

<b>Title</b>	<b>Diagnose faults in automatic transmissions on light vehicles</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>3</b>

<b>Purpose</b>	<p>This unit standard is intended for people in the automotive repair industry.</p> <p>People credited with this unit standard are able to diagnose faults in automatic transmissions on light vehicles.</p>
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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>Prerequisites</b>	Class 1 driver licence.
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### Guidance Information

- 1 It is recommended that people hold credit for Unit 919, *Demonstrate knowledge of light vehicle automatic transmission components and fault diagnosis procedures* 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;  
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.  
*Light vehicle* refers to classes MA, MB, MC, MD, MD1, MD2 and NA as specified in the Vehicle equipment standards classifications at <https://www.nzta.govt.nz/vehicles/vehicle-types/vehicle-classes-and-standards/vehicle-classes/>.

*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 Before commencing diagnostic tests on vehicles with an automatic transmission, the engine tune must be tested to ensure that it complies with manufacturer specifications.
- 8 The stall test in performance criterion 1.7 must only be conducted on a vehicle where service information indicates that it is possible.

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## Outcomes and performance criteria

### Outcome 1

Diagnose faults in automatic transmissions on light vehicles.

#### Performance criteria

- 1.1 Transmission test data is obtained in order to perform tests.  

Range	may include but is not limited to – shift points, fluid pressures, lockup clutch, model specified items, fluid type.
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- 1.2 The results of the tests on an automatic transmission are recorded on a suitable test report sheet.
- 1.3 The electrical test procedures for electronically controlled transmissions are carried out.
- 1.4 The transmission fluid is checked to ensure that its level is to specification, and its condition determined in the manner prescribed by the manufacturer.  

Range	condition – normal, black and smelly, pink and frothy, varnish-like deposits on the dipstick.
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- 1.5 The vehicle is operated in accordance with a set test schedule, and the results are noted.  

Range	includes but is not limited to – upshift points at light and full throttle, throttle and kickdown induced downshifts, manual shifting of the gears, reverse gear operation, engine braking.
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- 1.6 Fluid pressure tests are conducted, and the pressures in all ranges at idle and stall speeds recorded.

- 1.7 A stall test is conducted in conjunction with the pressure test, and the results noted.
- 1.8 The test results are analysed, to determine the probable causes of any faults found.

<b>Replacement information</b>	This unit standard and unit standard 24690 replaced unit standard 958, unit standard 15421, and unit standard 15422.
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<b>Planned review date</b>	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 February 2008	31 December 2022
Review	2	27 May 2021	N/A

<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>.

#### Comments on this unit standard

Please contact MITO New Zealand Incorporated [info@mito.org.nz](mailto:info@mito.org.nz) if you wish to suggest changes to the content of this unit standard.