

Title	Heat metal automotive components to aid disassembly and assembly in the automotive industry		
Level	2	Credits	2

Purpose	People credited with this unit standard are able to prepare to heat metal automotive components, and carry out the heating operation on metal automotive components to aid disassembly and assembly in the automotive industry.
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Classification	Motor Industry > Automotive Workshop Engineering
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Available grade	Achieved
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Guidance Information

- 1 Evidence presented for assessment against this unit standard must be consistent with safe work 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.
- 2 Legislation, regulations and/or industry standards relevant to this unit standard may include:
 - Health and Safety at Work Act 2015; and any subsequent amendments and replacements.
- 3 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 information such as 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 work practices.
- 4 Range

In this unit standard metal automotive components include any metal mating components that have an interference fit. These may include – bearings, shafts, bushes, and casings;

evidence is required for two separate occasions where components are required to be heated.

Outcomes and performance criteria

Outcome 1

Prepare to heat metal automotive components.

Performance criteria

- 1.1 Methods of heating metal automotive components are determined.
- Range direct heating may include – hot air gun, flammable gas;
indirect heating may include – water, oven.
- 1.2 Changes in structure and strength of the metal automotive component material when heated are determined.
- 1.3 Heating limitations of the metal automotive component are determined.
- Range maximum temperature, time heat applied.
- 1.4 The heating equipment is prepared and positioned for the operation to be carried out.
- 1.5 Metal automotive component is prepared for heating.
- Range component positioned securely, component isolated, heating protection for adjacent components, no flammable materials, safety precautions.

Outcome 2

Carry out the heating operation on metal automotive components to aid disassembly and assembly in the automotive industry.

Performance criteria

- 2.1 The metal automotive component is heated.
- Range direct heating, indirect heating;
heating flame adjusted and applied at a safe distance, uniform heat, heating limitations observed.
- 2.2 The heated metal automotive component is cooled in a manner which ensures that any harmful effects on the component that could result from the way in which it is cooled are kept to a minimum.
- 2.3 The heated metal automotive component is suitably positioned and marked while cooling to reduce the risk of any personnel getting burnt.
- 2.4 Heating equipment is shut down after use and stored safely.

Planned review date	31 December 2026
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	20 March 2008	31 December 2018
Review	2	21 April 2016	31 December 2023
Review	3	24 March 2022	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 Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council qualifications@hangaarorau.nz if you wish to suggest changes to the content of this unit standard.