1 Management of installations

The aviation fuel installation, comprising (but not limited to) the receipt and storage facility, apron pipeline network and stand hydrants are owned and operated by Manchester Airport Storage and Handling Company (MASHCO); a consortium made up of Shell, Air BP, Q8 and World Fuels Services (WFS).

The Operation and Management of the aviation fuel installation is carried out by North Air on behalf of MASHCO. An operations Manager is on call H24 for the fuel storage depot and the site is also manned 24/7.

2 Fuel storage, quality, and delivery

Details of fuel and availability at MA are found in the UK AIP. JET A-1 is stored at the Fuel Farm in tanks on the West Side of the airport. JET A-1 does not contain Fuel System Icing Inhibitor additives. AVGAS (100LL) is not available from fuel suppliers.

MASHCO are responsible for the quality of fuel supplied to the apron pipeline and hydrant network. At all times, fuel grade and quality must meet the specification fit for use in aircraft and in accordance with the requirements of the Air Navigation Order (ANO) and CAP748 and Joint Inspection Group (JIG) guidelines.

JET A-1 is delivered from the storage facility by pressurised hydrants at all pier-served terminal stands and most remote stands, from which a hydrant service vehicle may uplift the fuel to aircraft. Fuel is supplied to aircraft by various suppliers. Fuel may also be delivered to aircraft directly by tanker bowsers (although limited).

Any potential disruption to the normal supply of aviation fuel must be notified to the airport management immediately in writing by the quickest means.

3 Safety principles

The fuelling of aircraft will normally be carried out in the open air and is only to be carried out in Areas approved by the Airport Company.

Only personnel that have been suitably trained and assessed as competent may carry out aircraft fuelling.

Fuelling areas will be sited to avoid bringing fuelling equipment or aircraft fuel tank vents to within 15 metres of any building other than those parts constructed for the purpose of direct loading or unloading of aircraft.

Refuelling vehicles are not to approach aircraft until the aircraft engines have stopped and anti-collision lights have been switched off.

Refuelling vehicles should endeavour to be parked to enable freedom to exit the area in the event of an emergency. This is more essential for tankers.

All personnel engaged in refuelling procedures are to ensure that serviceable fire extinguishers are available.
All personnel engaged in refuelling procedures are to be aware of the method of summoning the Airport Fire Service.

Vehicles and equipment must not be parked under any part of the aircraft during refuelling, with the exception of refuelling equipment.

Replenishment of aircraft oxygen systems is not to take place when fuelling is in progress.

Refuelling should not take place when there is an electrical storm within 5km of Manchester Airport.

4 Fuelling zone procedures

During fuelling operations, air and fuel vapour are displaced from the aircraft tanks through vent points, which are usually situated at the aircraft wingtips. This presents a hazard of fuel vapour being ignited. For this reason, additional rules are required within an area known as the fuelling zone.

A fuelling zone is established when aircraft fuelling operations are in progress, extending at least 3 metres radially from the aircraft filling and venting points and from any part of the fuelling vehicle and equipment including hoses.

Requirements must be adhered to in the fuelling zone as below:

- All personnel must avoid any activity involving the risk of fuel vapour ignition. These include smoking, use of naked lights, operation of electrical systems and activity creating sparks from exposed iron or steel studs on footwear or from tools or other equipment or vehicles.
- Vehicle engines must not be left running in the fuelling zone. This includes Ground Power Units (GPU's). Hot vehicle exhausts are a major hazard and are prohibited inside the fuelling zone.
- Non-intrinsically safe equipment, including portable electronic devices (PEDs), such as mobile telephones, pagers, radios and any other electronic or electrically operated equipment are prohibited. The use of 'Flight Safe Mode' on PED's does not make the unit intrinsically safe. Therefore, these items are not to be used in the fuelling zone.
- Only authorised persons and vehicles are permitted within the fuelling zone and the number of these should be kept to a minimum.
- Airlines must ensure that passengers do not enter the fuelling zone whilst embarking or disembarking passengers. Baggage and passenger reconciliation checks must be carried out away from the fuelling zone.
- Aircraft Auxiliary Power Units (APU's), which have an exhaust efflux discharging into the fuelling zone, should, if required to be in operation during fuelling, be started before filler caps are removed or fuelling connections made. APU's must not be switched on during any refuelling operation.
- Photographic flash bulbs or electronic flash equipment must not be used within 6 metres of the fuelling equipment or any filling or venting points of the aircraft.

- The airline or aircraft operator should ensure that all personnel working on the inside of the cabin, hold or equipment compartment of the aircraft are made aware that fuelling is taking place.
- If the Fuelling Overseer considers that a hazard exists, refuelling should be stopped immediately until conditions permit resumption.
- Turnaround management by GHA must allow safe access and egress for fuelling vehicles at all times when fuelling operations take place. Blocking of safe egress routes is strictly prohibited.

5 Bonding and Grounding – Aircraft and Fuelling equipment

It is essential that aircraft, fuelling vehicles and over-wing nozzles, where applicable, should be electrically bonded together throughout fuelling operations to ensure that no difference in electrical potential exists between the units.

Bonding is to be maintained until all hoses have been disconnected or tank filler caps replaced.

6 Fuelling with passengers on board

Normally, passengers should always be disembarked prior to the commencement of aircraft fuelling. Commencement of fuelling is defined as 'connection of the bonding clip.' Completion is defined as 'when the bonding clip has been removed'.

In circumstances where it is not possible to complete fuelling without passengers on board, airline operators of fixed wing aircraft may allow passengers to embark, disembark or remain on board during fuelling operations. Airlines are required to develop their own safety procedures in such circumstances, to manage the risks associated. Suggested guidance includes the list on the following page.

- Cabin attendants, passengers and other relevant staff to be warned that fuelling will take place and that they must not smoke, operate electrical equipment or other potential sources of ignition.
- The aircraft's 'NO SMOKING' signs to be switched on together with sufficient interior lighting to enable emergency exits to be identified.
- The 'Fasten Seat Belts' sign must be switched off and passengers are to be briefed not to fasten their seatbelts.
- Provision should be made via at least two of the main passenger doors (or main passenger door plus one emergency exit when only one door is available), preferably at opposite ends of the aircraft, for safe evacuation in the event of an emergency. Throughout the fuelling operation these doors are to be constantly manned by a cabin attendant.
- Designated escape doors to be on the opposite side of the aircraft to the fuelling activity. Fuelling not to be permitted on both sides of aircraft.
- Whenever an exit with an inflatable escape slide is designated to meet the requirements in the above paragraph, the ground area beneath that exit and the slide deployment area must be kept clear of external obstructions.
- Ground servicing activities and work within the aircraft, such as catering, and cleaning must be conducted in such a manner that they do not create a hazard or obstruct aircraft exits.
- Inside the aircraft cabin the aisles, all exit areas and exit access areas must be kept clear of obstructions.
- The ability of any passenger to affect a rapid evacuation from the aircraft, most particularly those whose mobility is impaired, is to be considered.

7 Fuelling with engines running

Refuelling with engines running is only permitted in the following circumstances:

- Aircraft or helicopters engaged in casualty evacuation procedures
- Search & Rescue Helicopters
- Air Ambulances
- Military and other aircraft engaged in fire fighting

It is the responsibility of the fuel supplier to have a written agreement with the operator on procedures to be used by all parties during such an operation.

8 Fuelling and de-fuelling in hangars

Fuelling activities inside hangars are only permitted in circumstances where it is not possible for the operation to take place in the open air. Any such activity is to be risk assessed and carried out in accordance with the fuelling company's procedures.

Under no circumstances is fuelling or de-fuelling of AVGAS to take place inside any hangar or any other building.

The Airport Fire Service is to be in attendance, positioned outside the building.

9 Fuel spillages

The procedures to be used in the event of a fuel spillage are detailed in EGCC-I-AOPS-021.

10 Responsibilities

10.1 The aviation fuel installation managers are responsible for:

- Ensuring compliance with the Air Navigation Order, CAP748, Joint Inspection Group (JIG) guidelines and all other relevant statutory and regulatory requirements relating to the handling and storage of bulk aviation fuels.
- Ensuring that the grade and quality of fuel product meets the required specification at all times.
- Notifying the airport company about any potential disruption to the normal supply of aviation fuel immediately in writing by the quickest means.

10.2 The aviation fuel suppliers are responsible for:

- Ensuring compliance with the Air Navigation Order, CAP748, Joint Inspection Group (JIG) guidelines and all other relevant regulatory requirements relating to the handling of aviation fuels and the fuelling of aircraft.
- Ensuring that at all times, the fuel delivered to aircraft meets the required specification, including the grade and quality of fuel product.
- Ensuring that refuelling tanker bowsers and refuelling equipment access and exit from the aircraft stands as highlighted in the Stand Plans.
- Training and competence of refuelling operatives.
- Ensuring that all vehicle drivers possess a LGV-C or C+E driving licence.

11 Audits

Organisations that store, dispense or handle aviation fuel at MA will be subject to audits of this activity to ensure that they comply with the relevant legislative requirements. An appropriately qualified person from or on behalf of Manchester Airport will carry out this audit. The audit report will be made available to those being audited together with any recommendations of changes that may be required to procedures or equipment. In addition, audit reports may be made available to the Civil Aviation Authority or other regulatory bodies.

A reasonable time will be given to remedy any shortcomings found by the audit, but the Airport Company reserves the right to withdraw permission for the facility or fuelling activity to continue if it is found to be dangerous or if remedy to the shortcoming is not completed within the agreed reasonable time.

Consortium member companies of MASHCO carry out their own safety audit annually.

Airline customers typically undertake fuelling audits once or twice per year.