

41323 Produce transponder keys

Kaupae Level	4
Whiwhinga Credit	15
Whāinga Purpose	This skill standard is intended for people who are working in the locksmithing industry. People credited with this skill standard will be able to prepare for, assess, and produce working transponder keys using diagnostic tool, cloning, and bench programming methods. 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. Describe transponder key systems.	a. Describe transponder key technology and relevant modes of operation.
	b. Describe modes of programming authentication.
2. Prepare to produce a working transponder key.	a. Obtain relevant individual vehicle specifications.
	b. Identify the key blank, transponder type, transponder configuration and programming authentication protocol correctly, using reference material as required.
	c. Select appropriate programming device, including any relevant adaptors and tools for passing the programming authentication protocols.
	d. Select transponder key and configure correctly for the target vehicle.
3. Assess vehicle and cut key.	a. Obtain ownership information and authority to work on the vehicle.
	b. Identify and note any pre-existing mechanical and/or diagnostic faults.
	c. Cut key correctly.

Hua o te ako Learning outcomes	Paearu aromatawai Assessment criteria
4. Produce working transponder keys using different methods.	a. Produce a working key by diagnostic tool.
	b. Produce a working key by cloning.
	c. Produce a working key by bench programming.

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

Assessment specifications:

- Entry systems may include – passive keyless entry systems, remote keyless entry system, transponder keys.
- Evidence presented against assessment criterion 4a must include – vehicles from a minimum of four different manufacturers, and include at least one example of each of the following scenarios:
 - no working keys (all keys lost scenario).
 - PIN required.
 - pre-coded transponder required.
- Evidence presented against assessment criterion 4b must include a minimum of two different types of crypto code and vehicles from a minimum of two different manufacturers.
- 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 41324, *Produce mechanical vehicle keys*, Unit 30967, *Troubleshoot and diagnose faults in automotive mechanical locking systems*, Unit 30971, *Describe servicing automotive remote entry systems*, Unit 30972, *Troubleshoot, diagnose, and repair faults in automotive immobiliser systems* before being assessed against this unit standard.

Definitions

Diagnostic tool refers to a tool capable of performing basic fault code identification and key programming.

Fixed/Crypto/Rolling Code refers to potential authentication protocols used by transponders.

Passive Keyless Entry (PKE) system is a proximity system that provides the user with the convenience of unlocking a car door without pressing any buttons. Programmers, also known as programming devices, software, transponders, and key fobs, may be proprietary items.

Precoding refers to customised data generation performed on a transponder to prepare it for programming to a vehicle. Examples include – manufacturer specific, sub-model specific and VIN specific data.

Remote Keyless Entry (RKE) system enables the locking and unlocking of the car doors without having to insert a key into the door lock.

Transponder keys refer to keys which contain a Radio Frequency Device used for electronic authorisation to disarm the immobiliser.

Transponder key technology refers to transponders, electro-magnetic field generators, Radio Frequency transmission, read-write devices in vehicles.

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

Transponders

- Modes of operation – fixed code, crypto code, rolling code, precoding.
- Modes of programming authentication – PIN, incode - outcode, time delay, programming key, minimum key requirements.
- Reference material – software, personal records, books, transponder key reader.

Diagnostic tool method

- External battery support.
- Deletion of existing keys.
- Re-registration of retained original keys and addition of new keys.
- Testing of keys for correct operation.
- Identification and clearance of any new vehicle faults.

Cloning method

- Extraction of data from original key and vehicle as required.
- Writing of data on the cloneable transponder.
- Testing of keys for correct operation.

Bench programming method

- Identification and safe removal of target module.
- Extraction of data from the module.
- Key production using the extracted data.
- Return of module to working condition and re-installation in vehicle.
- Testing of all keys for correct operation.
- Identification and clearance of any new vehicle faults.

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.
- Master Locksmiths Association Australasia (MLAA), Code of Ethics. Available from: <https://masterlocksmiths.com.au/>.

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.