

Towing, marshalling and parking aircraft

Overview

This standard identifies the competences you need to carry out aircraft handling operations on commercial, military or light aircraft, both fixed wing and rotary, in accordance with approved procedures. You will be required to select the correct tools and equipment to use, based on the handling activities to be carried out, and to check that they are in a safe and serviceable condition. You will be required to assist in manoeuvring the aircraft to the appropriate location, and to prepare the aircraft for flight operations or post-flight recovery. The handling activities will involve assisting in aircraft towing, preparation for flight, starter crew, aircraft marshalling, recovery from flight, marshalling and parking.

Your responsibilities will require you to comply with organisational policy and procedures for the aircraft handling 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 and as part of a team, communicating (where appropriate) using hand signals and other communication devices. You must demonstrate a significant personal contribution during the team activities in order to satisfy the requirements of this standard, and competence in all the areas required by the standard must be demonstrated. You will be expected to take personal responsibility for your own actions, for your contribution to the team, and for the quality and accuracy of the work that you carry out.

Your underpinning knowledge will be sufficient to provide a sound basis for your work, and will provide an informed approach to applying aircraft handling techniques and procedures. You will have an understanding of the preparations to be carried out on the aircraft prior to moving it, in adequate depth to provide a sound basis for carrying out the activities safely and correctly.

You will understand the safety precautions required when carrying out the aircraft handling operations, especially those for jet intakes and exhaust dangers. You will be required to demonstrate safe working practices throughout, and will understand your responsibility for taking the necessary safeguards to protect yourself and others in the workplace.

Notes:

Towing, marshalling and parking aircraft

This standard is designed to cover the practical experience requirements of the Airline Transport Association (ATA) Chapter 09 Towing and Taxiing **and** Chapter 10 Parking, Mooring, Storage and Return to Service

Towing, marshalling and parking aircraft

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. prepare the aircraft and work area for the handling activities to be undertaken
3. carry out the activities within the limits of your personal authority
4. carry out the activities in the specified sequence and in an agreed timescale
5. report any instances where the activities cannot be fully met or where defects are identified
6. ensure that the aircraft and work area are left in a safe and secure condition on completion of the activities

Towing, marshalling and parking aircraft

Knowledge and understanding

You need to know and understand:

1. the specific safety precautions and procedures to be observed whilst carrying out the aircraft handling operations (including 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 activities, and the responsibility these requirements place on you
3. the authorisation you require to commence work on the aircraft
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 hazards associated with towing, marshalling, parking and securing the aircraft (including airfield hazards and procedures), and how to minimise them and reduce any risk
6. the hazards associated with engine start and running and how they can be minimised
7. the importance of aircraft husbandry and of ensuring that, throughout the activity, the aircraft and area are free from foreign objects; the implications of foreign object debris (FOD) to the safety of the aircraft
8. the protective equipment that you need to use for both personal protection (PPE) and protection of the aircraft
9. the specifications used during aircraft handling and the importance of following the procedures listed in these documents
10. the process and procedures for preparing an aircraft for flight operations (including engine start and 'see off')
11. the process and procedures for recovering an aircraft from flight operations ('see in')
12. the standard signals used when marshalling and handling aircraft
13. the attachment of towing devices to the aircraft and how to identify the appropriate attachment points
14. the equipment used to tow the aircraft (such as towing vehicles, tow bars, towing cables) and how to check that they are in a safe and usable condition
15. an understanding of the minimum turning radius for the particular aircraft being handled and the ground turning techniques to be used

Towing, marshalling and parking aircraft

16. the methods of communicating with the handling team and/or flight crew using both headsets and hand signals
17. the importance of correct securing of the aircraft (using such items as wheel chocks, mooring blocks and mooring cables)
18. the need to fit blanking plugs, covers, locking/safety devices and where appropriate, cocooning materials
19. the importance of correct static grounding of the aircraft
20. the importance of tool control and company tool control procedures
21. the methods and equipment used to manoeuvre the aircraft and how to check that the equipment is in a usable condition
22. how to deal with problems with aircraft handling processes or procedures, and the importance of informing appropriate people of any defects
23. the extent of your own authority and to whom you should report if you have problems that you cannot resolve

Towing, marshalling and parking aircraft

**Scope/range related
to performance
criteria**

1. Carry out all of the following during the aircraft handling activities:
 1. ensure that airport procedures applicable to movement in restricted (such as airside) areas, including necessary security procedures, are understood and carried out
 2. ensure that appropriate authorisation to move the aircraft is obtained and that authorisations relevant to operating towing vehicles are held and valid
 3. check that the work area is free from hazards and suitably prepared for the aircraft to be moved
 4. adhere to procedures or systems in place for risk assessment, COSHH, and other relevant safety regulations and procedures to realise a safe system of work
 5. ensure that the relevant required safety procedures are implemented
 6. obtain appropriate personal protection equipment and emergency equipment, and check that it is in a usable condition
 7. obtain any required support equipment, and check that it is in a safe and useable condition
 8. use approved aircraft handling and moving techniques at all times
 9. return tools and equipment to the correct storage location on completion of the activities
 10. leave the work area and the aircraft in a safe and secure condition
2. Prepare the aircraft for towing, by carrying out five of the following:
 1. ensure that the aircraft is in safe condition to move, by checking aircraft documentation
 2. check/set brake pressure
 3. make cockpit checks and apply internal power, as required
 4. check/fit required safety locks/pins (such as landing gear, nose steering, control surface)
 5. fit the towing arm
 6. check/remove electrical earthing and chocks (where appropriate)
 7. obtain clearance for movement
 8. ensure that the aircraft is prepared in accordance with local regulations

Towing, marshalling and parking aircraft

3. Assist in three of the following aircraft handling activities:
 1. towing
 2. marshalling
 3. parking/storing
 4. mooring
 5. picketing
4. Undertake three of the following roles when moving aircraft:
 1. brake man
 2. wing tip man
 3. tractor/steering operator
 4. blade man
 5. tail safety man
 6. towing supervisor
 7. safety chock man
5. Assist in carrying out all of the following during the preparation for flight operations:
 1. removing any fitted blanks, bungs and covers
 2. removing any locking/safety devices (such as undercarriage, nose steering, control surface)
 3. carrying out cockpit checks and applying ground power
 4. carrying out engine starter crew activities (using headset operations and/or hand signals)
 5. carrying out pre-flight checks
 6. marshalling
6. Carry out all of the following during recovery from flight operations:
 1. marshalling (where applicable)
 2. fitting any blanks, bungs and covers that may be required
 3. fitting any required locking/safety devices (such as undercarriage, nose steering, control surface)
 4. parking of the aircraft (to include the use of wheel chocks, mooring blocks and where appropriate, earthing)
7. Carry out aircraft handling operations in compliance with one of the following:
 1. Civil Aviation Authority (CAA)/European Aviation Safety

Towing, marshalling and parking aircraft

- Agency (EASA)
- 2. extended range twin engined operations procedures (ETOPS) (where appropriate)
- 3. Federal Aviation Authority (FAA)
- 4. Ministry of Defence (MoD)
- 5. Military Aviation Authority (MAA)
- 6. Aerospace Quality Management Standards (AS)
- 7. specific organisation standards and procedures
- 8. aircraft manufacturer's requirements

Towing, marshalling and parking aircraft

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

Towing, marshalling and parking aircraft

Developed by	Semta
Version Number	3
Date Approved	March 2021
Indicative Review Date	March 2024
Validity	Current
Status	Original
Originating Organisation	Enginuity
Original URN	SEMAE3303
Relevant Occupations	Engineering; Engineering and manufacturing technologies; Engineer; Engineering Technicians
Suite	Aeronautical Engineering Suite 3
Keywords	engineering; aeronautical; commercial; military or light aircraft; fixed wing and rotary; tools and equipment; manoeuvring; flight operations; post-flight recovery; towing; preparation for flight; starter crew; aircraft marshalling; recovery from flight