

Overview

This standard identifies the competences you need to install aircraft domestic equipment, in accordance with approved procedures. It covers both fixed wing and rotary winged aircraft. You will be required to select the appropriate tools and equipment to use, based on the operations to be performed and components to be installed. The domestic equipment to be installed will include items such as auxiliary equipment (fire extinguishers, first aid boxes, fire blankets, oxygen bottles, life jackets), system pipes and fittings (fresh hot and cold water, waste water), seat-based life rafts, toilets, sinks, galley fittings, beverage machines, food preparation equipment, water storage (fresh and waste), pumps, water heaters and sanitary fittings.

The installation activities will include making all necessary checks and adjustments to ensure that components are correctly positioned and aligned, have appropriate connections made with appropriate working clearances and that they function as per the specification.

Your responsibilities will require you to comply with organisational policy and procedures for the installation activities undertaken and to report any problems with the installation activities that you cannot personally resolve, or that are outside your permitted authority, to the relevant people. You will be expected to ensure that all tools, equipment and materials used in the installation are correctly accounted for. You will need to complete all necessary job/task documentation accurately and legibly, work with a minimum of supervision and take personal 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 installation techniques and procedures. You will understand the equipment being installed and its application and will know about the relevant components, fastening and securing devices, in adequate depth to provide a sound basis for carrying out the activities to the required specification.

You will understand the safety precautions required when carrying out the installation operations. 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:

1. work safely at all times, complying with health and safety and other relevant regulations, directives and guidelines
2. follow all relevant drawings and specifications for the installation being carried out
3. use the correct tools and equipment for the installation operations and check that they are in a safe and usable condition
4. install, position and secure the equipment and components in accordance with the specification
5. ensure that all necessary connections to the equipment are complete
6. deal promptly and effectively with problems within your control and report those that cannot be solved
7. check that the installation is complete and that all components are free from damage
8. complete the relevant documentation, in accordance with organisational requirements
9. leave the work area and aircraft in a safe and appropriate condition, free from foreign object debris on completion of the activities

Knowledge and understanding

You need to know and understand:

1. the specific safety practices and procedures that you need to observe when working with aircraft domestic equipment (including any specific legislation, regulations/codes of practice for the activities, equipment or materials)
2. the health and safety requirements of the work area in which you are carrying out the activities, and the responsibility these requirements place on you
3. the hazards associated with installing aircraft domestic equipment and with the tools and equipment used and how to minimise them and reduce any risks
4. the protective equipment that you need to use for both personal protection (PPE) and protection of the aircraft
5. the interpretation of drawings, standards, quality control procedures and specifications used for the installation (including BS, ISO or BSEN schematics, symbols and terminology)
6. how to carry out currency/issue checks on the specifications you are working with
7. the components to be installed and their function within the particular domestic system
8. the various mechanical fasteners that will be used and their method of installation (such as threaded fasteners and special securing devices)
9. the importance of using the specified fasteners for the particular installation and why you must not substitute others.
10. why securing devices need to be locked and labelled and the different methods that are used
11. what the torque loading requirements are on the fasteners and what to do if these loadings are exceeded or not achieved
12. the quality control procedures to be followed during the installation operations
13. procedures for ensuring that you have the correct tools, equipment, components and fasteners for the activities
14. the techniques used to position, align, adjust and secure the components to the aircraft without damage
15. methods of lifting, handling and supporting the components/equipment during the installation activities
16. the use of seals, sealant, adhesives and anti-electrolysis barriers and the precautions to be taken

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17. why electrical bonding is critical and why it must be both mechanically and electrically secure
18. the procedure for the safe disposal of waste materials
19. how to conduct any necessary checks to ensure the system integrity, functionality, accuracy and quality of the installation
20. how to recognise installation defects (such as cosmetic appearance, leaks, poor seals, misalignment, ineffective fasteners, foreign object damage or contamination)
21. the importance of ensuring that the completed installation is free from dirt, swarf and foreign object damage and of ensuring that any exposed components or pipe ends are correctly covered/protected
22. the tools and equipment used in the installation activities and their calibration/care and control procedures
23. why tool/equipment control is critical and what to do if a tool or piece of equipment is unaccounted for on completion of the activities
24. the problems that can occur with the installation operations and how these can be overcome
25. the recording documentation to be completed for the activities undertaken and where appropriate, the importance of marking and identifying specific pieces of work in relation to the documentation
26. the extent of your own responsibility and to whom you should report if you have problems that you cannot resolve

Scope/range related to performance criteria

1.

Carry out all of the following during the installation activities:

- 1.1 obtain and use the appropriate documentation (such as job instructions, aircraft installation drawings, planning and quality control documentation, aircraft procedures and specifications)
- 1.2 adhere to procedures or systems in place for risk assessment, COSHH, personal protective equipment and other relevant safety regulations and procedures to realise a safe system of work
- 1.3 provide and maintain a safe working environment for the installation activities
- 1.4 obtain the correct tools and equipment for the activity, and check that they are in a safe, tested and usable condition and within current calibration date
- 1.5 obtain clearance to work on the aircraft and observe the power isolation and safety procedures
- 1.6 ensure that correct part numbers are used, including (where appropriate) left or right handed parts
- 1.7 follow safe practice/approved installation techniques and procedures at all times
- 1.8 return all tools and equipment to the correct location on completion of the installation activities
- 1.9 dispose of waste materials in accordance with approved procedures

2.

Install ten of the following items of equipment:

- 2.1 auxiliary equipment (such as fire extinguishers, first aid boxes, fire blankets, oxygen bottles, life jackets)
- 2.2 system pipes and fittings (such as fresh hot and cold water, waste water)
- 2.3 seat-based life rafts
- 2.4 crew life rafts
- 2.5 beverage machines
- 2.6 water heaters
- 2.7 toilet units
- 2.8 food preparation equipment
- 2.9 water storage (waste)
- 2.10 sinks
- 2.11 water storage (fresh)
- 2.12 sanitary fittings
- 2.13 galley fittings
- 2.14 pumps
- 2.15 other specific equipment

3.

Apply all of the following installation methods:

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- 3.1 positioning and aligning
- 3.2 earth bonding
- 3.3 functional checks
- 3.4 manual handling
- 3.5 applying sealant/adhesives
- 3.6 torque loading

4.

Make all of the following types of connection:

- 4.1 mechanical
- 4.2 electrical
- 4.3 system pipes and fittings

5.

Carry out installations in compliance with one of the following standards:

- 5.1 Civil Aviation Authority (CAA)/European Aviation Safety Agency (EASA)
- 5.2 Ministry of Defence (MoD)
- 5.3 Military Aviation Authority (MAA)
- 5.4 Aerospace Quality Management Standards (AS)
- 5.5 customer standards and requirements
- 5.6 Federal Aviation Authority (FAA)
- 5.7 company standards and procedures
- 5.8 BS, ISO or BSEN standards and procedures
- 5.9 manufacturers standards and procedures

6.

Complete the relevant paperwork, to include one from the following and pass it to the appropriate people:

- 6.1 build records
- 6.2 aircraft flight logs
- 6.3 log cards
- 6.4 job cards
- 6.5 other specific recording method

Behaviours

You will be able to apply the appropriate behaviours required in the workplace to meet the job profile and overall company objectives, such as:

- strong work ethic
- positive attitude
- team player
- dependability
- responsibility
- honesty
- integrity
- motivation
- commitment

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