



Australian Government

Assessment Requirements for AURRTA007 Analyse and evaluate faults in light marine hydraulic systems

Release: 1

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Modification History

Release	Comment
Release 1	New unit of competency.

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:

- analyse and evaluate a fault in the hydraulic systems of three different light marine vessels
- the above analysis and evaluation must involve three of the following systems:
 - power assisted steering
 - hydraulic steering
 - bow thruster
 - trim tabs
 - tilt and trim
 - winch.

Knowledge Evidence

Individuals must be able to demonstrate knowledge of:

- work health and safety (WHS) and occupational health and safety (OHS) requirements relating to analysing and evaluating faults in light marine hydraulic systems, including procedures for working with:
 - fluids under pressure
 - stored pressure hazards
 - hot fluid hazards
- environmental requirements, including procedures for trapping, storing and disposing of fluids released from hydraulic systems
- principles and processes involved in planning and implementing analysis and evaluation of light marine hydraulic system faults

- design and planning of diagnostic procedures of light marine hydraulic system faults, including procedures for diagnosing:
 - hydraulic faults
 - mechanical faults
 - electrical faults
- procedures for analysing and evaluating light marine hydraulic system faults, including:
 - system failure analysis
 - component failure analysis
- hydraulic principles, including pressure, flow and force
- mechanical principles, including levers and mechanical advantage
- types, functions, operation and limitations of light marine hydraulic systems, including:
 - power assisted steering
 - hydraulic steering
 - bow thruster
 - trim tabs
 - tilt and trim
 - winches
- vessel systems and their impact on light marine hydraulic system operation, including vessel electrical system
- testing procedures for light marine hydraulic systems, including:
 - stroke times for tilt and trim operation
 - leak down and creep
 - full load water testing
- types, functions, operation and limitations of diagnostic testing equipment required to analyse and evaluate faults in light marine hydraulic systems
- procedures for documenting and reporting the analysis and evaluation process
- requirements of Australian Design Rules (ADRs) relating to light marine hydraulic systems.

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 light marine hydraulic 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 hydraulic system specifications
- three different light marine vessels with faults in the systems specified in the performance evidence
- diagnostic equipment for light marine hydraulic systems
- tools, equipment and materials appropriate for analysing and evaluating light marine hydraulic systems.

Links

Companion Volume implementation guides are found in VETNet -

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

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