

## Remove and replace an automatic transmission from and in a light vehicle

**Level** 3

**Credits** 2

**Purpose** This unit standard is for people in the automotive repair industry. People credited with this unit standard are able to remove an automatic transmission from, and replace an automatic transmission in, a light vehicle.

**Subfield** Motor Industry

**Domain** Automotive Transmission Systems

**Status** Registered

**Status date** 25 February 2008

**Date version published** 25 February 2008

**Planned review date** 31 December 2012

**Entry information** Prerequisite: Class 1 driver licence.

**Replacement information** This unit standard and unit standard 24314, replaced unit standard 958, unit standard 15421, and unit standard 15422.

**Accreditation** Evaluation of documentation and visit by NZQA and industry.

**Standard setting body (SSB)** NZ Motor Industry Training Organisation (Incorporated)

**Accreditation and Moderation Action Plan (AMAP) reference** 0014

This AMAP can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

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### Special notes

- 1 Legislation and publications relevant to this unit standard include but are not limited to – Health and Safety in Employment Act 1992; *The Official New Zealand Road Code*, Land Transport New Zealand.
- 2 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.

*Light vehicle* refers to classes as listed from Land Transport New Zealand website table <http://www.landtransport.govt.nz/publications/infosheets/infosheet-1-10.html#classes>: passenger vehicle MA, MB, MC; omnibus MD, MD1, MD2; and goods vehicle NA.

*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.

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## Elements and performance criteria

### Element 1

Remove an automatic transmission from a light vehicle.

#### Performance criteria

- 1.1 Safe working practices are observed throughout the task in accordance with legislative requirements.
- Range personal safety, safety of others, vehicle safety, workshop safety, environmental safety, tools and equipment safety.
- 1.2 Suitable tools and equipment are selected and used to enable the transmission to be removed in accordance with service information.
- 1.3 The transmission is drained of fluid, taking care to avoid personal injury from scalding, in accordance with company requirements.
- 1.4 The vehicle battery is disconnected in accordance with service information to prevent electrical damage occurring during the removal and replacement of the transmission.
- 1.5 The vehicle is supported in a safe manner to allow access to transmission attachments in accordance with company requirements.

- 1.6 The transmission is disconnected and removed from the vehicle in accordance with service information.

## Element 2

Replace an automatic transmission in a light vehicle.

### Performance criteria

- 2.1 Safe working practices are observed throughout the task in accordance with legislative requirements.
- Range personal safety, safety of others, vehicle 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 replaced in accordance with service information.
- 2.3 The transmission is installed in, and connected to, the vehicle in accordance with service information.
- 2.4 Transmission oil cooler is flushed and checked for oil flow, or replaced in accordance with service information.
- 2.5 The transmission is filled with fluid of the type, and to the level, specified by the vehicle manufacturer.
- 2.6 Adjustments are carried out in the sequence and manner prescribed by the vehicle manufacturer, and to vehicle manufacturer specifications.
- Range may include but is not limited to – selector linkage, downshift cable or switch, inhibitor switch, throttle position sensor; electronic control – live data collection, scanner tool or computer link-up adjustments.
- 2.7 The vehicle is road tested to ensure the transmission operation complies with vehicle manufacturer specifications.
- Range selector lever operation, shift pattern, shift quality, transmission noise, leaks; light throttle checks, full throttle checks, kickdown.

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### Please note

Providers must be accredited by NZQA, or an inter-institutional body with delegated authority for quality assurance, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be accredited by NZQA before they can register credits from assessment against unit standards.

Accredited providers and Industry Training Organisations assessing against unit standards must engage with the moderation system that applies to those standards.

Accreditation requirements and an outline of the moderation system that applies to this standard are outlined in the Accreditation and Moderation Action Plan (AMAP). The AMAP also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

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### **Comments on this unit standard**

Please contact the NZ Motor Industry Training Organisation (Incorporated) [info@mito.org.nz](mailto:info@mito.org.nz) if you wish to suggest changes to the content of this unit standard.