

<b>Title</b>	<b>Diagnose faults and overhaul a motorcycle transmission</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>6</b>

<b>Purpose</b>	This unit standard is for people in the motorcycle repair industry. People credited with this unit standard are able to diagnose faults in a motorcycle transmission, and overhaul a motorcycle transmission.
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<b>Classification</b>	Motor Industry > Automotive Transmission Systems
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<b>Available grade</b>	Achieved
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<b>Prerequisite</b>	Class 6 driver licence.
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### Guidance Information

- Legislation and publications relevant to this unit standard include but are not limited to – Health and Safety in Employment Act 1992; Land Transport Rule: Vehicle Repair 1998, Rule 34001; *The Official New Zealand Road Code*, Land Transport New Zealand.
- 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/>.  
New Zealand Road Code information can be obtained from the following website <http://www.landtransport.govt.nz/roadcode>.
- 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 24309, *Demonstrate knowledge of motorcycle clutches and transmissions.*

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## Outcomes and performance criteria

### Outcome 1

Diagnose faults in a motorcycle transmission.

#### 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 The level and condition of the transmission oil are checked visually, and any problems or evidence of component failure noted.
- 1.3 Clutch operation and gear selection are tested with the motorcycle stationary and the engine running, and any problems noted, in accordance with service information.
- 1.4 The motorcycle is operated in compliance with the Road Code to reproduce the fault symptoms and to test the operation of the clutch and transmission in each of the gears under various road conditions, and details of conditions when the symptoms occur are noted in accordance with company requirements.  
  
Range conditions – hilly and level terrain; accelerating, decelerating, cruising.
- 1.5 The test results are analysed in accordance with service information, to determine the probable causes of any faults found.

### Outcome 2

Overhaul a motorcycle transmission.

#### 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 the transmission to be overhauled in accordance with service information.

- 2.3 The transmission assembly is removed from the frame in accordance with service information, and in a manner that avoids personal injury and damage to the assembly and motorcycle.
- 2.4 The assembly is drained of oil, and the oil is disposed of in an environmentally safe manner in accordance with company requirements.
- 2.5 The transmission is cleaned externally to prevent the ingress of dirt and foreign matter during disassembly.
- 2.6 The transmission is disassembled in the sequence and manner prescribed by the motorcycle manufacturer, and end play and signs that could indicate causes of faults are identified and noted in accordance with company requirements.
- 2.7 All the transmission components are cleaned and inspected for wear, damage, and blockage of passageways. Any faults are rectified in accordance with service information.
- 2.8 The transmission is assembled in the sequence and manner prescribed by the motorcycle manufacturer, and any clearances are adjusted to comply with manufacturer specifications.
- 2.9 The transmission assembly is installed in the frame in accordance with service information, and filled with oil to meet manufacturer specifications.
- 2.10 The gear selection linkage is adjusted in accordance with service information.

<b>Replacement information</b>	This unit standard, unit standard 24309, unit standard 24311, unit standard 24312, and unit standard 24313 replaced unit standard 926 and unit standard 927.
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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 February 2008	31 December 2020
Review	2	26 April 2018	31 December 2020

<b>Consent and Moderation Requirements (CMR) reference</b>	0014
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.