



Australian Government

AURJTX003 Diagnose and repair motorcycle automatic transmissions

Release: 1

AURJTX003 Diagnose and repair motorcycle automatic transmissions

Modification History

Release	Comment
Release 1	New unit of competency.

Application

This unit describes the performance outcomes required to diagnose and repair faults in the automatic transmissions of motorcycles. It involves preparing for the task, selecting the correct diagnostic procedure, carrying out the diagnosis and the repair, performing post-repair testing, and completing workplace processes and documentation.

It 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.

Competency Field

Mechanical - Motorcycle

Unit Sector

Technical - Transmission

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold and italicised text is used, further information is detailed in the range of conditions section.
1. Prepare to diagnose and repair motorcycle automatic transmission	1.1 Job requirements are determined from workplace instructions 1.2 Diagnostic information is sourced and interpreted 1.3 Diagnosis options are analysed and those most appropriate to the circumstances are selected 1.4 Hazards associated with the work are identified and risks are

Elements	Performance Criteria
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	managed 1.5 Diagnostic tools and equipment are selected and checked for serviceability
2. Diagnose automatic transmission	2.1 Diagnostic tests are carried out according to workplace procedures and <i>safety and environmental requirements</i> 2.2 Faults are identified from diagnostic test results and causes of faults are determined 2.3 Diagnosis findings are reported according to workplace procedures, including recommendations for necessary repairs or adjustments
3. Repair automatic transmission	3.1 Repair information is sourced and interpreted 3.2 Repair options are analysed and those most appropriate to the circumstances are selected 3.3 Repair tools, equipment and materials are selected and checked 3.4 Repairs and component replacements and adjustments are carried out according to manufacturer specifications, safety and environmental requirements, and without causing damage to components or system 3.5 Post-repair testing is carried out according to workplace procedures to confirm fault rectification, and any further problems detected as having been introduced during the repair process are rectified
4. Complete work processes	4.1 Final inspection is made to ensure work is to workplace expectations and motorcycle is presented ready for use 4.2 Work area is cleaned, waste and non-recyclable materials are disposed of, and recyclable material is collected 4.3 Tools and equipment are checked and stored according to workplace procedures 4.4 Workplace documentation is processed according to workplace procedures

Foundation Skills

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

Skills	Description
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Skills	Description
Learning skills to:	locate appropriate sources of information efficiently.
Reading skills to:	interpret information from manufacturer and workshop literature when seeking automatic transmission specifications and procedures.
Writing skills to:	legibly and accurately fill out workplace documentation when reporting diagnostic findings, making repair recommendations, and recording parts and material used.
Oral communication skills to:	- clarify instructions - report diagnostic findings and make repair recommendations.
Numeracy skills to:	measure automatic transmission components and use basic mathematical operations, including addition and subtraction, to calculate distances, tolerances and deviations from manufacturer specifications.
Planning and organising skills to:	plan own work requirements and prioritise actions to achieve required outcomes and ensure tasks are completed within workplace timeframes.
Technology skills to:	use measuring equipment, such as tape measures, rulers and vernier calipers.

Range of Conditions

This section specifies work environments and conditions that may affect performance.

Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Bold italicised wording, if used in the performance criteria, is detailed below.

<i>Safety and environmental requirements</i> must include:	- work health and safety (WHS) and occupational health and safety (OHS) requirements, including procedures for handling transmission fluids and clutch materials - environmental requirements, including procedures for trapping, storing and disposing of fluids released from transmissions.
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Unit Mapping Information

Equivalent to AURJTX3003 Diagnose and repair motorcycle automatic transmissions

Links

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for AURJTX003 Diagnose and repair motorcycle automatic transmissions

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Performance Evidence

Before competency can be determined, individuals must demonstrate they can perform the following according to the standards defined in this unit's elements, performance criteria, range of conditions and foundation skills:

- diagnose and repair a fault in two different motorcycles with different automatic transmissions, in which the work must involve removing, dismantling, reassembling and refitting the transmissions.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- work health and safety (WHS) and occupational health and safety (OHS) requirements relating to diagnosing and repairing motorcycle automatic transmissions, including procedures for handling transmission fluids and clutch materials
- environmental requirements, including procedures for trapping, storing and disposing of fluids released from transmissions
- operating principles of motorcycle automatic transmissions and associated components, including:
 - gears types
 - gear ratios
- application, purpose and operation of the following motorcycle automatic transmissions and components, including:
 - continuously variable transmissions (CVT), including:
 - wet types
 - dry types
 - semi-automatic transmissions
 - dual clutch transmissions
 - automatic transmission electronic components, including:

- electronic control module
- input sensors, including vehicle speed sensor, throttle position sensor, mass air flow (MAF) sensor, manifold absolute pressure (MAP) sensor, transmission range sensor, engine speed sensor and temperature sensors
- electronic control module outputs, including indicator lamps, shift solenoids and pressure control solenoids
- types and compatibility of transmission system oils and additives
- types of diagnostic trouble codes and procedures for accessing codes
- diagnostic testing procedures for motorcycle automatic transmissions, including procedures for analysing:
 - component wear
 - abnormal system noise
- repair procedures for motorcycle automatic transmissions, including procedures for removing, dismantling, reassembling, refitting and adjusting components
- post-repair testing procedures for motorcycle automatic transmissions.

Assessment Conditions

Assessors must satisfy NVR/AQTF assessor requirements.

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 automatic transmissions 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 automatic transmission specifications
- two different motorcycles with different automatic transmissions with faults
- diagnostic equipment for motorcycle automatic transmissions
- tools, equipment and materials appropriate for repairing motorcycle automatic transmissions.

Links

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