**MSQ Unit 65**

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| Title: | **Take charge of an Engineering watch** |
| QCF Level: | **3** |
| Credit value: | **8** |
| Learning outcomes*The learner will:* | Assessment criteria *The learner can:* |
| 1. Be able to accept an Engineering watch
 | * 1. Establish the current condition of the engineroom machinery
	2. Agree current condition of the engine room machinery and accept the watch under those conditions
 |
| 1. Be able to hand over an Engineering watch
 | * 1. Hand over a watch in accordance with internationally accepted principles and procedures
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| 1. Be able to conduct an Engineering watch
 | * 1. Control an Engineering watch in accordance with Internationally accepted principles and procedures by: -
* reading machinery log books and handover notes
* ensuring that the power plant responds to any Bridge request for change
* ensuring that all the machinery is operated safely and efficiently
	1. Obtain readings about machinery performance
	2. Record readings and appropriate activity from machinery, equipment and engineering systems
	3. Ensure that all measures are taken to ensure protection of the environment from pollution
	4. Carry out the specified duties during the watch
	5. Ensure confirmed non-routine duties are carried out correctly by engine-room watch personnel
	6. Respond correctly to machinery alarms
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| 1. Be able to monitor engineering machinery, equipment and systems to ensure the safe and environmentally friendly operation of the plant
 | * 1. Evaluate the operational condition of the propulsion system and steering machinery
	2. Judge the electrical requirements and spare capacity
	3. Make adjustments to the main and auxiliary power plant to ensure most efficient operation for the required conditions
	4. Stop and start plant and machinery safely as required
	5. Ensure that any automatically starting standby equipment machinery is correctly prepared and in an operating condition, including
* generators
* air compressors
* boilers
* pump and bilge systems
	1. Check that all spare machinery items are correctly and safely stowed
	2. Ensure that all the daily running tanks and services for the engine are at the correct levels to maintain continued service of the plant
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| 1. Be able to communicate with appropriate personnel
 | * 1. Communicate on board in accordance with operational requirements
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| 1. Be able to Identify malfunctions and deviations from normal operation promptly to maintain safe operation
 | * 1. Explain the type of main plant malfunctions that are likely to occur
	2. State the “critical” machinery that will cause a dangerous occurrence if it fails
	3. Describe the environmental control systems that are in place reducing the impact of the vessel’s power plant
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| 1. Be able to take the necessary action on machinery malfunctions and deviation from normal operation promptly to maintain safe operation
 | * 1. Describe how to minimise the threat from a “critical “ machinery failure
	2. Describe how to make adjustments to maintain the safe and efficient operation of the machinery
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| 1. Be able to report malfunctions and deviations from normal operation promptly to maintain safe operation
 | * 1. Outline the reporting mechanisms available to report machinery failure and malfunction
	2. Describe the circumstances where each mechanism would be used
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| 1. Know what action to take in the event of a machinery and emergency alarm in the engineroom
 | * 1. Explain the action to take in the event of a machinery alarm. Including when to call for assistance
	2. Explain how to respond to the fire alarm
	3. Explain how to respond to the gas flooding alarm
	4. Describe how to ensure the safety of any persons that might be in the machinery space in an emergency situation
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| **Additional information about the unit** |  |
| Unit aim(s) | To provide learners with competences to carry out engineering watchkeeping functions  |
| Unit expiry date |  |
| Details of the relationship between the unit and relevant national occupational standards (if appropriate) | MNTB NOS (Jan 2006) – C03 Take Charge of an Engine Room Watch |
| Details of the relationship between the unit and other standards or curricula (if appropriate) | Maritime and Coastguard Agency Marine Guidance Notice regarding Certificates of Competency – Engine Department  |
| Assessment requirements specified by a sector or regulatory body (if appropriate) | MSA Assessment StrategyMCA Requirements |
| Endorsement of the unit by a sector or other appropriate body (if required) | MCA…. |
| Location of the unit within the subject/sector classification system | MSQ Pathway XXX |
| Name of the organisation submitting the unit | Scottish Qualifications Authority |
| Availability for use |  |
| Availability for delivery |  |
| Guided Learning Hours | 70 |