

<b>Title</b>	<b>Install or replace rail</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>2</b>

<b>Purpose</b>	People credited with this unit standard are able to: prepare to install or replace rail; follow rail permission systems; undertake rail installation or replacement; create rail joints; install rail fastenings and adjust track parameters; and check work and complete documentation.
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<b>Classification</b>	Rail Transport > Rail Infrastructure
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<b>Available grade</b>	Achieved
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### Guidance Information

- 1 Assessment against this unit standard is to 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 in Employment Act 1992, and Railways Act 2005.
- 3 Installation and replacement of rail must cover a minimum of two closures and two sections of track not exceeding 76 metres each.
- 4 Definitions  
*Organisational procedures* refer to documents that include: worksite rules, codes, and practices; equipment operating instructions; documented quality management systems; and health and safety requirements.  
*Work plan* refers to instructions that may include: work/service order, verbal instruction, formal work plan.

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### Outcomes and performance criteria

#### Outcome 1

Prepare to install or replace rail.

#### Performance criteria

- 1.1 Safety requirements are identified in accordance with organisational procedures.

- 1.2 Work plan for the installation or replacement of rail is received, interpreted, and followed in accordance with organisational procedures.
- Range may include but is not limited to – removal of existing rail, selection of rail and fastening systems, installation method.
- 1.3 Work methods to be employed are identified in accordance with organisational procedures.
- Range methods may be – manual, mechanical.
- 1.4 Tools and equipment are selected in accordance with work plan.
- Range may include but is not limited to – mechanical handling/lifting equipment, track machines, hand/power tools, rail tensors, rail heaters, rail threaders, fastening equipment, cutting and boring equipment.
- 1.5 Rail selected for installation is appropriate in terms of weight and dimensions in accordance with work plan.
- 1.6 Rail fastening systems are selected in accordance with work plan.
- Range may include but is not limited to – fishplates, rail anchors, bolts, nuts, washers.
- 1.7 Rail to sleeper fastening systems are selected in accordance with work plan.
- Range may include but is not limited to – dogspikes, screwspikes, rail clips.

## **Outcome 2**

Follow rail permission systems.

### **Performance criteria**

- 2.1 Track protection is established in accordance with organisational procedures.
- 2.2 Train movement information is accessed and interpreted in accordance with organisational procedures.
- 2.3 Permission to work or travel is obtained in accordance with organisational procedures.

## **Outcome 3**

Undertake rail installation or replacement.

**Performance criteria**

- 3.1 Personal protective equipment (PPE) is used in accordance with organisational procedures.
- Range may include but is not limited to – high visibility clothing, hearing protection, gloves, sunscreen, sunglasses, safety glasses, insect repellent, safety headwear, safety footwear, portable radios, hand lamps, flags.
- 3.2 Loading and unloading of rails is conducted in accordance with organisational procedures.
- 3.3 Rails are cut to required length in accordance with organisational procedures.
- 3.4 If required, rails are crowed to the correct curvature to ensure correct track geometry is maintained in accordance with organisational procedures.
- 3.5 Where necessary, existing rail is unfastened and removed in accordance with organisational procedures.
- 3.6 Where materials are removed, they are stored or disposed of in accordance with organisational procedures.
- Range materials may be – reusable, unserviceable.
- 3.7 Rail is lifted into place in accordance with organisational procedures.

**Outcome 4**

Create rail joints.

**Performance criteria**

- 4.1 Rail ends are drilled, and/or prepared for welding, in accordance with organisational procedures.
- 4.2 Rail joints are welded, or are assembled to specifications, in accordance with organisational procedures.
- 4.3 Surfaces and component parts on bolted joints are checked in accordance with organisational procedures.
- Range may include but is not limited to – insulation, lubrication, expansion gap, correct assembly to specification.

**Outcome 5**

Install rail fastenings and adjust track parameters.

**Performance criteria**

- 5.1 Required fastening or anchoring systems are installed in accordance with organisational procedures.
- 5.2 Track parameters are adjusted in accordance with organisational procedures.  
Range cart, top, alignment, gauge, rail stress, pop mark.

**Outcome 6**

Check work and complete documentation on installation or replacement of rail.

**Performance criteria**

- 6.1 Completed work is checked for compliance with work plan.
- 6.2 Documentation is completed in accordance with organisational procedures.

**This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.**

<b>Replacement information</b>	This unit standard was replaced by unit standard 33027.
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	26 May 2003	31 December 2024
Review	2	21 November 2008	31 December 2024
Review	3	24 February 2022	31 December 2024

<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>.