
Overview

This standard identifies the competences you need to carry out servicing activities on yacht or boat ancillary systems and equipment, in accordance with approved procedures. You will be required to carry out the servicing activities on a range of ancillary systems such as fuel and water holding tanks and pipework, bow and stern thrusters, trim tabs, pumps (such as sea water, fresh water and jet), gear boxes, steering gear, bearing brackets, seals and propellers, battery charging equipment (such as wind generators and solar panels), lifting equipment (such as anchor windlass, winches and hoists). This will involve checking equipment, such as pipework, control valves, pumps, motors for damage or wear, replacing faulty units and checking and adjusting the equipment, as appropriate, to maintain optimal operational performance.

Your responsibilities will require you to comply with organisational policy and procedures for the servicing activities undertaken and to report any problems with these activities or with the tools and equipment that are used, that you cannot personally resolve, or are outside your permitted authority, to the relevant people. You must ensure that all tools, equipment and materials used in the servicing activities are removed from the work area on completion of the activities and that all necessary job/task documentation is completed accurately and legibly. You will be expected to work with a minimum of supervision, taking full responsibility for your own actions and for the quality and accuracy of the work that you carry out.

Your underpinning knowledge will provide a good understanding of your work and will provide an informed approach to applying appropriate servicing procedures to yacht or boat ancillary systems and equipment. You will understand the servicing process and its application, in adequate depth to provide a sound basis for carrying out the activities to the required specification. In addition, you will be expected to report where the outcome identifies the need for further investigation or maintenance work.

You will understand the safety precautions required when carrying out the servicing activities, especially those for isolating the equipment and taking the necessary safeguards to protect the equipment and associated systems. You will be required to demonstrate safe working practices throughout and will understand the responsibility you owe to yourself and others in the workplace.

**Performance
criteria**

You must be able to:

- P1 work safely at all times, complying with health and safety legislation, regulations, directives and other relevant guidelines
- P2 follow the relevant maintenance schedules to carry out the required work
- P3 carry out the maintenance activities within the limits of your personal authority
- P4 carry out the maintenance activities in the specified sequence and in an agreed time scale
- P5 report any instances where the maintenance activities cannot be fully met or where there are identified defects outside the planned schedule
- P6 complete relevant maintenance records accurately and pass them on to the appropriate person
- P7 dispose of waste materials in accordance with safe working practices and approved procedures

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Knowledge and understanding

You need to know and understand:

- K1 the health and safety requirements of the area in which the servicing activity is to take place and the responsibility they place on you
- K2 how to recognise and deal with emergencies and the procedures to be followed (such as methods of safely evacuating and closing down of compartments in the case of fire or other major incident, first aid, fire fighting and resuscitation of personnel)
- K3 the isolation procedure that applies to the servicing activities and the specific ancillary equipment being worked on
- K4 the specific health and safety precautions to be applied during the servicing activities
- K5 the importance of using personal protective equipment (PPE) and other appropriate safety equipment during the servicing process
- K6 hazards associated with carrying out servicing activities on yacht or boat ancillary equipment (such as handling oils/greases, stored pressure/force, using damaged or badly maintained tools and equipment, not following laid-down maintenance procedures) and how they can be minimised
- K6 what constitutes a hazardous voltage and how to recognise victims of electric shock
- K7 how to reduce the risks of a phase to earth shock (such as insulated tools, rubber matting and isolating transformers)
- K8 how to obtain and interpret servicing specifications, ancillary equipment manufacturers' manuals, history/maintenance reports and other documents needed in the servicing process
- K9 the servicing schedules and methods to be followed to comply with organisational procedures for the servicing of the ancillary equipment
- K10 the basic principle of operation of the ancillary equipment being serviced and the purpose of individual components within the system
- K11 the different types of yacht or boat ancillary equipment, control equipment and peripheral devices and their servicing requirements
- K12 methods of checking that components are fit for purpose and the need to replace 'lifer' items such as filters, belts, seals and gaskets
- K13 how to recognise defects in yacht or boat ancillary equipment (such as under or over performance)
- K14 how to make sensory checks by sight, sound, smell, touch
- K15 the adjustments/corrections/tuning required to maintain the system at operational standard
- K16 the application and use of a range of mechanical operating mechanisms (such as levers and links, pulleys and belts, pivots, bearings, turnbuckles) and the likely functions that will require checking
- K17 the different types of pipes and hoses that are used and what to check during the servicing activities

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- K18 organisational policy on repair/replacement of components during the servicing activities
- K19 how to check that the replacement components meet the required specification/operating conditions
- K20 the procedure for obtaining consumables to be used during the servicing activity
- K21 the testing methods and procedures to be used to check that the ancillary equipment conforms to acceptable limits
- K22 the importance of ensuring that the system is maintained to the prescribed standard of cleanliness
- K23 how to compile servicing records/logs/reports which satisfy organisational policy and procedures
- K24 the problems that can occur whilst carrying out the servicing activities and how they can be avoided
- K25 the organisational procedure to be adopted for the safe disposal of waste of all types of materials
- K26 the extent of your own authority and whom you should report to if you have problems that you cannot resolve

Additional Information

Scope/range related to performance criteria

You must be able to:

1. Carry out **all** of the following during the servicing of the yacht or boat ancillary systems and equipment:
 - 1.1. use the correct issue of vessel/craft servicing documentation
 - 1.2. adhere to procedures or systems in place for risk assessment, COSHH, personal protective equipment and other relevant safety regulations
 - 1.3. obtain clearance to work on the system, and observe the appropriate power isolation and safety procedures
 - 1.4. provide safe access and working arrangements for the servicing area
 - 1.5. carry out the servicing activities, using appropriate techniques and procedures
 - 1.6. re-connect and return the system to service on completion of the servicing activities
 - 1.7. functionally test and adjust equipment to the prescribed level, as specified
 - 1.8. leave the work area clean and tidy

2. Carry out servicing activities on **six** of the following types of yacht or boat ancillary equipment:
 - 2.1. bow thrusters
 - 2.2. stern thrusters
 - 2.3. trim tabs
 - 2.4. anchor windlass
 - 2.5. passerelle
 - 2.6. generators
 - 2.7. wind generator
 - 2.8. solar panels
 - 2.9. fuel tanks and pipework
 - 2.10. p-brackets/a-brackets
 - 2.11. propellers
 - 2.12. water tanks and pipework
 - 2.13. holding tanks and pipework
 - 2.14. helm consoles
 - 2.15. out drive/Z-drive
 - 2.16. gearbox
 - 2.17. steering gear (mechanical, wire, hydraulic, rudder)
 - 2.18. jet pumps
 - 2.19.

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- 2.20. davits
 - 2.21. deck wash
 - 2.22. bathing platform
 - 2.23. sea water pump
 - 2.24. stern glands
 - 2.25. deep sea seals
 - 2.26. winches/hoists/lifting equipment
 - 2.27. other specific equipment
3. Carry out **twelve** of the following activities, as applicable to the equipment being serviced:
- 3.1. removing excessive dirt and dust from the ancillary equipment being serviced
 - 3.2. visual examination of the condition and security of the ancillary equipment (such as equipment locating and securing devices, hand rails and guards)
 - 3.3. checking the integrity of all connections
 - 3.4. checking condition of operating mechanisms (such as levers and links, cams, bearings, turnbuckles)
 - 3.5. replacing 'lived' consumables (such as oil, grease, belts, gaskets and seals)
 - 3.6. removing and replacing damaged or faulty units/components
 - 3.7. monitoring the condition and security of electrical components (such as cables, connectors, switches, contactors)
 - 3.8. replacing damaged or missing locking and retaining devices (nuts, bolts, locking devices/pins, cable ties, clips, proprietary fasteners)
 - 3.9. checking operation and cleaning all gauges and sensors
 - 3.10. making sensory checks (such as sight, sound, smell)
 - 3.11. replacing damaged or defective connectors/linkages
 - 3.12. checking alignment of running/sliding components
 - 3.13. carrying out specified lubrication
 - 3.14. measuring and adjusting moving part clearance
 - 3.15. making routine adjustments/tuning of components
 - 3.16. monitoring component condition/deterioration
 - 3.17. testing and reviewing the ancillary equipment function
 - 3.18. recording the results of the servicing and reporting any defects found
4. Carry out **four** of the following during the servicing of the ancillary equipment:
- 4.1. earth bonding tests
 - 4.2. serviceability checks
 - 4.3. power supply checks
 - 4.4. check security of pipework/hoses

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- 4.5. flushing pipework and systems
 - 4.6. checking shaft coupling (to compressor or pump)
 - 4.7. checking condition and security of cables and wiring
 - 4.8. checking alignment of equipment
 - 4.9. mechanical measuring checks (such as measuring operating clearance, travel, timings)
 - 4.10. other specific checks
5. Ensure that the serviced ancillary equipment meets **all** of the following:
- 5.1. all servicing activities have been completed to the required schedule
 - 5.2. all components and subassemblies are fit for purpose
 - 5.3. all connections are safe and sound
 - 5.4. all systems are leak free
 - 5.5. equipment functions to specification
 - 5.6. all potential defects are identified, recorded and reported for future action
6. Service yacht or boat ancillary equipment in compliance with **one** of the following:
- 6.1. BS or ISO standards and procedures
 - 6.2. customer (contractual) standards and requirements
 - 6.3. company standards and procedures
 - 6.4. specific craft/engine requirements/manufacture's data
 - 6.5. recognised compliance agency/body's standards (such as Lloyds, Boat Safety Scheme, BMEA Code)
 - 6.6. other accepted international standards
7. Complete the relevant paperwork, including **one** of the following and pass it to the appropriate people:
- 7.1. job cards
 - 7.2. system log
 - 7.3. maintenance logs or reports
 - 7.4. work authorisation documents
 - 7.5. vessel/craft documentation
 - 7.6. other specific recording method

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