
Overview

This standard identifies the competences you need to carry out servicing and maintenance activities on aircrew protective helmets and electrical headsets, in accordance with approved procedures. You will be required to select the appropriate tools and equipment to use, based on the maintenance activities to be carried out and to check that they are in a safe and serviceable condition. The maintenance activities to be carried out will involve dismantling the helmet, cleaning the various parts using suitable solutions, carrying out a thorough examination of the protective shell and associated parts in line with the relevant schedule, testing and final reassembly of the helmet and headset. Your responsibilities will require you to comply with organisational policy and procedures for the maintenance activities undertaken and to report any problems with these activities that you cannot personally resolve, or that are outside your permitted authority, to the relevant people. You will be expected to work with a minimum of supervision, taking 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 maintenance techniques and procedures to aircrew protective helmets and electrical headsets. You will understand the helmets and headsets being maintained, and their application, and will know about the various components, in adequate depth to provide a sound basis for carrying out the activities, identifying and correcting faults, and ensuring that the equipment is maintained to the required specification. You will understand the safety precautions required when carrying out the protective helmet and headset maintenance 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 the relevant maintenance schedules to carry out the required work
3. carry out the maintenance activities within the limits of your personal authority
4. carry out the maintenance activities, and replace components in the specified sequence and in an agreed timescale
5. report any instances where the maintenance activities cannot be fully met or where there are identified defects outside the planned schedule
6. dispose of waste materials in accordance with safe working practices and approved procedures
7. complete the relevant documentation, in accordance with organisational requirements
8. leave the work area, and equipment 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 precautions and procedures to be observed whilst carrying out the maintenance of the aircrew protective helmets and headsets (such as any specific legislation, regulations or codes of practice relating to the activities, equipment or materials)
2. the health and safety requirements of the work area in which you are carrying out the servicing/maintenance activities and the responsibility these requirements place on you
3. the hazards associated with maintaining aircrew protective helmets and electrical headsets and with the tools and equipment used and how to minimise them and reduce any risks
4. the requirements and importance of understanding and applying human factors as defined by the regulatory requirements and the potential impact if these are not adhered to
5. the personal protective equipment (PPE) that you need to use during the maintenance activities and where it can be obtained
6. the maintenance schedules and servicing specifications that are used during the servicing and maintenance and the importance of following the procedures listed in these documents (to include Urgent Technical Instructions (UTI), Routine Technical Instructions (RTI), Maintenance Instructions (MI), Preliminary Warning Instructions (PWI) and Serious Defect Signals)
7. the types of fault, defect or wear characteristic that are likely to occur with the aircrew protective helmets and electrical sets
8. how to determine when components require adjustment, repair or replacement
9. the components to be replaced in the protective helmets and headsets, and their method of replacement
10. how to identify the components to be used for the various types of protective helmets and headsets being maintained
11. the quality control procedures to be followed during the maintenance procedures
12. how to conduct any necessary checks to ensure that the equipment functions to specification
13. the problems that can occur with the maintenance of the protective helmets and headsets and how these can be overcome
14. the importance of the correct securing and locking of connections
15. the importance of tool control and the organisational tool control procedures
16. the tools and equipment used in the maintenance activities and their calibration/care and control procedures
17. 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
18. the importance of ensuring that when the maintenance is completed the equipment is free from dirt, swarf and foreign objects
19. the disposal methods for waste and petrol, oil and lubricants (POL)
20. the problems that can occur with the maintenance procedures and the importance of informing appropriate people of defects
21. 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
22. 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 servicing and maintenance of the aircrew protective helmets and electrical headsets:

- 1.1 obtain and use the appropriate documentation (such as job instructions, servicing or maintenance schedule, specifications, material data sheets and other relevant documentation)
- 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 maintenance 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 certification/calibration date
- 1.5 obtain clearance to work on the aircraft and observe any power isolation procedures
- 1.6 use approved servicing and maintenance techniques at all times
- 1.7 return all tools and equipment to the correct location on completion of the activities

2.

Carry out all of the following repair/maintenance activities, using appropriate methods and techniques:

- 2.1 dismantling equipment to component or sub-assembly level (such as removal of oxygen mask, visor cover and fabric covers)
- 2.2 cleaning the equipment (such as visor, protective shell and headsets), using appropriate solutions
- 2.3 monitoring the condition/deterioration of components
- 2.4 replacing all damaged or defective components
- 2.5 reassembling the equipment
- 2.6 carrying out any required modifications to the equipment
- 2.7 carrying out adjustments to components and connections (such as friction settings, tuning and adjusting microphones)
- 2.8 checking equipment operation and performance
- 2.9 testing equipment in accordance with the relevant specification

3.

Carry out a thorough examination of the helmet and headset, to include checking all of the following:

- 3.1 the protective shell for damage and softness of shell
- 3.2 all protective shell screws/fasteners for security
- 3.3 visors for scratches, abrasions and cracks
- 3.4 visor hinge mechanism for corrosion, damage, security, and adjust friction

settings, as required

3.5 ear capsules for damage, wear, hardening, discoloration and security

3.6 'Mic/Tel' leads for deterioration or fraying

3.7 chin and neck strap for wear, damage, fraying and deterioration

3.8 oxygen mask hooks for damage, security and bending/distortion

3.9 electrical headsets for signs of damage and deterioration

3.10 ear pads and headbands for hardening or cracking

3.11 the ear shells move freely in their stirrups

3.12 the microphone switch moves freely, and adjustable parts move freely without undue slackness

3.13 boom microphone (if fitted) for looseness and damage

4.

Replace components, to include six of the following:

4.1 visor (clear or tinted)

4.2 pads (crown, brow or neck)

4.3 side arm (outer and inner)

4.4 elastic straps

4.5 base assembly oxygen mask hook

4.6 ear capsule tensioning webbing

4.7 strap assembly cable retaining

4.8 transducer

4.9 strap assembly (chin or neck)

4.10 microphone switch

4.11 headset electrical

4.12 microphone boom

4.13 ear capsule

4.14 earphone

4.15 down lead assembly

4.16 fabric cover

4.17 lining assembly (brow or neck)

4.18 headband

4.19 visor cover assembly

4.20 earphone shell

4.21 'Mic/Tel' lead (down lead and jack plug connector)

5.

Carry out maintenance requirements, in accordance with two of the following types of instruction:

5.1 Urgent Technical Instructions (UTI)

5.2

Routine Technical Instructions (RTI)

5.3

Maintenance Instructions (MI)

5.4 Preliminary Warning Instructions (PWI)

5.5 Serious Defect Signals

6.

Carry out maintenance work in compliance with one of the following standards:

- 6.1 Civil Aviation Authority (CAA)/European Aviation Safety Agency (EASA)
- 6.2 Ministry of Defence (MoD)
- 6.3 Military Aviation Authority (MAA)
- 6.4 Aerospace Quality Management Standards (AS)
- 6.5 Federal Aviation Authority (FAA)
- 6.6 BS, ISO or BSEN procedures
- 6.7 customer standards and requirements
- 6.8 company standards and procedures
- 6.9 manufacturers standards and procedures

7.

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

- 7.1 maintenance schedule/log
- 7.2 job cards
- 7.3 aircraft service/flight log
- 7.4 other specific recording method

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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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