



Australian Government

Assessment Requirements for AURJTE101 Diagnose and repair motorcycle engines

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

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 at least three different motorcycle engines in which the work must involve removing, dismantling, reassembling, replacing and adjusting the engine cylinder heads
- dismantle and reassemble at least one of the above engines.

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 engines, including:
 - information provided by customers and supervisors
 - manufacturer specifications and procedures or equivalent documentation
- workplace procedures required to diagnose and repair motorcycle engines, 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 engines, including procedures for lifting and supporting motorcycle engines
- environmental requirements relating to diagnosing and repairing motorcycle engines, including procedures for trapping, storing and disposing of fluids released from engines

- operating principles of motorcycle engines, including:
 - combustion, including:
 - air-fuel ratios and combustion cycles
 - direct injection
 - detonation
 - engine design, including:
 - swept volume and engine volume
 - compression ratio
 - engine efficiency, including volumetric efficiency, thermal efficiency and mechanical efficiency
 - torque and horsepower, including brake horsepower
- diagnostic testing procedures for motorcycle engines, including:
 - wet and dry compression tests
 - cylinder leakage tests
 - oil pressure tests
 - checking sources of fluid leaks
 - exhaust smoke diagnosis
 - checking abnormal engine noises
- dismantling procedures for motorcycle engines, including procedures for:
 - measuring clearances and tolerances
 - inspecting components
- repair procedures for motorcycle engines, including procedures for removing, replacing and adjusting them
- assembly procedures for motorcycle engines, including procedures for:
 - fitting components
 - checking tolerances and clearances
 - torquing retaining bolts
- post-repair testing procedures for motorcycle engines, including:
 - checking oil pressure
 - road testing under load
 - checking for fluid leaks.

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 engines 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 engine specifications
- three different motorcycles with engine faults
- diagnostic equipment for motorcycle engines
- tools, equipment and materials appropriate for repairing motorcycle engines.

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

Links

Companion Volume Implementation Guide is found on VETNet -

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