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| **MSQ Unit 56** | **QCF Ref: L/602/5769** |
| Title: | **Marine engineering practice – An introduction** |
| QCF Level: | **2** |
| Credit value: | **6** |
| Learning outcomes - *The learner will:* | Assessment criteria - *The learner can:* |
| 1. Understand the construction of motor propulsion plant
 | * 1. Explain the difference between 2-stroke and 4-stroke cycles
	2. Describe the component parts of a marine diesel engine
	3. Describe the support systems for a marine diesel engine
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| 1. Understand the construction of steam propulsion plant
 | * 1. Describe the layout of a marine steam propulsion plant
	2. Describe the component parts of a marine boiler
	3. Describe the component parts of a marine steam turbine
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| 1. Understand the principles of pumps and pumping systems
 | * 1. Explain the difference between dynamic and displacement pumps
	2. Describe the component parts of a centrifugal pump
	3. Describe the constructional details of different types of displacement pumps
	4. Describe typical pumping systems
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| 1. Understand auxiliary systems onboard ship
 | * 1. Describe shipboard pneumatic systems
	2. Describe shipboard refrigeration and air conditioning systems
	3. Describe the operation of deck and cargo handling machinery
	4. Describe the operation of fresh water generation and sewage plant
	5. Describe the regulations regarding oil pollution from ships
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| **Additional information about the unit** |  |
| Unit aim(s) | To provide learners with knowledge and understanding of the machinery in a ship’s engine room and its interdependency |
| Unit expiry date |  |
| Details of the relationship between the unit and relevant national occupational standards (if appropriate) | MNTB NOS (Jan 2006) – A12 Respond to emergencies on board a vesselA32 Maintain safe, legal and effective working practices on board a vesselC03 Take charge of an engine room watchC11 Prepare and operate vessel propulsion machinery and ancillary systemsC12 Operate vessel auxiliaries and service machineryC34 Carry out maintenance of vessel mechanical machinery and systems |
| 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 | Transportation |
| Name of the organisation submitting the unit | Scottish Qualifications Authority |
| Availability for use |  |
| Availability for delivery |  |
| Guided Learning Hours | 60 |