

Title	Demonstrate knowledge of heavy vehicle and machine hydraulic systems		
Level	4	Credits	6

Purpose	People credited with this unit standard are able to demonstrate knowledge of heavy vehicle and machine hydraulic systems.
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Classification	Motor Industry > Automotive Hydraulics
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Available grade	Achieved
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Guidance Information

- 1 It is recommended that people hold credit for Unit 23927, *Demonstrate knowledge of automotive hydraulic principles* 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, company requirements and legislative requirements. This includes the knowledge and use of suitable tools and equipment.
- 3 Legislation, regulations and 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 or replacements.
- 4 Definitions
Company requirements refers 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 Machines may include – forklifts, earth-moving equipment, grader equipment, loaders, dozers, tractors, agricultural equipment, dump trucks, prime movers; electric machines, including – forklift, walk-behind pallet, ride-on pallet, reach truck, order picker, counterbalance truck, turret truck.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of heavy vehicle and machine hydraulic systems.

Performance criteria

- 1.1 Hydraulic circuit diagrams are described.
Range cutaway, pictorial, schematic.
- 1.2 Hydraulic valve types are described.
Range evidence of five types is required.
- 1.3 Hydraulic valve control is described.
Range pulse width modulation, electrical, mechanical, pilot operated.
- 1.4 Hydraulic hose repair is described.
Range couplings, hose placement.
- 1.5 Accumulator and attenuator operation are described.
- 1.6 Testing flow and pressure is described.
- 1.7 Repair of hydraulic cylinders is described.

Replacement information	This unit standard and unit standard 31277 replaced unit standard 24319.
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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	26 July 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.