

Title	Diagnose suspension failure on a heavy vehicle and repair components		
Level	4	Credits	6

Purpose	People credited with this unit standard are able to: identify and diagnose heavy vehicle suspension system failure; and repair suspension system components.
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Classification	Motor Industry > Vehicle Steering and Suspension
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Available grade	Achieved
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Prerequisites	Class 2, 3, 4, or 5 driver licence (if road testing the vehicle).
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Guidance Information

- 1 It is recommended that people hold credit for Unit 31231, *Diagnose heavy vehicle and machine steering and suspension systems, and system diagnosis* 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 Performance of the outcomes of this unit standard must comply with the following:
Health and Safety at Work Act 2015;
Traffic Regulations 1976;
Land Transport Rule: Heavy Vehicles 2004;
Land Transport Rule: Vehicle Repair 1998;
Land Transport Rule: Vehicle Standards Compliance 2002;
The Official New Zealand Road Code.
- 4 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.
- 5 **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.
Failure refers to wear or a worn component.

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 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.

- 6 For this unit standard, it is essential that the practical assessment evidence is obtained in the workplace under normal workplace conditions.
- 7 Road testing of heavy vehicles should only be undertaken by people holding the appropriate licence class or endorsement for the vehicle. For performance criterion 1.1, the candidate is required to accompany the driver to observe any suspension faults if they do not hold the appropriate licence to drive the vehicle themselves.

Outcomes and performance criteria

Outcome 1

Identify and diagnose heavy vehicle suspension system failure.

Range may include but is not limited to – wear, cracks, fractures, bends, sags, security.

Performance criteria

- 1.1 The vehicle is arranged to be road tested and any suspension faults observed are noted.
- Range may include – handling, noise, ride quality and height, suspension reaction control; springs, mountings, ball joints, bushes, bolts, rivets, pins.
- 1.2 Faulty components in the suspension system are identified.
- Range may include – springs, mountings, ball joints, bushes, bolts, rivets, pins.
- 1.3 From the condition of the faulty components, a diagnosis of the likely cause(s) is made, and the conclusions are recorded.
- Range may include – overloading, improper loading, improper handling, contributing mechanical causes.

Outcome 2

Repair suspension system components.

Performance criteria

2.1 The faulty component(s) is returned to full serviceability, and a recommendation made to remedy any contributing causes.

Range replace with approved replacement parts, repair, adjust.

2.2 The suspension is checked in its loaded or unloaded condition and any remaining faults are rectified.

2.3 Where replacement components may alter steering geometry, arrangements are made for steering angles to be checked and adjusted.

Replacement information	This unit standard and unit standard 24432 replaced unit standard 2315.
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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
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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.