

Diagnose faults in final drive assemblies on light vehicles

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 diagnose light vehicle final drive unit and limited slip differential faults.

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.

Recommended: Unit 918, *Demonstrate knowledge of light vehicle final drive assembly operation*, or demonstrate equivalent knowledge and skills.

Replacement information This unit standard and unit standard 24316 replaced unit standard 957.

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; Land Transport Rule: 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.
- 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.

Elements and performance criteria

Element 1

Diagnose light vehicle final drive unit faults.

Range unit without limited slip differential.

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 The level and condition of the differential oil are checked, visually and by feel, and any problems noted in accordance with company requirements.
- 1.3 The vehicle is operated in compliance with the Road Code to reproduce the fault symptoms, and details of conditions when the symptoms occur are noted in accordance with company requirements.
- 1.4 The test results are analysed in accordance with service information, to determine the probable causes of any faults found.

Element 2

Diagnose light vehicle limited slip differential faults.

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 The vehicle is driven on a winding road and different road surfaces in compliance with the Road Code. Any abnormal noises are noted in accordance with company requirements.
- 2.3 For a viscous drive system, a test is made to determine if the vehicle will pull away with one driving wheel on a slippery surface in accordance with company and Road Code requirements.
- 2.4 The break-away torque of the clutches is tested, and the results noted, in accordance with service information.
- 2.5 The differential is drained and refilled with oil to manufacturer specifications if the oil is suspect, and the testing procedure repeated.
- 2.6 The test results are analysed in accordance with service information, to determine the probable causes of any faults found.

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.