41321 Create two-tier master key systems using rotating constant and selective keying designs

Kaupae | Level	4
Whiwhinga | Credit	5
Whāinga | Purpose	This skill standard is intended for people who are working in the locksmithing industry. Learners credited with this skill standard will be able to create two-tier master key systems using rotating constant and selective keying designs. This skill standard aligns with the New Zealand Certificate in Locksmithing (Trade) (Level 4) [Ref: 2718].

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

Hua o te ako | Learning outcomes	**Paearu aromatawai |** Assessment criteria
1. Create two-tier master key systems using rotating constant and selective keying designs.	a. Map areas and doors to meet specified access requirements.
	b. Select appropriate Main Perm.
	c. Create a progression chart.
	d. Generate bitting array.
	e. Generate key matrix.
	f. Identify and mark out any bad codes.

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

Assessment specifications:

- Rotating constant design must include generation of 48 change key matrix using a 2 in 3 mask.
- Selective keying design must include generation of a 16 selective key matrix.
- Evidence presented for assessment against this skill standard may be achieved using a hypothetical scenario. Learners are not required to create a master key design for an actual customer.
- Evidence presented for assessment against this skill standard must be consistent with safe working practices and be in accordance with applicable service information, workplace procedures and legislative requirements.
- It is recommended that people hold credits for skill standard 41319, *Design a master key system manually* or demonstrate equivalent knowledge and skills before being assessed against this skill standard.

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Definitions

Locksmithing terminology is defined as per MLAA glossary:

Bitting refers to a potential key. These numbers represent the cuts of a key.

Depth steps refer to the minimum difference between useable depths. Set at the creation of the system, this will dictate the number of unique codes which can be produced from a chamber.

Main Perm refers to the highest level code the system is derived from.

Master Key refers to any key which has keys or codes below it in the hierarchy.

MLAA refers to Master Locksmiths Association of Australasia.

Phantom refers to a key which utilises existing shearlines to operates locks it is not authorised to operate.

Progression chart refers to a schedule detailing the designation, depth steps and sequence of progression for each progressed chamber.

Rotating Constant System refers to a system where chambers may change their designations.

Selective key refers to a key that is able to work a selection of locks without creating phantoms.

Workplace procedures refer to organisation policies and procedures that are documented in memo, electronic, or manual format and available in the workplace. They may include but are not limited to – standard operating procedures, site specific procedures, site safety procedures, equipment operating procedures, quality assurance procedures, product quality specifications, manufacturer's requirements, references, approved codes of practice, housekeeping standards, environmental considerations, on-site briefings, supervisor's instructions, and procedures to comply with legislative and local body requirements relevant to the locksmithing industry.

Ngā momo whiwhinga* | *Grades available

Achieved

Ihirangi waitohu | Indicative content

- Principles of rotating constant progression.
- Expansion of an existing system using rotating constant design.
- Importance of leaving a constant in a master key system design.
- Principles of selective key design.

Rauemi | Resources

Legislation, regulations and industry guidelines relevant to this skill standard include but are not limited to:

- Health and Safety at Work Act 2015.
- Privacy Act 2020.
- Master Locksmiths Association Australasia. (current version). *MLAA Glossary of Master keying Terms*. Available from: https://masterlocksmiths.com.au/.

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Pārongo Whakaū Kounga | Quality assurance information

Ngā rōpū whakatau-paerewa | Standard Setting Body	Manufacturing and Engineering Industry Skills Board
Whakaritenga Rārangi Paetae Aromatawai | DASS classification	Engineering and Technology > Mechanical Engineering > Locksmithing
Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga | CMR	0014

Hātepe | Process	**Putanga |** Version	**Rā whakaputa |** Review Date	**Rā whakamutunga mō te aromatawai |** Last date for assessment
Rēhitatanga | Registration	1	28 May 2026	N/A
Kōrero whakakapinga | Replacement information	N/A		
Rā arotake | Planned review date	31 December 2031		

Please contact Manufacturing and Engineering Industry Skills Board at qualifications@maeisb.nz to suggest changes to the content of this skill standard.

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