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CIVIL AVIATION DEPARTMENT
DIRECTOR GENERAL OF CIVIL AVIATION

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Subject: Guidelines for Demonstration of 6/24 months maintenance experience

1. Introduction.

- 1.1** CAR 66.A.20(b) 2 states that “the holder of Aircraft Maintenance Engineer license may not exercise certification privileges unless in the preceding two year period he/she has either acquired six months of maintenance experience in accordance with the privileges granted by the Aircraft Maintenance Engineer’s Licence or met the provision for the issue of appropriate privileges”.
- 1.2** CAR 145.A.35 (c) states that “the organisation shall ensure that all certifying staff and support staff are involved in at least 6 months of actual relevant aircraft or component maintenance experience in any consecutive 2-year period.

For the purpose of this paragraph “involved in actual relevant aircraft or component maintenance” means that the person has worked in an aircraft or component maintenance environment and has either exercised the privileges of the certification authorisation and/or has actually carried out maintenance on at least some of the aircraft type or aircraft group systems specified in the particular certification authorization.”

- 1.3** This circular lays down the procedure and guidelines for maintenance organisations and DGCA officers when:
- a) The maintenance organisation is establishing procedures for compliance to the requirement of having all Certifying Staff (C/S) and/or base maintenance Support Staff (S/S) involved in at least 6 months of actual relevant aircraft or component maintenance experience in any consecutive 2-year period; and
 - b) The DGCA officer is evaluating the compliance of the maintenance organisation to the requirement of having all Certifying Staff (C/S) and/or base maintenance Support Staff (S/S) involved in at least 6 months of

actual relevant aircraft or component maintenance experience in any consecutive 2-year period.

Note: Certifying staff means Aircraft, engine, component and NDT certifying staff.

- 1.4** The provisions of this circular are complimentary to the requirements of CAR-145 regulation “as amended” and on its own does not supersede or replace the associated regulatory or permits any deviations from the regulatory requirements.

2. Regulatory References:

- 2.1** Rule 61 of the Aircraft Rules, 1937
- 2.2** CAR 66
- 2.4** CAR 145

3. Procedures.

3.1 Maintenance Organisation Exposition.

The maintenance organisation, is required to detail in the MOE Chapter 3.4 (Certifying Staff and Support Staff qualification and training procedures), a procedure describing how the Certifying Staff (C/S) and Support Staff (S/S) shall demonstrate the compliance with the above requirement and how the control of this requirement is ensured.

This procedure shall be:

(a) established for :

- (i) issuing an initial individual CAR-145 C/S - S/S individual authorization;
- (ii) renewing an individual CAR-145 C/S - S/S individual authorisation.

(b) met by any holder of a CAR-145 C/S - S/S individual authorisation issued under any rating, as applicable depending on the scope of approval held by the maintenance organisation and in particular for:

- (i) A rating (A1, A2, A3 or A4), Aircraft certifying staff and/or support staff;
- (ii) C rating (from C1 to C22), Components certifying staff;
- (iii) B rating (B1, B2 or B3), Engines, APU certifying staff;
- (iv) D1 rating (any NDT method), specialised services certifying staff.

(c) Compliant with the duration and nature of experience criteria detailed below.

3.2 Definition of experience.

The 6 months maintenance experience in 2 years shall be understood as consisting of two elements, **duration** and **nature** of the experience. The minimum to meet the requirements for these elements may vary depending on

the size and complexity of the aircraft /engine/component and type of operation and maintenance.

The experience acquired/ recorded on a specific aircraft/ component/ engine/ APU type may also be used to demonstrate having or maintaining the experience on a similar* aircraft/component/engine/APU type. When the CAR-145 AMO intends to use the privilege of “similar aircraft/component/engine/APU” for the demonstration of the 6/24 months requirement, the MOE chapter 3.4 shall include, as applicable, definitions of similar aircraft/ engines/ components/ APUs types relevant to the scope of work held by the maintenance organization. The experience shall be gained in a CAR 145 AMO.

***NOTE:** *Two aircraft can be considered as “similar” when they have similar technology, construction and comparable systems, which means equally equipped with the following (as applicable to the licence category):*

- *Propulsion systems (piston, turboprop, turbofan, turboshaft, jet-engine or push propellers); and*
- *Flight control systems (only mechanical controls, hydromechanically powered controls or electromechanically powered controls); and*
- *Avionic systems (analogue systems or digital systems); and*
- *Structure (manufactured of metal, composite or wood).*

3.3 Duration.

C/S and/ or S/S shall demonstrate to have acquired within a maintenance organisation, in any consecutive 2-year period:

- (i) 6 months working with the same maintenance organisation; or
- (ii) 6 months split up into different blocks, working within the same or in different maintenance organisations.

3.4 Nature.

C/S and/or S/S shall demonstrate maintenance **activity** performed (and/or supervised and/or released to service), within an approved maintenance organization, on a comprehensive combination of different **tasks types** (i.e. servicing, inspection, troubleshooting, repairing, modifying, removal/installation, etc.).

3.5 Acceptable experience.

3.5.1. Duration.

A recording of a total of 180 tasks at different dates in the 2 years period would be the minimum expected record to demonstrate the “duration” requirement. The 180 tasks may be replaced by a record of 100 working days of maintenance

experience in accordance with the privileges. In this case each recorded day is intended to be a full working day, which for example means for base maintenance activity around 7/8 working hours per day. The duration should be recorded in days or half-days.

Note: In case same task is carried out on different dates, all such tasks may be considered towards fulfilling the total of 180 tasks as given above.

A person may have at the same time one or more CAR-145 C/S - S/S individual authorisation (i.e. being B1 aircraft C/S on 3 different A/C types, or being at the same time C6 and C14 C/S on different components P/N, etc.). He/she will have to record a minimum of 180 tasks (or 100 working days), regardless the number/types of CAR-145 C/S - S/S individual authorisation hold.

For any Ax, Bx, Cx and D1 rating, a maximum of 20% of the required experience duration, may be replaced by the following activities when relevant to the scope of the CAR Part 145 C/S - S/S individual authorisation:

- (i) Maintenance training as an instructor/ assessor;
- (ii) Maintenance technical support/ engineering;
- (iii) Maintenance management/ planning.

Having recorded 180 tasks or 100 days only during the first year of the 2-year period cannot be considered as acceptable. The experience shall be spread over the period to avoid a too long interval without activity.

In order to demonstrate compliance of the above requirements, the maintenance organisation's quality system should issue a document or have an electronic system in place (refer to para 4.1) where the **number of performed tasks (or working days)** shall be summarised and recorded for each C/S and/or S/S.

3.5.2 Nature.

The activities considered relevant for maintenance experience, as applicable to the CAR-145 C/S - S/S individual authorisation, are functional/operational test, service and ground handling, removal/installation, minimum equipment list, trouble shooting, modification, repair and inspection.

The tasks recorded need to be representative of the nature of the experience by:

- (i) being related to a combination of activities which is appropriate to the individual authorisation held currently (i.e. only records of service and ground handling for an aircraft B1 C/S is not acceptable, etc.)
- (ii) being representative of each of the CAR-145 C/S - S/S individual authorisation held currently according to the criteria stated in the following para.

- (iii) being not limited to simple tasks (i.e. a bulb replacement for an aircraft B2 C/S or wheel exchange for an aircraft B1 C/S, etc.). In addition, having recorded a majority of identical tasks or tasks not covering the overall individual authorisation privileges cannot be considered as acceptable. For instance, a Component C/S authorised to release under the C14 rating wheels, brakes and landing gears, should demonstrate experience on wheels, brakes and landing gears to keep the full C14 scope of authorization.

In order to demonstrate compliance of the above requirements, the maintenance organisation's quality system should issue a document or have an electronic system in place (refer to para 4.1) where the type of activity/ tasks shall be summarised and recorded for each C/S and/or S/S.

3.5.3 Aircraft Certifying Staff and/or Support Staff

The following specific criteria, shall be considered to identify an acceptable "nature of experience":

- (i) For category A, the experience shall include exercising the privileges, by means of performing tasks related to the authorisation (held currently or intended to be granted) on at least one aircraft type for each subcategory (i.e. A1, A2, A3, A4). This means tasks as mentioned in AMC 145.A.30(g), including servicing, component changes and simple defect rectifications;
- (ii) For category B1, B2 and B3, for every aircraft type rating included in the authorisation (holds or intended to be granted), the experience shall be on that particular aircraft or on a "similar aircraft" within the same subcategory (i.e. B1.1, B1.2, B1.3, B1.4);
- (iii) In order to ensure the experience is representative of the B2 qualification when granting an initial authorization to B2 category, only the avionics/electrical tasks that cannot be done by a B1 (e.g replacing bulbs and lights) should be recorded as B2;
- (iv) For category C, the experience shall cover at least one of the aircraft type endorsed in the authorisation (holds or intended to be granted);
- (v) For a combination of categories (i.e. B1.1 + B2, B1.1 + C, etc.), the experience shall include some activities in each category (holds or intended to be granted);
- (vi) When the organisation is using the privilege of "similar aircraft" as described in para 3.2 of this AAC, a minimum of 30% of the experience duration (tasks or working days, as applicable) needs to be recorded for each group of similar aircraft identified in the MOE 3.4.

3.5.4. Components, engines, specialised services certifying staff.

The following specific criteria, shall be taken into account, to identify an acceptable nature of experience:

- (i) Cx rating (from C1 to C22), Components certifying staff: the experience shall include exercising the privileges, by means of performing tasks or exercising the certification privileges of the authorization on each of the C rating authorised/ intended to be authorized as detailed in Subpart C of CAR 66;
- (ii) Bx rating (B1, B2 or B3), Engines certifying staff: the experience shall include exercising the privileges, by means of performing tasks or exercising the certification privileges of the authorization on each of the B rating authorised/intended to be authorized as detailed in Subpart C of CAR 66;
- (iii) D1 rating (any NDT method), Specialised services certifying staff: the experience shall include exercising the privileges, by means of performing tasks or exercising the certification privileges of the authorization on each of the NDT method authorised/ intended to be authorized as detailed in AAC 2 of 2017.
- (iv) When the organisation is using the privilege of “similar component/ Engine/ APU” as described in para 3.2 of this AAC, a minimum of 30% of the experience duration (tasks or working days as applicable) needs to be recorded for each group of similar component/ engine/ APU identified in the MOE 3.4.

3.6. Credit of experience.

For an initial CAR 145 C/S - S/S individual authorisation, the following credit of experience requirements may be considered:

- (i) For Ax rating C/S and S/S: having passed a type training (theoretical and practical) in an approved CAR 147 organisation within the year preceding the issue of the CAR 145 C/S-S/S individual authorisation supersedes the need for demonstration of 6/24 months maintenance experience on the specific aircraft type plus any other similar aircraft;
- (ii) For Cx rating C/S - S/S: having passed a relevant component training within the year preceding the issue of the CAR 145 C/S individual authorisation supersedes the need for Demonstration of 6/24 months maintenance experience for this particular component or a component from the same family and same technology;
- (iii) For Bx rating CS - S/S: having passed a relevant engine/ APU training within the year preceding the issue or of the CAR 145 C/S individual authorisation supersedes the need for demonstration of 6/24 months maintenance

experience for this particular engine/APU or an engine/APU from the same family and same technology;

- (iv) For D1 rating C/S: having passed a training and examination for an NDT method, within the year preceding the issue of the CAR 145 C/S individual authorisation supersedes the need, for demonstration of 6/24 months maintenance experience for this particular method to be added to the CAR 145 C/S individual authorisation.

3.7. Lack of recent experience demonstration/ record.

In the case it is not possible to demonstrate by records the duration and/or nature of experience according to the criteria established in this AAC, the CAR 145 C/S - S/S individual authorisation cannot be granted or renewed, unless the candidate C/S and/or S/S:

- (a) Acquires the missing elements of duration (i.e. missing number or tasks or missing days) and/or nature (i.e. missing T/S or MEL tasks for a B1 aircraft maintenance certifying staff, missing tasks on landing gears maintenance for C14 C/S, etc.) of experience. If the CAR 145 AMO is unable to provide this possibility due to missing workload/activity, it may be acceptable that the person completes such missing elements. The missing elements may be completed by the CAR-145 AMO issuing/ renewing the CAR 145 C/S - S/S individual authorisation or at another CAR 145 AMO;
- (b) Attends a complete aircraft type training or component/ engine/APU training according to the previous para 3.6 "Credit of experience. However, in the case of the renewal of the CAR 145 C/S - S/S individual authorisation, this option cannot be used as a standard means to replace experience demonstration but should only be used under extraordinary circumstances such as "a person coming from a period of inactivity", "a maintenance organisation having no maintenance workload for a period of time, etc.". In fact, the preferred solution in case of lack of recent experience should always be to acquire the missing part according to the previous point (a);
- (c) Limited to the case of an Ax rated maintenance organisation, with a scope of work limited to minor line maintenance such as for example transit, daily, weekly. Depending from the amount of activity carried out by the maintenance organisation, it may be difficult for each of the line maintenance C/S to demonstrate the necessary "nature" of experience covering the full privileges. In such case it may be accepted, that the CAR-145 C/S individual authorisation is issued or renewed as applicable, introducing limitations relevant to the missing nature of experience (i.e. authorisation excluding defects rectification, etc.). Such limitation may be removed by complying with the point (a) or (b) above, as necessary.

When all the C/S available for a certain aircraft type are endorsed with limitations in the CAR 145 C/S individual authorisation, the maintenance organisation is responsible for analysing the possible impact on the scope of approval and for continued compliance with CAR 145.

4. Maintenance experience records.

4.1. Individual logbook.

Rule 67AA of the Aircraft Rules, 1937 (Log Books of Aircraft Maintenance Personnel) requires that every person holding an Aircraft Maintenance Engineer's Licence or in the process of qualifying for such a licence under these rules shall maintain a personal log book, in the form and manner as specified by the Director General and record aircraft maintenance work carried out or supervised by him in such log book.

The compliance of the 6/24 months maintenance experience requirement shall be documented in an appropriate manner to demonstrate that both the "duration" and "nature of experience" meet the required standard.

A standard template for recording the maintenance experience is provided in CAR 66 (DGCA INDIA, CA Form 19-10 - Format of Aircraft Maintenance Engineer Work Record / Log Book) which is available on DGCA website. The format of recording of experience may be documented in the Exposition.

The experience may be recorded/ documented in any other individual log book or recording system (which may be an automated one).

When the maintenance organisation is able to develop an automated system, the automatically generated logbook needs to contain the same level of information, either:

- (i) directly in the logbook printout, or;
- (ii) indirectly by retrievable information (e.g. to be found in the work packages referred in the logbook itself).

Sd/-
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