



Australian Government

MARE001 Communicate effectively when performing engineering duties

Release: 1

MARE001 Communicate effectively when performing engineering duties

Modification History

Release 1. New unit of competency.

Application

This unit involves the skills and knowledge required to communicate effectively when performing engineering duties on board a commercial vessel and includes communicating with others; reading and interpreting engineering publications, specifications, instructions and other documents; reading and interpreting equipment performance indications; using available tools to communicate between the bridge, engine control room and main engine room; and using a computer to enter and retrieve engineering information.

This unit applies to the work of a Marine Engineering Watchkeeper on commercial vessels greater than 750 kW and an Engineer Class 3 Near Coastal.

This unit has links to legislative and certification requirements.

Pre-requisite Unit

Not applicable.

Competency Field

E - Communication

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 Apply information to engineering watchkeeping duties

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| 1.1 | Relevant engineering publications and other documentation are identified and accessed |
| 1.2 | Required information is extracted from relevant engineering publications and other documentation and is appropriately applied to work activities according to established marine engineering practice |
| 1.3 | Information in relevant engineering publications and other |

		documentation used in day-to-day work is applied to work activities
	1.4	Engineering specifications and drawings are correctly read and interpreted, and information is applied according to established marine engineering practice
2 Apply engineering information	2.1	Readings on performance indicators are correctly made and interpreted
	2.2	Engineering information, procedures, instructions and directions are obtained, interpreted and applied
	2.3	Standard drawing symbols, appropriate instrumentation and process control terms are correctly used in relation to actions and functions of marine equipment and plant
	2.4	Engineering drawings and control loops are correctly sketched as required
	2.5	Engineering reports, running sheets and other engineering documentation relevant to the performance of engineering duties are correctly and accurately completed
3 Communicate between bridge, engine control room and main engine room	3.1	Available tools are correctly used to communicate between bridge, engine control room and main engine room
	3.2	Appropriate records of engineering communications are completed according to organisational procedures and regulatory requirements
4 Communicate with officers, crew and others	4.1	Clear and precise communication is used and established communication practices are followed
	4.2	Communication misunderstandings are avoided using appropriate confirmation techniques and established communication practices
	4.3	Messages concerning vessel safety and operations are received, read, clarified as required, correctly interpreted and applied to engineering activities
	4.4	Appropriate techniques are used when communicating with multilingual crew to ensure communication is effective and messages are clearly understood
	4.5	Non-verbal communication is appropriately used when working and communicating with others
	4.6	Feedback, instruction and training on work performance is

effectively provided to engine room crew according to vessel procedures and established engineering practice

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

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

Range of Conditions

Specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

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

Relevant engineering publications and other documentation include one or more of the following:

- anti pollution and environmental protection regulations and procedures, including relevant sections of the International Convention for the Prevention of Pollution from Ships (MARPOL)
- instructions of relevant maritime authorities and classification societies concerning shipboard machinery operations, maintenance and repair
- International Safety Management (ISM) Code safety management system plans, procedures, checklists and instructions
- machinery and vessel manufacturer specifications, instructions and recommended procedures
- marine engineering publications and manuals
- relevant sections of national and international regulations, International Maritime Organization (IMO) Conventions and Codes, including Australian Maritime Safety Authority (AMSA) Marine Orders and class society rules dealing with shipboard machinery maintenance and repair
- operational and maintenance logs, running sheets and records, including computer databases of running information and maintenance records

- vessel and organisational planned operational and maintenance procedures and instructions
- vessel safety and emergency contingency plans and procedures, including relevant sections of the International Convention for the Safety of Life at Sea (SOLAS)
- vessel survey as it relates to shipboard plant, equipment and machinery

Performance indicators include one or more of the following:

- computer screens
- gauges
- instrumentation

Available tools include one or more of the following:

- alarms
- hand held radios
- internal communication systems

Unit Mapping Information

This is a new unit. This unit is equivalent to MARE5001A Communicate effectively when performing engineering duties.

Links

Companion Volume implementation guides are found in VETNet -

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

Assessment Requirements for MARE001 Communicate effectively when performing engineering duties

Modification History

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria on at least one occasion and include:

- assessing own work outcomes and maintain knowledge of current codes, standards, regulations and industry practices
- communicating effectively verbally and in writing
- identifying and interpreting numerical and graphical information in marine engineering publications
- identifying, collating and processing information required to prepare verbal and written reports
- imparting knowledge and ideas as required through oral, written and visual means
- interpreting documentation related to marine engineering operations
- maintaining effective records
- reading and interpreting written information needed to perform basic marine engineering tasks
- resolving misunderstandings in written and verbal communication
- using computer and relevant equipment to enter, access and retrieve engineering information
- using established marine engineering vocabulary as required.

Knowledge Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria and include knowledge of:

- established engineering practice for the operation, checking, maintenance and repair of marine plant, machinery, equipment and systems
- established written, verbal and non-verbal marine engineering communication practices
- marine engineering communication techniques, including barriers to effective communication and how to overcome them
- national and international regulations, International Maritime Organization (IMO) Conventions and Codes, including Australian Maritime Safety Authority (AMSA) Marine Orders applicable to the operation, maintenance and repair of plant, machinery and equipment on vessels of unlimited propulsion power
- principles of effective communication
- protocols and procedures for communicating with others on board vessels

- relevant industrial award requirements as they relate to shipboard engineering personnel responsibilities, obligations and entitlements
- relevant work health and safety (WHS)/occupational health and safety (OHS) legislation, codes of practice, policies and procedures
- standard nautical vocabulary as described in IMO Standard Marine Communication Phrases
- techniques for communicating effectively with a multilingual crew
- tools typically available for communication between bridge, engine control room and main engine room
- typical communication problems and appropriate action and solutions
- work health and safety (WHS)/occupational health and safety (OHS) requirements and work practices.

Assessment Conditions

Assessors must satisfy National Vocational Education and Training Regulator (NVR)/Australian Quality Training Framework (AQTF) assessor requirements.

Assessment must occur in workplace operational situations where it is appropriate to do so; where this is not appropriate, assessment must occur in simulated workplace operational situations that reflect workplace conditions.

Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.

Resources for assessment must include access to:

- tools, equipment, machinery, materials and personal protective equipment currently used in industry
- applicable documentation such as legislation, regulations, codes of practice, workplace procedures and operational manuals
- range of relevant exercises, case studies and/or simulations.

Links

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