Advisory Circular

CAA-AC- AGA017C

June, 2024

APRON SAFETY PROCEDURES

1.0 PURPOSE

1.1 This Advisory Circular (AC) provides guidelines to aerodrome operators in adopting apron safety operating procedures. The procedures illustrate how safety risks can be managed and provide guidance on how airside safety can be administered within the context of a systematic and structured management approach.

1.2 This **AC** supersedes **CAA-AC-AGA017B** issued in **March, 2021**.

1.3 This AC is effective on 1st June 2024.

2.0 REFERENCES.

2.1 Civil Aviation (Aerodromes Design and Operations) Regulations.

2.2 Civil Aviation (Certification, Licensing and Registration of Aerodromes) Regulations.

3.0 APRON SAFETY MEASURES AND PROCEDURES

3.1 **Foreign Object Debris**

3.1.1 Foreign Object Debris, known as FOD, is any loose item on an aerodrome airside, which could be a danger to aircraft operations if sucked into an engine. It is essential that the airside is a clean and FOD free environment.

3.1.2 The Aerodrome operator shall develop procedures to prevent FOD damage to any aircraft or person. The procedures so developed; shall as a minimum encompass measures to:

3.1.2.1 Ensure all rubbish are collected and put into secure rubbish bins before being disposed of in an off-airside location;

3.1.2.2 Ensure any rubbish skips located on airside have a secure lid to prevent any material escaping;

3.1.2.3 Ensure building sites and cargo operations prone to producing FOD have specific procedures to contain their site;

3.1.2.4 Ensure Vehicle and equipment utilizing the airside undergo regular maintenance to ensure no loose objects that could cause FOD;

3.1.2.5 Ensure all airside operators practice good housekeeping by cleaning their designated areas regularly throughout each day.

3.1.2.6 Ensure Ground handling agents engaged in the servicing or handling of aircraft inspect the aircraft stands to ensure that no foreign objects or materials are left on the parking stand before every arrival and after every departure.

3.1.2.7 Ensure drivers inspect their vehicles to ascertain that the loads are properly secured to prevent them from falling off the vehicle.

3.2 **Procedures for pedestrians on the apron.**

3.2.1 The aerodrome operator shall develop procedures to protect the users of aprons against jet blast hazards. The procedures so developed; shall as a minimum encompass measures to:

3.2.1.1 Ensure vehicles and wheeled equipment are left properly braked to minimize the risk of movement when subjected to jet blast;

3.2.1.2 Ensure prior to engine start up, all obstacles that are likely to be struck by jet blast are cleared.

3.2.1.3 Ensure apron employees and passengers are restricted to pass behind or near an aircraft with running engines;

3.2.1.4 Ensure airlines when taking their passengers from the aircraft to the Terminal Building and vice versa are guided safely by taking the following precautions;

a) Passengers are taken into or out of the aircraft only when its engines are off power and, if applicable, propellers have stopped spinning.

b) When there is another aircraft with engines on, passengers must be led at a sufficient distance from the aircraft so as not to be exposed to jet blast or air intake area of the engines.

c) Passengers are not led to cut across the route of a moving aircraft.

d) Special case passengers are preferably not led on foot across the apron.

3.2.1.5 Ensure pedestrian use crossing markings or walk paths and always look out for traffic, and that the designated passenger route is kept free of any equipment and surface conditions kept clean and passengers are kept clear of protrusions on the aircraft, propellers and ground support equipment as well as jet blast from other aircraft.

3.3 **Safety Procedures for Personnel Working on the Apron.**

3.3.1 As earlier stated, the apron is an area of high probability of accidents. Therefore, aerodrome operators shall have procedures that ensure Occupational Health Safety of personnel working on the apron. The procedures so developed; shall as a minimum encompass measures to:

3.3.1.1 Ensure personnel are conversant with safety rules applicable to the job; first aid, location and use of firefighting equipment.

3.3.1.2 Ensure personnel wear safety protective gear appropriate to the job being performed.

3.3.1.3 Ensure personnel wear ear protection to protect against the noise level of GPU, air starter and aircraft engines.

3.4 **Low Visibility Operations**

3.4.1 During Low Visibility Operations it can be very difficult to see aircraft movements. The aerodrome operator shall develop procedures to be followed during low visibility operations. The procedures so developed; shall as a minimum include measures to:

3.4.1.1 Ensure persons without essential aircraft operational requirements are not permitted to drive on the Maneuvering Area;

3.4.1.2 Ensure aircraft owners tie down or chock their aircraft to prevent uncontrolled movement;

3.4.1.3 Ensure particular care is exercised when moving around apron areas;

3.4.1.4 Ensure any airside works or constructions are stopped and contractors including construction equipment are removed from the maneuvering area.

3.4.1.5 Ensure any blanket clearance to operate on the maneuvering area previously issued by ATC is automatically cancelled when low visibility operations become effective.

3.5 Procedures for Aircraft Refueling

3.5.1 The aerodrome operator shall provide procedures to be complied with during aircraft fueling operations. The scope of such procedures shall address the following:

3.5.1.1 Aircraft protection:

3.5.1.2 Procedures shall ensure when refueling an aircraft, the connection or disconnection of any aircraft electrical equipment, e.g. Ground Power Unit (GPUs), batteries and battery charges, are not permitted.

3.5.1.3 Procedure shall ensure the Auxiliary Power Unit (APU) are not started and/or shutdown during fueling except in an emergency.

3.5.1.4 Procedures shall ensure the aircraft is grounded before the refueling.

3.5.1.5 Fuel safety zone:

3.5.1.6 Procedures shall ensure fire hazard associated with fuel vapours are cautioned to ensure that items and processes such as; matches, open flames, welding, use of photographic flashbulb, mobile telephoning etc. are kept out of the fueling safety zone.

3.5.1.7 Procedures shall ensure fueling safety zone declared as an area extending a minimum distance of 6 meters (20fts) radius from fueling receptacles, tank vents and fueling equipment.

3.5.1.8 Procedures shall ensure equipment providing other aircraft servicing functions are positioned within a minimum distance of 3 meters (10fts) radius of aircraft fuel system vent opening.

3.5.1.9 Fuel hose safety:

3.5.1.10 Fuel spillage:

3.5.1.11 Aerodrome operators shall develop procedures to be applied in the event of a large mass of fuel spillage on apron. The procedures so developed shall as a minimum ensure:

3.5.1.12 All personnel are evacuated from the area immediately.

3.5.1.13 All available firefighting equipment is mobilized as standby protection until the airport emergency services arrive.

3.5.1.14 Movement of unauthorized personnel and equipment into the area is controlled.

3.5.1.15 As far as possible all activities inside and outside spill area are restricted to reduce the risk of ignition.

3.5.1.16 All electrical equipment in use during the fueling operations is switched off.

3.5.1.17 Normal operations are not resumed on the aircraft, or any engines started before the person in charge of emergency determines that it is safe to continue.

3.5.1.18 If fuel is spilled on any load, then such items are NOT TO BE LOADED into the aircraft.

3.5.1.19 Fueling support equipment:

3.5.1.20 An aerodrome operator shall develop procedures to guide fueling support equipment. The procedures so developed shall as a minimum ensure:

3.5.1.21 Fueling vehicles are positioned in such a way that will allow rapid removal of aircraft and servicing vehicles during emergencies.

3.5.1.22 Fuel dispensers are grounded when refueling is in process.

3.5.1.23 Vehicles are not parked under the aircraft wing tip fuel vents.

3.5.1.24 The use of metal wheeled equipment, in close proximity to the aircraft, is prohibited.

3.5.1.25 That the Ground Power Units are not operated unless they are positioned 6 meters from aircraft fueling vents and venting points.

3.5.1.26 Fueling with persons on board the aircraft:

3.5.1.27 Aerodrome operators shall develop procedures to be followed when fueling while passengers are onboard. The procedures so developed shall as a minimum ensure:

3.5.1.28 The person responsible for fueling informs crew/staff onboard and around the aircraft that fueling is about to commence and when fueling is complete.

3.5.1.29 The person responsible for fueling informs crew/staff onboard and around the aircraft should a hazardous situation arise.

3.5.1.30 Ground activities outside the aircraft and work within it, such as catering and cleaning, are conducted so that they do not create a hazard or obstruction.

3.5.1.31 Fueling aircraft are controlled by personnel of technical competency from Fuel Company or its official representative.

3.5.1.32 Aircraft are not refueled when passengers are embarking, on board or disembarking unless it is properly attended.

3.5.1.33 Aircraft evacuation

3.6 Procedures for Ground Support Equipment

3.6.1 An aerodrome operator shall develop procedures to guide handling of ground equipment used for providing support services to aircraft. The procedures so developed shall as a minimum ensure that:

3.6.1.1 Only adequately trained, qualified and authorized personnel are permitted to operate the equipment.

3.6.1.2 Equipment shall be used only for the intended purpose.

3.6.1.3 Equipment is not permitted to move across the path of taxiing aircraft or embarking and disembarking passengers, and pedestrians always have the right-of-way.

3.6.1.4 Apron equipment is positioned behind the equipment restraint line, with the parking brakes applied, prior to the arrival of the aircraft at the parking position.

3.6.1.5 Passenger loading bridges are in the fully retracted position prior to aircraft arrival.

3.6.1.6 Equipment, including passenger loading bridges shall not be moved towards the aircraft until it has come to a complete stop, parking brakes on, chocks positioned, engines shut down, anti-collision beacons switched-off, and ground/flight deck contact established.

3.6.1.7 Ground support equipment is in good mechanical condition.

3.6.1.8 Equipment, when approaching or leaving an aircraft, is driven at the established low safe speed.

3.6.1.9 Baggage/cargo must be transported on equipment specifically designed for that purpose.

3.6.1.10 Loaded transporters and dollies have the load secured from movement, by the use of locks, stops, rails or straps at ALL times, except when the load is being transferred onto or off the equipment. All locks, stops, rails and straps should be checked every time before use.

3.6.1.11 Unserviceable equipment is clearly tagged “Out of Services’ and immediately sent to the repair/maintenance department.

3.6.1.12 Motorized equipment makes a full stop as a brake check before entering the equipment restraint area and again before reaching the aircraft side.

3.6.1.13 Protective rubber bumpers on equipment, e.g. passenger steps, loading bridges, conveyor belts, catering trucks, are not compressed against the aircraft fuselage to prevent damage and allow for aircraft settling during servicing.

3.6.1.14 Before removing ground support equipment from any aircraft cabin access door, the operators are advised by cabin crew. Ground support equipment is not removed unless a safety device has been put across the door opening or the door is being closed.

3.6.1.15 When opening the gate area, equipment is positioned to allow clear movement of the aircraft.

Civil Aviation Authority