

Title	Demonstrate knowledge of removing and refitting automotive air conditioning, cooling and oil cooling system components		
Level	3	Credits	4

Purpose	This theory-based unit standard is for people who wish to enter or are employed in the collision repair industry. People credited with this unit standard are able to demonstrate knowledge of removing and refitting automotive air conditioning, cooling and oil cooling system components.
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Classification	Motor Industry > Collision Repair
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Available grade	Achieved
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Explanatory notes

- 1 Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable manufacturer's specifications, service information, company and legislative requirements (this includes the knowledge/use of suitable tools and equipment).
- 2 Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the current version of including updated amendments to, and replacements of – Health and Safety at Work Act 2015, Hazardous Substances and New Organisms Act 1996.
- 3 Definitions
Company requirements refer to instructions to staff on policy and procedures which are documented in memo or manual format and are available in the workplace. These requirements include but are not limited to – company specifications and procedures, work instructions, manufacturer specifications, product quality specifications and legislative requirements.
Service information may include but is not limited to – technical information of a vehicle, machine, or product detailing operation; installation and servicing procedures; manufacturer instructions and specifications; technical terms and descriptions; and detailed illustrations. This may be accessed from the manufacturer.
Suitable tools and equipment means industry approved tools and equipment that are recognised within the industry as being the most suited to complete the task in a professional and competent manner with due regard to safe working practices.

Outcomes and evidence requirements

Outcome 1

Demonstrate knowledge of removing and refitting automotive air conditioning system components.

Evidence requirements

- 1.1 Components of an air conditioning system and their location on a vehicle are identified.
- 1.2 The precautions to take when removing and refitting air conditioning systems and their components are described.
- Range refrigerants, degassing, protection of the system from contaminants, disposal requirements, personal protection equipment
- 1.3 Procedures for removing air conditioning system components are described.
- Range condenser, dryer, compressor, pipes, o-rings
- 1.4 Procedures for refitting an air conditioning system components are described.
- Range condenser, dryer, compressor, pipes, o-rings
- 1.5 Required certification for working with air conditioning systems are identified.

Outcome 2

Demonstrate knowledge of removing and refitting automotive cooling system components.

Evidence requirements

- 2.1 Components of a cooling system and their location on a vehicle are identified.
- 2.2 The precautions to take when removing and refitting cooling systems and their components are described.
- Range system temperature, coolant type, disposal requirements, personal protection equipment
- 2.3 Procedures for removing cooling system components are described.
- Range radiator, overflow bottle, hoses, fastening systems
- 2.4 Procedures for refitting a cooling system components are described.
- Range radiator, overflow bottle, hoses, fastening systems

Outcome 3

Demonstrate knowledge of removing and refitting automotive oil cooling system components.

Evidence requirements

- 3.1 Components of an oil cooling system and their location on a vehicle are identified.
- 3.2 The precautions to take when removing and refitting oil cooling systems and their components are described.
- Range system temperature, capture of oil, disposal requirements, personal protection equipment
- 3.3 Procedures for removing oil cooling system components are described.
- Range pipes, hoses, oil cooler
- 3.4 Procedures for refitting oil cooling system components are described.
- Range pipes, hoses, oil cooler

Planned review date	31 August 2021
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	18 August 2016	N/A

Consent and Moderation Requirements (CMR) reference	0014
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMRs). The CMR also includes useful information about special requirements for organisations wishing

to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

Please contact the SSB MITO New Zealand Incorporated info@mito.org.nz if you wish to suggest changes to the content of this unit standard.