



Australian Government

**Assessment Requirements for AURJTR103
Diagnose and repair motorcycle starting
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

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 starting system of two different motorcycles or all-terrain vehicles (ATV's) in which the fault for each is within a different circuit chosen from the following:
 - vehicle starter motor and solenoid circuit
 - vehicle ignition switch to solenoid control circuit
 - vehicle battery to starter motor circuit
 - motorcycle starting system circuit.

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 starting systems, including:
 - information provided by customer and supervisors
 - manufacturer specifications and procedures or equivalent documentation
- workplace procedures required to diagnose and repair motorcycle starting 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 starting systems, including procedures for:
 - using specialised tools and equipment
 - using appropriate personal protective equipment (PPE)
 - identifying hazards and controlling risks associated with:
 - working on high voltage ignition systems
 - wearing jewellery while working around high current wiring systems
- operating principles of motorcycle starting systems and associated components, including:
 - producing movement due to the force between magnetic fields
 - producing magnetic fields due to current flow through conductors
 - basic direct current motor operation, including simple armature, magnetic field and commutator
- purpose and operation of motorcycle starting systems and components, including:
 - high current systems, including:
 - armature, commutator, field windings
 - starter motor windings
 - permanent magnet starter motors
 - direct drive and reduction-type starter motors
 - motorcycle starting electrical systems, including:
 - solenoids
 - shift levers
 - overrunning clutch flywheel ring gears
 - control circuits systems, including:
 - ignition switching, including key start and push-button start
 - safety switches, including inhibitor switches and clutch neutral switches
- diagnostic testing procedures for motorcycle starting systems, including:
 - using diagnostic flow charts
 - testing electrical systems, including procedures for:
 - accessing electrical terminals and using test probes without damaging connectors, fuse holders or wiring
 - load testing motorcycle starting systems
 - resistance, current flow and voltage drop checks of motorcycle starting system circuits
 - solenoid test
 - overrunning clutch and pinion tests
 - starter motor bench test
- repair procedures for motorcycle starting systems, including:
 - tightening connections
 - replacing faulty or damaged cable connections

- removing and replacing faulty or damaged components
- post-repair testing procedures for motorcycle starting systems, including:
 - checking for electrical connector mating
 - static and dynamic performance tests of motorcycle starting 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 starting 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:

- automotive repair workplace or simulated workplace
- workplace instructions
- manufacturer motorcycle starting system specifications
- two different motorcycles or ATV's with faults in their starting systems as specified in the performance evidence
- diagnostic equipment for motorcycle starting systems
- tools, equipment and materials appropriate for repairing motorcycle starting systems.

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>