



Australian Government

AURJTQ102 Diagnose and repair motorcycle driveline systems

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with AUR Automotive Retail, Service and Repair Training Package Version 6.0

Application

This unit describes the skills and knowledge required to diagnose and repair faults in the driveline systems of motorcycles. The unit involves preparing for the task, sourcing a diagnostic testing strategy, diagnosing the cause of the fault, carrying out the repair, performing post-repair testing, and completing workplace processes and documentation.

The unit applies to those working in the automotive service and repair industry.

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.

Unit Sector

Mechanical Motorcycle Technical – Driveline and Final Drives

Elements and Performance Criteria

ELEMENTS	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare to diagnose and repair motorcycle driveline system	1.1 Identify job requirements from workplace instructions 1.2 Identify required information for diagnosis activity 1.3 Analyse diagnostic options and source testing strategy to identify cause of fault using workplace and manufacturer procedures 1.4 Identify hazards and environmental issues associated with diagnose and repair activity, assess potential risks and implement control measures in line with workplace policies and procedures 1.5 Identify tools and equipment required for testing strategy and establish serviceability according to workplace procedures

ELEMENTS	PERFORMANCE CRITERIA
2. Diagnose motorcycle driveline system	2.1 Implement diagnostic tests set out in testing strategy according to manufacturer and workplace procedures, and workplace health and safety requirements 2.2 Identify cause of fault through analysis of diagnostic test results 2.3 Confirm and report cause of fault according to workplace procedures 2.4 Develop and report recommendations for necessary repairs according to workplace procedures
3. Repair motorcycle driveline system	3.1 Identify required information for repair activity 3.2 Identify tools, equipment and materials required for repair activity and establish serviceability according to workplace procedures 3.3 Carry out repairs according to workplace and manufacturer procedures, manufacturer specifications, workplace health and safety and environmental requirements 3.4 Carry out post-repair testing according to workplace procedures, workplace health and safety and environmental requirements
4. Complete work processes	4.1 Conduct final inspection according to workplace procedures and confirm vehicle is ready for use 4.2 Clear work area and dispose of or recycle materials according to workplace procedures 4.3 Complete documentation according to workplace procedures

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Learning	• Locates required sources of information efficiently • Develops a sequenced plan for a specific task.
Reading	• Organises and interprets technical information from workplace procedures, manufacturer procedures and manufacturer specifications.
Oral communication	• Clarifies instructions • Obtains information from customers and supervisors.

SKILL	DESCRIPTION
Numeracy	• Measures driveline system components • Uses mathematical operations • Calculates deviations and tolerances from manufacturer specifications.
Planning and organising	• Plans own work requirements • Prioritises actions to achieve required outcomes • Ensures tasks are completed within workplace timeframes.
Technology	• Uses precision measuring equipment.

Unit Mapping Information

Supersedes and is equivalent to AURJTQ002 Diagnose and repair motorcycle driveline systems.

Links

Companion Volume Implementation Guide is found on VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=b4278d82-d487-4070-a8c4-78045ec695b1>

Assessment Requirements for AURJTQ102 Diagnose and repair motorcycle driveline systems

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- diagnose and repair a fault in the following driveline systems of at least three different motorcycles, each time repairing a different one of the following:
 - one chain drive system, in which the work must involve removing, replacing or refitting the chain and sprockets
 - one belt drive system, in which the work must involve removing, replacing or refitting the belt and sprockets
 - one shaft drive system, in which the work must involve removing, replacing or refitting the drive shaft.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- methods to locate and interpret information required to diagnose and repair motorcycle driveline systems, including:
 - information provided by customers and supervisors
 - manufacturer specifications and procedures or equivalent documentation
- workplace procedures required to diagnose and repair motorcycle driveline systems, including:
 - establishing serviceability of tools and equipment
 - documentation procedures
 - housekeeping procedures, including:
 - examination of tools and equipment
 - storage of equipment
 - identification, tagging and isolation of faulty equipment
 - disposal of excess materials

- recycling procedures
- workplace health and safety (WHS) requirements relating to diagnosing and repairing motorcycle driveline systems, including procedures for handling shaft and chain driveline oils and lubricants
- environmental requirements relating to diagnosing and repairing motorcycle driveline systems, including procedures for trapping, storing and disposing of oils released from shaft and chain drivelines
- purpose and operation of motorcycle driveline systems and components, including:
 - chain drive systems, including:
 - chain construction, including chain pitch, roller width and roller diameter
 - cush drives
 - types of sprockets
 - belt drive systems, including:
 - belt construction
 - methods of tensioning belts
 - shaft drive systems, including:
 - side gear assemblies
 - final gear assemblies
- diagnostic testing procedures for motorcycle driveline systems, including procedures for analysing:
 - component wear
 - abnormal system noise
- repair procedures for motorcycle driveline systems, including procedures for:
 - repairing chain drives, including:
 - procedures for removing and refitting front and rear chain sprockets
 - procedures for removing chains and fitting new chains
 - procedures for adjusting chain tension and wheel alignment
 - repairing belt drives, including:
 - procedures for removing and refitting toothed belt sprockets
 - procedures for removing belts and fitting new belts
 - procedures for measuring and adjusting belt tension and wheel alignment
 - repairing shaft drive systems
- post-repair testing procedures for motorcycle driveline systems.

Assessment Conditions

Competency is to be assessed in the workplace or a simulated environment that accurately reflects performance in a real workplace setting.

Assessment must include direct observation of tasks.

Where assessment of competency includes third-party evidence, individuals must provide evidence that links them to the motorcycle driveline systems that they have worked on, e.g. repair orders.

Assessors must verify performance evidence through questioning on skills and knowledge to ensure correct interpretation and application.

The following resources must be made available:

- motorcycle repair workplace or simulated workplace
- workplace instructions
- manufacturer motorcycle driveline system specifications
- one motorcycle with a fault in its chain drive system
- one motorcycle with a fault in its belt drive system
- one motorcycle with a fault in its shaft drive system
- diagnostic equipment for motorcycle driveline systems
- tools, equipment and materials appropriate for repairing motorcycle driveline systems.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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