

Vehicle inspection requirements manual

Light vehicle repair

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1 March 2011

To: Holders of *Vehicle inspection requirements manual: Light vehicle repair certification*

Dear manual holder

VIRM: Light vehicle repair certification, version 3 amendment 2

Please find enclosed:

- 16 leaves to be inserted into your existing manual.

This amendment includes changes as the result of Land Transport Rule amendments, the increase of the self-certification financial interest limit as well as correcting some minor reference errors.

Instructions

1. Please update your VIRM by following the update instructions on the next page.
2. Update your 'Record of amendments' in the front of the VIRM and in your 'Master records'.

This amendment will come into effect on 15 March 2011.

The amendments are on our website at www.nzta.govt.nz/resources/virm-light-veh-repair-cert. If there are any problems with the documents you have received, please contact Vehicle Certifiers Registers on e-mail dvcupn@nzta.govt.nz or phone toll-free on 0800 587 287 option 4.

Yours sincerely



Graeme Swan
Technical coordinator
Vehicles Unit

List of changes – VIRM: Light vehicle repair certification version 3 amendment 2, March 2011

Page	Change	Remove these pages	Insert these pages
Intro 3-7	<ul style="list-style-type: none"> Financial interest changed from \$250 to \$500 	3-7 to 3-8	3-7 to 3-8
Intro 3-8	<ul style="list-style-type: none"> Vehicle classes table, AB row – 200 watts changed to 300 watts 		
Intro 3-11	<ul style="list-style-type: none"> Addition of 'written' to first sentence regarding repair instructions 	3-11 to 3-12	3-11 to 3-12
1-1-1	<ul style="list-style-type: none"> Summary of legislation re-written VIN figure updated to reflect recent changes 	1-1-1 to 1-1-2	1-1-1 to 1-1-2
3-1-3	<ul style="list-style-type: none"> New JIS standard mark 	3-1-3 to 3-1-4	3-1-3 to 3-1-4
9-1-1	<ul style="list-style-type: none"> Land Transport Rule: Vehicle Standards Compliance 2002 added 	9-1-1 to 9-1-2	9-1-1 to 9-1-2
Technical bulletins			
1-1	<ul style="list-style-type: none"> Typo fix – '5-2' changed to '5-5' 	1-1 to 3-2	1-1 to 3-2
2-1	<ul style="list-style-type: none"> Typo fix - '5-3' changed to '5-6' 		
3-2	<ul style="list-style-type: none"> Updated components inspected and certifier details 		

Vehicle inspection requirements manual: Light vehicle repair certification

Date: _____

Inspection manual topic: _____

Page number needing improvement: _____

Details of suggested improvements: _____

Contact details (in case we need to contact you for further clarification):

Name: _____

Company name: _____

Postal address: _____

Phone/fax/email: _____

Please send the completed form to:

*Technical Co-ordinator**Vehicles Unit**NZ Transport Agency**PO Box 5084**Lambton Quay**Wellington 6145**Fax 04 894 5011*

Introduction

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Introduction

1 Purpose and scope

The NZ Transport Agency *Waka Kotahi* (NZTA) prepared this manual to assist light vehicle repair certifiers to achieve correct and consistent standards of repair inspection and certification.

The purpose of this document is to:

- describe the NZTA's requirements of its repair certifiers in New Zealand
- state the conditions of their appointment
- cover the requirements for the inspection and certification of repairs.

Further copies of this manual may be obtained from:

Regional Operations

NZ Transport Agency

Private Bag 11777

PALMERSTON NORTH 4442

Phone: 0800 587 287

Fax: 06 953 6282

Amendments to this document will be issued from time to time as inspection requirements change and improvements are made. Suggestions for improvement should be made using the form provided at the beginning of this manual.

This is the *Vehicle inspection requirements manual (VIRM): Light vehicle repair certification (Repair VIRM)*. It has four main parts:

1. Introduction

The introduction explains the duties and responsibilities of the repair certifier, the inspection and certification process, complaints procedures, requirements for inspection premises and equipment, and the appointment of repair certifiers.

Also included are definitions and abbreviations, sample certification documents, an improvement suggestion form and a form for recording amendments.

2. Technical

This part of the manual covers the requirements for the certification of repairs to individual light vehicle components, structures and systems.

Each section of the technical part consists of up to three parts:

<i>Summary of legislation</i>	summarises the legislation that is relevant to that section.
<i>Reasons for rejection</i>	specifies the repair defects that must result in the vehicle being rejected for repair certification.
<i>Notes</i>	are for additional guidance, where required.

3. Technical bulletins

This part of the manual contains Technical bulletins that provide extended explanatory material for specific issues, components or vehicles.

This is to be used in conjunction with the relevant sections of the technical part of the manual.

To use the manual:

- the repair certifier identifies each system, structure or component affected by the repair
- the repair certifier selects the corresponding section from the technical part and inspects the repair to determine whether the requirements have all been met
- where there is a general requirement, such as for welding or water damage, then the damaged item must be inspected according to both the general and specific sections.

4. The LANDATA system

This part of the manual provides guidance on how to use the LANDATA system to access vehicle records and record notes describing damage.

In order to inspect and certify a vehicle with a Light vehicle repair record of certification (LT308), the repair certifier must:

- a) be an authorised repair certifier appointed by the NZTA under the Land Transport Rule: Vehicle Standards Compliance 2002 (the Rule) section 2.2
- b) know the repair certifier's responsibilities
- c) identify the vehicle class according to section 3.4 of this introduction
- d) identify whether the vehicle requires certification; section 3.3 of this introduction identifies the threshold for repair certification
- e) establish whether the vehicle complies; sections 3.5 and 3.6 of this introduction explain how to determine the vehicle's compliance with the requirements
- f) complete the inspection documentation, LT308; section 3.7 of this introduction explains the requirements for handling and completing the form
- g) collect fees; section 3.8 of this introduction lists the requirements for the repair certifier when charging and collecting fees.

3.1 Duties and responsibilities

3.1.1 General duties and responsibilities

The repair certifier's primary duty is to ensure that a repaired vehicle is within safe tolerance of the manufacturer's specifications. General duties and responsibilities are defined in the Deed of Appointment: Light Vehicle Repair Specialist Inspector and Inspecting Organisation, Land Transport Rule: Vehicle Standards Compliance 2002 (the Rule), Land Transport Rule: Vehicle Repair 1998 (the Repair Rule) and in this manual.

The scope is covered by this *VIRM*. If the repair certifier notices parts which are not covered in this *VIRM*, for example lights which have been replaced, they must be listed and referred to a TSD agent.

1. Repair Certifier

Repair certifier means a person who is appointed by the NZTA under section 2.2(1)(h) of the Rule to carry out inspection and certification activities in accordance with requirements and conditions imposed by the NZTA, and who is responsible for the inspection and certification outcome.

In this manual, a repair certifier is one appointed for the purpose of light vehicle repair specialist inspection and certification. This is defined in the Rule as specialist inspection and certification of repairs to significant damage or deterioration to the structure, chassis, body-to-chassis attachment, suspension or occupant protection system of a light vehicle.

For the avoidance of doubt, any reference to a certifier, vehicle inspector or inspecting organisation in any legislation, Deed of Appointment, the Repair Rule or any other relevant document is a reference to a repair certifier appointed by the NZTA under the Rule.

2. Inspection and certification activities (section 2.2(1)(h) of the Rule)

Repair certifiers carry out specialist inspection and certification of repairs to significant damage or deterioration to the structure, chassis, body-to-chassis attachment, suspension or occupant protection system of a light vehicle.

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

Repair certifiers must carry out inspection and certification activities competently and diligently and in accordance with the Rule, this document, their Deed of Appointment and the Repair Rule.

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

Repair certifiers may carry out only those inspection and certification activities for which the 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 repair certifier 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. The Deed of Appointment states a time of appointment of five years from the date it was signed. This time may be extended by the receipt of a valid Certificate of Appointment. The new termination date shall be that stated on the certificate.

6. Insurance and indemnity (Deed of Appointment, Light Vehicle Repair Specialist Inspector and Inspecting Organisation Clause 28)

The repair certifier must maintain a third party public liability in relation to performance of the repair certifier's duties.

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

It is a condition of appointment that a repair certifier continues to be a fit and proper person.

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

It is a condition of appointment that a repair certifier:

- a) keeps every LT308 and copies of all other relevant records and associated documents relating to repair inspections and certification for a minimum period of two years, and maintains them in a retrievable form for a minimum period of five years
- b) advises the Vehicles Unit as soon as practicable if there is a reason to believe that the inspection and certification of a vehicle has been carried out incorrectly
- c) advises the Vehicles Unit as soon as is practicable after they become aware of a defect in a manufacturer's production run or quality control process 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 repair certifier may not delegate any function or power to carry out inspection and certification activities for which they were appointed, except under conditions specified by the NZTA in writing.

A repair certifier may only delegate the following tasks to recognised technicians:

- a) wheel alignment measurement and recording
- b) three-dimensional chassis measurement and recording
- c) diagnostic reports on electronic parts, components and systems.

A repair certifier may approve a technician to perform the above tasks only after the repair certifier has ascertained that the person is fully capable of completing the task. Repair certifiers are responsible for the outcomes or consequences of any delegated task.

Repair certifiers must maintain a record of all recognised technicians that they have approved in accordance with any specifications in the *Performance review system (PRS)* manual that supports this manual.

10. Delegation of an inspection phase

A repair certifier may delegate a phase of the repair certification to another repair certifier when it is required by unusual circumstances. In such cases, the repair certifier must contact the Repair Certifiers' Association and supply details of the period during which delegation will take place and the name of the certifier to be delegated. If the Repair Certifiers' Association has any reason to think that this process may be being improperly used, it must notify the NZTA.

The certifier signing the LT308 retains responsibility for the entire repair and all its processes, *including the delegated work*.

The repair certification process consists of three phases:

1. Initial assessment and prescription of the repairs to be done.
2. Intermediate inspections of the repair in progress and prescription of any remedial work to make good any poor or misunderstood repairs.
3. Final inspection and sign-off on the LT308.

Delegation of phase 1 will not be permitted unless the repair certifier has applied to the NZTA for consideration on a case-by-case basis.

Where phase 2 is delegated, the delegated certifier must:

- inform the original certifier if they have been, or are about to be, suspended, revoked, or placed under mentoring
- approve the original instructions for the repair
- sign the LT308 for the interim inspection.

Under these circumstances, a delegated certifier will share the responsibility for any incorrect certification.

If the delegated certifier does not agree with any part of the repair specification, they must negotiate with the original certifier to agree on a repair specification that is acceptable to both, refuse the task, or in the absence of the original certifier, change the instruction to a higher repair specification.

Where phase 3 is delegated, the delegated certifier is responsible for the entire repair. If a repair certifier has concerns about this, they should seek advice from the NZTA.

3.1.2 Inspection and certification

1. Repair specialist inspection and certification (sections 6.5(1) and 6.5(4) of the Rule)

A repair certifier is required to inspect and certify a repaired vehicle as within safe tolerance of the manufacturer's specifications following significant damage or deterioration to its structure, chassis, body-to-chassis attachment, suspension or occupant protection system. Such inspection may extend beyond the inspection of the areas identified by the TSD agent.

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

The NZTA's requirements and conditions are contained in this document and the Deed of Appointment.

2. Identifying damage on the LANDATA system

A repair certifier may access a vehicle record on LANDATA, and add notes to the record to identify damage found during the initial inspection.

3. Determining compliance of a repaired vehicle (sections 6.5(5) and 11.1 of the Rule)

A specific aspect of a vehicle may be certified as meeting the requirements of the Rule if a repair certifier has identified the vehicle and has determined, on reasonable grounds, that the specific aspect:

- a) has not compromised the structural integrity of the vehicle, or
- b) has been repaired using components and materials that are fit for their purpose, and the vehicle is returned to within safe tolerance of its state when manufactured or modified, or
- c) has been repaired in accordance with this document, or
- d) has not suffered water damage to the extent that it is impractical for the repair certifier to certify the vehicle as safe to operate.

If the vehicle has been repaired before it entered New Zealand and the repair certifier cannot determine that the repair methods and parts used in the repair comply with the requirements of this manual, the repair certifier must record why he or she is prepared to certify the repair. This record should be supported as far as is practicable by documentation of tests and checks done on the repair and any components used.

4. Record of determination (section 6.6 of the Rule)

When a repair certifier has determined that a repaired vehicle complies with applicable requirements, the repair certifier must make a record of determination on the LT308 that the vehicle complies.

5. Supporting documents (section 6.7 of the Rule)

A repair certifier must keep all records concerned with the certification and must make them available upon request by the NZTA.

The records must be kept for a minimum of two years, and maintained in a retrievable form for a minimum of five years.

3.1.3 Re-inspection and re-certification (section 11.4 of the Rule)

If an LT308 has been issued to a vehicle as a result of an incorrect repair inspection and certification, the NZTA may require that a repair certifier:

- a) repeat the inspection and certification of the vehicle
- b) issue, if appropriate, an LT308
- c) meet the re-inspection and re-certification costs of the activities undertaken under (a) and (b).



3.1.4 Performance review

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

The NZTA may monitor and review the performance of a repair certifier, including the performance of inspection and certification activities.

The requirements and conditions are contained in this document, the Deed of Appointment and the NZTA PRS: *Light vehicle repair certification* manual.

2. Providing information to the NZTA (sections 3.1(2) and (3) of the Rule)

The NZTA may require a repair certifier to undergo such monitoring and review and to provide such information as the NZTA reasonably considers relevant. A repair certifier must comply with these requirements.

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

Repair certifiers must bear the costs of the monitoring and reviewing of their performance in accordance with any prescribed fee.

3.1.5 Investigations

1. Investigations (section 3.2(1) and 3.2(8) of the Rule)

If the NZTA has reason to believe that a repair certifier has failed to comply with any of the conditions of his or her appointment, the NZTA may require the repair certifier to undergo an investigation and to provide such information as the NZTA reasonably considers appropriate.

The repair certifier cannot refuse to undergo any investigation.

2. Notification of action (other than immediate suspension/imposing of conditions) (section 3.2(3) of the Rule)

Following an investigation and before carrying out action, the NZTA must notify the repair certifier in writing of:

- a) the action that is being considered
- b) the reason for the action that is being considered
- 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 was given
- d) the date on which the action that is being considered will take effect, where appropriate; this date must be at least 28 days after the notice was given, unless the NZTA determines otherwise.

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

If a repair certifier is notified as above, they must ensure that they provide the NZTA with all information within the period specified in the notice.

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

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

- a) decide whether or not to take the action that is being considered

- b) as soon as is practicable, provide written notification to the repair certifier of:
 - i. the NZTA's decision
 - ii. if appropriate, the date on which the action is to take effect
 - iii. if appropriate, the right of appeal under section 106 of the Land Transport Act 1998.

5. Remedial action, suspension, revocation (sections 3.2(2) and 3.2(8) of the Rule)

If, following an investigation, the NZTA is satisfied that the repair certifier has failed to comply with any of the conditions of their appointment, the NZTA may do one or more of the following:

- a) require that remedial action, such as undergoing training or mentoring, be undertaken by the repair certifier; the repair certifier cannot refuse to comply with the requirement
- b) suspend the repair certifier for a specified period or until conditions are met
- c) revoke the appointment of the repair certifier.

Schedule A of the Deed of Appointment specifies penalties for failure to comply with any of the conditions of the repair certifier's appointment.

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

If the NZTA has reason to believe that a repair certifier has failed to comply with a condition of his or her appointment and that this presents a significant risk to land transport safety, the NZTA may suspend the appointment with immediate effect, or impose any conditions on the appointment of the repair certifier.

Schedule A of the Deed of Appointment specifies penalties for failure to comply with any of the conditions of the repair certifier's appointment.

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

When the NZTA suspends the appointment, or imposes conditions on the appointment, the NZTA must notify the repair certifier 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. 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 imposition 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 imposition 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 against immediate suspension or imposition of conditions (section 3.3(6) of the Rule)

A repair certifier 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 (sections 3.2(7) and 3.2(8) of the Rule)

The NZTA may require a repair certifier to bear the costs associated with an investigation or remedial action in accordance with any prescribed fee. The repair certifier cannot refuse to pay the fee.

3.2 Disqualification from certification

A repair certifier must not inspect a vehicle in which he or she has a financial or professional interest such as:

- a) the repair certifier owns the vehicle or is paying for the repairs, or
- b) the repair certifier has been the primary repairer of the vehicle, or
- c) the vehicle has been repaired by a person working for the same company as the repair certifier and at the same premises, unless written permission has been obtained from the Vehicles Unit for each vehicle certified, or
- d) the repair certifier is the designer, manufacturer, supplier, installer, purchaser, owner or maintainer of items or products used in the vehicle being certified.

A repair certifier may certify a vehicle in which he or she has a limited financial interest. The meaning of this is as follows::

- a) The repair certifier may carry out minor remedial work that is directly concerned with bringing the vehicle structure within safe tolerance of the manufacturer's specifications while the vehicle is being prepared for certification, after an initial attempt has been made to repair it by an independent party.
- b) Financial interest is limited to \$500 per vehicle inspected. This does not include any fees charged by the repair certifier as part of normal certification work. Applications to exceed this limit must be directed to the National Manager Vehicles.
- c) A log of the remedial work and charges made must be retained and produced to an authorised NZTA representative on request.

A repair certifier must not inspect a vehicle if:

- a) they do not hold a driver licence for that class of vehicle, and
- b) they are required to drive it.

3.3 Establishing whether a vehicle must be repair certified

A vehicle must be inspected for light vehicle repair certification if:

- a) it requires repair certification for entry or re-entry to service, and
- b) it is a vehicle of one of the following classes:
LC, LD, LE1, LE2, MA, MB, MC, MD1, MD2, or NA (see **Table 1**), and

- c) the vehicle shows any of the following conditions:
- evidence of corrosion in a structural part of the vehicle; this includes evidence of rust bleed
 - corrosion perforation of any non-structural body panel of the vehicle
 - damage that affects the integrity of any bonded or welded seams or joints installed by the vehicle manufacturer
 - underbody damage that has caused the splitting of seam welds, distortion of suspension members or mounting points, or tearing of metal structures
 - denting or creasing across rocker panels or to a depth of more than 25 mm
 - denting or distortion to the folds or swages in the sill panel or structure of the inner or outer sill weld seam
 - distortion to the longitudinal chassis rails so as to affect the front or rear crush zones or kick-up areas
 - damage of a cross-member that may affect steering or suspension alignment
 - distortion of a cross-member
 - cracking of the unitary body in areas affecting a safety component or system
 - a deployed airbag or seatbelt pre-tensioner
 - there is evidence that repairs have been made to the structure or safety systems of the vehicle or the extent of the original damage is not evident
 - there is evidence that the vehicle has suffered water damage.

Note 1 Technical bulletin 4 explains the threshold requirements as set out for entry certifiers in New Zealand.

3.4 Identifying the vehicle class

Since some decisions are made according to the class of the vehicle, the repair certifier must be able to identify the class of the vehicle to be inspected (see **Table 1**).

Table 1. Vehicle classes

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)	A motor vehicle (other than a power-assisted pedal cycle) that has: <ol style="list-style-type: none"> a) two wheels, and b) either: <ol style="list-style-type: none"> i. an engine cylinder capacity not exceeding 50 cc and a maximum speed not exceeding 50 km/h, or ii. a power source other than a piston engine and a maximum speed not exceeding 50 km/h.

Class	Description
LB (Moped with three wheels)	A motor vehicle (other than a power-assisted pedal cycle) that has three wheels, and either: <ol style="list-style-type: none"> a) an engine cylinder capacity not exceeding 50 cc and a maximum speed not exceeding 50 km/h, or b) a power source other than a piston engine and a maximum speed not exceeding 50 km/h.
LB1	A class LB motor vehicle that has one wheel at the front and two wheels at the rear.
LB2	A class LB motor vehicle that has two wheels at the front and one wheel at the rear.
LC (Motorcycle)	A motor vehicle that has two wheels, and either: <ol style="list-style-type: none"> a) an engine cylinder capacity exceeding 50 cc, or b) a maximum speed exceeding 50 km/h.
LD (Motorcycle and sidecar)	A motor vehicle that has three wheels asymmetrically arranged in relation to the longitudinal median axis, and either: <ol style="list-style-type: none"> a) an engine cylinder capacity exceeding 50 cc, or b) a maximum speed exceeding 50 km/h.
Sidecar	A car, box, or other receptacle attached to the side of a motor cycle and supported by a wheel.
LE (Motor tricycle)	A motor vehicle that has: <ol style="list-style-type: none"> a) three wheels symmetrically arranged in relation to the longitudinal median axis, and b) a gross vehicle mass not exceeding one tonne, and either: <ol style="list-style-type: none"> i. an engine cylinder capacity exceeding 50 cc, or ii. a maximum speed exceeding 50 km/h.
LE1	A class LE motor vehicle that has one wheel at the front and two wheels at the rear.
LE2	A class LE motor vehicle that has two wheels at the front and one wheel at the rear.
Passenger vehicle	A motor vehicle that is constructed primarily for the carriage of passengers, and has either: <ol style="list-style-type: none"> a) at least four wheels, or b) 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) that has not more than nine seating positions (including the driver's seating position) in which the centre of the steering wheel is in the forward quarter of the vehicle's total length.

Class	Description
MC (Off-road passenger vehicle)	<p>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 has:</p> <ul style="list-style-type: none"> a) four-wheel drive, and b) 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 centreline and the tyres are inflated to the vehicle manufacturer's recommended pressure: <ul style="list-style-type: none"> i) an approach angle of not less than 28 degrees ii) a breakover angle of not less than 14 degrees iii) a departure angle of not less than 20 degrees iv) a running clearance of not less than 200 mm v) a front-axle clearance, rear-axle clearance, or suspension clearance of not less than 175 mm.
Omnibus	A passenger vehicle that has more than nine seating positions (including the driver's seating position).
MD1	An omnibus that has a gross vehicle mass not exceeding 3.5 tonnes and not more than 12 seats.
MD2	An omnibus that has a gross vehicle mass not exceeding 3.5 tonnes and more than 12 seats.
Goods vehicle	<p>A motor vehicle that:</p> <ul style="list-style-type: none"> a) is constructed primarily for the carriage of goods, and has either: <ul style="list-style-type: none"> i) at least four wheels, or ii) 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) a vehicle that is constructed for the carriage of both goods and passengers shall be considered primarily for the carriage of goods if the number of seating positions multiplied by 68 kg is less than 50% of the difference between the gross vehicle mass and the unladen mass b) the equipment and installations carried on special purpose vehicles not designed for the carriage of passengers shall be considered to be goods c) a goods vehicle that has two or more non-separable but articulated units shall be considered to be a single vehicle.
NA (Light goods vehicle)	A goods vehicle that has a gross vehicle mass not exceeding 3.5 tonnes.

3.5 Repair instructions

The repair certifier must issue written instructions specifying the repairs to be performed in order for the vehicle to be certified.

The repair certifier and the repairer must take into account manufacturer's instructions where available, including specifications, measurements, tolerances, materials, methods and procedures. It is the repair certifier's responsibility to justify any departure from the manufacturer's instructions.

If the manufacturer's instructions are not available, the repair certifier and the repairer must take into account the instructions of a recognised repair research organisation relevant to the vehicle type, such as R-Car, I-Car, or Thatcham. In this case it is the repair certifier's responsibility to justify any departure from these instructions.

The certifier may certify repairs where no proof of the methods and parts used can be obtained, if he or she determines, on reasonable grounds, that the repairs have returned the vehicle to safe tolerance of its condition when manufactured or modified.

3.6 Establishing whether the vehicle complies

The following steps must be taken in determining vehicle compliance:

1. Examine the vehicle in a suitable state in suitable premises to determine the level and extent of damage or corrosion, or the extent and condition of repairs that have been carried out.
2. Select the relevant sections from the technical pages of this manual that relate to each structure or component that has been repaired or damaged.
3. Inspect the vehicle and documentation against the requirements listed in those sections.
4. If any of the listed reasons for rejection apply to the vehicle, the repair certifier must reject the vehicle for certification.
5. If the repair certifier requires further information in order to determine compliance with the requirements, they must reject the vehicle until the information has been obtained.

3.7 Record of certification (section 6.6 of the Rule)

1. The repair certifier must complete an LT308 for any vehicle inspected.
2. The repair certifier must retain the top copy of the LT308.
3. The repair certifier must provide one copy of the LT308 (usually the carbon copy) to the owner of the vehicle.
4. The repair certifier must hold all documentary evidence as required by the technical pages of this manual.

3.8 Collecting fees

The Land Transport (Certification and Other Fees) Regulations 1999, Regulations 5 and 8 stipulate that the fee that may be charged by a repair certifier for the certification of a vehicle is an amount determined by the individual repair certifier having regard to:

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

Introduction 4 Complaints

Customers should be encouraged to direct any complaints to the repair certifier in the first instance.

To ensure that all written complaints are investigated, the repair certifier must maintain an effective complaints management process, which must provide:

- a) a clear and concise statement that recognises the positive value of complaints
- b) clear and concise instructions to all customers on how to register a complaint; this can be accomplished in several ways, for example:
 - i. a conspicuous notice on the work place wall, or
 - ii. a clear statement on any receipt or invoice issued, or
 - iii. a clear statement on the repair certifier's checksheet
- c) 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
- d) full documentation of each complaint processed, in accordance with the NZTA *PRS* manual, to enable subsequent investigation
- e) acknowledgement in writing within three working days of any written complaint
- f) a proposed resolution to the complainant within 20 working days of the complaint being made
- g) a record of each complaint, whether verbal or written, in accordance with the NZTA *PRS* manual
- h) a clear direction to the NZTA freephone (0800 699 000) if a customer wishes to make a complaint or appeal a decision made by an inspecting organisation.

The repair certifier must ensure that the premises used for the inspection and certification of repairs comply with the applicable requirements in this section.

5.1 Premises and equipment specifications

1. The repair certifier must carry out inspection and certification of repairs in an inspection area that:
 - a) enables a safe and thorough inspection
 - b) is situated within a building that has a roof, sides and door made of permanent building materials, and
 - i. is of sufficient dimensions, including doorway and access-way, to enable the efficient and thorough inspection of any vehicle
 - ii. is on ground that is constructed of a material that will remain firm in all weather conditions
 - iii. is on ground that is even and level (the ground will be considered level when it can be demonstrated that a vehicle will remain stationary with all brakes released)
 - iv. is sufficiently clear of structural and equipment intrusions (other than those necessary for the inspection and repair process) to enable the efficient and thorough inspection of any vehicle being certified
 - v. is provided with sufficient lighting to enable good visibility of the vehicle being certified and the equipment used in the inspection process.
2. The inspection area must provide the following equipment for the repair certifier (or delegate) to use as required:
 - a) an inspection hoist that enables the efficient and thorough close visual inspection of the complete vehicle underbody
 - b) an industrial-quality, hand-held inspection lamp
 - c) a hand tool selection
 - d) a trammel bar
 - e) currently calibrated four-wheel alignment measuring equipment and data sheets
 - f) currently calibrated three-dimensional chassis measuring equipment and data sheets.

5.2 Compliance with statutory requirements

It is the repair certifier's responsibility to ensure that the premises and equipment comply, as they apply to the repair certifier or their business, with:

- occupational safety and health requirements
- any other relevant acts, regulations and local bylaws.

Introduction 6 Appointments

To be appointed to inspect and certify repairs, the candidate must meet the requirements of this section.

The candidate must:

- a) be qualified as a panel beater with a National Certificate in panel beating or another qualification considered to be the equivalent by the New Zealand Qualifications Authority
- b) have at least 10 years experience in panel beating or vehicle repair
- c) have access to the premises and equipment necessary to certify repairs
- d) have sound knowledge of all technical aspects relating to the assessment of repairs, including:
 - i. the assessment of specialist reports, for example chassis measurement sheets, SRS and ABS reports, wheel alignment reports, etc
 - ii. the assessment of the suitability of repair methods and their effect on other components and systems
- e) have knowledge of requirements specified in the *VIRM: Light Vehicle Repair Certification*
- f) 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 interests of the public and land transport safety
- g) hold a current driver licence for the class(es) of vehicles to be inspected
- h) be eligible for any required insurance cover.

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

*Vehicle Certifiers Registers
NZ Transport Agency
Transport Registry Centre
Private Bag 11777
Palmerston North 4442
Phone 0800 587 287*

Introduction 7 Sample certification documents



Figure 1. LT308

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.
Approved vehicle standard	means a vehicle standard with which a vehicle is required to comply by an applicable requirement.
Certify	means in relation to a vehicle, or specific aspect of a vehicle, to make a record of determination under section 6.6(1)(a) or 7.6(1)(a) of the Rule 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.
Class	in relation to vehicles, means a category of vehicle of one of the groups A, L, M, N, and T, as specified in Table 1 in section 3.4 of this introduction.
Compliance label	means an attachment to the vehicle in the form of a label that confirms compliance with applicable requirements.
De-registered	means that a vehicle's New Zealand registration has been cancelled in accordance with section 27 or 28 of the <i>Transport (Vehicle and Driver Registration and Licensing) Act 1986</i> .
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 <i>Transport (Vehicle and Driver Registration and Licensing) Act 1986</i> .
Inspection and certification	means the performance of two or more of the following, for the purposes of determining compliance with applicable requirements: <ul style="list-style-type: none"> • examining vehicles • determining whether or not a vehicle or specific aspect of a vehicle complies with applicable requirements • issuing evidence of vehicle inspection • 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: <ul style="list-style-type: none"> • production of a record of determination as appropriate to the inspection and certification activity, or • provision of other records and information about the vehicle to the NZTA or other persons, or • production of evidence of vehicle inspection.

Inspecting organisation	means an organisation appointed under section 2.2 of the Rule which is responsible for inspection and certification outcomes. A repair certifier is an inspecting organisation and a vehicle inspector.
Land Transport document	has the meaning stated in the <i>Land Transport Act 1998</i> .
Manufacturer's operating limits	means: <ul style="list-style-type: none"> • 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 • 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.
Modify	in relation to a vehicle, means to change the vehicle from its original state by altering, substituting, adding or removing any structure, system, component or equipment, but does not include repair.
Motor vehicle	means a vehicle drawn or propelled by mechanical power, including its structure, systems, components and equipment; it includes a trailer, but does not include: <ul style="list-style-type: none"> • a vehicle running on rails • an invalid carriage • 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 • a trailer running on one wheel and designed exclusively as a speed measuring device or for testing the wear of vehicle tyres • 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 • a pedestrian-controlled machine.
NZTA	means the NZ Transport Agency.
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.



Re-enter service	in relation to a vehicle previously certified for entry into service on the road in New Zealand and that has been deregistered, means to begin to be operated in-service again.
Registered	in relation to a vehicle, means registered under the <i>Transport (Vehicle and Driver Registration and Licensing) Act 1986</i> .
Registration number	means the combination of numbers or letters, or numbers and letters on a registration plate, issued under the <i>Transport (Vehicle and Driver Registration and Licensing) Act 1986</i> , for use on a registration plate.
Repair	in relation to a vehicle, means to restore a damaged or worn vehicle, its structure, systems, components or equipment; it includes the replacement of damaged or worn structures, systems, components and equipment with equivalent undamaged or new structures, systems, components and equipment.
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.
Specialist inspection and certification	means inspection and certification of a specific aspect of a vehicle.
Statement of compliance	means a statement in a format specified by the NZTA confirming that a vehicle or component complied with one or more approved vehicle standards when manufactured or modified.
Vehicle Identification Number (VIN)	means a group of letters and numbers consisting of 17 characters that is: <ul style="list-style-type: none"> • affixed to a vehicle in accordance with the relevant standard prescribed under Regulation 90V of the Traffic Regulations 1976, and • capable of being decoded to provide identifying information about that vehicle.
Vehicle inspector	means a person appointed under section 2.2 of the Rule to carry out inspection and certification activities in accordance with the requirements and conditions imposed by the NZTA.
Vehicle standard	means a technical specification with which a vehicle, its structure, systems, components or equipment must comply, and which is adopted by: <ul style="list-style-type: none"> • the New Zealand Standards Council; or • any international, national or regional organisation with functions similar to those of the New Zealand Standards Council.
Warrant of Fitness	means evidence of vehicle inspection, issued under sections 6.8(b) or 7.9(b) or 7.9(c) of the Rule to a vehicle in sections 7.9(b) or 7.9(c) of the Rule.
Water damage	in relation to a vehicle, means damage to a vehicle's critical safety system as a result of exposure to water.

Vehicle identification

1-1 Vehicle identification

Vehicle identification

1-1 Vehicle identification

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Standards Compliance 2002

Mandatory requirements

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

Condition

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

Reasons for rejection

- A VIN number is not valid (**Note 1** and **Note 3**).
- A VIN or chassis number has been:
 - removed, or
 - erased, or
 - altered, or
 - defaced, or
 - obscured, or
 - destroyed, or
 - obliterated, or
 - attached or reattached by a person other than an approved VIN issuing agent (**Note 5**).

Note 1 The repair certifier must record the VIN number. The chassis number may be used as a technical reference.

Note 2 A vehicle without a VIN must be referred to a VIN issuing agent (VTNZ, VINZ, NZAA, Safer Vehicle Testing) to have a VIN assigned.

Note 3 A valid VIN 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 4 If the vehicle inspector has reason to believe that the VIN or chassis number has been tampered with in any way, they must advise the NZ Police.

Note 5 If the VIN is removed or replaced during repair, the repair certifier must provide the TSD agent with all relevant information describing which parts of the vehicle were affected by the repairs and the source of any parts used (including the registration plates, VIN or chassis number of any donor vehicles). The TSD agent will complete the required documentation and reattach the VIN.

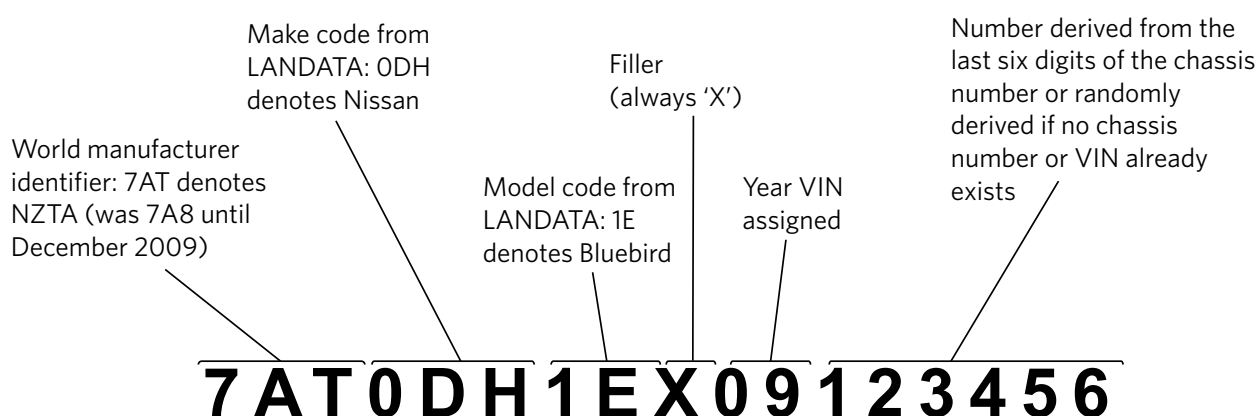


Figure 1-1. Structure of a VIN issued by the NZTA

Vehicle structure

- 2-1 Unibody chassis rails
- 2-2 Body-over-frame chassis rails
- 2-3 Sills
- 2-4 A-pillars
- 2-5 Other pillars
- 2-6 Bumpers and energy absorbers
- 2-7 Plastic repairs
- 2-8 Points of attachment

Vehicle structure

2-1 Unibody chassis rails

Summary of legislation

Applicable legislation

- Land Transport Rule: Frontal Impact 2001
- Land Transport Rule: Vehicle Repair 1998

Condition

1. 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.
2. A repair to a vehicle, its structure, systems, components or equipment must restore the damaged or worn vehicle, structure, system, component or equipment so that it is within safe tolerance of the state of the vehicle when manufactured.

Reasons for rejection

1. The performance of a frontal impact occupant protection system has been affected by any factor, including corrosion, structural damage, material degradation, inadequate repair, the fitting of additional equipment or the removal of equipment.
2. A chassis rail has not been replaced when there is evidence that it had been deformed so that a localised kink of 90° or more has been formed over a small radius.
3. A chassis rail has not been replaced or sectioned when there are visible cracks, tears or splinters before or after the chassis rail is straightened.
4. A crush zone has been repaired where this is not permitted in the manufacturer's instructions.
5. A rail has been over-stretched during repair.
6. Heat has been applied to a chassis rail in a manner that is not permitted in the manufacturer's instructions.
7. Rails have been heated as part of the repair and the manufacturer's temperatures and time limits have not been followed, or evidence of this process has not been provided (**Note 2**).
8. Heat has been applied to a rail in a manner that does not follow the manufacturer's specifications.
9. A rail has been sectioned when the manufacturer prohibits sectioning of rails.
10. A rail has been sectioned using any procedure that is prohibited by the manufacturer.
11. A recognised repair research organisation's procedures have not been followed to section a rail when the manufacturer's instructions are not available.
12. Unless permitted by the manufacturer's instructions, a chassis rail has been sectioned in or near the following locations:
 - a) engine, suspension, steering or drive train mounting point, or
 - b) crush zone.

Note 1 The replacement of damaged parts at factory seams should be done whenever practicable and when required by the vehicle manufacturer.

Note 2 If a rail is heated as part of a repair, evidence of the process must be provided in the vehicle file. This should include such information as the manufacturer's specifications, temperature indicator used, and the time that the heat was applied for.

Vehicle structure

2-2 Body-over-frame chassis rails

Summary of legislation

Applicable legislation

- Land Transport Rule: Frontal Impact 2001
- Land Transport Rule: Vehicle Repair 1998

Condition

1. 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.
2. A repair to a vehicle, its structure, systems, components or equipment must restore the damaged or worn vehicle, structure, system, component or equipment so that it is within safe tolerance of the state of the vehicle when manufactured.

Reasons for rejection

1. The performance of a frontal impact occupant protection system has been affected by any factor, including corrosion, structural damage, material degradation, inadequate repair, the fitting of additional equipment or the removal of equipment.
2. A chassis rail has not been replaced when there is evidence that it has been deformed so that a localised kink of 90° or more has been formed over a small radius.
3. A chassis rail has not been replaced or sectioned when there are visible cracks, tears and or splinters before or after the chassis rail is straightened.
4. A crush zone has been repaired where this is not permitted in the manufacturer's instructions.
5. A rail has been over-stretched during repair.
6. Rails have been heated as part of the repair and evidence that this process has been carried out to the manufacturer's temperatures and time limits has not been documented (**Note 2**).
7. Heat has been applied to a chassis rail where this is not permitted in the manufacturer's instructions.
8. A rail has been sectioned when the manufacturer prohibits sectioning of rails.
9. A rail has been sectioned but not following the manufacturer's instructions.
10. A recognised repair research organisation's procedures have not been followed to section a rail when the manufacturer's instructions are not available.
11. Unless permitted by the manufacturer's instructions, a chassis rail has been sectioned in or near the following locations:
 - a) engine, suspension, steering or drive train mounting point, or
 - b) crush zone.

Note 1 The replacement of damaged parts at factory seams should be done whenever practicable and when required by the vehicle manufacturer.

Note 2 If a rail is heated as part of a repair, evidence of the process must be provided in the vehicle file. This should include such information as the manufacturer's instructions, temperature indicator used, and the time that the heat was applied for.

Vehicle structure

2-3 Sills

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Repair 1998
- Land Transport Rule: Frontal Impact 2001

Condition

1. 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.
2. A repair to a vehicle, its structure, systems, components or equipment must restore the damaged or worn vehicle, structure, system, component or equipment so that it is within safe tolerance of the state of the vehicle when manufactured.

Reasons for rejection

1. A sill has been sectioned where this is not permitted in the manufacturer's instructions.
2. A sill has been sectioned but not following either the manufacturer's instructions or a recognised repair research organisation's procedures.
3. A sill has been sectioned but not using one of the following procedures (unless the procedure used is permitted by the manufacturer or a recognised repair research organisation):
 - a) lap joint, or
 - b) offset butt or offset lap joint with appropriate inserts, or
 - c) butt joint with an insert, or
 - d) a 25 mm overlap with MIG plug welds.

Note 1 Damaged parts should be replaced at factory seams whenever practicable and when required by the vehicle manufacturer.

Vehicle structure

2-4 A-pillars

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Repair 1998
- Land Transport Rule: Frontal Impact 2001
- Land Transport Rule: Glazing, Windscreen Wipe and Wash, and Mirrors 1999

Condition

1. A repair to a vehicle, its structure, systems, components or equipment must restore the damaged or worn vehicle, structure, system, component or equipment so that it is within safe tolerance of the state of the vehicle when manufactured.
2. 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.
3. Glazing must be mechanically sound, strong and securely affixed to the vehicle.

Reasons for rejection

1. An A-pillar has been sectioned when the manufacturer prohibits repairs to the A-pillar.
2. An A-pillar has been sectioned but not following either the manufacturer's methods or a recognised repair research organisation's procedures.
3. An A-pillar has been sectioned but not using one of the following procedures (unless specifically permitted by the manufacturer, or a recognised repair research organisation):
 - a) butt joint with an insert, or
 - b) offset butt joint, or
 - c) offset butt joint with an insert, or
 - d) a 25 mm overlap with MIG plug welds.
4. A foam-filled pillar has not had the foam replaced with the correct foam.
5. Filler has been applied to the windscreen bonding face of the pillar where this is not permitted in the manufacturer's instructions.
6. An incorrect etch primer has been applied to the windscreen bonding face of the pillar.

Note 1 Damaged parts should be replaced at factory seams whenever practicable and when required by the vehicle manufacturer.

Vehicle structure

2-5 Other pillars

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Repair 1998
- Land Transport Rule: Frontal Impact 2001
- Land Transport Rule: Seatbelts and Seatbelt Anchorages 2002
- Land Transport Rule: Door Retention Systems 2001

Condition

1. A repair to a vehicle, its structure, systems, components or equipment must restore the damaged or worn vehicle, structure, system, component or equipment so that it is within safe tolerance of the state of the vehicle when manufactured.
2. 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.
3. A seatbelt anchorage and its mounting location must:
 - a) be of a strength appropriate to both the vehicle and the seatbelt, and
 - b) be structurally sound and free of corrosion, and
 - c) not be damaged or distorted.
4. A door retention system and its mountings must be safe, structurally sound and in good working order.

Reasons for rejection

1. A pillar has been sectioned where this is not permitted in the manufacturer's instructions.
2. A pillar has been sectioned without following either the manufacturer's instructions or a recognised repair research organisation's procedures.
3. An A-pillar has been sectioned but not using one of the following procedures (unless specifically permitted by the manufacturer or a recognised repair research organisation):
 - a) butt joint with an insert, or
 - b) offset butt joint, or
 - c) offset butt joint with an insert, or
 - d) a 25 mm overlap with MIG plug welds.
4. A foam-filled pillar has not had the foam replaced with the correct foam.
5. An inner pillar has been cut or patched in either of the following locations (unless the manufacturer allows it):
 - a) above the seatbelt anchorage reinforcement, or
 - b) within 300 mm of a seatbelt retractor anchorage.
6. In the absence of specific permission in the manufacturer's instructions, a pillar has been cut in one of the following locations:
 - a) through sill panel reinforcements
 - b) within 150 mm of a door latch
 - c) within 150 mm of a door hinge.

Note 1 Damaged parts should be replaced at factory seams whenever practicable and when required by the vehicle manufacturer.

Vehicle structure

2-6 Bumpers and energy absorbers

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Repair 1998
- Land Transport Rule: Frontal Impact 2001

Reasons for rejection

1. In the absence of specific permission in the manufacturer's instructions, one of the following components has been repaired:
 - a) high strength steel bumper reinforcements
 - b) aluminium bumper reinforcements
 - c) structural fibre and composite bumpers
 - d) non-mechanical energy absorbers.

Vehicle structure**2-7 Plastic repairs****Summary of legislation****Applicable legislation**

- Land Transport Rule: Vehicle Repair 1998
- Land Transport Rule: Frontal Impact 2001

Reasons for rejection

1. In the absence of specific permission in the manufacturer's instructions, one of the following components has been repaired:
 - a) fuel tank or line
 - b) structural composite parts and components
 - c) energy absorbing bumper
 - d) composite leaf spring.

Vehicle structure**2-8 Points of attachment****Summary of legislation****Applicable legislation**

- Land Transport Rule: Vehicle Repair 1998

Reasons for rejection

1. A structure which is used as a point of attachment (**Note 1**) does not provide a secure mounting (**Note 2**).

Note 1 A point of attachment is the structure where legally required components such as headlamps, rear-view mirrors, etc are fitted.

Note 2 See **Technical bulletin 1** for further information regarding corrosion in Nissan Terrano or Mistral rear floor pan assemblies.

Vision

3-1 Windscreen

Vision 3-1 Windscreen

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Repair 1998
- Land Transport Rule: Glazing, Windscreen Wipe and Wash, and Mirrors 1999

Mandatory equipment

1. Windscreens fitted to the following vehicles must be made of laminated glass:
 - a) vehicles of class MA, MB, MC and NA manufactured on or after 1 July 1986
 - b) vehicles of class MD1 and MD2 manufactured on or after 1 July 1997
 - c) vehicles not covered by any of the defined vehicle classes manufactured on or after 1 January 2001.
2. All glazing fitted to vehicles of class LA, LB1, LB2, LC, LD, LE1 and LE2 must be made of a transparent material that does not shatter.

Compliance with approved standards

3. Windscreens fitted to the following vehicles must comply with one or more of the approved glazing standards in **Table 3-1-1**:
 - a) vehicles of group M and N manufactured on or after 1 January 1960, and
 - b) vehicles not covered by any of the defined vehicle classes manufactured on or after 1 January 2001.
4. Glazing in locations other than windscreens fitted to the following vehicles must comply with one or more of the approved glazing standards in **Table 3-1-1**:
 - a) vehicles of group M (**Note 2**) and N manufactured on or after 1 February 1977 (**Note 1**)
 - b) vehicles not covered by any of the defined vehicle classes manufactured on or after 1 January 2001.

Condition

5. A windscreen must be mechanically sound, strong and securely affixed to the vehicle.
6. A windscreen must not have scratches or other defects that:
 - a) unreasonably impair vision, or
 - b) compromise its strength.

Reasons for rejection

1. A windscreen that is required to be made of laminated glass is not made of laminated glass.
2. The incorrect adhesive has been used to bond in a piece of glazing.
3. A piece of glazing that is required to comply with an approved glazing standard did not comply, or cannot be demonstrated to have complied, with at least one of the standards listed in **Table 3-1-1** at the time the glazing was fitted (**Note 3**).
4. A windscreen that has been repaired has not been repaired to an approved standard.
5. There is no documentation to support that a repair to a windscreen has been completed to an approved standard.
6. A piece of glazing fitted to a vehicle of class LA, LB1, LB2, LC, LD, LE1 or LE2 is not made of a transparent material that does not shatter.
7. A windscreen has scratches, discolouration or other defects that unreasonably impair the driver's vision or compromise the strength of the windscreen.
8. The windscreen bonding area of the A-pillar has been repaired and the original glazing adhesive has not been removed fully or until only a thin film is left before the new adhesive was used.
9. The wrong adhesive has been used previously and the original glazing adhesive has not been removed fully before the new adhesive was used.

Note 1 For a vehicle manufactured before 1 January 1991, a glazing marking which contains one or more of the approved trade names in **Table 3-1-2** is evidence that a piece of glazing complies with an approved glazing standard.

Note 2 Curved scenic skylights above the cant rail, curved windows at the front and rear corners, skylights, louvres and interior partitions in omnibuses (vehicles of class MD1 and MD2) are not required to comply with approved glazing standards if they are made of transparent material that does not shatter.

Note 3 Any repairs to a windscreen must have documentation to show that the repair was carried out to an approved standard.

Vision

3-1 Windscreen (cont.)

Table 3-1-1 List of approved glazing standards*

UN-ECE Regulation No.	EEC/EC Directive	FMVSS	ADR	Japan	Others
43	92/22	205	8	TS for Window Glass or JIS R3211	BS 857 BS 5282 BS AU 178a ANSI/SAE Z26.1 NZS 5443 AS 2080 AS/NZS 2080 SABS 1191/1193 or ABG (behind driver only)

* A piece of glazing that is required to comply with an approved glazing standard must comply with at least one of the standards listed in the table.

Table 3-1-2 Approved trade names

Armourfloat	Safetyflex
Armourplate	Safety MGB (Meloplate)
Blindex	Safety MGB (Melite Safety Plate)
Duolite Safety	Sekurit
Duplicate Safety	Sigla
Flolite	Spectrofloat
Ford Indestructo	Splintex
Ford Safety Glass	Sunmat
Ford Silver Arrow	Suntex Safety Glass
Glacetex	Temperlite
Hankuk Glass Safety Heat Line	Temperlite Santa Marina
HMC Glass Safety Hankuk TF5	Thorex Connex
HMC Glass Safety Hankuk TV5	Triplex
Indestructo	Triplex Plate
Nippon Safety	Tuflite
NM Laminated Safety Glass FHP	Tyneside
Peerless	Veracetex
Plexite	



The following standard markings may assist in determining compliance with approved standards.

New Zealand Standards



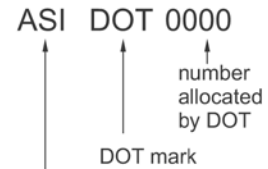
Australian Standards



British Standards



Federal Motor Vehicle Safety Standards (FMVSS)



Economic Commission for Europe (ECE)



Japanese Industrial Standards



South African Bureau of Standards



NOTE: The marking may be rearranged as shown in the windscreen markings above.

Glazing marked with the Allgemeine Bauartgenehmigung (ABG)

- manufacturer's trade name (e.g., Roxite), and
 - approval number (e.g., ~D2406)
- may be used only for glazing behind the driver.

>PMMA< FBJ

SEITZ SRE

D2307

AGP1000x0600



NOTE: The marking must have manufacturer's name (eg, Seitz) and ABG approval (eg, D2307).

Figure 3-1-1. Approved standards markings

<p>DOT 266 AS1 M 4 7 1 NZS 5443 LF AS 2080 Lic 2004 W.H.P Lic 210</p> BS 857-2:1967 <p> PILKINGTON New Zealand</p>	<p>LAMINATED F WHP</p> BS 857 <p>Kinonglas-Kristall-FIRA/F BFB-HI DOT 31 / M 75.4 / AS 1 DGM 36593 VSP</p> D 396	STADIP-V 43R-001009 M94 AS1-DOT211 E-00048 H8	<p>NISSAN LAMPANE DOT 23</p> LP <p>NISSAN SAFETY AS1 NSG.M491</p>
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Figure 3-1-2. Typical laminated glazing markings

Table 3-1-3 Glossary of codes for laminated glass

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
WHP =	complies with impact test
DOT =	Department of Transport (USA)
ATS or AIS =	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 =	plastic glazing not suitable for driver's vision

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









<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>

Figure 3-1-3. Types and maximum sizes of windscreen damage

Entrance and exit

4-1 Door and hinged panel retention systems

Entrance and exit

4-1 Door and hinged panel retention systems

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Repair 1998 2.1(1)
- Land Transport Rule: Door Retention Systems 2001

Condition

1. A repair to a vehicle, its structure, systems, components or equipment must restore the damaged or worn vehicle, structure, system, component or equipment so that it is within safe tolerance of the state of the vehicle, structure, system, component or equipment when manufactured.

Mandatory equipment

2. 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

3. 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).
4. 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.

Performance

5. A door retention system and its mountings must be safe and structurally sound.
6. 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.
7. The vehicle must be repaired using components and materials that are fit for their purpose, and return the vehicle within safe tolerance of its state when manufactured or modified.
8. A door retention system must be in good working order.
9. A door used for entrance and exit must open and close easily.
10. A door used for entrance and exit must remain secure in a closed position during the operation of the motor vehicle.

Reasons for rejection

1. 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.
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 due to loose connections, corrosion or other damage.
3. A door used for entrance and exit cannot be opened from the inside.
4. A door used for entrance and exit does not open or close easily.
5. A door or other hinged panel does not remain secure in a closed or locked position.
6. A side door intrusion beam has been removed or is missing (where one is required).
7. A side intrusion beam has been repaired without specific permission in the manufacturer's instructions.

Vehicle interior

- 5-1 Seats and seat anchorages
- 5-5 Seatbelts and seatbelt anchorages
- 5-6 Airbags
- 5-7 Interior impact

Vehicle interior

5-1 Seats and seat anchorages

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Repair 1998, 2.1(1)
- Land Transport Rule: Seats and Seat Anchorages 2002

Condition

1. A repair to a vehicle, its structure, systems, components or equipment must restore the damaged or worn vehicle, structure, system, component or equipment so that it is within safe tolerance of the state of the vehicle, structure, system, component or equipment when manufactured.

Mandatory equipment

2. A motor vehicle must be fitted with a driver's seat.
3. A seat in a motor vehicle must be fitted to the vehicle structure by means of seat anchorages.

Performance

4. Seats and seat anchorages must be safe, strong and in sound condition.
5. Seats and seat anchorages must be securely attached to the vehicle structure.
6. A replacement seat that is similar to the OE seat may be used provided that:
 - a) the seat is fitted to unmodified OE seat anchorages
 - b) the relationship between the seat, seat occupant and location of the seatbelt anchorages has not been affected.

Reasons for rejection

1. The vehicle is not fitted with a driver's seat.
2. An OE seat is missing or not fitted.
3. A seat is not attached to the vehicle structure by seat anchorages.
4. Damage or corrosion has weakened a seat frame.
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 (see **Technical bulletin 1** for further information on corrosion in Nissan Terrano or Mistral rear floorpan assemblies).
7. A seat frame has been repaired when this is prohibited by the manufacturer.
8. A seat has not been replaced after the seatbelt pre-tensioner system has been activated when this is required by the manufacturer's specifications.
9. A replacement seat has been used instead of an OE seat, and:
 - a) the seat is not fitted to unmodified OE seat anchorages, or
 - b) the relationship between the seat, seat occupant and location of the seatbelt anchorages has been affected, or
 - c) the replacement seat is not similar to the OE seat, that is a bench seat or bucket seats.

Vehicle interior

5-5 Seatbelts and seatbelt anchorages

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Repair 1998
- Land Transport Rule: Seatbelts and Seatbelt Anchorages 2002

Mandatory equipment

1. A motor vehicle must be fitted with seatbelts as specified in **Table 5-5-1** to **Table 5-5-3**.

Reasons for rejection

1. A seatbelt of the type specified in **Table 5-5-1** to **Table 5-5-3** has not been fitted for a seating position where one is required to be fitted.
2. A seatbelt is fitted, but it is not the type specified in **Table 5-5-1** to **Table 5-5-3** for the seating position.
3. The seatbelt assembly is not securely fixed to a seatbelt anchorage. (see **Technical bulletin 1** for further information on corrosion in Nissan Terrano or Mistral rear floorpan assemblies).
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 so 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, or
 - f) signs of chalking, or a powdery residue is evident on the webbing, or
 - g) become stiff, or
 - h) been dyed to conceal fading, or
 - i) contamination from grease, paint, solvents or similar products.
6. The seatbelt stitching:
 - a) is damaged or insecure, or
 - b) shows signs of home repairs, eg glueing, stitching by hand or home sewing machine, staples, bolts, or rivets, or
 - c) indicates that the 'rip stitch' system has been activated, that is the stitching is broken and a 'REPLACE BELT' label has been exposed near the lower seatbelt anchorage, or this label has been cut off.

Vehicle interior

5-5 Seatbelts and seatbelt anchorages (cont.)

Reasons for rejection

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 seatbelt stalk:
 - a) (wire-cable type) has wires that appear to be broken, or
 - b) (plastic covered webbing type) has webbing that 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.
9. A seatbelt with a pre-tensioning or pyrotechnic system has not been replaced after activation.
10. A seatbelt anchorage shows signs of cracks or deformation.
11. A diagnostic report has not been completed by the manufacturer or an approved representative for seatbelts that are connected to an ECU.
12. A seatbelt that is known to have been worn during a crash has not been replaced unless:
 - a) this is permitted in the manufacturer's instructions
 - b) the seatbelt has been inspected and certified to be within safe tolerance by the manufacturer or an approved agent.
13. A water-damaged vehicle is fitted with a seatbelt assembly that has been immersed or a second-hand replacement seatbelt assembly, and the assembly has not been inspected and certified to be within safe tolerance by the manufacturer or an approved agent.

Key to Table 5-5-1 to Table 5-5-3: Types of seatbelt

—	No seatbelt required
L	Lap seatbelt
S	Static lap and diagonal seatbelt without a retractor
R1	Single-sensitive emergency locking retractor lap and diagonal seatbelt
R2	Multiple (dual) sensitive emergency locking retractor lap and diagonal seatbelt

**Table 5-5-1 Vehicles first registered in New Zealand before 1 January 1991**

Vehicle class	Seating position (Note 5)	First registered anywhere	
		1 January 1955 to 31 October 1979	1 November 1979 to 31 December 1990
MA, MB, MC LE (without motorcycle controls)	Front outer and driver's (Note 1)	S ²	R2 ^{1,3}
	Front middle (Note 1)	—	L
	Rear outer (Note 1)	—	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

Table 5-5-2. Vehicles first registered in New Zealand from 1 January 1991 to 31 March 2002

Vehicle Class	Seating position	First registered anywhere	
		1 January 1955 to 31 December 1960	1 January 1961 to 31 December 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 1)

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 retro-fitted from 1 October 2003 (Note 1)

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. If missing, refer the vehicle to a TSD agent.

Vehicle interior

5-5 Seatbelts and seatbelt anchorages (cont.)

Table 5-5-3. Vehicles first registered in New Zealand from 1 April 2002

Vehicle class	Seating position	Manufactured		
		1 January 1955 to 31 October 1979	1 November 1979 to 30 September 2003	From 1 October 2003
MA, MB, MC LE (without motor cycle 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)	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	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 1**)

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 1**)

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. If missing, refer the vehicle to a TSD agent.

Note 1 Definitions

Outer seating position means a seating position next to a side wall of the vehicle where there is no more than 500 mm between the longitudinal centre of the seat and the side wall.

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.

Vehicle interior

5-6 Airbags

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Repair 1998
- Land Transport Rule: Frontal Impact 2001

Mandatory equipment

1. A frontal impact airbag, its operating system and its warning light system must remain operational if the vehicle was originally manufactured with a frontal impact airbag.
2. 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.
3. A motor vehicle must not have a light or other device indicating an airbag operating system is operable if it is inoperable.
4. Airbags may be removed or made inoperable in a vehicle that is more than 14 years old from the date of first registration; however, the vehicle must then be low volume vehicle certified.
5. Airbags may be removed or made inoperable in a vehicle that has been modified for disability or specialist use; however, the vehicle must then be low volume vehicle certified.

Permitted equipment

6. A switch may be installed as OE to render an airbag temporarily inoperable.

Performance

7. An airbag and its operating system must be safe and in good condition.
8. An airbag warning light fitted by the manufacturer must remain operational.

Reasons for rejection

1. A deployed airbag has not been replaced where the vehicle is less than 14 years old and the vehicle has not been low volume vehicle certified.
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 and there are no other signs to say it has been removed.
4. An airbag cover:
 - a) is damaged, or
 - b) has deteriorated, or
 - c) shows signs of tampering.
5. The airbag warning light:
 - a) does not operate, or
 - b) indicates a fault in the system.
6. An airbag that failed to deploy when involved in a crash above the deployment threshold has not been replaced.
7. An airbag component such as the impact sensor, clock spring or wire harness has been repaired where this is not permitted in the manufacturer's instructions.
8. An airbag component has been replaced and the specifications are different from the original component.
9. A salvaged replacement air bag and its associated components have been fitted without evidence of their fitness for purpose, including their source and the storage conditions of the donor vehicle and the airbag and its components (**Note 1**).
10. A declaration is produced for the airbag system stating that not all components and connections are within specifications (**Note 2**).
11. A declaration has not been completed when there is damage beyond the radiator support panel (**Note 2**).

Note 1 See **Technical bulletin 2** for further information on salvaged airbags.

Note 2 See **Technical bulletin 3** for an explanation of declaration requirements.

Vehicle interior**5-7 Interior impact****Summary of legislation****Applicable legislation**

- Land Transport Rule: Vehicle Repair 1998
- Land Transport Rule: Interior Impact 2001

Performance

1. Interior fittings, controls, and surfaces in the passenger compartments must be such that the likelihood of injury to occupants is minimised.

Reasons for rejection

1. An interior fitting, control, or surface of a motor vehicle has deteriorated to such an extent that the likelihood of injury to occupants is increased.
2. An interior fitting, control, or surface has been repaired or replaced in such a way that the likelihood of injury to occupants is increased.

Brakes

6-1 Service brake and parking brake

Brakes

6-1 Service brake and parking brake

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Repair 1998
- Land Transport Rule: Light-vehicle Brakes 2002

Mandatory equipment

1. Vehicles must have a service brake that acts on each wheel, except in the following cases:
 - a) A vehicle of class MA, MB, MC, MD1, MD2, or NA first registered anywhere before 1 February 1977 may have a service brake that is designed to act on fewer than four wheels.
 - b) 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.
 - c) A vehicle 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.

Permitted equipment

2. A vehicle may be fitted with a warning system that is part of, or associated with, the use of a brake component or system.

Performance

3. 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 safe performance of the brake is adversely affected.

Reasons for rejection

1. Brake fluid in the master cylinder reservoir shows signs of dirt or contamination when the vehicle has been water damaged.
2. Any replacement used parts are outside the manufacturer's wear limits or specifications.
3. The service brake pedal is insecure.
4. A brake pipe (including connections) is:
 - a) insecure, or
 - b) deformed from its original shape, or
 - c) corrosion damaged, for example there are signs of pitting or a noticeable increase in the pipe's outside diameter, or
 - d) routed incorrectly, or
 - e) not supported in all the original manufacturer's locations using supporting clamps and clips.
5. A brake calliper is insecure.
6. An ABS system component is damaged, insecure or missing.
7. A brake disc or drum is fractured or otherwise damaged.
8. The ABS or brake system warning lamp or self-check system, if fitted, indicates a defect in the ABS or brake system.
9. A declaration stating that a full diagnostic check has been completed by the manufacturer, an approved representative, or a recognised technician where any part of the ABS system has been repaired, replaced or damaged is not available (**Note 1**).
10. A declaration stating that a full diagnostic check has been completed by the manufacturer, an approved representative, or a recognised technician where the damage to the vehicle extends beyond the radiator support panel is not available (**Note 1**).
11. The parking brake lever:
 - a) is insecure, or
 - b) mounting is damaged, corroded, distorted, or
 - c) is fractured within 150 mm of the lever mounting.
12. A brake component shows signs of heating or welding after original manufacture.

Note 1 See **Technical bulletin 3** for an explanation of declaration requirements.

Steering and suspension

7-1 Steering and suspension systems

Steering and suspension

7-1 Steering and suspension systems

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Repair 1998
- Land Transport Rule: Steering Systems 2001

Condition

1. A steering system and any associated systems and components that could affect the directional control of a vehicle must:
 - a) be in good condition and provide the vehicle with safe, efficient, convenient and sensitive control, and
 - b) be strong, durable and fit for their purpose, taking into account whether adverse affects have resulted from a loss of integrity of any protective system used by a relevant component.

Reasons for rejection

1. In the absence of specific permission in the manufacturer's instructions:
 - a) a steering or suspension component has been welded as part of the repair, or
 - b) a steering or suspension component has been heated as part of the repair.
2. A steering or suspension component that has been damaged has not been replaced.
3. An original steering or suspension component has been retained during the repair that may have been damaged, and has not been disassembled and subjected to non-destructive testing by an approved CBIP inspector qualified in the process used.
4. The steering and suspension components have not been repaired so that they are within safe tolerance of the state of the system, component or equipment when manufactured.
5. New bolts of the same grade and size as the original bolts have not been used for replacement when the damage is a direct result of impact to steering or suspension components, or when stretch bolts are used.
6. A second-hand replacement component is worn beyond manufacturer's tolerances.
7. The steering wheel is insecurely attached to the steering shaft.
8. The steering column:
 - a) is insecure, or
 - b) has not been replaced if it was a collapsible column and it was damaged, or
 - c) has been repaired if it was a collapsible column.
9. 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) does not operate smoothly without roughness or stiffness, or

Reasons for rejection

- e) is fouling on the vehicle structure, wheel, tyre or brake system component.
10. 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) does not operate smoothly without roughness or stiffness.
11. A steering linkage or joint, steering arm or associated equipment, or 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) does not operate smoothly without roughness or stiffness, or
 - e) is fouling on the vehicle structure, wheel, tyre or brake system component.
12. A lock stop is loose or damaged.
13. A steering component mounting point:
- a) is insecure, or
 - b) has corrosion damage, buckling or fractures.
14. A front or rear 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) does not operate smoothly without roughness or stiffness, or
 - e) shows excessive play, roughness or stiffness in a strut upper support bearing.

Vehicle measurement

- 8-1 Three-dimensional chassis measurement
- 8-2 Four-wheel alignment measurement

Vehicle measurement

8-1 Three-dimensional chassis measurement

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Repair 1998

Reasons for rejection

1. A three-dimensional chassis measurement has not been completed when:
 - a) more than one panel requires repairs and/or replacement, or
 - b) a chassis rail has been damaged or displaced, or
 - c) where there is corrosion damage and the vehicle structure has deformed or collapsed.
2. A trammel bar measurement (or three-dimensional chassis measurement) has not been completed when:
 - a) only one panel requires repairs and/or replacement, or
 - b) there is no damage or displacement of a chassis rail or structural body section.
3. A trammel bar measurement has been completed and a four-wheel alignment has not been completed.
4. When a trammel bar has been used, the four-wheel alignment measurements cannot be brought within the manufacturer's specifications.
5. The actual measurements have not been recorded.
6. Where no measurement tolerances are available, the chassis measurement exceeds a measurement tolerance of ± 3 mm for a unibody or ± 5 mm for a body-over-frame vehicle.
7. The measurements of the vehicle are not within the vehicle manufacturer's or measurement sheet's specified measurement tolerances (**Note 2**).
8. An incorrect measurement sheet for the vehicle has been used (eg make, model, mechanical components in or out).
9. The vehicle has not been measured by the repair inspector or by a technician recognised as competent by the repair certifier.
10. The measurements have not been signed off by the repair inspector or by a technician recognised as competent by the repair certifier.
11. The measurement system used is not currently calibrated.

Vehicle measurement

8-1 Three-dimensional chassis measurement (cont.)

Reasons for rejection

12. Inadequate measurements have been taken to determine whether the vehicle is within specification.

Note 1 It is recommended that vehicles manufactured after 1 January 2004 be measured using an electronic measuring system.

Note 2 No chassis measurement is required when the only repairs are for corrosion damage and the damaged area or components shows no sign of deformation or collapse of the structure.

Note 3 The vehicle does not have to be returned to within the original specifications if it can be shown that there are no adverse effects to the structure, components or equipment. This must be noted on the LT308 with an explanation. However, there is no requirement for the TSD agent to accept these comments and they do not have to accept the LT308.

Note 4 The measurement sheet must be retained by the repair certifier with the vehicle file.

Vehicle measurement

8-2 Four-wheel alignment measurement

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Repair 1998

Reasons for rejection

1. A four-wheel alignment has not been completed when:
 - a) corrosion has affected a steering or suspension attachment, or
 - b) other damage has affected steering or suspension.
2. The measurements of the vehicle are not within the specified tolerance.
3. The measurements have not been taken by a technician approved by the repair certifier.
4. The four-wheel alignment machine is not currently calibrated.

Note 1 A copy of the wheel alignment report must be retained by the repair certifier with the vehicle file.

General repairs

- 9-1 Water damage
- 9-2 Welding
- 9-3 Replacement components
- 9-4 Corrosion protection

General repairs

9-1 Water damage

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Repair 1998
- Land Transport Rule: Vehicle Standards Compliance 2002

Repair requirements

1. The vehicle must be treated as though it has been fully immersed in water contaminated with silt and/or corrosive salts.
2. All body panels and structure must have all water contamination and residue removed from their cavities and the vehicle's corrosion protection restored.
3. If there is evidence that the vehicle has not been fully immersed and/or the composition of the water is known and a deviation from the requirements of **Table 9-1-1** is sought, this must be presented to the Vehicles Unit of the NZTA and permission granted to deviate from the requirements listed in the table.

Certification process

4. The repair certifier must specify what repairs must be carried out to reinstate the vehicle to requirements of the Repair Rule (and any other relevant rules). The repair certifier should indicate at what stages he wishes to inspect the vehicle before repairs can proceed.
5. When carrying out inspections, the repair certifier must obtain documents that outline the history of the replacement components. The Repair Rule requires that designated components must be replaced with new or with used components. For used components the full history of the donor vehicle must be known and that history must not prevent the vehicle from being restored to within safe tolerance of its state when first manufactured.
 - a) Intermediate inspections must occur at a time when a repair certifier can determine with confidence that the repairs have been carried out in accordance with their instructions and the rules.
 - b) In the final inspection a repair certifier must only certify a vehicle as being compliant, if they are fully satisfied that all necessary repairs have been completed to their instructions and the vehicle is now compliant with the Rule.
 - c) Once point (b) is complete the vehicle may go through the entry level inspection to allow it to be registered. The vehicle is still subject to the entry requirements.

Reasons for rejection

1. A safety-related component, part or system has not been inspected and replaced as described in **Table 9-1-1**.
2. A body panel has not had all water contamination and residue removed from its cavities and the vehicle's corrosion protection restored.
3. During the inspection of a vehicle there is evidence found that the vehicle has been water damaged and it has not been recorded as water damaged by the NZTA.
4. The vehicle has not been treated as though it has been fully immersed in water contaminated with silt and/or corrosive salts.
5. A body panel or structure has water contamination or residue.
6. Corrosion protection has not been restored as near as is practicable to the OE specifications.
7. The manufacturer's repair procedures have not been followed for all replacement parts, components or systems.
8. An item in the far right-hand column of **Table 9-1-1** that has been retained has not been certified as within safe tolerance by the manufacturer or an approved agent.

Note 1 If there is conclusive evidence to support that the vehicle has not been fully immersed and a deviation from the requirements of **Table 9-1-1** is sought this must be presented to the Vehicles Unit of the NZTA and permission granted to deviate from the requirements listed on page 9-1-3.

Note 2 The repair certifier must retain documented proof of all replacement components with the vehicle file.

Note 3 Components that are not designed to be stripped must be replaced.

General repairs

9-1 Water damage (cont.)

Note 4 Where any component is retained and requires inspection, a record of this must be retained by the repair certifier with the vehicle file.

Note 5 The repair certifier must contact the Vehicles Unit if the repair certifier notes at any stage that the vehicle has been subjected to water damage and that the vehicle is not noted in Landata as being water damaged.

Note 6 Once the vehicle has been certified, a copy of the file must be forwarded to the Vehicles Unit (Vehicles Unit, NZ Transport Agency, PO Box 5084, Lambton Quay, Wellington 6145). They will sign off the file, provided they are satisfied that the vehicle has in fact been repaired in accordance with the Rule. The Vehicles Unit Technical Manager will issue an authorisation (LT351) to allow the vehicle to proceed to entry level certification.

Table 9-1-1. Water damaged vehicle safety related components

Part	Action		
	Component can be replaced with non-used genuine components	Component can be replaced with used components	The original components can be reused after being stripped, inspected and tested by the manufacturer or an approved representative
Front seatbelt assemblies	•	•	• ¹
Rear seatbelt assemblies	•	•	• ¹
Seatbelt pre-tensioners	•	•	
Driver's airbag	•	• ²	
Passenger's airbag	•	• ²	
Side airbags	•	• ²	
Other airbags	•	• ²	
SRS control module	•	•	
SRS sensor(s)	•	•	
SRS wiring loom	•	•	
SRS relay(s)	•	•	
SRS clockspring	•	•	
ECU (incorporating SRS function)	•	•	
ECU (no SRS/safety function)	•	•	•
Wiring loom	•	•	
ABS actuator	•	•	•
ABC control module	•	•	•
Brake master cylinder	•	•	•

--

Part	Action		
	Component can be replaced with non-used genuine components	Component can be replaced with used components	The original components can be reused after being stripped, inspected and tested by the manufacturer or an approved representative
Brake booster system	•	•	•
Brake calipers	•	•	•
Drum brake cylinders and parts	•	•	•
Line pressure valves	•	•	•
Brake lamp switch	•	•	•
Ignition switch	•	•	•
Lamp switches	•	•	•
Lamp wiring and connectors	•	•	•
Lamp relay(s)	•	•	•
Horn, relay and switch	•	•	•
Wiper motor and switch	•	•	•
Speedometer	•	•	•
Door locks and latches	•	•	•
Brake fluid	•	•	
Power steering fluid	•	•	
Lamp assemblies	•	•	•
Glazing	•	•	•
Throttle cable	•	•	•
Handbrake cable	•	•	•

- ¹ Seatbelts may be repaired. Refer to Reason for rejection 7.
- ² Refer to section 5-3 Airbags in this manual
 - The component must only be replaced using one of these options.

General repairs

9-2 Welding

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Repair 1998

Repair requirements

1. The repair method used to comply a vehicle must take into account:
 - a) the date of manufacture of the vehicle, and
 - b) the class, make and other relevant characteristics of the vehicle, and
 - c) the approved vehicle standards with which the vehicle is required to comply, and
 - d) any relevant manufacturer's recommendations and alternative methods, and
 - e) the material specifications used for the construction of the vehicle, its structure, systems, components or equipment, and
 - f) the compatibility of the intended repair process with material specifications.

Reasons for rejection

1. The manufacturer's welding procedures have not been followed.
2. A recognised repair research organisation's procedures have not been followed (when the manufacturer provides no information).
3. A weld has been completed using the incorrect:
 - a) shielding gas, or
 - b) electrode wire.
4. There has been too much heat build-up during the welding so that the parent material is weakened.
5. The weld has:
 - a) porosity present, or
 - b) cracks present, or
 - c) undercut or cold lap, or
 - d) poor penetration.
6. Unless the vehicle manufacturer states otherwise replacement spot welds are:
 - a) located on top of the OE weld locations, or
 - b) spaced so as to create a continuous heat-affected zone.
7. Brazing has been used in a repair where it is not specifically permitted in the manufacturer's instructions.

Note 1 When welding is done, the manufacturer's specifications must be taken into account.

General repairs

9-3 Replacement components

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Repair 1998

Repair requirements

1. New or used replacement systems, components and equipment used in a repair must comply with an approved vehicle standard applicable to the year of manufacture of the vehicle, system, component or equipment (or later).
2. If there is no applicable approved vehicle standard, new or used replacement systems, components or equipment used in a repair must be fit for the purpose for which they are to be used by reference to:
 - a) the vehicle manufacturer's specifications for original performance, or
 - b) the original equipment supplier's manufacturer's specifications, or
 - c) later specifications for the same systems, components and equipment issued or approved by the vehicle manufacturer, or
 - d) the manufacturing and materials specifications of an approved standards institution for the systems, components and equipment.

Reasons for rejection

1. A replacement component, part or system that must comply with an approved vehicle standard does not.
2. A replacement component, part or system that must comply with an approved vehicle standard complies with an earlier version of the standard than the vehicle being repaired was certified to.
3. A replacement component, part or system that must comply with an approved vehicle standard complies with a more recent version of the standard than the vehicle being repaired was certified to, and this compromises the safety of the component, part or system.
4. A component, part or system that does not have to comply with a vehicle standard has been repaired using replacement components, parts or systems that:
 - a) are not fit for the purpose, or
 - b) do not meet the vehicle manufacturer's specifications, or
 - c) do not meet the specifications of an approved supplier to the vehicle manufacturer, or
 - d) do not meet the specifications of an approved standards institution.
5. Used replacement components, parts or systems have been fitted and:
 - a) there is no evidence of the origin of the component, part or system, or
 - b) there is no evidence that the donor vehicle meets the same standards as the vehicle being repaired, or
 - c) the replacement component, part or system does not meet the same specifications as the replaced component, part or system, or
 - d) the component, part or system is outside the manufacturer's tolerances or specifications.

General repairs**9-4 Component protection****Summary of legislation****Applicable legislation**

- Land Transport Rule: Vehicle Repair 1998

Repair requirements

1. The repair method used to comply a vehicle must take into account:
 - a) the date of manufacture of the vehicle, and
 - b) the class, make and other relevant characteristics of the vehicle, and
 - c) the approved vehicle standards with which the vehicle is required to comply, and
 - d) any relevant manufacturer's recommendations and alternative methods, and
 - e) the material specifications used for the construction of the vehicle, its structure, systems, components or equipment, and
 - f) the compatibility of the intended repair process with material specifications.

Reasons for rejection

1. Weld-through primers have not been used during the repair.
2. A corrosion protection system has not been applied during a repair upgrade when weld-through primer was not originally used.
3. A seam or seams have not been sealed using a suitable sealant.
4. A surface has not been corrosion protected or the original protection has been degraded in the repair, making it ineffective.
5. Manufacturer's corrosion protection instructions, or when these are not available, a recognised repair research organisation's procedures have not been used.

Motorcycles

10-1 Frame and forks

10-2 Measurements

Motorcycles

10-1 Frame and forks

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Repair 1998

Condition

1. A repair to a vehicle, its structure, systems, components or equipment must restore the damaged or worn vehicle, structure, system, component or equipment so that it is within safe tolerance of the state of the vehicle, structure, system, component or equipment when manufactured.

Reasons for rejection

1. A motorcycle frame has not been replaced when there is evidence that it had been deformed so that a localised kink of 90° or more has been formed over a small radius.
2. A motorcycle frame has been heated.
3. A steel frame of a motorcycle has been sectioned without an insert.
4. Heat has been applied to a frame in a manner that is not permitted in the manufacturer's instructions.
5. A frame has been heated as part of the repair and the manufacturer's temperatures and time limits have not been followed or evidence that this process has been followed has not been presented with the LT308 (**Note 2**).
6. A fork has been heated.
7. A fork has been straightened but the cross section has been deformed.
8. A thin-walled fork has been straightened after being bent more than 15°.
9. A fork has been straightened when the original damage is not known.
10. A fork has been sectioned.

Note 1 Damaged parts should be replaced at factory seams whenever practicable and when required by the vehicle manufacturer.

Note 2 If a frame is heated as part of a repair, evidence of the process must be included with the LT308. This should include such information as the manufacturer's specifications, temperature indicator used and the time that the heat was applied for.

Motorcycles 10-2 Measurements

Summary of legislation

Applicable legislation

- Land Transport Rule: Vehicle Repair 1998

Condition

- A repair to a vehicle, its structure, systems, components or equipment must restore the damaged or worn vehicle, structure, system, component or equipment so that it is within safe tolerance of the state of the vehicle, structure, system, component or equipment when manufactured.

Reasons for rejection

- A fork has runout in excess of 0.4 mm (unless permitted by the manufacturer).
- One of the following measurements is not within the manufacturer's specifications:
 - wheelbase (**Figure 10-2-1**)
 - steering head angle (**Figure 10-2-2**)
 - front wheel castor angle (**Figure 10-2-3**)
 - wheel track offset (**Figure 10-2-4**).
- The wheel alignment has not been measured.
- The wheel alignment is not within specification.
- A reference measurement of the frame has not been completed and recorded (**Note 1**).
- A reference measurement of the frame shows a difference of more than 3 mm (unless permitted by the manufacturer's instructions).

Note 1 A reference measurement of the frame is a comparative measurement of each side of the frame to verify symmetry.

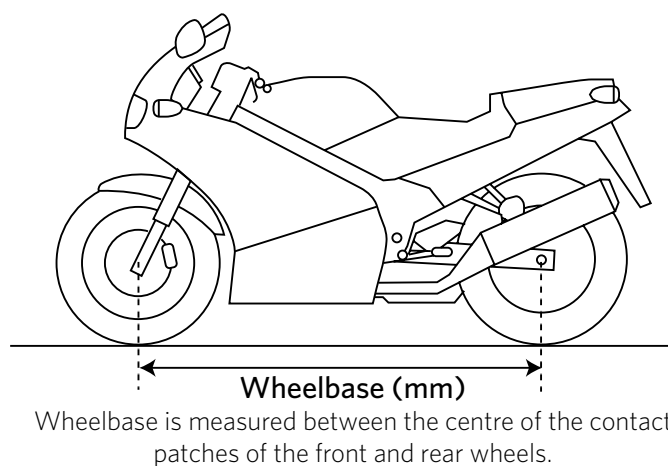


Figure 10-2-1. Wheelbase measurement

Motorcycles 10-2 Measurements (cont.)

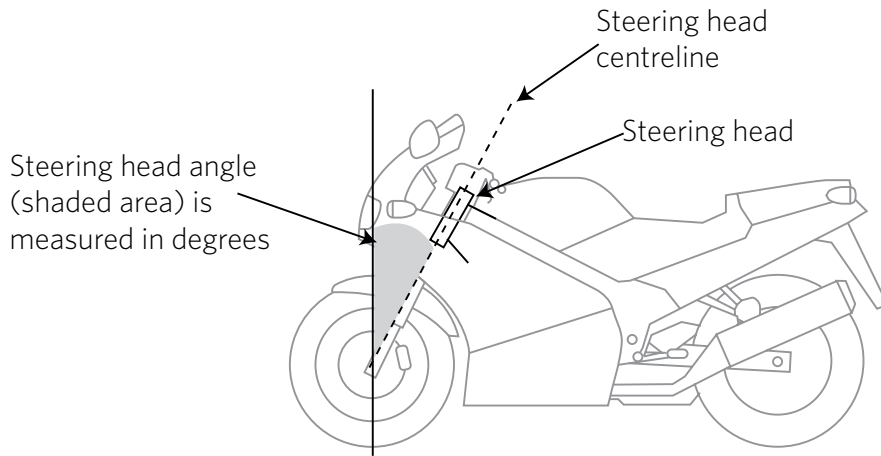


Figure 10-2-2. Steering head angle measurement

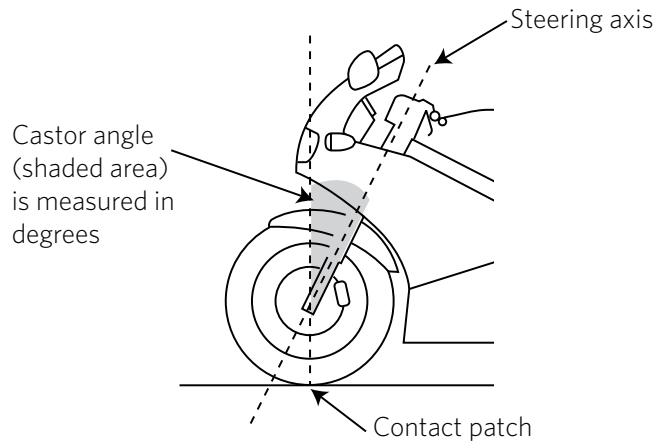


Figure 10-2-3. Front wheel castor angle measurement

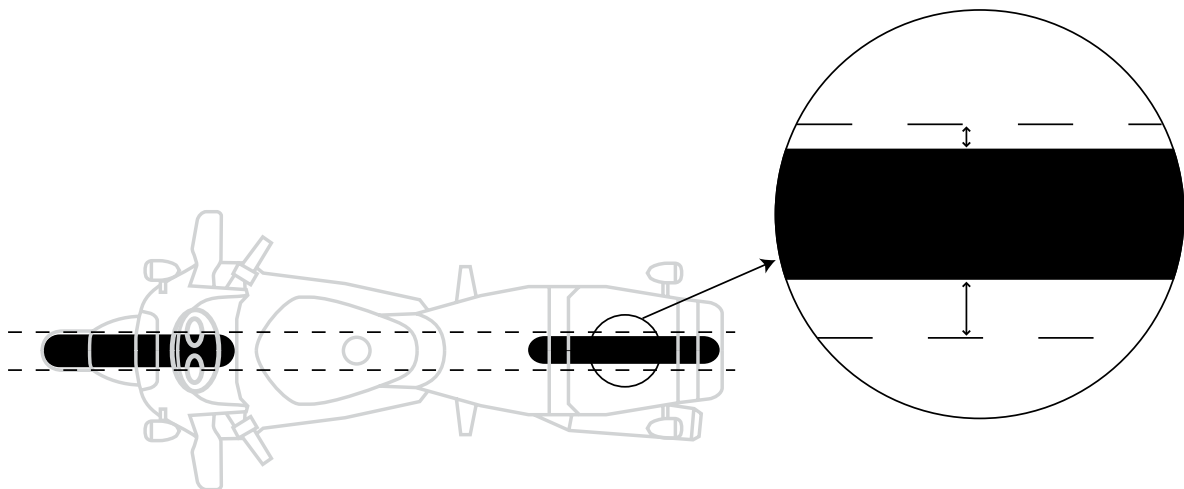


Figure 10-2-4. Wheel track offset measurement

The LANDATA system

This section has been removed for
security reasons

Technical bulletins

- 1 Inspection for corrosion in Nissan Terrano and Mistral rear floorpan assemblies
- 2 Salvaged Airbags
- 3 Declaration form for SRS and ABS inspections
- 4 Threshold for requiring repair certification
- 5 Threshold for lifting border damage flag

Technical bulletin 1

Inspection for corrosion in Nissan Terrano and Mistral rear floorpan assemblies

Replaces Infosheet 1.35 revision 4

VIRM references

This bulletin gives guidance to vehicle inspectors in applying the following requirements in the *VIRM: Light vehicle repair certification*, version 3:

- 2-8 Points of attachment: Reason for rejection 1.
- 5-1 Seats and seat anchorages: Reason for rejection 4 or 5.
- 5-5 Seatbelts and seatbelt anchorages: Reason for rejection 3.

Application

This document applies to models of Nissan Terrano and Nissan Mistral vehicles in which 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. These vehicles have a rear seat with three seating positions. Situated in the rear floor, beneath the seat, are:

- four seatbelt anchorages, and
- two seat anchorages.

Safety concern

If moisture gets trapped between the two layers of the floorpan, corrosion can occur around the seat or seatbelt anchorages. Corrosion can also occur where the under-floor reinforcing panel overlaps the top floor skin. Damage may be more extensive than is first apparent. If corrosion is detected, the integrity of the seat and seatbelt anchorages is considered to be at risk and should be rejected.

Inspection

Patch repairs

If the repair certifier is inspecting a Nissan Terrano or Nissan Mistral with a floorpan that has been patch repaired, the vehicle should be rejected unless it can be shown that the repairs were done before the following dates:

- 8 January 1997 for Nissan Terrano
- 10 November 2003 for Nissan Mistral.

Patch repairs to a Nissan Terrano or Nissan Mistral floorpan that were made prior to the above dates may be accepted provided that:

- the inspector is presented with evidence that the repair was carried out prior to the date indicated for the vehicle above, and
- the repair certifier considers that the patch repairs are effective and in sound condition.

However, any signs of corrosion either in the patched area or the remainder of the floorpan will be a reason for rejection and the floorpan will then need to be replaced.

Technical bulletin 1

Inspection for corrosion in Nissan Terrano and Mistral rear floorpan assemblies (cont.)

Low Volume Vehicle Technical Association (LVVTA) certified repairs

For Model D21 Nissan Terrano or Nissan Mistral R20 5-door vehicles only, an LVVTA rear floor load-bar seatbelt anchorage reinforcement system together with an LVV plate containing the following words in the Body/chassis field:

LVVTA Rear floor load-bar seatbelt anchorage reinforcement system may be installed.

For information about this seatbelt anchorage modification, and for a list of the LVVTA certifiers who can certify this modification, see www.lvvtta.org.nz.

For all other Nissan Terrano and Nissan Mistral models, the floorpan must be replaced. There is no LVVTA modification available at present as an alternative to replacement of the floor pan.

Technical bulletin 2

Salvaged airbags

Replaces Repair Certification Information Memorandum #17

VIRM references

This bulletin gives guidance to vehicle inspectors in applying the following requirements in the *VIRM: Light vehicle repair certification*, version 3:

- 5-6 Airbags: Reason for rejection 9.

Application

This document applies to light vehicles being certified for entry into New Zealand that require repair certification which involves salvaged airbags.

Safety concerns

An airbag is an explosive device; it must be packaged, transported and labeled appropriately. Damage or deterioration to an airbag may result in the airbag failing to deploy, or deploying incorrectly. This increases the risk of injury to vehicle occupants. The primary concern regarding salvaged airbags is that there is no visual or non-destructive way to determine whether a salvaged airbag will deploy as it is designed to.

Establishing a salvaged airbag's suitability for use in a repair

1. Inspect the donor vehicle and airbag

Oversee the removal of the airbag from the donor vehicle (photographs are required). Inspect the donor vehicle and the airbag for evidence of damage that may have affected the performance of the airbag, including water damage. If there is anything about the condition of the vehicle or the airbag that casts doubt over the serviceability of the airbag, reject it.

2. Prepare a signed statement

If you determine to the best of your knowledge that the airbag is suitable for use in a repair, you must prepare a signed statement to that effect. The statement must also record the identity of the donor vehicle (including chassis number) and the salvaged airbag part number.

3. Oversee packaging of the airbag

If the airbag is not going to be installed immediately, you must ensure that it is packaged appropriately. Packaging must be robust, absorb shock, offer suitable protection for transportation and have regard to the potential build-up of static electrical charges. The signed statement must be stored with the airbag.

Inspection and certification

1. Check that the airbag is suitable for use in the repair

- Check that there is a signed statement from a repair certifier declaring that the airbag is suitable for use in a repair. This document must be retained. If there is no signed statement with the airbag, you must reject it.
- Check that the airbag part number is recorded (correctly) on the statement and has the correct part number for the recipient vehicle. Reject the airbag if it does not.

Technical bulletin 2

Salvaged airbags (cont.)

- Visually inspect the packaging before removing the airbag. Inspect the airbag once it has been removed from the packaging. If there is anything about the condition of the packaging or the airbag that casts doubt over the serviceability of the airbag, reject it.

2. Confirm the integrity of the vehicle's SRS system

Check vehicle manufacturer requirements and verify that the remaining airbag system components (eg the clockspring connector, the steering column and the control module) are fit for further service and have not been damaged by the deployment of the original airbag. The vehicle must not be certified if there is evidence that any of these components are not fit for further service.

3. Operational checks

Do not certify the vehicle if the dash light test indicates that the electronic aspects of the airbag system are not functioning correctly.

Technical bulletin 3

Declaration form for SRS and ABS inspections

VIRM references

This bulletin gives guidance to vehicle inspectors in applying the following requirements in the *VIRM: Light vehicle repair certification*, version 3:

- 5-3 Airbags: Reasons for rejection 10 and 11.
- 6-1 Service and parking brake: Reasons for rejection 9 and 10.

Application

This document applies to light vehicles being certified that require a supplementary restraint system (SRS) or anti-lock braking system (ABS) diagnostic check during repair certification

Safety concerns

The growing trend towards electronic control of safety-related systems in passenger vehicles means that the repair and reinstatement of electronic control systems is increasingly important. However, specialist equipment and knowledge is required to interrogate the electronic control systems of the various makes and models of vehicles in New Zealand's fleet. It is important that a repair certifier has confidence in any given electronic control system diagnosis.

Inspection requirements

Diagnostic checks on SRS and ABS electronic control systems must be carried out by one of the following:

- a) the manufacturer of the vehicle or the SRS/airbag, or an approved representative proven to be competent in the use of suitable interrogation equipment, or
- b) a person or company recognised as reputable and competent by the repair certifier, and trained in the interrogation of automotive electronic control systems. This person or company must be proven to have access to and be competent in the use of suitable interrogation equipment.

Any person or company chosen and approved by the repair certifier to carry out diagnostic checks on electronic control systems must be documented on the *Delegation record* in the repair certifier's *PRS* manual.

A declaration form for SRS and/or SBS (see overleaf) must be completed by the person or company carrying out a diagnostic check on an automotive electronic control system. A copy of the declaration must be retained with the vehicle file.

Technical bulletin 3	Declaration form for SRS and ABS inspections (cont.)
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Declaration Form

Supplementary restraint systems and/or anti-lock braking systems

Certifier details

Company: _____

Certifier name: _____ Contact number: _____

Vehicle details

Make: _____ Model: _____

Model code: _____ Vehicle year: _____

VIN:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Odometer reading: _____

Reason for inspection: _____

Details of company performing the inspection

Company name: _____

Technician's name: _____

Address: _____

Phone number: _____ Mobile: _____

Scanner used: _____ Date program last updated: _____

Fault codes introduced: _____

Details of visual inspection: _____

Components inspected

- | | | |
|---|---|---|
| <input type="checkbox"/> Driver's airbag | <input type="checkbox"/> Booster cushion in seats | <input type="checkbox"/> Seatbelt pre-tensioner |
| <input type="checkbox"/> Electronic | <input type="checkbox"/> Knee airbags (dash) | <input type="checkbox"/> ABS |
| <input type="checkbox"/> Mechanical | <input type="checkbox"/> Brake pedal bags | |
| <input type="checkbox"/> Clock spring | <input type="checkbox"/> Front crash sensors | |
| <input type="checkbox"/> Passenger's airbag | <input type="checkbox"/> Side crash sensors | |

Side impact (seats, doors, pillars)

Front Rear

Other: _____

Declaration

I confirm that:

- I am sufficiently competent and experienced to carry out inspections on supplementary restraint systems and/or anti-lock braking systems, and
- I have carried out an inspection on the vehicle specified above using suitable equipment, and
- I am satisfied that the inspection did not identify any faults in those systems or components identified in this declaration.

As inspected on (date): _____

Signature: _____

Technical bulletin 4

Threshold for requiring repair certification

Reference material

This bulletin explains the threshold an entry certifier must use to determine whether or not a light vehicle (including a motorcycle where applicable) requires repair certification. It is included in this manual as a reference.

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 repair certifier.

When applying these criteria, consider whether:

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

IMPORTANT: All damage meeting the designated criteria and found in structural parts or the energy management path areas must be referred to a repair certifier.

Inspection

A list of specific types of damage follows. It explains the extent to which damage is allowed before a vehicle must be referred to a repair certifier. Assessment by a repair certifier should be obtained if doubt exists.

Cosmetic damage

A vehicle does not require repair certification if it has cosmetic damage to outer body panels, provided it does not affect the structural integrity of any of the bonded or welded seams or joints installed by the vehicle manufacturer.

Underbody impact damage

- A vehicle does not require repair certification if it has minor underbody impact damage as a result of 'grounding' the vehicle or some scraping of the sill seams.
- A vehicle must be repair certified if it has underbody damage as a result of 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.
- A vehicle does not require repair certification if there is crushing or tearing of floor stiffening members (**Note 1**), provided it does not affect any internal cross-members designed for side-impact protection.

Technical bulletin 4

Threshold for requiring repair certification (cont.)

Note 1 When distinguishing between floorpan stiffening members and cross-members, note that a member that runs through the line of a seat or occupant area will not be an energy absorbing-member (ie its purpose is to reinforce the floorpan), while a member that runs alongside a seat or occupant area should be treated as an energy absorbing-member (ie a chassis rail).

Denting or distortion

- A vehicle does not require repair certification if rocker panels (outer sills) are dented or creased lengthways along the sill to a maximum depth of 25 mm. If the depth of the crease exceeds 25 mm or runs across the sill, the vehicle must be repair certified.
- A vehicle **must** be repair certified if there is any discernible denting or distortion to the folds or swages in the sill panel or structure of the inner/outer sill weld seam, other than minor scraping.

Crush zones and kick-up areas

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

Crossmembers

- A vehicle does not require repair certification if it has minor jacking damage to a cross-member, provided there is no indication of loss of steering or suspension alignment.
- A vehicle must be repair certified if there is distortion of the cross-member as a result of collision with an object.

Cracking

- A vehicle must be repair certified if there is cracking in:
 - a) the chassis, or
 - b) any crossmembers and subframes, or
 - c) the load bearing monocoque body structures, or
 - d) the body on a vehicle with a chassis.

Repaired damage

- A vehicle with repaired damage does not require repair certification if repairs are only to correct cosmetic damage to the outer body panels, providing 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.
- A vehicle must be referred to a repair certifier if signs of fresh repair, rust prevention or under-sealing to any part of the vehicle structure are evident.

Supplementary restraint system (SRS): Airbags and seatbelt pretensioners

- A vehicle must be repair certified if it has a deployed airbag or seatbelt pretensioner, or there is evidence of repairs to or tampering with airbag module covers.

Note 2 Unless there is evidence that the airbag has been deployed, it is not expected that the vehicle go to a repair certifier if it has a sports steering wheel fitted with no airbag at entry and is failed and 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 3**.



Water damage

- A vehicle must be repair certified if there is evidence that it has suffered water damage (see **Technical bulletin 2**).

Note 3 For the purposes of the threshold for requiring 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.

Corrosion damage

- **Corrosion damage** is where the metal has been eaten away, which is evident by pitting. The outward signs of such corrosion damage are typically displayed by the swelling of a panel between spot welds, or lifting or bubbling of paint. In extreme cases, the area affected by the corrosion damage will fall out and leave a hole.

A vehicle must be repair certified if there is corrosion damage in any structural area, as indicated in the shaded areas of **Figure 1**.

Note 4 For the purposes of the threshold for requiring repair certification, 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.

- **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.

A vehicle must be repair certified if there is perforated corrosion in any other (non-structural) area, as indicated in the non-shaded areas of **Figure 1**.

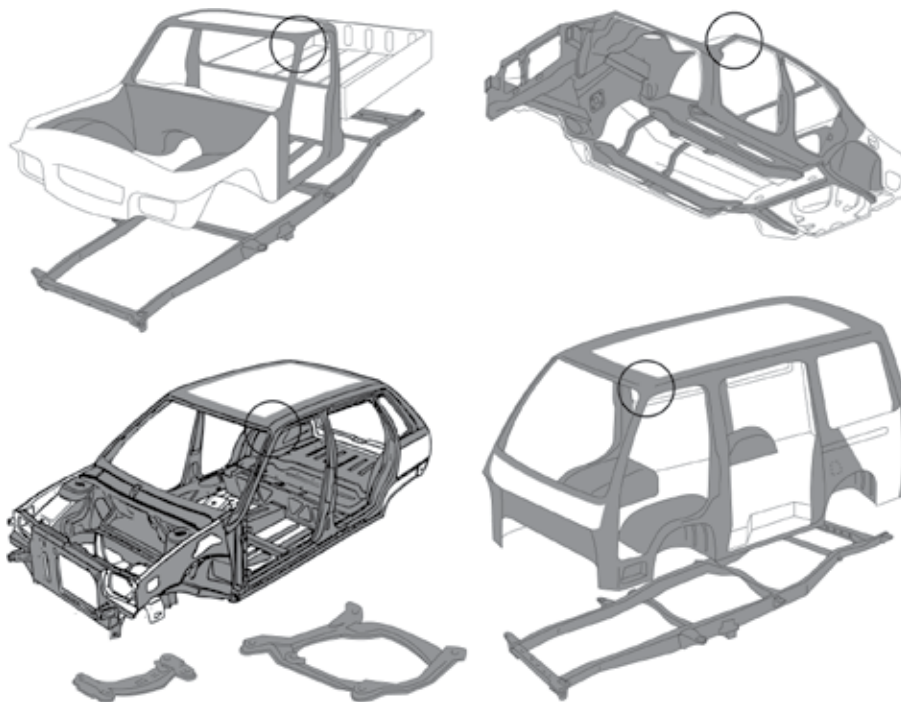


Figure 1. Structural corrosion damage limits

Technical bulletin 4

Threshold for requiring repair certification (cont.)

- Repair of corrosion on 'bolt-on' parts (doors, bonnets etc) within a 150 mm circle around the outside of hinge or latch components will require repair certification. These 'no corrosion' zones are circled in **Figure 2**.
- Replacement of these parts will not require repair certification, provided the inspector is satisfied that safety systems are not affected (eg side intrusion beams, burst proof locks, frontal impact systems).

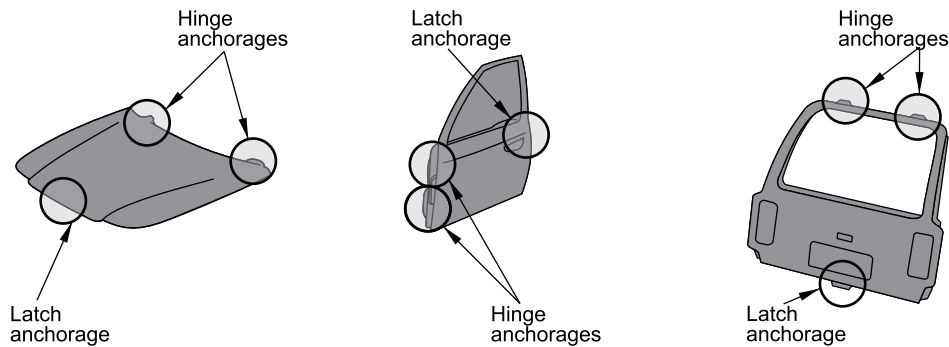


Figure 2. Hinge and latch anchorage corrosion damage limits

Vehicles flagged for damage by MAF

When MAF 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 repair certification, an application must be made to remove the damage flag.

A 'Request to remove border damage flag' form is available in *VIRM: Entry certification*, Reference material 17. The vehicle inspector must complete this form and forward it to the Vehicle Certifiers Registers team (fax number 06 953 6282).

Technical bulletin 5

Threshold for lifting border damage flag

Reference material

This bulletin explains the threshold a repair certifier must use to determine whether or not a light vehicle may have a border damage flag lifted once the vehicle has been repaired in accordance with the requirements of the light vehicle repair VIRM and a LT308 issued. This procedure must be read in conjunction with the requirements of the light vehicle repair VIRM when assessing vehicle structural integrity.

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 border damage flag lifting

Before a vehicle can be considered for border damage flag lifting it must meet the threshold for repair certification as required in **Technical bulletin 4** and have been presented to a TSD agent for entry certification and if applicable have a VIN issued and affixed.

Types of repairs that are eligible for border check damage flag removal

Structural repairs

Single panel structural repairs

This means only one structural panel being repaired or replaced. This enables sill repairs, replacement of the outer guard, H/L support panel, rear dog legs, etc to be replaced. A single panel structural repair would in no way affect the chassis alignment of the vehicle. A trammel bar measurement and four-wheel alignment must be carried out as required by **section 8-1**.

Section 9-4 in terms of component protection also applies to any repairs.

Corrosion damage

Corrosion damage to a structural area where there are no signs of major pitting, swelling or any holes are evident.

Note 1 For the purpose of this threshold, 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 into the external surface.

All areas affected by corrosion must under go a clean and treat process (**Note 2**).

Note 2 For the purpose of this threshold, clean and treat is defined in the following steps:

1. Abrasive blasting of the affected area, and
2. Affected area coated in rust neutraliser, and
3. Application of a two pack epoxy primer to the affected areas, and
4. Application of final protective coatings, and
5. Application of cavity wax to interior and seams of all affected box sections.

Types of repairs that are not eligible for border check flag removal

Structural repairs

1. Any repair that has affected the chassis alignment of a vehicle and requires 3D chassis alignment, or
2. Damage to multiple panels whether the structural integrity and/or chassis alignment of the vehicle been affected or not.

Corrosion damage

Any perforated corrosion in a structural area 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.

Any vehicle with rust heave or swelling that will require removal of any original panel or part of panel in order for an area to be patched.

Water or fire damage

No vehicle with water or fire damage may have the damage flag lifted, the normal process as set out in **section 9-1** applies.

SRS components

A damage flag will not be lifted if a SRS component has been deployed.

Flag lifting process

Once the repair certifier has issued a LT308 to a vehicle, the entry certifier must fill out the 'Request to remove border damage flag - light vehicles' form and fax this along with a copy of pages 1 and 4 of the LT308 to:

Vehicle Certifiers Register
Transport Registry Centre
NZ Transport Agency
Fax: 06 953 6282

Responsibilities

As a repair certifier you will be determining that a vehicle meets this threshold for the lifting of a border damage flag and as such you are required to keep a complete vehicle file which must include photos of but not limited to:

1. damage before repairs have started, and
2. the completed repair before filler and paint application, and
3. the finished repair.

If there are any inconsistencies between what has been flagged as damage and what appears on the vehicle, ie damage flag for damage to L/R dog leg but no damage is found, you must contact an NZTA Lead Specialist at the Vehicle Certifiers Register on 0800 587 287 or borderchecks@nzta.govt.nz with the vehicles VIN/chassis number and request the border check damage photo.