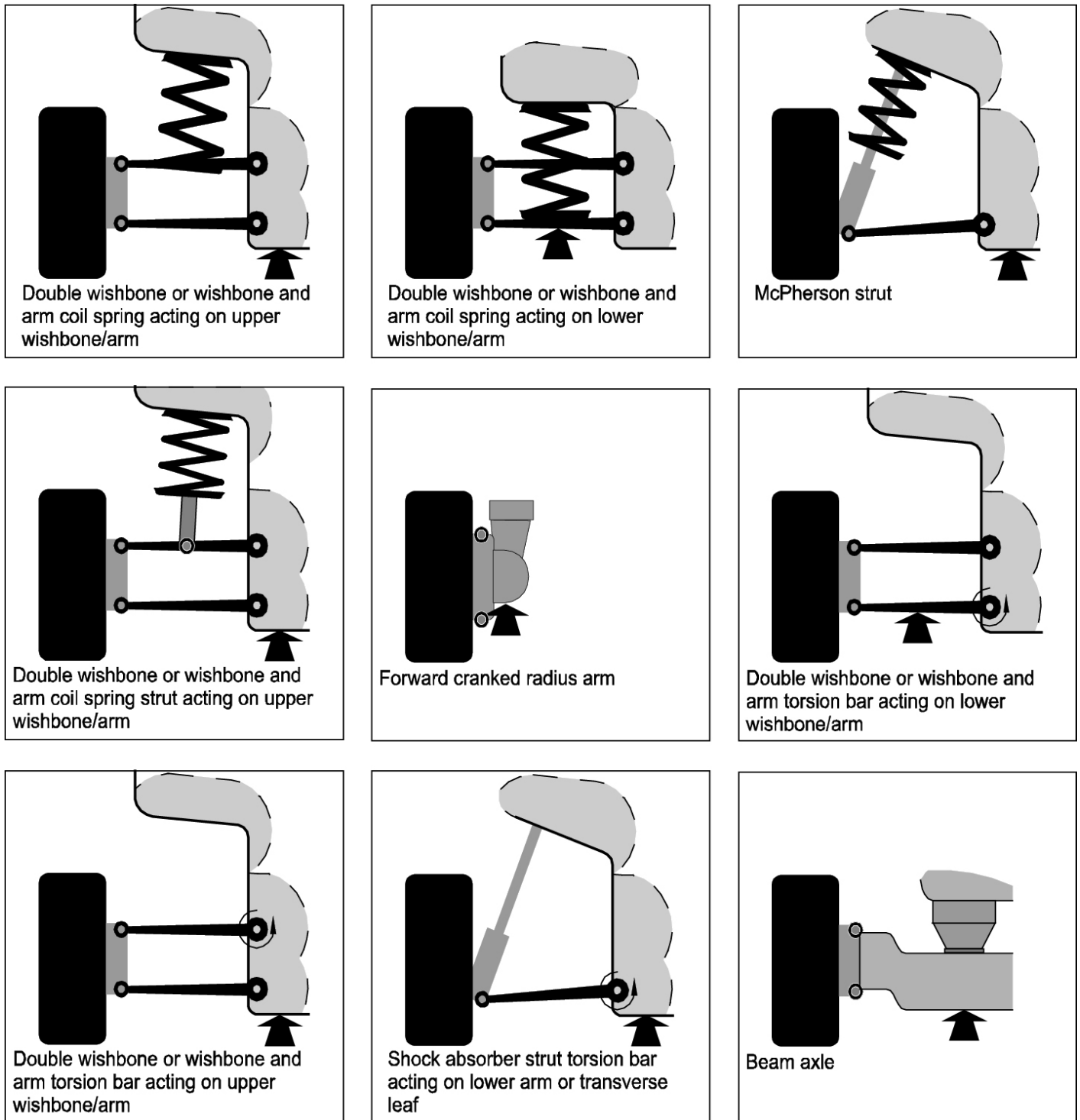
- General vehicles, [9-1 Steering and suspension systems](#)
- Motorcycles, [9-1 Steering and suspension systems](#)
- Trailers, [6-1 Steering and suspension systems](#).

Safety concern

Excessive wear in and subsequent failure of suspension ball joints can seriously affect the safe handling of the vehicle.

Inspection

To ensure that ball joint wear can be correctly detected, it is important that the vehicle is jacked up correctly, depending on which type of suspension the vehicle is fitted with. The jacking points for common types of suspension are illustrated below.



5 Webbing clamp seatbelts in class MA vehicles

Reference

- [General vehicles, 7-5 Seatbelts and seatbelt anchorages.](#)

Application

This bulletin applies to class MA vehicles fitted with a single- (R1) or dual- (R2) sensitive retractor seatbelt in a front outer seating position where that seatbelt has failed a WoF or CoF inspection.

This bulletin does not apply to vehicles:

- fitted with airbags as original equipment
- not listed in Table 5-1-1 (ie, where the fitting of webbing clamp seatbelts has not been approved by the vehicle

manufacturer)

- that are required to comply with an approved frontal impact standard, ie vehicles with a GVM of 2500kg or less that were:

- manufactured on or after 1 March 1999

- first registered in New Zealand on or after 1 April 2002 that were less than 20 years old at the time of first registration in New Zealand

- with OE specification seatbelts that have features specifically designed to operate in conjunction with other parts of an integrated occupant protection system
- in which the fitting of a webbing clamp seatbelt would require modifications to the vehicle structure.

Safety concern

The seatbelts commonly referred to as 'webbing clamp' or 'webbing grabber' seatbelts have features that minimise uncontrolled webbing payout after the locking mechanism has been activated. This ensures that vehicle occupants are kept firmly in their seats in a crash. When installing a new seatbelt after the previous one has failed during a WoF or CoF inspection, a webbing clamp seatbelt is the safest option for many vehicles.

Inspection

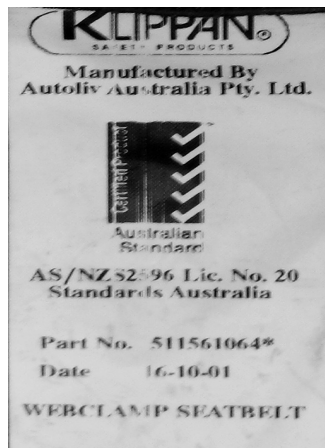
A failed type R1 or R2 retractor seatbelt in a front outer seating position must be replaced with a webbing clamp seatbelt (see Figure 5-1-1) unless a webbing clamp seatbelt is not readily available (see Note 1), or the vehicle inspector has confirmation that the vehicle is one to which this bulletin does not apply.

Note 1

A seatbelt is considered not readily available where, eg, an automotive parts retailer normally able to supply webbing clamp seatbelts does not currently have the correct webbing clamp seatbelt in stock and cannot supply one within two working days by courier from the parts supplier. The vehicle operator must supply proof that the webbing clamp seatbelt was not readily available, eg an invoice from the seatbelt installer or retailer.

Vehicle inspectors must enter the inspection result as outlined in the flowchart in Figure 5-1-2.

Figure 5-1-1. Example of a webbing clamp seatbelt label



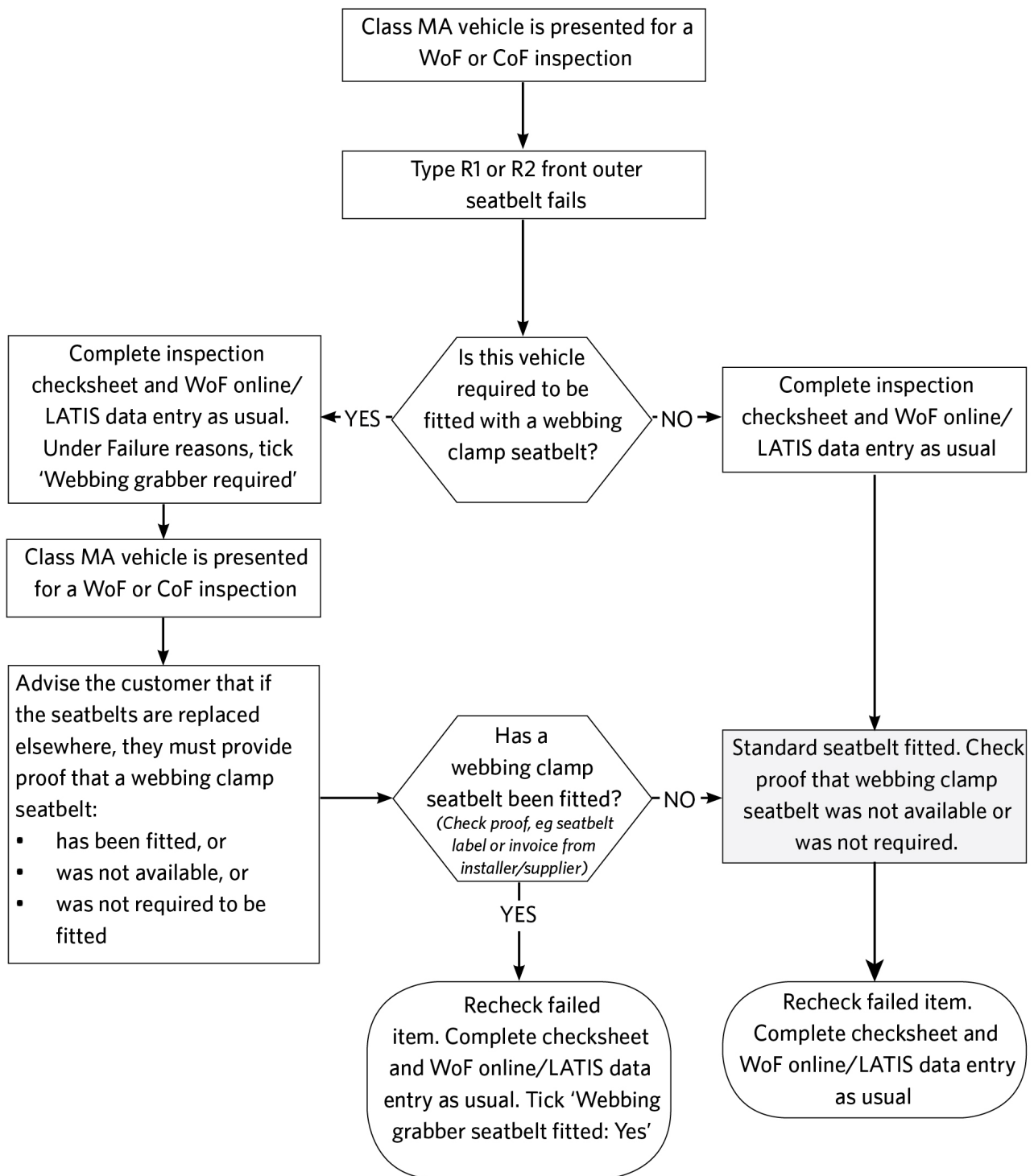


Figure 5-1-2. Webbing grabber seatbelt inspection process

Table 5-1-1. Vehicles generally approved for the fitment of webbing clamp seatbelts

Brand	Model	Variant	Model Code	Configuration	Year
Audi	100	2.2L Quattro		4 Door Sedan	1985–1989
Audi	100	Avant, Quattro		4 Door S/Wagon	1985–1991
Audi	100	CD Avant		4 Door S/Wagon	1985–1991
Audi	100	CD, CC, CS, E, EE	WAUZZ	4 Door Sedan	1983–1991
Audi	200	CD, CC, CS, E, EE	WAUZZ	4 Door Sedan	1983–1991
BMW	318		E30	4 Door Sedan	1983–1991
BMW	518		E34	4 Door Sedan	1988–1992
BMW	520		E34	4 Door S/Wagon	1992–1996
BMW	520		E34	4 Door Sedan	1988–1999
BMW	525		E34	4 Door S/Wagon	1992–1996
BMW	525		E34	4 Door Sedan	1988–1999
BMW	535		E34	4 Door Sedan	1988–1992
BMW	540		E34	4 Door S/Wagon	1992–1996
BMW	540		E34	4 Door Sedan	1993–1999
BMW	730		E32	4 Door Sedan	1985–1994
BMW	735		E32	4 Door Sedan	1985–1994
BMW	740		E32	4 Door Sedan	1985–1994
BMW	750		E32	4 Door Sedan	1988–1994

Daihatsu	Charade			2 Door Hatch	1983–1987
Daihatsu	Charade	CS	G11	4 Door Hatch	1983–1988
Daihatsu	Charade	CS, CX Turbo, TS	E-G112S	2 Door Hatch	1987–1993
Daihatsu	Charade	CS, CX Turbo, TS	E-G100	2 Door Hatch	1987–1993
Daihatsu	Charade	CS, CX Turbo, TS	E-G102	2 Door Hatch	1987–1993
Daihatsu	Charade	CX, TL, CS, Turbo	E-G100	4 Door Sedan	1983–1987
Daihatsu	Charade	LS, LX, EX	E-G200	4 Door Hatch	1993–1998
Daihatsu	Charade	LS, LX, EX	E-G203	4 Door Hatch	1993–1998
Daihatsu	Charade	LS, LX, EX	E-G213	4 Door Hatch	1993–1998
Daihatsu	Charade	SEI	E-G203S	4 Door Sedan	1995–1997
Daihatsu	Charade	SEI	E-G200S	4 Door Sedan	1995–1997
Daihatsu	Charade	TS (white only)		2 Door Hatch	1991–1991
Daihatsu	Mira	850 4WD	L201	2 Door Sedan	1990–1993
Daihatsu	Mira	LS, LX	L201	4 Door Sedan	1990–1998
Daihatsu	Mira	LS, LX	L500	4 Door Sedan	1990–1998
Daihatsu	Mira	LS	L8ORS	4 Door Hatch	1986–1990
Fiat	Punto	55 SX	ZFA176	4 Door Liftback	1994–1995
Fiat	Punto	55, GT	ZFA176	2 Door Hatch	1994–1995
Ford	Autozam			4 Door Sedan	1991–1997

Ford	Autozam	AZ-3		2 Door Coupe	1991–1997
Ford	Capri	XRS, Barchetta		2 Door Convert	1990–1994
Ford	Clef			4 Door Sedan	1991–1997
Ford	Fairlane		EA	4 Door Sedan	1988–1993
Ford	Falcon	S	EF	4 Door S/Wagon	1989–1993
Ford	Falcon	S	EB	4 Door Sedan	1989–1993
Ford	Falcon	S	EB	4 Door S/Wagon	1989–1993
Ford	Falcon	S	ED	4 Door S/Wagon	1989–1993
Ford	Falcon	S	ED	4 Door Sedan	1989–1993
Ford	Falcon	S	EF	4 Door Sedan	1989–1993
Ford	Falcon		EA	4 Door S/Wagon	1988–1990
Ford	Falcon		XG	4 Door S/Wagon	1985–1993
Ford	Falcon		XG	4 Door Sedan	1985–1993
Ford	Falcon		EA	4 Door Sedan	1988–1990
Ford	Festiva	S, Trio, GLXi	E-D23	2 Door Hatch	1993–2001
Ford	Festiva	S, Trio, GLXi	E-D25PF	2 Door Hatch	1993–2001
Ford	Festiva	Trio, GLXi	DAFP3	2 Door Hatch	1995–1998
Ford	Festiva	Trio, GLXi	DAFP3	4 Door Hatch	1995–1998
Ford	Festiva		E-DA3PF	4 Door Hatch	1985–1993

Ford	Festiva		E-DA3PF	2 Door Hatch	1985–1993
Ford	Laser	1.3C	LO3	2 Door Hatch	1987–1990
Ford	Laser	1.5 Sport		2 Door Hatch	1983–1987
Ford	Laser	GL	L04	4 Door Liftback	1992–1994
Ford	Laser	L	L05	2 Door Hatch	1986
Ford	Laser	Sport		2 Door Hatch	1981–1984
Ford	Laser	TX3	KF	2 Door Hatch	1990–1994
Ford	Laser		BF5PF	4 Door S/Wagon	1990–1994
Ford	Laser		BG8PF	4 Door Sedan	1990–1995
Ford	Laser		KH	4 Door Sedan	1990–1995
Ford	Laser		BG6PF	4 Door Sedan	1992–1994
Ford	Laser		KF	4 Door Sedan	1990–1995
Ford	Laser		BG5PF	4 Door Sedan	1990–1993
Ford	Laser			2 Door Hatch	1987–1989
Ford	Ltd		XE	4 Door Sedan	1981–1988
Ford	Ltd		XF	4 Door Sedan	1981–1988
Ford	Ltd		EB	4 Door Sedan	1991–1993
Ford	Ltd		EA	4 Door Sedan	1988–1993
Ford	Mondeo		WFOX	4 Door Sedan	1993–1994

Ford	Mondeo		WFOX	4 Door S/Wagon	1993–1994
Ford	Sierra			4 Door Sedan	1985–1992
Ford	Sierra	Cosworth	S15/88B	4 Door Liftback	1988–1992
Ford	Sierra	GLX	S15/90BB	4 Door S/Wagon	1988–1992
Ford	Sierra	XR 4X4	S15/85BB	4 Door Liftback	1985–1992
Ford	Sierra			4 Door S/Wagon	1984–1988
Ford	Taurus			4 Door Sedan	1992–1994
Ford	Telstar	GL	E-GEFPF	4 Door S/Wagon	1993–1997
Ford	Telstar	GLi, GLEi, Ghia	C-HIAVE	4 Door Sedan	1992–1997
Ford	Telstar	V6 XRi	GEEPF, T77	4 Door Liftback	1991–1994
Ford	Zodiac	MK3		4 Door Sedan	1963–1965
Holden	Astra			4 Door Hatch	1990–1995
Holden	Astra			4 Door Sedan	1990–1995
Holden	Caprice		US 97MD VS11	4 Door Sedan	1990–1998
Holden	Commodore		VP	4 Door S/Wagon	1991–1993
Holden	Commodore		VP	4 Door Sedan	1991–1993
Holden	Gemini		JT 150 MTHZ	4 Door Sedan	1986–1989
Holden	Vectra			4 Door Hatch	1990–1996
Holden	Vectra			4 Door Sedan	1990–1996

Honda	Accord	EX	CB1	2 Door Hatch	1984–1986
Honda	Accord	LX	CB2	2 Door Hatch	1986–1989
Honda	Accord	EX		2 Door Hatch	1984–1986
Honda	Accord	LXi	CB3	4 Door Sedan	1989–1995
Honda	Accord		E-CB9	4 Door S/Wagon	1991–1993
Honda	Ascot		CC4	4 Door Sedan	1992–1996
Honda	Ascot			4 Door Sedan	1986–1992
Honda	Ascot		CC5	4 Door Sedan	1992–1996
Honda	City	Auto	GA2	2 Door Hatch	1990–1992
Honda	City		FA	2 Door Hatch	1982–1984
Honda	City		FF	2 Door Hatch	1982–1984
Honda	City		FC	2 Door Hatch	1982–1984
Honda	City		FG	2 Door Hatch	1982–1984
Honda	City		GA1	2 Door Hatch	1984–1988
Honda	City		FD	2 Door Hatch	1982–1984
Honda	City		FH	2 Door Hatch	1982–1984
Honda	Civic		EG8, SR4	4 Door Sedan	1991–1995
Honda	Civic	AH		2 Door Hatch	1980–1984
Honda	Civic	ETI	E-EG4	4 Door Sedan	1990–1997

Honda	Civic	LX	CG	2 Door Hatch	1988–1992
Honda	Civic	LX	CS	2 Door Hatch	1988–1992
Honda	Civic	LX	CC	2 Door Hatch	1988–1992
Honda	Civic	LX	CL	2 Door Hatch	1988–1992
Honda	Civic	LXi, EXi	EG5	2 Door Hatch	1992–1996
Honda	Civic		EN1	2 Door Hatch	1973–1980
Honda	Civic			2 Door Hatch	1984–1988
Honda	Civic		EG3	2 Door Hatch	1991–1995
Honda	Civic		WC	2 Door Hatch	1980–1984
Honda	Civic		SS	2 Door Hatch	1980–1984
Honda	Civic		SL	2 Door Hatch	1980–1984
Honda	Civic			4 Door Hatch	1993–1996
Honda	CRX	del Sol	EG1	2 Door Hatch	1992–1997
Honda	CRX	Si	E-F7	2 Door Coupe	1988–1991
Honda	CRX	X		2 Door Hatch	1988–1991
Honda	Ferio		EG8, SR4	4 Door Sedan	1991–1995
Honda	Innova		CC4	4 Door Sedan	1992–1996
Honda	Innova		CC5	4 Door Sedan	1992–1996
Honda	Inspire		E-CC2	4 Door Sedan	1990–1995

Honda	Inspire		E-CC3	4 Door Sedan	1990–1995
Honda	Integra	GSi, VTi-R	E-DC1	2 Door Coupe	1993–1999
Honda	Integra	GSi, VTi-R	E-DC2	2 Door Coupe	1993–1999
Honda	Integra		E-DB8	4 Door Sedan	1993–1995
Honda	Integra		DB6	4 Door Sedan	1993–1997
Honda	Integra		DA6	2 Door Liftback	1989–1993
Honda	Integra		E-DB7	4 Door Sedan	1993–1995
Honda	Integra		DA5	2 Door Hatch	1988–1993
Honda	Integra		DB8	2 Door Liftback	1993–1997
Honda	Jazz	Hard top		2 Door RV	1992–1996
Honda	Jazz	Soft top	KD-UCS69DWH	2 Door RV	1992–1996
Honda	Legend		E-KA7	2 Door Coupe	1991–1994
Honda	Legend		KA2	2 Door Coupe	1986–1991
Honda	Logo		GA2	2 Door Hatch	1990–1992
Honda	NSX		E-NA1	2 Door Coupe	1991–1997
Honda	Prelude	EX & Si 4WS	BB4	2 Door Coupe	1987–1992
Honda	Prelude	EX & Si 4WS	BA8	2 Door Coupe	1987–1992
Honda	Prelude	EX & Si 4WS	BA9	2 Door Coupe	1987–1992
Honda	Prelude	EX & Si 4WS	BB1	2 Door Coupe	1987–1992

Honda	Prelude	EX, 2.0L – 16V	AB	2 Door Coupe	1983–1987
Honda	Prelude	XX		2 Door Coupe	1982–1987
Honda	Prelude			2 Door Coupe	1981–1982
Honda	Prelude			2 Door Coupe	1992–1996
Honda	Vigor		E-CC2	4 Door Sedan	1990–1995
Honda	Vigor		E-CC3	4 Door Sedan	1990–1995
Hyundai	Excel	1.2 & 1.5	KMHHF31	4 Door Sedan	1986–1990
Hyundai	Excel	1.2 & 1.5		4 Door Hatch	1990–1995
Hyundai	Excel	1.2 & 1.5, 1.3		4 Door Sedan	1990–1995
Hyundai	Excel	GL	KMHHA21JPGU08G338	4 Door Hatch	1986–1990
Hyundai	Lantra		KMHKW21RPWU099142	4 Door S/Wagon	1991–1999
Hyundai	Lantra	1.60	JRF	4 Door S/Wagon	1991–1993
Hyundai	Lantra	1.6, 1.8	J1-J2	4 Door Sedan	1993–1999
Hyundai	Lantra		KF31U	4 Door S/Wagon	1991–1999
Hyundai	Lantra		KF31U	4 Door Sedan	1991–1999
Hyundai	Prima	1.6 GSL	KMHT31	4 Door Sedan	1984–1990
Hyundai	Scoupe		KMHUE31NPPU141625	2 Door Coupe	1990–1995
Hyundai	Sonata	1.8, 2.0, 2.4	YRF	4 Door Sedan	1989–1991
Hyundai	Sonata	2.0 & 3.0 V6	Y3	4 Door Sedan	1993–1996

Hyundai	Sonata	GLS – 2.0 & 3.0		4 Door Sedan	1991–1993
Hyundai	Stellar	1.6 GSL	KMHT31	4 Door Sedan	1984–1990
Isuzu	Aska		JJ120	4 Door Sedan	1983–1989
Isuzu	Aska		E-CJ1	4 Door Sedan	1993–1996
Isuzu	Gemini	C/C	JTD69	4 Door Sedan	1989–1992
Isuzu	Gemini		MJ 1	4 Door Sedan	1994–1997
Isuzu	MU	Metal top	KD-UCS69DWM	2 Door RV	1982–1990
Isuzu	MU		UCS69	2 Door Ute	1993–1997
Jaguar/Daimler	XJ6	3.2, 4.0		4 Door Sedan	1990–1994
Lexus	ES300		VCV10R-BTPGKQ	4 Door Sedan	1994
Mazda	323	Astina		4 Door Liftback	1990–1998
Mazda	323	LX	BT4831L	4 Door Hatch	1981–1990
Mazda	323	Turbo 4WD/2WD	BM39	2 Door Hatch	1987–1988
Mazda	323		E-BD1051	2 Door Hatch	1981–1990
Mazda	323		BT7J	4 Door S/Wagon	1988–1992
Mazda	323		BW6P	4 Door S/Wagon	1988–1992
Mazda	323		BG6R.Z	4 Door Sedan	1989–1993
Mazda	323		BG7P	4 Door Sedan	1989–1993
Mazda	323		BG6P.S	2 Door Hatch	1989–1994

Mazda	323		BG3S	4 Door Sedan	1989–1994
Mazda	323		BF3P	2 Door Hatch	1984–1988
Mazda	323		BW3W	2 Door S/Wagon	1985–1989
Mazda	323		BF3V	2 Door S/Wagon	1985–1989
Mazda	323		BF5.W, BT	2 Door S/Wagon	1985–1993
Mazda	323		BV89	2 Door S/Wagon	1981–1990
Mazda	323		BG3P	4 Door Sedan	1989–1994
Mazda	323		BG6P.S	4 Door Hatch	1989–1994
Mazda	323		BG6P.S	4 Door Sedan	1989–1994
Mazda	323		BG8P.S	4 Door Liftback	1989–1994
Mazda Anniversary	626		81-83	Sedan, 4 Door Sedan	
Mazda	626		GESR	4 Door Liftback	1992–1997
Mazda	626		GT5FMN2	4 Door S/Wagon	1992–1997
Mazda	626		GT5FMN1	4 Door S/Wagon	1992–1997
Mazda	626		GW72	4 Door S/Wagon	1993–1997
Mazda	929	Hard top	HCFS	4 Door Sedan	1988–1991
Mazda	929	XGX 2.0i	EBBES	4 Door Sedan	1982–1987
Mazda	929	XGX 2000 Egi	EHBSHE	2 Door Coupe	1982–87
Mazda	929		E-GECP	4 Door Sedan	1991–1996

Mazda	929		HDES	4 Door Sedan	1991–1996
Mazda	929		HDEP	4 Door Sedan	1991–1996
Mazda	929		HD5S	4 Door Sedan	1991–1996
Mazda	929		HD5P	4 Door Sedan	1991–1996
Mazda	929			4 Door S/Wagon	1982–1987
Mazda	Astina	GLX		4 Door Liftback	1991–1997
Mazda	Astina		BG5P	4 Door Hatch	1989–1994
Mazda	Astina		BG5P	4 Door Liftback	1989–1994
Mazda	Astina		BG5P	2 Door Hatch	1989–1994
Mazda	Astina		BG8P	4 Door Sedan	1989–1994
Mazda	AZ3		EC5S	4 Door Sedan	1991–1995
Mazda	AZ3		ECPSA	4 Door Sedan	1991–1995
Mazda	Capella	Mark 1		2 Door Sedan	1981–1990
Mazda	Capella	Mark 4	E-CG2PP	4 Door Sedan	1992–1998
Mazda	Clef		E-GE5PA	4 Door Sedan	1992–1994
Mazda	Clef		GESRA	4 Door Sedan	1992–1994
Mazda	Clef		GEEPA	4 Door Sedan	1992–1994
Mazda	Cosmo			2 Door Coupe	1992–1997
Mazda	Cronos		E-GE5P	4 Door Sedan	1991–1994

Mazda	Cronos		GEEP	4 Door Sedan	1991–1994
Mazda	Cronos		E-GEFP	4 Door Sedan	1991–1994
Mazda	Cronos		E-GESR	4 Door Sedan	1991–1994
Mazda	Cronos		E-GE8P	4 Door Sedan	1991–1994
Mazda	Efini	MS-6	E-GE8P	4 Door Sedan	1991–1994
Mazda	Efini	MS-6	E-GEEP	4 Door Sedan	1991–1994
Mazda	Efini	MS-6	E-GESR	4 Door Sedan	1991–1994
Mazda	Efini	MS-8	EMBEP	4 Door Sedan	< 1992
Mazda	Efini	MS-8	EMB5A	4 Door Sedan	< 1992
Mazda	Efini	MS-8	EMB5P	4 Door Sedan	< 1992
Mazda	Etude			2 Door Hatch	1988–1997
Mazda	Etude			2 Door Hatch	1986–1987
Mazda	Eunos	500.00	E-CAEPE	4 Door Sedan	1992–1997
Mazda	Eunos	500.00	E-CA8P	4 Door Sedan	1992–1997
Mazda	Eunos	500.00	E-CA8PE	4 Door Sedan	1992–1997
Mazda	Eunos	500.00	E-CAEP	4 Door Sedan	1992–1997
Mazda	Eunos	500.00	E-CAPP	4 Door Sedan	1992–1997
Mazda	Eunos	MX3	E-EC5S	2 Door Hatch	1990–1995
Mazda	Eunos	MX3	E-EC5SA	2 Door Hatch	1990–1995
Mazda	Eunos	MX3	E-EC8SE	2 Door Hatch	1990–1995

Mazda	Eunos	MX5 Roadster	E-NA8C	2 Door Convert	1989–1997
Mazda	Eunos	MX5 Roadster	E-NA6CE	2 Door Convert	1989–1997
Mazda	Eunos	MX6	GEEB	2 Door Coupe	1988–1990
Mazda	Eunos	MX6	GEES	2 Door Coupe	1988–1990
Mazda	Eunos	MX6	GA9VAAB	2 Door Coupe	1992–1996
Mazda	Eunos	MX6	4WS 2.2 TURBO/GS52	2 Door Coupe	1990–1992
Mazda	Eunos	MX6	GA9WAAB	2 Door Coupe	1992–1996
Mazda	Eunos	MX6	GE5B	2 Door Coupe	1988–1990
Mazda	Eunos	MX6	GE5S	2 Door Coupe	1988–1990
Mazda	Eunos	Presso	E-EC5S	2 Door Hatch	1990–1995
Mazda	Eunos	Presso	E-EC8S	2 Door Hatch	1990–1995
Mazda	Familia	Interplay	E-BG5P	4 Door Sedan	1988–1997
Mazda	Familia		BG5P.S	4 Door Hatch	1989–1993
Mazda	Familia		BG5P.S	4 Door Liftback	1989–1993
Mazda	Familia		E-BFTP	2 Door Hatch	1988–1997
Mazda	Familia		E-BFM--	4 Door S/Wagon	1988–1997
Mazda	Familia		E-CBAEP	4 Door Hatch	1988–1997
Mazda	Familia		BG5P.S	2 Door Hatch	1989–1993
Mazda	Familia		BG5P.S	4 Door Sedan	1989–1993

Mazda	Luce	Limited V6	E-HCPS	4 Door Sedan	1981–1989
Mazda	Luce	Limited V6	HCFS	4 Door Sedan	1986–1991
Mazda	Luce			4 Door S/Wagon	1981–1987
Mazda	Luce		HBEP	4 Door Sedan	1983–1986
Mazda	MPV		LVEW	4 Door S/Wagon	1991–1995
Mazda	MS6		GE8P	2 Door Coupe	1991–1995
Mazda	MS8	Pillarless 2.0L	MBEP	4 Door Sedan	1992–1995
Mazda	MS8	Pillarless 2.5L	MB5A.P	4 Door Sedan	1992–1995
Mazda	MX5		NA6CE	2 Door Convert	1989–1993
Mazda	MX5		NA29	2 Door Convert	1990–1993
Mazda	MX5		NA14	2 Door Convert	1990–1993
Mazda	MX6		GEEB	2 Door Coupe	1991–1997
Mazda	RX7		E-FC3S	2 Door Coupe	1989–1995
Mazda	RX7 Savanna			2 Door Coupe	1987-1997
Mazda	Sentia		E-HD5S	4 Door Sedan	1991–1995
Mazda	Sentia		E-HD5P	4 Door Sedan	1991–1995
Mazda	Sentia		E-HDES	4 Door Sedan	1991–1995
Mazda	Sentia		E-HDEP	4 Door Sedan	1991–1995
Mercedes Benz	190	190E, 1.8, 2.0, 2.3 & 2.6	W201	4 Door Sedan	1984–1993

Mercedes Benz	190	E 2.5-16		4 Door Sedan	1989–1990
Mercedes Benz	190	E, 1.8, 2, 2.3, 2.6		4 Door Sedan	1984–1993
Mitsubishi	Asti		E-CA3	2 Door Coupe	1992–1996
Mitsubishi	Asti		E-CA1	2 Door Coupe	1992–1996
Mitsubishi	Asti		E-CA4	2 Door Coupe	1992–1996
Mitsubishi	Chariot	4WD Diesel	D09W	4 Door S/Wagon	1984–1986
Mitsubishi	Chariot	4WD Wagon	N12W	4 Door S/Wagon	1991–1995
Mitsubishi	Chariot	GLXi	DK3H45	4 Door RV	1991–1998
Mitsubishi	Chariot	GLXi	DK4H35	4 Door RV	1991–1998
Mitsubishi	Chariot	GLXi	DL5H45	4 Door RV	1991–1998
Mitsubishi	Chariot	MF	D02W	4 Door S/Wagon	1984–1989
Mitsubishi	Chariot		N34W	4 Door S/Wagon	1991–1995
Mitsubishi	Chariot		N43W	4 Door S/Wagon	1991–1995
Mitsubishi	Chariot		N48W	4 Door S/Wagon	1991–1995
Mitsubishi	Chariot		N44W	4 Door S/Wagon	1991–1995
Mitsubishi	Chariot		N38W	4 Door S/Wagon	1991–1995
Mitsubishi	Chariot		N33W	4 Door S/Wagon	1991–1995
Mitsubishi	Chariot		DX3	4 Door S/Wagon	1984–1991
Mitsubishi	Chariot		D05W	4 Door S/Wagon	1984–1991

Mitsubishi	Chariot		DX4	4 Door S/Wagon	1984–1991
Mitsubishi	Colt			2 Door Hatch	1981–1983
Mitsubishi	Colt			4 Door Hatch	1981–1983
Mitsubishi	Colt			2 Door Hatch	1984–1987
Mitsubishi	Colt			4 Door Hatch	1984–1987
Mitsubishi	Colt			2 Door Hatch	1987–1988
Mitsubishi	Cordia	GSL	GX5H24	2 Door Liftback	1983–1986
Mitsubishi	Cordia	GSR		2 Door Coupe	1983–1987
Mitsubishi	Cordia	Turbo 2 DR	CYZZ	2 Door Hatch	1983–1987
Mitsubishi	Cyborg	1.60		2 Door Hatch	1988–1997
Mitsubishi	Debonair		S12ASRHER	4 Door Sedan	1987–1990
Mitsubishi	Debonair		S22A	4 Door Sedan	1990–1993
Mitsubishi	Debonair		S26A	4 Door Sedan	1990–1995
Mitsubishi	Diamante		E-F15	4 Door Sedan	1990–1997
Mitsubishi	Diamante		E-F25	4 Door Sedan	1990–1997
Mitsubishi	Diamante		E-F27	4 Door Sedan	1990–1997
Mitsubishi	Diamante		E-F17	4 Door Sedan	1990–1997
Mitsubishi	Diamante		E-F13A	4 Door Sedan	1990–1997
Mitsubishi	Diamante		E-F12	4 Door Sedan	1990–

					1997
Mitsubishi	Diamante		E-F11	4 Door Sedan	1990–1997
Mitsubishi	Diamante		E-F07A	4 Door Sedan	1990–1997
Mitsubishi	Eclipse		D22A	2 Door Hatch	1989
Mitsubishi	Emeraude		E-84	4 Door Sedan	1992–1997
Mitsubishi	Emeraude		E-53	4 Door Sedan	1992–1997
Mitsubishi	Emeraude		E-54	4 Door Sedan	1992–1997
Mitsubishi	Emeraude		E-52A	4 Door Sedan	1992–1997
Mitsubishi	Eterna		E15A	4 Door Sedan	1983–1987
Mitsubishi	Eterna		E-X57A	4 Door Sedan	1992–1997
Mitsubishi	Eterna		E12A	4 Door Sedan	1983–1985
Mitsubishi	Eterna		E-E52A	4 Door Sedan	1992–1997
Mitsubishi	Eterna		E-E53	4 Door Sedan	1992–1997
Mitsubishi	Eterna		E-E54	4 Door Sedan	1992–1997
Mitsubishi	Eterna		E-E72	4 Door Sedan	1992–1997
Mitsubishi	Eterna		EE84	4 Door Sedan	1992–1997
Mitsubishi	Eterna			4 Door Liftback	1992–1997
Mitsubishi	Fabio			2 Door Hatch	1988–1997
Mitsubishi	Galant	E SL MCA Jet	E-E12A	4 Door Sedan	1983–1988
Mitsubishi	Galant	GSL Astron 80		2 Door Coupe	1988–

					1993
Mitsubishi	Galant	Liftback GTi	E33A	4 Door Liftback	1988–1993
Mitsubishi	Galant	Liftback V6 GTi	SH SERIES	4 Door Liftback	1993–1996
Mitsubishi	Galant		E-E35A	4 Door Sedan	1988–1993
Mitsubishi	Galant	GL	SJ3M41	4 Door Sedan	1993–1996
Mitsubishi	Galant	GLXi	SK5H4	4 Door Sedan	1993–1997
Mitsubishi	Galant	GTi 16V	SD744G	4 Door Liftback	1989–1991
Mitsubishi	Galant		E15A	4 Door Sedan	1984–1986
Mitsubishi	Galant		SB1M41G	4 Door Sedan	1988–1993
Mitsubishi	Galant		SC3H41D	4 Door Sedan	1988–1993
Mitsubishi	Galant		SB3H41G	4 Door Sedan	1988–1993
Mitsubishi	Galant		E77A	4 Door Sedan	1992–1996
Mitsubishi	Galant		E52A	4 Door Sedan	1992–1996
Mitsubishi	Galant		E72A	4 Door Sedan	1992–1996
Mitsubishi	Galant		E74A	4 Door Sedan	1992–1996
Mitsubishi	Galant		E78A	4 Door Sedan	1992–1996
Mitsubishi	Galant		E53A	4 Door Sedan	1992–1996
Mitsubishi	Galant		E54A	4 Door Sedan	1992–1996
Mitsubishi	Galant		E57A	4 Door Sedan	1992–1996

Mitsubishi	Galant		E32A	4 Door Sedan	1988–1991
Mitsubishi	Galant		E84A	4 Door Sedan	1992–1996
Mitsubishi	Geneva		MW3541	4 Door Sedan	1979–1988
Mitsubishi	Geneva		MX4544	4 Door Hatch	1979–1988
Mitsubishi	GTO		E-Z15A	2 Door Coupe	1991–1993
Mitsubishi	GTO		E-Z16A	2 Door Coupe	1991–1993
Mitsubishi	Lancer	GSR Coupe A	7A1LM	2 Door Coupe	1989–1999
Mitsubishi	Lancer		C63A	4 Door Liftback	1988–1992
Mitsubishi	Lancer	4WD	LJ8H44	4 Door S/Wagon	1987–1992
Mitsubishi	Lancer	CG	C12V	4 Door S/Wagon	1987
Mitsubishi	Lancer	GL	LJ3L41	4 Door Sedan	1993–1997
Mitsubishi	Lancer	GL, GLX, GLXi	E-CB6	4 Door Sedan	1992–1996
Mitsubishi	Lancer	GL, GLX, GLXi	E-CD8	4 Door Sedan	1992–1996
Mitsubishi	Lancer	GL, GLX, GLXi	E-CB1	4 Door Sedan	1992–1996
Mitsubishi	Lancer	GL, GLX, GLXi	E-CB3	4 Door Sedan	1992–1996
Mitsubishi	Lancer	GL, GLX, GLXi	E-CD5	4 Door Sedan	1992–1996
Mitsubishi	Lancer	GL, GLXi	LJ7H45, LJ1L45	4 Door S/Wagon	1993–1999
Mitsubishi	Lancer	GL, GLXi, GSR, SEi	LJ3L44	4 Door Liftback	1989–1996
Mitsubishi	Lancer	GL, GLXi ,GSR ,SEi	LJ7S44	4 Door Liftback	1989–1996

Mitsubishi	Lancer	GL, GLXi, GSR, SEi	LJ8H44	4 Door Liftback	1989–1996
Mitsubishi	Lancer	GLS	LJ1L41	4 Door Sedan	1993–1997
Mitsubishi	Lancer	GLX, GL, GSR	E-C73A	4 Door Sedan	1989–1992
Mitsubishi	Lancer	GLXi	LJ7H41	4 Door Sedan	1993–1997
Mitsubishi	Lancer	GLXi	LJ8H41	4 Door Sedan	1993–1997
Mitsubishi	Lancer	GTi		4 Door Sedan	1993–1997
Mitsubishi	Lancer	SEi	LJ8X41	4 Door Sedan	1993–1997
Mitsubishi	Lancer		E-DCB8	4 Door S/Wagon	1992–1993
Mitsubishi	Lancer		E-DCD5	4 Door S/Wagon	1992–1993
Mitsubishi	Lancer		E-DCD8	4 Door S/Wagon	1992–1993
Mitsubishi	Lancer		LK1L4	4 Door Sedan	1993–1997
Mitsubishi	Lancer		LB3M41	4 Door Sedan	1989–1992
Mitsubishi	Lancer		LC7H44	4 Door Liftback	1989–1992
Mitsubishi	Lancer		E-DCB5	4 Door S/Wagon	1992–1993
Mitsubishi	Libero		E-DCB8	4 Door S/Wagon	1992–1996
Mitsubishi	Libero		E-DCD8	4 Door S/Wagon	1992–1996
Mitsubishi	Libero		E-DCB5	4 Door S/Wagon	1992–1996
Mitsubishi	Libero		E-DCD5	4 Door S/Wagon	1992–1996
Mitsubishi	Magna	GLX, SE	T58P41	4 Door S/Wagon	1985–1991

Mitsubishi	Magna	GLX, SE	TS7D41	4 Door S/Wagon	1985–1991
Mitsubishi	Magna	GLX, Super Saloon	TS8D41	4 Door Sedan	1993–1996
Mitsubishi	Magna	GLX, Super Saloon	TS7D41	4 Door Sedan	1993–1996
Mitsubishi	Magna		TM, TN	4 Door Sedan	1985–1991
Mitsubishi	Magna		6MMTS	4 Door S/Wagon	1992–1996
Mitsubishi	Mirage		E-CA1	2 Door Coupe	1992–1996
Mitsubishi	Mirage		E-CA4	2 Door Coupe	1992–1996
Mitsubishi	Mirage		MW3541	4 Door Sedan	1979–1988
Mitsubishi	Mirage		MX4544	4 Door Hatch	1979–1988
Mitsubishi	Mirage		MX,MY 5S41	4 Door Sedan	1985–1989
Mitsubishi	Mirage		E-CA3	2 Door Coupe	1992–1996
Mitsubishi	Mirage	Spacewagon	MA3L45	4 Door S/Wagon	1988–1990
Mitsubishi	Mirage	1.3 & 1.5		4 Door S/Wagon	1985–1993
Mitsubishi	Mirage	GL	MY3L41	4 Door Sedan	1984–1988
Mitsubishi	Mirage	GL, GLXi, GSR	MJ7H24	2 Door Hatch	1992–1996
Mitsubishi	Mirage	GL, GLXi, GSR	MJ3L24	2 Door Hatch	1992–1996
Mitsubishi	Mirage	GL, GLXi, GSR	MJ8H24	2 Door Hatch	1992–1996
Mitsubishi	Mirage	GLX	MP to MV	4 Door Hatch	1979–1984
Mitsubishi	Mirage	GLX	M75H24	2 Door Hatch	1989–1992

Mitsubishi	Mirage	GLX	MX3M24	2 Door Hatch	1985
Mitsubishi	Mirage	GLX	MA5M45	4 Door S/Wagon	1987
Mitsubishi	Mirage	II GL	MV3L24	2 Door Hatch	1982
Mitsubishi	Mirage	Spacewagon	MB5M45	4 Door S/Wagon	1979–1985
Mitsubishi	Mirage	Super F	CA1A	2 Door Hatch	1991–1995
Mitsubishi	Mirage	Swift	C52A	2 Door Hatch	1987–1990
Mitsubishi	Mirage	SX Saloon	C62A	4 Door Liftback	1987–1990
Mitsubishi	Mirage	VIE-2 SDN	C62A	4 Door Sedan	1987–1990
Mitsubishi	Mirage		C12A	2 Door Hatch	1982–1990
Mitsubishi	Mirage		E-CB1	4 Door Sedan	1992–1996
Mitsubishi	Mirage		E-CB3	4 Door Sedan	1992–1996
Mitsubishi	Mirage		E-A152A/MT3 L24-NZ ASS.	2 Door Hatch	1979–1988
Mitsubishi	Mirage		E-CB4	4 Door Sedan	1992–1996
Mitsubishi	Mirage		E-CB6	4 Door Sedan	1992–1996
Mitsubishi	Mirage		E-CD8	4 Door Sedan	1992–1996
Mitsubishi	Mirage		CA	2 Door Hatch	1991–1995
Mitsubishi	Mirage		CA4A	2 Door Hatch	1992–1996
Mitsubishi	Mirage II	GL	MV3L24	4 Door Sedan	1994–1996
Mitsubishi	RVR	Sportsgear	N13W	4 Door RV	1993–1997
Mitsubishi	RVR	Sportsgear	N28W	4 Door RV	1993–1997

Mitsubishi	RVR	Sportsgear	N11W	4 Door RV	1993–1997
Mitsubishi	RVR	Sportsgear	N21W	4 Door RV	1993–1997
Mitsubishi	RVR	Sportsgear	N23W	4 Door RV	1993–1997
Mitsubishi	Ramada	GSR-X Turbo	E-E15A	4 Door Sedan	1985
Mitsubishi	Sigma	Super Saloon/ GLX/SE	E-E15A	4 Door Sedan	1984–1988
Mitsubishi	Sigma		E58	4 Door S/Wagon	1984–1988
Mitsubishi	Sigma		E-F13A	4 Door Sedan	1991–1995
Mitsubishi	Sigma		E-F27	4 Door Sedan	1991–1995
Mitsubishi	Sigma		E-F17	4 Door Sedan	1991–1995
Mitsubishi	Sigma		E-F15	4 Door Sedan	1991–1995
Mitsubishi	Sigma		E-F11	4 Door Sedan	1991–1995
Mitsubishi	Swift			2 Door Hatch	1988–1997
Mitsubishi	Tredia	SE 1.8 Auto		4 Door Sedan	1985–1987
Mitsubishi	V3000	Exec, SEi, Super Saloon	KS6P41	4 Door Sedan	1991–1996
Mitsubishi	V3000	Exec, SEi, Super Saloon	KS5D41	4 Door Sedan	1991–1996
Mitsubishi	V3000	Exec, SEi, Super Saloon	KS6D41	4 Door Sedan	1991–1996
Mitsubishi	V3000	Exec, SEi, Super Saloon		4 Door S/Wagon	1992–1996
Mitsubishi	V3000	GLX, Exec, SE		4 Door Sedan	1988–1991
Mitsubishi	Viento		E-E35A	4 Door Sedan	1988–1993

Mitsubishi	Viento		E54A	4 Door Sedan	1992–1996
Mitsubishi	Visage			4 Door Sedan	1992–1997
Nissan	Avenir	Diesel	WIORW	4 Door S/Wagon	1990–1994
Nissan	Avenir	Diesel	WIORZ	4 Door S/Wagon	1990–1994
Nissan	Avenir	Van	KB-VSW10	4 Door S/Wagon	< 1996
Nissan	Avenir	Van	R/T-VEW10	4 Door S/Wagon	< 1996
Nissan	Avenir	Van	R-VENW10	4 Door S/Wagon	< 1996
Nissan	Bluebird	ARX	U13 & NU	4 Door Liftback	1991–1995
Nissan	Bluebird	Bluebird 1.8L 2WD/4WD	RU12	4 Door S/Wagon	1987–1991
Nissan	Bluebird	Bluebird 1.8L 4WD	RNU12	4 Door S/Wagon	1987–1991
Nissan	Bluebird	FE Saloon	EU12	4 Door Sedan	1989–1991
Nissan	Bluebird	GF	PJ910	4 Door Sedan	1980–1984
Nissan	Bluebird	S, ARX-L	EU13	4 Door Sedan	1989–1994
Nissan	Bluebird	SE, SES, SEL	U13	4 Door Sedan	1991–1996
Nissan	Bluebird	SG Widetrack	RU11	4 Door Sedan	1985–1987
Nissan	Bluebird	SGS	WUCU12 AUST ASSY	4 Door S/Wagon	1991–1992
Nissan	Bluebird	SU13	U13 & NU	4 Door Sedan	1992–1997
Nissan	Bluebird	Widetrack	YU11	4 Door S/Wagon	1984–1992
Nissan	Bluebird	ZX	WFCU12AZX	4 Door S/Wagon	1984–1992
Nissan	Bluebird	ZX	N910	4 Door Sedan	1980–1984

Nissan	Bluebird	ZXE	UU12LFEU	4 Door Sedan	1984–1992
Nissan	Bluebird		WU11	4 Door S/Wagon	1985–1987
Nissan	Bluebird		UU12	4 Door Sedan	1989–1991
Nissan	Bluebird		U11	4 Door Sedan	1983–1988
Nissan	Bluebird		SNU13,SU13	4 Door Sedan	1991–1996
Nissan	California		E-WFNY10	4 Door S/Wagon	1991–1995
Nissan	Cefiro		E-PA32	4 Door Sedan	1994–1998
Nissan	Cefiro	Turbo	CA31	4 Door Sedan	1992–1996
Nissan	Cefiro		E-EA/LA31	4 Door Sedan	1990–1994
Nissan	EXA		E-KEN	2 Door Liftback	1986–1990
Nissan	Excimo		E-PA32	4 Door Sedan	1994–1999
Nissan	Infiniti	Q45		4 Door Sedan	1993–1997
Nissan	Langley	Type X	HN12	4 Door Hatch	1984–1986
Nissan	Laurel		UJC31	4 Door Sedan	1981–1985
Nissan	Leopard		EPF30	4 Door Sedan	1980–1987
Nissan	Lucino		E-FB14	2 Door Coupe	< 1994
Nissan	Maxima	3.0, S, SL, SE, SEL	J30	4 Door Sedan	1988–1995
Nissan	Maxima	30i V6	HJ30	4 Door Sedan	1991–1993
Nissan	Maxima	S	J30K	4 Door Sedan	1993
Nissan	Milano		EHN12	4 Door Hatch	1983–

					1987
Nissan	NX	2.00	B13	2 Door Liftback	1993–1995
Nissan	NX Coupe		E-B13	2 Door Liftback	1990–1993
Nissan	Pintara			4 Door Sedan	1988–1992
Nissan	Presea		E-HR/PR/R10	4 Door Sedan	1991–1995
Nissan	Primera		E-HP10,P10	4 Door Sedan	1990–1997
Nissan	Primera		E-FHP10	4 Door Liftback	1990–1997
Nissan	Pulsar	SG 1.3	RPN12	2 Door Hatch	1983–1987
Nissan	Pulsar		E-FN14	4 Door Sedan	1990–1996
Nissan	Pulsar		EHN12	4 Door Hatch	1983–1987
Nissan	Pulsar	GTi	E-FN/EN/HN14	2 Door Hatch	1991–1996
Nissan	Pulsar	Mi		4 Door Sedan	1987–1990
Nissan	Pulsar		N12	2 Door Hatch	1983–1988
Nissan	Pulsar		N13	4 Door Hatch	1986–1988
Nissan	Pulsar		EN13	4 Door Hatch	1988–1990
Nissan	Sentra	S	FUN-13	4 Door Hatch	1987–1992
Nissan	Sentra	SG	UN13DFU	4 Door Sedan	1989–1993
Nissan	Sentra	SG	FAN14	4 Door Hatch	1992–1996
Nissan	Sentra	SG, SGS, ZXE	N13	4 Door Sedan	1987–1992

Nissan	Sentra	SG, SGS, ZXE, L, S, SL	Y10	4 Door S/Wagon	1992–1997
Nissan	Sentra	SG, ZXE, Q, SGS	N14 SERIES	4 Door Sedan	1992–1996
Nissan	Sentra	SGS	UN13DFU	4 Door Hatch	1989–1993
Nissan	Sentra	SGS	WHB11	4 Door S/Wagon	1988
Nissan	Sentra	Sports hatch	WPB12	4 Door Liftback	1987–1992
Nissan	Sentra	SSS	N14 SERIES	4 Door Liftback	1992–1996
Nissan	Sentra	SW	N13	4 Door S/Wagon	1987–1992
Nissan	Sentra	ZXE	FPN13HFU	4 Door Hatch	1987–1991
Nissan	Sentra		RBN13	2 Door Hatch	1985–1991
Nissan	Sentra		PN13HAU	4 Door Sedan	1987–1991
Nissan	Sentra		PN13HFU	4 Door Sedan	1987–1991
Nissan	Sentra		PN13A	4 Door Sedan	1987–1991
Nissan	Sentra		WCB12FU	4 Door Liftback	1989–1993
Nissan	Sentra		UN13DFU	4 Door Liftback	1989–1993
Nissan	Silvia	RXE	EJS12	2 Door Liftback	1984–1986
Nissan	Silvia		S13	2 Door Coupe	1988–1992
Nissan	Skyline	Excel	WFJR31	4 Door S/Wagon	1980–1989
Nissan	Skyline	RXE Turbo	E-JS12	2 Door Coupe	1980–1989
Nissan	Skyline		E-HCR/ECR/HR32	4 Door Sedan	1989–1993

Nissan	Skyline		EHR31	4 Door Sedan	1980–1989
Nissan	Skyline			4 Door Hatch	1982
Nissan	Skyline	GT EX	HR30	4 Door Sedan	1981
Nissan	Skyline		JR31	4 Door S/Wagon	1987–1991
Nissan	Skyline		BCNR33	2 Door Coupe	1994–1999
Nissan	Sunny	1.30		4 Door Sedan	1983–1985
Nissan	Sunny	GX	B310	4 Door Sedan	1980–1983
Nissan	Sunny	Le Prix Turbo	EHB11	2 Door Hatch	1982–1987
Nissan	Sunny	SGS	WHB11	4 Door S/Wagon	1984–1987
Nissan	Sunny	SGX	HB11FU	4 Door Sedan	1982–1985
Nissan	Sunny		WHB12	4 Door Sedan	1985–1990
Nissan	Sunny		B13	4 Door Sedan	1990–1994
Nissan	Sunny		B14	4 Door Sedan	1990–1994
Nissan	Sunny		VB310	4 Door S/Wagon	1978–1982
Nissan	Terrano		Q-WBYD21	2 Door 4wd	1988–1995
Nissan	Vector	SSS		4 Door Sedan	1990–1994
Opel	Kadett	GSi	WOL 00053F	4 Door Hatch	1985–1989
Opel	Kadett		WOL-OOO 53F	2 Door Hatch	1985–1989
Peugeot	205	CJ	VF320DK 12/1	2 Door Convert	1989–1992
Peugeot	205	CTi	741B66	2 Door Convert	1986–

					1992
Peugeot	205	GR	VF320AK 12/1	4 Door Hatch	1989–1993
Peugeot	205	GTi, GT	VF20DK22	2 Door Hatch	1986–1993
Peugeot	205	GTi, GT	VF320CD62	2 Door Hatch	1986–1993
Peugeot	405	GR		4 Door Sedan	1990–1997
Peugeot	405	GR, SRDT	5ED22	4 Door S/Wagon	1990–1997
Peugeot	505			4 Door Sedan	1985–1986
Pontiac	Le Mans	GLE, GSE	K01	4 Door Sedan	1988–1992
Pontiac	Le Mans	GLE, GSE	K02	4 Door Sedan	1988–1992
Pontiac	Le Mans	GLE, GSE	K03	4 Door Liftback	1988–1992
Pontiac	Le Mans	GLE, GSE	K04	4 Door Liftback	1988–1992
Proton	Proton Saga	Aeroback		4 Door S/Wagon	1987–1994
Proton	Proton Saga	L, GL, GLX		4 Door Sedan	1987–1994
Seat	Ibiza	Crono		4 Door Hatch	1989–1990
Seat	Ibiza		VSS021A	2 Door Hatch	1987–1990
Suzuki	Cultus		AB33S	4 Door Hatch	1987
Suzuki	Swift		EAA355	2 Door Hatch	< 1994
Suzuki	Swift	GLX	SF 413	4 Door Hatch	1986–1989
Toyota	Aristo		E-UZS145	4 Door Sedan	1992–1996
Toyota	Aristo		E-JZS147	4 Door Sedan	1992–1996

Toyota	Caldina		ST190	4 Door S/Wagon	1992–1996
Toyota	Caldina		ST191	4 Door S/Wagon	1992–1996
Toyota	Caldina		ST195	4 Door S/Wagon	1992–1996
Toyota	Caldina		CT190.196	4 Door S/Wagon	1992–1996
Toyota	Camry	CS-X	SV21RG	4 Door S/Wagon	1989–1993
Toyota	Camry	GL, GX, GLX	VCV11	4 Door Sedan	1991–1996
Toyota	Camry	GL, GX, GLX	VCV10	4 Door Sedan	1991–1996
Toyota	Camry	GS	SV10	4 Door S/Wagon	1993–1997
Toyota	Camry	GS	SXV10	4 Door S/Wagon	1993–1997
Toyota	Camry	SE Saloon	SV10	4 Door Sedan	1982–1984
Toyota	Camry	SX	SV12	4 Door Sedan	1988
Toyota	Camry	V6 GX	TT153	4 Door Sedan	1993–1997
Toyota	Camry	V6 GX	CV10R	4 Door Sedan	1993–1997
Toyota	Camry	V6 Prominent	VZV20	4 Door Sedan	1987–1990
Toyota	Camry	ZE	CV30	4 Door Sedan	1990–1994
Toyota	Camry		SV40	4 Door Sedan	1992–1996
Toyota	Camry		VDV10R	4 Door Sedan	1993–1997
Toyota	Camry		SXV15	4 Door S/Wagon	1993–1996
Toyota	Camry		VCV10L	4 Door Sedan	1993–1997

Toyota	Camry			4 Door Sedan	1987–1995
Toyota	Carib		AE91	4 Door S/Wagon	1987–1989
Toyota	Carib		E-AE95G	4 Door S/Wagon	1988–1995
Toyota	Carib			2 Door Hatch	1982–1988
Toyota	Carib			4 Door S/Wagon	1982–1988
Toyota	Carina		E-ST183	4 Door Sedan	1988–1992
Toyota	Carina		E-ST180	4 Door Sedan	1988–1992
Toyota	Carina		E-ST182	4 Door Sedan	1988–1992
Toyota	Carina	1800 SE Extra		4 Door S/Wagon	1990–1997
Toyota	Carina	ST	E-AA60	2 Door Liftback	1984–1988
Toyota	Carina	Surf 1800 SX, 1800 Ltd		4 Door Sedan	1990–1996
Toyota	Carina		AT150	4 Door Sedan	1984–1988
Toyota	Carina			4 Door S/Wagon	1984–1988
Toyota	Ceres		AE101	4 Door Sedan	1991–1994
Toyota	Ceres		AE91	4 Door Sedan	1987–1989
Toyota	Ceres		E-AE95G	4 Door Sedan	1988–1995
Toyota	Ceres		E-AE101	4 Door Sedan	1993–1996
Toyota	Ceres		E-AE100	4 Door Sedan	1993–1997
Toyota	Ciglo Sprinter			4 Door Liftback	1987

Toyota	Corolla		AE91	4 Door Sedan	1987–1989
Toyota	Corolla			2 Door Hatch	1979–1988
Toyota	Corolla	1.3XL, 1.6GL, 1.6GLX	EE100	4 Door Sedan	1993–1997
Toyota	Corolla	1.3XL, 1.6GL, 1.6GLX	AE101	4 Door Sedan	1993–1997
Toyota	Corolla	Diesel XE	CE90	4 Door Sedan	1987–1990
Toyota	Corolla	GL	AE101R	4 Door S/Wagon	1993–1997
Toyota	Corolla	GLX	AE92	4 Door Liftback	1987–1992
Toyota	Corolla	GS	AE101R (NZ ASS)	4 Door Liftback	1995
Toyota	Corolla	GTi 1.6	AE92R AGMVF	2 Door Hatch	1988–1992
Toyota	Corolla	GX, GLX, GS, – 1.6 & 1.8	AE101	4 Door Liftback	1992–1997
Toyota	Corolla	GX, GLX, GS, – 1.6 & 1.8	AE102	4 Door Liftback	1992–1997
Toyota	Corolla	L	EE103	4 Door S/Wagon	1994–1998
Toyota	Corolla	L	EE104	4 Door S/Wagon	1994–1998
Toyota	Corolla	L-Touring	AE100	4 Door S/Wagon	1991–1997
Toyota	Corolla	Sprinter		2 Door Coupe	1984–1988
Toyota	Corolla	Van	EE90	2 Door Hatch	1988–1992
Toyota	Corolla	Van	EE100	2 Door Hatch	1993–1997
Toyota	Corolla	XL		4 Door Liftback	1979–1988
Toyota	Corolla	XL		4 Door Sedan	1979–1988

Toyota	Corolla	XL	EE90	4 Door Liftback	1987–1991
Toyota	Corolla	XL	EE90	4 Door S/Wagon	1987–1991
Toyota	Corolla	XL	EE90	4 Door Sedan	1987–1991
Toyota	Corolla	XL	EE90R	4 Door Hatch	1987–1991
Toyota	Corolla	XL, GL, – 1.3 & 1.6	AE100	4 Door Hatch	1992–1997
Toyota	Corolla	XL, GL, – 1.3 & 1.6	AE101	4 Door Hatch	1992–1997
Toyota	Corolla	XL, GL, – 1.3 & 1.6	AE100	2 Door Hatch	1992–1997
Toyota	Corolla	XL, GL, – 1.3 & 1.6	AE101	2 Door Hatch	1992–1997
Toyota	Corolla	XL, GL, – 1.3 & 1.6	EE100	4 Door Hatch	1992–1997
Toyota	Corolla	XL, GL, – 1.3 & 1.6	EE100	2 Door Hatch	1992–1997
Toyota	Corolla		KE70	2 Door S/Wagon	1979–1988
Toyota	Corolla		KE70	4 Door S/Wagon	1979–1988
Toyota	Corolla		AE92	4 Door Sedan	1987–1992
Toyota	Corolla		AE90	4 Door Sedan	1988–1993
Toyota	Corolla		AE80	4 Door Sedan	1983–1988
Toyota	Corolla		AE101R (NZ ASS)	4 Door Sedan	1994
Toyota	Corolla		AE101R (NZ ASS)	4 Door Hatch	1997
Toyota	Corolla		AE82	4 Door Liftback	1983–1987
Toyota	Corolla		E-AL21	4 Door Hatch	1984–1988
Toyota	Corolla		E-EL31	2 Door Liftback	1984–

					1988
Toyota	Corolla			4 Door S/Wagon	1988–1993
Toyota	Corolla FX		E-AE95G	4 Door Hatch	1988–1995
Toyota	Corolla FX		AE91	4 Door Hatch	1987–1989
Toyota	Corolla II	Windy	EL51	2 Door Hatch	1994–1998
Toyota	Corolla II		EL34	4 Door Sedan	1988–1991
Toyota	Corolla II		AL21	4 Door Hatch	1990–1994
Toyota	Corolla II		EL41	4 Door Sedan	1988–1991
Toyota	Corolla II		EL45	4 Door Sedan	1988–1991
Toyota	Corolla II		EL51	4 Door Sedan	1994–1998
Toyota	Corona	1800.00	ST170	4 Door Liftback	1988–1990
Toyota	Corona		CT176	4 Door S/Wagon	1988–1992
Toyota	Corona		ST170	4 Door S/Wagon	1988–1992
Toyota	Corona	1.8 Ex Saloon AD	ST150	4 Door Sedan	1983
Toyota	Corona	Amon	ST151R	4 Door Sedan	1986–1988
Toyota	Corona	CX	TT141	4 Door Sedan	1979–1987
Toyota	Corona	Diesel	CT170	4 Door Sedan	1987–1992
Toyota	Corona	Excimo		2 Door Coupe	1987–1995
Toyota	Corona	GL	ST191	4 Door Sedan	1990–1996
Toyota	Corona	GL, GLX, GLXi	ST171	4 Door Liftback	1987–

					1992
Toyota	Corona	GL, GX, GLX	ST190	4 Door Sedan	1992–1996
Toyota	Corona	GL, GX, GLX	CT190	4 Door Sedan	1992–1996
Toyota	Corona	GT-R	ST162	2 Door Coupe	1985–1990
Toyota	Corona	GX, GLX, GSX	ST190	4 Door Liftback	1992–1996
Toyota	Corona	ST	ST150	4 Door Liftback	1985–1987
Toyota	Corona		TT141	4 Door S/Wagon	1984–1988
Toyota	Corona		ST150	4 Door Sedan	1983–1985
Toyota	Corona		ST160	2 Door Coupe	1983–1985
Toyota	Corona		ST150R	4 Door Sedan	1984–1988
Toyota	Corona		ST170	4 Door Sedan	1987–1992
Toyota	Corsa	4D 1500 VIT-S	EL44	4 Door Sedan	1990–1996
Toyota	Corsa		E-EL43	2 Door Hatch	1990–1994
Toyota	Corsa		E-EL41	2 Door Hatch	1990–1994
Toyota	Crown	Super Saloon	MS135	4 Door Sedan	1990
Toyota	Curren		ST207	4 Door Sedan	1994–1996
Toyota	Curren		ST206	4 Door Sedan	1994–1996
Toyota	Emina		TRC10	2 Door Van	1992–1994
Toyota	Estima	Emina X	TCR10	4/Door Van	1992–1996
Toyota	Estima	T/Diesel	CXR21	4/Door Van	1992–

					1996
Toyota	Estima	T/Diesel	CXR20	4/Door Van	1992–1996
Toyota	Estima	T/Diesel	CXR10	4/Door Van	1992–1996
Toyota	Estima	T/Diesel	CXR11	4/Door Van	1992–1996
Toyota	Estima	X Emina	TRC10	2 Door Van	1992–1994
Toyota	Gracia		VCV11	4 Door Sedan	1991–1996
Toyota	Gracia		VCV10	4 Door Sedan	1991–1996
Toyota	Grande		GX61	4 Door Sedan	1981–1984
Toyota	Grande			4 Door Sedan	1986–1990
Toyota	Levin		AE91	4 Door Sedan	1987–1989
Toyota	Levin		E-AE95G	4 Door Sedan	1988–1995
Toyota	Levin		E-AE101	4 Door Sedan	1993–1996
Toyota	Marino		AE101-BTMER	4 Door Sedan	1992–1993
Toyota	Marino		AE91	4 Door Sedan	1987–1989
Toyota	Marino		E-AE95G	4 Door Sedan	1988–1995
Toyota	Marino		EA-E100	4 Door Sedan	1993–1997
Toyota	Mark II	LE	CX60	4 Door Sedan	1981–1983
Toyota	Rav4		E-SXA10G	2 Door RV	1994–1999
Toyota	Scepter		E-SVX/VCV15W	4 Door S/Wagon	1993–1996

Toyota	Scepter		VCV15W	2 Door Coupe	1994–1997
Toyota	Scepter		VCV15	2 Door Coupe	1994–1997
Toyota	Scepter		VCV10	2 Door Coupe	1994–1997
Toyota	Scepter		E-SXV-15	2 Door Coupe	1994–1997
Toyota	Scepter		E-SXV-10	2 Door Coupe	1994–1997
Toyota	Spacio		AE91	4 Door S/Wagon	1987–1989
Toyota	Spacio		E-AE95G	4 Door S/Wagon	1988–1995
Toyota	Sprinter	1.5 XL	AE81	4 Door Sedan	1983–1986
Toyota	Sprinter	SE Limited	AE100	4 Door Sedan	1991–1996
Toyota	Sprinter	XL Diesel	CE80	4 Door Liftback	1982–1984
Toyota	Sprinter		AE81	4 Door Liftback	1983–1987
Toyota	Starlet		KP60R	2 Door Hatch	1979–1983
Toyota	Supra		E-GA70H	2 Door Sedan	1986–1992
Toyota	Supra		MA70	2 Door Sedan	1986–1992
Toyota	Supra		E-JZA70	2 Door Sedan	1986–1992
Toyota	Tercel			4 Door S/Wagon	1985–1988
Toyota	Tercel		EL44	4 Door Sedan	1991–1997
Toyota	Tercel		E-EL43	2 Door Hatch	1992–1994
Toyota	Tercel		E-EL41	2 Door Hatch	1992–1994

Toyota	Trueno		E-AE101	4 Door Sedan	1993–1996
Toyota	Trueno		AE91	4 Door Sedan	1987–1989
Toyota	Trueno		E-AE95G	4 Door Sedan	1988–1995
Toyota	Vista		CV30	4 Door Sedan	1995–1998
Toyota	Vista		VZV30	4 Door Sedan	1990–1996
Toyota	Vista		VZV32	4 Door Sedan	1990–1996
Toyota	Vista		E-SV33	4 Door Sedan	1989–1995
Toyota	Vista		E-SV32	4 Door Sedan	1989–1995
Toyota	Vista		VZV33	4 Door Sedan	1990–1996
Toyota	Vista		E-SV25	4 Door Sedan	1988–1995
Toyota	Vista		VZV31	4 Door Sedan	1990–1996
Toyota	Vista		SV30	4 Door Sedan	1990–1996
Toyota	Windom	3.3, 2.5	E-VCV10	4 Door Sedan	1991–1995
Toyota	Windom	3.3, 2.5	E-VCV11	4 Door Sedan	1991–1995
Triumph	2000	MK 2		4 Door Sedan	1965–1979
Triumph	Stag			2 Door Convert	1970–1979
Volkswagen	Beetle	1500.00		2 Door Sedan	1968–1976
Volkswagen	Golf	CL, GL		4 Door Hatch	1984–1991
Volkswagen	Golf	GTi	WWWZZZ19ZHW	2 Door Hatch	1984–1991

Volkswagen	Polo		WVWZZ	2 Door Hatch	1992– 1995
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6 Inspection requirements for temporary vehicle imports

Application

This bulletin specifies the in-service inspection requirements for vehicles that have been imported temporarily from overseas. A temporary import vehicle is brought into the country by a resident of another country, usually for a maximum period of 18 months, while the vehicle remains registered in its country of origin. The vehicle must be exported from New Zealand within that period.

Inspecting a temporary import vehicle for WoF or CoF

Before inspecting a temporary import vehicle for WoF or CoF, the vehicle inspector must check that the following requirements have been met:

1. The vehicle must have the overseas registration plates attached.
2. The registration plate number must be the same as on the licence label.

Note Where the plate number has more than six digits, only the first six digits of the plate number are on the label. Where those digits already exist in the system, the six digits on the label will start with a 'V', followed by the first five digits of the plate number.

3. The label correctly describes the vehicle to which the plates are attached.
4. The licence label must be current or have expired no more than 12 months ago.
5. The label indicates that the vehicle has been 'first registered' in New Zealand less than 18 months ago.

If the above requirements are not met, or the vehicle inspector finds that the vehicle is not on the system, a WoF or CoF must not be issued. Please refer the vehicle to the nearest TSD agent.

Vehicle inspection requirements

Temporary import vehicles do not require entry or specialist certification, but are required to comply with the basic safety requirements listed in the provisions of the Geneva Convention on Road Traffic. These provisions are outlined below. For WoF/CoF inspection purposes, they apply to all temporary import vehicles, including cars, trucks and trailers, but not including mopeds and other vehicles that don't require a WoF or CoF in New Zealand. The vehicle inspector may use the main parts of the VIRM for further guidance.

Note Temporarily imported vehicles do not have to meet requirements for modification. Therefore, low volume vehicle (LVV) or heavy vehicle specialist (HVS) certification is not required. However, if a vehicle inspector feels that a vehicle is unsafe to operate, he/she may seek advice from a low volume vehicle or heavy vehicle specialist certifier.

See Table 6-1-1: Group M and N vehicles, Table 6-1-2: Group L vehicles and Table 6-1-3: Trailers.

Table 6-1-1. Group M and N vehicles

General safety requirements	<ol style="list-style-type: none"> 1. The vehicle must be in good working order and safe mechanical condition so as not to endanger the driver or vehicle occupants or other road users, or cause damage to public or private property. 2. The construction of the vehicle must not obstruct the driver's vision to the front, right or left of the vehicle. 3. As far as possible, the machinery or equipment of the vehicle must not: <ol style="list-style-type: none"> a) be at risk of fire or explosion, or b) cause the emission of noxious gases or offensive fumes, or c) produce excessive or disturbing noise, or d) increase the risk of a collision and/or damage caused in a collision.
Brakes	<ol style="list-style-type: none"> 1. The vehicle must be fitted with a service brake capable of slowing the vehicle and bringing it to a controlled stop under any conditions of loading, on any gradient that the vehicle may be operated on, in an efficient, safe and rapid way. 2. The vehicle must be fitted with a parking brake capable of bringing the vehicle to a controlled stop if the service brake fails. 3. The brakes fitted to a vehicle must be capable of acting on at least half the wheels, and brake performance must be balanced on each side of an axle. 4. At least half the braking devices must act on braking surfaces directly attached to the wheels (or through parts not liable to fail). 5. Braking surfaces must be in good condition, and must always be connected with the wheels of the vehicle in such a way that it is not possible to disconnect them, other than momentarily by means of clutch, gearbox or free wheel. 6. The parking brake must be readily applicable and capable of remaining applied for an indefinite period even in the absence of the driver.
Headlamps	<ol style="list-style-type: none"> 1. A vehicle must be fitted with main-beam headlamps bright enough to illuminate the road ahead for 100m in normal darkness. 2. A vehicle must be fitted with two white or yellow dipped-beam headlamps bright enough to illuminate the road ahead for 30m in normal darkness without causing significant dazzle to other road users. <p>Note On vehicles from left-hand drive countries the headlamps dip to the right. To avoid blinding on-coming traffic, the headlamps must be adjusted so they do not dip to the right. Generally, asymmetric beam headlamps will also need to be modified to remove the right-hand flick-up, eg by applying some form of masking, such as plastic overlay, or fitting different bulbs.</p>
Other lamps	<ol style="list-style-type: none"> 1. A vehicle must be fitted with two white forward-facing position lamps visible from 150m in normal darkness without causing significant dazzle to other road users. These lamps must be mounted as far towards each side of the vehicle as is practicable, no further than 400mm from the extreme outer edges of the vehicle. 2. A vehicle must be fitted with at least one red rearward-facing position lamp, visible from 150m from the rear of the vehicle in normal darkness. 3. A vehicle must be fitted with a rear-registration-plate illumination lamp that illuminates the figures and letters of the plate so that they are visible from 20m from the rear of the vehicle in normal darkness. 4. A vehicle must be fitted with two red rear reflectors symmetrically mounted as far towards each side of the vehicle as practicable, no further than 400mm from the extreme outer edges of the vehicle. Rear reflectors must be visible from 100m in normal darkness when illuminated by means of two main-beam headlamps. 5. A vehicle must be fitted with at least one red or amber stop lamp mounted at the rear of the vehicle. A stop lamp must operate when the service brake is applied. If the stop light is red, the light intensity must be greater than that of the rearward-facing position lamps. 6. Where the vehicle is fitted with direction indicator lamps, they must have one of the following: <ol style="list-style-type: none"> a) a moveable arm protruding beyond each side of the vehicle and illuminated by a steady amber light when the arm is in the horizontal position, or b) a constantly blinking or flashing amber light mounted on each side of the vehicle, or

	<p>c) a constantly blinking or flashing light at each side of the front and rear of the vehicle. These lights must be white or orange towards the front of the vehicle, and red or orange towards the rear of the vehicle.</p>
Other components	<ol style="list-style-type: none"> 1. A vehicle must be equipped with a strong steering system that allows the vehicle to be turned easily, quickly and with certainty. 2. A vehicle must be equipped with at least one driving mirror of adequate size and location to provide the driver with a clear view to the rear of the vehicle. 3. A vehicle must be fitted with at least one audible warning device (horn) that is not: <ol style="list-style-type: none"> a) a bell, or b) a gong, or c) a siren, or d) any other loud-toned device. 4. A windscreen, where fitted, must be made of a stable, transparent material that is not likely to produce sharp splinters if broken. Objects must not appear distorted when viewed through this material. 5. Where a vehicle is fitted with a windscreen, it must have at least one efficient windscreen wiper that operates without the constant control of the driver. 6. A vehicle must be fitted with an exhaust silencer system that operates constantly and cannot be interrupted by the driver while on the road. 7. A vehicle must be fitted with pneumatic tyres.

Table 6-1-2. Group L vehicles

General safety requirements	<ol style="list-style-type: none"> 1. The vehicle must be in good working order and safe mechanical condition so as not to endanger the driver or vehicle occupants or other road users, or cause damage to public or private property. 2. The construction of the vehicle must not obstruct the driver's vision to the front, right or left of the vehicle. 3. As far as possible, the machinery or equipment of the vehicle must not: <ol style="list-style-type: none"> a) be at risk of fire or explosion, or b) cause the emission of noxious gases or offensive fumes, or c) produce excessive or disturbing noise, or d) increase the risk of a collision and/or damage caused in a collision.
Brakes	<ol style="list-style-type: none"> 1. The vehicle must be fitted with two braking devices operated by hand or foot, capable of slowing the vehicle and bringing it to a controlled stop in an efficient, safe and rapid way.
Headlamps	<ol style="list-style-type: none"> 1. The vehicle must be fitted with at least one main-beam headlamp bright enough to illuminate the road ahead for 100m in normal darkness. 2. The vehicle must be fitted with at least one dipped-beam headlamp bright enough to illuminate the road ahead for 30m in normal darkness without causing significant dazzle to other road users.
Other lamps	<ol style="list-style-type: none"> 1. A class LD vehicle must be fitted with two white forward-facing position lamps visible from 150m in normal darkness without causing significant dazzle to other road users. These lamps must be mounted as far towards each side of the vehicle as is practicable, no further than 400mm from the extreme outer edges of the vehicle. 2. The vehicle must be fitted with at least one red rearward-facing position lamp, visible from 150m from the rear of the vehicle in normal darkness. 3. The vehicle must be fitted with a rear-registration-plate illumination lamp that illuminates the figures and letters of the plate so that they are visible from 20m to the rear of the vehicle in normal darkness. 4. Rear reflectors must be fitted to the following vehicles: <ol style="list-style-type: none"> a) A class LD vehicle must be fitted with two red rear reflectors symmetrically mounted as far towards each side of the vehicle as is practicable, no further than 400mm from the extreme outer edges of the vehicle. b) A class LC, LE1 or LE2 vehicle must be fitted with one red rear reflector symmetrically mounted as far towards each side of the vehicle as practicable, no further than 400mm from the extreme outer edges of the vehicle. <p>Rear reflectors must be visible from 100m in normal darkness when illuminated by means of two main-beam headlamps.</p> 5. Where the vehicle is fitted with direction indicator lamps, they must have one of the following: <ol style="list-style-type: none"> a) a moveable arm protruding beyond each side of the vehicle and illuminated by a steady amber light when the arm is in the horizontal position, or b) a constantly blinking or flashing amber light mounted on each side of the vehicle, or c) a constantly blinking or flashing light at each side of the front and rear of the vehicle. These lights must be white or orange towards the front of the vehicle, and red or orange towards the rear of the vehicle.
Other components	<ol style="list-style-type: none"> 1. The vehicle must be equipped with a strong steering system that allows the vehicle to be turned easily, quickly and with certainty. 2. The vehicle must be equipped with at least one driving mirror of adequate size and location to provide the driver with a clear view to the rear of the vehicle. 3. A vehicle must be fitted with at least one audible warning device (horn) that is not: <ol style="list-style-type: none"> a) a bell, or b) a gong, or

	<p>c) a siren, or</p> <p>d) any other loud-toned device.</p> <p>4. A windscreen, where fitted, must be made of a stable, transparent material that is not likely to produce sharp splinters if broken. Objects must not appear distorted when viewed through this material.</p> <p>5. A vehicle fitted with a windscreen must have at least one efficient windscreen wiper that operates without the constant control of the driver.</p> <p>6. The vehicle must be fitted with an exhaust silencer system that operates constantly and cannot be interrupted by the driver while on the road.</p> <p>7. The vehicle must be fitted with pneumatic tyres.</p>
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Table 6-1-3. Trailers

General safety requirements	<p>1. The trailer must be in good working order and safe mechanical condition so as not to endanger the driver or vehicle occupants or other road users, or cause damage to public or private property.</p> <p>2. As far as possible, the machinery or equipment of the trailer must not:</p> <ul style="list-style-type: none"> a) be at risk of fire or explosion, or b) cause the emission of noxious gases or offensive fumes, or c) produce excessive or disturbing noise, or d) increase the risk of a collision and/or damage caused in a collision.
Lamps	<p>1. The trailer at the end of a combination of vehicles must be fitted with at least one red rearward-facing position lamp, visible from 150m from the rear of the vehicle in normal darkness.</p> <p>2. The trailer must be fitted with a rear-registration-plate illumination lamp that illuminates the figures and letters of the plate so that they are visible from 20m to the rear of the vehicle in normal darkness.</p> <p>3. The trailer must be fitted with two red rear reflectors visible from 100m in normal darkness when illuminated by means of two main-beam headlamps.</p> <p>4. The trailer at the end of a combination of vehicles must be fitted with a least one red or amber stop lamp mounted at the rear of the vehicle, unless the stop light of the towing vehicle is visible from the rear. A stop light must operate when the service brake is applied. If the stop light is red, the intensity of the light output must be greater than that of the rearward-facing position lamps.</p> <p>5. Where a trailer is fitted with direction indicator lamps, they must have one of the following:</p> <ul style="list-style-type: none"> a) a moveable arm protruding beyond each side of the vehicle and illuminated by a steady amber light when the arm is in the horizontal position, or b) a constantly blinking or flashing amber light mounted on each side of the vehicle, or c) a constantly blinking or flashing light at each side of the front and rear of the vehicle. These lights must be white or amber towards the front of the vehicle, and red or amber towards the rear of the vehicle.
Other components	<p>1. A full trailer must be equipped with a strong steering system that allows the vehicle to be turned easily, quickly and with certainty.</p> <p>2. A trailer must be fitted with pneumatic tyres.</p>

7 Guidance for vehicle inspectors when checking tyre tread depth

Reference

- [General vehicles, 10-1 Tyres and wheels](#)
- [Motorcycles, 10-1 Tyres and wheels](#)
- [Trailers, 7-1 Tyres and wheels.](#)

[Land Transport Rule: Tyres and Wheels 2001](#) has been amended to include new tyre tread depth requirements. These requirements became law on 1 November 2007. They take into account new tyre tread designs and allow for more consistent checking of tread depth during vehicle inspections.

Below is some guidance to help vehicle inspectors measure tyre tread depth to the new requirements for different kinds of tread patterns.

What is the new requirement for tyre tread depth?

The rule now states that a tyre must have a tread pattern depth of at least 1.5mm (excluding any tie-bar or tread depth indicator strip) within all principal grooves that contain moulded tread depth indicators and around the whole circumference of the tyre.

Virtually all tyres have moulded tread-depth indicators. However, a small number of tyres, such as some retreaded or vintage tyres, may not have moulded tread-depth indicators. For these, the NZTA has retained the old requirement of at least 1.5mm tread depth across $\frac{3}{4}$ of the tread width and around the whole circumference of the tyre.

What are principal grooves and tread depth indicators, and how do I find these?

Principal grooves are the wide grooves in the tyre tread which have the tread-depth indicators located inside them. Any other grooves are secondary grooves which may wear out during the service life of the tyre. Tread-depth indicators (also known as tread wear indicators or TWIs) are the projections within the principal grooves that let you know how far the tread has worn and are usually about 1.6-2.2mm thick. If you find it difficult to find tread-depth indicators, just look along the side wall for a small '△' or 'TWI' mark (see Figure 7-1-1 and Figure 7-1-2).

△' or 'TWI' mark (see Figure 7-1-1 and Figure 7-1-2).

Where do I measure the tread depth?

The tread depth is measured in the principal grooves that contain the tread-depth indicators. However, there are tread patterns where the principal grooves cover different widths of tyre tread. This means that in order to pass a WoF or CoF some tyres must have 1.5mm tread depth across a greater tread width than other tyres. This is especially the case for tyres that have lateral grooves (those that end at the tyre edges), as shown in Example 1 of Figure 7-1-3. Vehicle inspectors may disregard the outer end of a lateral groove where it normally tapers off over the shoulder. Note that the tread is only that part of the tyre that is in contact with the ground.

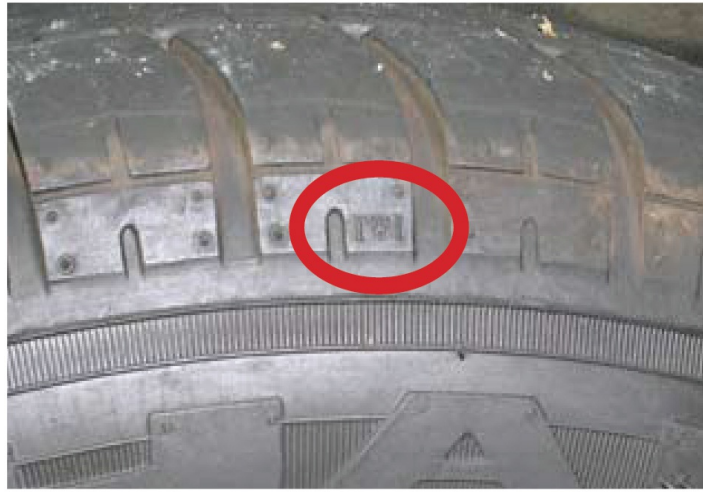
Figure 7-1-3 shows different tread patterns with tread-depth indicators (and therefore principal grooves) and the approximate measuring width marked.

Figure 7-1-1. The '△' mark



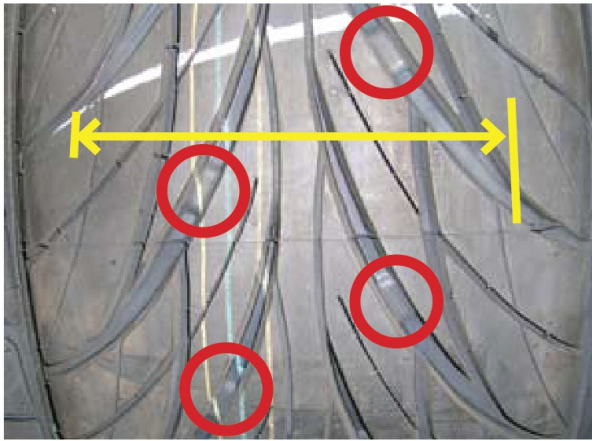
The marks and tread-depth indicators are usually in about six places around the tyre. It is important that these are not mistaken for any shallow sections that are part of the tread pattern.

Figure 7-1-2. The 'TWI' mark

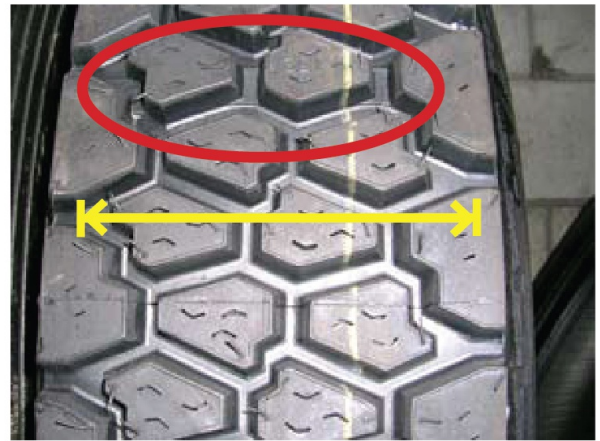


The marks and tread-depth indicators are usually in about six places around the tyre. It is important that these are not mistaken for any shallow sections that are part of the tread pattern.

Figure 7-1-3. Examples of tread depth indicators



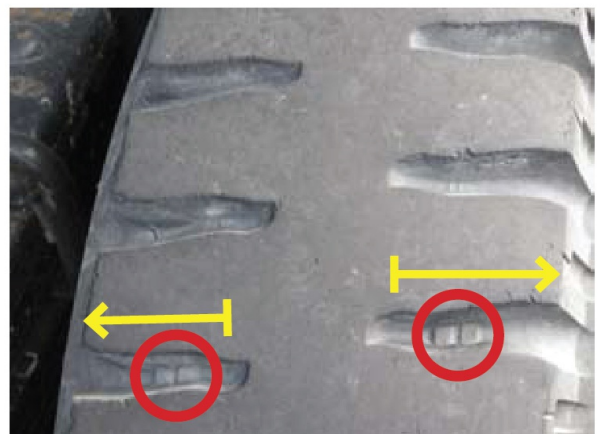
Example 1



Example 2



Example 3



Example 4



Example 5



Example 6

8 Guidance for vehicle inspectors when inspecting vehicles for clearly visible smoke

Reference

- [General vehicles, 11-2 Visible exhaust smoke](#)
- [Motorcycles, 11-2 Visible exhaust smoke.](#)

The requirement is based on [Land Transport Rule: Vehicle Exhaust Emissions 2007](#). The aim of this rule is to check that vehicles are not gross polluters. A Ministry of Transport study in 2006 estimated that 1–2% of petrol-powered vehicles may be affected by this test. The number of diesel vehicles affected may be higher.

Below is some guidance on how to conduct the test as well as assistance in assessing whether any smoke emissions will cause the vehicle to pass or fail.

The test for clearly visible smoke

The following test may be performed with the engine below normal operating temperature. If the vehicle fails the test, it must be repeated with the engine at normal operating temperature and purged.

The test consists of a five-second idling test and a rapid acceleration test from idle to 2500rpm, or half the maximum engine speed if this is lower.

Five second idling test

With the engine idling, observe the tailpipe emissions for five seconds.

Rapid acceleration test

While the engine is accelerated quickly from idle to 2500rpm (or half the maximum engine speed if this is lower), observe the tailpipe emissions. The vehicle inspector may require an assistant to accelerate the engine. The assistant must be appropriately instructed to avoid engine damage by over-accelerating the engine.

Passing or failing a vehicle

A vehicle will pass if during both tests:

- there are no visible emissions, or
- the emissions are largely water vapour, or
- the smoke is barely visible (see Figure 8-1-1), or
- the engine produces some visible smoke because of its design and does not emit much more smoke from the tailpipe than it would have done when the vehicle was manufactured and running on the correct fuel. The inspector may require documentary evidence that the engine produces some visible smoke because of its design.

A vehicle will fail if during either test:

- there is clearly visible smoke (see Figure 8-1-2), and
- (only in the case where the engine produces some visible smoke because of its design) there is noticeably and significantly more smoke from the tailpipe than there would have been when the vehicle was manufactured and running on the correct fuel.

Figure 8-1-1. Barely visible smoke.



Figure 8-1-2. Clearly visible smoke.



Example 1



Example 2



Example 3



Example 4

Clearly visible smoke. These vehicles would fail.

9 Shock absorbers – misting vs excessive leakage

A vehicle must be failed for WoF if a shock absorber has excessive leakage of damping fluid ([VIRM section 9-1, RfR 13f](#)). However, it seems that quite a few inspectors are incorrectly failing a vehicle when the shock absorber only displays “misting”.

Misting is normal on shock absorbers and must pass for WoF/CoF.

By design, the piston rod carries a film of oil through the rod seal to lubricate the seal lips, thereby reducing friction/wear at the seal contact area, and prolonging seal life. Misting occurs when the hot piston rod is drawn out of the shock body and the microscopic film of hot oil on the rod turns to vapour. This vapour, or mist, condenses when it reaches the cooler outside air, and forms a film on the outside of the shock body. The film will attract road dust and debris, and will often coat the entire body of the shock.

Examples of excessively leaking shock absorbers (FAIL):



Rod seals may leak as a result of extreme wear, contamination, or defect. A leaking shock will show clear signs of oil leaking in streams from the upper seal down the shock body and may drip from the shock.

Such leakage is considered to be excessive and must be failed for WoF/CoF.

Examples of misting shock absorbers (PASS):



Note: Some minor streaking of oil may appear on a new shock body during initial stroking. This is the result of the seal “setting” and purging any oil (from assembly) from the seal. This is not to be mistaken as a failure, as it is temporary and totals only a few millilitres of oil.

Page added 14 October 2013 (see [amendment details](#)).

10 Brake test procedures for specific vehicles

With new vehicle technologies, testing some vehicles' brakes, especially on roller brake machines, can be slightly tricky. If the correct process is not followed, there is an increased risk of damaging the vehicle or even the roller brake machine.

This bulletin contains information supplied to the NZTA by vehicle manufacturers about vehicles for which specific brake test

procedures need to be followed to reduce the risk of damaging them during the test. It will be updated as the NZTA becomes aware of further specific test procedures supplied by vehicle manufacturers.

If you are not sure about how to test a specific vehicle, check with the local vehicle manufacturer's agent in the first instance. The roller brake machine manufacturer may also be able to supply information, or refer to the machine's operating manual.

BMW

IMPORTANT INFORMATION – READ BEFORE TESTING THE BRAKES:

- DO NOT open any doors during the test or while the vehicle is in motion as the transmission will select Park.
- Maximum roller speed must not exceed 5km/h.
- The complete roller brake machine test must not exceed 3 minutes. If the test has not been completed at the 3 minute mark, stop the test immediately and drive the vehicle for at least 1 km to achieve sufficient lubrication in the transfer case.

Testing the electro-mechanical parking brake (EMF) found on most BMW vehicles

You can recognise EMF by the existence of a pull or push electrical button to apply the hand brake rather than a hand brake lever. To test the EMF parking brake, you must carry out the following procedure:

1. Place the vehicle on the 1/5 slope or roller brake machine (do not use a Tapley meter or other decelerometer for this test).
2. Put the vehicle into Neutral.
3. Switch off the engine (if engine is running, the vehicle will apply the service brakes and not the parking brake).
4. Turn ignition on but do not start the engine (do not touch the foot brake pedal as doing so will switch the engine on again).
5. Carry out the parking brake test as usual by applying the parking brake button and also releasing the parking brake via the button.
6. Apply the foot brake pedal and re-start the engine.

Testing the service brakes on all BMW X-drive 4x4 vehicles

As a precaution, treat all BMW 4x4 vehicles as X-drive vehicles. To test the service brakes on a roller brake machine (which must have 4WD mode), carry out the following procedure:

1. Make sure HDC (Hill Descent Control) is switched off (the HDC light will be off).
2. Put the vehicle into Neutral.
3. DO NOT touch the accelerator pedal and DO NOT select a gear while the rollers are turning to avoid damaging the vehicle or rollers.
4. Carry out brake test as usual using the roller brake machine's 4WD mode.
5. When the rollers have stopped turning, lock the rollers, select a gear and drive forward slowly.