

Title	Demonstrate knowledge of motorcycle frame, steering, and suspension systems		
Level	4	Credits	6

Purpose	People credited with this unit standard are able to demonstrate knowledge of: motorcycle frames; motorcycle steering systems; and motorcycle suspensions.
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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 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.
- 3 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 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.

Motorcycle referred to in this unit standard includes on-road and off-road motorcycles and scooters.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of motorcycle frames.

Performance criteria

1.1 Types of frame construction and design are identified.

Range construction includes – tubes, steel plates, pressed steel, alloys, composite;
design includes – diamond frame, cradle frame, backbone frame, underbone frame, monocoque.

1.2 Frame components are described.

Range steering stem, engine mounts, swing arm, attachment points.

Outcome 2

Demonstrate knowledge of motorcycle steering systems.

Performance criteria

2.1 The components of the steering system and their function are described.

2.2 Steering geometry is described.

Range steering axis, rake and trail, caster angle, wheel alignment.

Outcome 3

Demonstrate knowledge of motorcycle suspensions.

Performance criteria

3.1 Front suspension components are described.

3.2 Rear suspension components are described.

3.3 Suspension adjustments are described.

Range ride height, compression and rebound damping, pre-load, sag.

Replacement information	This unit standard, unit standard 24430, and unit standard 24431 replaced unit standard 2311.
Planned review date	31 December 2023

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	25 January 2008	31 December 2020
Review	2	26 April 2018	31 December 2020
Review	3	1 November 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.