

Title	Diagnose faults in a turbocharger on a vehicle or machine, and remove and refit a turbocharger on an engine		
Level	4	Credits	5

Purpose	People credited with this unit standard are able to diagnose faults in a turbocharger on a vehicle or machine, remove a turbocharger from an engine, and refit an overhauled turbocharger to an engine.
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Classification	Motor Industry > Automotive Fuel Systems and Exhaust
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Available grade	Achieved
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Guidance Information

- 1 It is recommended that people hold credit for Unit 31407, *Demonstrate knowledge of automotive turbochargers* 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 Legislation, regulations or industry standards relevant to this unit standard include but are not limited to – the current version of the Health and Safety at Work Act 2015; and any subsequent amendments and replacements.
- 4 **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 may include – technical information for a vehicle, machine, or product detailing operation; installation and servicing procedures; manufacturer instructions; technical terms and descriptions; and detailed illustrations.
- 5 The intent of this unit standard is to diagnose faults in an automotive turbocharger on a vehicle or machine, remove the turbocharger, and refit the overhauled turbocharger. The overhauling of automotive turbochargers is covered in unit standard 31397, *Overhaul an automotive turbocharger*.
- 6 Evidence of diagnosing faults in three separate turbochargers while on a vehicle or machine is required to meet the requirements for assessment of this unit standard.

Outcomes and performance criteria

Outcome 1

Diagnose faults in an automotive turbocharger on a vehicle or machine.

Performance criteria

- 1.1 The symptoms of the faults are verified and recorded.
- 1.2 The turbocharger is tested following a logical systematic test procedure.
- 1.3 Turbocharger faults are diagnosed.

Outcome 2

Remove a turbocharger from an engine.

Performance criteria

- 2.1 The surrounding area where the turbocharger is mounted is cleaned.
- 2.2 The turbocharger unit is removed from the engine.
- 2.3 The turbocharger unit is covered to prevent ingress of dirt.

Outcome 3

Refit an overhauled turbocharger to an engine.

Performance criteria

- 3.1 Inlet and exhaust manifolds are free of any debris before refitting unit.
- 3.2 Engine oil and filter are changed and system is primed.
- 3.3 The turbocharger unit is refitted to the engine.
- 3.4 The turbocharging system is checked to ensure it operates correctly.

Planned review date	31 December 2023
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	30 August 2018	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.