

Title	Haul a freight train on a network route using a main line locomotive		
Level	4	Credits	25

Purpose	People credited with this unit standard are able to: prepare to drive a freight train on a network route; drive a freight train on a network route; demonstrate knowledge and use of braking systems on a freight train on a network route; and describe follow-up procedures and complete documentation.
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Classification	Rail Transport > Rail Operations
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Available grade	Achieved
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Prerequisites	Unit 19287, <i>Demonstrate knowledge of the Automatic Signalling Rules system for rail operations</i> ; or demonstrate equivalent knowledge and skills.
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Guidance Information

- 1 Assessment against this unit standard must be carried out within the context of an organisation operating under a current, valid Rail Licence issued in accordance with the provisions of the Railways Act 2005. The organisation's operating rules, codes, and instructions, referred to in this unit standard, are those the organisation has in place to meet the requirements of the Rail Licence.
- 2 Legislation relevant to this unit standard includes the:
Health and Safety at Work Act 2015.
Railways Act 2005 and subsequent amendments.
- 3 Definitions
Dynamic brake refers to regenerative braking, if this feature is fitted to the locomotive.
Freight train refers to a consist of rail vehicles of either fixed axle or bogie configuration being hauled by one or more main line locomotives.
Locomotive whistle refers to any audible warning device installed on motive power units.
Network route refers to a railway network route of 40 kilometres or more managed by a network operator.
Organisational procedures refer to documents that include: operating rules, codes, instructions, and practices; equipment operating instructions; documented quality management systems; and health and safety requirements.
Rail vehicle refers to any flanged wheeled vehicle which uses the railway line.
Train Control is a centre from where the movements of all trains in a specified area are brought under the direction of a Train Control Officer.

- 4 Range
Main line locomotives for this unit standard may include but are not limited to – Brush Class 30; General Electric; General Motors and Mitsubishi DJ locomotives.
- 5 Assessment information
- a All activities and evidence must be in accordance with organisational procedures.
 - b Operation of the freight train must be of a reasonable duration to allow for the demonstration of performance outcomes specified in this unit standard. Typically, the assessment would be expected to require a cumulative operation time of approximately eight hours over a line managed by a network operator.
 - c The haulage of a freight train over any prescribed main line requires the locomotive driver to be first familiar with the route. It is recommended that assessment against this unit standard only be undertaken following a reasonable period of exposure to the track and surrounding environment. The time required for familiarisation will vary depending on the length and other aspects of the route.
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Outcomes and performance criteria

Outcome 1

Prepare to drive a freight train on a network route using a main line locomotive.

Performance criteria

- 1.1 Train instructions are received, interpreted, and followed.
Range standing instructions, special instructions.
- 1.2 Train crew is briefed about job requirements.
Range may include but is not limited to – shunts en-route, train crossings en-route, limit of authority to journey.
- 1.3 Documentation is completed.

Outcome 2

Drive a freight train on a network route using a main line locomotive.

Performance criteria

- 2.1 Locomotive controller is operated.
Range increase and decrease power without damage to traction motors.

- 2.2 Locomotive is operated with consideration to road characteristics and environmental conditions.
- Range may include but is not limited to – current and anticipated terrain, rate of acceleration, speed restrictions, fuel conservation, condition of track, presence of track maintenance personnel.
- 2.3 Locomotive is operated with consideration to the composition of the freight train.
- Range may include but is not limited to – train length, freight type, freight weight and distribution, condition of freight wagons.
- 2.4 Locomotive is operated in accordance with Driver Advice System (DAS).
- 2.5 Train is monitored with vigilance throughout the entire operation.
- Range may include but is not limited to – visual inspection, head-end device feedback, brake pipe pressure gauge.
- 2.6 Signal locations are anticipated, and indications are acted upon throughout the entire journey.
- 2.7 Locomotive whistle is used in accordance with regional requirements.
- 2.8 Locomotive headlight is used in accordance with regional requirements.
- 2.9 Communications with Train Control personnel are carried out in accordance with job requirements.
- Range may include but is not limited to – VHF fixed radio, UHF portable radio, track side telephones, cell phone.

Outcome 3

Demonstrate knowledge and use of braking systems on a freight train on a network route using a main line locomotive.

Performance criteria

- 3.1 Actions to take in the event of an emergency stop are described.
- 3.2 Train and locomotive air brakes are operated.
- Range slow down train, service stop.
- 3.3 Dynamic brake is used.
- Range used in isolation, used in conjunction with other braking systems.
- 3.4 Locomotive controller is operated correctly in conjunction with locomotive and train braking systems.

Outcome 4

Describe follow-up procedures and complete documentation.

Performance criteria

- 4.1 Steps for the reporting of incidents and unusual occurrences en-route are described.
- 4.2 Steps for the reporting of problems with locomotive and/or train consist are described.
- 4.3 Documentation is completed.

Planned review date	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	20 November 2009	31 December 2022
Review	3	29 April 2021	31 December 2022
Revision	4	16 December 2021	N/A

Consent and Moderation Requirements (CMR) reference	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 Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council qualifications@hangaarorau.nz if you wish to suggest changes to the content of this unit standard.