

Title	Demonstrate knowledge of automotive hydraulic principles		
Level	3	Credits	4

Purpose	This unit standard is for people who wish to enter or are employed in the motor industry. People credited with this unit standard are able to demonstrate knowledge of: hydraulic principles; good work practices when servicing hydraulic systems; and hydraulic systems and components.
----------------	---

Classification	Motor Industry > Automotive Hydraulics
-----------------------	--

Available grade	Achieved
------------------------	----------

Guidance Information

Legislation, regulations and/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.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of hydraulic principles.

Performance criteria

- 1.1 The roles of pressure and flow in hydraulics are described.
Range forces, energy transfer, work, power.
- 1.2 The difference between hydrodynamics and hydrostatics is described.
- 1.3 The functions of hydraulic oil, filters and coolers are described.

Outcome 2

Demonstrate knowledge of good work practices when servicing hydraulic systems.

Performance criteria

2.1 Clean work practices when working with hydraulic systems are described.

Range keeping dirt and other contaminants out of the system, cleaning systems after a failure, oil specification, oil filtration and oil change intervals.

2.2 Safety precautions when working on hydraulic systems are described.

Range relieving system pressure before disconnecting oil lines; working and supporting a raised system; and avoiding contact with hot fluids and parts.

Outcome 3

Demonstrate knowledge of hydraulic systems and components.

Performance criteria

3.1 The components of a hydraulic system are described.

Range hydraulic motor, hydraulic tank, hydraulic pump, control valves, hydraulic cylinder, actuators.

3.2 The different types of hydraulic systems and their applications are described.

Range open loop, closed loop, open centre, closed centre.

3.3 The purpose and operation of hydraulic pumps are described.

Range gear, piston, vane.

3.4 The types and operation of control valves are described.

Replacement information	This unit standard and unit standard 23928 replaced unit standard 931.
--------------------------------	--

Planned review date	31 December 2022
----------------------------	------------------

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	21 September 2007	31 December 2019
Review	2	28 September 2017	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.