

2. Manoeuvring area vehicle driver and Radiotelephony (RTF) training

- (1) The number of drivers permitted to drive on the manoeuvring area shall be kept to the minimum necessary, and the functions they perform shall be within the following areas of responsibility:
- (i) runway inspections;
 - (ii) bird control;
 - (iii) rescue and firefighting;
 - (iv) essential maintenance and engineering;
 - (v) ATC; and
 - (vi) airline or handling agent for aircraft towing and runway crossings.

(2) Criteria

- (a) Driving personnel shall provide the aerodrome operator with a letter from their organisation that their job requires access to the manoeuvring area including the runway during operational hours.
- (b) Drivers expected to operate on the manoeuvring area of an aerodrome shall have successfully completed the airside vehicle driving training as prescribed in this part.
- (c) Drivers expected to drive on the manoeuvring area shall also obtain a period of 3 months experience in general airside driving before training to operate on the manoeuvring area including the runway.

(3) Delivery method

- (a) This training shall consist of two main components, the first comprising of two parts being the classroom theoretical part which shall include the use of prepared presentations, maps, diagrams, videos, booklets and checklists as appropriate; and the practical part as per training content prescribed in section (i).
- (b) The second component shall involve supervised practical training and visual familiarization on the aerodrome by a suitably trained person, thereafter a practical assessment shall be completed by an examiner designated by the Authority
- (c) The training shall be based on the use of a driver simulator for situational awareness training and hazard identification, under practical mentored instruction.

(4) Validity

Manoeuvring area vehicle driver and Radiotelephony (RTF) training shall valid for period of 2 years.

(5) Duration of training

Radiotelephony (RTF) training shall be covered over a minimum period of 2 days and refresher training shall be conducted over minimum of 1 day.

(6) Training content shall address the following topics:

(a) Legal requirements

- (i) ATC Rules, rights of way of aircraft ICAO Doc 4444;
- (ii) definitions of movement area, manoeuvring area, aprons, stands; and

- (iii) methods used to disseminate information regarding works in progress.

(b) Air Traffic Control

- (i) function of aerodrome control and its area of responsibility;
- (ii) function of ground movement control and its area of responsibility;
- (iii) normal and Emergency procedures used by ATC relating to aircraft;
- (iv) ATC frequencies used and normal hand over/ transfer points for vehicles;
- (v) ATC call signs, vehicle call signs, phonetic alphabet, standard phraseology;
- (vi) demarcation of responsibilities between ATC and Apron Control if applicable.

(c) Personal responsibilities

- (i) minimum medical fitness to drive (including, eyesight, colour perception and hearing);
- (ii) personal Protective Equipment (PPE) - (including, hearing, foot, high visibility clothing);
- (iii) driving standards;
- (iv) no smoking and other hazardous activities;
- (v) responsibilities of drivers with respect to avoiding collisions;
- (vi) responsibilities with respect to FOD, fuel or oil spillages; and
- (vii) responsibility with respect to escorting other vehicles on the manoeuvring area.

(d) Vehicle Standards

- (i) condition and standard to ensure the vehicle used for the purpose and task;
- (ii) requirements to display obstruction lights and company insignia, including reflective markings;
- (iii) requirements for daily vehicle inspections prior to operating on the manoeuvring area;
- (iv) attention to the display of obstruction and general lights; and
- (v) serviceability of all essential communications systems with ATC and base operations.

(e) Aerodrome layout

- (i) signs, markings and lighting used on the manoeuvring area;
- (ii) signs, markings and lighting used to protect the runway;
- (iii) description of equipment essential to air navigation such as instrument landing systems (ILS);
- (iv) description of protected zones related to ILS antenna;
- (v) description of ILS protected areas and their relation to runway-holding points;
- (vi) description of runway instrument/visual strip, cleared and graded area; and
- (vii) description of lighting used on the manoeuvring area.

(f) Hazards of manoeuvring area driving

- (i) engine suction/ingestion and blast, vortex, propellers, and helicopter operations;
 - (ii) operations in low visibility and other adverse weather conditions;
 - (iii) procedures in the event of a vehicle or radio becoming unserviceable while on the manoeuvring area;
 - (iv) right of way of aircraft, towed aircraft and rescue; and
 - (v) firefighting vehicles in an emergency.
- (g) **Emergency procedures**
 - (i) actions to be taken in the event of a vehicle accident/incident;
 - (ii) actions to be taken in the event of an aircraft accident/incident;
 - (iii) actions to be taken if foreign object debris found on runways and taxiways;
 - (iv) procedures to be used by vehicle drivers if lost or unsure of their position; and
 - (v) aerodrome emergency telephone numbers.
- (h) **Aircraft familiarisation**
 - (i) knowledge of aircraft types operating at the aerodrome;
 - (ii) knowledge of airline call signs, including insignia;
 - (iii) knowledge of aircraft terminology relating to engines, fuselage, control surfaces, undercarriage, lights, vents, etc.
- (i) **Practical training (visual familiarisation)**
 - (i) runways (including access and exit routes), holding areas, taxiways and aprons;
 - (ii) signs, surface markings and lighting associated with runways, holding positions, CAT I, II and III operations;
 - (iii) all signs, surface markings and lighting associated with taxiways;
 - (iv) markings that demarcate the boundary between aprons and manoeuvring areas;
 - (v) navigation aids such as ILS, protected area, antenna, RVR equipment and other meteorological equipment;
 - (vi) hazards of operating around aircraft landing, taking off or taxiing; and

(7) Radiotelephony (RTF) Training

- (1) The movement of vehicles on the manoeuvring area is subject to authorisation by ATC.
- (2) All vehicles that operate on the runway shall be fitted with the appropriate radio communication frequencies.
- (3) Drivers of vehicles operating on the manoeuvring area shall display a high degree of competence in their use of RTF phraseology and aviation English.

(8) Radiotelephony training shall address the topics –

- (a) **Hierarchy of message priority**

Message priorities, an understanding of distress, alerting, control and information messages.

(b) **Phonetic alphabet**

Correct pronunciation of letters, words and numbers.

(c) **Standard phraseology** –

- (i) Emphasis on the need for drivers to use standard phraseology; and
- (ii) The need for caution with certain phrases such as “cleared” and “go ahead”.

(d) **Call signs for aircraft, ATC and vehicles**

- (i) Understanding the terminology and acronyms used by ATC and pilots;
- (ii) Knowledge of airline and vehicle call signs used at the aerodrome.

(e) **Read back procedures**

The need for vehicle drivers to use standard read back, in the same manner as pilots, for instructions such as “enter/cross the runway”, and if conditional clearances are used.

(f) **Readability scale**

Understanding and use of the readability scale from 1 to 5.

(g) **Lost or uncertain of position**

Procedures for vehicle drivers lost or uncertain of their position on the manoeuvring area.

(h) **Vehicle breakdown**

Local procedure for vehicle breakdown on runways and taxiways; and procedures for notifying ATC of vehicle failure.

(i) **Radio failure**

- (i) Understanding of the local procedure if radio failure occurs while on the runway or taxiway; and
- (ii) understanding the light signals that can be used by ATC to pass instructions to vehicles.

(j) **Transmitting techniques and use of RTF**

- (i) Understanding the reasons for listening out prior to transmitting;
- (ii) use of standard phraseology and aviation English;
- (iii) words and sounds to be avoided;
- (iv) correct positioning of microphones to avoid voice distortion;
- (v) avoidance of “clipped” transmissions;
- (vi) awareness of regional accents and variations of speech; and
- (vii) speed of delivery of RTF phraseology.

(k) **Portable radios**

- (i) correct use of radios;
- (ii) effective range and battery life;

- (iii) screening/shielding effects on the aerodrome; and
- (iv) use of correct call signs, either related to a vehicle or a person.
- (l) **Safety requirements while using radios**
 - (i) Instructions regarding the use of portable radios and hand-held microphones while driving a vehicle; and
 - (ii) Instructions on the use of mobile telephones while operating airside.
- (m) **Assessments**
 - (a) The aerodrome operator or outsourced training organisation shall ensure that processes are in place to ensure that designated examiners –
 - (i) are technically competent in meeting the regulatory training standards;
 - (ii) can demonstrate they can assess candidates as competent in the prescribed training.

3. Maintenance of competence for drivers in the manoeuvring areas

- (1) In order to improve and maintain safety in the aircraft manoeuvring areas, all personnel required to drive shall be in possession of an airside vehicle operator's permit which shall display the following information –
 - (a) name of the driver;
 - (b) company name;
 - (c) driver's permit number;
 - (d) type of training provided to the driver;
 - (e) an approved ATO; and;
 - (f) competency period.
- (2) Following the initial training and issuance of the permit, all drivers of vehicles and operators of equipment shall demonstrate competence at regular periods throughout the term of the permit.
- (3) Records of competence tracking shall be kept and made available for audit purposes by the aerodrome safety management team and Authority inspectors. Templates for record of competence tracking that shall be used by the drivers of vehicles and operators of equipment are shown on table 1,2 and 3.
- (4) Failure to comply may lead to the driving permit being revoked, shall a permit be revoked, reinstatement shall only be granted following attendance on a refresher course and successful completion of the set examination.

Items A to D are required to be checked/undertaken on a 3-monthly basis

- A. Turnaround procedures (compliant with current airport safety documentation)
- B. Towing - Apron (compliant with current airport safety documentation)
- C. Radio Telephony (compliant with current airport safety documentation).
- D. Current with airside safety operations instructions.

Items E to F are required to be checked/undertaken on a 6-monthly basis

- E. Towing - Airfield (compliant with current airport safety documentation).
- F. Airfield layout (compliant with the latest changes).

Items G to I are required to be checked/undertaken on a 12-monthly basis

G. General Airside Driving (compliant with current airport safety documentation)

H. Vehicle Type Check (compliant with current airport safety documentation)

I. Table Top discussion (to include items A to I)

Table 1. Maintenance of Competence for Airside Vehicle Drivers

| Maintenance of Competence for Drivers in the Manoeuvring Area | | | | | | | | | | | | | | | |
|---------------------------------------------------------------|-----------------------|----------|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Jan-Dec | Freq | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | |
| Subject | | | | | | | | | | | | | | | |
| A | Turnaround Procedures | 3 Months | Date/Initials | | | | | | | | | | | | |
| | | | Performance condition | | | | | | | | | | | | |
| B | Towing on APRON | 3 Months | Date/Initials | | | | | | | | | | | | |
| | | | Performance condition | | | | | | | | | | | | |
| C | Radio Telephony | 3 Months | Date/Initials | | | | | | | | | | | | |
| | | | Performance condition | | | | | | | | | | | | |
| D | Currency Safety Doc | 3 Months | Date/Initials | | | | | | | | | | | | |
| | | | Performance condition | | | | | | | | | | | | |
| E | Towing on AIRFIELD | 6 Months | Date/Initials | | | | | | | | | | | | |
| | | | Performance condition | | | | | | | | | | | | |
| F | Airfield Layout | 6 Months | Date/Initials | | | | | | | | | | | | |
| | | | Performance condition | | | | | | | | | | | | |

Table 2. Maintenance of Competence for Drivers in the Manoeuvring Area

| Maintenance of Competence for Drivers in the Manoeuvring Area | | | | | | | | | | | | | | | |
|---------------------------------------------------------------|-------------------------|-----------|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Jan-Dec | Freq | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | |
| Subject | | | | | | | | | | | | | | | |
| G | General Airside Driving | 12 Months | Date/Initials | | | | | | | | | | | | |
| | | | Performance condition | | | | | | | | | | | | |
| H | Vehicle Type Check | 12 Months | Date/Initials | | | | | | | | | | | | |
| | | | Performance condition | | | | | | | | | | | | |

Table 3 Maintenance of Competence for Drivers on the Runway

| Maintenance of Competence for Drivers on the Runway | | | | | | | | | | | | | | | |
|-----------------------------------------------------|-----------------------|----------|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Jan-Dec | Freq | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | |
| Subject | | | | | | | | | | | | | | | |
| A | Turnaround Procedures | 3 Months | Date/Initials | | | | | | | | | | | | |
| | | | Performance condition | | | | | | | | | | | | |
| B | Towing APRON | 3 Months | Date/Initials | | | | | | | | | | | | |
| | | | Performance condition | | | | | | | | | | | | |
| C | Radio Telephony | 3 Months | Date/Initials | | | | | | | | | | | | |
| | | | Performance condition | | | | | | | | | | | | |

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