



Australian Government

MARM017 Survey vessel operational systems

Release: 1

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Modification History

Release 1. New unit of competency.

Application

This unit involves the skills and knowledge required to undertake a periodic survey of vessel operational systems including propulsion and steering gear systems, deck machinery, pumping systems, power generation, refrigeration plant, liquid petroleum gas (LPG) systems for appliances and navigational systems.

This unit applies to people working in the maritime industry as a domestic commercial vessel marine surveyor and may form part of accreditation requirements for surveyors under Australian legislation.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Not applicable.

Competency Field

M – Marine Surveying

Unit Sector

Not applicable.

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe the performance needed to demonstrate achievement of the element.

1 Identify survey requirements

- 1.1 Relevant standards for vessel equipment and operational systems are identified, accessed and incorporated into survey plan as required
- 1.2 Survey scope and depth is confirmed against relevant standards and organisational requirements
- 1.3 Operational limits, certificate of operations and previous certificates of survey are reviewed for special conditions or equivalent solutions

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| | 1.4 | Equipment and operational system requirements for survey and range of variations are accurately identified, selected and tested for serviceability |
| 2 Prepare for survey | 2.1 | Operational systems to be surveyed for type, size and nature of vessel operations are accurately identified, reviewed and incorporated into survey plan |
| | 2.2 | Relationships between different operational systems are accurately interpreted and items to be surveyed are noted in survey plan |
| | 2.3 | Maintenance records are obtained and reviewed to confirm survey scope |
| 3 Conduct periodic survey of operational systems | 3.1 | Survey of operational systems is carried out according to regulatory requirements |
| | 3.2 | Primary and secondary operational systems and their components are surveyed according to survey schedule |
| | 3.3 | Changes to operational equipment or equivalent solutions are identified and examined for fitness both in or out of water as required by survey schedule |
| 4 Report and act on non-compliance | 4.1 | Non-compliance is detected, recorded and reported according to regulatory and organisational requirements |
| | 4.2 | Risk arising from non-compliance is detected, reported and communicated to relevant personnel |
| | 4.3 | Relevant provisions of legislation appropriate to level of risk detected are identified and followed |
| | 4.4 | Appropriate reports and documentation related to survey are developed and managed according to regulatory and organisational requirements |

Foundation Skills

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Range is restricted to essential operating conditions and any other variables essential to the work environment.

Relevant standards include one or more of the following:	• class rules and approvals • general servicing requirements for operational equipment • manufacturer guidelines and servicing requirements • Marine Orders • National Standard for the Administration of Marine Safety (NSAMS) Section 4 • NSCV and USL Code as applicable • organisational standards • safety data sheets/material safety data sheets (SDSs/MSDSs) • safety management systems (SMS) • safety of life at sea (SOLAS) • Australian/New Zealand Standards (AS/NZS): • AS/NZS 3000: Electrical installations • AS/NZS 3004: Electrical installations – verification guidelines • WHS/OHS
Survey scope and depth include one or more of the following:	• class of vessel • grandfathering conditions • survey cycle in accordance with NSAMS Chapter 4: • change of class survey • damage/repair or condition surveys • equivalent solution or deemed-to-satisfy surveys • periodic survey (either annual or bi-annual) • survey level of vessel
Operational limits include one or more of the following:	• as defined in certificate of operations and/or certificate of survey • testing requirements for electrical and fire systems
Regulatory requirements include one or more of the following:	• Marine Safety (Domestic Commercial Vessel) National Law • NSCV • regulations and Marine Orders • USL Code
Primary and secondary operational systems include one or more of the following:	• maintenance and servicing requirements as well as general condition of: • ballast • bilge pumping systems

- communication equipment
- electrical systems
- engines and auxiliaries
- fire and safety systems
- fuel systems
- hydraulic systems
- machinery systems
- navigational systems
- piping and pumping systems
- power generating plants such as hybrid systems, wind and solar generation
- propulsion systems
- refrigeration
- sanitary systems
- steering systems
- tanks

Equivalent solutions
include one or more of the
following:

- as noted in certificate of operation or certificate of survey
- as noted in NSCV Part B
- national register of exemptions and equivalent solutions

Unit Mapping Information

This unit replaces and is equivalent to MARM5007A Survey vessel operational systems.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=772efb7b-4cce-47fe-9bbd-ee3b1d1eb4c2>