



Australian Government

Assessment Requirements for AURRTQ106 Diagnose and repair marine jet drive propulsion systems

Release: 1

Assessment Requirements for AURRTQ106 Diagnose and repair marine jet drive propulsion systems

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 following two jet drive propulsion systems in different marine vessels:
 - centrifugal
 - axial flow.

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 marine jet drive propulsion systems including:
 - information provided by customers and supervisors
 - manufacturer specifications and procedures or equivalent documentation
- workplace procedures required to diagnose and repair marine jet drive propulsion 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 marine jet drive propulsion systems, including procedures for lifting and supporting jet drive propulsion systems

- environmental requirements relating to diagnosing and repairing marine jet drive propulsion systems, including procedures for trapping, storing and disposing of fluids released from jet drive propulsion systems
- operating principles of jet drive propulsion systems and associated components, including:
 - producing thrust using water pressure
 - changing vessel direction
- purpose and operation of jet drive propulsion systems and components, including:
 - types of jet pumps, including:
 - centrifugal
 - axial flow
 - methods of reversing thrust, including:
 - cable-operated buckets
 - hydraulically-operated buckets
 - electrically-operated buckets
 - gearboxes
- diagnostic testing procedures for marine jet drive propulsion systems, including:
 - housing to impeller clearance and wear
 - bearing wear
 - seal wear
 - bilge pump operation
 - gearbox operation
 - bucket operation
- dismantling procedures for jet drive propulsion systems, including procedures for:
 - measuring clearances and tolerances
 - inspecting components
- repair procedures for marine jet drive propulsion systems, including procedures for:
 - replacing impellers and housing
 - replacing bearings and seals, including oil replacement
 - replacing couplings
 - servicing buckets
- post-repair testing procedures for marine jet drive propulsion systems, including water testing.

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 jet drive propulsion 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:

- marine repair workplace or simulated workplace
- workplace instructions
- manufacturer jet drive propulsion system specifications
- a centrifugal jet drive propulsion system in a marine vessel with system faults
- an axial flow jet drive propulsion system in a marine vessel with system faults
- diagnostic equipment for jet drive propulsion systems
- tools, equipment and materials appropriate for dismantling, repairing, reassembling and adjusting marine jet drive propulsion 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>