

Title	Demonstrate knowledge of exhaust systems of heavy vehicles and equipment		
Level	3	Credits	3

Purpose	<p>This theory-based unit standard is intended for people who work on heavy vehicles and equipment.</p> <p>People credited with this unit standard are able to demonstrate knowledge of exhaust systems of heavy vehicles and equipment.</p>
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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

- 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.
- Performance of the outcomes of this unit standard must comply with the following:
Health and Safety at Work Act 2015;
Land Transport Rule: Vehicle Equipment 2004;
Land Transport Rule: Vehicle Repair 1998.
- 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.
- 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.
Heavy Vehicle refers to classes MD3, MD4, ME, NB, TC and TD as specified in the Vehicle equipment standards classifications at <https://www.nzta.govt.nz/vehicles/vehicle-types/vehicle-classes-and-standards/vehicle-classes/>; or has a gross vehicle mass that exceeds 3500kg and is not of a class specified in the Vehicle equipment standards classifications.
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.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of exhaust systems of heavy vehicles and equipment.

Performance criteria

- 1.1 Purpose and types of exhaust systems are identified and described.
- Range includes but is not limited to – prevent noise, direct fumes, exhaust emissions.
- 1.2 Principles of how the exhaust system works are identified.
- 1.3 Components that make up the exhaust system are described.
- Range includes but is not limited to – manifold, pipes, tubes, stacks, mufflers, diesel catalytic converters, brackets, flanges, DPFs (diesel particulate filters).
- 1.4 Effects of an accident on the exhaust system are identified.
- Range complete system, part of the system.
- 1.5 Legislative requirements relating to exhaust systems are described.
- 1.6 Exhaust size and air flow rates of an exhaust system are compared.
- Range naturally aspirated engine, turbocharged engine.
- 1.7 Requirements of an exhaust system to produce back pressure are determined.
- 1.8 Diesel exhaust brake operation is described.

Replacement information	This unit standard, unit standard 24179, and unit standard 24180, replaced unit standard 930 and unit standard 15404.
Planned review date	31 December 2025

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

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.