

Carry out diagnosis, servicing, and fault rectification in motorcycle or all-terrain vehicle (ATV) final drives

Level 3

Credits 5

Purpose This unit standard is for people in the motorcycle repair industry. People credited with this unit standard are able to: check a drive chain and sprockets for serviceability; service a chain drive; diagnose shaft drive unit faults; disassemble, inspect, and rectify faults in, shaft drive assemblies; diagnose belt drive unit faults; and disassemble, inspect, and rectify faults in, belt drive assemblies.

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 6 driver licence.

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.

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.

Elements and performance criteria

Element 1

Check a drive chain and sprockets for serviceability.

Performance criteria

- 1.1 Safe working practices are observed throughout the task in accordance with legislative requirements.
- Range personal safety, safety of others, motorcycle or ATV safety, workshop safety, environmental safety, tools and equipment safety.
- 1.2 The condition of the drive chain is checked, and any faults noted, in accordance with service information.
- Range adjustment, stretching, freedom of movement of links, lubrication, cleanliness.
- 1.3 The drive chain guides, slipper, and guards are checked visually for damage, security, wear, and adjustment, and any faults noted, in accordance with service information.
- 1.4 The sprockets are inspected for wear and damage, and any faults noted, in accordance with service information.
- 1.5 An assessment is made to determine the suitability of the components for further service, by comparing their condition with the maximum allowable wear rates specified by the manufacturer.

Element 2

Service a chain drive.

Performance criteria

- 2.1 Safe working practices are observed throughout the task in accordance with legislative requirements.
- Range personal safety, safety of others, motorcycle or ATV safety, workshop safety, environmental safety, tools and equipment safety.
- 2.2 Unserviceable sprockets, drive shock or guide rubbers and/or slipper, and guards are replaced in accordance with service information.
- 2.3 The chain is cleaned and lubricated in accordance with service information.
- Range chains with and without O-rings.
- 2.4 The chain is fitted and adjusted in accordance with service information.

Element 3

Diagnose shaft drive unit faults.

Performance criteria

- 3.1 Safe working practices are observed throughout the task in accordance with legislative requirements.
- Range personal safety, safety of others, motorcycle or ATV safety, workshop safety, environmental safety, tools and equipment safety.
- 3.2 The level and condition of the final drive oil are checked, visually and by feel, and any discrepancies and oil leaks noted, in accordance with service information.
- 3.3 The motorcycle or ATV 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.
- 3.4 The rear wheel backlash is checked in accordance with service information, and the result is noted and compared with manufacturer specifications.
- 3.5 The drive shaft is checked for runout, and the result is noted and compared with manufacturer specifications.
- 3.6 The test results are analysed in accordance with service information, to determine the probable causes of any faults found.

Element 4

Disassemble, inspect, and rectify faults in, shaft drive assemblies.

Performance criteria

- 4.1 Safe working practices are observed throughout the task in accordance with legislative requirements.
- Range personal safety, safety of others, motorcycle or ATV safety, workshop safety, environmental safety, tools and equipment safety.
- 4.2 Suitable tools and equipment are selected and used to enable the assembly to be overhauled in accordance with service information.
- 4.3 The shaft drive assembly is disassembled, and any signs that could indicate the cause of the faults noted, in accordance with service information.
- 4.4 The component parts are examined, and signs of wear and damage are identified.
- Range driveshaft splines, universal and constant velocity (CV) joints, pinion and ring gear, flanges, bearings, seals.
- 4.5 Parts not suitable for further service are replaced to meet manufacturer specifications.
- 4.6 The shaft drive assembly is assembled in accordance with service information.
- 4.7 The pinion depth of mesh, backlash, and bearing preloads are adjusted and checked to ensure that they comply with manufacturer specifications.
- 4.8 The driveshaft is installed in accordance with service information.
- 4.9 The shaft drive assembly is filled with oil to the specification and level prescribed by the manufacturer.

Element 5

Diagnose belt drive unit faults.

Performance criteria

- 5.1 Safe working practices are observed throughout the task in accordance with legislative requirements.
- Range personal safety, safety of others, motorcycle or ATV safety, workshop safety, environmental safety, tools and equipment safety.

- 5.2 The motorcycle or ATV 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.
- 5.3 The test results are analysed in accordance with service information, to determine the probable causes of any faults found.

Element 6

Disassemble, inspect, and rectify faults in, belt drive assemblies.

Performance criteria

- 6.1 Safe working practices are observed throughout the task.
- Range personal safety, safety of others, motorcycle or ATV safety, workshop safety, environmental safety, tools and equipment safety.
- 6.2 Suitable tools and equipment are selected and used to enable the assembly to be overhauled in accordance with service information.
- 6.3 The belt drive assembly is disassembled and inspected, and any signs that could indicate the cause of the faults noted, in accordance with service information.
- 6.4 The component parts are examined, and any signs of wear and damage are identified.
- Range drive belt, pulleys, springs, centrifugal ratio changing mechanism, centrifugal clutch, shafts and splines.
- 6.5 Parts not suitable for further service are replaced to meet manufacturer specifications.
- 6.6 The belt drive assembly is assembled in accordance with service information.

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.