

Overview

This standard identifies the competences you need to remove aircraft armament system components, in accordance with approved procedures. It covers both fixed wing and rotary winged aircraft and includes equipment and components associated with guns, missiles, rockets, bombs and other systems, as applicable to the aircraft type. You will be required to select the appropriate tools and equipment to use, based on the operations to be performed and the components to be removed. The armament components to be removed will include items such as pipework, laser guidance, weapons carriers, weapons pylons, looms, fusing units, firing units, mechanical and electrical controls, and safety devices. The removal activities will include making all necessary checks to ensure that components are removed safely and that the armament system is left in a safe condition.

Your responsibilities will require you to comply with organisational policy and procedures for the 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 ensure that all tools, equipment and materials used are correctly accounted for 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 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 armament removal techniques and procedures. You will understand the armament system and its application and will know about the components, tools and equipment used and the removal requirements, 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 working on the aircraft armament system and with its associated tools and equipment. 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. establish and where appropriate, mark component orientation for re-assembly
3. ensure that any stored energy or substances are released safely and correctly
4. remove the required components using approved tools and techniques
5. take suitable precautions to prevent damage to components, tools and equipment during removal
6. check the condition of the removed components and record those that will require replacing
7. label the removed components and store them in an appropriate location
8. store or discard the removed components in accordance with approved procedures
9. leave the aircraft and the armament system in a safe and appropriate condition, free from foreign object debris on completion of the activities
10. complete the relevant documentation, in accordance with organisational requirements

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 armament systems (such as any specific legislation, regulations/codes of practice for the activities, equipment or materials)
2. the health and safety requirements of the work area where you are carrying out the activities and the responsibility these requirements place on you
3. the isolation and lock-off procedures or permit-to-work procedure that applies
4. the hazards associated with removing aircraft armament system components and with the tools and equipment used and how to minimise them and reduce any risks
5. 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
6. the protective equipment that you need to use for both personal protection (PPE) and protection of the aircraft
7. the precautions to be taken to prevent electrostatic discharge (ESD) damage to circuits and sensitive components (such as use of earthed wrist straps)
8. what constitutes a hazardous voltage and how to recognise victims of electric shock
9. how to reduce the risks of a phase to earth shock (such as insulated tools, rubber matting and isolating transformers)
10. how to extract and use information from engineering drawings and related specifications
11. how to carry out currency/issue checks on the specifications you are working with
12. the components to be removed and their function within the particular armament system
13. the various mechanical fasteners that will be used and their method of removal (such as threaded fasteners, special securing and locking devices)
14. why securing devices need to be unlocked and labelled and the different

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methods that are used

15. the quality control procedures to be followed during the removal operations

16. procedures for ensuring that you have the correct tools, equipment, components and fasteners for the activities

17. the techniques used to remove the components from the aircraft without damage

18. methods of lifting, handling and supporting the components/equipment during the removal activities

19. why electrical bonding is critical and why it must be both mechanically and electrically secure

20. the procedure for the safe disposal of waste materials

21. how to conduct any necessary checks to ensure the system integrity, accuracy and quality of the removal

22. how to recognise removal defects (such as leaks, poor seals, misalignment, ineffective fasteners, foreign object damage or contamination)

23. the importance of ensuring that the completed removal is free from dirt, swarf and foreign object damage and of ensuring that any exposed components or pipe ends are correctly covered/protected

24. the tools and equipment used in the removal activities and their calibration/care and control procedures

25. 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

26. the problems that can occur with the removal operations and how these can be overcome

27. 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

28. the extent of your 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 removal of the aircraft armament system components:

- 1.1 obtain and use the appropriate documentation (such as job instructions, aircraft drawings, technical instructions 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 activities
- 1.4 ensure the safe isolation of equipment (such as mechanical, electricity, gas, air or fluids)
- 1.5 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
- 1.6 obtain clearance to work on the aircraft and observe all relevant isolation and safety procedures
- 1.7 carry out the removal activities, using approved techniques and procedures
- 1.8 dispose of waste items in a safe and environmentally acceptable manner
- 1.9 return all tools and equipment to the correct location on completion of the removal activities

2.

Remove components from three of the following aircraft armament systems:

- 2.1 gun
- 2.2 rockets
- 2.3 bombs and components
- 2.4 defensive aids
- 2.5 missile
- 2.6 role equipment
- 2.7 weapon release equipment
- 2.8 depth charge
- 2.9 search and rescue equipment
- 2.10 bomb fuse and components
- 2.11 bomb guidance and components
- 2.12 aircraft ammunition
- 2.13 other specific system

3.

Carry out all of the following activities, using appropriate tools and techniques:

- 3.1 disconnecting mechanical controls
- 3.2 making electrical disconnections
- 3.3 removal of earth bonding
- 3.4 covering/protecting exposed components or pipe ends

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- 3.5 use of ground support equipment
- 3.6 removing bolt securing devices (such as split pins, wire locking, lock nuts)
- 3.7 removing mechanical fasteners (such as bolts, screws, quick-release mechanisms)
- 3.8 carrying out lifting operations (manual or automated)

4.

Remove armament system components, which include five of the following:

- 4.1 pipe work
- 4.2 looms
- 4.3 firing units
- 4.4 magazines
- 4.5 laser guidance
- 4.6 weapons pylons
- 4.7 weapons carriers
- 4.8 control units
- 4.9 cylinders/actuating mechanisms
- 4.10 mechanical controls (such as plungers, springs, rollers)
- 4.11 safety devices
- 4.12 fusing units
- 4.13 electrical mechanisms (such as solenoids, indicators, motors, switches)
- 4.14 other specific components

5.

Remove components from aircraft armament systems in accordance 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 aircraft breakdown documentation
- 6.2 computer records
- 6.3 job cards
- 6.4 aircraft flight log
- 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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