

Title	Diagnose and rectify faults in motorcycle frames, steering, and suspension systems		
Level	4	Credits	4

Purpose	This unit standard is for people in the motorcycle repair industry. People credited with this unit standard are able to diagnose motorcycle steering, suspension, and frame faults and their causes, and rectify motorcycle frame, suspension, and steering faults.
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Classification	Motor Industry > Vehicle Steering and Suspension
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Available grade	Achieved
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Prerequisites	Class 6 driver licence.
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Guidance Information

- 1 Legislation and publications relevant to this unit standard include but are not limited to – Health and Safety in Employment Act 1992; Land Transport Rules: Frontal Impact 2001, Rule 32006/1; Steering Systems 2001, Rule 32003/1; *Vehicle Inspection Requirements Manual (VIRM) In-service Certification, Motorcycle section*; *The Official New Zealand Road Code*, Land Transport New Zealand.
- 2 Land Transport Rules are produced for the Minister of Transport by Land Transport New Zealand. These rules are available online at <http://www.landtransport.govt.nz/rules/>.
The VIRM is published by Land Transport New Zealand and is available online at <http://www.landtransport.govt.nz/certifiers/virm-in-service/index.html>.
New Zealand Road Code information can be obtained from the following website <http://www.landtransport.govt.nz/roadcode>.
- 3 Definitions
Company requirements refer to instructions to staff on policy and procedures which are documented in memo or manual format and are available in the workplace. These requirements include but are not limited to – company specifications and procedures, work instructions, manufacturer specifications, product quality specifications, and legislative requirements.
Motorcycle referred to in this unit standard includes on-road and off-road motorcycles, scooters, and all-terrain vehicles (ATVs).
Service information may include but is not limited to – technical information of a vehicle, machine, or product detailing operation; installation and servicing procedures; manufacturer instructions and specifications; technical terms and

descriptions; and detailed illustrations. This can be accessed in hard copy or electronic format and is normally sourced from the manufacturer.

Suitable tools and equipment means 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.

- 4 For this unit standard, it is essential that the practical assessment evidence is obtained in the workplace under normal workplace conditions.
- 5 Recommended entry information: Unit 24430, *Demonstrate knowledge of diagnosing faults in motorcycle frame, steering, and suspension systems.*

Outcomes and performance criteria

Outcome 1

Diagnose motorcycle steering, suspension, and frame faults and their causes.

Performance criteria

- 1.1 Safe working practices are observed throughout the task in accordance with legislative requirements.

Range personal safety, safety of others, motorcycle safety, workshop safety, environmental safety, tools and equipment safety.
- 1.2 Machine components are visually inspected for wear, damage, and security in accordance with service information and the VIRM requirements.
- 1.3 Frame and swing arm alignment is checked in accordance with service information.
- 1.4 The motorcycle is road tested to isolate any abnormal handling and riding characteristics.
- 1.5 The symptoms of faults found on the road test, and the conditions when they occur, are determined and noted in accordance with company requirements.
- 1.6 The cause of the fault is identified by investigation in accordance with service information, and a report is given to the supervisor or customer.

Outcome 2

Rectify motorcycle frame, suspension, and steering faults.

Performance criteria

- 2.1 Safe working practices are observed throughout the task in accordance with legislative requirements.

Range personal safety, safety of others, motorcycle safety, workshop safety, environmental safety, tools and equipment safety.

- 2.2 Suitable tools and equipment are selected and used to enable faults to be rectified in accordance with service information.
- 2.3 Worn, damaged, and weakened components are replaced to restore full serviceability in accordance with service information and the VIRM requirements.
- 2.4 Suspension, steering, and frame components are adjusted and aligned in accordance with service information.
- 2.5 The machine is test ridden to check if the fault is rectified and the findings noted and reported to the supervisor or customer.

Range fault symptoms not rectified, fault symptoms no longer present as a result of repair work.

Replacement information	This unit standard, unit standard 24429, and unit standard 24430 replaced unit standard 2311.
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This unit standard is expiring. Assessment against the standard must take place by the last date for assessment set out below.

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

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>.