



Australian Government

AURRTE1001 Prepare outboard engines for wet-run testing

Release 1

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Modification History

Release	Comment
Release 1	New unit of competency

Unit Descriptor

Unit descriptor	<p>This unit describes the performance outcomes required to prepare outboard engines for wet-run testing.</p> <p>The unit involves identifying and confirming work requirements, preparing engine for testing procedure, performing wet run testing, and completing work finalisation processes.</p> <p>No licensing, legislative, regulatory or certification requirements apply to this unit at the time of publication.</p>
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Application of the Unit

Application of the unit	Work applies to the testing of an outboard engine out of water in a marine maintenance environment.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the required performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge and/or the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare to wet run an outboard engine	1.1. Workplace instructions are used to determine job requirements relating to wet-running outboard engines 1.2. Workplace Health and Safety (WHS) requirements are observed and applied throughout the work 1.3. Procedures and information are sourced and interpreted 1.4. Test method is selected for particular application 1.5. Appropriate tools and equipment are selected and prepared Work area is located and prepared
2. Set up testing equipment	2.1. Engine systems' settings are determined for wet-run testing according to manufacturer requirements 2.2. Testing equipment is attached to engine according to manufacturer and component supplier specifications
3. Perform wet-run test	3.1. Wet-run test is commenced by starting and operating engine according to workplace procedures and manufacturer and component supplier specifications and without causing damage to components or systems 3.2. Engine test performance is monitored 3.3. Engine test results are compared with manufacturer and component supplier specifications 3.4. Tests are conducted giving consideration to workplace environmental requirements
4. Clean up work area and finalise work processes	4.1. Tools and equipment are checked and stored according to workplace expectations 4.2. Work area is cleaned and tidied according to workplace procedures 4.3. Workplace documentation is completed according to workplace procedures

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- communication skills to:
 - clarify workplace instructions and determine job requirements
 - gain information from appropriate persons and assistance as required
- literacy skills to:
 - read and follow manufacturer information
 - read and follow information in standard operating procedures and testing instructions
 - report and record actions
- numeracy skills to interpret gauges and measuring equipment
- planning and organising skills to:
 - identify risk factors to minimise risk to self and others
 - contribute to activities which implement and follow standard workplace procedures
 - identify environmental constraints associated with task
- problem-solving skills to:
 - recognise a workplace problem or a potential problem
 - refer problems outside area of responsibility to appropriate person
- self-management skills to:
 - locate and identify appropriate tools and equipment
 - locate technical information
 - follow basic workplace documentation, such as operating procedures
 - recognise limitations and seek timely advice
- technical skills to select and use tools and equipment appropriate for wet-run testing of marine engines
- technology skills to use workplace technology to assist with work practices

Required knowledge

- WHS regulations, requirements, equipment and material, and personal safety requirements relating to marine engine wet-run testing
- types and classifications of marine engines and system components
- starting procedures of outboard engines
- testing procedures appropriate to wet running outboard engines
- environmental considerations of wet run testing of outboard engines
- workplace documentation policies and procedures

Evidence Guide

EVIDENCE GUIDE

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy all of the requirements of the performance criteria and required skills and knowledge.

A person who demonstrates competency in this unit must be able to:

- observe safety procedures and requirements
- communicate effectively with others involved in or affected by the work
- select methods and techniques which are appropriate to the circumstances
- wet-run test a minimum of three marine outboard engines
- complete workplace documents and clean-up requirements.

Context of, and specific resources for assessment

Competency is to be assessed in the workplace or a simulated workplace environment that accurately reflects performance in a real workplace setting.

Assessment is to occur:

- using standard workplace practices and procedures
- following safety requirements
- applying environmental constraints

Assessment is to comply with relevant:

- regulatory requirements
- Australian standards
- industry codes of practice

The following resources must be made available:

- workplace location or simulated workplace
- operational marine outboard engines, including 2 and 4 stroke type
- equipment and hand tools appropriate to the wet-run testing of outboard engines
- engine specifications and work instructions
- workplace documentation.

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Overview of assessment**Method of assessment**

Assessment must satisfy the endorsed Assessment Guidelines of this Training Package.

Assessment methods must confirm consistency and accuracy of performance (over time and in a range of workplace relevant contexts) together with the application of required skills and knowledge.

Assessment methods must be by direct observation of tasks and include questioning on required skills and knowledge to ensure correct interpretation and application.

Competence in this unit may be assessed in conjunction with other units which together form part of an holistic work role.

Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate the needs of diverse clients.

Assessment processes and techniques must be culturally sensitive and appropriate to the language, literacy and numeracy capacity of the candidate and the work being performed.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Workplace instructions may include:	<ul style="list-style-type: none"> • computer-generated instructions • verbal instructions • written instructions.
Job requirements may include:	<ul style="list-style-type: none"> • outboard engine wet run methods, processes and equipment
Workplace health and safety (WHS) requirements:	<ul style="list-style-type: none"> • are those prescribed under legislation, regulations, codes of practice, and workplace policies and procedures • may include: <ul style="list-style-type: none"> • protective clothing and equipment • use of tools and equipment • handling of material • use of fire-fighting equipment • first aid equipment • hazard control, including control of hazardous materials and toxic substances.
<ul style="list-style-type: none"> • Tools and equipment may include: 	<ul style="list-style-type: none"> • hand tools • flushing or wet-run fittings • water hose and fittings • specialist tools and equipment
Engine systems may include:	<ul style="list-style-type: none"> • 2 or 4 stroke • outboard engines fitted or not fitted to a vessel
Wet-run testing may include:	<ul style="list-style-type: none"> • using lifting equipment to locate engine for test • attaching flushing device or fitting • checking security of fittings • connecting remote water supply • regulating water supply for test • checking throttle / choke / fast idle settings • making battery connections
Engine test results may include:	<ul style="list-style-type: none"> • test report recommendations for repairs and/or modifications • component conformity to manufacturer and supplier specifications • component manufacturer and component supplier warranty considerations

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Environmental requirements may include:

- noise
- water use and runoff
- ensuring exhaust emissions are removed as required by state and territory laws
- clean-up management

Unit Sector(s)

Competency field	Marine
Unit sector	Technical - Engines

Custom Content Section

Not applicable.