

Title	Demonstrate knowledge of heavy machine and equipment suspension systems, and diagnosing system failure		
Level	3	Credits	3

Purpose	People credited with this unit standard are able to demonstrate knowledge of: heavy machine and equipment suspension systems; and diagnosing heavy machine and equipment suspension system failure.
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Classification	Motor Industry > Vehicle Steering and Suspension
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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 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.
- 2 Performance of the outcomes of this unit standard must comply with the following:
Health and Safety at Work Act 2015;
Land Transport Rule: Vehicle Repair 1998.
- 3 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.
- 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 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 working practices.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of heavy machine and equipment suspension systems.

Performance criteria

- 1.1 Heavy machine and equipment suspension systems are described.
 Range rigid suspension, semi-rigid suspension, flexible suspension, gas suspension, track frame suspension.
- 1.2 Characteristics of heavy machine and equipment suspension systems are described.
 Range steering, weight distribution, load carrying, traction, traversing rough terrain.
- 1.3 Procedures for inspecting suspension systems are described.
 Range springs, trunnions, beams, bearings, bushes, bolts, rivets, welds.
- 1.4 Causes of suspension failure are described.
 Range wear, fracture, cracks, bending, misalignment, security.

Outcome 2

Demonstrate knowledge of diagnosing heavy machine and equipment suspension system failure.

Performance criteria

- 2.1 Procedures for identifying faulty components in the suspension system are described.
 Range springs, mountings, struts, ball joints, bushes, bolts, rivets, pins; wear, cracks, fractures, bends, sag, security; road test for handling – noise, ride quality, suspension reaction control.
- 2.2 Probable causes of suspension failure are described.
 Range overloading, improper loading or weight distribution, improper handling, contributing mechanical causes.

Replacement information	This unit standard and unit standard 24435 replaced unit standard 2330.
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Planned review date	31 December 2025
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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 July 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.