CIVIL AVIATION AUTHORITY, BANGLADESH

ANO (AW) PART-66 GUIDANCE DOCUMENT

Foreword

The ANO (AW) Part-66 Guidance Document has been designed to assist Aircraft Maintenance Engineers and those involved with aircraft maintenance engineering by providing detailed guidance to existing Aircraft Maintenance Engineering Licensing requirements.

This document includes details on the implementation of ANO(AW) Part-66, the conversion of ANO(AW) Part-D licences to ANO(AW) Part-66 and details on the addition of type ratings to an existing licence.

It should be noted that this document is for guidance only and the main reference points ANO (AW) Part-66 be referred to.

Civil Aviation Authority, Bangladesh
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Table of Contents

CHAPTER-1: GENERAL INFORMATION

1.1 Introduction

This guidance document explains the privileges of and the requirements for aircraft maintenance engineers' Licences and ratings together with the administrative procedures for the application and processing of the same. It also explains the conversion process of protected rights that may apply to licence holders converting from ANO(AW) Part-D Licence to ANO(AW) Part-66 Licence.

1.2 Transition to ANO(AW) Part-66 Licence

ANO(AW) Part -66 became effective from 14 July 2013, replacing ANO(AW) Part-D.

1.3 Requirements to Hold A Licence Under ANO(AW) Part-66

In order to be granted authorization to issue certificates of release to service a person must hold a valid licence issued in accordance with ANO(AW) Part-66 by the specified date given in sub section 1.2. The minimum age to hold ANO(AW) Part-66 licence is 18 years.

1.4 How to be an Aircraft Maintenance Engineer under ANO(AW) Part-66

Under ANO(AW) Part-66 an aircraft maintenance Engineer licence confirms that the person to whom it refers has met the ANO(AW) Part -66 knowledge and experience requirements for any aircraft basic category and aircraft type rating specified in the document.

The licence is divided broadly between Mechanical and Avionic trade disciplines although in view of the various technologies and combinations applicable to certain aircraft the Mechanical licence category is further subdivided. In addition there are various levels within the licence that allow the holder to be authorized to perform certain roles within line and/or base maintenance. These reflect different levels of task complexity and are supported by different standards of experience and knowledge. An individual may hold a combination of licence categories.

The categories within the aircraft maintenance Engineer licence are:

Category A Maintenance Certifying Staff
Category B1 Maintenance Certifying Staff (Mechanical)
Category B2 Maintenance Certifying Staff (Avionic)
Category B3 Maintenance Certifying Staff for piston-engine non-pressurized aeroplanes of 2000 Kg MTOM and below.
Category C Base Maintenance Certifying Staff

1.4.1 Category A

Category A is further divided into sub categories as follows:

A1 Aeroplanes Turbine
A2 Aeroplanes Piston
A3 Helicopters Turbine
A4 Helicopters Piston

The experience demonstrated on application must be relevant to the sub category of licence being applied for and must satisfy certain criteria in respect of recency. For further information on Category A please refer to Chapter 3.

1.4.2 Category B

The sub-categories for Category B Line Maintenance Certifying Technician/Base Maintenance Technician are:

B1.1 Aeroplanes Turbine
B1.2 Aeroplanes Piston
B1.3 Helicopters Turbine
B1.4 Helicopters Piston
B3 Aeroplanes Piston (non-pressurized aeroplanes of 2000 Kg MTOM and below)
B2 Avionics (no further sub division).

The wider privileges of the Category B licence and the role of the Technician in defect diagnosis and rectification and system inspection require a more detailed knowledge than that for Category A. This requires a longer period of experience and examination at a higher level than for Category A. For further information on Category B1 please refer to Chapter 4. For further information on Category B2 please refer to Chapter 6.

1.4.3 Category C

The requirements for Category C can be achieved via two routes: a graduate with a degree in Aeronautical Engineering recognized by the CAAB, or a similar discipline that is considered relevant to aircraft maintenance and that has been accepted for this purpose by the CAAB, or a B1 or B2 licence holder with a prescribed period of certifying experience. For further information on Category C please refer to Chapter 7.

1.4.4 Knowledge Requirements and Examinations

Applicants who successfully complete a ANO(AW) Part-147 approved basic training course will have received instruction in the required knowledge subjects and have passed examinations associated with that course and the respective licence category.

Unless qualifying for exemptions, all other licence applicants will have to sit the appropriate examinations. These consist of various modular examinations in multi choice question format, intended to sample the knowledge across the appropriate syllabus and an essay paper to verify the use of written English. The content of the examinations vary both in range and complexity according to the licence category being sought. For further information please refer to the relevant licence chapter in this document and also to Chapter 11.

1.5 Medical

Certifying staff must not exercise the privileges of their certification authorisation if they know or suspect that their physical or mental condition renders them unfit to exercise such privileges.

1.6 Proof of Identity

For all ANO(AW) Part-66 initial issue applications, proof of identity is required. In most cases, a passport (for foreigners), National Identify Card or birth certificate for Bangladeshi must be provided. In all cases, if the personal details provided on the licence application form conflicts with the evidence of identity or, the information provided is not clear both on the evidence of identity and application form, the application will be returned to the applicant without assessment.

1.7 Foreign Licence Holders

Foreign Licence holders who are wishing to pursue the ANO(AW) Part-66 licence must complete all relevant requirements according to the licence being applied for. Previous aircraft maintenance practical experience within an organisation approved by the local National Aviation Authority may be counted towards the total experience requirement providing acceptable evidence of authenticity of the experience is provided.

As for the foreign Licence holders who are wishing to apply for validation of their national Licence to work in a local Bangladeshi AMO, please refer to ANO(AW) Part-D, Chapter-D6. All foreign Licences will be verified by the CAAB before recognition.

1.8 ANO(AW) Part-66 Certification Privileges

Certifications are made in accordance with the procedures of the ANO(AW) Part-145 or ANO(AW)Part-M approved maintenance organisations or existing maintenance organization, within the scope of the issued authorisation(s). Certifying staff qualified in accordance with ANO(AW) Part-66 and holding a valid aircraft maintenance licence with, where applicable, the appropriate type ratings will be eligible to hold one or more of the following categories.

1.8.1 Category A

A category A certifying licence permits the holder to issue certificates of release to service following minor scheduled line maintenance and simple defect rectification within the limits of tasks specifically endorsed on the authorisation. The certification privileges are restricted to work that the authorisation holder has personally performed in a ANO(AW) Part-145 organisation.

1.8.2 Category B1

A category B1 certifying staff authorisation permits the holder to issue certificates of release to service following maintenance, including aircraft structure, power plants and mechanical and electrical systems. Authorisation to replace avionic line replaceable units requiring simple tests to prove their serviceability is also permitted.

1.8.3 Category B2

A category B2 certifying staff authorisation permits the holder to issue certificates of release to service following maintenance on avionic and electrical systems. Category B2 certifying staff can qualify for any A sub category subject to compliance with the appropriate A sub category requirements.

Note: Compass compensation and adjustment certification privileges are contained within a Category B2 AML.

1.8.3 Category B3

A category B3 certifying staff authorisation permits the holder to issue certificates of release to service following maintenance on aeroplane structure, powerplant and mechanical, electrical systems and avionic systems (only simple tests to prove their serviceability and not requiring troubleshooting).

1.8.4 Category C

A category C certifying staff authorisation permits the holder to issue certificates of release to service following base maintenance. The authorisation is valid for the aircraft, in its entirety, including all systems.

1.9 Validity and Renewal of Licences

Licence privileges relating to the maintenance and certification of aircraft above and below 5700kg MTOM may be converted to ANO(AW) Part-66 at the time of renewal or upon request by the Licence holder. CAAB Form 19 ‘ANO(AW) Part-66 Aircraft Maintenance Engineer’s Licence Initial/Variation/renewal’ – Application, should be used for the transfer of Protected Rights based upon ANO(AW) Part-D including type ratings.

An application for licence renewal cannot be made to the CAAB more than 60 days before expiry. However, if the licence holder intends to apply for conversion to ANO(AW) Part-66 licence instead of renewing the ANO(AW) Part- D licence, such applications involving conversion will be accepted before

that time and in any event should be made no later than 6 weeks before the licence is due to expire to avoid any break in continuity.

The validity period of ANO(AW) Part -66 Licence is five years.

Further information relating to the conversion can be found in Chapter 2 Conversion of Protected Rights. Protected rights are the entitlement to have ANO(AW) Part- D Licence privileges transferred to ANO(AW) Part -66 aircraft maintenance licence.

On conversion from a ANO(AW) Part- D licence, basic licence categories and aircraft type ratings held will be transferred to the ANO(AW) Part-66 Aircraft Maintenance Licence. Limitations will be applied where appropriate to the basic licence and to aircraft type ratings reflecting the scope of the previous basic licence held

1.10 Aircraft Maintenance Logbook

Under ANO(AW) Part-66 there is a requirement to record satisfactory basic training and skills attainment as a pre-requisite for basic licence issue, for applicants who have completed a ANO(AW)(AW) PART -147 training course.

To assist both basic and type rating applicants to demonstrate that they meet the licensing requirements, the CAAB has introduced an Aircraft Maintenance Engineer's Logbook which is now available for use and can be downloaded from the CAAB website at www.caab.gov.bd. The Logbook is not available directly from the CAAB.

Note: It is only necessary to submit the relevant logbook pages in support of an application and not the entire document.

1.11 The Logbook Assessor

It is an Assessors responsibility to evaluate and determine the extent of practical skills and maintenance experience necessary for the holder to submit an application for an engineer's Licence. There are two types of Assessor as detailed below.

1.11.1 ANO(AW) PART -145 and ANO(AW) Part-147 Logbook Assessor

The Assessor will be nominated by the ANO(AW) Part-145 or ANO(AW) Part-147 organisation or existing maintenance organization by virtue of holding a supervisory or management position within the approved organisation. In this case the CAAB would expect the nominated person or persons to be included in that organisation's exposition. This will allow the person or persons of that organisation to act as an Assessor for that organisation for the duration of that organisation's ANO(AW) Part-145 or ANO (AW) Part-C or ANO(AW) Part-147 approval or whilst they remain in the employ of that organisation.

Note: It is not necessary to submit application form CAAB Form 19A as the CAAB Assessor Authorisation is not required for a ANO(AW) Part-145 or ANO(AW) Part-C or ANO(AW) Part- 147 organisation.

1.11.2 The CAAB Authorised Assessor (for applicants working outside of ANO(AW) Part- 145, ANO(AW) Part-C and ANO(AW) Part- 147 organisations)

The Assessor will be a senior Licenced aircraft maintenance engineer whose licence coverage encompasses that for which the application is being made or the Assessor will be a person with acceptable experience who holds or who has held a senior position in an approved aircraft maintenance organisation. In this case an application will need to be made to the CAAB on CAAB Form 19A, which can be downloaded from our web site www.caab.gov.bd.

A letter of approval will be issued to the CAAB Authorised Assessor and will be valid for two years. After this period the Assessor must re-apply.

1.12 Licence Application Forms & Guidance Documents

ANO(AW) Part- 66 application forms and accompanying guidance documents are available now. The forms cross-refer to the guidance document and vice-versa, giving step-by-step guidance on how to complete each section of the form, the requirements for the particular application and any additional supporting documents required, if necessary.

The forms with accompanying guidance can be downloaded from our web site www.caab.gov.bd.

Note : Having clear concise supporting data will enable us to issue licences more efficiently and with less risk of rejections. The CAAB will not contact the applicant for clarification of details on applications and therefore it is most important to have the correct information before applying.

1.13 Administrative Processing

Applications should be sent to: Chairman, Civil Aviation Authority, Bangladesh, Head Quarter, Kurmitola, Dhaka-Bangladesh. Attention: Director Flight Safety & Regulation.

When an application is submitted to CAAB, the CAAB will check the application to ensure that all necessary paperwork, logbook, fees etc. have been submitted. The application will then be assessed to ascertain whether all technical requirements have been met. An applicant will be notified if the application has been rejected in writing or by e-mail.

Note : Most common reasons for rejection are :

(a) Quality Manager has not certified supporting documentation;
(b) More detailed summary of experience required;
(c) Incomplete application forms;
(d) Licence not submitted ;
(e) Incorrect fees;

CAAB Form 19 and CAAB authorized logbook assessor application (CAAB Form 19A) shall be accompanied with a copy of National ID card (Bangladeshi only) or passport. Originals should also be brought with the applicant in case CAAB needs verification. Originals shall be handed over to the applicant immediately after verification. For other cases see the following.

1.13.1 Scheme of Charges

Details of our scheme of charges can be found in ANO(AW) Chapter-A.10.

1.13.2 Change of Address

Changes of address should be made in writing by letter, fax and must include the current licence and National ID card (for Bangladeshi only) or passport for foreigners. Quote your details of the new permanent address. Once actioned, the applicant will be informed. When received the licence must be signed in ink.

1.13.3 Change of Name

The holder of a licence who has changed their name is required to notify the CAAB by completing CAAB Form 19. For any change of name you are required to submit either actual passport, national ID card (Bangladeshi only).

1.13.4 Change of Nationality

An application for change of nationality must be made by completing CAAB Form 19.

1.14 Lost Licence

Individuals who have lost their licence are required to submit CAAB Form 19 for a duplicate licence together with the police report if the matter was reported to the police.

Note: The current licence should be returned to the CAAB prior to change of details.

CHAPTER 2: CONVERSION OF PROTECTED RIGHTS

2.1 Qualifications Giving Protected Rights

Qualifications that may be included in a ANO(AW) Part-66 licence issued to reflect 'protected rights' are as follows:

- LWTR's on a valid ANO(AW) Part D licence
- Type Ratings on a valid ANO(AW) Part D licence

2.2 Conversion of ANO(AW) Part-D LWTR to ANO(AW) Part-66 Basic Licence

LWTR's on a valid licence granted or extended under ANO(AW) Part D may be converted to a full or restricted ANO(AW) Part -66 licence in the basic categories of B1 and/or B2 and/or B3 reflecting the combination of LWTR's held. Where the sum of these does not constitute a full ANO(AW) Part-66 category or sub-category, limitations will be added to reflect the extent of the individual's protected rights. These limitations are listed in Section 2.5.

If the licence holder qualifies for a B1 sub-category AML, the equivalent A sub-category AML will also be granted (excluding licences with limitations 5 & 6 applied).

Holders of a ANO(AW) Part D licence may also qualify for the grant of ANO(AW) Part -66 Category C AML. For further information refer to Chapter 7.

Part and full conversion examinations as appropriate may be taken before or after the conversion process to remove limitations, which would otherwise apply. In most instances additional experience will also need to be demonstrated before qualifying for the full category or sub-category of a ANO(AW) Part 66 AML.

A table covering the most common ANO(AW) Part D to ANO(AW) Part -66 licence conversion scenarios can be found in Appendix B of this chapter.

2.3 Conversion of ANO(AW) Part D Type Ratings to ANO(AW) Part-66 Licence

Aircraft types on a ANO(AW) Part D licence may be transferred to a ANO(AW) Part -66 licence under protected rights. In general, obsolete types not shown in the ANO(AW) Part -66 list of type rating descriptions will not be transferred.

2.3.1 A & C (Mechanical) Type Ratings

Type ratings for individual aeroplanes or helicopters will be transferred as type ratings in Category B1 with any appropriate limitations and in Category C if the requirements of Section 2.6 are met.

2.3.2 E, I & R (Avionic) Type Ratings

Avionic type ratings held on ANO(AW) Part-D licence at the time of conversion will be transferred to the replacement ANO(AW) PART -66 AML in the form of type ratings.

Note: A group type rating does not automatically entitle the holder to certify work on an aircraft type with which he or she is not familiar. It is incumbent upon the individual to first familiarise themselves with the general characteristics of the aircraft, the maintenance documentation system used by the manufacturer and the relevant airworthiness directives that apply to the aircraft type.

2.4 Protected Rights to Category C

The **Category** C licence, Base Maintenance Certifying Engineer, is primarily a maintenance management licence that permits the holder to be authorised by a ANO(AW) Part-145 approved maintenance organisation to release an aircraft following base maintenance. For the grant of Category C, ANO(AW) Part-66 requires that an individual must have three years experience as a certifying technician in either Category B1 or B2. Since the Category C licence focuses upon the overall maintenance management of an aircraft during base maintenance and the subsequent single Certificate of Release to Service covering all trade disciplines, the CAAB is unable to grant a Category C licence to the holder of only a single ANO(AW) Part D Category (e.g. applicant with only category A or C are not eligible for C)

On transfer of protected rights of ANO(AW) Part D licence holder, Category C will only be issued for the following cases:

Category of A & C, and for a minimum of three years have held type rating licence	Conversion to B1 licence with or without Limitations	Issue of C licence
Category of E, I & R, and for a minimum of three years have held type rating licence	Conversion to B2 licence with or without Limitations	

2.5 Limitations on a Converted Licence

Limitation codes may be applied singly or in combination to basic categories and type ratings to reflect the scope of protected rights transferred to ANO(AW) Part-66 licence. The limitation codes and their translation which is printed on the reverse of the licence are listed below:

1. Excluding Electrical Power Generation & Distribution Systems.
2. Excluding Instrument Systems.
3. Excluding Radio Radar Systems.
4. Excluding Avionic Lrus.
5. Excluding Airframe.
6. Excluding Engine.
7. Excluding all Pressurised Aeroplanes.
8. Excluding maintenance tasks on Wooden Structures and Fabric Coverings
9. Excluding Wooden Aeroplanes
10. Excluding Metal Tubing and Fabric Aeroplanes
11. Excluding Composite Aeroplanes
12. Excluding Metal Aeroplanes
13. Excluding Propeller-Turbine Engines.
14. Excluding FADEC System
15. Excluding all aircraft equipped with retractable landing gear
16. Excluding Autopilot Systems on Helicopters
17. Others

2.6 Removing Limitations from a Basic Licence

To remove limitations from a basic B1 or B2 or B3 ANO(AW) Part-66 licence, where protected rights do not directly convert to a full ANO(AW) Part-66 Category/sub-category licence the relevant conversion examinations must be passed and any appropriate experience requirements met. Applications to remove limitations on a basic Category/ sub-category must cover all the limitations. Please refer to Appendix B to this Chapter for the removal of limitations.

2.7 Converting to a Non-Restricted (Without Limitations) Basic Category Licence

To convert to a non-restricted ANO(AW) Part-66 basic B1 or B2 or B3 category licence where protected rights do not directly convert to a full ANO(AW) Part-66 Category/sub-category, the relevant conversion examinations need to be taken in addition to meeting any appropriate experience requirements. Appendix A to this Chapter contains a self-assessing table listing common conversion scenarios.

Where the appendix table does not cover a specific situation, an assessment will be required and applicants should apply in writing to CAAB. Further information on examinations can be found in Chpater-10.

Application should be made at the same time as that for conversion once the required conversion examinations and experience has been completed.

2.7.1 Experience Requirement

Typically 6 months relevant additional experience is also required in the areas appropriate to the basic category/sub-category, which are not covered by protected rights showing evidence of the experience including detailed evidence of competence in the relevant basic skills.

2.8 Removing Limitations from a Type Rating

Where the limitation applies only to the type rating, it can be removed by completing either an approved conversion course covering the differences or a full B1 or B2 type course as appropriate. This training must be conducted by a suitably approved ANO(AW) Part-147 maintenance training organisation or be a type course approved by the CAAB. For Group 2 & 3 aircraft, CAAB may conduct such examination.

The experience requirement as detailed in 2.7.1 is still required, except that the experience may be reduced. Please refer to 8.7.

2.9 Making Your Application

Note 1: Refer to Appendix A to Chapter 1 for information on the revised forms and guidance.

CAAB Form 19 should be used for all conversion applications

2.9.1 Supporting Documents

The supporting information required, where applicable, in addition to CAAB Form 19 is listed below.

2.9.2 Course Completion Certificates – issued by CAAB approved organisations.

<u>Note 2:</u> Having clear concise supporting data will enable us to issue licences more efficiently and with less risk of rejections. The CAAB will not contact the applicant for clarification of details on applications and therefore it is most important to have the correct information before applying.

2.9.3 Additional Information

Where a type rating is already endorsed on the ANO(AW) Part D licence it will be endorsed on the ANO(AW) Part-66 licence without further requirement. It will however, be limited to the same extent as the ANO(AW) Part D type rating.

APPENDICES TO CHAPTER 2

APPENDIX A COMMON ANO(AW) Part-66 CONVERSION SCENARIOS

Conversion tables are based on ANO(AW) Part D categories and type ratings held.

Note: An applicant for conversion to ANO(AW) Part-66 who has passed the necessary conversion examinations will be required to provide evidence of appropriate experience in areas not covered by their protected rights.

Note: Category A privileges will be granted in the same sub-categories as the B1 category unless the B1 sub-category contains limitation 5.

LWTR(s) Held	ANO(AW) Part-66	Plus Limitation(s)	
A – Airframe C – Engines	B1	1 4	Excluding electrical power generation & distribution systems Excluding Avionic LRU's
	B3	None	
A – Airframe	B1	1 4 6	Excluding electrical power generation & distribution systems Excluding Avionic LRU's Excluding engine
	B3	6	Excluding engine
C – Engines	B1	1 4 5	Excluding electrical power generation & distribution systems Excluding Avionic LRU's Excluding airframe
	B3	5	Excluding airframe
E – Electrical	B2	2 3	Excluding radio radar systems. Excluding instrument systems.
I – Instrument	B2	1 3	Excluding radio radar systems. Excluding electrical power generation & distribution systems.
R – Radio	B2	1 2	Excluding electrical power generation & distribution systems. Excluding instrument systems.
E – Electrical I – Instrument	B2	3	Excluding radio radar systems
E – Electrical R – Radio	B2	2	Excluding instrument system
I – Instrument R – Radio	B2	1	Excluding electrical power generation & distribution systems.
E – Electrical I – Instrument R – Radio	B2	None	

APPENDIX B : REMOVAL OF LIMITATIONS/CONVERTING TO A FULL CATEGORY LICENCE – EXAMINATION REQUIREMENTS

The most common conversion examinations required are detailed in tables 1,2,3,4, 5 and 6.

Note: Conversion examinations may be taken prior to or post conversion to ANO(AW) Part-66. Application for the removal of limitations will be accepted at the same time as conversion to ANO(AW) Part-66.

Conversion to B1.1 Aeroplanes-Turbine: --- Table 1

ANO(AW) Part D Categories Held	ANO(AW) Part-66 Modules and part-Modules required	
	Full Modules	Part Modules
A - Aircraft C - Engines		3.4, 3.5, 3.16; 4.1.3, 4.3, 5.4 to 5.6, 5.10, 5.11, 5.13, 5.15; 6.3.1, 6.7, 6.9 7.4, 7.7, 7.10 to 7.12, 7.19; 8.1 11.5, 11.14, 11.18 to 11.21 15.1, 15.11 17.7;
A - Aircraft	15 & 17	3.4, 3.5, 3.16,; 4.1.3, 4.3, 5.4 to 5.6, 5.10, 5.11, 5.13, 5.15; 6.3.1, 6.7, 6.9 7.4, 7.7, 7.10 to 7.12, 7.19; 8.1 11.5, 11.14, 11.18 to 11.21
C - Engines	8, 11A	3.4, 3.5, 3.16, 3.17 4.1.3, 4.3, 5.1 to 5.6, 5.10, 5.11, 5.13, 5.15; 6.3, 6.7, 6.9 7.4, 7.7, 7.10 to 7.12, 7.14.2, 7.16, 7.17, 7.19; 15.1, 15.11 17.7;

Conversion to B1.2 Aeroplanes-Piston ----Table 2

ANO(AW) Part D Categories Held	ANO(AW) Part-66 Modules and part-Modules required	
	Full Modules	Part Modules
A - Aircraft C - Engines		3.4 to 3.5, 3.16, 3.17; 4.1.3, 4.3, 5.10, 5.13, 5.15; 6.3.1, 6.7, 6.9 8.1 7.4, 7.7, 7.10 to 7.12, 7.17, 7.19; 16.4.3, 16.6, 16.11, 16.13 11.4, 11.5.2,11.7, 11.8, 11.14, 11.17 17.1,17.2, 17.4, 17.6, 17.7
A - Aircraft	16 & 17	3.4 to 3.5, 3.16, 3.17; 4.1.3, 4.3, 5.10, 5.13, 5.15; 6.3.1, 6.7, 6.9 7.4, 7.7, 7.10 to 7.12, 7.17, 7.19; 8.1 11.4, 11.5.2,11.7, 11.8, 11.14, 11.17
C - Engines	8, 11B	3.4 to 3.5, 3.16, 3.17; 4.1.3, 4.2 4.3, 5.1, 5.10, 5.13, 5.15; 6.3, 6.7, 6.9 7.4, 7.7, 7.10 to 7.12, 7.14.2, 7.16, 7.17, 7.19;; 16.4.3, 16.6,16.11, 16.13 17.1,17.2, 17.4, 17.6, 17.7

Conversion to B1.3 Helicopters Turbine: --- Table 3

ANO(AW) Part D Categories Held	ANO(AW) Part-66 Modules and part-Modules required	
	Full Modules	Part Modules
A - Rotorcraft C - Engines	8	3.4 to 3.5, 3.16, 3.17; 4.1.3, 4.2, 4.3, 5.1 to 5.6, 5.10, 5.11, 5.13, 5.15; 6.3, 6.7, 6.9 7.4, 7.7, 7.10 to 7.12, 7.14.2, 7.16, 7.17, 7.19; 12.6 to 12.8, 12.10 to 12.13, 12.15 to 12.19; 15.1, 15.11
A - Rotorcraft	8, 15	3.4 to 3.5, 3.16, 3.17; 4.1.3, 4.2, 4.3, 5.1 to 5.6, 5.10, 5.11, 5.13, 5.15; 6.3, 6.7, 6.9 7.4, 7.7, 7.10 to 7.12, 7.14.2, 7.16, 7.17, 7.19; 12.6 to 12.8, 12.10 to 12.13, 12.15 to 12.19;
C - Engines	8, 12	3.4 to 3.5, 3.16, 3.17; 4.1.3, 4.2, 4.3, 5.1 to 5.6, 5.10, 5.11, 5.13, 5.15; 6.3, 6.7, 6.9 7.4, 7.7, 7.10 to 7.12, 7.14.2, 7.16, 7.17, 7.19; 15.1, 15.11

Conversion to B1.4 Helicopters Piston: -- Table 4

ANO(AW) Part D Categories Held	ANO(AW) Part-66 Modules and part-Modules required	
	Full Modules	Part Modules
A - Rotorcraft C - Engines	8	3.4 to 3.5, 3.16, 3.17; 4.1.3, 4.2, 4.3, 5.1, 5.10, 5.13, 5.15; 6.3, 6.7, 6.9 7.4, 7.7, 7.10 to 7.12, 7.14.2, 7.16, 7.17, 7.19; 12.6 to 12.8, 12.10 to 12.13, 12.15 to 12.19; 16.4.3, 16.6, 16.11, 16.13
A - Rotorcraft	8, 16	3.4 to 3.5, 3.16, 3.17; 4.1.3, 4.2, 4.3, 5.1, 5.10, 5.13, 5.15; 6.3, 6.7, 6.9 7.4, 7.7, 7.10 to 7.12, 7.14.2, 7.16, 7.17, 7.19; 12.6 to 12.8, 12.10 to 12.13, 12.15 to 12.19;
C - Engines	8, 12	3.4 to 3.5, 3.16, 3.17; 4.1.3, 4.2, 4.3, 5.1, 5.10, 5.13, 5.15; 6.3, 6.7, 6.9 7.4, 7.7, 7.10 to 7.12, 7.14.2, 7.16, 7.17, 7.19; 16.4.3, 16.6, 16.11, 16.13

Conversion to B3 Aeroplanes-Piston MTOW 2000Kg or below ----Table 5

ANO(AW) Part D Categories Held	ANO(AW) Part-66 Modules and part-Modules required	
	Full Modules	Part Modules
A - Aircraft C - Engines	-	3.4, 3.5, 3.17; 4.1.3, 5.1, 5.5, 5.11, 5.13, 5.15; 6.3.1, 6.7, 6.9 7.7, 7.10 to 7.12, 7.17, 7.19; 11.4, 11.5.2, 11.7, 11.14; 8.1 16.4.3, 16.6, 16.11, 16.13 17.1,17.2, 17.4, 17.6, 17.7
A - Aircraft	16 & 17	3.4 to 3.5, 3.17; 4.1.3, 5.1, 5.5, 5.11, 5.13, 5.15; 6.3.1, 6.7, 6.9 7.7, 7.10 to 7.12, 7.17, 7.19; 8.1 11.4, 11.5.2, 11.7, 11.14;
C - Engines	8, 11C	3.4 to 3.5, 3.17; 4.1.3, 5.1, 5.5, 5.11, 5.13, 5.15; 6.3, 6.7, 6.9 7.7, 7.10 to 7.12, 7.14.2, 7.16, 7.17, 7.19; 16.4.3, 16.6,16.11, 16.13 17.1,17.2, 17.4, 17.6, 17.7

Conversion to B2 Avionic:-- Table 6

ANO(AW) Part D Categories Held	ANO(AW) Part-66 Modules and part-Modules required	
	Full Modules	Part Modules
E – Electrical I – Instrument R – Radio	-	3.4, 3.5 | 4.1, 4.2 | 5.4, 5.5, 5.10, 5.13, 5.15 | 6.1 to 6.4, 6.7 to 6.10 7.1 to 7.4; 7.6, 7.7, 7.16, 7.18, 7.19 | 8.2 13.1(c), 13.2, 13.3,13.4, 13.6 to 13.8, 13.10, 13.20 to 13.22 | 14.1
E – Electrical	8	3.4 to 3.5, 3.16; | 4.1.1, 4.2, 4.3; | 5.1, 5.4, 5.5, 5.10, 5.11, 5.13 to 5.15; 6.1 to 6.4, 6.7 to 6.10 | 7.1 to 7.4; 7.6, 7.7, 7.16, 7.18, 7.19 13.1 to 13.4, 13.6 to 13.8, 13.10, 13.11.3, 13.17, 13.18, 13.20 to 13.22 | 14.1, 14.2,
I – Instrument		3.4 to 3.5, 3.12, 3.16 to 3.18; | 4.1, 4.2, | 5.4, 5.5, 5.10, 5.13 to 5.15; 6.1 to 6.4, 6.7 to 6.10 | 7.1 to 7.4; 7.6, 7.7, 7.16, 7.18, 7.19 | 8.2 13.1, 13.2, 13.4 to 13.11, 13.20 to 13.22 | 14.1, 14.3
R – Radio	8, 13, 14	3.4 to 3.5, 3.12, 3.17, 3.18 | 4.1.1, 4.2; | 5.1, 5.4, 5.5, 5.10, 5.11, 5.13, 5.15; 6.1 to 6.4, 6.7 to 6.10 | 7.1 to 7.4; 7.6, 7.7, 7.16, 7.18, 7.19 | 8.2
E – Electrical I – Instrument		3.4 to 3.5, 3.16; | 4.1.1, 4.2; | 5.4, 5.5, 5.10, 5.13 to 5.15; 6.1 to 6.4, 6.7 to 6.10 | 7.1 to 7.4; 7.6, 7.7, 7.16, 7.18, 7.19 | 8.2 13.1(c), 13.2, 13.4, 13.6 to 13.8, 13.10, 13.20 to 13.22 | 14.1,
E – Electrical R – Radio	8	3.4 to 3.5; | 4.1.1, 4.2, 4.3; | 5.1, 5.4, 5.5, 5.10, 5.11, 5.13, 5.15; 6.1 to 6.4, 6.7 to 6.10 | 7.1 to 7.4; 7.6, 7.7, 7.16, 7.18, 7.19 | 14.1, 14.2, 13.1 to 13.4, 13.6 to 13.8, 13.10, 13.11, 13.17, 13.18, 13.20 to 13.22
I – Instrument R – Radio		3.4 to 3.5, 3.12, 3.17, 3.18; | 4.1.1, 4.2, | 5.4, 5.5, 5.10, 5.13, 5.15; 6.1 to 6.4, 6.7 to 6.10 | 7.1 to 7.4; 7.6, 7.7, 7.16, 7.18, 7.19 | 8.2 13.1(c), 13.2, 13.4 to 13.8, 13.10 to13.16, 13.19 to 13.22 | 14.1, 14.3

Conversion from ANO(AW) Part D Aircraft & Engines (A&C) to B2 Avionic

Presently. CAAB does not keep this provision

CHAPTER 3: CATEGORY A LICENCE

3.1 The Category A Licence

The Category A licence is a mechanical based licence and permits the holder to issue certificates of release to service within the limits of tasks specifically endorsed on the authorisation, following minor scheduled line maintenance and simple defect rectification. Ref ANO(AW) Part-145.30(6).

The A licence is sub-divided into sub-categories as below:
A1 Aeroplanes Turbine-Engines
A2 Aeroplanes Piston-Engines
A3 Helicopters Turbine-Engines
A4 Helicopters Piston-Engines

3.2 ANO(AW) Part-147 Approved Training Route

A course of training can be undertaken under the auspices of a ANO(AW) Part-147 approved basic training school. The course will consist of a minimum of 800 hours instruction, except for sub-Category A2 which will consist of 650 hours instruction. The purpose of the course is to teach the individual the basic underpinning theoretical knowledge required of the category A role and to provide basic skills and maintenance practices training to establish basic practical competence. The course includes theory exams and practical skills assessments as part of the training and qualification philosophy.

The approved course must be followed by a minimum of 1 year's practical line maintenance experience to consolidate the training received prior to licence application.

3.3 Experience Requirements

3.3.1 General

An applicant for a category A licence must have completed a prescribed period of aircraft maintenance experience. This experience should include minor scheduled line maintenance and simple defect rectification on operating aircraft appertaining to the category of licence for which application is to be made.

3.3.2 'Recent Practical Maintenance Experience'

All applicants must have gained at least one year's experience on aircraft typical of the category or sub-category for which application is made. Of this one year's experience, six months must have been gained in the 12 months immediately before application. The remainder must have been gained in the 10 years before application.

3.3.3 Self Starter and Other Experienced Applicants

Category A applicants who have not successfully completed a ANO(AW) Part-147 approved course of training, should have at least 3 years practical maintenance experience on operating aircraft.

3.4 Reduction in Experience Requirements

A reduction in the 3 years experience requirement may be considered for certain applicants who fall into either category below. There are currently no standard assessment terms for these applications and therefore applicants are advised, before applying for licence issue, to ensure they meet the experience criteria in accordance with ANO(AW) Part-66.30 and AMC 66.30 (a) and (b).

3.4.1 'Skilled Worker'

A skilled worker is a person who has successfully completed a course of training, acceptable to the competent authority, involving the manufacture, repair, overhaul or inspection of mechanical, electrical or electronic equipment. The training would have included the use of tools and measuring devices.

3.4.2 Experience Required
2 years where the applicant has already qualified in another profession as above.

3.4.3 'Other Experienced Applicants'
Aircraft maintenance experience gained outside a civil aircraft maintenance environment can include experience gained in armed forces, coast guards and police.

3.4.4 Experience Required
All applicants must have gained at least one year's experience on aircraft typical of the category or sub-category for which application is made. Of this one year's experience, six months must have been gained in the 12 months immediately before application. The remainder must have been gained in the 10 years before application.

3.4.5 'Experience gained outside CAAB approved organisations'
Aircraft maintenance engineers with experience working on operational civil aircraft gained outside CAAB approved organisations, may claim that experience towards the grant of a ANO(AW) Part-66 licence, providing that the experience is deemed acceptable by the CAAB.

3.4.6 Experience Required
Experience claimed towards a ANO(AW) Part-66 licence must meet the standards of approved AMO and must be correctly authenticated in a manner acceptable to the CAAB.

3.5 Basic Theoretical Knowledge Requirements

3.5.1 General
Basic knowledge levels for each category licence have been allocated relating to the complexity of certifications appropriate to the particular licence. A Category 'A' applicant must demonstrate an adequate level of knowledge in the required subjects as detailed in this Chapter.

Knowledge level requirements and general information relating to examination requirements and procedures can be found in Chapter 11.

3.5.2 Aeroplanes Turbine-Engines (A1.1)
Module 1 Mathematics
Module 2 Physics
Module 3 Electrical Fundamentals
Module 5 Digital Techniques/Electronic Instrument Systems
Module 6 Materials & Hardware
Module 7A Maintenance Practices
Module 8 Basic Aerodynamics
Module 9A Human Factors
Module 10 Aviation Legislation
Module 11A Aeroplanes Aerodynamics, Structures & Systems
Module 15 Gas Turbine Engines
Module 17A Propeller

3.5.3 Aeroplanes Piston-Engines (A1.2)
Module 1 Mathematics
Module 2 Physics
Module 3 Electrical Fundamentals
Module 5 Digital Techniques/Electronic Instrument Systems
Module 6 Materials & Hardware
Module 7A Maintenance Practices
Module 8 Basic Aerodynamics
Module 9A Human Factors

Module 10 Aviation Legislation
Module 11B Aeroplanes Aerodynamics, Structures & Systems
Module 16A Piston Engine
Module 17 Propeller

3.5.4 Helicopter Turbine-Engines (A1.3)

Module 1 Mathematics
Module 2 Physics
Module 3 Electrical Fundamentals
Module 5 Digital Techniques/Electronic Instrument Systems
Module 6 Materials & Hardware
Module 7A Maintenance Practices
Module 8 Basic Aerodynamics
Module 9A Human Factors
Module 10 Aviation Legislation
Module 12 Helicopter Aerodynamics, Structures & Systems
Module 15 Gas Turbine Engine

3.5.5 Helicopter Piston Engines (A1.4)

Module 1 Mathematics
Module 2 Physics
Module 3 Electrical Fundamentals
Module 5 Digital Techniques/Electronic Instrument Systems
Module 6 Materials & Hardware
Module 7A Maintenance Practices
Module 8 Basic Aerodynamics
Module 9A Human Factors
Module 10 Aviation Legislation
Module 12 Helicopter Aerodynamics, Structures & Systems
Module 16 Piston Engine

3.5.6 Essay Paper

In addition to the multi-choice question paper relating to appropriate level and modules required, an essay paper must be taken. The essay paper will comprise questions drawn from the syllabus subjects covering Maintenance Practices (Module 7A), Human Factors (Module 9A) and Aviation Legislation (Module 10).

3.6 Credits from Theoretical Knowledge Requirements

3.6.1 General

Partial examination exemptions may be given to applicants who wish to extend their current licence to include a further basic Category/sub-Category.

3.6.2 Extension of a Licence to include another Category

The modular syllabus of ANO(AW) Part-66 often requires different levels of knowledge for the different licence categories (A, B1, B2 and B3) within a module; therefore there are conversion examinations applicable to certain modules for licence holders wishing to include another category. The most common cases of category conversion are detailed in Chapter 8.

The CAAB will conduct all conversion part module examinations (unless approval has been granted by the CAAB for a ANO(AW) Part-147 Organisation to conduct the examinations). Applications should be made in the normal way. Further general information on examinations can be found in Chapter 11.

3.7 Making Your Application

Note 1: Refer to Appendix A to Chapter 1 for information on form numbers.

CAAB Form 19 should be used in respect of all Category A initial issue applications. Current forms may be downloaded from our web site (www.caab.gov.bd). A guidance document that is linked to the application form will provide easy to follow guidance on the basic licensing requirements, which parts of the application to complete and what may be required in support of your application.

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Note 2: The Category A licence is a basic licence only and cannot hold any type ratings. C7.1

Supporting Documents

Course Completion Certificates – issued by CAAB approved organisations.

Logbook – confirming experience.

Note: Having clear concise supporting data will enable us to issue licences more effectively and with less risk of errors or rejections.

CHAPTER 4: CATEGORY B1 LICENCE

4.1 The Category B1 Licence

The B1 licence is a mechanical based licence and permits the holder to issue certificates of release to service following line maintenance, including aircraft structure, power plants and mechanical and electrical systems. Replacement of avionic line replaceable units requiring simple tests without the use of test equipment to prove their serviceability is also included within the privileges of this licence. A Category B1 licence holder also has a role in base maintenance in supporting the Category C certifier who is the final CRS/SMI signatory.

The B1 licence is sub-divided into sub-categories as below:

B1.1 Aeroplanes Turbine-Engines
B1.2 Aeroplanes Piston-Engines
B1.3 Helicopters Turbine-Engines
B1.4 Helicopters Piston-Engines

4.2 ANO(AW) Part-147 Approved Training Route

A course of training can be undertaken under the auspices of a ANO(AW) Part-147 approved basic training school. The course will consist of a minimum of 2400 hours instruction. The purpose of the course is to teach the individual the basic underpinning theoretical knowledge required of the category B1 role and to provide basic skills and maintenance practices training to establish basic practical competence. The course includes theory exams and practical skills assessments as part of the training and qualification philosophy.

4.2.1 B1.1 (Aeroplanes Turbine-Engine) and B1.3 (Helicopter Turbine-Engine)

The approved course must be followed by a minimum of 2 years practical maintenance experience to consolidate the training received.

4.2.2 B1.2 (Aeroplanes Piston-Engine) and B1.4 (Helicopter Piston-Engine)

The approved course must be followed by a minimum of 1 year's practical maintenance experience to consolidate the training received.

Note: A full ANO(AW) Part-66 B1 licence issued in a particular sub-category also entitles the holder to exercise the privileges of a Category A licence for other aircraft types, not endorsed on the ANO(AW) Part-66 licence as type ratings, subject to the task training and authorisation requirements for those types being satisfied.

4.3 Experience Requirements

4.3.1 General

An applicant for a category B1 licence must have completed a prescribed period of aircraft maintenance experience. This experience is to be relevant to the licence category required and to the maintenance experience of operating aircraft. This experience should include maintenance on aircraft structure, powerplant, mechanical and electrical systems and replacement of avionic LRU's requiring simple tests to prove their serviceability.

4.3.2 'Recent Practical Maintenance Experience'

All applicants must have gained at least one year's experience on aircraft typical of the category or sub-category applied for. Of this one year's experience, six months must have been gained in the 12 months immediately before application. The remainder must have been gained in the 10 years before application.

4.3.3 Self Starter and Other Experienced Applicants

Category B1.1 or B1.3 applicants who have not attended a ANO(AW) Part-147 approved course of training, should have at least 5 years practical maintenance experience on operating aircraft. Experienced

engineers, such as Skilled Workers, Armed Forces, Coast Guards or Police, may be eligible for a reduction in experience required (refer to section 4.4).

Category B1.2 or B1.4 applicants who have not attended a ANO(AW) Part-147 approved course of training, should have at least 3 years practical maintenance experience on operating aircraft. Experienced engineers, such as Skilled Workers, Armed Forces, Coast Guards or Police, may be eligible for a reduction in experience required (refer to section 4.4).

4.4 Reduction in Experience Requirements

A reduction in the experience requirement may be considered for certain applicants who fall into either category below. There are currently no standard assessment terms for these applications and therefore applicants are advised, before applying for licence issue, to ensure they meet the experience criteria in accordance with ANO(AW) Part-66.30 and AMC 66.30 (a).

4.4.1 'Skilled Worker'

A skilled worker is a person who has successfully completed a course of training, acceptable to the CAAB, involving the manufacture, repair, overhaul or inspection of mechanical, electrical or electronic equipment. The training would have included the use of tools and measuring devices.

4.4.2 Experience Required

B1.1 and B1.3 applicants must demonstrate 3 years experience where the applicant has already qualified in another profession as above.

B1.2 and B1.4 applicants must demonstrate 2 years experience in a civil maintenance environment appropriate to the category applied for, where the applicant has already qualified in another profession as above.

4.4.3 'Other Experienced Applicants'

Aircraft maintenance experience gained outside a civil aircraft maintenance environment can include experience gained in armed forces, coast guards and police.

4.4.4 Experience Required

B1.1 and B1.3 applicants must demonstrate 1 years experience in a civil maintenance environment appropriate to the category applied for, where the applicant can provide satisfactory evidence of working in one of the above disciplines.

B1.2 and B1.4 applicants must demonstrate 1 years experience in a civil maintenance environment appropriate to the category applied for, where the applicant can provide satisfactory evidence of working in one of the above disciplines.

4.4.5 'Experience gained outside CAAB approved organisations'

Aircraft maintenance engineers with experience working on operational civil aircraft gained outside CAAB approved organisations, may claim that experience towards the grant of a ANO(AW) Part-66 licence, providing that the experience is deemed acceptable by the CAAB.

4.4.6 Experience Required

Experience claimed towards a ANO(AW) Part-66 licence must meet the standards of ANO(AW) PART - 145 and must be correctly authenticated in a manner acceptable to the CAAB.

4.5 Basic Theoretical Knowledge Requirements

4.5.1 General

Basic knowledge levels for each category licence have been allocated relating to the complexity of certifications appropriate to the particular licence. A Category B1 applicant must demonstrate an adequate level of knowledge in the required subjects as detailed in this Chapter.

Knowledge level requirements and general information relating to examination requirements and procedures can be found in Chapter 11.

4.5.2 Aeroplanes Turbine-Engines (B1.1)

Module 1 Mathematics
Module 2 Physics
Module 3 Electrical Fundamentals
Module 5 Digital Techniques/Electronic Instrument Systems
Module 6 Materials & Hardware
Module 7A Maintenance Practices
Module 8 Basic Aerodynamics
Module 9A Human Factors
Module 10 Aviation Legislation
Module 11A Aeroplanes Aerodynamics, Structures & Systems
Module 15 Gas Turbine Engines
Module 17A Propeller

4.5.3 Aeroplanes Piston-Engines (B1.2)

Module 1 Mathematics
Module 2 Physics
Module 3 Electrical Fundamentals
Module 5 Digital Techniques/Electronic Instrument Systems
Module 6 Materials & Hardware
Module 7A Maintenance Practices
Module 8 Basic Aerodynamics
Module 9A Human Factors
Module 10 Aviation Legislation
Module 11B Aeroplanes Aerodynamics, Structures & Systems
Module 16 Piston Engine
Module 17A Propeller

4.5.4 Helicopter Turbine-Engines (B1.3)

Module 1 Mathematics
Module 2 Physics
Module 3 Electrical Fundamentals
Module 5 Digital Techniques/Electronic Instrument Systems
Module 6 Materials & Hardware
Module 7A Maintenance Practices
Module 8 Basic Aerodynamics
Module 9A Human Factors
Module 10 Aviation Legislation
Module 12 Helicopter Aerodynamics, Structures & Systems
Module 15 Gas Turbine Engine

4.5.5 Helicopter Piston Engines (B1.4)

Module 1 Mathematics
Module 2 Physics
Module 3 Electrical Fundamentals
Module 5 Digital Techniques/Electronic Instrument Systems
Module 6 Materials & Hardware
Module 7A Maintenance Practices
Module 8 Basic Aerodynamics
Module 9A Human Factors
Module 10 Aviation Legislation
Module 12 Helicopter Aerodynamics, Structures & Systems
Module 16 Piston Engine

4.5.6 Essay Paper

In addition to the multi-choice question paper relating to appropriate level and modules required, an essay paper must be taken. The essay paper will comprise questions drawn from the syllabus subjects covering Maintenance Practices (Module 7), Human Factors (Module 9) and Aviation Legislation (Module 10).

4.6 Credits From Theoretical Knowledge Requirements

4.6.1 General

Partial examination exemptions may be given to applicants who wish to extend their current licence to include a further basic Category/sub-Category.

4.6.2 Extension of a Licence to include another Category

The modular syllabus of ANO(AW) Part-66 often requires different levels of knowledge for the different licence categories (A, B1, B2 and B3) within a module; therefore there are conversion examinations applicable to certain modules for licence holders wishing to include another category. The most common cases of category conversion are detailed in Chapter 8.

The CAAB will conduct all conversion part module examinations (unless approval has been granted by the Authority for a ANO(AW) Part-147Organisation to conduct the examinations). Applications should be made in the normal way. Further general information on examinations can be found in Chapter 11.

4.7 Making Your Application

Refer to Appendix A to Chapter 1 for information on form numbers.

CAAB Form 19 should be used in respect of all Category B initial issue applications. Current forms may be downloaded from our web site (www.caab.gov.bd). A new guidance document that is linked to the application form will provide easy to follow guidance on the basic licensing requirements, which parts of the application to complete and what may be required in support of your application. Refer to Chapter 1, Appendix B.

4.7.1 Supporting Documents

Course Completion Certificates – issued by CAAB approved organisations.

Logbook – confirming experience.

Note: Having clear concise supporting data will enable us to issue licences more effectively and with less risk of errors or rejections. The CAAB will not contact the applicant for clarification of details on application.

CHAPTER 5: CATEGORY B3 LICENCE

5.1 The Category B3 Licence

The B3 licence is a mechanical based licence and permits the holder to issue certificates of release to service following line maintenance, including aircraft structure, power plants and mechanical and electrical systems. Work on avionic systems requiring only simple tests to prove their serviceability and not requiring trouble shooting is also included within the privileges of this licence.

5.2 ANO(AW) Part-147 Approved Training Route

A course of training can be undertaken under the auspices of a ANO(AW) Part-147 approved basic training school. The course will consist of a minimum of **1000** hours instruction. The purpose of the course is to teach the individual the basic underpinning theoretical knowledge required of the category B3 role and to provide basic skills and maintenance practices training to establish basic practical competence. The course includes theory exams and practical skills assessments as part of the training and qualification philosophy.

The approved course must be followed by a minimum of 1 year's practical maintenance experience to consolidate the training received.

Note: The category B3 licence does not include any A subcategory. Nevertheless, this does not prevent the B3 licence holder from releasing maintenance tasks typical of the A1.2 subcategory for piston-engine non-pressurized aeroplanes of 2000 Kg MTOM and below, within the limitations contained in the B3 licence.

5.3 Experience Requirements

5.3.1 General

An applicant for a category B3 licence must have completed a prescribed period of aircraft maintenance experience. This experience is to be relevant to the licence category required and to the maintenance experience of operating aircraft. This experience should include maintenance on aircraft structure, powerplant, mechanical and electrical systems and avionics systems requiring simple tests to prove their serviceability.

5.3.2 'Recent Practical Maintenance Experience'

All applicants must have gained at least one year's experience on aircraft typical of the category or sub-category applied for. Of this one year's experience, six months must have been gained in the 12 months immediately before application. The remainder must have been gained in the 10 years before application.

5.3.3 Self Starter and Other Experienced Applicants

Category B3 applicants who have not attended a ANO(AW) Part-147 approved course of training, should have at least 3 years practical maintenance experience on operating aircraft. Experienced engineers, such as Skilled Workers, Armed Forces, Coast Guards or Police, may be eligible for a reduction in experience required (refer to section 5.4).

5.4 Reduction in Experience Requirements

A reduction in the experience requirement may be considered for certain applicants who fall into either category below. There are currently no standard assessment terms for these applications and therefore applicants are advised, before applying for licence issue, to ensure they meet the experience criteria in accordance with ANO(AW) Part-66.30 and AMC 66.30 (a).

5.1.1 'Skilled Worker'
A skilled worker is a person who has successfully completed a course of training, acceptable to the CAAB, involving the manufacture, repair, overhaul or inspection of mechanical, electrical or electronic equipment. The training would have included the use of tools and measuring devices.

5.4.2 Experience Required
B3 applicants must demonstrate 2 years experience where the applicant has already qualified in another profession as above.

5.4.3 'Other Experienced Applicants'
Aircraft maintenance experience gained outside a civil aircraft maintenance environment can include experience gained in armed forces, coast guards and police.

5.4.4 Experience Required
B3 applicants must demonstrate 1 years experience in a civil maintenance environment appropriate to the category applied for, where the applicant can provide satisfactory evidence of working in one of the above disciplines.

5.4.5 'Experience gained outside CAAB approved organisations'
Aircraft maintenance engineers with experience working on operational civil aircraft gained outside CAAB approved organisations, may claim that experience towards the grant of a ANO(AW) Part-66 licence, providing that the experience is deemed acceptable by the CAAB.

5.4.6 Experience Required
Experience claimed towards a ANO(AW) Part-66 licence must meet the standards of ANO(AW) PART - 145 and must be correctly authenticated in a manner acceptable to the CAAB.

5.5 Basic Theoretical Knowledge Requirements

5.5.1 General
Basic knowledge levels for each category licence have been allocated relating to the complexity of certifications appropriate to the particular licence. A Category B3 applicant must demonstrate an adequate level of knowledge in the required subjects as detailed in this Chapter.

Knowledge level requirements and general information relating to examination requirements and procedures can be found in Chapter 11.

5.5.2 Aeroplanes Turbine-Engines (B3)
Module 1 Mathematics
Module 2 Physics
Module 3 Electrical Fundamentals
Module 4 Electronic Fundamentals
Module 5 Digital Techniques/Electronic Instrument Systems
Module 6 Materials & Hardware
Module 7B Maintenance Practices
Module 8 Basic Aerodynamics
Module 9B Human Factors
Module 10 Aviation Legislation
Module 11C Aeroplanes Aerodynamics, Structures & Systems
Module 16 Piston Engine
Module 17B Propeller

5.5.6 Essay Paper
In addition to the multi-choice question paper relating to appropriate level and modules required, an essay paper must be taken. The essay paper will comprise questions drawn from the syllabus subjects covering Maintenance Practices (Module 7), Human Factors (Module 9) and Aviation Legislation (Module 10).

5.6 Credits From Theoretical Knowledge Requirements

5.6.1 General

Partial examination exemptions may be given to applicants who wish to extend their current licence to include a further basic Category/sub-Category.

5.6.2 Extension of a Licence to include another Category

The modular syllabus of ANO(AW) Part-66 often requires different levels of knowledge for the different licence categories (A, B1, B2 and B3) within a module; therefore there are conversion examinations applicable to certain modules for licence holders wishing to include another category. The most common cases of category conversion are detailed in Chapter 8.

The CAAB will conduct all conversion part module examinations (unless approval has been granted by the Authority for a ANO(AW) Part-147 Organisation to conduct the examinations). Applications should be made in the normal way. Further general information on examinations can be found in Chapter 11.

5.7 Making Your Application

Refer to Appendix A to Chapter 1 for information on form numbers.

CAAB Form 19 should be used in respect of all Category B initial issue applications. Current forms may be downloaded from our web site (www.caab.gov.bd). A new guidance document that is linked to the application form will provide easy to follow guidance on the basic licensing requirements, which parts of the application to complete and what may be required in support of your application. Refer to Chapter 1, Appendix B.

5.7.1 Supporting Documents

Course Completion Certificates – issued by CAAB approved organisations.

Logbook – confirming experience.

Note: Having clear concise supporting data will enable us to issue licences more effectively and with less risk of errors or rejections. The CAAB will not contact the applicant for clarification of details on application.

CHAPTER 6: CATEGORY B2 LICENCE

6.1 The Category B2 Licence

The B2 licence is avionic based and permits the holder to issue certificates of release to service, following line maintenance on avionic systems. A Category B2 licence holder also has a role in base maintenance in supporting the Category C certifier who is the final CRS signatory.

The B2 licence broadly covers the following areas:

- Instrument Systems
- Automatic Pilot Systems (fixed and rotary wing), including Auto-throttle and Auto-land Systems
- Radio Communication, Navigation and Radar Systems
- Electrical Power Generation and Distribution to Avionic Systems

Note: B2 licence does not provide for any category A licence authorization entitlement. Where such entitlement is desired the applicant will have to obtain a category A licence endorsement in accordance with the relevant requirements (refer to Chapter 2 and Chapter 8).

5.2 ANO(AW) Part-147 Approved Training Route

A course of training can be undertaken under the auspices of ANO(AW) Part-147 approved basic training school. The course will consist of a minimum of 2400 hours instruction. The purpose of the course is to teach the individual the basic underpinning theoretical knowledge required of aircraft and the related systems required of the category B2 role and to provide basic skills and maintenance practices training to establish basic practical competence. The course includes theory exams and practical skills assessments as part of the training and qualification philosophy.

The approved course must be followed by a minimum of 2 year's practical maintenance experience to consolidate the training received.

6.3 Experience Requirements

6.3.1 General

An applicant for a category B2 licence must have completed a prescribed period of aircraft maintenance experience. This experience is to be relevant to the licence category sought and to the maintenance experience of operating aircraft in avionic and electrical systems.

6.3.2 'Recent Practical Maintenance Experience'

All applicants must have gained at least one year's experience on aircraft typical of the category or sub-category applied for. Of this one year's experience, six months must have been gained in the 12 months immediately before application. The remainder must have been gained in the 10 years before application.

6.3.3 Self Starter and Other Experienced Applicants

Category B2 applicants who have not attended ANO(AW) Part-147approved course of training should have at least 5 years practical maintenance experience on operating aircraft. Experienced engineers, such as Skilled Workers, Armed Forces, Airfroce, Coast Guards or Police, may be eligible for a reduction in experience required (refer to section 6.4).

6.4 Reduction in Experience Requirements

A reduction in the 5 years experience requirement may be considered for certain applicants who fall into either category below.

There are currently no standard assessment terms for these applications and therefore applicants are advised, before applying for licence issue, to ensure they meet the experience criteria in accordance with ANO(AW) Part-66.30 and AMC 66.30 (a).

6.4.1 'Skilled Worker'
A skilled worker is a person who has successfully completed a course of training, acceptable to the CAAB, involving the manufacture, repair, overhaul or inspection of mechanical, electrical or electronic equipment. The training would have included the use of tools and measuring devices.

6.4.2 Experience Required
3 years where the applicant has already qualified in another profession as above.

6.4.3 'Other Experienced Applicants'
Aircraft maintenance experience gained outside a civil aircraft maintenance environment can include experience gained in armed forces, coast guards and police.

6.4.4 Experience Required
B2 applicants must demonstrate 1 years experience in a civil maintenance environment appropriate to the category applied for, where the applicant can provide satisfactory evidence of working in one of the above disciplines.

6.4.5 'Experience gained outside CAAB approved organisations'
Aircraft maintenance engineers with experience working on operational civil aircraft gained outside CAAB approved organisations, may claim that experience towards the grant of a ANO(AW) Part-66 licence, providing that the experience is deemed acceptable by the CAAB.

6.4.6 Experience Required
Experience claimed towards ANO(AW) Part-66 licence must meet the standards of ANO(AW) Part-145 and must be correctly authenticated in a manner acceptable to the CAAB.

6.5 Basic Theoretical Knowledge Requirements

6.1 General
Basic knowledge levels for each category licence have been allocated relating to the complexity of certifications appropriate to the particular licence. Category B2 applicant must demonstrate an adequate level of knowledge in the required subjects as detailed below.

Knowledge level requirements and general information relating to examination requirements and procedures can be found in Chapter 11.

6.5.2 B2 Avionic
Module 1 Mathematics
Module 2 Physics
Module 3 Electrical Fundamentals
Module 4 Electronic Fundamentals
Module 5 Digital Techniques/Electronic Instrument Systems
Module 6 Materials & Hardware
Module 7A Maintenance Practices
Module 8 Basic Aerodynamics
Module 9A Human Factors
Module 10 Aviation Legislation
Module 13 Aircraft Aerodynamics, Structures and Systems
Module 14 Propulsion

6.5.3 Essay Paper
In addition to the multi-choice question paper relating to appropriate level and modules required, an essay paper must be taken. The essay paper will comprise questions drawn from the syllabus subjects covering Maintenance Practices (Module 7), Human Factors (Module 9) and Aviation Legislation (Module 10).

6.6 Credits From Theoretical Knowledge Requirements

6.6.1 General

Partial examination exemptions may be given to applicants who wish to extend their current licence to include a further basic Category/sub-category.

6.6.2 Extension of a Licence to include another Category

The modular syllabus of ANO(AW) Part-66 often requires different levels of knowledge for the different licence categories (A, B1, B2 and B3) within a module; therefore there are conversion examinations applicable to certain modules for licence holders wishing to include another category. The most common cases of category conversion are detailed in Chapter 8.

The CAAB will conduct all conversion part module examinations (unless approval has been granted by the Authority for a ANO(AW) Part-147 Organisation to conduct the examinations). Applications should be made in the normal way. Further general information on examinations can be found in Chapter 11.

6.7 Making Your Application

Note: Refer to Appendix A to Chapter 1 for information on form numbers.

CAAB Form 19 should be used in respect of all Category B initial issue applications. Current forms may be downloaded from our web site (www.caab.gov.bd) along with a guidance document that will provide easy to follow guidance on the basic licensing requirements, which parts of the application to complete and what may be required in support of your application. Refer to Chapter 1, Appendix B.

6.7.1 Supporting Documents

Course Completion Certificates – issued by CAAB approved organisations.

Logbook – confirming experience.

Note: Having clear concise supporting data will enable us to issue licences more effectively and with less risk of errors or rejections. The CAAB will not contact the applicant for clarification of details on applications.

CHAPTER 7: CATEGORY C LICENCE

7.1 The Category C Licence

The Category C licence permits the release of an aircraft to service in its entirety by a single certificate of release to service by one overall signatory, once all base maintenance work and checks have been completed in accordance with ANO(AW) PART -145 The Category C licence certifier will act priANO Partily in a maintenance management role controlling the progress of aircraft maintenance work. A Category C licence alone does not permit the holder to act as a B1 or B2 certifier.

7.2 Experience Requirements

7.2.1 General

An applicant for a category C licence must have completed a prescribed period of aircraft maintenance experience. The Category C licence may be obtained via one of two available routes: either by experience gained through holding a Category B1 or B2 licence, or as a graduate entrant with a degree that is considered to be acceptable to the CAAB.

7.2.2 Large Aircraft

3 years experience exercising B1.1, B1.3 or B2 privileges on large aircraft or as ANO(AW) PART -145 B1.1, B1.3 or B2 support staff, or a combination of both.

5 years experience exercising B1.2 or B1.4 privileges on large aircraft or as ANO(AW) PART -145 B1.2 or B1.4 support staff, or a combination of both.

7.2.3 Non Large Aircraft

3 years experience exercising B1 or B2 privileges on non- large aircraft or as ANO(AW) PART -145 B1 or B2 support staff, or a combination of both.

7.2.4 Graduate Route

A graduate holding a degree in Aeronautical Engineering, or a similar discipline that is considered by the CAAB relevant to aircraft maintenance that has been accepted for this purpose by the CAAB, must have at least 3 years experience in a civil aircraft maintenance environment including 6 months of observation of base maintenance tasks. There are currently no standard assessment terms for these applications and therefore applicants are advised, before applying for licence issue, to ensure they meet the experience criteria in accordance with ANO(AW) Part-66.30 and related AMC. A person qualifying for a Category C licence via this route will not be entitled to a Category B1 or B2 licence unless the requirements for those Categories are also met.

Note: The CAAB would need to conduct a detailed assessment of the course, which would require the active co-operation of the university concerned. Degrees issued will not be accepted or recognised for CAAB licence issue if the standards and basis upon which such degrees were issued cannot be ratified by the CAAB.

7.3 Basic Theoretical Knowledge Requirements

7.3.1 General

Basic knowledge levels for each category licence have been allocated relating to the complexity of certifications appropriate to the particular licence. Category C certifying staff with a mechanical background should meet the Category B1 basic knowledge levels. Category C certifying staff with an avionic background should meet the category B2 basic knowledge levels.

Refer to Chapter 4 for Category B1 Line Maintenance Certifying Technician (Mechanical), or Chapter 6 for Category B2 Line Maintenance Certifying Technical (Avionic), as appropriate.

Applicants following the Graduate route for direct issue of Category C must still pass either the Category B1 or B2 full examinations unless the degree course qualifies for the standard exemptions as listed in section 7.4, or exemptions have been agreed as a result of the assessment of the particular degree course.

Knowledge level requirements and general information relating to examination requirements and procedures can be found in Chapter 11.

7.4 Credits from Theoretical Knowledge Requirements

7.4.1 General

Partial examination exemptions may be given to applicants who wish to extend their current licence categories to include further maintenance certification privileges (refer to Chapter 8).

7.5 Making Your Application

Note: Refer to Appendix A to Chapter 1 for information on form numbers.

CAAB Form 19 should be used in respect of all Category C initial issue applications. Current forms may be downloaded from our web site (www. caab.gov.bd). A guidance document that is linked to the application form will provide easy to follow guidance on the basic licensing requirements, which parts of the application to complete and what may be required in support of your application. Refer to Chapter 1, Appendix B.

7.5.1 Supporting Documents

Graduates – documentary evidence of satisfactory course completion.

Note 1: Courses will have already been assessed by the CAAB and recognised in accordance with ANO(AW) Part-66.30 para 5.

Course Completion Certificates – issued by CAAB approved organisations.

Logbook – confirming experience.

Note 2: Having clear concise supporting data will enable us to issue licences more effectively and with less risk of errors or rejections. The CAAB will not contact the applicant for clarification of details on application.

CHAPTER 8

Reserved

CHAPTER 9: TYPE RATINGS

9.1 Introduction

Holders of ANO(AW) Part-66 Aircraft Maintenance Licences in Category B1, B2, B3 and C may apply for inclusion of an Aircraft Type Rating subject to meeting the relevant requirements. A Category 'A' licence does not contain type ratings.

In order that ANO(AW) Part-145 or ANO(AW) Part-M maintenance organisation can issue a certification authorisation to a ANO(AW) Part-66 licence holder in categories B1 and/or B2 and/or B3 the relevant type rating must be held. Without the relevant type rating and authorisation, the licence holder cannot sign the Certificate of Release to Service for work carried out on the aircraft.

Note: There are additional requirements to be satisfied for authorisation issue. 'Certification Authorisation' means the authorisation issued to certifying staff by the organisation and which specifies the fact that they may sign certificates of release to service within the limitations stated in such authorisation on behalf of the approved organisation.

9.2 Aircraft Type Ratings & Group Ratings

The CAAB issue type ratings and group ratings in accordance with ANO(AW) Part-66. Aircraft groups are mentioned bellow:

1. Group 1: complex motor-powered aircraft as well as multiple engine helicopters, aeroplanes with maximum certified operating altitude exceeding FL290, aircraft equipped with fly-by-wire systems and other aircraft requiring an aircraft type rating when defined so by CAAB.
2. Group 2: aircraft other than those in Group 1 belonging to the following subgroups:
   - Sub-group 2a: single turbo-propeller engine aeroplanes
   - Sub-group 2b: single turbine engine helicopters
   - Sub-group 2c: single piston engine helicopters
3. Group 3: piston engine aeroplanes other than those in Group 1.

Aircraft Rating requirements are mentioned in Appendix D:

9.2.1 Individual Type Ratings

Type Ratings are issued in accordance with ANO(AW) Part-66, Appendix I of 'Chapter 4: Appendices to AMCs'.

Individual type ratings will be granted following completion of appropriate training, examination and experience requirements.

9.2.2 Manufacturer Sub-Group Ratings Manufacturer sub-group ratings may be granted after complying with the type rating requirements of two aircraft types **representative of that subgroup** from the same manufacturer. (See two examples below).

Types Endorsed		Manufacturer Group Rating (as appears on licence)
Cessna 208 + Cessna 210	=	Sub-group 2a: Eurocopter EC 130

Types Endorsed		Manufacturer Group Rating (as appears on licence)
EC 130 B4 + EC 130 T2	=	Sub-group 2a: Piper

Types Endorsed		Manufacturer Group Rating (as appears on licence)
R 22 + R 44	=	Sub-group 2c: Robinson R22/R44 Series

9.2.3 Full Group Ratings

Full group ratings may be granted after complying with the type rating requirements of three aircraft types **representative of the group** from different manufacturers. (See example below).

Types Endorsed		Full Group Rating (as appears on licence)
Piper PA23 + Cessna C175 + Beech 33	=	Group 3–metal structure

Note 1: No full group rating may be granted to B1 multiple turbine engine aeroplanes, where only manufacturer group rating applies.

Note 2: Aircraft types representative of the group is defined - below.

B1 – the aircraft type should include typical systems and engines relevant to the group (i.e. retractable undercarriage, pressurisation, variable pitch propeller, etc. for the single piston engine metal subgroup).

B2 – the aircraft type should include complex avionics systems (i.e. radio coupled autopilot, EFIS, flight guidance systems, etc.).

Note 3: A 'multiple engines' group will automatically include the corresponding 'single engine' group (i.e. a licence holder with 'Cessna – Aeroplane multi piston engine – metal structure', will automatically receive 'Cessna – Aeroplanes single piston engine – metal structure').

9.3 ANO(AW) Part-147 Approved Type Training

A list of ANO(AW) Part-147 Approved Type Training Organisations can be found on our web site; however, prospective users of training should check the status of the courses with the organisation concerned.

9.3.1 Category A

In respect of the Category 'A' licence, authorisations will be granted following completion of the relevant category A task training carried out by the appropriately approved organisation. The training will include practical hands-on training and theoretical training appropriate for each task authorised. Specific training on each aircraft type will be required reflecting the authorised task(s). A list of Category 'A' minor scheduled line maintenance tasks can be found in *Appendix A* to this Chapter.

9.3.2 Category B1 and B2

ANO(AW) Part-147 training should include theoretical and practical elements in relation to the licence privileges. Theoretical and practical training must comply with ANO(AW) Part-66, Appendix III. This training coupled with relevant type experience is a prerequisite for licence type endorsement and forms the basis for ANO(AW) Part-145 authorisation to be issued.

9.3.3 Category C

Type training for Category C must comply with ANO(AW) Part-66, *Appendix III*. Category C applicants who have qualified by holding an academic degree must take the first aircraft type theoretical training at Category B1 or B2 level. Practical training is not required.

9.4 Non ANO(AW) Part-147 Direct Course Approvals

ANO(AW) Part-66 allows for direct approval of a type course towards the grant of a type rating without having ANO(AW) Part- 147 approval. However, the course criteria must be to the same standards as ANO(AW) Part-147. Applicants applying under a direct course approval must ensure that the CAAB has granted approval to the relevant Operator, Training or Maintenance Organisation, prior to embarking on the course, as courses will not be retrospectively approved.

9.4.1 Validity of type course under direct course approval:

The type course completed under direct course approval will be considered valid for five years or type refresher course within last three years as per ANO(AW) Part-D chapter D.1. However, the candidate must have practical experience on the type of aircraft for a period of 6 months within the 24 months.

9.5 Aircraft Type Training

Aircraft type training may be sub-divided into airframe, power plant or electrical/avionic systems and the organisation may be approved to conduct all or only one of the sub-sections above.

Airframe type training means type training including all relevant aircraft structure and systems, excluding the bare engine.

Power plant type training means type training on the bare engine, including the build-up to a quick engine change unit.
Note: Where a split course is used one element of the two courses must contain the engine/airframe interface.

Avionic systems type training means type training on avionics systems.

9.6 Aircraft Type Training and Examination Standard

9.6.1 Category A

Satisfactory completion of training will be determined by an approved procedure laid out in the organisation's exposition and in accordance with Part-147, demonstrated by an examination and/or by a workplace assessment, carried out by either an approved ANO(AW) Part-145 organisation or a ANO(AW) Part-147 training organisation. The practical assessment will determine a person's competence to perform task(s). The examiner will provide a written report to explain whether a candidate has passed or failed.

9.6.2 Category B1, B2 and C

The completion of aircraft type training will be demonstrated by a multi-choice written examination carried out by a ANO(AW) Part-147 organisation.

Note: *Appendix B* of this chapter gives guidance regarding training standards required.

9.7 Aircraft Type Rating Experience Requirement

ANO(AW) Part-66 requires that a satisfactory amount of experience is required for an aircraft rating, in addition to the training. As a guide, 4 months is considered to be acceptable although the experience required will largely depend on the licence(s) and rating(s) already held. Where a similar aircraft type is held to that which is being applied for, experience can be reduced however, the experience should not be less than two weeks.

For each application, the CAAB will need to satisfy itself that the practical training is of sufficient duration before adding a type rating.

9.7.1 Acceptable Type Rating Experience

There are three types of experience that are deemed to be acceptable, as detailed below.

• Experience gained during an approved ANO(AW) Part-147 training course. This experience should be detailed in logbook format and supported by the appropriate ANO(AW) Part-147 certificate.

• Experience gained in an approved ANO(AW) Part-145 maintenance organisation (OJT - On Job Training on the first type for group 1 aircraft). Again this experience should be detailed in logbook format, however, worksheets that are certified by an Assessor and cross-referred to on the CAAB Form 19 will be accepted.

• Any experience gained in an organisation that has been officially accepted by the CAAB. This experience must again be detailed in logbook format or worksheets that are suitably certified.

Note: *Appendix C* of this chapter provides guidance regarding practical experience requirements for type addition.

9.8 Type Rating Limitations & Removal

Where limitations are held on a basic licence, they will automatically be applied to the type ratings contained within that licence. In all cases any limitations must first be lifted from the basic licence before being lifted from a type rating or ratings. However, both can be removed at the same time. Application must be made in respect of both the basic licence and the type rating on form CAAB Form 19.

9.8.1 Requirements for Removal of Limitation(s) from Type Rating

A ANO(AW) Part-147 type training course is required covering the areas to which the limitation(s) apply. Only full courses are approved under ANO(AW) Part-147, however the applicant will only be required to attend the relevant parts of the course, according to the limitation (i.e. a licence holder with limitation 10 (Excluding Airframe) will only be required to attend this part of the course)).The experience requirement is the same as for an additional type rating. (Refer to Section 9.4).

9.9 Making Your Application

CAAB Form 19 should be used in respect of all type rating applications. Current forms may be downloaded from our web site (www. caab.gov.bd). A guidance document that is linked to the application form will provide easy to follow guidance on the licensing requirements, which parts of the application to complete and what may be required in support of your application. Refer to Chapter 1, Appendix B.

9.9.1 Supporting Documents

Course Completion Certificates – covering both theoretical and practical elements, issued by CAAB approved organisations.

Logbook – containing work tasks. Details appropriate to the application being made, clearly identified and validated by an authorised signatory.

Note: Having clear concise supporting data will enable us to issue licences more effectively and with less risk of errors or rejections. This supporting documentation may be referred to on Application CAAB Form 19.

Appendix A: Category A Minor Scheduled Line Maintenance Tasks

The definition of minor scheduled line maintenance tasks is any minor scheduled inspection or check up to and including a weekly check specified in the operators approved aircraft maintenance programme.

Training will be completed before the appropriate tasks are permitted to be carried out by the Category A licence holder.

- Replacement of wheel assemblies. Replacement of wheel brake units. Replacement of emergency equipment.
- Replacement of ovens, boilers and beverage makers.
- Replacement of internal and external lights, filaments and flash tubes. Replacement of windscreen wiper blades.
- Replacement of passenger and cabin crew seats, seat belts and harness. Closing of cowlings and refitment of quick access inspection panels.
- Replacement of toilet system components but excluding gate valves.
- Simple repairs and replacement of internal compartment doors and placards but excluding doors forming part of a pressure structure.
- Simple repairs and replacement of overhead storage compartment doors and cabin furnishing items. Replacement of static wicks.
- Replacement of aircraft main and APU aircraft batteries.
- Replacement of in-flight entertainment system components but excluding public address. Routine lubrication and replenishment of all system fluids and gases.
- The de-activation only of sub-systems and aircraft components as permitted by the operator's minimum equipment list where such de-activation is agreed by the CAAB as a simple task.
- Replacement of any other components as agreed by the CAAB for a particular aircraft type only where it is agreed that the task is simple.

Note: This list will be updated in accordance with ANO(AW) Part-145.30(g)

Appendix B: Type Training and Examination Standard

1. Type training levels

The three levels listed below define the objectives, the depth of training and the level of knowledge that the training is intended to achieve.

- **Level 1:** A brief overview of the airframe, systems and powerplants as outlined in the Systems description Section of the Aircraft Maintenance Manual /Instructions for Continued Airworthiness.
  Course objectives: Upon completion of the course, the student will be able to:

  (a) Provide a simple description of the whole subject, using common words and examples, using typical terms and identify safety precautions related to the airframe, its systems and powerplant

  (b) Identify aircraft manuals, maintenance practices important to the airframe, its systems and powerplant

  (c) Define the general layout of the aircraft's major systems

  (d) Define the general layout and characteristics of the powerplant

  (e) Identify special tooling and test equipment used with the aircraft

- **Level 2:** Basic system overview of controls, indicators, principal components including their location and purpose, servicing and minor troubleshooting, general knowledge of the theoretical and practical aspects of the subject..

  Course objectives: In addition to the information contained in the Level 1 training, at the completion of Level 2 training, the student will be able to:

  (a) Understand the theoretical fundamentals; apply knowledge in a practical manner using detailed procedures;

  (b) Recall the safety precautions to be observed when working on or near the aircraft, power plant and systems.

  (c) Describe systems and aircraft handling particularly access, power availability and sources.

  (d) Identify the locations of the principal components.

  (e) Explain the normal functioning of each major system, including terminology and nomenclature.

  (f) Perform the procedures for ramp and transit servicing associated with the aircraft for the following systems: Fuel, Power Plants, Hydraulics, Landing Gear, Water/Waste, Oxygen.

  (g) Demonstrate proficiency in use of crew reports and on-board reporting systems (minor troubleshooting) and determine aircraft airworthiness per the MEL/CDL.

  (h) Demonstrate the use, interpretation and application of appropriate documentation including instructions for continued airworthiness, maintenance manual, illustrated parts catalogue, etc.

- **Level 3:** Detailed description, operation, component location, removal/installation and bite and troubleshooting procedures to maintenance manual level.

  Course objectives: In addition to the information contained in Level 1 and Level 2 training, at the completion of Level 3 training, the student will be able to:

  (a) Demonstrate a theoretical knowledge of aircraft systems and structures and interrelationships with other systems, provide a detailed description of the subject using theoretical fundamentals and specific examples and to interpret results from various sources and measurements and apply corrective action where appropriate;

(b) Perform system, engine, component and functional checks as specified in the maintenance manual.

(c) Demonstrate the use, interpret and apply appropriate documentation including structural repair manual, troubleshooting manual, etc.;

(d) Correlate information for the purpose of making decisions in respect of fault diagnosis and rectification to maintenance manual level.

(e) Describe procedures for replacement of components unique to aircraft type.

2. Type training standard

Although aircraft type training includes both theoretical and practical elements, courses can be approved for the theoretical element, the practical element or for a combination of both.

3.1. Theoretical element

(a) Objective:

On completion of a theoretical training course the student shall be able to demonstrate, to the levels identified in the Appendix III syllabus, the detailed theoretical knowledge of the aircraft's applicable systems, structure, operations, maintenance, repair, and troubleshooting according to approved maintenance data. The student shall be able to demonstrate the use of manuals and approved procedures, including the knowledge of relevant inspections and limitations.

(b) Level of training:

Training levels are those levels defined in point 2 above.

After the first type course for category C certifying staff all subsequent courses need only be to level 1.

During a level 3 theoretical training, level 1 and 2 training material may be used to teach the full scope of the chapter if required. However, during the training the majority of the course material and training time shall be at the higher level.

(c) Duration:

The theoretical training minimum tuition hours are contained in the following table:

Category	**Hours**
Aeroplanes with a maximum take-off mass above 30000kg:	
B1.1	150
B1.2	120
B2	100
C	30
Aeroplanes with a maximum take-off mass equal or less than 30000kg and above 5700kg:	
B1.1	120
B1.2	100
B2	100
C	25

Category	**Hours**	
Aeroplanes with a maximum take-off mass of 5700kg and below*:		
B1.1	80	For non-pressurised piston engine aeroplanes below 2000kg MTOM the minimum duration can be reduced by 50%.
B1.2	60	
B2	60	
C	15	
*Helicopters***		
B1.3	120	For helicopters in group 2 (as defined in point 66.A.5)(1) the minimum duration can be reduced by 30%.
B1.4	100	
B2	100	
C	25	

For the purpose of the table above, a tuition hour means 60 minutes of teaching and excludes any breaks, examination, revision, preparation and aircraft visit.

These hours apply only to theoretical courses for complete aircraft/engine combinations according to the type rating as defined by the competent authority.

(d) Justification of course duration:

Training courses carried out in a maintenance training organisation approved in accordance with Annex IV (Part-147) and courses directly approved by the competent authority shall justify their hour duration and the coverage of the full syllabus by a training needs analysis based on:

- The design of the aircraft type, its maintenance needs and the types of operation,
- Detailed analysis of applicable chapters – see contents table in point 3.1(e) below,
- Detailed competency analysis showing that the objectives as stated in point 3.1(a) above are fully met.

Where the training needs analysis shows that more hours are needed, course lengths shall be longer than the minimum specified in the table.

Similarly, tuition hours of differences courses or other training course combinations (such as combined B1/B2 courses), and in cases of theoretical type training courses below the figures given in point 3.1(c) above, these shall be justified to the competent authority by the training needs analysis as described above.

In addition, the course must describe and justify the following:

- The minimum attendance required to the trainee, in order to meet the objectives of the course.
- The maximum number of hours of training per day, taking into account pedagogical and human factors principles.

If the minimum attendance required is not met, the certificate of recognition shall not be issued. Additional training may be provided by the training organisation in order to meet the minimum attendance time.

(e) Content:

As a minimum the elements in the Syllabus below that are specific to the aircraft type must be covered. Additional elements introduced due to technological changes shall also be included.

The training syllabus shall be focused on mechanical and electrical aspects for B1 personnel, and electrical and avionic aspects for B2.

Chapters / Levels	Aeroplanes turbine		Aeroplanes piston		Helicopters turbine		Helicopters piston		Avionics
Licence Category	B1	C	B1	C	B1	C	B1	C	B2
Introduction Module:									
05 Time limits/maintenance checks	1	1	1	1	1	1			
06 Dimensions/Areas (MTOM, etc)	1	1	1	1	1	1			
07 Lifting and Shoring	1	1	1	1	1	1			
08 Levelling and weighing	1	1	1	1	1	1			
09 Towing and taxiing	1	1	1	1	1	1			
10 Parking/mooring, Storing & Return to Service	1	1	1	1	1	1			
11 Placards and Markings	1	1	1	1	1	1			
12 Servicing	1	1	1	1	1	1			
20 Standard practices – only type particular	1	1	1	1	1	1			
Helicopters									
18 Vibration and Noise Analysis (Blade tracking)	-	-	-	-	3	1	3	1	-
60 Standard Practices Rotor	-	-	-	-	3	1	3	1	-
62 Rotors	-	-	-	-	3	1	3	1	1
62A Rotors – Monitoring and indicating	-	-	-	-	3	1	3	1	3
63 Rotor Drives	-	-	-	-	3	1	3	1	1
63A Rotor Drives - Monitoring and indicating	-	-	-	-	3	1	3	1	3
64 Tail Rotor	-	-	-	-	3	1	3	1	1
64A Tail Rotor - Monitoring and indicating	-	-	-	-	3	1	3	1	3
65 Tail Rotor Drive	-	-	-	-	3	1	3	1	1
65A Tail Rotor Drive - Monitoring and indicating	-	-	-	-	3	1	3	1	3
66 Folding Blades/Pylon	-	-	-	-	3	1	3	1	-
67 Rotors Flight Control	-	-	-	-	3	1	3	1	-
53 Airframe Structure (Helicopter)	-	-	-	-	3	1	3	1	-
25 Emergency Flotation Equipment	-	-	-	-	3	1	3	1	-
Airframe structure									
51 Standard practices and structures (damage classification, assessment and repair)	3	1	3	1	-	-	-	-	1
53 Fuselage	3	1	3	1	-	-	-	-	1
54 Nacelles/Pylons	3	1	3	1	-	-	-	-	1
55 Stabilizers	3	1	3	1	-	-	-	-	1
56 Windows	3	1	3	1	-	-	-	-	1
57 Wings	3	1	3	1					1
27A Flight Control Surface (All)	3	1	3	1	-	-	-	-	1
52 Doors	3	1	3	1	-	-	-	-	1
Zonal & Station Identification Systems	1	1	1	1	1	1	1	1	1

Chapters	Levels	**Aeroplanes turbine**		**Aeroplanes piston**		**Helicopters turbine**		**Helicopters piston**		**Avionics**
Licence Category		B1	C	B1	C	B1	C	B1	C	B2
Airframe Systems										
21 Air Conditioning		3	1	3	1	3	1	3	1	3
21A Air Supply		3	1	3	1	1	3	3	1	2
21B Pressurization		3	1	3	1	3	1	3	1	3
21C Safety & Warning Devices		3	1	3	1	3	1	3	1	3
22 Auto flight		2	1	2	1	2	1	2	1	3
23 Communications		2	1	2	1	2	1	2	1	3
24 Electrical Power		3	1	3	1	3	1	3	1	3
25 Equipment and Furnishings		3	1	3	1	3	1	3	1	1
25A Electronic Equipment including emergency equipment		1	1	1	1	1	1	1	1	3
26 Fire Protection		3	1	3	1	3	1	3	1	3
27A Sys. Operations: Electrical/Fly-by-Wire		3	1	-	-	-	-	-	-	3
28 Fuel Systems		3	1	3	1	3	1	3	1	2
28A Fuel Systems — Monitoring and indicating		3	1	3	1	3	1	3	1	3
29 Hydraulic Power		3	1	3	1	3	1	3	1	2
29A Hydraulic Power — Monitoring and indicating		3	1	3	1	3	1	3	1	3
30 Ice and Rain Protection		3	1	3	1	3	1	3	1	3
31 Indicating/Recording Systems		3	1	3	1	3	1	3	1	2
31A Instrument Systems		3	1	3	1	3	1	1	3	3
32 Landing Gear		3	1	3	1	3	1	3	1	2
32A Landing Gear — Monitoring and indicating		3	1	3	1	3	1	3	1	3
33 Lights		3	1	3	1	3	1	3	1	3
34 Navigation		2	1	2	1	2	1	2	1	3
35 Oxygen		3	1	3	1	-	-	-	-	2
36 Pneumatic		3	1	3	1	3	1	3	1	2
36A Pneumatic — Monitoring and indicating		3	1	3	1	3	1	3	1	3
37 Vacuum		3	1	3	1	3	1	3	1	2
38 Water/Waste		3	1	3	1	-	-	-	-	2
41 Water Ballast		3	1	3	1	-	-	-	-	2
42 Integrated modular avionics		2	1	2	1	2	1	2	1	3
44 Cabin Systems		2	1	2	1	2	1	2	1	3
45 On-Board Maintenance System (or covered in 31)		3	1	3	1	3	1	-	-	3
46 Information Systems		2	1	2	1	2	1	2	1	3
50 Cargo and Accessory Compartments		3	1	3	1	3	1	3	1	1
Turbine Engine										
70 Standard Practices — Engines —only type particular		3	1	-	-	3	1	-	-	1
70A Constructional arrangement and operation (Installation Inlet, Compressors, Combustion Section, Turbine Section, Bearings and Seals, Lubrication Systems)		3	1	-	-	3	1	-	-	1
70B Engine Performance		3	1	-	-	3	1	-	-	1
71 Power Plant		3	1	-	-	3	1	-	-	1

Chapters	Levels	Aeroplanes turbine		Aeroplanes piston		Helicopters turbine		Helicopters piston		Avionics
Licence Category		B1	C	B1	C	B1	C	B1	C	B2
72 Engine Turbine/Turbo Prop/Ducted Fan/ Unducted fan		3	1	-	-	3	1	-	-	1
73 Engine Fuel and Control		3	1	-	-	3	1	-	-	1
73A FADEC Systems		3	1	-	-	3	1	-	-	3
74 Ignition		3	1	-	-	3	1	-	-	3
75 Air		3	1	-	-	3	1	-	-	1
76 Engine Controls		3	1	-	-	3	1	-	-	1
77 Engine Indicating Systems		3	1	-	-	3	1	-	-	3
78 Exhaust		3	1	-	-	3	1	-	-	1
79 Oil		3	1	-	-	3	1	-	-	1
80 Starting		3	1	-	-	3	1	-	-	1
82 Water Injection		3	1	-	-	3	1	-	-	1
83 Accessory Gearboxes		3	1	-	-	3	1	-	-	1
84 Propulsion Augmentation		3	1	-	-	3	1	-	-	1
49 Auxiliary Power Units (APUs)		3	1	-	-	-	-	-	-	3
Piston Engines:										
70 Standard Practices — Engines —only type Particular		-	-	3	1	-	-	3	1	1
70A Constructional arrangement and operation (Installation Inlet, Compressors, Combustion Section, Turbine Section, Bearings and Seals, Lubrication Systems)		-	-	3	1	-	-	3	1	1
70B Engine Performance		-	-	3	1	-	-	3	1	1
71 Power Plant		-	-	3	1	-	-	3	1	1
73 Engine Fuel and Control		-	-	3	1	-	-	3	1	1
73A FADEC Systems		-	-	3	1	-	-	3	1	3
74 Ignition		-	-	3	1	-	-	3	1	3
76 Engine Controls		-	-	3	1	-	-	3	1	1
77 Engine Indicating Systems		-	-	3	1	-	-	3	1	3
78 Exhaust		-	-	3	1	-	-	3	1	1
79 Oil		-	-	3	1	-	-	3	1	1
80 Starting		-	-	3	1	-	-	3	1	1
81 Turbines		-	-	3	1	-	-	3	1	1
82 Water Injection		-	-	3	1	-	-	3	1	1
83 Accessory Gearboxes		-	-	3	1	-	-	3	1	1
84 Propulsion Augmentation		-	-	3	1	-	-	3	1	1
Propellers:										
60A Standard Practices — Propeller		3	1	3	1	-	-	-	-	1
61 Propellers/Propulsion		3	1	3	1	-	-	-	-	1
61A Propeller Construction		3	1	3	1	-	-	-	-	-
61B Propeller Pitch Control		3	1	3	1	-	-	-	-	-
61C Propeller Synchronizing		3	1	3	1	-	-	-	-	1

61D Propeller Electronic control	2	1	2	1	-	-	-	-	3
61E Propeller Ice Protection	3	1	3	1	-	-	-	-	-
61F Propeller Maintenance	3	1	3	1	-	-	-	-	1

(f) Multimedia Based Training (MBT) methods may be used to satisfy the theoretical training element either in the classroom or in a virtual controlled environment subject to the acceptance of the competent authority approving the training course.

3.2. Practical element

(a) Objective:

The objective of practical training is to gain the required competence in performing safe maintenance, inspections and routine work according to the maintenance manual and other relevant instructions and tasks as appropriate for the type of aircraft, for example troubleshooting, repairs, adjustments, replacements, rigging and functional checks. It includes the awareness of the use of all technical literature and documentation for the aircraft, the use of specialist/special tooling and test equipment for performing removal and replacement of components and modules unique to type, including any on-wing maintenance activity.

(b) Content:

At least 50% of the crossed items in the table below, which are relevant to the particular aircraft type, shall be completed as part of the practical training.

Tasks crossed represent subjects that are important for practical training purposes to ensure that the operation, function, installation and safety significance of key maintenance tasks is adequately addressed; particularly where these cannot be fully explained by theoretical training alone. Although the list details the minimum practical training subjects, other items may be added where applicable to the particular aircraft type.

Tasks to be completed shall be representative of the aircraft and systems both in complexity and in the technical input required to complete that task. While relatively simple tasks may be included, other more complex tasks shall also be incorporated and undertaken as appropriate to the aircraft type.

Glossary of the table: LOC: Location; FOT: Functional / Operational Test; SGH: Service and Ground Handling; R/I: Removal / Installation; MEL: Minimum Equipment List; TS: Trouble Shooting.

Chapter	B1/B2	B1					B2				
	LOC	FOT	SGH	R/I	MEL	TS	FOT	SGH	R/I	MEL	TS
Introduction Module											
05 Time limits/maintenance checks	X/X	—	—	—	—	—	—	—	—	—	—
06 Dimensions/Areas	X/X	—	—	—	—	—	—	—	—	—	—
07 Lifting and Shoring	X/X	—	—	—	—	—	—	—	—	—	—
08 Leveling and weighing	X/X	—	X	—	—	—	—	X	—	—	—
09 Towing & Taxiing	X/X	—	X	—	—	—	—	X	—	—	—
10 Parking/mooring, Strong and Return to Service	X/X	—	X	—	—	—	—	X	—	—	—
11 Placards and Markings	X/X	—	—	—	—	—	—	—	—	—	—
12 Servicing	X/X	—	X	—	—	—	—	X	—	—	—
20 Standard practices — only type particular	X/X	—	X	—	—	—	—	X	—	—	—
Helicopters											
18 Vibration and Noise Analysis (Blade tracking)	X/--	—	—	—	—	X	—	—	—	—	—
60 Standard Practices Rotor – only Type Specific	X/X	—	X	—	—	—	—	X	—	—	—
62 Rotors	X/--	—	X	X	—	X	—	—	—	—	—
62A Rotors — Monitoring and indicating	X/X	X	X	X	X	X	—	—	X	—	X
63 Rotor Drives	X/--	X	—	—	—	X	—	—	—	—	—
63A Rotor Drives — Monitoring and indicating	X/X	X	—	X	X	X	—	—	X	—	X
64 Tail Rotor	X/--	—	X	—	—	X	—	—	—	—	—
64A Tail rotor — Monitoring and indicating	X/X	X	—	X	X	X	—	—	X	—	X
65 Tail Rotor Drive	X/--	X	—	—	—	X	—	—	—	—	—
65A Tail Rotor Drive — Monitoring and indicating	X/X	X	—	X	X	X	—	—	X	—	X
66 Folding Blades/Pylons	X/--	X	X	—	—	X	—	—	—	—	—
67 Rotor Flight Control	X/--	X	X	—	X	X	—	—	—	—	—
53 Airframe Structure (Helicopter)											
25 Emergency Floatation Equipment	X/X	X	X	X	X	X	X	X	—	—	—
Airframe structure											
51 Standard practices and structures (damage classification, assessment and repair)											
53 Fuselage	X/--	—	—	—	—	X	—	—	—	—	—
54 Nacelles/Pylons	X/--	—	—	—	—	—	—	—	—	—	—
55 Stabilizers	X/--	—	—	—	—	—	—	—	—	—	—
56 Windows	X/--	—	—	—	—	X	—	—	—	—	—
57 Wings	X/--	—	—	—	—	—	—	—	—	—	—
27A Flight Control Surface (All)	X/--	—	—	—	—	X	—	—	—	—	—
52 Doors	X/X	X	X	—	—	—	—	X	—	—	—
Airframe Systems											
21 Air Conditioning	X/X	X	X	—	X	X	X	X	—	X	X
21A Air Supply	X/X	X	—	—	—	—	X	—	—	—	—

Chapter	B1/B2	B1					B2				
	LOC	FOT	SGH	R/I	MEL	TS	FOT	SGH	R/I	MEL	TS
21B Pressurization	X/X	X	—	—	X	X	X	—	—	X	X
21C Safety & Warning Devices	X/X	—	X	—	—	—	—	X	—	—	—
22 Auto flight	X/X	—	—	—	X	—	X	X	X	X	X
23 Communications	X/X	—	X	—	X	—	X	X	X	X	X
24 Electrical Power	X/X	X	X	X	X	X	X	X	X	X	X
25 Equipment and Furnishings	X/X	X	X	X	—	—	X	X	X	—	—
25A Electronic Equipment including emergency equipment	X/X	X	X	X	—	—	X	X	X	—	—
26 Fire Protection	X/X	X	X	X	X	X	X	X	X	X	X
27 Flight Controls	X/X	X	X	X	X	X	X	—	—	—	—
27A Sys. Operations: Electrical/Fly-by-Wire	X/X	X	X	X	X	—	X	—	X	—	X
28 Fuel Systems	X/X	X	X	X	X	X	X	X	—	X	—
28A Fuel Systems — Monitoring and indicating	X/X	X	—	—	—	—	X	—	X	—	X
29 Hydraulic Power	X/X	X	X	X	X	X	X	X	—	X	—
29A Hydraulic Power — Monitoring and indicating	X/X	X	—	X	X	X	X	—	X	X	X
30 Ice and Rain Protection	X/X	X	X	—	X	X	X	X	—	X	X
31 Indicating/Recording Systems	X/X	X	X	X	X	X	X	X	X	X	X
31A Instrument Systems	X/X	X	X	X	X	X	X	X	X	X	X
32 Landing Gear	X/X	X	X	X	X	X	X	X	X	X	—
32A Landing Gear — Monitoring and indicating	X/X	X	—	X	X	X	X	—	X	X	X
33 Lights	X/X	X	X	—	X	—	X	X	X	X	—
34 Navigation	X/X	—	X	—	X	—	X	X	X	X	X
35 Oxygen	X/--	X	X	X	—	—	X	X	—	—	—
36 Pneumatic	X/--	X	—	X	X	X	X	—	X	X	X
36A Pneumatic — Monitoring and indicating	X/X	X	X	X	X	X	X	X	X	X	X
37 Vacuum	X/--	X	—	X	X	X	—	—	—	—	—
38 Water/Waste	X/--	X	X	—	—	—	X	X	—	—	—
41 Water Ballast	X/--	—	—	—	—	—	—	—	—	—	—
42 Integrated modular avionics	X/X	—	—	—	—	—	X	X	X	X	X
44 Cabin Systems	X/X	—	—	—	—	—	X	X	X	X	X
45 On-Board Maintenance System (or covered in 31)	X/X	X	X	X	X	X	X	X	X	X	X
46 Information Systems	X/X	—	—	—	—	—	X	—	X	X	X
50 Cargo and Accessory Compartments	X/X	—	X	—	—	—	—	—	—	—	—
Turbine/Piston Engine Module:											
70 Standard Practices — Engines —only type particular	—	—	X	—	—	—	—	X	—	—	—

Chapter	B1/B2	B1					B2				
	LOC	FOT	SGH	R/I	MEL	TS	FOT	SGH	R/I	MEL	TS
70A Constructional arrangement and operation (Installation Inlet, Compressors, Combustion Section, Turbine Section, Bearings and Seals, Lubrication Systems)	X/X	—	—	—	—	—	—	—	—	—	—
Turbine engines:											
70B Engine Performance	—	—	—	—	—	X	—	—	—	—	—
71 Power Plant	X/--	—	—	—	—	—	—	—	—	—	—
72 Engine Turbine/Turbo Prop/Ducted Fan/ Unducted fan	X/--	—	—	—	—	—	—	—	—	—	—
73 Engine Fuel and Control	X/-X	X	—	—	—	—	—	—	—	—	—
73A FADEC Systems	X/X	X	—	X	X	X	X	—	X	X	X
74 Ignition	X/X	X	—	—	—	—	X	—	—	—	—
75 Air	X/--	—	—	X	—	X	—	—	—	—	—
76 Engine Controls	X/--	X	—	—	—	X	—	—	—	—	—
77 Engine Indicating	X/X	X	—	—	X	X	X	—	—	X	X
78 Exhaust	X/--	X	—	—	X	—	—	—	—	—	—
79 Oil	X/--	—	X	X	—	—	—	—	—	—	—
80 Starting	X/--	X	—	—	X	X	—	—	—	—	—
82 Water Injection	X/--	X	—	—	—	—	—	—	—	—	—
83 Accessory Gearboxes	X/--	—	X	—	—	—	—	—	—	—	—
84 Propulsion Augmentation	X/--	X	—	—	—	—	—	—	—	—	—
Auxiliary Power Units (APUs):											
49 Auxiliary Power Units (APUs)	X/--	X	X	—	—	X	—	—	—	—	—
Piston Engines:											
70 Standard Practices — Engines —only type Particular	—	—	X	—	—	—	—	X	—	—	—
70A Constructional arrangement and operation (Installation Inlet, Compressors, Combustion Section, Turbine Section, Bearings and Seals, Lubrication Systems)	X/X	—	—	—	—	—	—	—	—	—	—
70B Engine Performance	—	—	—	—	—	X	—	—	—	—	—
71 Power Plant	X/--	X	X	—	—	—	—	X	—	—	—
73 Engine Fuel and Control	X/X	X	—	—	—	—	—	—	—	—	—
73A FADEC Systems	X/X	X	—	X	X	X	X	X	X	X	X
74 Ignition	X/X	X	—	—	—	—	X	—	—	—	—
76 Engine Controls	X/--	X	—	—	—	X	—	—	—	—	—
77 Engine Indicating	X/X	X	—	—	X	X	X	—	—	X	X
78 Exhaust	X/--	X	—	—	X	X	—	—	—	—	—
79 Oil	X/--	—	X	X	—	—	—	—	—	—	—
80 Starting	X/--	X	—	—	X	X	—	—	—	—	—
81 Turbines	X/--	X	X	X	—	X	—	—	—	—	—
82 Water Injection	X/--	X	—	—	—	—	—	—	—	—	—

Chapter	B1/B2	B1					B2				
	LOC	FOT	SGH	R/I	MEL	TS	FOT	SGH	R/I	MEL	TS
83 Accessory Gearboxes	X/--	—	X	X	—	—	—	—	—	—	—
84 Propulsion Augmentation	X/--	X	—	—	—	—	—	—	—	—	—
Propellers:											
60A Standard Practices — Propeller	—	—	—	X	—	—	—	—	—	—	—
61 Propellers/Propulsion	X/X	X	X	—	X	X	—	—	—	—	—
61A Propeller Construction	X/X	—	X	—	—	—	—	—	—	—	—
61B Propeller Pitch Control	X/--	X	—	X	X	X	—	—	—	—	—
61C Propeller Synchronizing	X/--	X	—	—	—	X	—	—	—	X	—
61D Propeller Electronic control	X/X	X	X	X	X	X	X	X	X	X	X
61E Propeller Ice Protection	X/-	X	—	X	X	X	—	—	—	—	—
61F Propeller Maintenance	X/X	X	X	X	X	X	X	X	X	X	X

3. Type training examination standard

3.1 Theoretical element examination standard

After the theoretical portion of the aircraft type training has been completed, a written examination shall be performed, which shall comply with the following:

(a) Format of the examination is of the multiple-choice type. Each multiple-choice question shall have 3 alternative answers of which only one shall be the correct answer. The total time is based on the total number of questions and the time for answering is based upon a nominal average of 90 seconds per question.

(b) The incorrect alternatives shall seem equally plausible to anyone ignorant of the subject. All the alternatives shall be clearly related to the question and of similar vocabulary, grammatical construction and length.

(c) In numerical questions, the incorrect answers shall correspond to procedural errors such as the use of incorrect sense (+ versus -) or incorrect measurement units. They shall not be mere random numbers.

(d) The level of examination for each chapter (*) shall be the one defined in point 2 “Aircraft type training levels”. However, the use of a limited number of questions at a lower level is acceptable.

(e) The examination shall be of the closed book type. No reference material is permitted. An exception will be made for the case of examining a B1 or B2 candidate's ability to interpret technical documents.

(f) The number of questions shall be at least 1 question per hour of instruction. The number of questions for each chapter and level shall be proportionate to:

- The effective training hours spent teaching at that chapter and level;

- The learning objectives as given by the training needs analysis.

CAAB will assess the number and the level of the questions when approving the course.

(g) The minimum examination pass mark is 75 %. When the type training examination is split in several examinations, each examination shall be passed with at least a 75% mark. In order to be possible to achieve exactly a 75% pass mark, the number of questions in the examination shall be a multiple of 4.

(h) Penalty marking (negative points for failed questions) is not to be used.

(i) End of module phase examinations cannot be used as part of the final examination unless they contain the correct number and level of questions required.

(*) For the purpose of this point 4, a "chapter" means each one of the rows preceded by a number in the table contained in point 3.1(e).

3.2 Practical element examination standard

After the practical element of the aircraft type training has been completed, an assessment must be performed, which must comply with the following:

(a) The assessment shall be performed by designated assessors appropriately qualified.

(b) The assessment shall evaluate the knowledge and skills of the trainee.

4. Type examination standard

Type examination shall be conducted by training organisations appropriately approved under Part-147 or by the competent authority.

The examination shall be oral, written or practical assessment based, or a combination thereof and it shall comply with the following requirements:

(a) Oral examination questions shall be open.

(b) Written examination questions shall be essay type or multiple-choice questions.

(c) Practical assessment shall determine a person's competence to perform a task.

(d) Examination subjects shall be on a sample of chapters (**) drawn from paragraph 3 type training/examination syllabus, at the indicated level.

(e) The incorrect alternatives shall seem equally plausible to anyone ignorant of the subject. All of the alternatives shall be clearly related to the question and of similar vocabulary, grammatical construction and length.

(f) In numerical questions, the incorrect answers shall correspond to procedural errors such as corrections applied in the wrong sense or incorrect unit conversions: they shall not be mere random numbers.

(g) The examination shall ensure that the following objectives are met:

1. Properly discuss with confidence the aircraft and its systems.
2. Ensure safe performance of maintenance, inspections and routine work according to the maintenance manual and other relevant instructions and tasks as appropriate for the type of aircraft, for example troubleshooting, repairs, adjustments, replacements, rigging and functional checks such as engine run, etc., if required.
3. Correctly use all technical literature and documentation for the aircraft.
4. Correctly use specialist/special tooling and test equipment, perform removal and replacement of components and modules unique to type, including any on-wing maintenance activity

(h) The following conditions apply to the examination:

1. The maximum number of consecutive attempts is three. Further sets of three attempts are allowed with a one year waiting period between sets. A waiting period of 30 days is required after the first failed attempt within one set, and a waiting period of 60 days is required after the second failed attempt.

   The applicant shall confirm in writing to the maintenance training organisation or the competent authority to which they apply for an examination, the number and dates of attempts

during the last year and the maintenance training organisation or the competent authority where these attempts took place. The maintenance training organisation or the competent authority is responsible for checking the number of attempts within the applicable timeframes.

2. The type examination shall be passed and the required practical experience shall be completed within the three years preceding the application for the rating endorsement on the aircraft maintenance licence.

3. Type examination shall be performed with at least one examiner present. The examiner(s) shall not have been involved in the applicant's training.

(i) A written and signed report shall be made by the examiner(s) to explain why the candidate has passed or failed.

(**) For the purpose of this point 5, a "chapter" means each one of the rows preceded by a number in the tables contained in points 3.1(e) and 3.2(b).

6. On-the-Job Training

On-the-Job Training (OJT) shall be approved by CAAB.

It shall be conducted at and under the control of a maintenance organisation appropriately approved for the maintenance of the particular aircraft type and shall be assessed by designated assessors appropriately qualified.

It shall have been started and completed within the three years preceding the application for a type rating endorsement.

(a) Objective:
The objective of OJT is to gain the required competence and experience in performing safe maintenance.

(b) Content:
OJT shall cover a cross section of tasks acceptable to the competent authority. The OJT tasks to be completed shall be representative of the aircraft and systems both in complexity and in the technical input required to complete that task. While relatively simple tasks may be included, other more complex maintenance tasks shall also be incorporated and undertaken as appropriate to the aircraft type.

Each task shall be signed off by the student and countersigned by a designated supervisor. The tasks listed shall refer to an actual job card/work sheet, etc.

The final assessment of the completed OJT is mandatory and shall be performed by a designated assessor appropriately qualified.

The following data shall be addressed on the OJT worksheets/ logbook:

1. Name of Trainee;
2. Date of Birth;
3. Approved Maintenance Organisation;
4. Location;
5. Name of supervisor(s) and assessor, (including licence number if applicable);
6. Date of task completion;
7. Description of task and job card/work order/ tech log, etc;
8. Aircraft type and aircraft registration;
9. Aircraft rating applied for.

In order to facilitate the verification by the competent authority, demonstration of the OJT shall consist of (i) detailed worksheets/logbook and (ii) a compliance report demonstrating how the OJT meets the requirement of this Part.

Appendix C: Aircraft Type Practical Experience and On-the-Job Training

List of Tasks

Type experience should be demonstrated by the submission of records or logbook showing the tasks performed by the applicant as specified by the CAAB.

Time limits/Maintenance checks
100 hour check (general aviation aircraft).
"B" or "C" check (transport category aircraft).
Assist carrying out a scheduled maintenance check i.a.w. AMM.
Review Aircraft maintenance log for correct completion.
Review records for compliance with Airworthiness Directives.
Review records for compliance with component life limits.
Procedure for inspection following heavy landing.
Procedure for inspection following lightning strike.

Dimensions/Areas
Locate component(s) by zone/station number.
Perform symmetry check.

Lifting and Shoring
Assist in :
Jack aircraft nose or tail wheel.
Jack complete aircraft.
Sling or trestle major component.

Levelling/Weighing
Level aircraft.
Weigh aircraft.
Prepare weight and balance amendment.
Check aircraft against equipment list.

Towing and Taxiing
Prepare for aircraft towing.
Tow aircraft.
Be part of aircraft towing team.

Parking and mooring
Tie down aircraft.
Park, secure and cover aircraft.
Position aircraft in dock.
Secure rotor blades.

Placards and Markings
Check aircraft for correct placards.
Check aircraft for correct markings.

Servicing
Refuel aircraft.
Defuel aircraft.
Carry out tank to tank fuel transfer.
Check/adjust tire pressures.
Check/replenish oil level.
Check/replenish hydraulic fluid level.
Check/replenish accumulator pressure.
Charge pneumatic system.
Grease aircraft.
Connect ground power.
Service toilet/water system
Perform pre-flight/daily check.

Vibration and Noise Analysis
Analyse helicopter vibration problem.
Analyse noise spectrum.
Analyse engine vibration.

Air Conditioning
Replace combustion heater.
Replace flow control valve.
Replace outflow valve.
Replace safety valve.
Replace vapour cycle unit.
Replace air cycle unit.
Replace cabin blower.
Replace heat exchanger.
Replace pressurisation controller.
Clean outflow valves.
Deactivate/reactivate cargo isolation valve.
Deactivate/reactivate avionics ventilation components.
Check operation of air conditioning/heating system.
Check operation of pressurisation system.
Troubleshoot faulty system.

Auto flight
Install servos.
Rig bridle cables
Replace controller.
Replace amplifier.
Replacement of the auto flight system LRUs in case of fly-by-wire aircraft.
Check operation of auto-pilot.
Check operation of auto-throttle/auto-thrust.
Check operation of yaw damper.
Check and adjust servo clutch.
Perform autopilot gain adjustments.
Perform mach trim functional check.
Troubleshoot faulty system.
Check autoland system.
Check flight management systems.
Check stability augmentation system.

Communications
Replace VHF com unit.
Replace HF com unit.
Replace existing antenna.
Replace static discharge wicks.
Check operation of radios.
Perform antenna VSWR check.
Perform Selcal operational check.
Perform operational check of passenger address system.
Functionally check audio integrating system.
Repair co-axial cable.
Troubleshoot faulty system.

Electrical Power
Charge lead/acid battery.
Charge Ni-Cad battery.
Check battery capacity.
Deep-cycle Ni-Cad battery.

Replace integrated drive/generator/alternator.
Replace switches.
Replace circuit breakers.
Adjust voltage regulator.
Change voltage regulator.
Amend electrical load analysis report.
Repair/replace electrical feeder cable.
Troubleshoot faulty system.
Perform functional check of integrated drive/generator/alternator.
Perform functional check of voltage regulator.
Perform functional check of emergency generation system.

Equipment/Furnishings
Replace carpets
Replace crew seats.
Replace passenger seats.
Check inertia reels.
Check seats/belts for security.
Check emergency equipment.
Check ELT for compliance with regulations.
Repair toilet waste container.
Remove and install ceiling and sidewall panels.
Repair upholstery.
Change cabin configuration.
Replace cargo loading system actuator.
Test cargo loading system.
Replace escape slides/ropes.

Fire protection
Check fire bottle contents.
Check/test operation of fire/smoke detection and warning system.
Check cabin fire extinguisher contents.
Check lavatory smoke detector system.
Check cargo panel sealing.
Install new fire bottle.
Replace fire bottle squib.
Troubleshoot faulty system.
Inspect engine fire wire detection systems.

Flight Controls
Inspect primary flight controls and related components i.a.w. AMM.
Extending/retracting flaps & slats.
Replace horizontal stabiliser.
Replace spoiler/lift damper.
Replace elevator.
Deactivation/reactivation of aileron servo control.
Replace aileron.
Replace rudder.
Replace trim tabs.
Install control cable and fittings.
Replace slats.
Replace flaps.
Replace powered flying control unit.
Replace flat actuator.
Rig primary flight controls.
Adjust trim tab.
Adjust control cable tension.
Check control range and direction of movement.
Check for correct assembly and locking.
Troubleshoot faulty system.
Functional test of primary flight controls.
Functional test of flap system.
Operational test of the side stick assembly.
Operational test of the THS.
THS system wear check.

Fuel
Water drain system (operation).
Replace booster pump.
Replace fuel selector.
Replace fuel tank cells.
Replace/test fuel control valves.
Replace magnetic fuel level indicators.
Replace water drain valve.
Check/calculate fuel contents manually.
Check filters.
Flow check system.
Check calibration of fuel quantity gauges.
Check operation feed/selectors.
Check operation of fuel dump/jettison system.
Fuel transfer between tanks.
Pressure defuel.
Pressure refuel (manual control).
Deactivation/reactivation of the fuel valves (transfer defuel, X-feed, refuel).
Troubleshoot faulty system.

Hydraulics
Replace engine driven pump.
Check/replace case drain filter.
Replace standby pump.
Replace hydraulic motor pump/generator.
Replace accumulator.
Check operation of shut off valve.
Check filters/clog indicators.
Check indicating systems.
Perform functional checks.
Pressurisation/depressurisation of the hydraulic system.
Power Transfer Unit (PTU) operation.
Replacement of PTU.
Troubleshoot faulty system.

Ice and rain protection
Replace pump.
Replace timer.
Inspect repair propeller deice boot.
Test propeller de-icing system.
Inspect/test wing leading edge de-icer boot.
Replace anti-ice/deice valve.
Install wiper motor.
Check operation of systems.
Operational test of the pitot-probe ice protection.
Operational test of the TAT ice protection.
Operational test of the wing ice protection system.
Assistance to the operational test of the engine air-intake ice protection (with engines operating).
Troubleshoot faulty system.

Indicating/recording systems
Replace flight data recorder.
Replace cockpit voice recorder.
Replace clock.
Replace master caution unit.

Replace FDR.
Perform FDR data retrieval.
Troubleshoot faulty system.
Implement ESDS procedures.
Inspect for HIRF requirements.
Start/stop EIS procedure.
Bite test of the CFDIU.
Ground scanning of the central warning system.

Landing Gear
Build up wheel.
Replace main wheel.
Replace nose wheel.
Replace steering actuator.
Replace truck tilt actuator.
Replace gear retraction actuator.
Replace uplock/downlock assembly.
Replace shimmy damper.
Rig nose wheel steering.
Functional test of the nose wheel steering system.
Replace shock strut seals.
Replace brake unit.
Replace brake control valve.
Bleed brakes.
Replace brake fan.
Test anti skid unit.
Test gear retraction.
Change bungees.
Adjust micro switches/sensors.
Charge struts with oil and air.
Troubleshoot faulty system.
Test auto-brake system.
Replace rotorcraft skids.
Replace rotorcraft skid shoes.
Pack and check floats.
Flotation equipment.
Check/test emergency blowdown (emergency landing gear extension).
Operational test of the landing gear doors.

Lights
Repair/replace rotating beacon.
Repair/replace landing lights.
Repair/replace navigation lights.
Repair/replace interior lights.
Replace ice inspection lights.
Repair/replace logo lights.
Repair/replace emergency lighting system.
Perform emergency lighting system checks.
Troubleshoot faulty system

Navigation
Calibrate magnetic direction indicator.
Replace airspeed indicator.
Replace altimeter.
Replace air data computer.
Replace VOR unit.
Replace ADI.
Replace HSI.
Check pitot static system for leaks.
Check operation of directional gyro.
Functional check weather radar.
Functional check doppler.
Functional check TCAS.
Functional check DME.
Functional check ATC Transponder
Functional check flight director system.
Functional check inertial nav system.
Complete quadrantal error correction of ADF system.
Update flight management system database.
Check calibration of pitot static instruments.
Check calibration of pressure altitude reporting system.
Troubleshoot faulty system.
Check marker systems.
Compass replacement direct/indirect.
Check Satcom.
Check GPS.
Test AVM.

Oxygen
Inspect on board oxygen equipment.
Purge and recharge oxygen system.
Replace regulator.
Replace oxygen generator.
Test crew oxygen system.
Perform auto oxygen system deployment check.
Troubleshoot faulty system.

Pneumatic systems
Replace filter.
Replace air shut off valve.
Replace pressure regulating valve.
Replace compressor.
Recharge dessicator.
Adjust regulator.
Check for leaks.
Troubleshoot faulty system.

Vacuum systems
Inspect the vacuum system i.a.w. AMM.
Replace vacuum pump.
Check/replace filters.
Adjust regulator.
Troubleshoot faulty system.

Water/Waste
Replace water pump.
Replace tap.
Replace toilet pump.
Perform water heater functional check.
Troubleshoot faulty system.
Inspect waste bin flap closure.

Central Maintenance System
Retrieve data from CMU.
Replace CMU.
Perform Bite check.
Troubleshoot faulty system.

Airborne Auxiliary power
Install APU.
Inspect hot section.
Troubleshoot faulty system.

Structures
Assessment of damage.
Sheet metal repair.
Fibre glass repair.
Wooden repair.
Fabric repair.
Recover fabric control surface.
Treat corrosion.
Apply protective treatment.

Doors
Inspect passenger door i.a.w. AMM.
Rig/adjust locking mechanism.
Adjust air stair system.
Check operation of emergency exits.
Test door warning system.
Troubleshoot faulty system.
Remove and install passenger door i.a.w. AMM.
Remove and install emergency exit i.a.w. AMM.
Inspect cargo door i.a.w. AMM.

Windows
Replace windshield.
Replace direct vision window.
Replace cabin window.
Repair transparency.

Wings
Skin repair.
Recover fabric wing.
Replace tip.
Replace rib.
Replace integral fuel tank panel.
Check incidence/rig.

Propeller
Assemble prop after transportation.
Replace propeller.
Replace governor.
Adjust governor.
Perform static functional checks.
Check operation during ground run.
Check track.
Check setting of micro switches.
Assessment of blade damage i.a.w. AMM.
Dynamically balance prop.
Troubleshoot faulty system

Main Rotors
Install rotor assembly.
Replace blades.
Replace damper assembly.
Check track.
Check static balance.
Check dynamic balance.
Troubleshoot.

Rotor Drive
Replace mast.
Replace drive coupling.
Replace clutch/freewheel unit
Replace drive belt.
Install main gearbox.
Overhaul main gearbox.
Check gearbox chip detectors.

Tail Rotors
Install rotor assembly.
Replace blades.
Troubleshoot.

Tail Rotor Drive
Replace bevel gearbox.
Replace universal joints.
Overhaul bevel gearbox.
Install drive assembly.
Check chip detectors.
Check/install bearings and hangers.
Check/service/assemble flexible couplings.
Check alignment of drive shafts.
Install and rig drive shafts.

Rotorcraft flight controls
Install swash plate.
Install mixing box.
Adjust pitch links.
Rig collective system.
Rig cyclic system.
Rig anti-torque system.
Check controls for assembly and locking.
Check controls for operation and sense.
Troubleshoot faulty system.

Power Plant
Build up ECU.
Replace engine.
Repair cooling baffles.
Repair cowling.
Adjust cowl flaps.
Repair faulty wiring.
Troubleshoot.
Assist in dry motoring check.
Assist in wet motoring check.
Assist in engine start (manual mode).

Piston Engines
Remove/install reduction gear.
Check crankshaft run-out.
Check tappet clearance.
Check compression.
Extract broken stud.
Install helicoil.
Perform ground run.
Establish/check reference RPM.
Troubleshoot.

Turbine Engines
Replace module.
Replace fan blade.
Hot section inspection/boroscope check.
Carry out engine/compressor wash.
Carry out engine dry cycle.
Engine ground run.
Establish reference power.

Trend monitoring/gas path analysis.
Troubleshoot.

Fuel and control, piston
Replace engine driven pump.
Adjust AMC.
Adjust ABC.
Install carburettor/injector.
Adjust carburettor/injector.
Clean injector nozzles.
Replace primer line.
Check carburettor float setting.
Troubleshoot faulty system.

Fuel and control, turbine
Replace FCU.
Replace Engine Electronic Control Unit (FADEC).
Replace Fuel Metering Unit (FADEC).
Replace engine driven pump.
Clean/test fuel nozzles.
Clean/replace filters.
Adjust FCU.
Troubleshoot faulty system.
Functional test of FADEC.

Ignition systems, piston
Change magneto.
Change ignition vibrator.
Change plugs.
Test plugs.
Check H.T. leads.
Install new leads.
Check timing.
Check system bonding.
Troubleshoot faulty system.

Ignition systems, turbine
Perform functional test of the ignition system.
Check glow plugs/ignitors.
Check H.T. leads.
Check ignition unit.
Replace ignition unit.
Troubleshoot faulty system.

Engine Controls
Rig thrust lever.
Rig RPM control.
Rig mixture HP cock lever.
Rig power lever.
Check control sync (multi-eng).
Check controls for correct assembly and locking.
Check controls for range and direction of movement.
Adjust pedestal micro-switches.
Troubleshoot faulty system.

Engine Indicating
Replace engine instruments(s).
Replace oil temperature bulb.
Replace thermocouples.
Check calibration.
Troubleshoot faulty system.

Exhaust, piston
Replace exhaust gasket.
Inspect welded repair.
Pressure check cabin heater muff.
Troubleshoot faulty system.

Exhaust, turbine
Change jet pipe.
Change shroud assembly.
Install trimmers.
Inspect/replace thrust reverser.
Replace thrust reverser component.
Deactivate/reactivate thrust reverser.
Operational test of the thrust reverser system.

Oil
Change oil.
Check filter(s).
Adjust pressure relief valve.
Replace oil tank.
Replace oil pump.
Replace oil cooler.
Replace firewall shut off valve.
Perform oil dilution test.
Troubleshoot faulty system.

Starting
Replace starter.
Replace start relay.
Replace start control valve.
Check cranking speed.
Troubleshoot faulty system.

Turbines, piston engines
Replace PRT.
Replace turbo-blower.
Replace heat shields.
Replace waste gate.
Adjust density controller.

Engine water injection
Replace water/methanol pump.
Flow check water/methanol system.
Adjust water/methanol control unit.
Check fluid for quality.
Troubleshoot faulty system

Accessory gear boxes
Replace gearbox.
Replace drive shaft.
Inspect magnetic chip detector

APU
Removal/installation of the APU.
Removal/installation of the inlet guide-vane actuator.
Operational test of the APU emergency shut-down test.
Operational test of the APU.

Appendix D: Aircraft rating requirements

Aircraft Groups	B1/B3 licence	B2 licence	C licence
Group1 • Complex motorpowered aircraft. • Multiple engine helicopters. • Aeroplanes certified above FL290. • Aircraft equipped with fly-by-wire. • Other aircraft defined by CAAB	**(For B1)** **Individual TYPE RATING** Type training: - Theory + examination - Practical + assessment **PLUS** OJT (for first aircraft in licence subcategory)	**Individual TYPE RATING** Type training: - Theory + examination - Practical + assessment **PLUS** OJT (for first aircraft in licence subcategory)	**Individual TYPE RATING** Type training:- Theory + examination
Group 2 **Subgroups:** **2a: single turboprop aeroplanes (*)** **2b: single turbine-engine helicopters (*)** **2c: single piston-engine helicopters (*)** (*) Except those classified in Group 1.	**(For B1.1, B1.3, B1.4)** **Individual TYPE RATING** (type training + OJT) **or** (type examination + practical experience) **Full SUBGROUP RATING** (type training + OJT) **or** (type examination + practical experience) on at least 3 aircraft representative of that subgroup **Manufacturer SUBGROUP RATING** (type training + OJT) **or** (type examination + practical experience) on at least 2 aircraft representative of that manufacturer subgroup	**Individual TYPE RATING** (type training + OJT) **or** (type examination + practical experience) **Full SUBGROUP RATING** based on demonstration of practical experience **Manufacturer SUBGROUP RATING** based on demonstration of practical experience	**Individual TYPE RATING** type training **or** type examination **Full SUBGROUP RATING** type training **or** type examination on at least 3 aircraft representative of that subgroup **Manufacturer SUBGROUP RATING** type training **or** type examination on at least 2 aircraft representative of that manufacturer subgroup
Group3 **Piston engine aeroplanes** (except those classified in Group 1)	**(For B1.2)** **Individual TYPE RATING** (type training + OJT) **or** (type examination + practical experience) **Full GROUP 3 RATING** based on demonstration of practical experience **Limitations:** • Pressurized aeroplanes • Metal aeroplanes • Composite aeroplanes • Wooden aeroplanes • Metal tubing & fabric aeroplanes	**Individual TYPE RATING** (type training + OJT) **or** (type examination + practical experience) **Full GROUP 3 RATING** based on demonstration of appropriate experience	**Individual TYPE RATING** type training **or** type examination **Full GROUP 3 RATING** based on demonstration of practical experience
Piston engine non-pressurized Aeroplanes of 2000 kg MTOM and below	**(For B3)** **FULL RATING "Piston engine non-pressurized aeroplanes of 2000 kg MTOM & below"** based on demonstration of practical experience **Limitations:** • Metal aeroplanes • Composite aeroplanes • Wooden aeroplanes • Metal tubing & fabric aeroplanes	**Not applicable**	**Not applicable**

CHAPTER 10: ANO(AW) Part D and Specialized Tasks

10.1 General Information

ANO(AW) Part-66 was issued on July 14, 2013. ANO(AW). However, existing ANO(AW) Part D licence holders can exercise the privileges of their licences for existing operators until the expiry of their licence or June 2017 whichever is later. CAAB recommends that all ANO(AW) Part D holders apply for conversion to ANO(AW) Part-66 licences at least six weeks before the expiry of their licences.

10.1.1 ANO(AW) Part-66 Introduction Timetable

An introduction timetable is provided at Appendix A to this Section, which provides information on cessation dates and compliance dates. Updates to this table will be made on our web site.

10.2 Conversion of ANO(AW) Part D Licence to an ANO(AW) Part-66 Licence

A quick reference to renewal requirements may be found in Appendix B to this Chapter.

10.3 Specialized Tasks

ANO(AW) Part-145 and ANO(AW) Part-M should be referred whenever there is a question about performance of any maintenance. This document provides guidance only on matters related to licencing. For example, whether someone requires a ANO(AW) Part-66 licence for specialized tasks like NDT.

10.3.1 Engine run-up and Taxiing

Engine run and taxi courses are not required in ANO(AW) Part-66 type training, and hence not required to endorse a type in a ANO(AW) Part-66 licence. However, AMC 145.70 (a) requires that the ANO(AW) Part-145 organisation develops procedure for engine run-up and taxiing. Those procedures should indicate how the maintenance personnel will be qualified before performing such tasks. The qualification procedure should include an engine run-up and taxiing course or those qualifying can be trained by a person who already has engine run-up and taxiing authorisation in the ANO(AW) Part-145 organisation.

10.3.2 Non Destructive Testing Personnel

ANO(AW) Part-66 licence is not a pre-requisite to get an NDT authorization in a ANO(AW) Part-145 organisation. An unlicenced person can also have an NDT authorization. A good guide for the development of a procedure in MOE for the qualification of NDT personnel is, UK CAA CAP 747, GR No.23- *Personnel Certification for Non-Destructive Testing of Aircraft, Engines, Components and Materials*

Refer to ANO(AW) Part-145.30 (f) and AMC 145.30 (f)

10.4 The Future of ANO(AW) Part D Licence

All ANO(AW) Part D Licences shall be valid until it expires or June 2017 whichever is later, after which a ANO(AW) Part-66 Licence will be issued upon renewal. Any limitations applicable will be imposed on the converted ANO(AW) Part-66 Licence.

CAAB will not conduct any examination for new applicants as per ANO(AW) Part D. However, examinations will be conducted for the candidates who have already passed one or more subjects for the issuance of ANO(AW) Part D licence. All such candidates are also encouraged to comply with the as per ANO(AW) Part-66 modules or conversion modules.

10.5 Classification of Aircraft Into The Various Groups Within ANO(AW) Part D Licence Categories

As CAAB has not issued any group rating licence so far as per ANO(AW) Part D, there will not be any requirement to convert group rating licence to ANO(AW) Part-66 group rating licence.

Appendix B: Quick Reference Renewal Requirements

LICENCE RENEWAL WITHIN VALIDITY PERIOD	**RECOMMEND CONVERSION TO ANO(AW) Part-66** 6 months experience of maintenance on operational aircraft within the last 24 months at time of application.
LICENCE RENEWAL WITHIN 24 MONTHS EXPIRY OF LICENCE	
LICENCE RENEWAL EXPIRED OVER 24 MONTHS BUT WITHIN 4 YEARS	Must qualify for a ANO(AW) Part-66 licence. 'Protected Rights' will apply based upon LWTR's held. The appropriate conversion examinations and experience requirements must be completed. ANO(AW) Part-66 multiple-choice papers 9 (Human Factors) and 10 (Aviation Legislation) will need to be passed in addition to that above.

REQUIRED FORMS AND DOCUMENTS

• CAAB Form 19 (for conversion) and appropriate supporting documentation.

Chapter 11: General Examination Requirements and Procedures

11.1 General Information

This Chapter provides information on the examinations appropriate to the grant or extension of a licence in accordance with ANO(AW) Part-66.

11.2 ANO(AW) Part-66 Examinations

Although ANO(AW) Part-66 employs a modular syllabus the content of a module may vary in terms of the subjects covered within the module and depth of knowledge required according to the basic licence category sought. ANO(AW) Part-66 examinations are based on the ANO(AW) Part-66 syllabus as set out in Appendix I to ANO(AW) Part-66.

11.2.1 Multi-Choice Paper

For each module being taken, a question paper including instructions is provided together with an answer sheet. Each question comprises an introductory statement (question stem) and three alternative answers designated (A), (B) and (C) printed below. Only one of these answers is totally correct; the remaining two answers are incorrect or only partially correct, being incomplete in some definite aspect.

11.2.2 Essay Paper

Prior to licence issue essay examinations need to be passed in the following modules:
Module 7 - 2 questions
Module 9 - 1 question
Module 10 - 1 question
Essays can be sat singly or in groups.

For details of the subject modules and applicability please refer to the relevant Sections of this publication.

11.3 Sitting for a Written Examination & Venue

In order to sit for an examination, applicants are asked to follow the procedures below:-

- Candidates should apply only in writing with appropriate fees.
- The time between the closing date for applications will be given in the AME exam announcement but in any case will not be less than three weeks before examination sitting date.

Candidates will be notified regarding venue details and examination timetables within reasonable time frame.

11.4 Examination Timetable

There is NO set timetable yet, but CAAB anticipates one OR two examinations schedule (containing all the modules) per year will be conducted.

11.5 Attendance at the Examinations

Candidates should be present at the examination centre at least 20 minutes before the scheduled time for the commencement of each examination sitting. All candidates are required to present photo ID on the exam day. Acceptable photo ID's are passport, National ID cards (Bangladeshi Only). Candidates without ID will not be permitted to sit the exam. Candidates may only enter the examination room during the 10 minutes preceding the start of the examinations to prepare examination material. They must not remain in the room after the finish of the examination period.

Personal coats, bags, briefcases, etc. may be placed at the front/rear of the examination room, under the direction of the invigilating officer. Any bags etc. could be removed if left unattended outside the examination room.

Note: the CAAB accepts no responsibility for items of personal equipment a candidate brings into the examination hall and which he/she is not permitted to retain during the examination.

Candidates are also advised that, at all examination centers, a 'no smoking rule' must be observed.

11.6 Materials for the Examination

No other materials than that are required for the examination are allowed on the desks. However, candidates may use own pens when writing essays. The use of calculators is not permitted.

11.7 Examination Briefing

Before the start of the examinations, the invigilator will give a briefing regarding the examination**.**

11.8 Regulations Applied to the Conduct of Written Examinations

Candidates are not allowed to use any loose paper other than that provided at the examination. All papers provided to the candidates are to be returned with the answer sheet to the invigilator on completion.

Candidates must ensure that all answers have been transferred onto their answer sheet by the end of the examination. Candidates failing to do this will not be given any extra time.

Silence is to be observed in the examination room **at all times**. Electronic alarms and key rings are not permitted. Mobile telephones, pagers etc. must be switched to silent or off and left with the candidates personal belongings.

If a candidate wishes to speak to an Invigilating Officer, he/she should remain seated and raise his/her hand. It should be noted that the Invigilating Officer will consider only those questions from candidates which relate to the general conduct of the examinations and he/she will not enter into discussion on the interpretation of words or questions contained in the examination papers.

Candidates are to stop work and put pencils down when so directed and must remain seated and quiet until all answer material has been collected.

Any candidate who attempts to remove unauthorised examination materials from the room will be liable to disqualification from those examinations which have been taken and may be subject to special arrangements for future examinations.

Any infringement of examination regulations may result in the candidate being disqualified in any subject he has taken and barred from further participation in future examinations.

11.9 Examination Results

Candidates should not telephone to request dispatch dates of examination results, as results will not be given over the telephone under any circumstances. Results will not be released by fax, nor is it possible to collect your results on the day of dispatch, simply because one candidate could enjoy time advantage over another. Results will not be released until any outstanding payments have been received.

Discussion or correspondence with candidates on the subject of their written examination results is not allowed.

11.10 ANO(AW) Part-66 Module Exam Re-Sits

ANO(AW) Part-66 Appendix II, 1.11 states that 'failed module examination, except in the case of a maintenance training organization approved in accordance with Part-147 which conducts a course of retraining tailored to the failed subjects in the particular module when the failed module may be retaken after 30 days.'

The maximum number of consecutive attempts for each module is three. Further sets of three attempts are allowed with a one-year waiting period between sets.

11.10.1 ANO(AW) Part-147 Course Completion Certificate

The ANO(AW) Part-147 Course Completion Certificate must:-

- Clearly identify the training establishments name and address
- The candidates name
- Details of the module training given
- Duration of training including commencement and completion

11.10.2 Applications for re-sit of failed modules at ANO(AW) Part-147 Organisations

Candidates applying to re-sit failed modules at ANO(AW) Part-147 organisations must adhere to the rule detailed in Section 11.10, unless they have undertaken a further 'tailored to suit' course of training with that organisation or have provided the organisation with the appropriate course completion certificate as detailed in 11.10.1.

11.11 Examination Pass Standards and Validity Periods

A candidate must complete all required examinations within ten years of their first pass except in the cases detailed in sub-section 11.11.1 and 11.11.2 below. Passes falling outside that time limit will lapse. The papers can be attempted in any order. A pass in a ANO(AW) Part-66 examination will be awarded to a candidate achieving at least 75% of the marks allocated to that examination.

11.11.1 Exam module passes for the Removal of Limitations

Under the current rules there is no deadline for the removal of limitations from a ANO(AW) Part-66 licence and therefore are no validity periods applied to the module or part module exam passes. This could be subject to change in future and any information will be published on our web site.

11.11.2 Exam module passes for the Extension of one Category to Another

In accordance with ANO(AW) Part-66 Appendix 1 of chapter 3, the ten year period does not apply to those modules which are common to more than one ANO(AW) Part-66 licence category or sub category and which were previously passed as part of another such category or sub-category examination.

Appendix A: Suggested Study Material

The following is a list of publications which may be useful when studying for knowledge examinations in support of a ANO(AW) Part-66 maintenance licence.

CAR'84, ANO(AW) Parts,
ANO(AW) Part-M Continuing Airworthiness Requirements
ANO(AW) Part-145 Maintenance Organisation Approvals
ANO(AW) Part-66 Certifying Staff
ANO(AW) Part-147 Training Organisation Requirements

Book Title	**Author**	**ISBN**
Basic Knowledge		
Ordinary Level Physics	Abbott	0-435-6700-5
ASA-AMT-G	Dale Crane	1-56027-152-3
Mechanics of Flight	A.C. Kermode	0-582-23740-8
Principles of Flight	Mike Burton	1-85310-779-4
Principles of Flight	Jeppesen	0-88487-358-7
Principles of Flight	Nordian	82-8107-014-5
The Foundations of Helicopter Flight	Simon Newman	0-340-58702-4
The Helicopter How it Flies	J Fay	0-7153-8940-8
The Art & Science of Flying Helicopters	Shawn Coyle	0-340-65249-7

Airframe and Mechanical	**Author**	**ISBN**
Aircraft Maintenance and Repair	Kroes. Watkins. Delp	0-07-112991-X
The Aeroplane Structure	A.C. Kermode	0-273-25229-1
ASA-AMT-Structure	Dale Crane	1-56027-339-9
Jeppesen General		0-88487-203-3
Jeppesen Airframe		0-88487-205-1
ASA-AMT-A`	Dale Crane	1-56027-153-1
Engineered Materials Handbook Vol 1	ASM International	0-87170-279-7
Light Aircraft Inspection	J.E. Heywood	0-85661-016-X
Light Aircraft Maintenance	J.E. Heywood	0-24611-909-8
ASA – AMT – SYS	Dale Crane	1-56027-340-2
Fundamentals of Helicopter Maintenance	Schafer	0891002812

Powerplant	**Author**	**ISBN**
The Jet Engine	Rolls Royce	0-902-121235
Aircraft Powerplants	Bent & McKinley	0-07-035569-X
Aircraft Powerplants	Kroes. Wild	0-07-113429-6
ASA – AMT – P	Dale Crane	1-56027-410-7
Aircraft Gas Turbine Engine Technology	I. E. Treager	0028018281
Aircraft Gas Turbine Engine Technology	I. E. Treager	007065199X

Electrical / Electronic and Avionics	**Author**	**ISBN**
Electrical Technology	E Hughes	0470207337
Aircraft Electrical Systems	E Pallet	0-582-98819-5
Aircraft Electricity and Electronics	Eisman	0-02-801859-1
Art of Electronics	Horowitz /Hill	0-521-37095-7
Elements of Electronics	Hickey/Villines	0070286957
Modern Aviation Electronics	A Helfrich	0-13-118803-8
Micro Electronics in Aircraft systems	E Pallet	0-273-08612-X
Digital Logic	Boyce	0-13214619-3
Fiber Optics	Zanger	0-675-20944-7
Introduction to Avionics	Collinson	0-412-48550-9
Avionic Fundamentals		0-89100-293-6
Manual of Avionics	B Kendal	0-632-01863-1
Automatic Flight Control	E Pallet	0-632-03495-5
Aircraft Instruments & Integrated Systems	E Pallett	0-582-08627-2
Digital Avionic Systems	GRS Spitzer	0-07-060333-2
Transport Category Aircraft Systems	Wild	0-88487-232-7
Aircraft Radio Systems	J Powell	0-273-08444-5
Aircraft Radio Systems	J Powell	0-89100-356-8
Radio Navigation Systems	Forssell	0-13-751058-6
Avionic Navigation Systems	Kayton/Fried	0-471-54795-6
Electro-magnetic Compatibility	Kodali	0-7803-117-5