

## Carry out routine maintenance on automotive automatic transmissions

**Level** 3

**Credits** 4

**Purpose** This unit standard is for people in the automotive repair industry. People credited with this unit standard are able to: road test a vehicle to determine automatic transmission operation; carry out a visual inspection on an automatic transmission; change the fluid and filter in an automatic transmission; and carry out service adjustments.

**Subfield** Motor Industry

**Domain** Automotive Transmission Systems

**Status** Registered

**Status date** 25 February 2008

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**Planned review date** 31 December 2012

**Entry information** Prerequisite: Appropriate driver licence for the vehicle being driven.

Recommended: Unit 24336, *Demonstrate knowledge of light vehicle automatic transmissions and their servicing requirements*, or demonstrate equivalent knowledge and skills.

**Replacement information** This unit standard replaced unit standard 935 and unit standard 15420.

**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.  
*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 Range  
This unit standard includes one of the following transmission types – inline transmission, transaxle, continuously variable transmission (CVT).
- 5 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

Road test a vehicle to determine automatic transmission operation.

### Performance criteria

- 1.1 Safe driving practices are observed in accordance with the Road Code.
- 1.2 Details are obtained and preliminary checks carried out before testing the transmission operation in accordance with company requirements.  
  
Range may include but is not limited to – customer concerns, transmission type, transmission specifications, fluid type, fluid levels, correct operating temperature, engine idle, general engine condition, brake operation, vehicle condition, self-test codes.

- 1.3 The vehicle is tested in a stationary position for transmission operation in accordance with service information.
- Range smooth selection of selector through all positions, transmission creep, inhibitor switch operation.
- 1.4 The vehicle is road tested to check transmission operation complies with vehicle manufacturer specifications.
- Range selector lever operation, shift pattern, shift quality, transmission noise;  
light throttle checks, full throttle checks, kickdown, uphill checks.
- 1.5 A report on transmission operation is made to the supervisor in accordance with company requirements.

## Element 2

Carry out a visual inspection on an automatic transmission.

### 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 A visual inspection is completed, and any defects noted and reported to the supervisor, in accordance with company requirements.
- Range may include but is not limited to – transmission cooling system, leaks, mountings, linkage and inhibitor, damage, oil condition and level, drive train.

## Element 3

Change the fluid and filter in an automatic transmission.

### Performance criteria

- 3.1 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.
- 3.2 The fluid level is checked, and any variation from the full mark noted, in accordance with service information.

- 3.3 The fluid on the dipstick is inspected for condition, and a report made to the supervisor, in accordance with company requirements.
- Range fluid colour, fluid odour, particles in the fluid, water contamination.
- 3.4 The fluid is changed in accordance with service information.
- Range draining the fluid, checking fluid colour, inspecting amount and types of deposits in the oil pan, cleaning removed parts, refitting parts, refilling the transmission with the specified fluid type, observing strict cleanliness.
- 3.5 Oil filters are renewed or cleaned in accordance with service information.
- Range throw-away filters are renewed, gauze screens are cleaned.
- 3.6 A visual inspection for fluid leaks is completed, and the nature of any leakage identified and reported to the supervisor, in accordance with company requirements.

#### **Element 4**

Carry out service adjustments.

#### **Performance criteria**

- 4.1 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.
- 4.2 Service information is obtained before attempting any adjustment in accordance with company requirements.
- Range type of adjustment, method of adjustment.
- 4.3 Suitable tools and equipment are selected and used to enable the service adjustments to be carried out in accordance with service information.
- 4.4 The service adjustments are carried out in accordance with vehicle manufacturer specifications.
- Range may include but not limited to – cables, bands, throttle position sensor (TPS), vacuum (VAC) modulator, linkages, inhibitor switch, engine idle speed, cooling system.
- 4.5 The vehicle is road tested in accordance with the Road Code, once adjustments have been made, to confirm that the transmission operates to vehicle manufacturer specifications.

### **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.