

<b>Title</b>	<b>Demonstrate knowledge of automated manual transmissions (AMTs) and AMT shift control operation</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>1</b>

<b>Purpose</b>	This theory-based unit standard is for people in the automotive repair industry. People credited with this unit standard are able to demonstrate knowledge of AMTs and AMT shift control operation.
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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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### Guidance information

#### Definition

*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.

### Outcomes and performance criteria

#### Outcome 1

Demonstrate knowledge of AMTs and AMT shift control operation.

#### Performance criteria

- 1.1 Construction comparison between manual transmissions and AMTs are identified in accordance with service information.
- Range clutch mechanism, clutch(es), transmission controls, shift actuator, layout of components.
- 1.2 Features of AMTs are identified in accordance with manufacturer specifications.
- Range includes but is not limited to – automated two-pedal shifting, manual or automatic mode selection, optimal shift points for performance and fuel economy, extended clutch and powertrain life, less reliance on driver ability.

1.3 Actuation types are identified, and their operation described, in accordance with service information.

Range includes but is not limited to – electro-hydraulic control, electro-pneumatic control, electric motor, direct shift lever or paddles.

1.4 The power flow from the engine to the transmission during gear change is described in accordance with service information.

<b>Replacement information</b>	This unit standard was replaced by unit standard 31059.
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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**Status information and last date for assessment for superseded versions**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	1 March 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>.

*This unit standard is expiring*