



Australian Government

Assessment Requirements for AURJTR102 Diagnose and repair motorcycle charging 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 at least two different motorcycles in which the fault for each must involve a different component from among the following:
 - external regulator/rectifier assembly
 - power and earth circuits linking alternator and battery
 - motorcycle charging system circuit
 - alternator control
 - alternator output.

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 charging systems, including:
 - information provided by customer and supervisors
 - manufacturer specifications and procedures or equivalent documentation
- workplace procedures required to diagnose and repair motorcycle charging 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 charging 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 charging systems and associated components, including:
 - motorcycle charging batteries with direct current
 - vehicle system power and electrical current requirements
 - generating principles, including Faraday's law and inducing an electromotive force (EMF)
 - producing direct current (DC) EMF
 - producing alternating current (AC) EMF
 - changing AC to DC, including half-wave and full-wave rectification
- purpose and operation of motorcycle charging systems and components, including:
 - alternators, including:
 - internal component function and operation
 - external components and drive function and operation
 - star-connected and delta-connected stator windings
 - excited field winding and permanent magnet type alternators
 - regulation of output voltage, including zener diodes and exciter diodes
 - battery management systems
- diagnostic testing procedures for motorcycle charging 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 charging systems
 - resistance, current flow and voltage drop checks of motorcycle charging system circuits
- repair procedures for motorcycle charging systems, including:
 - tightening connections
 - replacing faulty or damaged cable connections
 - removing and replacing faulty or damaged components
- post-repair testing procedures for motorcycle charging systems, including:
 - checking for electrical connector mating
 - static and dynamic performance tests of motorcycle charging 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 charging 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 charging system specifications
- two different motorcycles with faults in their charging systems as specified in the performance evidence
- diagnostic equipment for motorcycle charging systems
- tools, equipment and materials appropriate for repairing motorcycle charging 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>