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| Overview | This standard covers the competence required to plan for and safely operate auxiliaries and service machinery, other than electrical systems, and respond to malfunctions. The machinery is prepared for operational requirements and start-up and shut down occurs within defined operating conditions. Procedures are followed for changes in demand, deviations from the norm, emergency shut down and communicated to relevant personnel.  **Target Group**  This standard applies to individuals at the operational level with responsibility for operating auxiliaries and service on machinery on vessels of any type over 750kW registered power |

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| **Performance criteria**  You must be able to: | 1. plan operations in accordance with established safety rules and regulations and manufacturer's recommendations and to prevent damage 2. prepare machinery in accordance with operating instructions, established safety rules and regulations and manufacturer's recommendations at the right time appropriate to the intended operation 3. start up or shut down equipment and systems safely and efficiently 4. monitor machinery in accordance with schedules, operating conditions and instructions throughout normal operation 5. carry out adjustments to the machinery in the right sequence and time to maintain machinery conditions and instrument readings within defined levels and with optimum safety and efficiency 6. identify irregularities, defects or damage and take action promptly to maximise vessel and machinery safety 7. carry out emergency shut down and isolating procedures and take multiple alarms in priority order to maximise vessel and machinery safety 8. give sufficient notice of operations to enable other relevant personnel to carry out their responsibilities safely and efficiently 9. report promptly and accurately to an appropriate authority any malfunction and irregularities |

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| Knowledge and understanding  You need to know and understand: | 1. the working principles and constructional details of auxiliary machinery 2. planning of operations, planning methods, sources of information – statutory, company and manufacturers. 3. the main duties and responsibilities of shipboard personnel, delegation of responsibilities in the machinery space and the level of supervision required by individuals. 4. the operational checks and procedures to operate each individual auxiliary system and how to bring each individual system to state of readiness. 5. the location, cause and effects of common faults in auxiliary machinery and systems and action necessary to prevent damage. 6. the permitted range, effects of adjustments and consequence of deviation beyond specified range to auxiliary machinery. 7. the operation of auxiliary machinery and systems in the event of failure of remote control systems 8. the shutting down of systems and equipment on completion of operations 9. the use of internal communication systems, communicating with engineroom and bridge personnel and effective forms of communication. 10. the importance and use of records for commercial and legislative purposes. 11. the application of Statutory Regulations and guidelines, organisational instructions and guidance and vessel contingency plans |

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