

Correct as at 18th June 2026. It may be superseded at any time.

Extract taken from: Entry certification > Inspection and certification > Vehicle structure

## 3 Vehicle structure

### 3-1 Structure

**IMPORTANT:** Any parts that require removal or disassembly in order to carry out the inspection of structural components and frontal impact occupant protection systems must be removed or disassembled. Refer to [Vehicle structure – 3-3 Inspection specifications](#).

A vehicle whose structure has been damaged beyond the threshold specified in [Vehicle structure – 3-4 Threshold for requiring repair certification](#) must be certified by a specialist repair certifier before entry certification.

## Reasons for rejection

### Compliance with approved standards

1. A vehicle that is required to comply with an approved frontal impact standard did not comply, or cannot be demonstrated to have complied, with at least one of the standards listed in [Table 3-2-1](#) at the time the vehicle was manufactured.

### Condition and modification

2. A structural component (Note 4) or frontal impact occupant protection system does not comply with a requirement relating to condition or modification set out in the [VIRM: In-service certification, section 3-1](#).

#### Note 1

If a vehicle is fitted with an auxiliary bar (eg a bullbar), refer to:

[Technical bulletin 6 – Auxiliary bars](#)

#### Note 2

[Technical bulletin 10](#) contains information regarding inspection for corrosion in the rear floorpan assembly of some Nissan Terrano and Mistral models.

#### Note 3

Structural components that can be unbolted, such as doors with intrusion beams and sub frames, which are damaged or corroded are a reason for rejection. However, these parts can be replaced by the owner and re-inspected without the need for repair certification.

#### Note 4

Structural components include, as a minimum, the following:

| <b>a) Engine compartment</b>   | <b>b) Exterior</b>  | <b>c) Luggage/cargo compartment</b>  | <b>d) Underbody and/or chassis frame</b>  | <b>e) Passenger compartment (inside vehicle)</b>  |
|--|---|--|---|---|
| i. Front crush zones<br>ii. Chassis rails<br>iii. Inner guards<br>iv. Firewall<br>v. Suspension towers and mountings<br>vi. Radiator support panel | i. Door frames, locks and hinges<br>ii. Pillars<br>iii. Sills<br>iv. Roof guttering | i. Suspension towers and mountings<br>ii. Seatbelt anchorages<br>iii. Floor<br>iv. Rear panel<br>v. Spare wheel well | i. Front and rear crush zones<br>ii. Chassis rails and cross members<br>iii. Floor rails<br>iv. Steering and suspension mountings<br>v. Subframe mountings<br>vi. Seat and seatbelt anchorages<br>vii. Sills<br>viii. Floor | i. Exposed floor areas<br>ii. Floor to inner sill seams<br>iii. Pillars<br>iv. Cross members<br>v. Seat and seatbelt anchorages |

## Summary of legislation

### Applicable legislation

- [Land Transport Rule: Frontal Impact Amendment 2005](#)
- General safety requirements of [Land Transport Rules](#),

including:

- [Land Transport Rule: Glazing, Windscreen Wipe and Wash, and Mirrors Amendment 2005](#)
- [Land Transport Rule: Door Retention Systems 2001](#)
- [Land Transport Rule: Seats and Seat Anchorages 2002](#)
- [Land Transport Rule: Seatbelts and Seatbelt Anchorages Amendment 2005](#)
- [Land Transport Rule: Light-vehicle Brakes 2002](#)
- [Land Transport Rule: Steering Systems 2001](#)
- [Land Transport Rule: Tyres and Wheels Amendment 2005.](#)

### Compliance with approved standards

1. Certain vehicles must comply with one or more of the approved frontal impact standards in [Table 3-2-1](#). Follow the flowcharts in [Figure 3-2-1](#), [Figure 3-2-2](#) and [Figure 3-2-3](#) to determine whether a particular vehicle is required to comply with an approved frontal impact standard.

### Condition and modification

2. Structural components (Note 4) and frontal impact occupant protection systems must comply with the requirements relating to condition and modification set out in the [VIRM: In-service certification, section 3-1](#).

Page amended **1 December 2016** (see [amendment details](#)).

## 3-2 Determining frontal impact compliance

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**IMPORTANT:** vehicles may be exempt from the requirement to meet a frontal impact standard.

See [Technical bulletin 7](#), [Technical Bulletin 8](#) and [Technical bulletin 9](#) for further information.

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The following information may help a vehicle inspector to apply the requirements for compliance with approved frontal impact standards.

### Determine whether or not the vehicle must meet a frontal impact standard (FIS)

Refer to Figure 3-2-1 (Step 1), Figure 3-2-2 (Step 2) and Figure 3-2-3 (Step 3) to determine whether or not the vehicle needs to meet an approved frontal impact standard.

If the vehicle is not required to comply with an approved standard, continue with the inspection.

Figure 3-2-1. Step 1

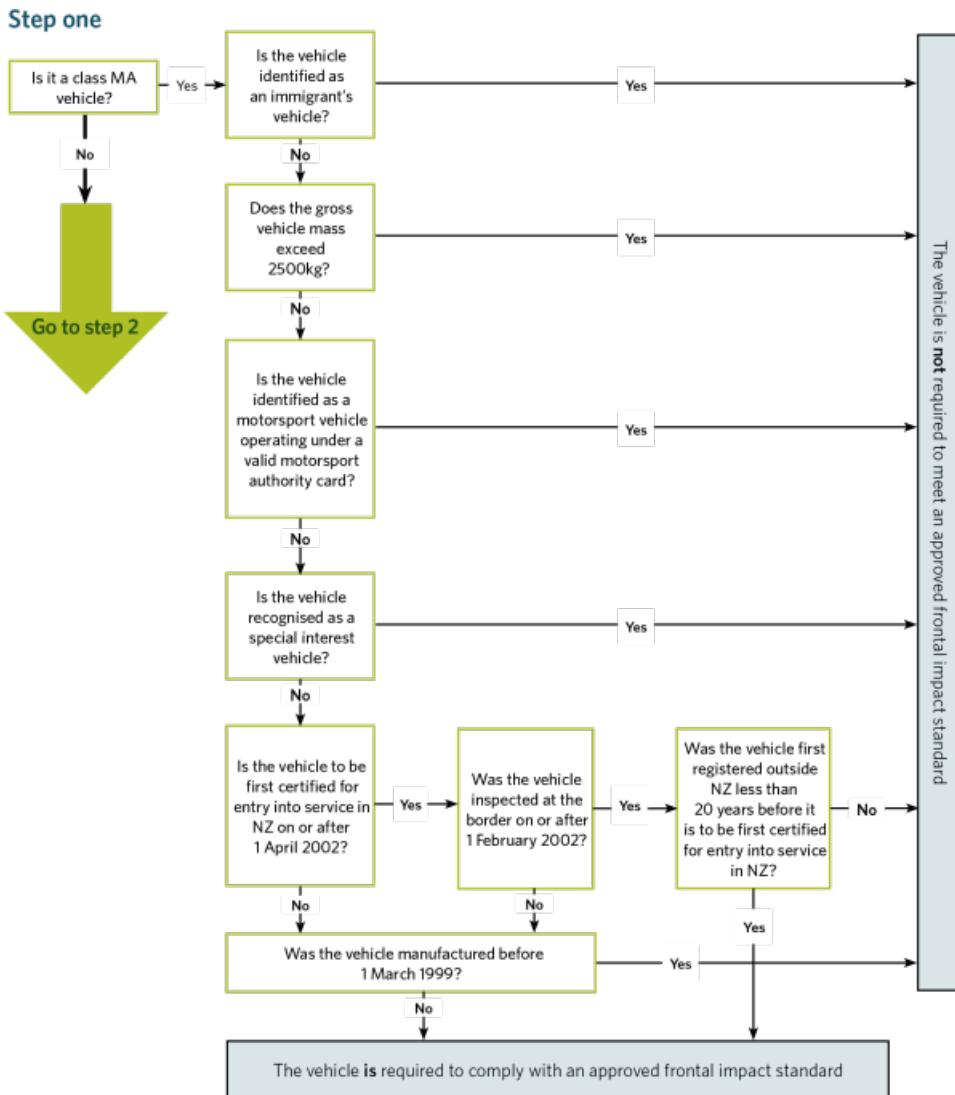


Figure 3-2-2. Step 2

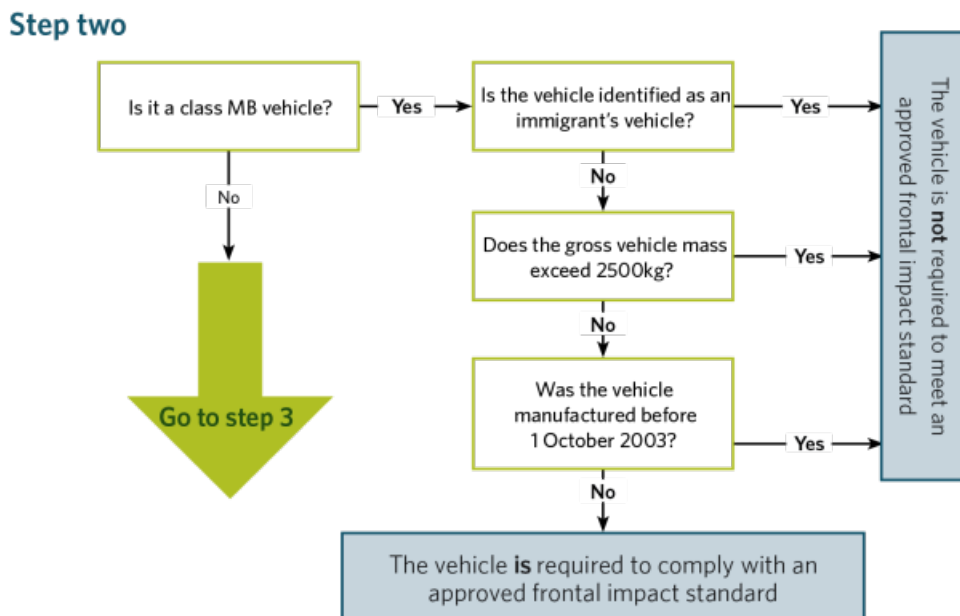
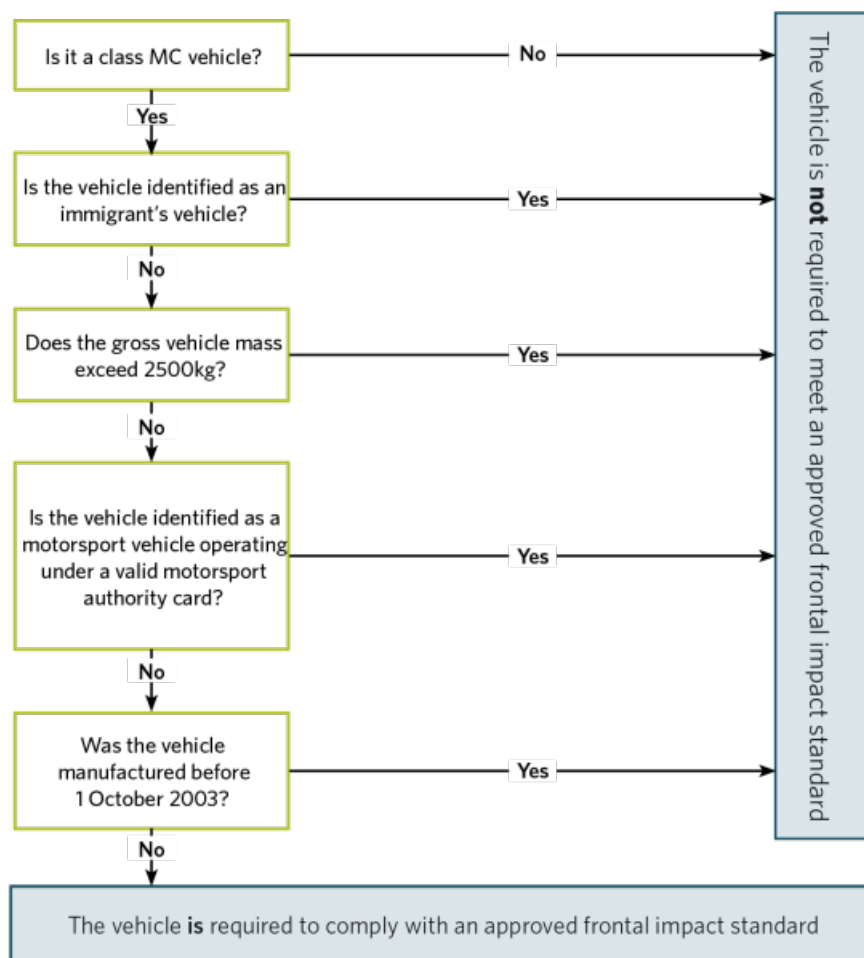


Figure 3-2-3. Step 3

Step three



If the vehicle is required to comply with an approved standard (listed in Table 3-2-1), there are several methods of determining whether or not the vehicle complies, which vary depending on the class of vehicle, the country of import and the date of manufacture.

Table 3-2-1. List of approved frontal impact standards\*

| UN-ECE Regulation no. | EEC/EC Directive | FMVSS | ADR      | Japan  |
|-----------------------|------------------|-------|----------|--|
| 94                    | 96/79<br>99/98   | 208   | 69<br>73 | TS for occupant protection in frontal collision.<br>Article 18 |

\* A vehicle that is required to comply with an approved frontal impact standard must comply with at least one of the standards listed in the table.

### Check recognised manufacturer's lists

The Transport Agency has been advised by several common vehicle manufacturers regarding compliance with approved frontal impact standards for particular class MA vehicles. These vehicles are listed by make and model and published on the [NZTA website](#)

If a vehicle is shown on one of these lists as complying with an approved frontal impact standard, no further evidence is required to prove that the vehicle meets frontal impact standard requirements. However, a full statement of compliance is still required to prove compliance with other applicable standards, unless an alternative method of confirming standards compliance is provided.

If a vehicle is shown on one of these lists as not complying with an approved frontal impact standard, the vehicle cannot be certified unless a statement of compliance showing that the specific vehicle meets an approved frontal impact standard is provided.

## **Alternative methods for determining frontal impact compliance**

If a vehicle is not shown on any of the recognised manufacturer's lists, one of the following methods may be used to determine compliance with an approved frontal impact standard.

### **1 Vehicles imported from any country**

If a class MA, MB or MC vehicle imported from any country (including Japan) is not shown on one of the recognised manufacturer's lists, one of the following methods may be used to determine compliance with an approved frontal

impact standard:

| Description  | Methods for determining FIS compliance  |
|--|---|
| A class MA, MB or MC vehicle                                     | <ul style="list-style-type: none"> <li>• A statement of compliance issued by a representative of the vehicle manufacturer, confirming compliance with an approved frontal impact standard</li> </ul>                                    |
| A class MA vehicle manufactured on or after 1 January 1996       | <ul style="list-style-type: none"> <li>• An Australian Design Rules (ADR) plate affixed to the vehicle</li> </ul>   |
| A class MB or MC vehicle manufactured on or after 1 January 1998 |   |
| A used class MA, MB or MC vehicle                                | <ul style="list-style-type: none"> <li>• An FMVSS certification plate, and</li> <li>• original documentation confirming that the vehicle was first registered in the US</li> </ul>  |
| A new or unregistered class MA, MB or MC vehicle                 | <p>An FMVSS certification plate, and</p> <ul style="list-style-type: none"> <li>• documentation confirming that the vehicle was manufactured for the US market and would be permitted for use on public roads in the US</li> </ul>      |
| A used class MA, MB or MC vehicle                                | <ul style="list-style-type: none"> <li>• An CMVSS certification plate, and</li> <li>• original documentation confirming that the vehicle was first registered in Canada</li> </ul>  |
| A new or unregistered class MA, MB or MC vehicle                 | <p>A CMVSS certification plate, and</p> <ul style="list-style-type: none"> <li>• documentation confirming that the vehicle was manufactured for the Canadian market and would be permitted for use on public roads in Canada</li> </ul> |
| A class MA, MB or MC vehicle                                     | <ul style="list-style-type: none"> <li>• A United Nations Economic Commission for Europe (UN/ECE) compliance plate, which must display the VIN and an approved frontal impact standard</li> </ul>                                       |
| A class MA, MB or MC vehicle                                     | <ul style="list-style-type: none"> <li>• An EC Whole Vehicle Approval plate, which must display compliance with the directive '2001/116' or later directive</li> </ul>  |

| Description        | Methods for determining FIS compliance  |
|--------------------|---|
| A class MA vehicle | <ul style="list-style-type: none"> <li>• An EC Whole Vehicle Approval plate and first registered in the United Kingdom in 10/2003 or later</li> </ul> |

## 2 Vehicles imported from Japan

If a class MA, MB or MC vehicle that was manufactured in Japan is not shown on one of the recognised manufacturer's lists published on the Transport Agency website, one of the following methods may be used to determine frontal impact compliance.

| Manufactured in Japan |  |  |
|-----------------------|--|--|
| Class                 | Description  | Methods for determining FIS compliance   |
| MA                    | Car with an engine capacity of 660 cc or more  | <ul style="list-style-type: none"> <li>• Evidence that the vehicle was manufactured for the domestic market on or after 1 January 1996 (Note 2)</li> </ul>   |
|                       | Domestic model first registered in Japan after the end of the last year shown on the latest JAMA list (Note 1) | <ul style="list-style-type: none"> <li>• Evidence to establish a clear link to the continuation of a chassis number sequence known to be frontal impact compliant (Note 2)</li> </ul>              |
|                       | Car with an engine capacity less than 660 cc (mini-sized vehicle)  | <ul style="list-style-type: none"> <li>• Evidence that the vehicle was manufactured on or after 1 July 2000</li> </ul>   |
|                       | New/unregistered car   | <ul style="list-style-type: none"> <li>• A Japanese completion inspection certificate which demonstrates that the vehicle was manufactured in Japan on or after 1 January 1996 (Note 2)</li> </ul> |
| MB<br>or<br>MC        | Manufactured for the Japanese domestic market  | <ul style="list-style-type: none"> <li>• Evidence that it was manufactured in Japan on or after 1 July 1999</li> </ul>   |
|                       | Domestic model first registered in Japan after the end of the last year shown in the latest JAMA list (Note 1) | <ul style="list-style-type: none"> <li>• Evidence to establish a clear link to the continuation of a chassis number sequence known to be frontal impact compliant</li> </ul>                       |

**Note 1**

Japan Automobile Manufacturers Association's (JAMA) books may be used to establish the date of manufacture of Japanese domestic vehicles manufactured after 1 January 1996. When using this method, a vehicle inspector must be able to verify this information and demonstrate the verification process.

**Note 2**

If a class MA vehicle manufactured in Japan for the Japanese domestic market is not listed in any of the JAMA charts or chassis numbers covering production from 1993 onwards, and was first registered in Japan after the end of the last year shown on the latest JAMA list, it can be assumed that the vehicle was manufactured after 1 January 1996.

**Note 3**

Any MA, MB or MC class vehicle imported from Japan that satisfies documentation requirements for general compliance and meets Euro 4, Japan 05 etc level emissions standards or better may be accepted as frontal impact compliant.

If a class MA, MB or MC vehicle that was manufactured outside Japan is not shown on one of the recognised manufacturer's lists published on the NZTA website, one of the following methods may be used to determine frontal

impact compliance.

| <b>Manufactured outside Japan</b> |   |  |
|-----------------------------------|---|--|
| <b>Class</b>                      | <b>Description</b>  | <b>Methods for determining compliance</b>  |
| MA                                | Vehicle with an engine capacity less than 660cc (mini-sized vehicle)              | <ul style="list-style-type: none"> <li>• Evidence that the vehicle was manufactured on or after 1 July 2000 (Note 4), and</li> <li>• Evidence that the vehicle has been through the Japanese type approval process (ie a TDN shown on the de-registration or export certificate)</li> </ul>  |
|                                   | Car with an engine capacity of 660cc or more manufactured for the Japanese market | <ul style="list-style-type: none"> <li>• Evidence that the vehicle was manufactured on or after 1 April 1999 (Note 4), and</li> <li>• Evidence that the vehicle has been through the Japanese type approval process (ie a TDN shown on the de-registration or export certificate)</li> </ul> <p style="text-align: center;">or</p> <ul style="list-style-type: none"> <li>• Evidence that the vehicle was manufactured after 1 July 1999 (this may be determined by decoding the VIN to confirm the vehicle has a model year of 2000 or later), and</li> <li>• Evidence that the vehicle has been through the Japanese type approval process (ie a TDN shown on the de-registration or export certificate), and</li> <li>• The frontal impact compliance lists provided on the NZTA website do not contain any contra information</li> </ul> |
|                                   | Vehicle with no TDN shown on the de-registration or export certificate.           | <ul style="list-style-type: none"> <li>• Alternative evidence of compliance with an applicable standard. This may be a statement of compliance, an EC Whole Vehicle Approval plate showing directive 2001/116, or a UN/ECE decal showing compliance with R94 , or</li> <li>• A TDN exemption .</li> </ul>  |
| MB<br>or<br>MC                    | Manufactured for the Japanese domestic market.                                    | <ul style="list-style-type: none"> <li>• Evidence that the vehicle was manufactured on or after 1 July 1999 (Note 4) (this may be determined by decoding the VIN to confirm the vehicle has a model year of 2000 or later), and</li> <li>• Evidence that the vehicle has been through the Japanese type approval process (ie a TDN shown on the de-registration or export certificate), and</li> <li>• The frontal impact compliance lists provided on the Transport Agency website do not contain any contra information.</li> </ul>  |

| Manufactured outside Japan   |  |                                    |
|--|--|------------------------------------|
| Class  | Description  | Methods for determining compliance |
| Vehicle with no TDN shown on the de-registrat or export certificat | <ul style="list-style-type: none"> <li>Alternative evidence of compliance with an applicable standard. This may be a statement of compliance, an EC Whole Vehicle Approval plate showing directive 2001/116, or a UN/ECE decal showing compliance with R94.</li> </ul> |                                    |

**Note 4**

Care must be taken when decoding the VIN. Not all manufacturers use the ISO standard exactly, so it cannot be taken for granted that manufacturers will always use the tenth character as year of manufacture, or that all manufacturers will use the same characters to denote the year. Table 3-2-3 shows decode data for some non-Japanese makes. Refer to the recognised manufacturers' lists on the the NZTA website for further information.

**Note 5**

For further information regarding frontal impact compliance requirements for specific Mitsubishi models, refer to Technical bulletin 8 – Frontal impact compliance for Mitsubishi models.

**Note 6**

For further information regarding frontal impact compliance requirements for Toyota Cavalier vehicles, refer to Technical bulletin 9 – Frontal impact compliance for Toyota Cavaliers.

**Note 7**

For further information regarding exemptions from frontal impact compliance requirements for people-mover vehicles, refer to Technical bulletin 7 - Frontal impact standard exemptions.

**Note 8**

A list of the class MA Japanese makes and models that are known to be manufactured outside Japan for the Japanese domestic market are shown in Table 3-2-2

**Table 3-2-2. Japanese vehicles manufactured outside Japan**

|   |   |   |
|---|---|---|
| <p>Ford</p> <p><b>Note:</b> Some Ford models are built in Japan in partnership with Mazda</p> | <p>Festiva (Korea)</p> <p>Ka (Spain)</p> <p>Mondeo (Belgium)</p>                    | <p>Probe (US)</p> <p>Taurus (US)</p> <p>Escape (Taiwan)</p>       |
| <p>Honda</p>  | <p>Accord CD3, CD7, CD8, CE1, CF2 (US)</p> <p>Accord Inspire UA4, UA5</p>           | <p>Civic Coupe EJ7 (US)</p> <p>LaGreat RL1 (US)</p>               |
| <p>Mitsubishi</p>   | <p>Carisma (Belgium and the Netherlands)</p> <p>Magna station wagon (Australia)</p> | <p>Diamante (Australia)</p>                                       |
| <p>Nissan</p>   | <p>Bluebird 'Aussie' (Australia)</p> <p>Primera E-FHP11 (Great Britain)</p>         | <p>AD station wagon R-MV FY10 (Mexico)</p> <p>Mistral (Spain)</p> |
| <p>Toyota</p>   | <p>Avalon (US)</p> <p>Cavalier (US)</p>   | <p>Scepter (US)</p> <p>Voltz (US)</p>                             |
| <p>Subaru</p>   | <p>Traviq (Germany)</p>   |   |

**Table 3-2-3. VIN decode data for some European makes**

| <b>Make</b>  | <b>VINs starting with:</b> | <b>Make</b> | <b>VINs starting with:</b> |
|--------------|----------------------------|-------------|----------------------------|
| Audi         | WAU, WUA or TRU            | Hyundai     | KMH                        |
| Cadillac     | 1G6                        | Jeep        | 1J4 or 1J8                 |
| Chrysler     | 1A8, 1C3, 1C4 or 1C8       | Land Rover  | SAL                        |
| Daewoo       | KLA or KL1                 | Opel        | W0L                        |
| Ford China   | LFA                        | Porsche     | WP0 or WP1                 |
| Ford Europe* | WF0                        | Saab        | YS3                        |
| Ford USA     | 1FA or 1FM                 | Volkswagen  | WVW or WVG                 |

\* All of the above vehicle manufacturers use the tenth character as model year, except Ford Europe, which uses the eleventh character as year of manufacture.

Figure 3-2-4. Flowchart for determining frontal impact compliance for class MA vehicles

**Does this MA class vehicle meet an approved frontal impact standard?**

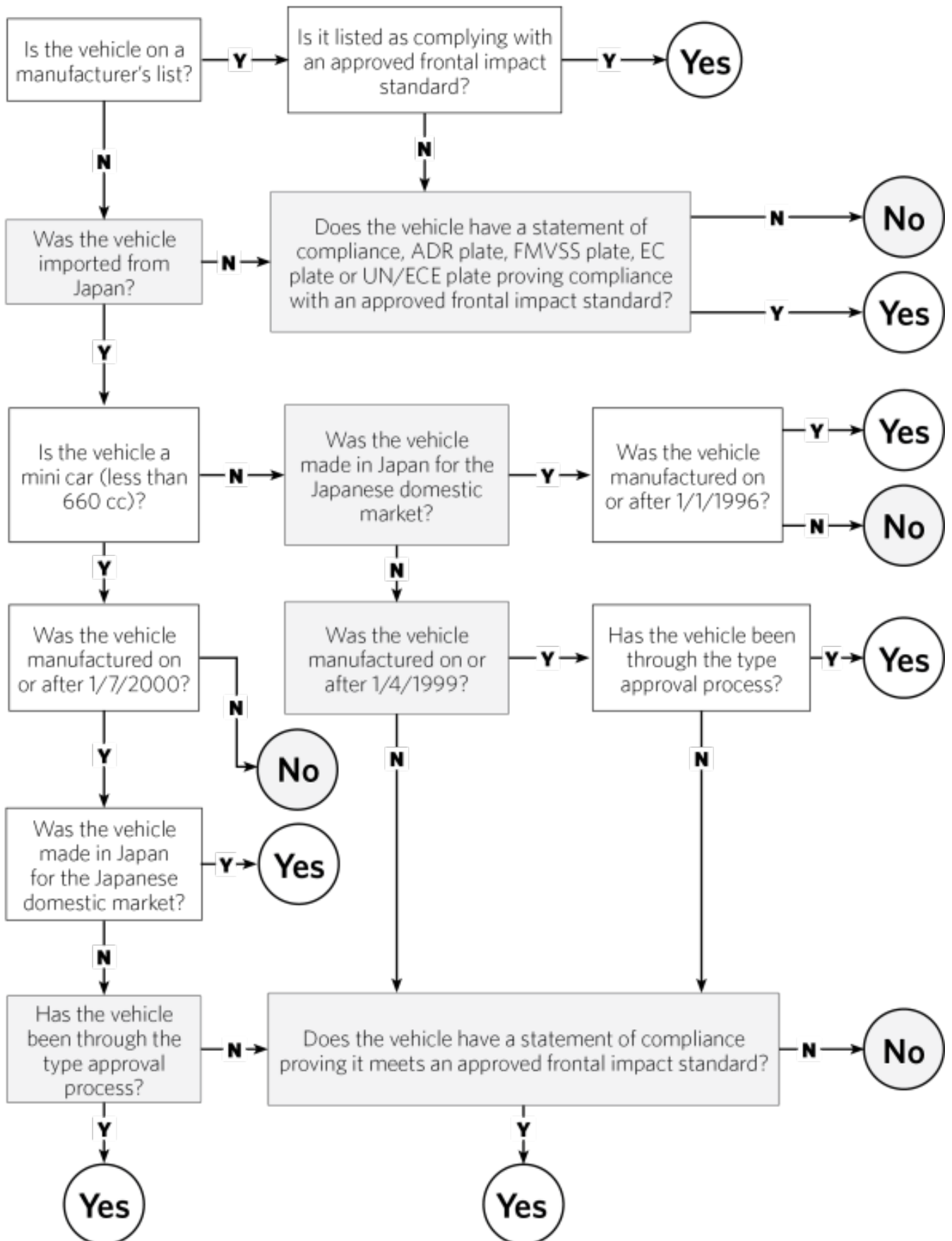
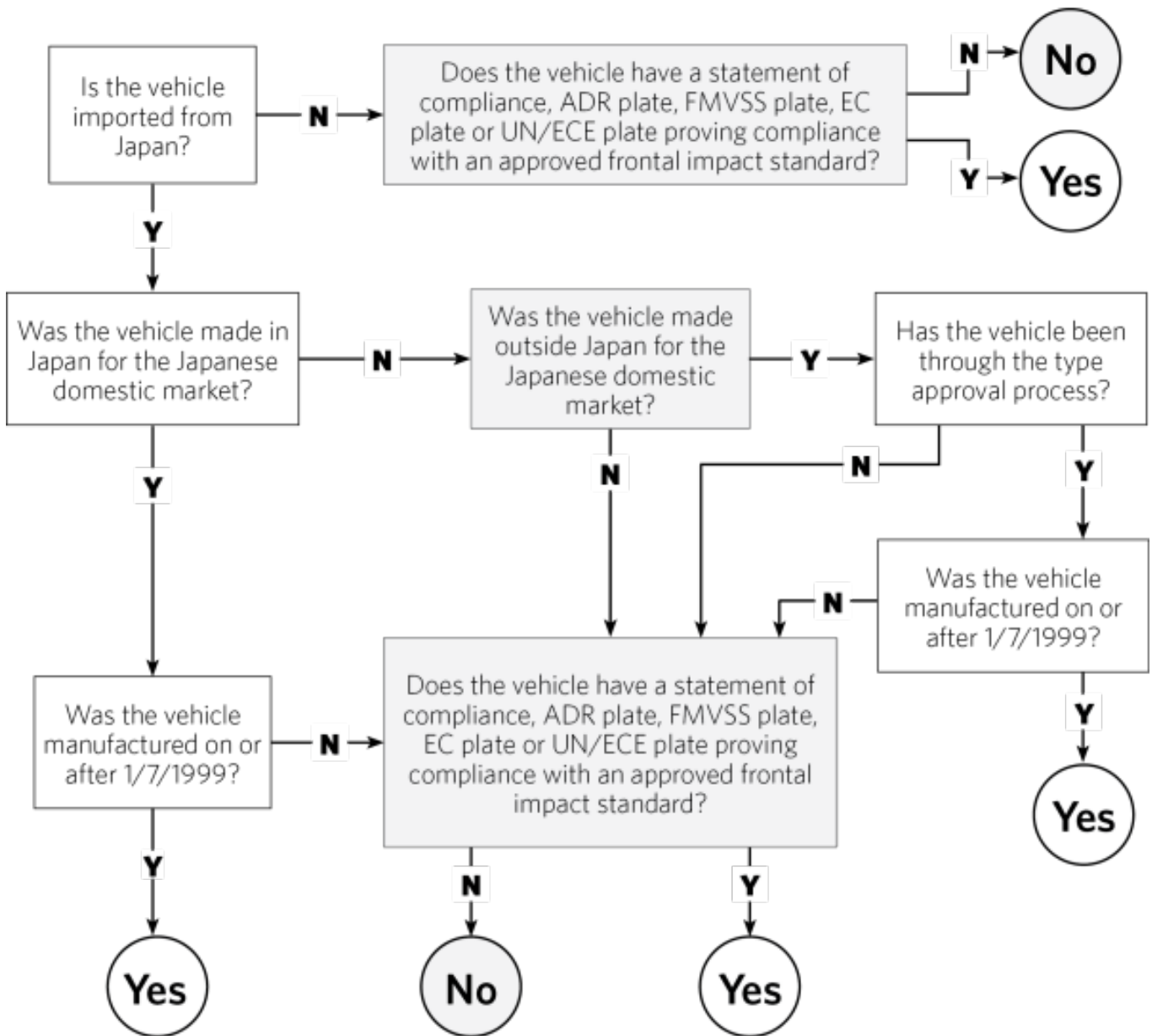


Figure 3-2-5. Flowchart for determining frontal impact compliance for class MB and MC vehicles

Does this MB or MC class vehicle meet an approved frontal impact standard?



Page amended 1 November 2017 (see [amendment details](#)).

### 3-3 Inspection specifications

The vehicle inspector must personally carry out a full structural inspection of the vehicle.

Every vehicle must be inspected for existing accident damage, structural repairs, corrosion or evidence of water or fire damage (see [Technical bulletin 2](#)). Any damage, deterioration or repairs to structural areas of the vehicle outside the limits set by the threshold must be recorded on LANDATA and the vehicle referred to a [specialist](#) repair certifier ([Note 11](#)).

The threshold for requiring [specialist](#) repair certification must be strictly met. See [Vehicle structure – 3-4 Threshold for requiring specialist repair certification](#)

If a vehicle was flagged for damage by the border inspection organisation (BIO) and then presented in a repaired state, it must be referred to a **specialist** repair certifier.

Damage or deterioration does not require either repair or specialist certification provided it is within the limits established in [Vehicle structure – 3-4 Threshold for requiring specialist repair certification](#)

If a vehicle is failed as a result of structural damage, it cannot be certified until the vehicle has been inspected and certified by a **specialist** repair certifier.

A three-dimensional (3D) chassis measurement must be carried out on all **light** vehicles undergoing repair certification, unless the vehicle has been referred to a **specialist** repair certifier as a result of corrosion damage. However, if the corrosion damage is extensive enough to cause distortion or partial collapse of the existing vehicle structure, 3D measurement must be carried out.

A vehicle referred to a specialist repair certifier may be returned with an LT307 No repair certification required declaration if the damage or previous repairs are assessed as minor/non-structural. See [Reference material 79](#) for a sample LT307. If the vehicle has a damage flag this can be lifted using the LT307 as a basis for the flag removal.

## Pre-1991 vehicles

Trim does not need to be removed as part of the structural inspection if the vehicle was:

- manufactured before 1991, and
- previously registered in New Zealand before 1 January 1991.

However, a structural inspection must be carried out. If the vehicle fails the structural inspection, it must be referred to a **specialist** repair certifier and undergo the same repair certification process as any other vehicle that has failed the entry level structural inspection process.

## Scratch-built low volume vehicles

Trim does not need to be removed as part of the structural inspection if a vehicle is a scratch-built low volume vehicle certified by category LV1D, LV2B or LV2C authorised LVV certifiers. However, a full general inspection must be carried out. The vehicle inspector may require an invasive structural inspection if any areas of concern are identified during the general inspection.

## Parallel-imported new vehicles

A full structural inspection is required for parallel-imported new vehicles. However, an application for an exemption from the requirement to remove trim is likely to be accepted. See [Reference material 18](#) for a template of the 'Request for trim removal exemption'.

## 1 Structural inspection

During entry-level certification, vehicles of class MA, MB, MC, MD1, MD2 and NA must undergo an invasive structural inspection, according to the following specifications.

1. Before inspecting a vehicle, the following trim items must be completely removed from the vehicle (other than pillar trims referred to in the notes):

- a) door aperture windlances and sealing strips
- b) door sill plates
- c) all upper and lower pillar trims necessary to expose:

- i. previous repair and corrosion damage
- ii. seatbelt anchorages
- d) rear seat squab (unless fully hinged)
- e) boot aperture rubbers or sealing strips
- f) boot sidewall trim, floor coverings and spare wheel
- g) front inner guard covers fitted to monocoque construction vehicles. (Note 1)
- h) front sub-frame splash guards. (Note 2)

#### **Note 1**

Front inner guard covers do not need to be completely removed from the vehicle; they can hang from one mounting point provided it is possible to view the structure of the vehicle with the guard cover in that position.

#### **Note 2**

Front sub-frame splash guards only need to be loosened so that they can be pulled down and the front underbody structure fully viewed.

#### **Note 3**

Pillar trims only need to be completely removed from the mounting surface (they can hang from the seat belt webbing). They do not need to be removed from the vehicle.

#### **Note 4**

It is not necessary on all vehicles to remove the 'A' pillar trim as part of the structural inspection. The vehicle inspector can ask for the 'A' pillar trim to be removed if there is reason to believe that the trim is covering evidence of damage, previous repair or corrosion.

#### **Note 5**

Boot sidewall trim only needs to be removed if it is not possible to view the vehicle structure with the trim in place.

#### **Note 6**

This is the minimum amount of trim removal necessary to enable a vehicle inspector to identify any damage, deterioration or poor repairs to structural areas of the vehicle. In many instances it will be necessary to remove additional trim (splashguards etc) to enable a vehicle inspector to identify the full extent of the structural damage, deterioration or previous repairs.

2. Before commencing the inspection, the vehicle inspector must check the exterior of the vehicle for any signs of previous crash repairs under appropriate lighting conditions (as specified in [section 8\(1.3\) and \(1.6\)](#) of the Introduction to this manual). Evidence of previous repairs may be indicated in any of the following ways:

- a) mismatch of paint colour or finish
- b) uneven ride height

- c) wrinkles in side panels, doors and roof
- d) misaligned wheels
- e) uneven gaps between body panels (fenders, bonnet, doors and boot).

3. The following items must be inspected on each vehicle:

a) Engine compartment

|   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• front crush zones</li> </ul> | <ul style="list-style-type: none"> <li>• firewall</li> </ul>                        |
| <ul style="list-style-type: none"> <li>• chassis rails</li> </ul>     | <ul style="list-style-type: none"> <li>• suspension towers and mountings</li> </ul> |
| <ul style="list-style-type: none"> <li>• inner guards</li> </ul>      | <ul style="list-style-type: none"> <li>• radiator support panel</li> </ul>          |

b) Exterior

|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• door frames, locks and hinges</li> </ul> | <ul style="list-style-type: none"> <li>• pillars</li> </ul>        |
| <ul style="list-style-type: none"> <li>• sills (Note 7)</li> </ul>                | <ul style="list-style-type: none"> <li>• roof guttering</li> </ul> |

**Note 7**

Where a vehicle is fitted with full sill exterior plastic body kits, which completely cover the exterior sill so that it is not possible to remove without damaging beyond repair, the body kit only needs to be removed if the vehicle inspector believes there are underlying problems with the sill.

c) Luggage/cargo compartment

|   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• suspension towers and mountings</li> </ul> | <ul style="list-style-type: none"> <li>• seatbelt anchorages</li> </ul> |
| <ul style="list-style-type: none"> <li>• floor</li> </ul>                           | <ul style="list-style-type: none"> <li>• rear panel</li> </ul>          |
| <ul style="list-style-type: none"> <li>• spare wheel well</li> </ul>                |   |

d) Underbody and/or chassis frame

|   |   |
|---|---|
| <ul style="list-style-type: none"><li>• front and rear crush zones</li></ul>      | <ul style="list-style-type: none"><li>• sub-frame mountings</li></ul>               |
| <ul style="list-style-type: none"><li>• chassis rails and cross-members</li></ul> | <ul style="list-style-type: none"><li>• seatbelt anchorages</li></ul>               |
| <ul style="list-style-type: none"><li>• floor rails</li></ul>                     | <ul style="list-style-type: none"><li>• sills</li></ul>                             |
| <ul style="list-style-type: none"><li>• floor</li></ul>                           | <ul style="list-style-type: none"><li>• steering and suspension mountings</li></ul> |

e) Passenger compartment (inside vehicle)

|   |  |
|---|--|
| <ul style="list-style-type: none"><li>• exposed floor areas</li></ul>       | <ul style="list-style-type: none"><li>• cross-members</li></ul>                |
| <ul style="list-style-type: none"><li>• floor to inner sill seams</li></ul> | <ul style="list-style-type: none"><li>• seat and seatbelt anchorages</li></ul> |
| <ul style="list-style-type: none"><li>• pillars</li></ul>                   |  |

**Note 8**

The vehicle inspector must fully extend every seatbelt to ensure that the entire length of the seatbelt is inspected.

The underbody inspection must be carried out under specified lighting conditions, using any of the following equipment:

- an inspection pit
- a vehicle hoist
- a ramp of adequate height that allows the inspector to comfortably walk under the vehicle to inspect all crush zones, chassis rails, sills and cross-members.

**Note 9**

If seatbelt anchorage bolts are removed as part of the structural inspection process they must be reassembled using a calibrated torque wrench.

## 2 Evidence of inspection

The vehicle inspector must place some form of unique mark to identify the person carrying out the structural inspection (eg inspector initials as identified in the QMS/PRS Staff Record) at each concealed location inspected. This provides evidence of the inspection and a form of quality control.

For all concealed upper and lower outboard seatbelt anchorages, the unique identification marks must be placed within 50mm of these.

### 3 Reassembly

Where components are removed as part of the inspection process, an IO must have procedures in place to ensure that those components are reassembled correctly.

### 4 Trim removal exemption

Under some circumstances it is not practicable to remove the trim in a motor vehicle.

Examples of such cases are:

|  |  |
|--|--|
| <ul style="list-style-type: none"><li>• chiller vans</li></ul> | <ul style="list-style-type: none"><li>• vehicles fitted with airbags in the roof or pillars</li></ul>  |
| <ul style="list-style-type: none"><li>• motorhomes</li></ul>   | <ul style="list-style-type: none"><li>• late-model, high specification, 'expensive' vehicles</li></ul> |

In such instances, IOs may apply to NZ Transport agency Waka Kotahi (NZTA) for an exemption from the requirement to remove the interior trim.

Before NZTA can process an exemption for a specific vehicle, the IO must structurally inspect the vehicle and complete an application for an exemption from trim removal requirements (see [Reference material 18](#)).

Once NZTA has received the application, an NZTA Certification Officer or nominated person will contact the entry certifier to arrange a date and time for the vehicle to be inspected.

1. The vehicle should be available on a hoist. The NZTA staff member or nominated person will advise which items such as door rubbers, inner guards and under body panels need to be removed for the purposes of the inspection.
2. The IO must provide the Certification Officer with a copy of the structural inspection sheet.
3. The Certification Officer will physically inspect the vehicle. NZTA will consider the following factors when processing an application for exemption from trim removal:

|   |   |
|---|---|
| <ul style="list-style-type: none"><li>• the type of vehicle</li></ul>           | <ul style="list-style-type: none"><li>• the condition of the vehicle</li></ul>                  |
| <ul style="list-style-type: none"><li>• the age of the vehicle</li></ul>        | <ul style="list-style-type: none"><li>• whether the vehicle can be easily stripped</li></ul>    |
| <ul style="list-style-type: none"><li>• the vehicle's safety features</li></ul> | <ul style="list-style-type: none"><li>• whether the vehicle can be partially stripped</li></ul> |

4. If any evidence of structural damage, repairs or corrosion damage is found, the application will be declined.

#### Note 10

An application may be reconsidered if a specialist repair certifier inspects the vehicle and issues an LT307 certificate (for a light vehicle - see [Reference material 79](#) for a sample certificate) or a statement on letterhead from a heavy vehicle specialist certifier (for heavy vehicles) that confirms there is no damage, repairs or corrosion.

## 5 The Certification Officer will consider the application and notify the applicant of the outcome.

a) If the Certification Officer considers that stripping the vehicle would not pose difficulties or damage the vehicle, the application for a trim removal exemption will be declined. A letter of notification will be sent to the applicant.

b) If the Certification Officer believes there is sufficient reason to grant an exemption from trim removal requirements, the Certification Officer will approve a full or partial trim removal exemption. An 'exemption to remove trim on an imported used vehicle' letter describing any special conditions will be sent to the entry certifier, and a copy will be sent to the applicant.

**IMPORTANT:** [Technical bulletin 11](#) describes the requirements for carrying out the inspection of motorhomes.

### Note 11

**Specialist repair certifier** in this case means a light vehicle repair certifier or heavy vehicle specialist certifier as applicable to the vehicle class.

Page amended 1 November 2014 (see [amendment details](#)).

Page updated 19 November 2021 (see [details](#)).

## 3-4 Threshold for requiring specialist repair certifier inspection

The following information gives guidance to vehicle inspectors in determining **when** a light vehicle (including motorcycles and mopeds) **or a** heavy vehicle undergoing entry certification in New Zealand requires **specialist inspection** by a repair certifier. (Note 1)

**Important:** If the vehicle documentation (eg a registration document or invoice) contains the words 'statutory', 'written off', **(Note 5)** 'write-off', 'salvage', 'junked' or 'non-repairable' or similar the vehicle **must** be referred to a specialist repair certifier.

### Applicable legislation

- [Land Transport Rule: Vehicle Repair 1998](#)

A repair to a vehicle (including its structure, systems, components or equipment) must restore the damage or wear to within safe tolerance of its state when manufactured or modified.

## Criteria for reporting structural damage or corrosion

The criteria detailed below must be used when deciding if any damage or corrosion should be referred to a specialist repair certifier. All damage meeting this criteria and found in the energy management path areas must be referred to a specialist repair certifier.

Structural components that can be unbolted, such as doors with intrusion beams and sub frames, which are damaged or corroded are a reason for rejection. However, these parts can be replaced by the owner and re-inspected without the need for repair certification.

The important distinction when applying these criteria is:

- Whether the area identified as damaged by impact, previous repair, or corrosion is structural or cosmetic, and
- Whether the extent of damage is sufficient to compromise the structural integrity of the motor vehicle, or

- Whether evidence of damage, previous damage repair, or heat damage is present in a structural area, or energy management path of the motor vehicle.

Photographs illustrating examples of structural damage and corrosion are shown in [Reference material 71](#)

## Damage/deterioration that must be referred to a specialist repair certifier

### Under-body impact damage

A vehicle must be referred to a specialist repair certifier if it has underbody damage caused by a collision with a substantial object, sufficient to cause the splitting of seam welds, distortion of suspension members or mounting points, or tearing of metal structures.

### Denting or distortion

- A vehicle must be referred to a specialist repair certifier if there is any discernible denting or distortion to the folds or swages in the dog leg, sill panel or structure of the inner/outer sill weld seam, other than minor scraping.
- A vehicle must be referred to a specialist repair certifier if rocker panels (outer sills) are dented or creased lengthways along the sill and the depth of the crease exceeds 25mm (see Figure 3-4-1).
- A vehicle must be referred to a specialist repair certifier if rocker panels (outer sills) are vertically dented or creased across the sill regardless of the depth of the crease or dent (see Figure 3-4-1).

### Crush zones and kick-up areas

A vehicle must be referred to a specialist repair certifier if there is distortion of the longitudinal rails affecting the front and rear crush zones and kick-up areas.

### Crossmembers

A vehicle must be referred to a specialist repair certifier if there is denting or distortion of the crossmember as a result of collision with an object.

### Cracking

A vehicle must be referred to a specialist repair certifier if there is cracking in:

- the unibody or chassis
- any crossmembers and subframes
- a load bearing member, or energy management paths in unibody structures
- the body of a vehicle with a body-over-frame chassis in the energy management paths, engine mounts, suspension mounts, body mounts, pillars, or sills.

### Repaired damage

A vehicle must be referred to a specialist repair certifier if signs of repair, rust prevention, acid wash (see [Technical bulletin 49: Acid wash process on used imports](#)) or under-sealing to any part of the vehicle structure are evident (for exceptions to this requirement see [Technical bulletin 44: Rust prevention or under-sealing on late model cars from the UK](#)) (for rust heave on heavy vehicle chassis refer to Figure 3-4-4).

## Heavy Motor Vehicle repairs that do not require a specialist repair certification (LT400)

This guide contains the list of repairs to heavy vehicles that do not require heavy vehicle specialist inspection and certification, ie an LT400.

1. Replacement of bolted components. Except for components that specifically require specialist inspection and certification. (eg log bolster attachments, drawbars and drawbeams, etc)
2. Repairs to the **first failures** of chassis cross-members that are **NOT** one of the following:
  - a) the first or last cross-member of the chassis
  - b) cross-members that are fitted within 500mm from engine or transmission mounts
  - c) cross-members that are fitted within 500mm from a suspension support (eg spring hanger)
  - d) cross-members to which a driveshaft centre bearing is fitted
  - e) cross-members that are fitted to support a:
    - ball-race turntable
    - tow coupling
    - fifth-wheel
    - king pin
    - bolster attachment
    - hoist, hydraulic cylinder of a tipping body, or any other devices that may place a concentrated load on the chassis.
3. Repairs to coaming rails that do not support certified load anchorage points, including stock crate j-hooks.
4. Tow-eyes fitted to the front of a vehicle for recovery purposes.
5. Repairs to a component of a freight or bus monocoque body (ie not a truck's driver/passenger cab) if the component is not part of the body framework. (eg body panels)

**Note:** the vehicle inspector may reject the component during the Certification of Fitness inspection if the welding that has been carried out as part of the repair is of poor quality, established by means of visual inspection.

## Supplementary Restraint System (SRS): Airbags and seatbelt pretensioners

A vehicle must be referred to a specialist repair certifier if it has a deployed airbag (Note 2) or seatbelt pretensioner, or there is evidence of repairs to or tampering with airbag module covers. (including colour variations in plastic covers to steering wheels, dash panels, interior trim, or non-original stitching to seat mounted airbags).

## Water or fire damage

- A vehicle must be repair certified by a specialist repair certifier if there is evidence that it has suffered water or fire damage (Note 3). See [Technical bulletin 2](#)

## Corrosion or wood laminate damage

- **Corrosion or wood rotting damage** is where a metal or wooden structure has been eaten away and could be seen as bubbling or pitting of the steel elements or by water damage, delamination or swelling of a wooden surface. The typical outward signs of such damage are lifting, bubbling or discolouring of painted surfaces. In extreme cases, the affected area will fall out and leave a hole.

A vehicle must be specialist repair certified if there is corrosion damage (Note 4) in any structural area, as indicated in the shaded areas of Figure 3-4-2.

- **Perforated corrosion** is where the metal is corroded to the extent that it has holes, or holes are exposed when rust scale is removed. If metal is badly pitted causing a loss of metal thickness it must also be treated as perforated corrosion.
- **Rust heave on a heavy vehicle chassis** must be assessed in accordance with the requirements in the VIRM: [In-service certification 3-1 Structure \(heavy vehicles\)](#). See also Figure 3-4-4.

If there is perforated corrosion in any other (non-structural) area, as indicated in the non-shaded areas of Figure 3-4-2, the vehicle must be reported.

- **Repair** of corrosion on 'bolt on' parts (doors, bonnets etc) within a 150mm circle around the outside of hinge or latch components will require specialist repair certification. These 'no corrosion' zones are circled in Figure 3-4-3
- **Replacement** of these parts will not require specialist repair certification, provided the inspector is satisfied that safety systems are not affected (eg side intrusion beams, burst proof locks, frontal impact systems).

## Permitted cosmetic damage/deterioration

Cosmetic damage to the motor vehicle's outer body panels is permitted, providing it does not affect the structural integrity of chassis, the energy management paths, or any of the bonded or welded seams and joints used in the manufacturing process.

Cosmetic parts on a unibody chassis are generally bolt on items such as the bonnet, front guards, boot-lid, and in most cases the doors.

Photographs illustrating examples of cosmetic damage are shown in [Reference material 72](#)

### Inspection

A list of specific types of damage follows. It explains the extent to which damage is allowed before a vehicle must be reported.

#### Underbody impact damage

A vehicle doesn't require specialist repair certification if it has minor underbody impact damage caused by 'grounding' the vehicle or where some scraping of the sill seams or floor pan stiffening members has occurred.

#### Denting or distortion

A vehicle is not required to be referred to a specialist repair certifier if rocker panels (outer sills) are dented or creased lengthways along the sill to a depth of less than 25mm.

#### Cross-members

A vehicle is not required to be referred to a specialist repair certifier if it has minor jacking damage to a cross-member, provided there is no indication of loss of steering or suspension alignment.

## Repaired damage

A vehicle with repaired damage is not required to be referred to a specialist repair certifier if repairs are only to correct cosmetic damage to the outer body panels, provided the vehicle inspector is able to discern the extent of the damage and confirm that none of the vehicle manufacturer's seams or joints have been disturbed during the repair.

## Vehicles flagged for damage at the border

When a Border Inspection Organisation identifies damage on a vehicle during the border check, the vehicle will be flagged as damaged on LANDATA. If the vehicle inspector determines that the damage does not exceed the threshold for requiring specialist repair certification, an application must be made to remove the damage flag.

A 'Request to remove border damage flag' form is available in [Reference material 17](#). The vehicle inspector must complete this form and give it to the IO supervisor authorised to remove damage flags.

## Repair certification and damage flags

A light vehicle may have a damage flag removed if it has been repaired in accordance with the requirements of the [VIRM: Light vehicle repair certification](#) and it has been requested by a repair certifier, as mentioned in the LT308.

A heavy vehicle may have a damage flag removed if it has been repaired and certified (LT400) by a heavy vehicle specialist certifier with the appropriate category.

### Note 1

**Specialist repair certifier** in this case means a light vehicle repair certifier or heavy vehicle specialist certifier as applicable to the vehicle class.

### Note 2

Unless there is evidence that the airbag has been deployed, it is not expected that the vehicle go to a specialist repair certifier if it has a sports steering wheel fitted with no airbag at entry and is failed and it is requested that the OE steering wheel be reinstated.

If the airbag has not been deployed it is only expected that the original steering wheel be reinstated and an SRS declaration issued in line with [Technical bulletin 29](#)

### Note 3

For the purposes of the threshold for requiring specialist repair certification, evidence of water damage may be physical evidence, or it may be that the vehicle has been written-off for insurance purposes as a result of water damage.

### Note 4

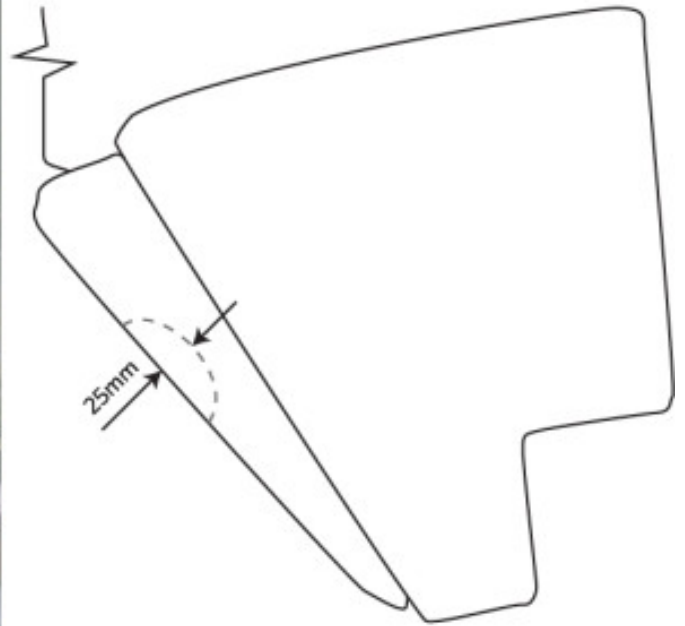
Corrosion damage includes any signs of 'rust bleed'.

**Rust bleed** is a rust coloured stain or mark that appears around an area of corrosion that may not be visible. Rust bleed is most commonly found where panels join or overlap when corrosion has started between the two surfaces and moisture has caused a rust stain or mark to run onto the external surface.

**Note 5 ( NZ vehicles re-entering service only)**

If there is proof from the insurance company that the vehicle was written off for reasons other than body or structural damage, no referral to a repair certifier is required unless the structural condition of the vehicle exceeds the threshold for requiring repair certification.

**Figure 3-4-1. Outer sills cross section and rocker panels**



Cross section of door sill

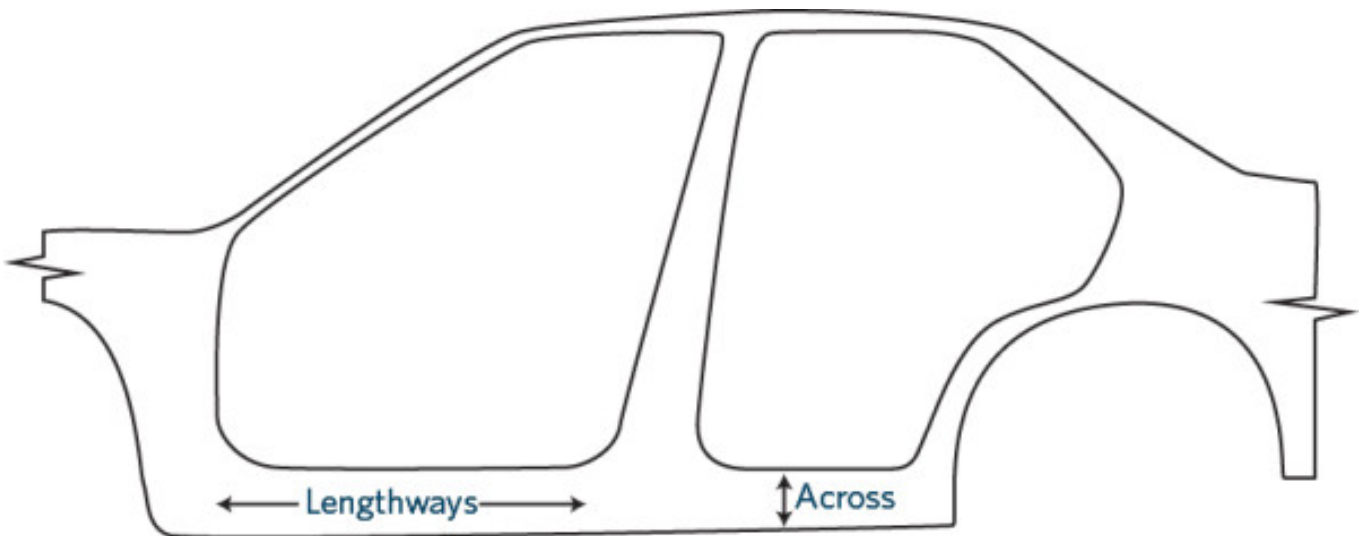


Figure 3-4-2. Structural corrosion damage limits

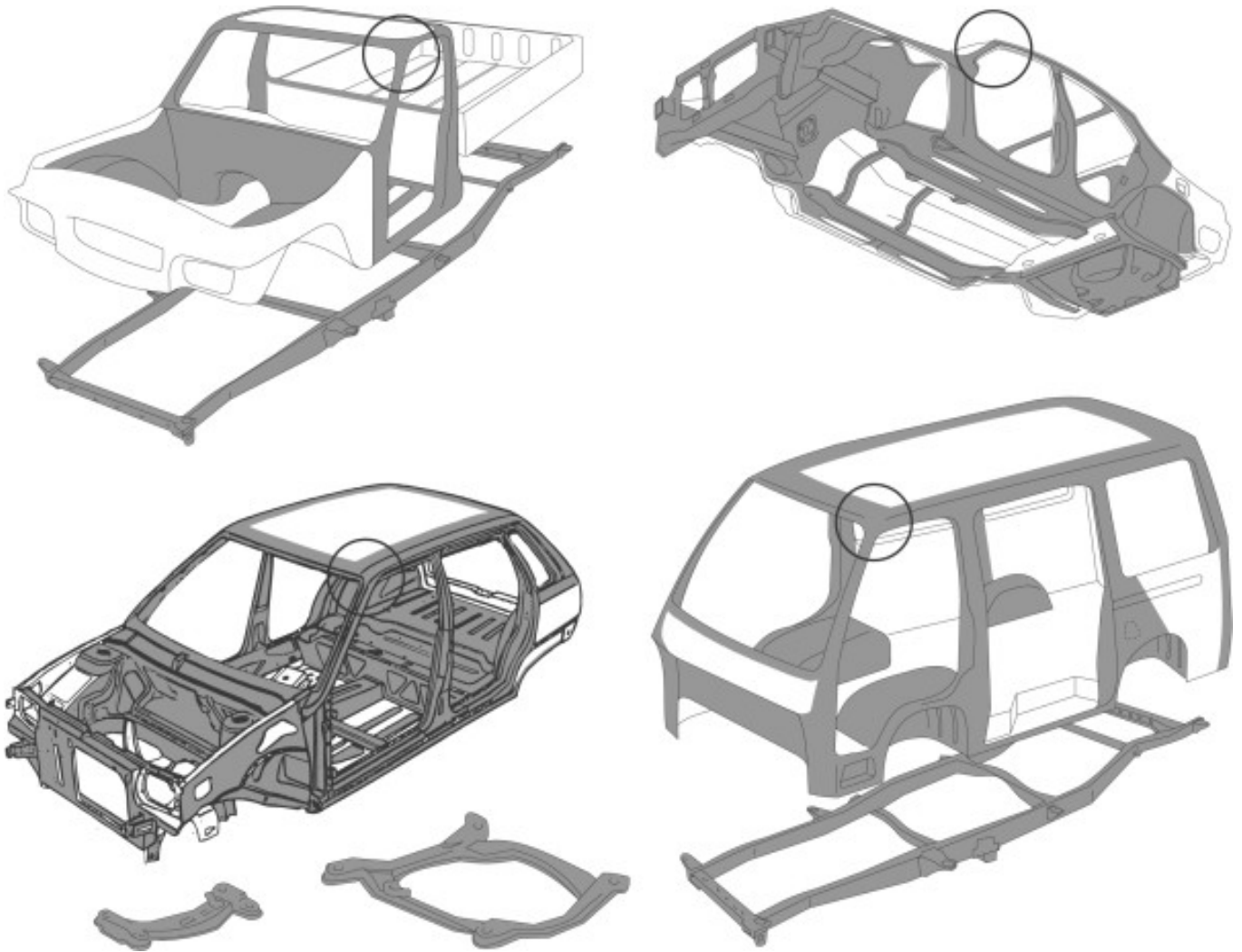


Figure 3-4-3. Hinge and latch anchorage corrosion damage limits

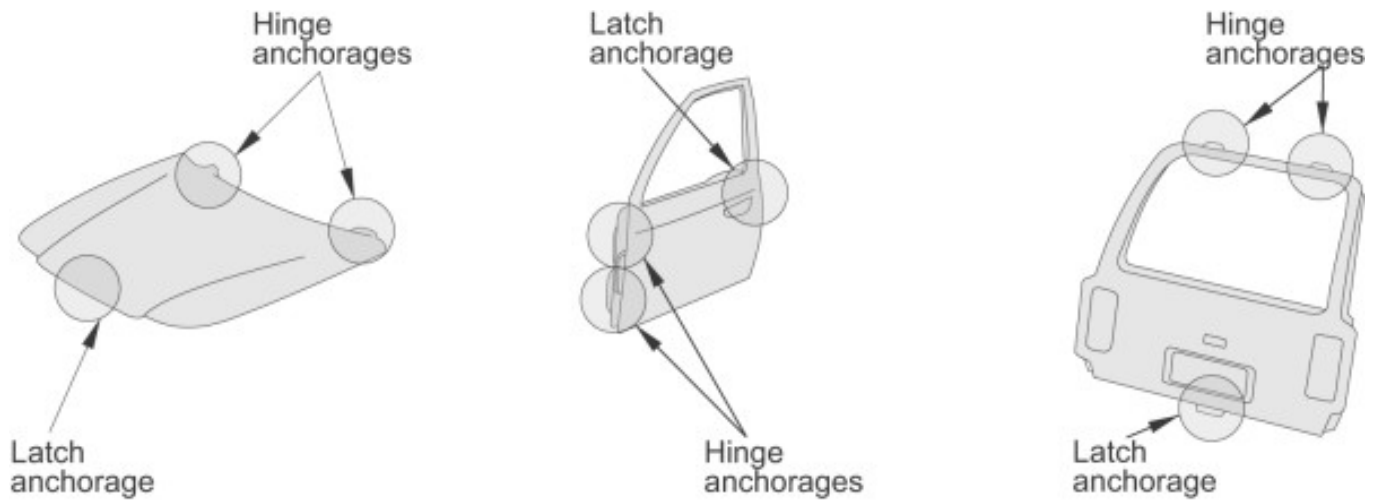
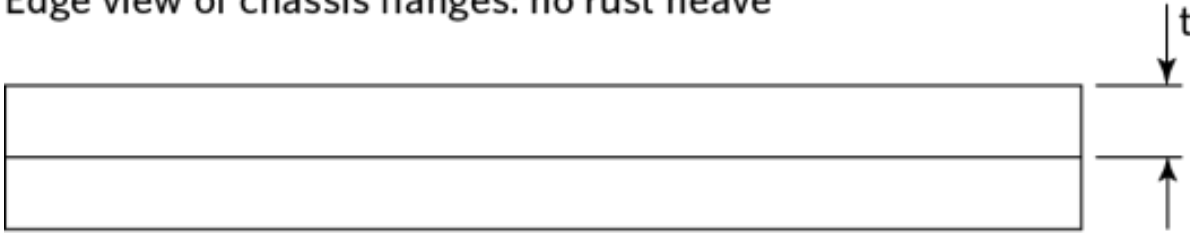
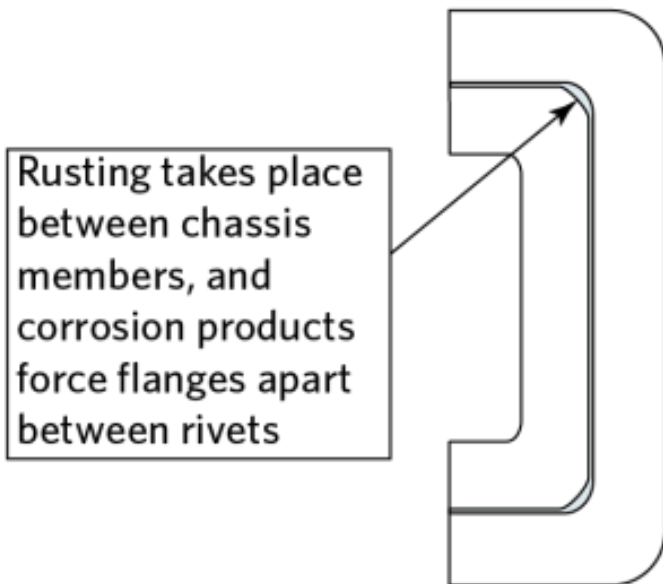
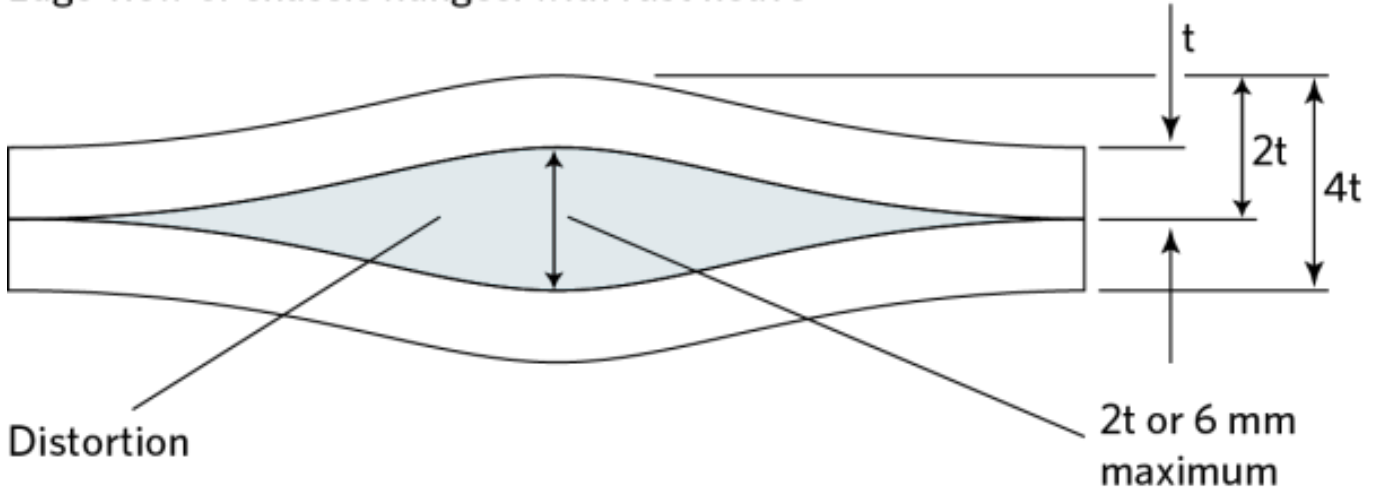


Figure 3-4-4. Rust heave limits

Edge view of chassis flanges: no rust heave



Edge view of chassis flanges: with rust heave



Rusting takes place between chassis members, and corrosion products force flanges apart between rivets

Apply similar criteria (twice material thickness or 6 mm maximum) for corrosion in other parts of structural members

Rust heave beyond the limits described above is acceptable only if an HVS certifier has confirmed this in writing. The vehicle may continue without repair until an expiry date specified by the HVS certifier. Where no expiry date is specified the vehicle must be referred to an HVS certifier for another assessment at the next CoF inspection.

Regardless of any expiry date, an inspector may refer the vehicle to an HVS certifier if he/she suspects that the safety of the vehicle is compromised, eg due to excessive corrosion or chassis cracking. If the chassis is repaired, an LT400 is required.

## 3-5 Stability (Light PSV)

Vehicles must comply with the requirements relating to modification set out in the [VIRM: In-service certification, section 3-2](#)

There are no additional requirements in respect of light PSV stability for the inspection and certification of unmodified vehicles for entry into service.

**Note:** the following is a guide as to the requirements for compliance of light PSVs with stability requirements of the [Land Transport Rule: Passenger Service Vehicles 1999](#) (the PSV Rule).

A mass produced standards compliant stock model light vehicle is deemed to comply with the stability requirements in the PSV Rule, and there is usually no need for certification in respect of mass produced MA, MB, MC, MD1 and MD2 category vehicles. This approach could be used even in the case of class NA vehicles converted into MD1 or MD2.

If there is a serious doubt that the vehicle would comply, and if the vehicle inspector has reasons to believe that a conversion will prevent the vehicle from meeting requirements, he/she may require specialist certification. For example, if a class NA Ford Transit van is converted to an MD2 light bus, but the floor level is much higher than would be usual for unmodified MD2 category Ford Transits of similar passenger capacity, then the vehicle inspector may assume that the stability requirements might not be complied with. A similar situation might arise with off-roader vehicles with very narrow track and very high ground clearance.

## 3-5 Stability (Heavy PSV)

### Reasons for rejection

#### Mandatory requirements

1. A heavy PSV does not demonstrate static tilt stability as required in Table 3-5-1

#### Modification and repair

2. A vehicle does not comply with a requirement relating to modification and repair set out in the [VIRM: In-service certification, section 3-2](#).

#### Note 1

See [Technical Bulletin 32](#) for vehicle makes and models that can be accepted as meeting this requirement. All other documentation must be referred to the NZTA for approval.

To be considered for approval by the NZTA, documentation must be model / sub-model specific and be able to support the validity of the statement in accordance with any of the following, as appropriate:

- a summary of evidence or a certificate from independent tests carried out in accordance with the requirements of the approved vehicle standards
- a type approval issued by a relevant authorised certification organisation in accordance with the approved vehicle standards
- documents in relation to arrangements for ensuring conformity of production in accordance with the requirements of the approved vehicle standards
- documents confirming that a deviation of the vehicle or specific aspect of the vehicle from the original source design, resulting from changes to components or manufacturing methods, does not have an adverse effect on compliance with the approved vehicle standards

- any other requirements specified by the Transport Agency.

If documentation isn't available or is insufficient, an HVEC must be engaged by the manufacturer to demonstrate compliance.

**Table 3-5-1. Static tilt stability requirements for a heavy PSV**

| Floor height              | Sideways tilt | Demonstration of compliance   |
|---------------------------|---------------|---|
| Less than 2m above ground | 35 degrees    | <ul style="list-style-type: none"> <li>• Written documentation from the vehicle manufacturer (Note 1), or</li> <li>• calculations, if the centre of gravity can be proven within 50mm, certified by an HVS certifier category HVEC, or</li> <li>• practical testing certified by an HVS certifier category HVEC.</li> </ul> |
| 2m or more above ground   | 28 degrees    |   |

## Summary of legislation

### Applicable legislation

- [Land Transport Rule: Passenger Service Vehicles 1999](#)
- [Land Transport Rule: Vehicle Standards Compliance 2002](#).

### Mandatory requirements

1. A motor vehicle which entered service as a PSV on or after 1 July 2000 must be stable under the following conditions of static tilt:

a) a vehicle with a floor not more than 2m above the ground, and loaded with weights representing the occupants' mass in all seating positions must be stable on a surface which is subject to a sideways tilt of 35 degrees, as demonstrated by one of the following methods:

- i. written documentation from the vehicle manufacturer, or
- ii. type approval, or
- iii. calculations, if the centre of gravity can be proven within 50mm, or
- iv. practical testing certified by a HVS certifier.

b) a vehicle with a floor 2m or more above the ground, and loaded with weights representing the occupants' mass in all seating positions for a single-decked vehicle and in the upper deck only of a double-decked vehicle must be stable on a surface which is subject to a sideways tilt of 28 degrees, as demonstrated by one of the following methods:

- i. written documentation from the vehicle manufacturer, or
- ii. type approval, or
- iii. calculations, if the centre of gravity can be proven within 50mm, or
- iv. practical testing certified by a HVS certifier.

2) A statement of compliance may be issued for a vehicle or for a specific aspect of a vehicle only if the manufacturer or manufacturer's representative, or a relevant component manufacturer or component manufacturer's representative, is able to support the validity of the statement in accordance with any of the following, as appropriate:

a) a summary of evidence or a certificate from tests carried out in accordance with the requirements of the approved vehicle standards,

b) a type approval issued by a relevant authorised certification organisation in accordance with the approved vehicle standards,

c) documents in relation to arrangements for ensuring conformity of production in accordance with the requirements of the approved vehicle standards,

d) documents confirming that a deviation of the vehicle or specific aspect of the vehicle from the original source design, resulting from changes to components or manufacturing methods, does not have an adverse effect on compliance with the approved vehicle standards,

e) any other requirements specified by the Agency.

3) A vehicle manufacturer or manufacturer's representative, or a relevant component manufacturer or component manufacturer's representative, must comply, within a reasonable time, with any request from the Transport Agency to provide the information or document listed in 2)(a) to (e).

#### **Modification and repair**

2. A vehicle must comply with the requirements relating to modification and repair set out in the [VIRM: In-service certification, section 3-2](#).

Page amended **1 November 2017** (see [amendment details](#)).

## **3-6 Roll-over strength (Light PSV)**

### **Reasons for rejection**

#### **Mandatory requirements**

1. A vehicle inspector has reason to believe that the structural strength of a light PSV, when manufactured, would not be sufficient to provide reasonable protection for the occupants in the event of roof or wall deformation resulting from the vehicle rolling over.

#### **Note 1**

A mass-produced, standards-compliant stock-model light vehicle of class MA, MB, MC, MD1, MD2 or previously of class NA is deemed to comply with the roll-over strength requirements.

If there is serious doubt that the vehicle would comply, the vehicle inspector may request further information from a relevant person such as the vehicle manufacturer or a specialist certifier.

# Summary of legislation

## Applicable legislation

- [Land Transport Rule: Passenger Service Vehicles 1999](#)

## Mandatory requirements

1. The structural strength of a light PSV must be sufficient to provide reasonable protection for the occupants in the event of roof or wall deformation resulting in the vehicle rolling over.

## 3-6 Roll-over strength (Heavy PSV)

## Reasons for rejection

### Mandatory requirements

1. A heavy PSV, except for a double-decked vehicle does not demonstrate compliance with at least one of the following:

- one of the approved methods of UN/ECE 66
- one of the approved methods of ADR 59/00
- certification to [PSV Rule](#) 7.5(3) by an HVS certifier category HVEC.

### Note 1

See [Technical Bulletin 32](#) for vehicle makes and models that can be accepted as meeting this requirement. All other documentation must be referred to NZTA for approval.

To be considered for approval by NZTA, documentation must be model / sub-model specific and be able to support the validity of the statement in accordance with any of the following, as appropriate:

- a summary of evidence or a certificate from independent tests carried out in accordance with the requirements of the approved vehicle standards
- a type approval issued by a relevant authorised certification organisation in accordance with the approved vehicle standards
- documents in relation to arrangements for ensuring conformity of production in accordance with the requirements of the approved vehicle standards
- documents confirming that a deviation of the vehicle or specific aspect of the vehicle from the original source design, resulting from changes to components or manufacturing methods, does not have an adverse effect on compliance with the approved vehicle standards
- any other requirements specified by NZTA.

If documentation is unavailable or insufficient, an HVEC must be engaged by the manufacturer to demonstrate compliance.

# Summary of legislation

## Applicable legislation

- [Land Transport Rule: Passenger Service Vehicles 1999](#).

## Mandatory requirements

1. A heavy motor vehicle, except for a double-decked vehicle, which entered service as a PSV on or after 1 September 1999 must:

- a) demonstrate compliance with:
  - i. one of the approved methods of UN/ECE 66, or
  - ii. one of the approved methods of ADR 59/00, or
- b) be certified to [PSV Rule](#) 7.5(3) by an HVS certifier.

Page amended **1 October 2023** (see [amendment details](#)).