

Test, diagnose, and rectify vehicle hydraulic power-assisted steering system faults

Level 4

Credits 2

Purpose This unit standard is for people in the automotive repair industry. People credited with this unit standard are able to pressure test and diagnose faults in a hydraulic power-assisted steering system, and rectify faults in a hydraulic power-assisted steering system.

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 Prerequisite: Appropriate driver licence for the vehicle being driven.

Recommended: Unit 24426, *Demonstrate knowledge of diagnosing and rectifying vehicle power-assisted steering system faults*, or demonstrate equivalent knowledge and skills.

Replacement information This unit standard, unit standard 24426, and unit standard 24428 replaced unit standard 901.

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>.

Special notes

- 1 Legislation and publications relevant to this unit standard include but are not limited to – Health and Safety in Employment Act 1992; Resource Management Act 1991, s15 Discharge of contaminants into environment; Land Transport Rules: Steering Systems 2001, Rule 32003/1; Vehicle Repair 1998, Rule 34001; *The Official New Zealand Road Code*, Land Transport New Zealand.
- 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/>.
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.

Elements and performance criteria

Element 1

Pressure test and diagnose faults in a hydraulic power-assisted steering system.

Performance criteria

- 1.1 Safe working practices are observed throughout the task in accordance with legislative requirements.

Range	personal safety, safety of others, vehicle or machine safety, workshop safety, environmental safety, tools and equipment safety.
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- 1.2 Suitable tools and equipment are selected and used to enable the system to be pressure tested in accordance with service information.
- 1.3 Information is obtained from the customer to help diagnose the fault and is recorded in accordance with company requirements.

- 1.4 The vehicle is road tested to verify the customer description of the steering system fault.
- 1.5 The steering system is inspected to identify any external faults in accordance with service information.
- 1.6 The vehicle is prepared for testing the power-assisted steering system in accordance with service information.
- 1.7 The steering pump pressures are checked and recorded in accordance with service information.
- 1.8 The cause of any abnormal results is determined by analysing the test results and comparing them with vehicle manufacturer specifications.
- 1.9 A report is given to the supervisor with a repair recommendation in accordance with company requirements.

Element 2

Rectify faults in a hydraulic power-assisted steering system.

Performance criteria

- 2.1 Safe working practices are observed throughout the task in accordance with legislative requirements.

Range personal safety, safety of others, vehicle or machine safety, workshop safety, environmental safety, tools and equipment safety.
- 2.2 The power steering fluid is drained, collected, and disposed of in an environmentally safe method in accordance with company requirements.
- 2.3 Faulty power-assisted steering components are replaced, in a manner that restores full serviceability, in accordance with service information and legislative requirements.

Range reservoir, pump, steering rack and/or steering box.
- 2.4 The power-assisted steering system is primed and topped up with the specified hydraulic fluid. All air is bled from the system in accordance with service information.
- 2.5 The power-assisted steering system is tested to ensure compliance with service information.
- 2.6 The vehicle is road tested to ensure the steering operation meets legislative requirements.

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.

Comments on this unit standard

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