

**DEPARTMENT OF CIVIL AVIATION
MALAYSIA
AIRWORTHINESS NOTICE**

No: 10	Issue: 5	Page: 1
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Date: 1 July 1997

AIRCRAFT MAINTENANCE ENGINEERS' LICENCES -TYPE RATINGS

1. Introduction

- 1.1 This Notice sets out the Type Ratings for Malaysian Aircraft Maintenance Engineers' Licences in respect of the certification of aircraft registered in Malaysia including also their engines and systems.
- 1.2 The extent to which the privileges of a type rated licence may be exercised is shown in the current issue of Airworthiness Notice No. 3 in conjunction with paragraph 3 of this Notice.
- 1.3 Provision is made for the grant of Group Type Ratings encompassing types of aeroplanes, rotorcraft, engines, equipment and systems and only selected aircraft, engines, equipment and systems are listed specifically. However, as a general policy, applications for Group Type Ratings for aeroplanes, engines, and rotorcraft will only be accepted from Aircraft Maintenance Engineers whose licences already include Type Ratings appropriate to the Group applied for.

2. General

- 2.1 Malaysian Aircraft Maintenance Engineers' licences are granted in accordance with the current Standards of the International CMI Aviation Organisation (ICAO) contained in Annex 1 to the Convention.
- 2.2 The requirement for the grant, extension and renewal of Aircraft Maintenance Engineers' Licences are also referred to in Airworthiness Notices No. 5, 6 and 7. For full understanding of the requirements, those Notices must be read in conjunction with this Notice.
- 2.3 Changes to licensing procedures which occur from time to time and which could affect the requirements are notified in Airworthiness Notices. Engineers shall take account of the appropriate Airworthiness Notices.

3. Applicability

- 3.1 Where a type of aircraft (or its engines or systems) is defined by one of the Group Type Ratings in paragraphs 5 to 9, 12 or 13 of this Notice, an engineer may exercise the certification privileges in respect of that type provided that :
 - a) he holds a valid Malaysian Type Rated Licence in the appropriate Category, endorsed with the appropriate paragraph of this Notice,
 - (b) the aircraft is on the Malaysian Register, and
 - (c) he familiarises himself with the type by attending an appropriate type course OR participate in a training program acceptable to the DCA.
- 3.2 Where a type of aircraft (or its engines or systems) is listed by name in paragraphs 5, 6, 7 and 10 of this Notice, the licence holder has certification privileges in respect of that type as qualified by paragraph 4.1 or 10 of this Notice. Where a Type Rating in a licence is unrestricted, the privileges of the licence are without restriction within that series. Where a Type Rating in a licence is restricted to a specific type or series the privileges of the licence are so restricted.

Note: It has been decided that certain types of aircraft which were first certificated after 1 January, 1972 may only be maintained by Organisations specifically approved for the purpose (refer to paragraph 14 of this Notice). Consequently, the privileges of a Type Rated licence cannot be exercised for such aircraft.

- 3.3 Where a type of aircraft (or its engines or systems) is not defined by a Group Type Rating or is not listed by name, an application for the Type Rating of a licence in respect of the type of aircraft, engines or systems, will be considered provided that :-
 - (a) an aircraft of the type is registered in Malaysia and holds a Malaysian Certificate of Airworthiness, and

(b) the aircraft is not of the type which may only be maintained by an Organisation approved specifically for the maintenance of that aircraft in accordance with the note to sub-paragraph 3.2 of this notice.

3.4 To qualify for a type rating on a specific type of aircraft (and/or its engine or systems) as per paragraphs 5,6,7, and 10, the applicant shall be required to attend the appropriate type course and/or an acceptable training program and meet the experience requirement as specified in paragraph 2.2.

4. Categories 'A' and 'C' Aeroplanes, Engines and Rotorcraft

4.1 Specific Type Ratings

4.1.1 Type Ratings, may be granted for specific aircraft and/or engines defined by, or listed in, paragraph 5, 6 or 7 of this Notice except as indicated in sub-paragraph 4.1.2 of this Notice.

4.1.2 No further Type Rated licences will be issued in Categories 'B' or 'D'. Existing holders of Type Rated licences in categories 'B' and 'D' will be allowed to exercise the associated certification privileges until further notice but applications for extensions within the Categories will not be accepted.

4.2 Group Type Ratings

4.2.1 A Group Type Rating granted in relation to paragraphs 5, 6 or 7 of this Notice includes all the aeroplanes, engines, or rotorcraft defined by that paragraph (e.g. a licence endorsed "paragraph 5.3.1" includes the group defined by sub-paragraph 5.2.1, but not 5.1, 5.2, 5.3 or 5.4. A licence endorsed "paragraph 5.3" includes the groups defined by sub-paragraphs 5.2, 5.2.1 and 5.3.1 but not 5.1 or 5.4).

4.2.2 Group Type Ratings for Categories 'A' and 'C' may be granted only for a group of aeroplanes, engines or rotorcraft defined by sub-paragraph 5.1, 5.2, 5.2.1, 5.3, 5.3.1, 5.4, 5.5, 5.5.1, 6.1, 6.2, 6.3, 6.4, 7.1 or 7.3 of this Notice.

4.2.3 The grant or extension of Group Type Ratings is at the discretion of the DCA. Evidence will be required that the experience claimed is sufficiently and broadly based to be compatible with the increased certification privileges of a Group Type Rating. In this regard, the applicant may be required to attend an interview at the DCA Airworthiness Division.

5. Category 'A' - Aeroplanes

5.0 Composite materials aeroplanes not exceeding 5700 kg MTWA.

5.1 Wooden and wood and metal aeroplanes :-

Aeroplanes where the primary structure is made from wood or combination of wood and metal.

5.2 Unpressurised metal aeroplanes not exceeding 2730 kg MTWA.

5.2.1 Unpressurised metal aeroplanes not exceeding 2730 kg MTWA with fixed landing gear only.

5.3 Unpressurised metal aeroplanes not exceeding 5700 kg MTWA.

5.3.1 Unpressurised metal aeroplanes not exceeding 5700 kg MTWA with fixed landing gear only.

5.4 Unpressurised metal aeroplanes, excluding aircraft maintained by an Organisation approved specifically for the purpose (see paragraph 14 of this Notice for list current at date of issue of this Notice).

5.5 Pressurised and unpressurised metal aeroplanes not exceeding 5700 kg MTWA.

5.5.1 Pressurised and unpressurised metal aeroplanes not exceeding 2730 kg MTWA.

5.6 Pressurised aeroplanes exceeding 5700 kg. MTWA, but excluding those aeroplanes defined in paragraph 14 of this Notice.

5.6.1 Deleted.

5.6.2 Deleted.

6. Category 'C' – Engines

- 6.1 Unsupercharged reciprocating piston engines fitted with a fixed pitch propeller.
- 6.2 Unsupercharged reciprocating piston engines fitted with a fixed or variable pitch propeller.
- 6.3 Supercharged, Turbocharged and un5upercharged reciprocating piston engines fitted with a fixed or variable pitch propeller.
- 6.3.1 Deleted.
- 6.4 Jet-Turbine engines not exceeding 22.25 kN (5000 lbf) static thrust including, where so endorsed, the associated APU installations.
- 6.5 Propeller Turbine engines fitted to aeroplanes :-

	Garrett Airesearch TPE 331)	
#	General Electric CT7)	including,
#	Pratt and Whitney PT6A)	when so
#	Allison 250)	endorsed, the
)	associated APU
)	installation

Note : For engines annotated @ or # see Airworthiness Notice No. 3, paragraph 4.4(a) and (b).

- 6.6 Jet Turbine engines, in aeroplanes, exceeding 22.25 kN (5000 lbf) static thrust including where so endorsed, the associated APU installations.

7. Categories 'A' and 'C' – Rotorcraft

- 7.1 Piston-engined rotorcraft.
- 7.2 Reserved.
- 7.3 Turbine-engined rotorcraft not exceeding 2730 kg MTWA.

Note: This sub-paragraph includes the Allison 250 and Turbomeca Arriel engines which are annotated # for the purpose of Airworthiness Notice No. 3, paragraph 6.4(a) and (b).

7.4	Aerospatiale SA330	with	Turbomeca Turmo #
	Aerospatiale AS332	with	Turbomeca Makila #
	Aerospatiale SA365	with	Turbomeca Arriel #
	Bell 212	with	Pratt and Whitney PT6T #
	Bell 222	with	AVCO Lycoming LTS 101 #
	Bell 230	with	Allison 250 #
	Bell 412	with	Pratt and Whitney PTST #
	Bell 430	with	Allison 250 #
	Erickson S-64	with	Pratt and Whitney JFTD12A @
	Sikorsky S61	with	General Electric CT58 @
	Sikorsky S76	with	Allison 250 #
	Sikorsky S76	with	Turbomeca Arriel #
	Sikorsky S76	with	Pratt and Whitney PT6B #

Note: For an engine annotated @ or #, see Airworthiness Notice No. 3, paragraph 6.4(a) and (b).

8. Category 'X' – Instruments

- (a) A rating granted to any of the sub-paragraphs 8.1 to 8.4 of this Notice includes all the instruments fitted to those aircraft in which are installed the systems defined by or listed in that sub-paragraph, excluding those aircraft listed in paragraph 10 of this Notice, and as limited by paragraph 3 of this Notice.
- (b) A rating granted in relation to sub-paragraph 8.8 of this Notice relates to Direct and Remote Reading Compasses only, but excludes compasses on those aircraft listed in paragraph 10 of this Notice, and as limited by paragraph 3 of this Notice.

Note 1: A Type Rated Licence which is valid for Category 'X' - Instruments, does not include compass compensation and adjustment unless the licence is specifically endorsed to that effect

Note 2: A Type Rated Licence which is valid for Category 'X': - Instruments includes INS, GPWS and Compass Systems unless there is a specific endorsement stating otherwise.

Note 3: Where a system is a combined flight director/automatic pilot the rating does not include items of equipment associated solely with the automatic pilot

- 8.1 General aircraft instrument systems, but excluding instruments installed on any aircraft which has a Flight Director System.
- 8.2 Reserved.
- 8.3 Reserved.
- 8.4 Flight Director Systems employing electrically driven gyroscopes (attitudes).
- 8.5 Reserved.
- 8.6 Reserved.
- 8.7 Reserved.
- 8.8 'X' - Instruments (Compasses)

Direct and Remote Reading Compasses (Includes Compass Compensation and Adjustment)

Note 1: No further Type rated Licence in Para S.8 will be issued in Category 'X' Instrument (Compasses). Existing licence holders will be allowed to exercise the associated certification privileges until further notice.

Note 2: Holders of LWTR Compass Compensation and Adjustment issued after the date of issue of this notice must have endorsement for Type Rating Para 15 in order to certify for Compass Compensation and Adjustment.

9. Category 'X' - Electrical

A rating granted in relation to any sub-paragraph of paragraph 9 of this Notice includes the generation system and the electrical installation in aircraft as defined by that sub-paragraph, as limited by paragraph 3 of this Notice.

Note 1: A Type Rated Licence which is valid for Category 'X' - Electrical does not include GPWS unless the licence is specifically endorsed to that effect

Note 2: A Type Rated Licence which is valid for Category 'X' - Electrical does not include compass compensation and adjustment unless the licence is specifically endorsed to that effect

- 9.1 Aircraft in which the main generation system output is d.c. (including alternators having a self-contained rectifier system) and in which secondary alternators having an individual power rating not exceeding 1.5 kVA may be fitted.
- 9.2 Aircraft in which the main generation system output is d.c. and which have installed "frequency wild" alternators with an individual power rating exceeding 1.5 kVA for auxiliary services.

- 9.3 Aircraft in which the main generation system output is "frequency wild" a.c. and d.c. power is supplied from transformer rectifier units.
- 9.4 Aircraft in which the main generation system output is "constant frequency" a.c. from alternators driven by constant speed drive units, or variable speed constant frequency (VSCF) generator/converter systems, and d.c. power is supplied from transformer rectifier units.

10. Combined Category 'X' - Instruments and Automatic Pilots

A rating granted in relation to paragraph 10 of this Notice includes all the general instrumentation, flight director and automatic pilot systems installed in the aircraft type endorsed in the licence, as limited by paragraph 3 of this Notice.

Note: A Type Rated Licence which is valid for Combined-Category 'X': includes INS, GPWS, compass systems and compass compensation and adjustment, unless there is a specific endorsement stating otherwise.

- 10.1.1 Reserved
- 10.1.2 Reserved
- 10.1.3 Reserved
- 10.1.4 Reserved
- 10.1.5 Reserved
- 10.1.6 Boeing 737-200

11. Reserved

12. Category 'R' - Radio

A rating granted in relation to any sub-paragraph of paragraph 12 of this Notice includes all the types of radio systems listed in that sub-paragraph, as limited by paragraph 3 of this Notice.

Note 1: A Type Rated Licence which is valid for Category 'R' - Radio does not include compass compensation and adjustment unless the licence is specifically endorsed to that effect.

Note 2: A Type Rated Licence which is valid for category 'R' - Radio does not include GPWS unless the licence is specifically endorsed to that effect.

- 12.1 Airborne Communication Systems, including VHF, HF, Voice Recorder and Audio equipment.
- 12.2 Airborne Navigation Systems, including ADF, VOR, ILS, LORAN, VLF/OMEGA, GPS (Global Positioning System) and CW Hyperbolic equipment.
- 12.3 Airborne radar systems.

13. Category 'X' - Automatic Pilots

A rating granted in relation to any sub-paragraph of paragraph 13 of this Notice includes all the automatic pilot systems listed in that sub-paragraph when installed in aircraft, excluding those aircraft listed in paragraph 10 of this Notice, and as limited by paragraph 3 of this Notice.

Note 1: A Type Rated Licence which is valid for Category 'X' - Automatic Pilots does not include compass compensation and adjustment unless the licence is specifically endorsed to that effect.

Note 2: For the purpose of licensing, automatic stabilisers are deemed to be automatic pilots.

Note 3: Automatic pilots include related systems such as yaw dampers and/or roll dampers, mach trim systems and automatic throttle systems.

- 13.1 Non-Radio-Coupled Automatic Pilots (Aeroplanes)
- 13.2 Radio-Coupled (VOR and/or LOC) Automatic Pilots (Aeroplanes)

- 13.3 ILS Coupled Automatic Pilots (Aeroplanes).
- 13.4 Non-Radio-Coupled Automatic Pilots (Rotorcraft).
- 13.5 Radio-Coupled Automatic Pilots (Rotorcraft).
14. Certain aircraft and non-rigid Airships which were first certificated after 1 January, 1972 may be maintained only by an Organisation approved specifically for the purpose. Type ratings will not be granted for these aircraft, engines and systems. The list current at the date of issue of this Notice is:-

Airbus Industrie A300B4

Airbus Industrie A320

Airbus Industrie A330

Boeing 737-300/400/500

Boeing 777-200/300

Boeing 747-200/300/400

Canadair Challenger CL600 – 2B16/2B19

DeHavilland DHC-7

DeHavilland DHC-B

Dassault Falcon 900

Fokker 50

Gulfstream G III

Gulfstream G IV

Guifstream G V

McDonnell Douglas DC10-30

Note: The combined category 'X' - Instruments/Automatic Pilots (Aeroplanes) LWTR is the licence required by engineers authorised to Issue certifications in respect of instruments or automatic pilots on which have an automatic landing capability or potential.

15. Compass Compensation and adjustment

16. Cancellation

This Notice cancels Airworthiness Notice No. 10 Issue 4 dated 1 September 1994 which should be destroyed.

DIRECTOR GENERAL
DEPARTMENT OF CIVIL AVIATION
MALAYSIA.