

<b>Title</b>	<b>Demonstrate knowledge of rail braking systems used in New Zealand</b>		
<b>Level</b>	<b>2</b>	<b>Credits</b>	<b>2</b>

<b>Purpose</b>	People credited with this unit standard are able to: describe the types of rail braking systems available; and identify types of braking systems fitted to rail vehicles, in New Zealand.
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<b>Classification</b>	Rail Transport > Rail Core Skills
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 Legislation relevant to this unit standard includes:  
Health and Safety at Work Act 2015.  
Railways Act 2005 and subsequent amendments.
- 2 Definition  
*Rail vehicle* refers to any flanged wheeled vehicle which uses the railway line.

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### Outcomes and performance criteria

#### Outcome 1

Describe the types of rail braking systems available in New Zealand.

#### Performance criteria

- 1.1 The continuous, automatic air brake system is described in terms of its components and function.  
  
Range may include but is not limited to – reservoir(s), bleed hole, compressor, hoses, rolling stock isolation, triple valve, pistons, brake blocks, propagation rate, brake valve, independent brake.
- 1.2 Dynamic braking is described in terms of its components, function, and benefits.  
  
Range may include but is not limited to – brake resistor, blowers, rheostatic and regenerative options, brake shoe/disc wear.
- 1.3 Electro-pneumatic braking is described in terms of its components and how it complements the continuous air-brake system.
- 1.4 Park brakes are described in terms of their purpose and function.

**Outcome 2**

Identify types of braking systems fitted to rail vehicles in New Zealand.

**Performance criteria**

2.1 Rail vehicle braking systems are identified.

Range may include but is not limited to – electric multiple units, diesel-mechanical railcars, passenger carriages/trains, freight wagons/trains;  
evidence is required for the braking systems on a minimum of one type of rail vehicle.

2.2 Locomotive braking systems are identified.

Range may include but is not limited to – diesel-electric, diesel-mechanical, electric, steam;  
evidence is required for the braking systems on a minimum of one type of locomotive.

<b>Planned review date</b>	31 December 2025
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	24 May 2002	31 December 2022
Review	2	14 December 2007	31 December 2022
Review	3	29 April 2021	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0013
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

**Comments on this unit standard**

Please contact Competenz [qualifications@competenz.org.nz](mailto:qualifications@competenz.org.nz) if you wish to suggest changes to the content of this unit standard.