



GOVERNMENT OF INDIA

OFFICE OF THE DIRECTOR GENERAL OF CIVIL AVIATION

TECHNICAL CENTRE, OPP. SAFDARJUNG AIRPORT, NEW DELHI-110 003

CIVIL AVIATION REQUIREMENTS

SECTION 2 – AIRWORTHINESS

SERIES 'L' PART V

20th JANUARY, 1992

EFFECTIVE: FORTHWITH

Subject : Certification privileges of Aircraft Maintenance Engineers.

1. Aircraft Rule 61 details the procedure for grant of Aircraft Maintenance Engineers licence, its validity and procedure for renewal. The licences issued under this rule are valid for the particular type of aircraft, engines and equipment endorsed on the licence. Aircraft Maintenance Engineers from time to time get additional endorsements on their licences after acquiring experience and fulfilling the conditions mentioned in the said rule. The licences are renewed subject to the condition that the Aircraft Maintenance Engineer has been engaged in aircraft industry in the capacity of either Aircraft Maintenance Engineer or in a supervisory capacity including imparting of training to AMEs. "Open" licences may also be obtained which cover a class of aircraft upto a certain weight category as detailed in CAR Series 'L', Part VI. This CAR is being issued to detail the certification privileges of the AME and also the circumstances under which the privileges of such endorsement could be exercised by the AMEs.
2. DEFINITIONS:
 - 2.1 **Assembly** is that the items are fitted, assembled, attached, installed, connected, secured or adjusted in the approved manner.
 - 2.2 **Avionics System** includes instrument system, electrical and radio system of Airbus A320 aircraft and any other aircraft to be notified separately.
 - 2.3 **Condition** is the physical state of an item.
 - 2.4 **Functioning** is the operation in the approved manner.
 - 2.5 **Human performance** : Human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations .
 - 2.6 **Mandatory Inspection** is any inspection classified as mandatory by DGCA/ Manufacturer, where the inspection itself is the work.
 - 2.7 **Overhaul** is major work operation which involves dismantling and complete testing to specification and renewal of operation life.
 - 2.8 **Modification** is a change made to a type certificated aircraft including its engines, propellers, accessories, equipment, radio equipment and their installation.
 - 2.9 **Problematic use of substances** : The use of one or more psychoactive substances by aviation personnel in a way that :
 - (a) Constitutes a direct hazard to the user or endangers the life , health or welfare of others : and /or
 - (b) Causes or worsens an occupational , social ,mental or physical problem or disorder
 - 2.10 **Psychoactive substances** : Alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants ,hallucinogens, and volatile solvents,whereas coffee and tobacco are excluded.

2.11**Repair** :The restoration of an Aeronautical product to an airworthy condition to ensure that the aircraft continues to comply with the design aspects of the appropriate airworthiness requirements used for the issuance of the Type Certificate for the respective aircraft type , after it has been damaged or subjected to wear .

(a) **Major Repair** means a design change which is intended to restore an aeronautical product to an airworthy condition

(i) When the damage or wear being repaired are restored to airworthiness condition might appreciably affect the weight , balance , structural strength , performance , power plant operation , flight characteristics , or other qualities affecting airworthiness or environmental characteristics or

(ii) that will be embodied in the product using non standard practices

(b) **Minor Repair** means a repair other than a major repair.

2.12 **Replacement** is a work operation which involves the removal and replacement of the same part or the substitution of an approved alternative part.

2.13 **Scheduled Maintenance Inspection** is any inspection including test required by the approved maintenance schedule.

3. Whenever work is carried out on an aircraft, it is the duty of all persons to consider the effect such work may have, directly or indirectly on items which are the responsibility of other such persons. In all such cases where an overlap of responsibility occurs, the person primarily responsible for the item must involve all other trade disciplines affected. Certificates of Maintenance/ Flight Release must be issued by all concerned, each assuming responsibility for those aspects of the work for which the licence holder is entitled to assume responsibility.

4. A Certificate of Maintenance/ Flight Release shall only be issued for a particular overhaul, repair, replacement, modification, mandatory inspection or scheduled maintenance inspection when the signatory is (signatories are) satisfied that the work has been properly carried out, having due regard to the use of:-

a) up-to-date instructions including manuals, drawings, specifications, DGCA mandatory modifications/ inspections and firms procedures,

b) recommended tooling and test equipment which currently calibrated where applicable, and

c) a working environment appropriate to the work being carried out.

4.1 **Prohibition on consumption of intoxicating and psychoactive substances**

4.1.1 No person acting as , or carried in aircraft for the purpose of acting as, engineer shall have taken or used any alcoholic drink, sedative, narcotic or stimulant drug or preparation within twelve hours of the commencement of the flight or take or use any such preparation in the course of flight or take or use any such preparation in the course of flight , and no such person shall , while so acting or carried , be in a state of intoxication or have detectable blood alcohol what so ever in his breath, urine or blood alcohol analysis or in a state in which by reason of his having taken any alcoholic, sedative , narcotic or stimulant drug or preparation , his capacity so to act is impaired.

4.1.2 The licence holders shall not exercise the privileges of their licences and related ratings while under the influence of any psychoactive substance, which might render them unable to safely and properly exercise the privileges of the licences and ratings .

4.1.3 The licence holder shall not engage in any problematic use of substances

5. The privileges of AME Licences shall be exercised only :

(a) In respect of such operations and such aircraft as are entered on his licence in their entirety either specifically or under broad category.

(b) In respect of such operations and such air frames, power plants, aircraft systems including electrical, instrument and radio system and components as are entered on his licence.

(c) Provided he has familiarised himself with all pertinent and current information relating to the airworthiness of a particular type of aircraft, air frame, power plant, aircraft system including electrical, instrument and radio system or components which he certifies as

airworthy, after maintenance (overhaul, repair and/or modification).

(d) On condition that within the preceding 24 months he has exercised the appropriate privileges of Aircraft Maintenance Engineers Licence for not less than six months.

(e) With due consideration of airworthiness and safety of aircraft in operation, with immediate effect no person holding an 'open' rating endorsement on the AME licences shall exercise the privileges of that rating on any aircraft unless he has familiarised himself with the construction and maintenance (including overhaul where necessary) for a minimum period of three months before exercising the privileges.

6. Certification privileges of Aircraft Maintenance Engineers' licence:

6.1 A rating in Category 'A' entitles the holder certify aircraft, (excluding engines) of the types included in the Rating, in respect of :

- 1) Certification of fitness for flight (issue of flight release) of an aircraft for which a certificate of airworthiness is about to be issued.
- 2) Certification as to the safety for flight of public transport aircraft.
- 3) Certification in the log book of work done under approved maintenance schedules.
- 4) Certification in the log book of repairs, approved minor repairs.
- 5) Certification in the log book of modifications approved as minor modifications.
- 6) Certification in the log book of replacement of approved components and parts.

6.1.1 For Certification of repair, replacement, modification, mandatory inspection and scheduled maintenance inspection the holder of the licence is responsible for condition, assembly and function of all parts of the aeroplane of all parts and systems, (other than those which are the responsibility of other AMEs as shown in this CAR) provide the work doesnot involve the following:-

- (a) Bolted joints requiring special techniques.
- (b) Complete riveted joints in primary structures.

- (c) Complete glued joints in primary structures.
 - (d) Bonded assemblies in primary structures.
 - (e) Fibre reinforced plastic/epoxy primary structures.
 - (f) Welded and brazed joints.
 - (g) Cotton, linen, polyester and glass fibre fabric covering of a complete fuselage or aerofoil.
 - (h) The disturbing of individual parts of units which are supplied as bench tested units, except for the replacement or adjustment of items normally replaceable or adjustable in service where subsequent functioning may be proved without the use of test apparatus additional to the test apparatus used for normal functioning check.
- 6.1.2 The holder of Category 'A' licence for light aircraft is entitled to issue Certificate of Maintenance/ Flight Release in respect of instrument, electrical, autopilot.
- 6.1.3 The holder of Category 'A' licence for heavy aircraft is not entitled to issue Certificate of Maintenance/Flight Release in respect of instrument, electrical, autopilot and radio systems for which separate licence in Category 'E', 'I', 'R' and 'V' (as applicable) will be required.
- 6.2 A rating in Category 'B' entitles the holder certify aircraft (excluding engines) of the types included in the Rating, in respect of :
- 1) Certification in the log book of aircraft after overhaul, except that the overhaul, repair or modification of the engine(s), instruments, autopilots, variable pitch propellers, or electrical equipment shall have been previously certified by a firm approved for the purpose or by an Aircraft Maintenance Engineer appropriately licenced.
 - 2) Certification in the log book of approved repairs.
 - 3) Certification in the log book of approved modifications.
 - 4) Certification in the log book of the replacement of approved components and parts.
 - 5) Certification of manufacture of simple parts from approved materials using approved drawing design unless

6.2.1 For Certification of overhaul, repair, replacement, modification, mandatory inspection and scheduled maintenance inspection the holder of the licence is responsible for condition, assembly and function of all parts of the aeroplane (provided the work doesnot involve the making of the components or parts) other than those which are the responsibility of other AMEs as shown in this CAR.

(a) Engine mounting structures and cowlings

(b) Engine Controls

(c) Engine fuel, oil and coolant systems } except for
 (d) Engine fire extinguishing systems } those parts
 (e) Engine fluid de-icing systems } which form part
 } or are attached
 } to the engine.

6.2.3 The licence in Category 'B' will cover only light aircraft.

- 1) Certification as to fitness for flight of engines, including propellers fitted in an aircraft for which a Certificate of Airworthiness is about to be issued.

2) Certification as to the safety for flight of engines including propellers fitted in public transport aircraft.

3) Certification in the log book of work done under approved maintenance schedules.

4) Certification in the log book of the embodiment of approved modifications and the replacement of approved components and parts.

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devices which are concerned with their operation (other than those which are the responsibility of other AMEs as shown in this CAR) provided the work does not involve the following:-

- (a) Dismantling of a piston engine other than to obtain access to piston/cylinder assemblies.
- (b) Dismantling of main casings or main rotating assemblies of a turbine engine.
- (c) The removal or dismantling of reduction gears, except that when the reduction gear is so fitted that its removal is necessary for carrying out inspections after suspected shock loadings.
- (d) Propeller balancing, except those propellers which require check balancing in accordance with the aircraft maintenance manual, and provided suitable training on the balancing equipment has been received.
- (e) Welded and brazed joints.
- (f) The disturbing of individual parts of units which are supplied as bench tested units, except for the replacement or adjustment of items normally replaceable or adjustable in service where subsequent functioning may be proved without the use of test apparatus additional to the test apparatus used for normal functioning check.

Note : Boroscope inspection of engines **shall not be** carried out by Category 'C' licence holder. Boroscope inspection of engines shall be carried out by persons specifically approved. However, in exigencies, at out stations where the services of an approved person is not available, category 'C' Licence holder with the appropriate ratings may carry out boroscope inspection after obtaining prior approval of the nearest Airworthiness office.

6.4 A rating in Category 'D' entitles the holder certify engines of the types included in the Rating, in respect of :

- 1) Certification in the log book of engines after overhaul.
- 2) Certification in the log book of approved repairs.
- 3) Certification in the log book of approved modifications.
- 4) Certification in the log book of the replacement of approved components and parts.
- 5) Certification of manufacture of simple parts from approved materials using approved drawing design unless it is stated in the licence that this duty is excluded.

6.4.1 For Certification of overhaul, repair, replacement, modification, mandatory inspection, the holder of the licence is responsible for condition, assembly and functioning of the engine(s) in so far as test bed performance is concerned/ functioning in so far as an

installed engine is concerned in conjunction with a holder of Category 'C' licence.

- 6.4.2 The holder of licence in Category 'D' may issue Certificate of Maintenance relating to all aspects of overhaul, repair, replacement, modification and mandatory inspection of components and parts of the engine only (excluding overhaul, repair, replacement, modification and mandatory inspection of ignition apparatus, instrument equipment and electrical equipment) provided that the work does not involve the making of components or parts.

- 6.5 A rating in Category 'E' entitles the holder to certify electrical system installed on heavy aircraft included in Rating, in respect of :

Certification in the logbook in respect of minor repair, replacement, minor modification, mandatory inspection and scheduled maintenance inspection of an aircraft electrical system.

- 6.6 A rating in Category 'I' entitles the holder to certify Instruments installed on heavy aircraft included in the Rating, in respect of :

Certification in the logbook in respect of minor repair, replacement, minor modification, mandatory inspection and scheduled maintenance inspection of an aircraft instrument system.

- 6.7 A rating in Category 'R' entitles the holder to certify Radio Communication, navigation and Radar equipment installed on aircraft of the types included in the Rating, in respect of:

Certification in the logbook in respect of minor repair, replacement, minor modification, mandatory inspection and scheduled maintenance inspection of an aircraft radio communication, navigation and radar equipment.

- 6.8 A rating in Category 'V' entitles the holder to certify Avionics system installed on the type of aircraft included in the Rating, in respect of :

Certification in the logbook in respect of minor repair, replacement, minor modification, mandatory inspection and scheduled maintenance inspection of an aircraft electrical, instrument, radio communication, navigation and radar system and also where avionics system is interfused with Airframe and Engines in collaboration with an AME in Category 'A' and 'C'.

- 6.9 A rating in Category 'X' entitles the holder certify instruments and accessories of the types included in the Rating, in respect of :

Certification in the log book of the overhaul, repair, modification, test and installation of autopilot (specifically endorsed)/ electrical system/ Instrument system/ Radio equipment/ Variable Pitch propeller and of replacements thereto installed on light aircraft.

- 6.9.1 The person holding licence in Category 'X' (Radio Equipment) on a particular Radio Equipment on any aircraft can carry out Final Test Data (FTD)/ Bench Check of the same equipment installed on a different type of aircraft.

7. Certification as far as installation of ignition apparatus installed on light aircraft may be done either by Category 'C' licence or Category 'X' (Electrical System) licence holder who have acquired specific experience. However the overhaul of ignition equipment will be certified by Category 'X' licence engineer holding electrical licence.

Note: For AME licence holders in Category 'X' to cover Ignition Apparatus issued prior to the revised Aircraft Rule 61 published vide GSR No. 196 (E) dated 1st April '1991, will be endorsed in the new format with a note :- "Also valid for Ignition Apparatus."

8. Certification of Remote reading Compass will be certified by persons having Category 'I' or 'R' covering instrument systems or radio equipment having RR Compass endorsed on the licence.

Note: For AME licence holders in Category 'X' to cover RR/DR Compass issued prior to the revised Aircraft Rule 61 published vide GSR No. 196 (E) dated 1st April '1991, will be endorsed in the new format with a note :- "Also valid for RR/DR Compass."

9. Certification of Direct Reading Compass will be certified by person holding licence in any Category having DR Compass endorsed on the licence.

10. In case where a person is not able to meet the above requirements of paragraph 5(d) and 5(e) he can exercise the privileges only after satisfying the following :

- (i) He should work under another appropriately licensed AME who meets the requirements of the above paragraphs for a minimum period of three months.
- (ii) Or he should undergo an oral check with the regional airworthiness office and demonstrate his knowledge and familiarity with the structural details and

maintenance schedules relating to his type of aircraft, engine, aircraft components and/or system (Electrical, Instrument and Radio system).

11. Persons in the following trades will be deemed to be engaged in aircraft certification and meeting the requirements of sub-para (d) and (e) of para 5 for the purpose of exercising the privileges of the licence endorsed on their licence:
- (i) Aircraft Maintenance Engineers engaged in certification of aircraft endorsed on their licence either in line maintenance or overhaul or in major maintenance as an inspector or as a supervisory personnel incharge.
 - (ii) Persons employed in the Quality Control organisation of an airline/flying club/State Govt./Non- Scheduled operator operating the type of aircraft endorsed on their licence.
 - (iii) Persons employed in the Quality Control Organisation/Production Division of manufacturers manufacturing the type of aircraft, aircraft equipment and aircraft components for civil use endorsed on their licence.
 - (iv) Persons employed in training institutions as Instructors Incharge imparting training on the type of aircraft, aircraft engines, item of equipment endorsed on their licence.
 - (v) Persons having undergone approved refresher courses run by approved training schools.

12. METHOD OF CERTIFICATION:

All certifications by AMEs shall be made in the relevant documents such as log books, flight release, schedules and various stages in indelible pencil or ink. All entries must be made within 48 hours of the completion of work. In case an AME is on outstation duty QCM/Dy. QCM may make such log book entries on behalf of the AMEs provided the AME has certified the work on appropriate procedure sheet/ schedule. Such authorisation of personnel and procedure of making entries by persons other than those who have performed the work shall be documented in the Quality Control Manual and approved by the DGCA.

Failure on the part of an AME to make log books entries in the stipulated time and manner prescribed above will be deemed as 'violation' of relevant aircraft rule and liable for appropriate disciplinary action. Quality Control Managers/Chief Engineers of approved organisations should ensure that these instructions are complied with by regular scrutiny of log books/procedure sheets/schedules etc.

13. INTIMATION TO REGIONAL AIRWORTHINESS OFFICE :

Where an AME not meeting the requirements mentioned in para 5(d) wishes to exercise the privileges, he may intimate the regional airworthiness office and also the method he would adopt to comply with the requirements. The intimation may be on the form given as Appendix.

Sd/-
(S. L. Srivastava)
Deputy Director General of Civil Aviation
for Director General of Civil Aviation

APPENDIX

INTIMATION/REQUEST FOR EXERCISING PRIVILEGES OF AME LICENCE
WHICH DO NOT MEET REQUIREMENTS OF PARA 2.

1. Name of AME

(a) Licence No.

(b) Endorsement

Type of Aircraft

Cat. A

Cat. B

Cat. C

Cat. D

Cat. E

Cat. I

Cat. R

Cat. V

Cat. X

2. Present Organisation where the AME is working :

3. Last Organisation where the AME worked:

4. Type of Aircraft, Engine, equipment, for which the privilege is to be exercised :

5. Name and Licence No. of AME under whom three months experience is to be claimed :

6. I request for an oral check.

Date : _____

Name & Signature _____
of AME

Note : Delete whichever is not applicable.

-- END --