

## Disassemble, inspect, and overhaul power steering boxes and power steering rack assemblies

**Level** 4

**Credits** 3

**Purpose** This unit standard is for people in the automotive repair industry. People credited with this unit standard are able to disassemble and inspect power steering boxes and power steering rack assemblies, and overhaul power steering boxes and power rack assemblies.

**Subfield** Motor Industry

**Domain** Vehicle Steering and Suspension

**Status** Registered

**Status date** 25 January 2008

**Date version published** 25 January 2008

**Planned review date** 31 December 2012

**Entry information** Recommended: Unit 884, *Dismantle, inspect, and overhaul vehicle manual steering boxes and rack assemblies*, or demonstrate equivalent knowledge and skills.

**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 relevant to this unit standard includes but is not limited to – Health and Safety in Employment Act 1992; Land Transport Rules: Steering Systems 2001, Rule 32003/1; Vehicle Repair 1998, Rule 34001.
- 2 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/>.

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 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

Disassemble and inspect power steering boxes and power steering rack assemblies.

#### 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 that enable steering boxes and rack assemblies to be disassembled in accordance with service information.
- 1.3 Steering boxes and rack assemblies are cleaned externally to prevent the ingress of dirt and foreign matter during disassembly in accordance with company requirements.
- 1.4 Steering boxes and rack assemblies are disassembled and gaiters (boots), seals, bearings, and bushes are removed in accordance with service information.
- 1.5 Control valves and hydraulic pipes, hoses, and connections are removed in accordance with service information.
- 1.6 All parts are inspected for wear, and a condition report completed in accordance with company requirements.

## Element 2

Overhaul power steering boxes and power rack assemblies.

### 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 that enable steering boxes and rack assemblies to be overhauled in accordance with service information.
- 2.3 Any parts worn beyond manufacturer service limits are replaced with new parts to manufacturer specifications.
- 2.4 Any parts that are damaged are replaced with new parts to manufacturer specifications.
- 2.5 Power steering box and power steering rack components are assembled in accordance with service information and legislative requirements, using replacement parts, specified lubricant, and mandatory new parts.
- Range mandatory new parts – bushes, bearings, seals, lock washers.
- 2.6 Mechanical adjustments are carried out in accordance with service information
- Range steering box – end play and backlash of the steering gear and cross-shaft;  
rack assembly – bearing and rack preloads and clearances, pinion backlash and adjustments.
- 2.7 Control valves are assembled and adjusted to specification in accordance with service information.
- 2.8 Hydraulic pressure tests are carried out to ensure compliance with service information.

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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.