

Title	Recover refrigerant from, and evacuate and charge an automotive air conditioning system		
Level	3	Credits	2

Purpose	<p>This unit standard is intended for people in the automotive repair industry.</p> <p>People credited with this unit standard are able to: recover refrigerant from; evacuate; and charge an automotive air conditioning system.</p>
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Classification	Motor Industry > Automotive Heating, Ventilation, and Air Conditioning
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Available grade	Achieved
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Guidance Information

- 1 It is recommended that people hold credit for Unit 19666, *Demonstrate knowledge of refrigerants and their effect on the environment*, and Unit 24448, *Demonstrate knowledge of servicing automotive air conditioning systems* before being assessed against this unit standard.
- 2 Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with applicable service information, and company requirements and legislative requirements. This includes the knowledge and use of suitable tools and equipment.
- 3 Performance of the outcomes of this unit standard must comply with the following:
Health and Safety at Work Act 2015;
Ozone Layer Protection Act 1996;
Resource Management Act 1991, s15 *Discharge of contaminants into environment*;
Australia and New Zealand Refrigerant handling code of practice 2007
<https://www.irhace.org.nz/publications-2/code-of-practice/> ;
Local body regulations for discharging contaminants to air, land or water.
- 4 Any new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.
- 5 Definitions
Company requirements refer to instructions to staff on policy and procedures that are available in the workplace. These requirements may include – company policies and procedures, work instructions, product quality specifications and legislative requirements.

Service information refers to technical information for a vehicle, machine, or product detailing operation; installation and servicing procedures; manufacturer instructions; technical terms and descriptions; and detailed illustrations.

Suitable tools and equipment refer to 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.

- 6 For this unit standard, it is essential that the practical assessment evidence is obtained in the workplace under normal workplace conditions.
- 7 Should the air conditioning system require recovering, evacuating and/or recharging of refrigerant, this work must be completed by the holder of an Approved Filler Certificate issued under the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Outcomes and performance criteria

Outcome 1

Recover refrigerant from an automotive air conditioning system.

Performance criteria

- 1.1 Precautions are observed throughout the task.

Range cleanliness; ventilation; eye protection, respirator or face mask, gloves, protective clothing; working with a pressurised system; running the engine; awareness of moving parts; heating components; using air conditioning equipment; recovery and storage of refrigerant.
- 1.2 The refrigerant is recovered from the system.
- 1.3 The compressor oil is disposed of.

Outcome 2

Evacuate an automotive air conditioning system.

Performance criteria

- 2.1 Precautions are observed throughout the task.

Range cleanliness; ventilation; eye protection, respirator or face mask, gloves, protective clothing; working with a pressurised system; running the engine; awareness of moving parts; heating components; using air conditioning equipment; recovery and storage of refrigerant.
- 2.2 The vacuum pump and service manifold are connected, and the system evacuated.

Outcome 3

Charge an automotive air conditioning system.

Performance criteria

- 3.1 Precautions are observed throughout the task.
- Range cleanliness; ventilation; eye protection, gloves, protective clothing; working with a pressurised system; running the engine; awareness of moving parts; heating components; using air conditioning equipment; recovery and storage of refrigerant.
- 3.2 The test equipment is connected to the automotive air conditioning.
- 3.3 The system is evacuated to the manufacturer's specified vacuum reading and time interval, and any vacuum leaks are detected and noted.
- 3.4 Any leaks apparent when evacuating the system are located.
- 3.5 The system is evacuated and then charged to the specified level, with compatible refrigerant and compressor oil.
- 3.6 A performance test is conducted to confirm the system is operating correctly, and the results are recorded for future servicing requirements.

Planned review date	31 December 2025
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	25 January 2008	31 December 2022
Review	2	29 April 2021	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>.

Comments on this unit standard

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