

40428**Carry out inspection and maintenance of detachable grip technology in passenger ropeways**

Kaupae Level	4
Whiwhinga Credit	20
Whāinga Purpose	<p>This skill standard is for people who are already working in the passenger ropeway sector to carry out inspection and maintenance of detachable grip technology in passenger ropeways.</p> <p>This skill standard may be used in programmes leading to qualifications and micro-credentials at Level 3 and above in passenger ropeway systems and maintenance.</p>

Hua o te ako me Paearu aromatawai | Learning outcomes and assessment criteria

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
1. Explain the components and principles of detachable grip technology.	a. Explain the basic principles of how a detachable grip functions.
	b. Identify components and explain their function.
2. Carry out inspection and maintenance of detachable grip technology.	a. Identify potential hazards associated with detachable grip maintenance and apply relevant control measures.
	b. Disassemble and reassemble detachable grips.
	c. Carry out inspections and maintenance for detachable grips.
	d. Identify torque specifications and apply correct procedures during installation and maintenance of detachable grip components.
	e. Prepare passenger ropeway equipment for Non-Destructive Testing (NDT) on critical areas as specified by the manufacturer while carrying out visual inspections.
	f. Maintain and replace detachable grip components as required.
	g. Complete accurate and detailed documentation of inspection findings, maintenance activities, and any required follow-up actions in accordance with the organisation's requirements.

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
3. Carry out testing and safety control procedures for detachable grips to ensure safe operations of passenger ropeway.	a. Identify potential hazards associated with detachable grip testing and apply relevant control measures.
	b. Complete testing for detachable grips in accordance with manufacturers' recommendations to ensure safety.
	c. Measure tolerances of detachable grip components and rectify deviations from specified tolerances.
	d. Interpret test results and take corrective actions.
	e. Complete all relevant documentation in accordance with the organisation's requirements.

Pārongo aromatawai me te taumata paearu | Assessment information and grade criteria

Assessment specifications:

Evidence for assessment may include participation in simulated or real-world scenarios to assess practical application of skills.

It is recommended that people hold credits for skill standards 40425, *Explain regulations and compliance requirements for passenger ropeway operations*, and 40426, *Explain of non-destructive testing (NDT) principles and applications for passenger ropeways* before being assessed against this skill standard or demonstrate equivalent knowledge and skills.

Definitions:

Detachable grip refers to the mechanism allowing for efficient coupling and decoupling of the grip device from the haul rope/cable, facilitating the transition of the carrier from the moving cable to a stationary position at loading and unloading stations.

Inspection and maintenance of passenger ropeways refers to the regular and systematic examination and maintenance of passenger ropeway systems, equipment, facilities, or processes to ensure they are in good working condition and comply with safety and operational standards. These inspections are conducted at predefined intervals as specified by passenger ropeway manufacturers' guidelines, regulatory bodies, and industry and site-specific operational requirements. These are part of a preventive maintenance program to identify and solve potential issues before they lead to equipment failure or safety hazards. The goal of routine inspections and maintenance is to maintain passenger ropeways' ensure the safe and efficient transportation of passengers, compliance with regulations, and enhance safety in the workplace.

Pull force testing or slip testing involves applying a controlled force to the grip mechanism to simulate the conditions under which it might detach from the rope/cable.

Ngā momo whiwhinga | Grades available

Achieved.

Ihirangi waitohu | Indicative content

- Understanding the fundamentals of how a detachable grip functions.
- Stored energy and handling protocols.
- Components of a detachable grip such as – guide rollers, tread plates, open/closed rails, guard rails, stations.
- Control measures such as – lockout, safe zone.
- NDT tests such as – visual inspection.
- Pull force testing or slip testing.
- Maintenance of components such as – bushes, springs, torsion bars, bearings, rollers, axles, friction plate, roll-pin, application of lube.

Rauemi | Resources

Legislation, regulations and/or industry standards

- Health & Safety at Work Act 2015
<https://www.legislation.govt.nz/act/public/2015/0070/latest/DLM5976660.html>.
- Pressure Equipment, Cranes and Passenger Ropeways Regulations 1999 (PECPR)
<https://www.legislation.govt.nz/regulation/public/1999/0128/latest/DLM284452.html>.
- NZS 8635:2018 Passenger ropeways and passenger conveyors, available at
<https://www.standards.govt.nz/shop/nzs-86352018>.
- Manufacturers' specifications.
- Workplace operation procedures.

Pārongo Whakaū Kounga | Quality assurance information

Ngā rōpū whakatau-paerewa Standard Setting Body	Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council
Whakaritenga Rārangi Paetae Aromatawai DASS classification	Engineering and Technology>Mechanical Engineering > Maintenance and Diagnostics in Mechanical Engineering
Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga CMR	0013

Hātepe Process	Putanga Version	Rā whakaputa Review Date	Rā whakamutunga mō te aromatawai Last date for assessment
Rēhitatanga Registration	1	30 January 2025	NA
Kōrero whakakapinga Replacement information	N/A		
Rā arotake Planned review date	31 December 2029		

Please contact Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council at qualifications@hangaarorau.nz if you wish to suggest changes to the content of this skill standard.