



Australian Government

Department of Education, Employment and Workplace Relations

TDMMR3107B OPERATE AND CARRY OUT BASIC SERVICING ON AUXILIARY SYSTEMS

Revision Number: 1

TDMMR3107B OPERATE AND CARRY OUT BASIC SERVICING ON AUXILIARY SYSTEMS

Modification History

Not applicable.

Unit Descriptor

UNIT DESCRIPTOR:

This unit involves the skills and knowledge required to operate and carry out routine basic servicing checks on auxiliary systems on a small commercial vessel (including the steering, pumping and any refrigeration systems on the vessel) within the limits of responsibility and skill of a Marine Engine Driver Grade 3 or a Coxswain as per relevant sections of Part D of the National Standard for Commercial Vessels (NSCV).

Note: Relevant State/Territory training and qualification requirements need to be fulfilled by any persons carrying out installation, maintenance and/or repair of refrigeration equipment especially with regard to preventing the escape of refrigerants into the atmosphere and to electrical work. Work on refrigeration systems only includes allowable basic operator servicing as per manufacturer's manual. Maintenance and repair of refrigeration systems on a vessel should only be performed by persons qualified under the relevant regulations.

Application of the Unit

Application of the unit	The unit has applications in the qualification for a Coxswain and Marine Engine Driver Grade 3 (MED 3) as per relevant sections of Part D of the National Standard for Commercial Vessels (NSCV), i.e. Certificate II in Transport&Distribution (Coastal Maritime Operations - Coxswain) and Certificate II in Transport&Distribution (Marine Engine Driving - Grade 3).
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Licensing/Regulatory Information

Licensing/legislative requirements	The unit is consistent with the relevant sections of State and Territory maritime regulations and NSCV/USL Code for a Coxswain or MED 3.
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Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

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. Assessment of performance is to be consistent with the Evidence Guide.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Operate auxiliary systems	<ul style="list-style-type: none"> a Auxiliary systems are operated in accordance with procedures and manufacturer's instructions and specifications b Auxiliary systems are prepared, started up and shut down as per manufacturer's instructions c Basic faults are identified during operations and appropriate action is taken as per company procedures
ELEMENT	PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
2 Carry out basic, routine checking and servicing procedures on auxiliary systems	<ul style="list-style-type: none">a The operation of auxiliary systems is monitored in accordance with manufacturer's instructions, and faulty operation reported in accordance with proceduresb Faulty equipment and components are identified and reported, and action is initiated as required for isolation, tagging and repair or replacement as per company procedures
3 Follow safety and hazard control procedures	<ul style="list-style-type: none">a All required safety precautions and regulations are followed when operating and maintaining auxiliary systemsb Operational hazards are identified and action is taken to minimise or eliminate risk to personnel, vessel and the environmentc Where relevant, procedures and precautions necessary for entry into confined spaces on a vessel are correctly followedd Appropriate action is taken in the event of a failure or emergency involving auxiliary systems to isolate and secure the relevant equipment and the vessel and maintain the safety of the vessel and persons involvede Shipboard emergency and contingency are followed in the event of a failure or emergency involving auxiliary systems

Required Skills and Knowledge

REQUIRED KNOWLEDGE

This describes the knowledge required for this unit.

- 1 Relevant OH&S and pollution control legislation, codes of practice, policies and procedures
- 2 Procedures for the operation and routine basic servicing of auxiliary systems on a small vessel
- 3 Safety, environmental and hazard control precautions and procedures relevant to the operation and routine servicing of auxiliary systems on a small vessel
- 4 Basic features and operating characteristics of auxiliary systems used on small vessels, including:
 - a steering systems
 - b pumping systems
 - c refrigeration systems

REQUIRED KNOWLEDGE

- 5 Problems related to the operation and routine basic servicing of auxiliary systems on small vessels and appropriate action and solutions
- 6 Running logs and servicing records that may be kept on a small commercial vessel

REQUIRED SKILLS

This describes the basic skills required for this unit.

- 1 Use basic verbal communication skills required when operating and carrying out routine basic servicing on the auxiliary systems of a small vessel
- 2 Read, interpret and apply simple instructions on the operation and routine basic servicing of auxiliary systems of a small vessel
- 3 Complete any required servicing records
- 4 Work safely and collaboratively with others during the operation and routine basic servicing of auxiliary systems on a small vessel
- 5 Select and use relevant tools and equipment as per instructions
- 6 Recognise faulty equipment and take appropriate action as per operating instructions
- 7 Recognise routine problems during the operation and routine basic servicing of auxiliary systems on a small vessel and take appropriate action
- 8 Adapt to changes in equipment and procedures in the workplace
- 9 Follow required work schedule as per company requirements
- 10 Read and interpret gauges

Evidence Guide

Evidence Guide

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The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for this Training Package.

1 Critical aspects of evidence required to demonstrate competency in this unit	Assessment must confirm appropriate knowledge and skills to: <ul style="list-style-type: none">a Operate auxiliary systems on a small vesselb Carry out routine basic servicing and checks of auxiliary systems on a small vesselc Identify typical problems related to the basic servicing of auxiliary systems on a vessel and take appropriate action in conjunction with other crew membersd Exercise all required safety, environmental and hazard control precautions and procedures during operation and routine servicing of systemse Communicate effectively with others when operating and carrying out basic servicing on auxiliary systems on a small vessel
2 Evidence required for demonstration of consistent performance	<ul style="list-style-type: none">a Performance is demonstrated consistently over a period of time and in a suitable range of contextsb Consistently applies underpinning knowledge and skills when:<ul style="list-style-type: none">1 operating auxiliary systems on a small vessel2 carrying out routine servicing on auxiliary systems on a small vessel3 identifying and reporting routine operational and basic servicing problems4 applying safety and pollution control precautions when operating and servicing auxiliary systems on a small

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- vessel
- c Shows evidence of application of relevant workplace procedures, including:
 - 1 relevant sections of State and Territory marine regulations
 - 2 OH&S regulations and hazard prevention policies and procedures
 - 3 job procedures and work instructions
 - 4 relevant equipment manufacturer's guidelines relating to operating and carrying out routine servicing on auxiliary systems on a small vessel
 - 5 environmental protection procedures when carrying out servicing operations
 - d Action is taken promptly to report and/or rectify problems identified when operating and carrying out routine basic servicing on auxiliary systems
 - e Work is completed systematically with required attention to detail
 - f Recognises and adapts appropriately to cultural differences in the workplace, including modes of behaviour and interactions among crew and others

Evidence Guide (continued)

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3 Context of assessment

- a Assessment of competency must comply with the assessment requirements of the relevant maritime regulations
- b Assessment of this unit must be undertaken within relevant marine authority approved and audited arrangements by a registered training organisation:
 - 1 As a minimum, assessment of knowledge must be

Evidence Guide (continued)

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	<p>conducted through appropriate written/oral examinations, and</p> <p>2 Appropriate practical assessment must occur:</p> <p>i at the registered training organisation; and/or</p> <p>ii on an appropriate working or training vessel</p>
<p>4 Specific resources required for assessment</p>	<p>Access is required to opportunities to:</p> <p>a participate in a range of exercises, case studies and other simulated practical and knowledge assessments that demonstrate the skills and knowledge to operate and carry out routine basic servicing on auxiliary systems on a small vessel; and/or</p> <p>b operate and carry out routine basic servicing on auxiliary systems on an operational commercial or training vessel</p>

Range Statement

Range Statement

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The Range Statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

VARIABLE

SCOPE

1. GENERAL CONTEXT

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a. Work must be carried out:	1 in compliance with the relevant sections of State and Territory marine regulations and the National Standard for Commercial Vessels and USL Code
b. Work is performed:	1 within established procedures, with responsibility for own outputs in relation to specified quality and safety standards
d. Work requires:	1 limited responsibility for others in achieving outcomes, including the application of solutions to a variety of predictable servicing problems

2. WORKSITE ENVIRONMENT

a Vessel may include:	1 any small commercial vessel up to 500 kW propulsion power
b Auxiliary systems may include:	1 steering arrangements 2 pumping systems 3 refrigeration systems
c Operation and basic servicing of auxiliary systems may be conducted:	1 by day or night in both normal and emergency situations 2 under any permissible conditions of weather 3 while underway 4 during berthing and unberthing operations 5 while anchored or moored 6 in dry dock 7 when bunkering

Range Statement

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- 8 during fishing operations (where applicable)
- 9 during cargo operations

Range Statement (continued)

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VARIABLE	SCOPE
d Basic servicing may include:	<ul style="list-style-type: none"> 1 routine basic checks of systems and equipment 2 identification and reporting of faults and arranging for repair or replacement
e Operation and basic servicing tasks for auxiliary systems may include:	<ul style="list-style-type: none"> 1 operating controls 2 checking readings 3 identifying faulty operation 4 making adjustments in accordance with manufacturer's instructions
f Servicing tools and equipment may include:	<ul style="list-style-type: none"> 1 hand tools, including screwdrivers, spanners, wrenches protective clothing and equipment such as: <ul style="list-style-type: none"> i eye and ear protection ii safety boots iii dust and fume masks

Range Statement (continued)

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<p>g Documentation and records may include:</p>	<p>1 relevant sections of State and Territory marine regulations</p> <p>2 vessel and company auxiliary systems servicing procedures</p> <p>3 equipment manufacturer's instructions, specifications and procedures</p>
<p>h Applicable legislation, regulations and codes may include:</p>	<p>1 National Standard for Commercial Vessels and USL Code</p> <p>2 relevant sections of State and Territory marine regulations</p> <p>3 relevant international, Commonwealth, State and Territory OH&S and pollution control legislation</p>

Unit Sector(s)

Not applicable.

Field

Field R Carry Out Operations on Equipment and Systems

Relationship to other units

<p>Relationship to other units</p>	<p>The unit may be assessed in conjunction with other units that relate to the functions of the occupation(s) concerned.</p>
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