

Correct as at 8th June 2026. It may be superseded at any time.

Extract taken from: Entry certification > Inspection and certification > Brakes

## 8 Brakes

### 8-1 Service brake and park brake

See also [Heavy vehicle brake testing: CoF and entry certification brake test protocol and procedure](#)

## Reasons for rejection

### Mandatory equipment

1. A vehicle does not comply with a requirement relating to mandatory equipment set out in the [VIRM: In-service certification, section 8-1](#)
    - Where required, an entry certifier must obtain a declaration from a recognised technician, stating that the anti-lock braking system is within safe tolerance of the manufacturer's specifications. See [Technical bulletin 29](#) for further information on SRS/ABS/ESC declarations.
  2. A **new** motor vehicle of class MA, MB, MC or NA that is first certified for entry into service in New Zealand on or after 1 July 2015 does not have electronic stability control fitted (Note 1).
    - For evidence of acceptable proof that the vehicle is fitted with an ESC system see [Technical bulletin 37](#)
  3. A **used** motor vehicle of class MC that is inspected at the border for entry into service in New Zealand on or after 1 March 2016 does not have electronic stability control fitted (Note 1).
    - For evidence of acceptable proof that the vehicle is fitted with an ESC system see [Technical bulletin 37](#)
  4. A **used** motor vehicle of class MA with engine capacity greater than 2 litres that is inspected at the border from 1 March 2018 does not have electronic stability control fitted (Note 1).
    - For evidence of acceptable proof that the vehicle is fitted with an ESC system see [Technical bulletin 37](#)
  5. A **used** motor vehicle of class MA, MB and NA light passenger and goods vehicles that is inspected at the border from 1 March 2020 does not have have electronic stability control fitted (Note 1).
    - For evidence of acceptable proof that the vehicle is fitted with an ESC system see [Technical bulletin 37](#)
  6. A vehicle of class LC, LD or LE does not comply with the requirements of Table 8-1-2.
- ### Compliance with approved standards
7. A brake that is required to comply with an approved brake standard did not comply, or cannot be demonstrated to have complied, with at least one of the standards listed in Table 8-1-1 at the time the vehicle was manufactured.
  8. A brake has brake friction material that is:

- a) not identifiable by markings of the vehicle manufacturer or a recognised brake friction material manufacturer listed in [Figure 8-2-1](#), or
- b) not supplied by a recognised supplier and accompanied by a statement of compliance from that supplier.

### Condition, performance and modification

9. Brake fluid in the master cylinder reservoir shows signs of dirt or contamination.

10. Brake friction material is:

- a) worn below the limits shown in [Table 8-2-1](#), or
- b) separating from the brake pad backing plate or brake shoe, or
- c) cracked or otherwise damaged, or
- d) contaminated by brake fluid, oil or grease.

11. A brake drum:

- a) has an ovality or a diameter that is outside the service limits set by the vehicle or brake manufacturer, or
- b) is fractured, scored or otherwise damaged.

12. A brake disc:

- a) has runout or a thickness that is outside the service limits set by the vehicle or brake manufacturer, or
- b) has a thickness of less than 90% of the original thickness if the service limits for runout or thickness are not known, or
- c) is fractured, scored or otherwise damaged.

13. A vehicle or brake does not comply with a requirement relating to condition, performance or modification set out in the [VIRM: In-service certification, section 8-1](#)

### Note 1

Similar to frontal impact and emissions requirements this provision will not apply to:

- an immigrant's vehicle, or
- a special interest vehicle, or
- a motorsport vehicle that is operated in accordance with the conditions of a valid low volume vehicle authority card issued for the vehicle in accordance with the Low Volume Vehicle Code, or
- a low volume vehicle that was not originally fitted with an electronic stability control system and is certified in accordance with the Low Volume Vehicle Code, or
- a motor vehicle of class MA, MB, MC or NA manufactured, or first registered outside of New Zealand, twenty years or more before the date of its first certification for entry into service in New Zealand.

**Table 8-1-1. Approved brake standards\***

UN-ECE Regulation no.	EEC/EC Directive	FMVSS	ADR	Japan
13	71/320	105	31	TS for passenger motor vehicle braking systems, or
13-H	74/132	122	33	TS for two-wheeled vehicle brake systems
78	75/524	135	35	Article 12
	79/489			TS for two-wheeled vehicle brake systems
	85/647			Article 61
	88/194			
	91/422			
	98/12			
	2002/78			
	93/14			
	2006/27			

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

**Table 8-1-2. ABS brake requirements for class LC, LD and LE vehicles**

	<b>A new class LC, LD and LE vehicle of a model or sub-model that was first manufactured on or after 1 April 2020</b>	<b>All class LC, LD and LE vehicles (see exceptions below)</b>
<p><b>A class LC, LD or LE vehicle that is powered by either:</b></p> <ul style="list-style-type: none"> <li>• <b>a combustion engine of capacity greater than 50 cubic centimetres up to and including 125 cubic centimetres; or</b></li> <li>• <b>an electrically powered motor having net power output of greater than 4kW up to and including 11kW.</b></li> </ul>	<p>Antilock braking systems or Combined braking systems required if first certified for entry into service in New Zealand on or after 1 April 2020</p>	<p>Antilock braking systems or Combined braking systems required if first certified for entry into service in New Zealand on or after 1 November 2021</p>
<p><b>A class LC, LD or LE vehicle that is powered by either:</b></p> <ul style="list-style-type: none"> <li>• <b>a combustion engine of capacity greater than 125 cubic centimetres; or</b></li> <li>• <b>an electrically powered motor having net power output of greater than 11kW and a power to weight ratio of greater than 0.1kW/kg</b></li> </ul>	<p>Antilock braking systems required if first certified for entry into service in New Zealand on or after 1 April 2020</p>	<p>Antilock braking systems required if first certified for entry into service in New Zealand on or after 1 November 2021</p>

**Exceptions to Table 8-1-2**

Advanced brake system requirements do not apply to:

- an enduro motorcycle; or
- a trial motorcycle; or
- a motorcycle that was first registered in any country before 1 January 1990; or
- an immigrant's vehicle; or
- a motorcycle for which a special interest motorcycle permit has been granted; or
- a farm motorcycle, or
- a low volume vehicle that was:
  - assembled or scratch-built in quantities of 500 or less in any one year (ie, not a uniquely modified low volume vehicle), and
  - not originally fitted with an antilock brake system or a combined brake system, and
  - is certified in accordance with the Low Volume Vehicle Code.

# Summary of legislation

## Applicable legislation

- [Land Transport Rule: Light-vehicle Brakes 2002](#)

## Mandatory equipment

1. Vehicles must comply with the requirements relating to mandatory equipment set out in the [VIRM: In-service certification, section 8-1](#)
2. A **new** motor vehicle of class MA, MB, MC or NA that is first certified for entry into service in New Zealand on or after 1 July 2015 must have electronic stability control fitted (Note 1)
  - For evidence of acceptable proof that the vehicle is fitted with an ESC system see [Technical bulletin 37](#)
3. A **used** motor vehicle of class MC that is inspected at the border for entry into service in New Zealand on or after 1 March 2016 must have electronic stability control fitted (Note 1)
  - For evidence of acceptable proof that the vehicle is fitted with an ESC system see [Technical bulletin 37](#)
4. A **used** motor vehicle of class MA with engine capacity greater than 2 litres that is inspected at the border from 1 March 2018 must have electronic stability control fitted (Note 1)
  - For evidence of acceptable proof that the vehicle is fitted with an ESC system see [Technical bulletin 37](#)
5. A **used** motor vehicle of class MA, MB and NA light passenger and goods vehicles that is inspected at the border from 1 March 2020 must have electronic stability control fitted (Note 1)
  - For evidence of acceptable proof that the vehicle is fitted with an ESC system see [Technical bulletin 37](#)
6. A vehicle of class LC, LD or LE must comply with the requirements of Table 8-1-2

## Compliance with approved standards

7. The brakes on the following vehicles must comply with one or more of the approved brake standards in Table 8-1-1:
  - a) vehicles of group L, and class MD1 and MD2 manufactured on or after 1 October 2002
  - b) vehicles of class MA manufactured on or after 1 January 1992
  - c) vehicles of class MB, MC and NA manufactured on or after 1 January 1996.

## Condition, performance and modification

8. Brakes must be easily adjustable to compensate for wear and must be maintained in good condition and efficient working order.
9. Brake friction surfaces must be within safe tolerance of their state when manufactured and must not be scored, damaged or weakened to the extent that the safety performance of the brake is adversely affected.
10. The ovality and diameter of brake drums must be within the service limits set by the vehicle or brake manufacturer.
11. The runout and thickness of brake discs must be within the service limits set by the vehicle or brake manufacturer. If the thickness limit is not known for a particular disc, the thickness must not be less than 90% of the original thickness.

12. Vehicles and brakes must also comply with the requirements relating to condition, performance and modification set out in the [VIRM: In-service certification, section 8-1](#)

Page amended **9 August 2021** (see [amendment details](#))

Page updated 6 January 2025 (see [details](#))

## 8-1 Service brake and park brake (heavy vehicles)

See also [Heavy vehicle brake testing: CoF and entry certification brake test protocol and procedure](#)

### Reasons for rejection

#### Mandatory equipment

1. A vehicle does not comply with a requirement relating to mandatory equipment set out in:

- [VIRM: In-service certification, section 8-1, heavy vehicles](#)

2. A vehicle in Table 8-1-2 does not have proof of compliance with requirements in that table.

#### Condition, performance and modification

3. A vehicle or brake does not comply with a requirement relating to condition, performance or modification set out in:

- [VIRM: In-service certification, section 8-1, heavy vehicles](#)

#### Note 1

Where required, an entry certifier must obtain a declaration from a recognised technician stating that the anti-lock braking system is within safe tolerance of the manufacturer's specifications. See [Technical bulletin 29](#) for further information on SRS/ABS declarations.

**Table 8-1-2. Heavy-vehicle brakes – compliance requirements for class MD3, MD4, ME, NB and NC vehicles<sup>1</sup>**

Conditions applying	Requirements
<p>Imported, and</p> <ul style="list-style-type: none"> <li>• first registered in New Zealand 1 March 2007 to 30 June 2008, and</li> <li>• operated in a combination with a GM<sup>2</sup> &gt;39?44 t</li> </ul>	<ul style="list-style-type: none"> <li>• HVBS(2) Heavy Vehicle Braking Specification of 6 December 1998, or</li> <li>• HVBC(2) Heavy Vehicle Brake Code, second edition, or</li> <li>• HVBNZ New Zealand Heavy Vehicle Brake Specification, or</li> <li>• At least one approved standard in Table 8-1-3</li> </ul>
<p>Manufactured in New Zealand, and</p> <ul style="list-style-type: none"> <li>• first registered in New Zealand 1 March 2007 to 30 June 2008, and</li> <li>• operated in a combination with a GM<sup>2</sup> &gt;39?44 t</li> </ul>	<ul style="list-style-type: none"> <li>• HVBS(2) Heavy Vehicle Braking Specification of 6 December 1998, or</li> <li>• HVBC(2) Heavy Vehicle Brake Code, second edition, or</li> <li>• HVBNZ New Zealand Heavy Vehicle Brake Specification</li> </ul>
<p>Imported<sup>4</sup> first registered in New Zealand on or after 1/7/2008</p>	<ul style="list-style-type: none"> <li>• At least one approved standard in Table 8-1-3</li> </ul>
<p>Manufactured in New Zealand, and</p> <ul style="list-style-type: none"> <li>• first registered on or after 1 July 2008, and</li> <li>• with a towing connection for towing a heavy trailer</li> </ul>	<ul style="list-style-type: none"> <li>• HVBNZ, New Zealand Heavy Vehicle Brake Specification</li> </ul>
<p>Manufactured in New Zealand and</p> <ul style="list-style-type: none"> <li>• first registered on or after 1 July 2008, and</li> <li>• with no towing connection for towing a heavy trailer</li> </ul>	<ul style="list-style-type: none"> <li>• HVBNZ New Zealand Heavy Vehicle Brake Specification, or</li> <li>• stopping tests in 6.1(2)(b) of Heavy-vehicle Brake Rule</li> </ul>

<sup>1</sup> Not applicable to mobile cranes except those constructed using a commercial truck chassis.

<sup>3</sup> GM means gross mass.

<sup>4</sup> Imported in this case includes heavy PSVs that are manufactured in New Zealand from imported transport frame/chassis which comply with an approved brake standard in Table 8-1-3.

**Table 8-1-3. Approved brake standards for class MD3, MD4, ME, NB and NC vehicles\***

UN-ECE Regulation no.	EEC/EC Directive	FMVSS	ADR	Japan
13	71/320 91/422 98/12 2002/78	105 (Hydraulic and Electric Brake Systems); or 121 (Air Brake Systems)	35	TS for brake systems of trucks and buses (Japan); or TS for anti-lock brake system (Japan)  Article 12

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

- [Technical bulletin 31](#) clarifies brake standards requirements for class MD3, MD4, ME, NB and NC vehicles.

## Summary of legislation

Applicable legislation

- [Land Transport Rule: Heavy-vehicle Brakes 2006](#).

### Mandatory equipment

1. Vehicles must comply with the requirements relating to mandatory equipment set out in:

- [VIRM: In-service certification, section 8-1, heavy vehicles](#).

2. The brakes on class MD3, MD4, ME, NB and NC vehicles must comply with the requirements in Table 8-1-2.

### Condition, performance and modification

3. Brakes must be easily adjustable to compensate for wear and must be maintained in good condition and efficient working order.

4. Vehicles and brakes must also comply with the requirements relating to condition, performance and modification out in:

- [VIRM: In-service certification, section 8-1, heavy vehicles](#).

## 8-1 Service brake and park brake (heavy PSVs)

See also [Heavy vehicle brake testing: CoF and entry certification brake test protocol and procedure](#)

## Reasons for rejection

### Mandatory equipment

1. A vehicle does not comply with a requirement relating to mandatory equipment set out in:

- [VIRM: In-service certification, section 8-1, heavy PSV](#)

2. A vehicle in Table 8-1-2 does not have proof of compliance with requirements in that table.

### Condition, performance and modification

3. A vehicle or brake does not comply with a requirement relating to condition, performance or modification set out in:

- [VIRM: In-service certification, section 8-1, heavy PSV](#)

### Note 1

Where required, an entry certifier must obtain a declaration from a recognised technician stating that the anti-lock braking system is within safe tolerance of the manufacturer's specifications. See [Technical bulletin 29](#) for further information on SRS/ABS declarations.

**Table 8-1-2. Heavy-vehicle brakes – compliance requirements for class MD3, MD4, ME, NB and NC vehicles<sup>1</sup>**

Conditions applying	Requirements
<p>Imported, and</p> <ul style="list-style-type: none"> <li>• first registered in New Zealand 1 March 2007 to 30 June 2008, and</li> <li>• operated in a combination with a GM<sup>2</sup> &gt;39?44 t</li> </ul>	<ul style="list-style-type: none"> <li>• HVBS(2) Heavy Vehicle Braking Specification of 6 December 1998, or</li> <li>• HVBC(2) Heavy Vehicle Brake Code, second edition, or</li> <li>• HVBNZ New Zealand Heavy Vehicle Brake Specification, or</li> <li>• At least one approved standard in Table 8-1-3</li> </ul>
<p>Manufactured in New Zealand, and</p> <ul style="list-style-type: none"> <li>• first registered in New Zealand 1 March 2007 to 30 June 2008, and</li> <li>• operated in a combination with a GM<sup>2</sup> &gt;39?44 t</li> </ul>	<ul style="list-style-type: none"> <li>• HVBS(2) Heavy Vehicle Braking Specification of 6 December 1998, or</li> <li>• HVBC(2) Heavy Vehicle Brake Code, second edition, or</li> <li>• HVBNZ New Zealand Heavy Vehicle Brake Specification</li> </ul>
<p>Imported<sup>4</sup> first registered in New Zealand on or after 1/7/2008</p>	<ul style="list-style-type: none"> <li>• At least one approved standard in Table 8-1-3</li> </ul>
<p>Manufactured in New Zealand, and</p> <ul style="list-style-type: none"> <li>• first registered on or after 1 July 2008, and</li> <li>• with a towing connection for towing a heavy trailer</li> </ul>	<ul style="list-style-type: none"> <li>• HVBNZ, New Zealand Heavy Vehicle Brake Specification</li> </ul>
<p>Manufactured in New Zealand and</p> <ul style="list-style-type: none"> <li>• first registered on or after 1 July 2008, and</li> <li>• with no towing connection for towing a heavy trailer</li> </ul>	<ul style="list-style-type: none"> <li>• HVBNZ New Zealand Heavy Vehicle Brake Specification, or</li> <li>• stopping tests in 6.1(2)(b) of Heavy-vehicle Brake Rule</li> </ul>

<sup>1</sup> Not applicable to mobile cranes except those constructed using a commercial truck chassis.

<sup>3</sup> GM means gross mass.

<sup>4</sup> Imported in this case includes heavy PSVs that are manufactured in New Zealand from imported transport frame/chassis which comply with an approved brake standard in Table 8-1-3

**Table 8-1-3. Approved brake standards for class MD3, MD4, ME, NB and NC vehicles\***

UN-ECE Regulation no.	EEC/EC Directive	FMVSS	ADR	Japan
13	98/12 2002/78	105 (Hydraulic and Electric Brake Systems); or 121 (Air Brake Systems)	35	TS for brake systems of trucks and buses (Japan); or TS for anti-lock brake system (Japan)  Article 12

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

- [Technical bulletin 31](#) clarifies brake standards requirements for class MD3, MD4, ME, NB and NC vehicles.

## Summary of legislation

Applicable legislation

- [Land Transport Rule: Heavy-vehicle Brakes 2006](#)

### Mandatory equipment

1. Vehicles must comply with the requirements relating to mandatory equipment out in:

- [VIRM: In-service certification, section 8-1, heavy PSV](#)

2. The brakes on class MD3, MD4, ME, NB and NC vehicles must comply with the requirements in Table 8-1-2

### Condition, performance and modification

3. Brakes must be easily adjustable to compensate for wear and must be maintained in good condition and efficient working order.

4. Vehicles and brakes must also comply with the requirements relating to condition, performance and modification out in:

- [VIRM: In-service certification, section 8-1, heavy PSV](#)

## 8-1 Service brake and park brake (heavy trailers)

See also [Heavy vehicle brake testing: CoF and entry certification brake test protocol and procedure](#)

## Reasons for rejection

### Mandatory equipment

1. A vehicle does not comply with a requirement relating to mandatory equipment set out in the [VIRM: In-service certification, section 5-1](#)
2. A vehicle in Table 8-1-4 has not been certified as set out in that table.

### Condition, performance and modification

3. A vehicle or brake does not comply with a requirement relating to condition, performance or modification set out in the [VIRM: In-service certification, section 5-1](#)

**Table 8-1-4. Heavy-vehicle brakes – compliance requirements for class TC and TD vehicles**

Conditions applying	Requirements
<ul style="list-style-type: none"><li>• Operated in a combination with a GM<sup>1</sup> &gt;39?44 t, and</li><li>• first registered in New Zealand 1 March 2007 to 30 June 2008</li></ul>	<ul style="list-style-type: none"><li>• Breakaway brake, and</li><li>• HVBS(2) Heavy Vehicle Braking Specification of 6 December 1998, or</li><li>• HVBC(2) Heavy Vehicle Brake Code, second edition, or</li><li>• HVBNZ New Zealand Heavy Vehicle Brake Specification</li></ul>
<ul style="list-style-type: none"><li>• First registered on or after 1 July 2008</li></ul>	<ul style="list-style-type: none"><li>• Breakaway brake, and</li><li>• HVBNZ New Zealand Heavy Vehicle Brake Specification</li></ul>

<sup>1</sup> GM means gross mass.

<sup>2</sup> The appropriate brakes standard code must be entered into the standards code field in the ILOAD screen on LANDATA (refer to page 3-1-1 of the [LATIS agents' manual](#)).

## Summary of legislation

### Applicable legislation

- [Land Transport Rule: Heavy-vehicle Brakes 2006](#)

### Mandatory equipment

1. Vehicles must comply with the requirements relating to mandatory equipment set out in the [VIRM: In-service certification, section 5-1](#)

2. The brakes on class TC and TD vehicles must comply with requirements in Table 8-1-4.

### **Condition, performance and modification**

3. Brakes must be easily adjustable to compensate for wear and must be maintained in good condition and efficient working order.

4. Vehicles and brakes must also comply with the requirements relating to condition, performance and modification set out in the [VIRM: In-service certification, section 5-1](#)

## **8-2 Inspection specifications**

### **Technical information**

**IMPORTANT:** any parts that require removal or disassembly in order to carry out the inspection of brakes and brake components must be removed or disassembled.

#### **Exceptions to this requirement are as follows:**

- a) No removal or disassembly is required for vehicles presented for re-registration that were manufactured before 1991 and previously registered in New Zealand before 1 January 1991.
- b) No removal or disassembly is required for new vehicles and scratch-built low volume vehicles, it is not necessary to disassemble any brake components.
- c) For vehicles with rear drum brakes that are less than two years old and that have travelled less than 40,000km, only the front brakes must be disassembled initially. If the front brakes are up to standard, and there are no signs of problems with the rear brakes, disassembly of the rear brakes is not required.
- d) No removal or disassembly is required for class LA and LB vehicles, new, used or being re-registered.

## **Procedure**

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### **Entry-level brake inspection process for class LC, LD, LE vehicles, and group M or N light vehicles**

The vehicle inspector must personally carry out the brake inspection of all vehicles according to the following specifications.

The alternative method for motorcycles may be used if the vehicle inspector is unfamiliar with the disassembly or reassembly of the braking system.

#### **Master cylinder**

1. Check the condition of the brake fluid in the master cylinder reservoir for contaminants. If there are visible signs of dirt, moisture or other contaminants in the fluid, the fluid must be replaced.
2. Check the master cylinder for leaks.

## Underbody brake components

1. Brake components underneath the vehicle must be inspected using a hoist, pit or ramp that allows the vehicle inspector to comfortably walk under the vehicle.
2. Check the park brake cable by examining exposed cable for signs of knotting, corrosion or fraying or the use of auxiliary tensioning devices.
3. Examine any brake rods for excessive corrosion or wear.

## Wheels, brake drums and disc pads

1. Remove all wheels, brake drums and disc pads.
  - a) Only the front brakes need to be disassembled initially, if the vehicle:
    - is less than two years old, and
    - has travelled less than 40,000km, and
    - is fitted with drum brakes at the rear.

Provided there are no problems detected with the front brakes and the rear brakes exhibit no external sign of a problem (eg uneven braking, leaks, noises), no further disassembly is required.

- b) Brake components do not need to be disassembled during the entry certification inspection if the vehicle is new (Note 1) or a scratch-built low volume vehicle.

### Note 1

'New' means a vehicle that has not been registered and operated in any country, and has not been operated on a road in any country as a demonstration or courtesy vehicle or used for training or test purposes. It must not be a scratch-built vehicle that contains components which have been fitted to a vehicle operated on a road in any country.

- c) Any brake discs or drums and their friction materials, which are used for park brakes only, do not have to be inspected in detail, or have compliance verified. No further disassembly is required provided the brakes do not show any external signs of a problem and meet performance and condition requirements set out in the [VIRM: In-service certification section 8-1](#)

2. Check the run out of the disc rotors, the minimum thickness of the discs and any variation in disc thickness using calibrated measuring equipment (Note 2)
3. Check the drums for ovality using calibrated measuring equipment.

Measurements must be checked against the manufacturer's specifications. If the manufacturer's specifications are not available, the following maximum runout and ovality are permitted:

- runout on a disc brake rotor with a single acting hydraulic piston 0.1mm
- runout on a disc brake rotor with opposing hydraulic pistons 0.2mm
- ovality on a brake drum for light vehicles 1.0mm.

### Note 2

If an entry certifier wishes to use a roller brake machine to detect disc/rotor runout, they must be able to demonstrate this ability to an NZTA officer.

If machining is required, both of the drums or discs on a common axis must be machined. If it is found that a disc brake rotor requires machining or replacing, the brake friction material that was originally fitted to the vehicle may be re-used, provided it is within safe tolerance of the vehicle manufacturer's specifications. The entry certifier must consider the thickness and condition of the remaining brake friction material, and whether or not the vehicle manufacturer permits the re-fitting of brake friction material to new or re-surfaced brake rotors.

### **Wheel cylinders and callipers**

1. Check wheel cylinders and callipers for fluid leaks.
2. Check that the calliper or cylinder pistons have not seized, and are able to slide or swing on their mountings as appropriate.

### **Brake pipes**

1. Ensure that brake pipes are secure and supported.

### **Hoses and connections**

1. Inspect all hoses and connections (under pressure) for condition. Flexible brake hoses must be rejected if:
  - they leak brake fluid, or
  - they are insecure, or
  - they bulge under pressure, or
  - they are twisted, or
  - they have been stretched, or
  - the outer covering is chafed or cracked, particularly in the area of the crimp.

### **Brake friction material**

1. Visually inspect the brake friction material to verify that the material was supplied by the vehicle manufacturer. The name or logo of the vehicle manufacturer or a brake friction material manufacturer (listed in Figure 8-2-1) will be marked on the backing plate or the edge of the friction material.

If the material cannot be identified as being supplied by the vehicle manufacturer, the vehicle must not be certified until replacement brake friction material has been fitted, which:

- has been supplied by a recognised supplier (Note 3), or
- is accompanied by a statement completed by the supplier (see [Reference material 42](#)), or
- is accompanied by a 'Brake repair declaration' form (see [Reference material 42](#)) completed by a recognised brake repairer.

A correctly completed 'Brake repair declaration' form is acceptable evidence for replaced brake friction material.

If the brake friction material fitted to a vehicle is not known to be original equipment (OE), it may be accepted if it was made by a manufacturer that is known to produce OEM or OES brake parts.

If brake friction material does not meet these criteria, it must be removed and replaced with parts that return the vehicle's brakes to within safe tolerance of the manufacturer's specifications. When disc pads or linings are replaced, the material on both the left and right side of an axle must be replaced using identical material with the same coefficient of friction.

**Table 8-2-1. Limits for wear on brake friction material**

<b>Material</b>	<b>Minimum thickness</b>
Disc pads	3.0mm
Shoe linings (bonded)	2.0mm
Shoe linings (riveted)	2.0mm above the head of the rivet minimum thickness
Motorcycle disc pads and shoe linings	Manufacturer's minimum specification, if available, otherwise the general limits above must be used.

**Note 3**

A recognised supplier is a supplier recognised by the entry certifier as being reputable and competent to supply material that ensures the braking system will be returned to within safe tolerance of its state when manufactured.

**Note 4**

These limits for wear do not apply if the manufacturer has specified a greater minimum thickness for specific vehicle makes and models.

**Important:** Entry certifiers are required to include a regular audit of brake repairers in their procedures to ensure that information contained in declarations is correct.

**Markings not found in published data**

Where brake friction material is found with markings that cannot be found in published data, but the entry certifier believes the material to be OEM (or acceptable manufacturer's alternative) and otherwise fit for further service, it can be accepted. The entry certifier will need to provide evidence of how they determined that the friction material is OEM (or acceptable manufacturer's alternative) (if asked).

**Reassembly**

Where components are removed as part of the inspection process, an entry certifier must have procedures in place to ensure that those components are re-assembled correctly.

**Brake performance**

1. Once components have been accepted, carry out a service brake system performance test using an NZTA-approved brake machine.
2. Record the braking effort achieved.
3. Check that the performance meets the requirements specified in the [VIRM: In-service certification, section 8-1](#)

## Re-checking brakes that fail inspection

A brake performance test is required following any brake system repair or component replacement.

Vehicles returning for recheck following brake repair are not expected to be dismantled again for invasive inspection if a declaration from a recognised brake repairer is supplied. The 'Brake repair declaration' form is shown in [Reference material 42](#)

### Note 6

Brake parts that meet UN/ECE Regulation 90R are acceptable for vehicles undergoing entry certification. The vehicle inspector must retain documented evidence that the brake parts meet UN/ECE 90R and are suitable for the particular vehicle (in the location where they are fitted) on the vehicle file.

### Alternate method for motorcycle brakes

In cases where a vehicle inspector is not familiar with the disassembly or reassembly of the motorcycle's braking system, a relevant person or company, recognised by the entry certifier as being reputable and competent to carry out this work, may be employed to strip, inspect and reassemble motorcycle brake systems in accordance with the above inspection specifications.

This recognised person or company must supply the entry certifier with documentation confirming that the brake system and components are within safe tolerance of their state when manufactured.

If the motorcycle is required to comply with an approved brake standard, the documentation must also confirm that the brakes still comply with the original equipment brake standard to which the motorcycle was manufactured.

The recognised person or company must issue a declaration confirming that:

1. the motorcycle brake system has been dismantled, and
2. all brake components have been inspected, and
3. measurements have been taken and recorded, and
4. the brake system has been reassembled with no repairs required

### OR

any component(s) not within safe tolerance of the manufacturer's specifications is repaired or replaced, and the brake system has been reassembled.

If the motorcycle brake components are dismantled away from the inspection site, the brake component measurements must be recorded by the recognised person or company, or the vehicle inspector must be present during the dismantling process to record details.

The motorcycle owner/importer may take the vehicle to the recognised person or company.

### Figure 8-2-1. Recognised brake friction material manufacturers

- see Note 7

Manufacturer	Logos
Aisin	
	
Akebono	
Ambrake	
AP Racing* (see below)	
Asktechnica	 ASK Corporation
ATE	
Bendix	
Bosch	
BRAx	
Brembo	
Delco	
Delphi	
EBC Brakes	
Ferodo	
Girling	
Hitachi	
Hosei	
Japan Brake Industrial Co.	
Jurid	
KIA Precision Works	Similar to 
Lockheed	Not supplied
Lucas	

Manufacturer	Logos
Mando	
Mintex	
MK Kashiya	
MY 2016 Ltd	
NBK	
Nippondenso	
Nisshinbo	
Nissin Kogyo	
PAGID	
PBR	
Powerbrake	
Premier	
Royale	
Sangsin	
Sanyo	
Scandinavian Brake Systems	
Sumitomo	
Takara/Vesrah	
TEMB Auto Brake Co. Ltd	
Teves	
Textar	
Tokiko	
TRW Aftermarket	
Valeo	

\* AP Racing pads may only be accepted if the friction material type can be identified. AP Racing acceptable pad material types are identified by:

- APF403
- APF404
- APF405.

These are not acceptable, as these are identified by the manufacturer as track only materials.

- APF401
- APF402
- APG406.

**Table 8-2-2. Approved brake parts suppliers**

- see Note 7

Legal name of business	Trading name used on invoice
Allparts International Ltd	Allparts International Ltd
Apex Brake and Clutch Ltd	Apex Brake and Clutch Ltd
Auto Brake and Clutch Ltd	Auto Brake and Clutch Specialists
Auto Brake and Clutch Supplies Ltd	Auto Brake and Clutch Supplies Ltd
Auto Brakes Ltd	Auto Brakes Ltd
Auto Replacements 1994 Ltd	Auto Replacements 1994 Ltd
Auto Trail Ltd	Auto Trail Ltd
Autolines NP Ltd	Autolines Auto One
Automotive Brake and Clutch Ltd	Automotive Brake and Clutch Ltd
Automotive Driveline 1992 Ltd	Automotive Driveline 1992 Ltd
Automotive Parts Giants Ltd.	Automotive Parts Giants Ltd.
Automotive Partzio Ltd	Partzio (East Tamaki Ltd)
Automotive Partzio Ltd	Partzio (Otahuhu Ltd)
Bay City Motor Co Ltd	Bay City Motor Co Ltd
Belfor Automotive Centre Ltd	Belfor Automotive Centre Ltd
Brake and Clutch Rebuilders Ltd	Brake and Clutch Rebuilders Ltd
Brake and Transmission Ltd	Brake and Transmission NZ Ltd
Brakes and Spares Ltd	Brakes and Spares Ltd

Legal name of business	Trading name used on invoice
Challenge Auto Parts	Challenge Auto Parts
Cockram Motors (Chch) Ltd	Cockram Nissan
Collins Motors Ltd	Collins Auto Parts and Accessories
Cycle and Carriage (North Shore) Ltd	Kia Motors New Zealand
Daihatsu New Zealand Limited	Daihatsu New Zealand Limited
Direct Auto One	Direct Auto One
EBC Brakes NZ Ltd	EBC Brakes NZ
Extreme Distributors Ltd	Extreme Automotive Distributors
Forward Specs (2000) Ltd	Forward Specs (2000) Ltd
Garland Motors	Whakatane Auto One
GPC Asia Pacific Limited	Repcos Auto Parts
	NAPA Auto Parts
Holdaways Limited	Holdaways Ltd
Holden New Zealand Ltd	Holden New Zealand Ltd
Honda New Zealand Ltd	Honda New Zealand Ltd
Import Part Specialists Ltd	Import Part Specialists Ltd
Independent Brake Supplies NZ Ltd	Independent Brake Supplies NZ Ltd
Interpart Ltd	Interpart Ltd
Jaycon Engineering Ltd	MP Auto Parts

Legal name of business	Trading name used on invoice
Jeffrey Gong, T/A Callahan Auto Supply	Callahan Auto Supply
John Patton Ltd	Thames Auto One
Johnson Piston Rings Ltd	Johnson Piston Rings
Lambert Brake and Clutch Ltd	Lambert Brake and Clutch Ltd
Le Freins Ltd	Autosafe Taupo
MacDonald Halligan Motors Ltd	MacDonald Halligan Motors Ltd
Master Part Automotive Products (1997) Ltd	0800 Brakes
Master Part Automotive Products Ltd	Master Part Brake and Clutch
Mintoft and Heenan Ltd	Freemans Auto One
Muffler and Brake Ltd	Muffler and Brake Ltd
Murray McLean Motorcycles Services Ltd	Murray McLean Motorcycles Services Ltd
Napier Auto Supplies (1980) Ltd	Napier Auto Supplies
Nelson Brake Services Ltd	Nelson Brake Services Ltd
New Zealand Brake Company Ltd	Brake Co
Orton Motor 1990 Ltd	Ruts Auto Brake, Clutch
Owens Suspension and Brake Specialists Ltd	Owens Suspension and Brake Specialists Ltd
Partmaster Ltd	Partmaster
Pembroke Fram Ltd	Union Yamaha

Legal name of business	Trading name used on invoice
Precision Brake and Clutch Services Ltd	Precision Brake and Clutch Services Ltd
R and J E Hull Ltd	Brake Specialists
Rawson Parts Ltd	Partnership Auto One
Red Baron (NZ) Ltd	
Redwood Investments Ltd	Bikes 'n' Bits
River City Auto World	Wanganui Toyota
Robbie's Speedy Exhaust and Brakes Shop Ltd	Robbie's Speedy Exhaust and Brake Shop Ltd
RTJ Industries	Brake Service Centre
Safe R Brakes Ltd	Safe R Brakes Ltd
SAS Autoparts Limited	SAS Autoparts
Segedins Auto Parts Ltd	Segedins Auto Parts Ltd
Sims Brake Services Ltd	Sims Brake Services Ltd
Southern Brakes and Driveline Ltd	Southern Brakes and Driveline Ltd
Speedy Parts (NZ) Ltd	Speedy Parts (NZ) Ltd
Sterling Brake and Clutch Specialists	Sterling Brake and Clutch Specialists
Styles Autoparts Ltd	Hawera Autospare
Sovic Engineering Ltd	Sovic Engineering Ltd
T B and J F Bell Partnership	Redhills Benz

Legal name of business	Trading name used on invoice
Taupo Auto One Ltd	Taupo Auto One
Transport Brake and Clutch Ltd	Transport Brake and Clutch
Triumph Promotions Ltd	Jim Wright Nissan
Vehicle Testing and Compliance Ltd	Vehicle Testing and Compliance Ltd
Waikato Bonding Services Ltd	
Waikato Clutch and Brake Specialists Ltd	Waikato Clutch and Brake Specialists Ltd
Whakatane Brake and Clutch Centre Ltd	Whakatane Brake and Clutch Centre Ltd
W. White Wholesale Ltd.	Whites Powersports

Table updated 6 May 2024.

#### Note 7

If you would like information added to this page please email [virmupdates@nzta.govt.nz](mailto:virmupdates@nzta.govt.nz) with the following information:

- documentation from the manufacturer proving the parts meet the requirements of the [Land Transport Rule: Light Vehicle Brakes 2002](#), section 3.3(3) (ie that they comply with UN/ECE Regulation 90)
- the manufacturers logo
- the legal name of your business and the trading name used on invoices.

NZTA will review your submission and add to this page if satisfied.

Page amended **21 August 2024** (see [amendment details](#))