

**40427****Carry out inspection and maintenance of fixed grip technology in passenger ropeways**

<b>Kaupae   Level</b>	4
<b>Whiwhinga   Credit</b>	10
<b>Whāinga   Purpose</b>	<p>This skill standard is for people already working in the passenger ropeway sector to carry out inspection and maintenance of fixed 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**

<b>Hua o te ako   Learning outcomes</b>	<b>Paearu aromatawai   Assessment criteria</b>
1. Explain the components and principles of fixed grip technology.	a. Explain the principles that distinguish fixed grip surface lifts from aerial ropeways.
	b. Explain the principles of how fixed grips function.
	c. Identify components of fixed grips and explain their function.
	d. Explain correct relocation requirements and expected timeframes.
2. Carry out inspection and maintenance of fixed grip technology.	a. Identify potential hazards associated with fixed grip maintenance and apply relevant control measures.
	b. Disassemble and reassemble fixed grips.
	c. Carry out inspections and maintenance of fixed grips.
	d. Identify torque specifications and apply correct procedures during installation and maintenance of fixed grip components.
	e. Prepare passenger ropeway equipment for non-destructive testing (NDT) on critical elements of fixed grips while carrying out visual inspections.
	f. Maintain and replace fixed grip components as required.
	g. Complete relevant 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 fixed grip technology to ensure safe operations of passenger ropeway.	a. Identify potential hazards associated with fixed grip testing and apply relevant control measures.
	b. Complete testing for fixed grips in accordance with manufacturers' recommendations
	c. Measure tolerances of fixed 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 including correctly attaching the grip onto the haul rope.

Testing as per manufacturers requirements including pull force testing also known as slip testing.

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

Definitions:

*Fixed grips* refers to the means of clamping a carrier to the haul rope, that once mechanically clamped, by means of a torque value does not release from the haul rope.

*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* (also known as *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**

- The fundamentals of how a fixed grip functions.
- Stored energy and handling protocols.
- Control measures such as – lockout, safe zone.
- Components and maintenance of a fixed grips such as – grip main body, grip jaw, thrust pin, grip tongues, cup springs, spring piston, spring housing, snap rings, roll pins, nuts and washers, O-rings.
- NDT tests such as – visual inspection, and knowledge of what components require NDT and intervals of NDT.

**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**

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

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

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