سلامة الطيران
AVIATION SAFETY

الهيئة العامة للطيران المدني
Civil Aviation Authority
State of Kuwait | دولة الكويت

2026/04/14

2026/045/SUPDT-R/41

All KCASR Stakeholders and Users

Sub.: ***Regulatory Circular No. 2026-03.***
Revision Number 06 to Kuwait Civil Aviation Safety Regulations – KCASR 1 – PERSONNEL LICENSINGPART 66 – ACCEPTABLE MEANS OF COMPLIANCE (AMC) & GUIDANCE MATERIALS (GM).

Dear Sir,

Please find enclosed herewith the regulatory circular No. ***2026-03*** regarding the issuance of ***KCASR 1 – PERSONNEL LICENSINGPART 66 – ACCEPTABLE MEANS OF COMPLIANCE (AMC) & GUIDANCE MATERIALS (GM) Rev. 06***. This is for your information and distribution to all concerned departments.

Up to date KCASR Parts are published on the DGCA/ASD website (https://kcasr.dgca.gov.kw).

If required, the DGCA/Aviation Safety Department personnel are available to answer your questions on the interpretation and intended implementation of the proposed amendments.

KCASR 1 – PERSONNEL LICENSINGPART 66 – ACCEPTABLE MEANS OF COMPLIANCE (AMC) & GUIDANCE MATERIALS (GM) Rev. 06 will be in effect from 31/May/2026.

Yours Sincerely,

President of Civil Aviation.

Abdullah F. Alrajhi
Acting / Deputy Director General
for Aviation Safety, Air Transport & Aviation Security

CC: Director General of Civil Aviation.
Dy. Dir. Gen. Kuwait. Intel. Airport Affairs.
Dy. Dir. Gen. for Air Navigation Services Affairs.
Safety Management Coordination Center (SMCC).
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Legal Department

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2026/04/14

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REGULATORY CIRCULAR (NO. 2026-03)

Subject:

Notice of Amendment to Kuwait Civil Aviation Safety Regulations KCASR (issue 4).

Purpose:

The purpose of this Regulatory Circular No. **2026-03** is to Amend **KCASR 1 – PERSONNEL LICENSINGPART 66 – ACCEPTABLE MEANS OF COMPLIANCE (AMC) & GUIDANCE MATERIALS (GM)** (issue 4) to comply with DGCA requirements.

This Regulatory Circular No.**2026-03** is based on (NPA) No. 2026-02 dated 05/Jan/2026

Revisions:

This amendment will be included in the revision (**06**) of KCASR 1 – PERSONNEL LICENSINGPART 66 – ACCEPTABLE MEANS OF COMPLIANCE (AMC) & GUIDANCE MATERIALS (GM).

Regulatory Requirements:

This amendment shall apply to the following Organizations approved by the Directorate General of Civil Aviation (DGCA) or authorised to operate within the State of Kuwait:

1. Airport Operators;
2. Air Navigation Service Providers;
3. Air Operator Certificate (AOC);
4. Approved Maintenance Organizations (AMO) Holders;
5. Ground Handling Service Providers;
6. Training Organizations;
7. All users of KCASRs.

Effective Date:

This new revision will be in effect from **31/May/2026**.

Required Action:

All users of KCASR must comply with the provisions of this amendment from the effective date.

President of Civil Aviation

Abdullah F. Alrajhi
Acting / Deputy Director General
for Aviation Safety, Air Transport & Aviation Security

الطيران المدني
Civil Aviation
State of Kuwait - دولة الكويت

Kuwait Civil Aviation Safety Regulations

KCASR 1 – PERSONNEL LICENSING

PART 66 – ACCEPTABLE MEANS OF COMPLIANCE (AMC) & GUIDANCE MATERIALS (GM)

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Amendment Record

Amendment No	Date of Issue	Remarks
1	March 2018	NSRA 2018-06 Implemented
2	June 2018	Part Rename
3	October 2018	NPA 2018-42 Implemented
4	June 2019	NPA 2019-09 Implemented
5	January 2023	NPA 2021-17
6	April 2026	NPA 2026-02 – In order to be synchronised with EASA (989/2023)

Control of this Document

DC.1 Introduction

DC.1.1 Pursuant to Law No (85) of the Year 2025, (30) of the year 1960 and subsequent Ministerial Decision No (18) of the year 1996, based upon that Law and as reflected in the Preamble to the Kuwait Civil Aviation Safety Regulations, Issue 4, Rev.2, August 2019, the President of the Kuwait Directorate General of Civil Aviation is empowered to adopt and amend Kuwait Civil Aviation Safety Regulations. In accordance herewith, the following AMC & GM is hereby established for compliance by all persons concerned. This AMC & GM shall be known as KCASR - Part 66 Certifying Staff Acceptable Means of Compliance (AMC) & Guidance Material (GM) and any reference to this title shall mean referring to these regulations governing the requirements to be met for the certification of personnel licensing.

DC.2 Authority for this Regulation

DC.2.1 This KCASR - Part 66 Certifying Staff Acceptable Means of Compliance (AMC) & Guidance Material (GM) is issued on the authority of the President of the Kuwait Directorate General of Civil Aviation.

DC.3 Applicability

DC.3.1 This KCASR - Part 66 Certifying Staff Acceptable Means of Compliance (AMC) & Guidance Material (GM) is applicable to the aviation industry of the State of Kuwait.

DC.4 Scope

DC.4.1 KCASR 1 Personnel Licensing (AMC & GM) contains the acceptable means of compliance and guidance material for the personnel licensing regulations and shows compliance with ICAO Annex 1. The AMC & GM are separated into the following parts with cross references between parts where applicable.

Part ARA Authority Requirements for Aircrew (AMC & GM)
Part ORA Organisational Requirements for Aircrew (AMC & GM)
Part FCL Flight Crew Licensing (AMC & GM)
Part CC Cabin Crew (AMC & GM)
Part FOO/FD Flight Operation Officer and Flight Dispatcher (AMC & GM)
Part MED Medical (AMC & GM)
Part 66 Aircraft Maintenance Engineer Licence (AMC & GM)
Part 147 Approved Training Organisations (AMC & GM)
Part ATCO Air Traffic Control Officer (AMC & GM)

DC.5 Definitions

DC.5.1 Terms not defined shall have the meaning given to them in the relevant legal instruments or international legal instruments in which they appear, especially as they appear in the Convention and its Annexes.

Section A - Technical Requirements

GM 66.A.3 Licence categories

Individual aircraft maintenance licence holders need not be restricted to a single category. Provided that each qualification requirement is satisfied, any combination of categories may be granted.

GM1 66.A.5 Aircraft groups

The following table summarises the applicability of categories/subcategories of Part-66 licences versus the groups/subgroups of aircraft:

Category/subcategory	A, B1 and C	B2	B3
1 — Complex motor-powered aircraft — Multi-engine helicopters — Aeroplanes above FL290 — Aircraft with fly-by-wire systems — Any other aircraft when defined by Kuwait DGCA	X	X	
2 2a: Single turboprop aeroplanes 2b: Single turbine helicopters 2c: Single piston helicopters	X	X	
3 — Piston engine aeroplanes	X	X	
3 — Piston engine aeroplanes (non- pressurised of 2000 kg MTOM and below)	X	X	X

AMC 66.A.10 Application

Maintenance experience should be written up in a manner that the reader has a reasonable understanding of where, when and what maintenance constitutes the experience. A task-by task account is not necessary but at the same time a bland statement “X year’s maintenance experience completed” is not acceptable. A logbook of maintenance experience is required to be kept. It is acceptable to cross-refer in the KCASR Form 19 to other documents containing information on maintenance.

Applicants claiming the maximum reduction in 66.A.30 (a) total experience based upon successful completion of 147.A.200 approved basic training should include the Part-147 certificate of recognition for approved basic training.

Applicants claiming reduction in 66.A.30 (a) total experience based upon successful completion of technical training in an organisation or institute recognised by the Kuwait DGCA

as a competent organisation or institute should include the relevant certificate of successful completion of training.

GM 66.A.20(a) Privileges

1. The following definitions apply:

Electrical system means the aircraft electrical power supply source, plus the distribution system to the different components contained in the aircraft and relevant connectors. Lighting systems are also included in this definition. When working on cables and connectors which are part of these electrical systems, the following typical practices are included in the privileges:

— Continuity, insulation and bonding techniques and testing;

— Crimping and testing of crimped joints;

— Connector pin removal and insertion;

— Wiring protection techniques.

Avionics system means an aircraft system that transfers, processes, displays or stores analogue or digital data using data lines, data buses, coaxial cables, wireless or other data transmission medium, and includes the system's components and connectors. Examples of avionics systems include the following:

— Auto flight;

— Communication, Radar and Navigation;

— Instruments (see NOTE below);

— In-Flight Entertainment Systems;

— Integrated Modular Avionics (IMA);

— On-Board Maintenance Systems;

— Information Systems;

— Fly-by-Wire Systems (related to ATA27 "Flight Controls");

— Fibre Optic Control Systems.

***Note**: Instruments are formally included in the privileges of the B2 licence holders. However, maintenance on electromechanical and pitot-static components may also be released by a B1 or B3 license holder.*

Simple test means a test described in approved maintenance data and meeting all the following criteria:

— The serviceability of the system can be verified using aircraft controls, switches, Built-in Test Equipment (BITE), Central Maintenance Computer (CMC) or external test equipment not involving special training.

— The outcome of the test is a unique go–no go indication or parameter, which can be a single value or a value within an interval tolerance. No interpretation of the test result or interdependence of different values is allowed.

— The test does not involve more than 10 actions as described in the approved maintenance data (not including those required to configure the aircraft prior to the test, i.e. jacking, flaps down, etc. or to return the aircraft to its initial configuration). Pushing a control, switch or button, and reading the corresponding outcome may be considered as a single step even if the maintenance data shows them separated.

Troubleshooting means the procedures and actions necessary to identify the root cause of a defect or malfunction using approved maintenance data. It may include the use of BITE or external test equipment.

Line maintenance refer to AMC1 145.A.10

Base Maintenance refer to AMC1 145.A.10

2. 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-pressurised aeroplanes of 2 000 kg MTOM and below, within the limitations contained in the B3 licence.
3. Reserved
4. Reserved
5. The category C licence permits certification of base maintenance by the issue of a single certificate of release to service for the complete aircraft after the completion of all such maintenance. The basis for this certification is that the maintenance has been carried out by competent mechanics and category B1, B2 and B3 support staff, as appropriate, have signed for the maintenance tasks under their respective specialisation. The principal function of category C certifying staff is to ensure that all required maintenance has been called up and signed off by category B1, B2 and B3 support staff, as appropriate, before issue of the certificate of release to service. Only category C personnel who also hold category B1, B2 or B3 qualifications may perform both roles in base maintenance.

AMC 66.A.20(b)2 Privileges

The 6 months maintenance experience in 2 years should be understood as consisting of two elements: duration and nature of the experience. The minimum to meet the requirements for these elements may vary depending on the size and complexity of the aircraft and type of operation and maintenance.

Duration:

Within an approved maintenance organisation:

6 months working within the same organisation; or

6 months split up into different blocks, working within the same or in different organisations.

The 6-month period can be replaced by 100 days of maintenance experience in accordance with the privileges, whether they have been performed within an approved organisation, or as independent certifying staff according to M.A.801 (b)2, or as a combination thereof.

When the licence holder maintains and releases aircraft in accordance with M.A.801 (b)2, in certain circumstances this number of days may even be reduced by 50% when agreed in advance by the Kuwait DGCA. These circumstances consider the cases where the licence holder happens to be the owner of an aircraft and carries out maintenance on his own aircraft,

or where a licence holder maintains an aircraft operated for low utilisation, that does not allow the licence holder to accumulate the required experience. This reduction should not be combined with the 20% reduction permitted when carrying out technical support, or maintenance planning, continuing airworthiness management or engineering activities. To avoid a too long period without experience, the working days should be spread over the intended 6-month period.

Nature of the experience:

Depending on the category of the aircraft maintenance licence, the following activities are considered relevant for maintenance experience:

Servicing;

Inspection;

Operational and functional testing;

Troubleshooting;

Repairing;

Modifying;

Changing component;

Supervising these activities;

Releasing aircraft to service.

For category A licence holders, the experience should include exercising the privileges, by means of performing tasks related to the authorisation on at least one aircraft type for each licence subcategory. This means tasks as mentioned in AMC 145.A.30(g), including servicing, component changes and simple defect rectifications.

For category B1, B2 and B3, for every aircraft type rating included in the authorisation the experience should be on that particular aircraft or on a similar aircraft within the same licence (sub) category. Two aircraft can be considered as similar when they have similar technology, construction and comparable systems, which means equally equipped with the following (as applicable to the licence category):

Propulsion systems (piston, turboprop, turbofan, turboshaft, jet-engine or push propellers); and

Flight control systems (only mechanical controls, hydromechanically powered controls or electromechanically powered controls); and

Avionic systems (analogue systems or digital systems); and

Structure (manufactured of metal, composite or wood).

For licences endorsed with (sub)group ratings:

In the case of a B1 licence endorsed with (sub)group ratings (either manufacturer subgroup or full (sub)group) as defined in 66.A.45, the holder should show experience on at least one aircraft type per (sub)group and per aircraft structure (metal, composite or wood).

In the case of a B2 licence endorsed with (sub)group ratings (either manufacturer subgroup or full (sub)group) as defined in 66.A.45, the holder should show experience on at least one aircraft type per (sub)group.

In the case of a B3 licence endorsed with the rating *"piston-engine non-pressurised aeroplanes of 2000 kg MTOM and below"* as defined in 66.A.45, the holder should show experience on at least one aircraft type per aircraft structure (metal, composite or wood).

For category C, the experience should cover at least one of the aircraft types endorsed on the licence.

For a combination of categories, the experience should include some activities of the nature shown in paragraph 2 in each category.

A maximum of 20% of the experience duration required may be replaced by the following relevant activities on an aircraft type of similar technology, construction and with comparable systems:

Aircraft maintenance related training as an instructor/assessor or as a student;

Maintenance technical support/engineering;

Maintenance management/planning.

The experience should be documented in an individual logbook or in any other recording system (which may be an automated one) containing the following data:

Date;

Aircraft type;

Aircraft identification, i.e. registration;

ATA Chapter (optional);

Operation performed i.e. 100 FH check, MLG wheel change, engine oil check and complement, SB embodiment, troubleshooting, structural repair, STC embodiment…;

Type of maintenance, i.e. base, line;

Type of activity, i.e. perform, supervise, release;

Category used: A, B1, B2, B3 or C;

Duration in days or partial-days.

GM 66.A.20(b)2 Privileges

The sentence *"met the provision for the issue of the appropriate privileges"* included in 66.A.20(b)2 means that during the previous 2 years the person has met all the requirements for the endorsement of the corresponding aircraft rating (for example, in the case of aircraft in Group 1, theoretical plus practical element plus, if applicable, on-the-job training). This supersedes the need for 6 months of experience for the first 2 years. However, the requirement of 6 months of experience in the preceding 2 years will need to be met after the second year.

AMC 66.A.20(b)3 Privileges

The wording *"has the adequate competence to certify maintenance on the corresponding aircraft"* means that the licence holder and, if applicable, the organisation where he/she is contracted/employed, should ensure that he/she has acquired the appropriate knowledge,

skills, attitude and experience to release the aircraft being maintained. This is essential because some systems and technology present in the particular aircraft being maintained may not have been covered by the training/examination/experience required to obtain the licence and ratings.

This is typically the case, among others, in the following situations:

Type ratings which have been endorsed on a licence in accordance with Appendix I to AMC to Part-66 “List of Type Ratings” after attending type training/on-the-job training which did not cover all the models/variants included in such rating. For example, a licence endorsed with the rating Airbus A318/A319/A320/A321 (CFM56) after attending type training/on-the-job training covering only the Airbus 320 (CFM56).

Type ratings which have been endorsed on a licence in accordance with Appendix I to AMC to Part-66 “List of Type Ratings” after a new variant has been added to the rating in Appendix I, without performing difference training. For example, a licence endorsed with the rating Boeing 737-600/700/800/900 for a person who already had the rating Boeing 737-600/700/800, without performing any difference training for the 737-900.

Work being carried out on a model/variant for which the technical design and maintenance techniques have significantly evolved from the original model used in the type training/on-the-job training.

Specific technology and options selected by each customer which may not have been covered by the type training/on-the-job training.

Changes in the basic knowledge requirements of Appendix I to Part-66 not requiring re-examination of existing licence holders (grandfathered privileges).

The endorsement of group/subgroup ratings based on experience on a representative number of tasks/aircraft or based on type training/examination on a representative number of aircraft.

Persons meeting the requirements of 6 months of experience every 2 years only on certain similar aircraft types as allowed by AMC 66.A.20(b)2.

Persons holding a Part-66 licence with limitations, obtained through conversion of national qualifications (66.A.70), where such limitations are going to be lifted after performing the corresponding basic knowledge examinations. In this case, the type ratings endorsed in the licence may have been obtained in the national system without covering all the aircraft systems (because of the previous limitations) and there will be a need to assess and, if applicable, to train this person on the missing systems.

Additional information is provided in AMC 145.A.35(a).

GM 66.A.20(b)4 Privileges

Holders of a Part-66 aircraft maintenance licence may only exercise certification privileges when they have a general knowledge of the language used within the maintenance environment including knowledge of common aeronautical terms in the language. The level of knowledge should be such that the licence holder is able to:

read and understand the instructions and technical manuals used for the performance of maintenance;

make written technical entries and any maintenance documentation entries, which can be understood by those with whom they are normally required to communicate;

read and understand the maintenance organisation procedures;

communicate at such a level as to prevent any misunderstanding when exercising certification privileges.

In all cases, the level of understanding should be compatible with the level of certification privileges exercised.

GM 66.A.25(a) Basic knowledge requirements

The levels of knowledge for each licence (sub) category are directly related to the complexity of the certifications related to the corresponding licence (sub) category, which means that category A should demonstrate a limited but adequate level of knowledge, whereas category B1, B2 and B3 should demonstrate a complete level of knowledge in the appropriate subject modules.

AMC 66.A.30(a) Basic experience requirements

1) For a category C applicant holding an academic degree the representative selection of tasks should include the observation of hangar maintenance, maintenance planning, quality assurance, record-keeping, approved spare parts control and engineering development.
2) While an applicant for a category C licence may be qualified by having 3 years' experience as category B1 or B2 certifying staff only in line maintenance, it is however recommended that any applicant for a category C holding a B1 or B2 licence demonstrate at least 12 months experience as a B1 or B2 support staff.
3) A skilled worker is a person who has successfully completed training acceptable to the Kuwait DGCA and involving the manufacture, repair, overhaul or inspection of mechanical, electrical or electronic equipment. The training should be in line with the requirements stipulated in KCASR 1 Part-66 Appendix I, and would include the use of tools and measuring devices.

   Applications for the eligibility for skilled worker will be assessed on a case-by-case basis, Additional maintenance experience may be required as deemed necessary by Kuwait DGCA.
4) Maintenance experience on operating aircraft:
   - Means the experience of being involved in maintenance tasks on aircraft which are being operated by airlines, air taxi organisations, owners, etc.; as relevant to the licence category/subcategory
   - Should cover a wide range of tasks in length, complexity and variety;
   - Aims at gaining sufficient experience in the real environment of maintenance as opposed to only the training school environment;
   - May be combined with Part-147 approved training so that periods of training can be intermixed with periods of experience, similar to an apprenticeship.
   - may be full-time or part-time, either as professional or on a voluntary basis.

5) In the case of an applicant for a licence, including several categories/subcategories, it is acceptable to combine the periods of experience as long as there is a sufficient experience for each category/subcategory during the required period. Examples:

- Application for a B1.1 (turbine aeroplanes) + B1.3 (turbine helicopters): the Regulation requires 5 years of experience for B1.1 and 5 years of experience for B1.3 for an applicant with no relevant previous technical training:
  - It is not acceptable to combine the experience in a single 5-year period where the applicant has been working for 3 years on turbine aeroplanes and 2 years on turbine helicopters.
  - However, it is acceptable to combine the experience in a single 5-year period if the applicant has been working for 5 years on turbine aeroplanes and turbine helicopters (for example, aeroplanes in the morning, helicopters in the afternoon, or a few days every week on aeroplanes and a few days every week on helicopters).
- Application for a B1.1 (turbine aeroplanes) + B2 (avionics): the Regulation requires 5 years of experience for B1.1 and 5 years of experience for B2 for an applicant with no relevant previous technical training.

  — It is not acceptable to combine the experience in a single 5-year period where the applicant has been working for 3 years on turbine aeroplanes (with no avionics work) and 2 years on avionics systems.

  — However, it is acceptable to combine the experience in a single 5-year period if the applicant has been working for 5 years on structures, powerplant, mechanical and electrical systems and avionics (for B1.1 tasks in the morning, B2 tasks in the afternoon, or a few days every week for B1.1 tasks and a few days every week for B2 tasks).

— Application for a B1.1, B1.2, B1.3, B1.4 and B2: the Regulation requires 5 years of experience for B1.1, B1.3 and B2, and 3 years of experience for B1.2 and B1.4 for an applicant with no relevant previous technical training.

  — In this case, it is very unlikely that the experience for each category/subcategory would be sufficient.

The table below summarises the basic experience requirements for the category C licence.

To: From:	Category C for CMPA	Category C for other than
Holder of a licence with **B1.1, B1.3, B2** or **B3***	3 years of experience as support or both support staff and certifying staff, in operating CMPA, including 12 months as support staff in base maintenance.	3 years of experience as support staff, or both support staff and certifying staff, in operating other than CMPA, including 6 months as support staff in base maintenance.
	5 years of experience as support	

Holder of a licence with **B1.2** or **B1.4**	or both support staff and certifying staff, in operating CMPA, including 12months as support staff in base maintenance.	
Holder of an academic degree, in a relevant technical discipline, issued by a university or any other higher educational institution recognised by the Kuwait DGCA	3 years of experience in working ir aircraft maintenance environment, a representative selection of tasks are directly associated with aircraf maintenanc of operating CMPA including 6 months of participation the performance of base maintena tasks on operating CM	3 years of experience in working in an aircraft maintenance environment, on a representative selection of tasks that are directly associated with aircraft maintenance of operating other than CMPA, including 6 months of participation in the performance of base maintenance tasks on operating other than CMPA.
Holder of a licence with category C for other than CMPA	2 years of experience as B1 or B2 support staff, or both support staff and certifying staff, including 6 months as support staff in base maintenance. Holding an academic degree: 2 of experience in working in an maintenance environment, on a representative selection of tasks are directly associated with aircraft maintenance of operating CMPA, including 3 months of participation the performance of base tasks on operating CMPA.	
Holder of a licence with category C for CMPA		Experience required for Category C for CMPA covers category C for other than CMPA.

* Only applicable to category C for other than CMPA.

AMC 66.A.30(d) Basic experience requirements

To be considered as recent experience, at least 50% of the required 12-month recent experience should be gained within the 12-month period prior to the date of application for the aircraft maintenance licence. The remainder of the recent experience should have been gained within the 7-year period prior to application. It must be noted that the rest of the basic experience required by 66.A.30 must be obtained within the 10 years prior to the application as required by 66.A.30 (f).

AMC 66.A.30(e) Basic experience requirements

For category A the additional experience of civil aircraft maintenance should be a minimum of 6 months. For category B1, B2 or B3 the additional experience of civil aircraft maintenance should be a minimum of 12 months.

Aircraft maintenance experience gained outside a civil aircraft maintenance environment may include aircraft maintenance experience gained in armed forces, coast guards, police, etc., or in aircraft manufacturing.

GM 66.A.40 Continued validity of the aircraft maintenance licence

The validity of the aircraft maintenance licence is not affected by recency of maintenance experience whereas the validity of the 66.A.20 privileges is affected by maintenance experience as specified in 66.A.20 (a).

GM 66.A.45(b) Endorsement with aircraft ratings

An aircraft type rating includes all the aircraft models/variants listed in column 2 of Appendix I to AMC to Part-66.

When a person already holds a type rating on the licence and such type rating is amended in the Appendix I to AMC to Part-66 in order to include additional models/variants, there is no need for additional type training for the purpose of amending the type rating in the licence. The rating should be amended to include the new variants, upon request by the applicant, without additional requirements. However, it is the responsibility of the licence holder and, if applicable, the maintenance organisation where he/she is employed to comply with 66.A.20(b)3, 145.A.35(a) and M.A.607(a), as applicable, before he/she exercises certification privileges.

Similarly, type training courses covering certain, but not all the models/variants included in a type rating, are valid for the purpose of endorsing the full type rating.

AMC 66.A.45(e) Endorsement with aircraft ratings

For the granting of manufacturer subgroup ratings for Group 2 aircraft, for B1 and C licence holders, the sentence “at least two aircraft types from the same manufacturer which combined are representative of the applicable manufacturer subgroup” means that the selected aircraft types should cover all the technologies relevant to the manufacturer subgroup in the following areas:

Flight control systems (mechanical controls/hydromechanically powered controls/electromechanically powered controls); and

Avionic systems (analogue systems/digital systems); and

Structure (manufactured of metal/composite/wood).

In cases where there are very different aircraft types within the same manufacturer subgroup, it may be necessary to cover more than two aircraft types to ensure adequate representation.

For this purpose it may be possible to use aircraft types from the same manufacturer classified in Group 1 as long as the selected aircraft belong to the same licence subcategory for which the rating will be endorsed.

For the granting of full subgroup ratings for Group 2 aircraft, for B1 and C licence holders, the sentence *"at least three aircraft types from different manufacturers which combined are representative of the applicable subgroup"* means that the selected aircraft types should cover all the technologies relevant to the manufacturer subgroup in the following areas:

Flight control systems (mechanical controls/hydromechanically powered controls/ electromechanically powered controls); and

Avionic systems (analogue systems/digital systems); and

Structure (manufactured of metal/composite/wood).

In cases where there are very different aircraft types within the same subgroup, it may be necessary to cover more than three aircraft types to ensure adequate representation.

For this purpose it may be possible to use aircraft types from different manufacturers classified in Group 1 as long as the selected aircraft belong to the same licence subcategory for which the rating will be endorsed.

For manufacturer subgroup ratings, the term *"manufacturer"* means the TC holder defined in the certification data sheet, which is reflected in the list of type ratings in Appendix I to AMC to Part-66.

In the case of an aircraft rating where the type rating refers to a TC holder made of a combination of two manufacturers which produce a similar aircraft (i.e. AGUSTA/BELL HELICOPTER TEXTRON or any case of aircraft similarly built by another manufacturer), this combination should be considered as one manufacturer.

As a consequence:

When a licence holder gets a manufacturer type or a manufacturer subgroup rating made of a combination of manufacturers, it covers the combination of such manufacturers.

When a licence holder who intends to endorse a full subgroup rating selects three aircraft from different manufacturers, this means from different combinations of manufacturers as applicable.

AMC 66.A.45(d), (e)3, (f)1 and (g)1 Endorsement with aircraft ratings

The *"practical experience"* should cover a representative cross section including at least 50% of tasks contained in Appendix II to AMC relevant to the licence category and to the applicable aircraft type ratings or aircraft (sub) group ratings being endorsed. This experience should cover tasks from each paragraph of the Appendix II list. Other tasks than those in the Appendix II may be considered as a replacement when they are relevant. In the case of (sub)group ratings, this experience may be shown by covering one or several aircraft types of the applicable (sub)group and may include experience on aircraft classified in group 1, 2 and/or 3 as long as the experience is relevant. The practical experience should be obtained under the supervision of authorised certifying staff.

In the case of endorsement of individual type ratings for Group 2 and Group 3 aircraft, for the second aircraft type of each manufacturer (sub) group the practical experience should be reduced to 30% of the tasks contained in Appendix II to AMC relevant to the licence category and to the applicable aircraft type. For subsequent aircraft types of each manufacturer (sub) group this should be reduced to 20%.

Practical experience should be demonstrated by the submission of records or a logbook showing the Appendix II tasks performed by the applicant. Typical data to be recorded are similar to those described in AMC 66.A.20 (b) 2.

GM 66.A.45 Endorsement with aircraft ratings

The following table shows a summary of the aircraft rating requirements contained in 66.A.45, 66.A.50 and Appendix III to Part-66.

The table contains the following:

- The different aircraft groups;
- For each licence (sub) category, which ratings are possible (at the choice of the applicant):
  - Individual type ratings;
  - Full and/or Manufacturer (sub)group ratings;
- For each rating option, which are the qualification options;
- For the B1.2 licence (Group 3 aircraft) and for the B3 licence (piston-engine non-pressurised aeroplanes of 2 000 kg MTOM and below), which are the possible limitations to be included in the licence if not sufficient experience can be demonstrated in those areas.

***Note**: OJT means "On-the-Job Training" (Appendix III to Part-66, Section 6) and is only required for the first aircraft rating in the licence (sub)category.*

Aircraft rating requirements			
Aircraft groups	**B1/B3 Licence**	**B2 Licence**	**C Licence**
Group 1 - Complex motor-powered aircraft. - Multiple engine helicopters. - Other than piston-engine aeroplanes certified above FL290. - Aircraft equipped with fly-by-wire. - Other aircraft when defined by the Kuwait DGCA.	**(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 category)	**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
Group 3 **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:** Pressurised aeroplane 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 practical experience	**Individual TYPE RATING** type training **or** type examination **Full GROUP 3 RATING** based on demonstration of practical experience
Piston-engine non-pressurised aeroplanes of 2 000 kg MTOM and below	**(For B3)** **FULL RATING "Piston engine non-pressurised aeroplanes of 2 000 kg MTOM and below"** based on demonstration of practical experience - - Composite aeroplanes - Wooden aeroplanes - Metal tubing & and fabric aeroplanes		

GM 66.A.45(b) Endorsement with aircraft ratings

An aircraft type rating includes all the aircraft models/variants listed in column 2 of Appendix I to AMC to Part-66.

When a person already holds a type rating on the licence and such type rating is amended in the Appendix I to AMC to Part-66 in order to include additional models/variants, there is no need for additional type training for the purpose of amending the type rating in the licence. The rating should be amended to include the new variants, upon request by the applicant, without additional requirements. However, it is the responsibility of the licence holder and, if applicable, the maintenance organisation where he/she is employed to comply with 66.A.20(b)3 and 145.A.35(a), as applicable, before he/she exercises certification privileges.

Similarly, type training courses covering certain, but not all the models/variants included in a type rating, are valid for the purpose of endorsing the full type rating.

AMC 66.A.50(b) Limitations

The appropriate experience required to remove the limitations referred to in 66.A.45 (f) and (g) should consist of the performance of a variety of tasks appropriate to the limitations under the supervision of authorised certifying staff. This should include the tasks required by a scheduled annual inspection. Alternatively, this experience may also be gained, if agreed by the Kuwait DGCA, by theoretical and practical training provided by the manufacturer, as long as an assessment is further carried out and recorded by this manufacturer.

It may be acceptable to have this experience on just one aircraft type, provided that this type is representative of the (sub) group in relation to the limitation being removed.

The application for the limitation removal should be supported by a record of experience signed by the authorised certifying staff or by an assessment signed by the manufacturer after completion of the applicable theoretical and practical training.

GM 66.A.70 Conversion provisions

As described in point 66.A.70, the conversion provisions apply to the holder of a certifying staff qualification valid in the State of Kuwait prior to the date of entry into force of Part-66. The sentence *"the holder of a certifying staff qualification valid in the State of Kuwait"* means any person who had a qualification valid in the State of Kuwait allowing that person the performance of activities identical to the privileges of "certifying staff" contained in Regulation Part 66. This means that the signature of that person was sufficient to declare that the maintenance had been properly performed and the aircraft was ready for service and fit for flight in respect to such maintenance.

This should not been mistaken for the responsibilities linked to the airworthiness review, which was performed at different periods (typically varying from 6 months to 3 years) in the national systems. This is an activity which is performed at very specific points of time and not after every maintenance activity. As an airworthiness review is not performed after every maintenance event before the aircraft takes flight, an airworthiness review cannot be considered as a maintenance release. This means that the conversion provisions described in 66.A.70 are not applicable to persons performing airworthiness review functions unless their signature was required after every maintenance event before the aircraft can take flight.

The conversion applies to "certifying staff qualifications" such as, for example:

Holding a State of Kuwait licence (or completed the process to obtain such a licence);

Having completed a qualification process defined by the Kuwait DGCA to become certifying staff;

Having completed the qualification requirements for certifying staff within a maintenance organisation, as defined in their procedures.

This does not mean that in order to be entitled to a conversion process, the applicant has to be exercising certification privileges. A person may hold a "certifying staff qualification" while not having certification privileges (or while exercising very limited certification privileges below his/her qualification) for different reasons such as, for example, the following:

The person is working as "support staff" in the base maintenance environment;

The person has been authorised only for a very limited range of tasks (lower than what he/she would be entitled if his/her qualification is considered) since the person is working in a line station where the scope of tasks is very limited;

The person holds a licence with a wider scope than the scope of the organisation where he/she is employed;

The person is working outside the aviation industry or is temporarily on leave due to different reasons (medical, personal, etc.).

These persons are entitled to have the conversion performed in accordance with the full scope of their qualification and the full privileges that they would be entitled to hold on the basis of such qualification.

Although only those certifying staff qualifications gained prior to the dates indicated above are eligible for conversion, this does not mean that the application for conversion has to be submitted prior to those dates. The applicant is entitled to have the conversion performed irrespective of when he/she applies for conversion.

A certifying staff qualification can be subject to more than one conversion process and can also be converted to more than one licence (with any applicable limitations). This could be the case, for example, for a person who already had the certifying staff qualification converted to a B1.2 licence with limitations linked to some missing elements of the Part-66 Appendix I and II standard (following 66.A.70(c)). This person would be entitled to apply and have his/her certifying staff qualification converted to a B1.2 or a B3 licence on the basis of 66.A.70(d), which would mean that there is no need to compare with the Part-66 Appendix I and II standard, introducing only those limitations required to maintain the existing privileges.

GM 66.A.70(c) Conversion provisions

For example, a limitation could be where a person holds a pre-existing certifying staff qualification which covered, to the standard of Part-66 Appendix I and II, all the modules/subjects corresponding to the B1 licence except for electrical power systems. This person would receive a Part-66 aircraft maintenance licence in the B1 category with a limitation (exclusion) on electrical power systems.

For removal of limitations, refer to 66.A.50(c).

GM 66.A.70(d) Conversion provisions

In the case of aircraft not involved in commercial air transport other than large aircraft, an example of limitations could be where a person holds a pre Part-66 qualification which covered privileges to release work performed on aircraft structures, powerplant, mechanical and electrical systems but excluded privileges on aircraft equipped with turbine engine, aircraft above 2000 kg MTOM, pressurised aircraft and aircraft equipped with retractable landing gear. This person would receive a Part-66 aircraft maintenance licence in the B1.2 or B3 (sub) category with the following limitations (exclusions):

Aircraft involved in commercial air transport (this limitation always exists);

Aircraft above 2000 kg MTOM;

Pressurised aircraft;

Aircraft equipped with retractable landing gear.

Another example of limitations could be where a pilot-owner holds a pre Part-66 qualification which covered privileges to release work performed on aircraft structures, powerplant, mechanical and electrical systems but limited to his/her own aircraft and to a particular aircraft type (for example, a Cessna 172). This pilot-owner would receive a Part-66 aircraft maintenance licence in the B1.2 or B3 (sub) category with the following limitations (exclusions):

Aircraft involved in commercial air transport (this limitation always exists);

Aircraft other than a Cessna 172;

Aircraft not owned by the licence holder.

The essential aspect is that the limitations are established in order to maintain the privileges of the pre Part-66 qualification, without comparing the previous qualification with the standard of Part-66 Appendix I and II. For removal of limitations, refer to 66.A.50(c).

Section B - Procedure for the Kuwait DGCA

AMC 66.B.20 Record-keeping

The record-keeping system should ensure that all records are accessible whenever needed within a reasonable time. These records should be organised in a consistent way throughout the Kuwait DGCA (chronological, alphabetical order, etc.).

All records containing sensitive data regarding applicants or organisations should be stored in a secure manner with controlled access to ensure confidentiality of this kind of data.

All computer hardware used to ensure data backup should be stored in a different location from that containing the working data in an environment that ensures they remain in good condition. When hardware or software changes take place, special care should be taken that all necessary data continues to be accessible at least through the full period specified in 66.B.20.

AMC 66.B.100 Procedure for the issue of an aircraft maintenance licence by the Kuwait DGCA

Applicants claiming the maximum reduction in 66.A.30 (a) total experience based upon successful completion of a 147.A.200 approved basic training course should include the Part-147 certificate of recognition for approved basic training.

Applicants claiming reduction in 66.A.30 (a) total experience based upon successful completion of training considered relevant by the Kuwait DGCA and considered as a skilled worker in a technical trade should include the relevant certificate of successful completion of training.

Applicants claiming credit against the 66.A.30 (a) total experience requirement by virtue of 66.A.30 (a) non-civil aircraft maintenance experience may only be granted such credit where the Kuwait DGCA has recognised such non-civil aircraft maintenance experience. The Kuwait DGCA will have specified who within the non-civil environment may make a statement that the applicant has met relevant maintenance experience. The applicant should include a detailed statement of such maintenance experience signed by the non-civil maintenance authority in accordance with the conditions specified by the Kuwait DGCA.

The Kuwait DGCA should check that the experience record satisfies above paragraphs in terms of content and the countersigning signature.

AMC 66.B.105 Procedure for the issue of an aircraft maintenance licence via the Part-145 approved maintenance organisation

The maintenance organisation approved under Part-145 should include the procedure in the organisation's exposition (Chapter 3.16) and this procedure should be audited by the Kuwait DGCA at least once in each 12-month period. This procedure should include a limitation stating that it is only applicable to the case where the Kuwait DGCA for the Part-145 approval and for the Part-66 licence is the same.

The Part-145 organisation should check that the experience records have been properly countersigned.

The maintenance organisation approved under Part-145 may keep the experience record of applicants in a different form from that of application KCASR Form 19 but such different form or manner should be acceptable to the Kuwait DGCA.

AMC 66.B.110 Procedure for the change of an aircraft maintenance licence to include an additional basic category or subcategory

In the case of computer-generated licences, the licence should be reissued.

AMC 66.B.115 Procedure for the change of an aircraft maintenance licence to include an aircraft rating or to remove limitations

Where the type training has not been conducted by a Part-147 organisation, there should be supporting documents confirming to the Kuwait DGCA that:

the type training has been approved by the Kuwait DGCA in accordance with 66.B.130;

the applicant has completed the elements of the approved type training; and

the trainee has been successfully examined/assessed.

Aircraft type training may be subdivided in airframe and/or powerplant and/or avionics/electrical systems type training courses.

Airframe type training course means a type training course including all relevant aircraft structure and electrical and mechanical systems excluding the powerplant.

Powerplant type training course means a type training course on the bare engine, including the build-up to a quick engine change unit.

The interface of the engine/airframe systems should be addressed by either airframe or powerplant type training course. In some cases, such as for general aviation, it may be more appropriate to cover the interface during the airframe course due to the large variety of aircraft that can have the same engine type installed.

Avionics/electrical systems type training course means type training on avionics and electrical systems covered by but not necessarily limited to ATA Chapters 22, 23, 24, 25, 27, 31, 33, 34, 42, 44, 45, 46, 73 and 77 or equivalent.

For the acceptance of the OJT programme described in Section 6 of Appendix III to Part-66, the Kuwait DGCA should develop adequate procedures which may be similar to the procedure described in AMC 66.B.130 for the “direct approval of aircraft type training”.

AMC 66.B.100 to 115

Aircraft type endorsement should use the standard codes contained in Appendix I to the AMCs.

AMC 66.B.120 Procedure for the renewal of an aircraft maintenance licence validity

The Kuwait DGCA should not carry out any investigation to ensure that the licence holder is in current maintenance practice as this is not a condition for the renewal of a licence. Ensuring the continued validity of the certification privileges is the responsibility of the approved Part-

145/ Subpart-F maintenance organisation or the certifying staff in accordance with M.A.801 (b)2. For the purpose of ensuring the continued validity of the certification privileges the Kuwait DGCA may, when periodically reviewing the organisations in accordance with 145.B.30 or M.B.604, or during on-the-spot checks, request the licence holder to provide documentary evidence of compliance with 66.A.20 (b) when exercising certification privileges.

AMC 66.B.130 Procedure for the direct approval of aircraft type training

The procedure for the direct approval of type training courses by the Kuwait DGCA should require that the following aspects are described by the organisation providing the training:

The content and the duration of the theoretical and/or practical elements, as applicable, in accordance with Appendix III to Part-66, including the Training Need Analysis (TNA);

The teaching methods and instructional equipment;

The material and documentation provided to the student;

The qualification of instructors, examiners and/or assessors, as applicable;

The examination and/or assessment procedure, as applicable. Further guidance about the assessment and the designated assessors is given in Appendix III to AMC to Part-66;

The documentation and records to be provided to the student to justify the satisfactory completion of the training course and related examination/ assessment. This should include not only a certificate of completion but enough documentation and records to justify that the content and duration approved has been met and that the examination/assessment has been successfully passed.

The above criteria apply to a full course as well as to a partial course such as the practical element of a type training course and its assessment.

The procedure should also indicate how the Kuwait DGCA is going to audit the proper performance of the approved course.

The direct approval of aircraft type training should be done on a case-by-case basis and should not be granted for long-term periods, since it is not a privilege of the organisation providing the training.

GM 66.B.200 Examination by the Kuwait DGCA

Questions may be prepared in the national language but the use of aviation English is recommended wherever possible.

The primary purpose of essay questions is to determine that the candidates can express themselves in a clear and concise manner and can prepare a concise technical report, which is why only a few essay questions are required.

Oral type questions may not be used as the primary means of examination because of the difficulty in establishing consistency of standards between examiners or day-to-day.

However, nothing prevents the Kuwait DGCA from meeting potential certifying staff for the purpose of ensuring that they understand their obligations and responsibilities in the application of maintenance Parts.

For pass mark purposes, the essay questions should be considered as separate from the multiple choice questions.

Multiple choice question (MCQ) generation.

The following principles should be observed when developing multiple choice questions:

The examination should measure clearly formulated goals. Therefore, the field and depth of knowledge to be measured by each question should be fully identified.

All the questions should be of the multiple choice type with three alternative answers.

Questions that require specialised knowledge of specific aircraft types should not be asked in a basic licence examination.

The use of abbreviations and acronyms should generally be avoided. However, where needed, only internationally recognised abbreviations and acronyms should be used. In case of doubt, use the full form, e.g. angle of attack = 12 degrees instead of a = 12°.

Questions and answers should be formulated as simply as possible: the examination is not a test of language. Complex sentences, unusual grammar and double negatives should be avoided.

A question should comprise one complete positive proposition. No more than 3 different statements should appear among the suggested responses; otherwise, the candidate may be able to deduce the correct answer by eliminating the unlikely combinations of statements.

Questions should have only one true answer.

The correct answer should be absolutely correct and complete or, without doubt, the most preferable. Responses that are so essentially similar that the choice is a matter of opinion rather than a matter of fact should be avoided. The main interest in MCQs is that they can be quickly performed: this is not achieved if doubt exists about the correct answer.

The incorrect alternatives should seem equally plausible to anyone ignorant of the subject. All alternatives should be clearly related to the question and be of similar vocabulary, grammatical structure and length. In numerical questions, the incorrect answers should correspond to procedural errors such as corrections applied in the wrong sense or incorrect unit conversions: they should not be mere random numbers.

Calculators are not allowed during examination. Therefore, all calculations should be feasible without a calculator. Where a question involves calculations not feasible without a calculator, such as $\sqrt{10}$, then the question should specify the approximate value of $\sqrt{10}$.

Questions should be referred to Part-66 Appendix I examination syllabus.

Essay question generation:

The purpose of the essay is to allow the Kuwait DGCA to determine if candidates can express themselves in a clear and concise manner in the form of a written response, in a technical report format using the technical language of the aviation industry. The essay examination also allows assessing, in part, the technical knowledge retained by the individual and with a practical application relevant to a maintenance scenario.

Questions should be written so as to be broad enough to be answered by candidates for all licence category or subcategories (Cat A, B1, B2 and B3) and comply with the following general guidelines:

the question topic selected should be generic, applicable to mechanical as well as avionic licence categories and have a common technical difficulty level as indicated in Part -66, Appendix I;

cover technology applicable to most areas of aircraft maintenance;

reflects common working practises;

it is not type or manufacturer specific and avoids subjects which are rarely found in practice;

when drafting a question, there is a need to ensure that consideration is given to the limited practical experience that most candidates will have.

To make the questions and the marking procedures as consistent as possible, each question and model answer, with the required key areas (see below), should be reviewed independently by at least 2 technical staff members.

When raising questions, the following should be considered:

Each essay question will have a time allowance of 20 minutes.

A complete A4 side is provided for each question and answer; if required, the answer can be extended onto the reverse side of the page.

The question should be such that the answer expected will be at the level shown for that subject in the module syllabus.

The question should not be ambiguous but should seek a broad reply rather than be limited in scope for answer.

The question should lend itself to be written in a technical report style, in a logical sequence (beginning, middle and end), containing the applicable and relevant technical words needed in the answer.

Do not ask for drawings/sketches to support the essay.

The question should be relevant to the category and level of difficulty listed in the syllabus, e.g. a description of a typical general aviation system may not be acceptable for a typical commercial aeroplane.

Subject to obvious constraints in relation to the topic being addressed the question should have a strong bias towards the practical maintenance of a system/component and the answer should show an understanding of normal and deteriorated conditions of an aircraft and its systems. Variations on alternative possible answers which have not been thought of may have to be taken into account to aid the examiner when marking. If considered relevant, the model answer should be amended to include these new points.

Because of the difficulty in marking an essay answer using key points only, there is a need for the way in which the report was written to be assessed and taken into consideration.

The total points for each question will add up to 100 and will need to reflect both the combination of the technical (key point) element and the report style element.

Each key point will be graded upon its importance and have point weighting allocated to it. The total weight will represent 60% of the mark.

Key points are the ‘important elements’ that may be knowledge- or experience-based and will include other maintenance-orientated factors such as relevant safety precautions or

legislative practices, if applicable. Excessive reference to the need for MM referral or safety checks may be considered wasteful.

The answer to the question will be analysed for the clarity and manner in which the essay report is presented and have a weighting allocated to it which will represent 40% of the mark.

The answer should show the candidate's ability to express himself/herself in technical language. This includes readability of the language, basic grammar and use of terminology.

The report starts in the beginning and has logical process to reach a conclusion.

Supporting diagrams should not be encouraged but, if used, should supplement the answer and not replace the need for a broad text answer.

The report should not be indexed, itemised or listed.

(n) Within reason, the candidate should not be penalised for incorrect spelling.

(o) A zero mark should only be given in exceptional circumstances. Even if the student misunderstands the question and gives an answer to a different question, a sympathetic mark even if only for the report style should be given, this could add up to the maximum percentage allowed.

(p) The two allocated marks should be added together and written into the answer paper.

If an answer resulting in a borderline failure is principally due to "written report errors," the paper should be discussed and the mark agreed, if possible, with another examiner.

GM 66.B.300 General

As described in point 66.B.300, certifying staff qualifications eligible for conversion are those valid *"prior to the entry into force of the applicable requirements of this Part-66",* which means those qualifications valid before the following dates:

Prior to the date of entry into force for aircraft above 5700 kg MTOM;

Prior to the date of entry into force for aircraft of 5700 kg MTOM and below.

Nevertheless, since the B3 licence did not exist at these dates, certifying staff qualifications eligible for conversion to a B3 licence are those valid before 31 January 2016, which is the date where the Kuwait DGCA has the obligation to start issuing such.

AMC 66.B.305(a) Conversion report for national qualifications

Conversion reports prepared on the basis of point 66.A.70 (c) should include a comparison between the scope of the national qualification (i.e., the national qualification requirements) and the scope of the Part-66 licence qualification (i.e., the Part-66 qualification requirements), which should be performed on the basis of a detailed analysis of the national and Part-66 basic qualification standards. The report should identify where a difference between the two standards exists and where such a difference would lead to a limitation on the Part-66 licence.

Conversion reports prepared on the basis of point 66.A.70 (d), which are limited to aircraft not involved in commercial air transport other than large aircraft, should include the privileges

associated to the national qualification. The report should identify which limitations are needed on the Part-66 licence to maintain these privileges.

GM 66.B.305(b)3 Conversion report for national qualifications

As conversions performed on the basis of 66.A.70 (d) are aimed to maintain the privileges of the pre-existing national qualification, the limitations introduced on the Part-66 licence are not linked to possible differences between the scope of the national qualification and the scope of the Part-66 licence qualification. This conversion does not include such comparison.

This means that, in order to remove such limitations, full compliance with the conditions of Part-66 needs to be demonstrated.

AMC 66.B.310(a) Conversion report for approved maintenance organisations Authorisations

Conversion reports prepared on the basis of point 66.A.70 (c) should include a comparison between the qualification required for each type of organisation authorisation and the scope of the Part-66 licence qualification, which should be performed on the basis of a detailed analysis of the organisation and Part-66 basic qualification standards. The report should identify where a difference between the two standards exists and where such a difference would lead to a limitation on the Part-66 licence.

Conversion reports prepared on the basis of point 66.A.70 (d), which is limited to aircraft not involved in commercial air transport other than large aircraft, should include the privileges associated with the organisation authorisation. The report should identify which limitations are needed on the Part-66 licence to maintain these privileges.

GM 66.B.310(b)3 Conversion report for approved maintenance organisations authorisations

As conversions performed on the basis of 66.A.70 (d) are aimed to maintain the privileges of the pre-existing organisation authorisations, the limitations introduced on the Part-66 licence are not linked to possible differences between the qualification required for the organisation authorisation and the Part-66 licence qualification. This conversion does not include such comparison.

This means that, in order to remove such limitations, full compliance with the conditions of Part-66 needs to be demonstrated.

AMC to Appendix II — Basic examination standard

The tables below show the acceptable number of questions for the submodules. Justified deviations from these values are also acceptable, provided the sum of the questions complies with the total number of questions for a given module.

MODULE 1 — MATHEMATICS

MODULE 1 — MATHEMATICS	Nr of questions	
	A	B1 B2 B3
Total number for the module:	16	32
1.1 Arithmetic	6	6
1.2 Algebra:		
(a) Simple algebraic expressions;	5	4
(b) Equations.	—	12
1.3 Geometry:		
(a) Simple geometrical constructions;	—	3
(b) Graphical representation;	5	4
(c) Trigonometry.	—	3

MODULE 2 — PHYSICS

MODULE 2 — PHYSICS	Nr of questions	
	A B3	B1 B2
Total number for the module:	32	52
2.1 Matter	4	5
2.2 Mechanics *2.2.1 Statics*	6	7
2.2.2 Kinetics	6	7
2.2.3 Dynamics:		
(a) Mass, force, and energy;	4	5
(b) Momentum and conservation of momentum.	4	4
2.2.4 Fluid dynamics:		
(a) Gravity and density;	2	2
(b) Viscosity; compressibility on fluids; static, dynamic, and total pressure.	2	3
2.3 Thermodynamics:		
(a) Temperature;	2	2
(b) Heat.	2	8
2.4 Optics (light)	—	5
2.5 Wave motion and sound	—	4

MODULE 3 — ELECTRICAL FUNDAMENTALS

MODULE 3 — ELECTRICAL FUNDAMENTALS	Nr of questions		
	A	B1 B2	B3
Total number for the module:	20	52	24
3.1 Electron theory	2	2	2
3.2 Static electricity and conduction	3	3	2
3.3 Electrical terminology	3	2	2
3.4 Generation of electricity	3	2	2
3.5 Sources of DC electricity	3	3	3
3.6 DC circuits	1	2	1
3.7 Resistance/resistor:			
(a) Resistance;	—	3	1
(b) Resistors.	—	2	—
3.8 Power	—	3	1
3.9 Capacitance/capacitor	—	4	1
3.10 Magnetism:			
(a) Theory of magnetism;	—	3	1
(b) Magnetomotive force.	—	1	1
3.11 Inductance/inductor	—	4	1
3.12 DC motor/generator theory	—	3	1
3.13 AC theory	5	3	1
3.14 Resistive (R), capacitive (C) and inductive (L) circuits	—	3	1
3.15 Transformers	—	3	1
3.16 Filters	—	1	—
3.17 AC generators	—	3	1
3.18 AC motors	—	2	1

MODULE 4 — ELECTRONICS FUNDAMENTALS

MODULE 4 — ELECTRONICS FUNDAMENTALS	Nr of questions		
	A	B1 B3	B2
Total number for the module:	—	20	40
4.1 Semiconductors			
4.1.1 Diodes:			
(a) Description and characteristics;	—	8	8
(b) Operation and function.	—	—	7
4.1.2 Transistors:			
(a) Description and characteristics;	—	4	4
(b) Construction and operation.	—	—	7
4.1.3 Integrated circuits:			
(a) Basic description and operation;	—	3	2
(b) Description and operation.	—	—	4
4.2 Printed circuit boards	—	2	3
4.3 Servomechanisms:			
(a) Principles;	—	3	2
(b) Construction, operation, and use.	—	—	3

MODULE 5 — DIGITAL TECHNIQUES / ELECTRONIC INSTRUMENT SYSTEMS

MODULE 5 — DIGITAL TECHNIQUES / ELECTRONIC INSTRUMENT SYSTEMS	Nr of questions			
	A	B3	B1	B2
Total number for the module:	20	20	40	72
5.1 Electronic instrument systems	4	4	4	4
5.2 Numbering systems	—	—	3	5
5.3 Data conversion	—	—	3	4
5.4 Data buses	—	—	3	5
5.5 Logic circuits: (a) Identification and applications;	—	—	3	4
(b) Interpretation of logic diagrams.	—	—	—	4
5.6 Basic computer structure: (a) Computer terminology and technology;	6	2	4	2
(b) Computer operation.	—	—	—	6
5.7 Microprocessors	—	—	—	4
5.8 Integrated circuits	—	—	—	5
5.9 Multiplexing	—	—	—	4
5.10 Fibre optics	—	—	3	3
5.11 Electronic displays	2	2	2	4
5.12 Electrostatic sensitive devices	6	6	4	5
5.13 Software management control	—	1	3	3
5.14 Electromagnetic environment	—	1	3	4
5.15 Typical electronic/digital aircraft systems	2	4	5	6

MODULE 6 — MATERIALS AND HARDWARE

MODULE 6 — MATERIALS AND HARDWARE	Nr of questions		
	A	B1 B3	B2
Total number for the module:	52	80	60
6.1 Aircraft materials — ferrous:			
(a) Alloy steels used in aircraft;	3	3	3
(b) Testing of ferrous materials;	—	2	1
(c) Repair and inspection procedures.	—	2	1
6.2 Aircraft materials — non-ferrous:			
(a) Characteristics;	3	4	3
(b) Testing of non-ferrous materials;	—	3	2
(c) Repair and inspection procedures.	—	2	1
6.3 Aircraft materials — composite and non-metallic			
6.3.1 Composite and non-metallic other than wood and fabric: (a) Characteristics;	2	4	3
(b) Detection of defects;	2	4	—
(c) Repairs and inspection procedures.	—	2	2
6.3.2 Wooden structures	3	4	—
6.3.3 Fabric covering	—	4	—
6.4 Corrosion:			
(a) Chemical fundamentals;	3	3	3
(b) Types of corrosion.	4	5	3
6.5 Fasteners			
6.5.1 Screw threads	4	4	3
6.5.2 Bolts, studs, and screws	6	6	5
6.5.3 Locking devices	2	2	2
6.5.4 Aircraft rivets	2	3	2
6.6 Pipes and unions:			
(a) Identification;	1	1	1
(b) Standard unions.	2	2	2
6.7 Springs	—	1	1
6.8 Bearings	2	4	3
6.9 Transmissions	3	4	4
6.10 Control cables	5	5	4
6.11 Electrical cables and connectors	5	6	11

MODULE 7 — MAINTENANCE PRACTICES

MODULE 7 — MAINTENANCE PRACTICES	Nr of questions		
	A	B1 B3	B2
Total number for the module:	76	80	60
7.1 Safety precautions — aircraft and workshop	4	4	4
7.2 Workshop practices	4	4	4
7.3 Tools	6	6	6
7.4 (Reserved)	—	—	—
7.5 Engineering drawings, diagrams, and standards	6	6	6
7.6 Fits and clearances	5	5	5
7.7 Electrical wiring interconnection system (EWIS)	4	4	8
7.8 Riveting	4	3	—
7.9 Pipes and hoses	4	3	—
7.10 Springs	1	1	—
7.11 Bearings	4	3	—
7.12 Transmissions	3	3	—
7.13 Control cables	4	3	—
7.14 Material handling *7.14.1 Sheet metal*	—	2	—
7.14.2 Composite and non-metallic	—	2	—
7.14.3 Additive manufacturing	2	4	2
7.15 (Reserved)	—	—	—
7.16 Aircraft weight and balance:			
(a) Centre-of-gravity calculation;	—	2	2
(b) Aircraft weighing.	—	1	—
7.17 Aircraft handling and storage	7	5	6
7.18 Disassembly, inspection, repair, and assembly techniques:			
(a) Types of defects and visual inspection techniques;	2	2	2
(b) General repair methods — structural repair manual;	—	2	—
(c) Non-destructive inspection techniques;	—	1	1
(d) Disassembly and reassembly techniques;	2	1	1
(e) Troubleshooting techniques.	—	1	1
7.19 Abnormal events:			
(a) Inspections following lightning strikes and HIRF penetration;	2	1	2
(b) Inspections following abnormal events such as heavy landing and flight through turbulence.	2	1	—
7.20 Maintenance procedures	6	6	6
7.21 Documentation and communication	4	4	4

MODULE 8 — BASIC AERODYNAMICS

MODULE 8 — BASIC AERODYNAMICS	Nr of questions	
	A B3	B1 B2
Total number for the module:	24	24
8.1 Physics of the atmosphere	2	2
International Standard Atmosphere (ISA), application to aerodynamics.		
8.2 Aerodynamics	9	9
8.3 Theory of flight	7	7
8.4 High-speed airflow	4	4
8.5 Flight stability and dynamics	2	2

MODULE 9 — HUMAN FACTORS

MODULE 9 — HUMAN FACTORS	Nr of questions
	ALL
Total number for the module:	28
9.1 General	3
9.2 Human performance and limitations	3
9.3 Social psychology	2
9.4 Factors that affect human performance	3
9.5 Physical environment	2
9.6 Tasks	2
9.7 Communication	3
9.8 Human error	4
9.9 Safety management	2
9.10 The 'Dirty Dozen' and risk-mitigation	4

MODULE 10 — AVIATION LEGISLATION

MODULE 10 — AVIATION LEGISLATION	Nr of questions	
	A	B1 B2 B3
Total number for the module:	32	44
10.1 Regulatory framework	5	5
10.2 Certifying staff — maintenance	7	7
10.3 Approved maintenance organisations	6	6
10.4 Independent certifying staff	-	4
10.5 Air operations	4	4
10.6 Certification of aircraft and parts	1	4
10.7 Continuing airworthiness	6	7
10.8 Oversight principles in continuing airworthiness	2	3

MODULE 10 — AVIATION LEGISLATION	Nr of questions	
	A	B1 B2 B3
10.9 Maintenance and certification beyond the current DGCA regulations	—	3
10.10 Cybersecurity in aviation maintenance	1	1

MODULE 11 — AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS

MODULE 11 — AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS	Nr of questions				
	A1	**A2**	**B1.1**	**B1.2**	**B3**
Total number for the module:	108	72	140	100	60
11.1 Theory of flight:					
(a) Aeroplane aerodynamics and flight controls;	2	2	2	2	2
(b) Aeroplane, other aerodynamic devices.	2	2	2	2	2
11.2 Airframe structures ***(ATA 51)****:*					
(a) General concepts;	3	3	4	3	2
(b) Airworthiness requirements for structural strength;	3	3	3	3	1
(c) Construction methods.	1	1	3	2	1
11.3 Airframe structures — aeroplanes					
11.3.1 Fuselage, doors, windows **(ATA 52/53/56)***:*	1	1	2	2	2
(a) Construction principles;					
(b) Airborne towing devices;	1	1	1	1	1
(c) Doors.	1	1	1	1	-
11.3.2 Wings **(ATA 57)**	2	2	3	3	2
11.3.3 Stabilisers **(ATA 55)**	1	1	2	2	1
11.3.4 Flight control surfaces ***(ATA 55/57)***	1	1	2	2	1
11.3.5 Nacelles/pylons ***(ATA 54)***	1	1	2	2	1
11.4 Air conditioning and cabin pressurisation ***(ATA 21)****:*					
(a) Pressurisation;	2	2	3	1	—
(b) Air supply;	3	—	3	—	—
(c) Air conditioning;	3	—	3	—	—
(d) Safety and warning devices;	2	1	2	2	—
(e) Heating and ventilation system.	—	1	—	2	1
11.5 Instruments / avionics systems *11.5.1 Instrument systems* ***(ATA 31)***	2	2	4	4	3
11.5.2 Avionics systems Fundamentals of system layouts and operation of:	3	2	5	4	4

MODULE 11 — AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS	Nr of questions				
	A1	A2	B1.1	B1.2	B3
— Autoflight **(ATA 22)**; — Communications **(ATA 23)**; — Navigation systems **(ATA 34)**.					
*11.6 Electrical power **(ATA 24)***	4	3	5	5	4
*11.7 Equipment and furnishings **(ATA 25)*** (a) Emergency equipment;	4	2	4	3	2
(b) Cabin and cargo layout.	3	3	3	3	-
*11.8 Fire protection **(ATA 26)*** (a) Fire and smoke detection system and fire-extinguishing systems;	3	2	4	3	—
(b) Portable fire extinguisher.	1	1	1	1	1
*11.9 Flight controls **(ATA 27)*** (a) Primary and secondary flight controls;	3	2	4	4	3
(b) Actuation and protection;	3	—	3	—	—
(c) System operation;	3	—	3	—	—
(d) Balancing and rigging.	1	1	3	3	2
*11.10 Fuel systems **(ATA 28/47)*** (a) Systems layout;	2	2	3	3	2
(b) Fuel handling;	2	2	2	2	1
(c) Indications and warnings;	1	1	2	2	1
(d) Special systems;	1	—	1	—	—
(e) Balancing.	2	—	2	—	—
*11.11 Hydraulic power **(ATA 29)*** (a) System description;	1	1	3	3	2
(b) System operation (1);	1	1	3	2	1
(c) System operation (2).	2	—	2	—	—
*11.12 Ice and rain protection **(ATA 30)*** (a) Principles;	1	1	2	2	1
(b) De-icing;	1	1	2	2	1
(c) Anti-icing;	1	—	2	—	—
(d) Wipers;	1	1	2	2	1
(e) Rain-repellent systems.	2	—	2	—	—
*11.13 Landing gear **(ATA 32**)* (a) Description;	3	3	4	3	1
(b) System operation;	3	3	4	2	1
(c) Air–ground sensing;	1	—	1	—	—

MODULE 11 — AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS	Nr of questions				
	A1	A2	B1.1	B1.2	B3
(d) Tail protection.	1	1	1	1	1
*11.14 Lights **(ATA 33)***	2	2	3	3	2
*11.15 Oxygen **(ATA 35)***	3	3	4	4	3
*11.16 Pneumatic/vacuum **(ATA 36)***					
(a) Systems;	3	3	3	3	2
(b) Pumps.	3	3	3	3	2
*11.17 Water/waste **(ATA 38)***					
(a) Systems;	2	2	2	2	1
(b) Corrosion.	1	1	1	1	1
*11.18 Onboard maintenance systems **(ATA 45)***	3	—	3	—	—
*11.19 Integrated modular avionics (IMA) **(ATA 42)***					
(a) Overall system description and theory;	1	—	1	—	—
(b) Typical system layouts.	1	—	1	—	—
*11.20 Cabin systems **(ATA 44)***	2	—	2	—	—
*11.21 Information systems **(ATA 46)***	2	—	2	—	—

MODULE 12 — HELICOPTER AERODYNAMICS, STRUCTURES AND SYSTEMS

MODULE 12 — HELICOPTER AERODYNAMICS, STRUCTURES AND SYSTEMS	Nr of questions	
	A3 A4	B1.3 B1.4
Total number for the module:	100	128
12.1 Theory of flight — rotary wing aerodynamics	6	9
12.2 Flight control systems (ATA 67)	9	9
12.3 Blade tracking and vibration analysis (ATA 18)	6	9
12.4 Transmission	3	6
12.5 Airframe structures (ATA 51)		
(a) General concept;	5	6
(b) Construction methods of the principal elements.	5	7
12.6 Air conditioning (ATA 21)	—	—
12.6.1 Air supply	1	2
12.6.2 Air conditioning	3	5
12.7 Instruments / avionics systems		
12.7.1 Instrument systems (ATA 31)	6	9
12.7.2 Avionics systems Fundamentals of system layouts and operation of: — Autoflight (ATA 22); — Communications (ATA 23); — Navigation systems (ATA 34).	5	7

12.8 Electrical power (ATA 24)	8	10

MODULE 12 — HELICOPTER AERODYNAMICS, STRUCTURES AND SYSTEMS	Nr of questions	
	A3 A4	B1.3 B1.4
12.9 Equipment and furnishings (ATA 25)		
(a) Emergency equipment: Seats, harnesses, and belts; Lifting systems.	2	3
(b) Emergency flotation systems: Cabin layout, cargo retention; Equipment layout; Cabin furnishing installation.	3	3
12.10 Fire protection (ATA 26)	3	4
(a) Fire and smoke detection systems and fire-extinguishing systems;		
(b) Portable fire extinguishers.	1	1
12.11 Fuel systems (ATA 28)	7	8
12.12 Hydraulic power (ATA 29)	8	8
12.13 Ice and rain protection (ATA 30)	4	4
12.14 Landing gear (ATA 32)		
(a) System description and operation;	3	4
(b) Sensors.	3	3
12.15 Lights (ATA 33)	3	4
12.16 (Reserved)		
12.17 Integrated modular avionics (IMA) (ATA 42)		
(a) Overall system description and theory;	1	1
(b) Typical system layouts.	1	1
12.18 Onboard maintenance systems (ATA 45)	2	3
Central maintenance computers; Data-loading system; Electronic library system.		
12.19 Information systems (ATA 46)	2	2

MODULE 13 — AIRCRAFT AERODYNAMICS, STRUCTURES AND SYSTEMS

MODULE 13 — AIRCRAFT AERODYNAMICS, STRUCTURES AND SYSTEMS	Nr of questions B2
Total number for the module:	188
13.1 Theory of flight (a) Aeroplane aerodynamics and flight controls;	3
(b) Rotary wing aerodynamics.	1
13.2 Structures — general concepts ***(ATA 51)*** (a) General concepts;	4
(b) Fundamentals of structural systems.	4
13.3 Autoflight ***(ATA 22)*** (a) Fundamentals of automatic flight control;	16
(b) Autothrottle systems and automatic landing systems.	8
13.4 Communication/navigation ***(ATA 23/34)*** (a) Fundamentals of communication and navigation systems;	24
(b) Fundamentals of aircraft surveillance systems.	3
13.5 Electrical power (ATA 24)	13
13.6 Equipment and furnishings ***(ATA 25)***	5
13.7 *Flight controls* (a) Primary and secondary flight controls **(ATA 27)**;	4
(b) Actuation and protection;	4
(c) System operation;	2
(d) Rotorcraft flight controls **(ATA 67)**.	2
13.8 Instruments (ATA 31)	20
13.9 Lights (ATA 33)	7
13.10 Onboard maintenance systems ***(ATA 45)***	5
13.11 Air conditioning and cabin pressurisation ***(ATA 21)*** (a) Pressurisation;	2
(b) Air supply;	2
(c) Air conditioning;	2
(d) Safety and warning devices.	2
13.12 *Fire protection* ***(ATA 26)*** (a) Fire and smoke detection system and fire- extinguishing systems;	2
(b) Portable fire extinguisher.	1
13.13 *Fuel systems* ***(ATA 28, ATA 47)*** (a) System layout;	2
(b) Fuel handling;	2
(c) Indications and warnings;	2
(d) Special systems;	2
(e) Balancing.	1
13.14 Hydraulic power ***(ATA 29)***	

MODULE 13 — AIRCRAFT AERODYNAMICS, STRUCTURES AND SYSTEMS	Nr of questions B2
(a) System layout;	1
(b) System operation (1);	5
(c) System operation (2).	5
13.15 Ice and rain protection ***(ATA 30)***	
(a) Principles;	1
(b) De-icing;	2
(c) Anti-icing;	1
(d) Wiper systems;	1
(e) Rain repellent.	1
13.16 Landing gear ***(ATA 32)***	
(a) Description;	1
(b) System;	3
(c) Air–ground sensing.	3
13.17 Oxygen ***(ATA 35)***	2
13.18 Pneumatic/vacuum ***(ATA 36)***	6
13.19 Water/waste ***(ATA 38)***	2
13.20 Integrated modular avionics (IMA) ***(ATA 42)***	
(a) Overall system description and theory;	2
(b) Typical system layouts.	1
13.21 Cabin systems ***(ATA 44)***	3
13.22 Information systems ***(ATA 46)***	3

MODULE 14 — PROPULSION

MODULE 14 — PROPULSION	Nr of questions B2
Total number for the module:	32
14.1 Engines	
(a) Turbine engines;	3
(b) Auxiliary power units (APUs);	4
(c) Piston engines;	2
(d) Electric and hybrid engines;	4
(e) Engine control.	3
14.2 Electric/electronic engine indication systems	10
14.3 Propeller systems	2
14.4 Starting and ignition systems	4

MODULE 15 — GAS-TURBINE ENGINE

MODULE 15 — GAS-TURBINE ENGINE	Nr of questions	
	A1 A3	B1.1 B1.3
Total number for the module:	60	92
15.1 Fundamentals	4	4
15.2 Engine performance	—	6
15.3 Inlet	3	4
15.4 Compressors	5	7
15.5 Combustion section	3	3
15.6 Turbine section	5	5
15.7 Exhaust	4	4
15.8 Bearings and seals	—	3
15.9 Lubricants and fuels	3	4
15.10 Lubrication systems	3	4
15.11 Fuel systems	4	5
15.12 Air systems	3	3
15.13 Starting and ignition systems	3	4
15.14 Engine indication systems	5	7
15.15 Alternate turbine constructions	—	2
15.16 Turboprop engines	3	5
15.17 Turboshaft engines	2	3
15.18 Auxiliary power units (APUs)	2	3
15.19 Power plant installation	2	3
15.20 Fire protection systems	2	3
15.21 Engine monitoring and ground operation	4	7
15.22 Engine storage and preservation	—	3

MODULE 16 — PISTON ENGINE

MODULE 16 — PISTON ENGINE	Nr of questions	
	A2 A4	B1.2 B1.4 B3
Total number for the module:	52	76
16.1 Fundamentals of piston engines	5	5
16.2 Engine performance	3	5
16.3 Engine construction	7	8
16.4 Engine fuel systems	—	—
16.4.1 Carburettors	3	4
16.4.2 Fuel injection systems	2	4
16.4.3 Electronic engine control	2	4
16.5 Starting and ignition systems	5	5
16.6 Induction, exhaust, and cooling systems	3	4
16.7 Supercharging/turbocharging	4	6
16.8 Lubricants and fuels	2	5
16.9 Lubrication systems	3	4
16.10 Engine indication systems	6	7
16.11 Power plant installation	3	3
16.12 Engine monitoring and ground operation	3	5
16.13 Engine storage and preservation	—	3
16.14 Alternative piston-engine constructions	1	4

MODULE 17 — PROPELLER

MODULE 17 — PROPELLER	Nr of questions	
	A1 A2	B1.1 B1.2 B3
Total number for the module:	20	32
17.1 Fundamentals of propellers	5	8
17.2 Propeller construction	4	5
17.3 Propeller pitch control	4	6
17.4 Propeller synchronising	—	2
17.5 Propeller ice protection	2	3
17.6 Propeller maintenance	3	6
17.7 Propeller storage and preservation	2	2

AMC to Section 1 of Appendix III to Part-66 "Aircraft Type Training and Examination Standard On-the-Job Training"

Aircraft type training

Aircraft type training may be subdivided in airframe and/or powerplant and/or avionics/electrical systems type training courses:

Airframe type training course means a type training course including all relevant aircraft structure and electrical and mechanical systems excluding the powerplant.

Powerplant type training course means a type training course on the bare engine, including the build-up to a quick engine change unit.

The interface of the engine/airframe systems should be addressed by either airframe or powerplant type training course. In some cases, such as for general aviation, it may be more appropriate to cover the interface during the airframe course due to the large variety of aircraft that can have the same engine type installed.

Avionics/electrical systems type training course means type training on avionics and electrical systems covered by but not necessarily limited to ATA (Air Transport Association) Chapters 22, 23, 24, 25, 27, 31, 33, 34, 42, 44, 45, 46, 73 and 77 or equivalent.

Practical training may be performed either following or integrated with the theoretical elements. However, it should not be performed before theoretical training.

The content of the theoretical and practical training should:

address the different parts of the aircraft which are representative of the structure, the systems/components installed and the cabin; and

include training on the use of technical manuals, maintenance procedures and the interface with the operation of the aircraft.

Therefore, it should be based on the following elements:

Type design including relevant type design variants, new technology and techniques;

Feedback from in-service difficulties, occurrence reporting, etc.;

Significant applicable airworthiness directives and service bulletins;

Known human factor issues associated with the particular aircraft type;

Use of common and specific documentation, (when applicable, such as MMEL, AMM, MPD, TSM, SRM, WD, AFM, tool handbook), philosophy of the troubleshooting, etc.;

Knowledge of the maintenance on-board reporting systems and ETOPS maintenance conditions, when applicable;

Use of special tooling and test equipment and specific maintenance practises including critical safety items and safety precautions;

Significant and critical tasks/aspects from the MMEL, CDL, Fuel Tank Safety (FTS), airworthiness limitation items (ALI) including Critical Design Configuration Control Limitations (CDCCL), CMR and all ICA documentation such as MRB, MPD, SRM, AMM, etc., when applicable.

Maintenance actions and procedures to be followed as a consequence of specific certification requirements, such as, but not limited to, RVSM (Reduced Vertical Separation Minimum) and NVIS (Night Vision Imaging Systems);

Knowledge of relevant inspections and limitations as applicable to the effects of environmental factors or operational procedures such as cold and hot climates, wind, moisture, sand, de-icing/anti-icing, etc.

The type training does not necessarily need to include all possible customer options corresponding to the type rating described in the Appendix I to AMC to Part-66.

Limited avionic system training should be included in the category B1 type training as the B1 privileges include work on avionics systems requiring simple tests to prove their serviceability.

Electrical systems should be included in both categories of B1 and B2 type training.

The theoretical and practical training should be complementary and may be:

Integrated or split;

Supported by the use of training aids, such as, trainers, virtual aircraft, aircraft components, synthetic training devices (STD), computer-based training devices (CBT), etc.

AMC to Paragraph 3.1(d) of Appendix III to Part-66 "Aircraft Type Training and Examination Standard On-the-Job Training"

Training Needs Analysis for the theoretical element of the aircraft type training

The minimum duration for the theoretical element of the type rating training course, as described in Appendix III to Part-66, has been determined based on:

generic categories of aircraft and minimum standard equipment fit;

The purpose of the Training Needs Analysis (TNA) is to adapt and justify the duration of the course for a specific aircraft type. This means that the TNA is the main driver for determining the duration of the course, regardless of whether it is above or below the minimum duration described in Appendix III to Part-66.

In the particular case of type training courses approved on the basis of the requirements valid before the Regulation was applicable and having a duration for the theoretical element equal to or above the minimum duration contained in paragraph 3.1(c) of Appendix III to Part-66, it is acceptable that the TNA only covers the differences introduced by the Regulation in paragraph 3.1(e) "Content" and the criteria introduced in paragraph 3.1(d) "Justification of course duration" related to the minimum attendance and the maximum number of training hours per day. This TNA may result in a change in the duration of the theoretical element.

The content and the duration deriving from the TNA may be supported by an analysis from the Type Certificate holder.

In order to approve a reduction of such minimum duration, the evaluation done by the Kuwait DGCA should be performed on a case-by-case basis appropriate to the aircraft type. For example, while it would be exceptional for a theoretical course for a large transport category aircraft such as an A330 or B757 to be below the minimum duration shown, it would not necessarily be exceptional in the case of a General Aviation (GA) business aircraft such as a Learjet 45 or similar. Typically, the TNA for a GA aircraft course would demonstrate that a course of a shorter duration satisfies the requirements.

When developing the TNA, the following should be considered:

The TNA should include an analysis identifying all the areas and elements where there is a need for training as well as the associated learning objectives, considering the design philosophy of the aircraft type, the operational environment, the type of operations and the operational experience. This analysis should be written in a manner which provides a reasonable understanding of which areas and elements constitute the course to meet the learning objectives.

As a minimum, the Training Need Analysis (TNA) should take into account all the applicable elements contained in paragraph 3.1 of Part-66 Appendix III and associated AMCs.

The TNA should set up the course content considering the Appendix III objectives for each level of training and the prescribed topics in the theoretical element table contained in paragraph 3.1 of Part-66 Appendix III.

For each Chapter described in the theoretical element table contained in paragraph 3.1 of Part-66 Appendix III, the corresponding training time should be recorded.

Typical documents to be used to identify the areas and elements where there is a need for training typically include, among others, the Aircraft Maintenance Manual, MRB report, CMRs, airworthiness limitations, Troubleshooting Manual, Structural Repair Manual, Illustrated Parts Catalogue, Airworthiness Directives and Service Bulletins.

During the analysis of these documents:

Consideration should be given to the following typical activities:

Activation/reactivation;

Removal/installation;

Testing;

Servicing;

Inspection, check and repairs;

Troubleshooting/diagnosis.

For the purpose of identifying the specific elements constituting the training course, it is acceptable to use a filtering method based on criteria such as:

Frequency of the task;

Human factor issues associated to the task;

Difficulty of the task;

Criticality and safety impact of the task;

In-service experience;

Novel or unusual design features (not covered by Part-66 Appendix I);

Similarities with other aircraft types;

Special tests and tools/equipment.

It is acceptable to follow an approach based on:

Tasks or groups of tasks; or

Systems or subsystems or components.

The TNA should:

Identify the learning objectives for each task, group of tasks, system, subsystem or component;

Associate the identified tasks to be trained to the regulatory requirements (table in paragraph 3.1 of Appendix III to Part-66);

Organise the training into modules in a logical sequence (adequate combination of chapters as defined in Appendix III of Part-66);

Determine the sequence of learning (within a lesson and for the whole syllabus);

Identify the scope of information and level of detail with regard to the minimum standard to which the topics of the TNA should be taught according to the set-up objectives.

Address the following:

Description of each system/component including the structure (where applicable);

System/component operation taking into account:

Complexity of the system (e.g. the need of further breakdown into subsystems, etc.);

Design specifics which may require more detailed presentation or may contribute to maintenance errors;

Normal and emergency functioning;

Troubleshooting;

Interpretation of indications and malfunctions;

Use of maintenance publications;

Identification of special tools and equipment required for servicing and maintaining the aircraft;

Maintenance Practices;

Routine inspections, functional or operational tests, rigging/adjustment, etc.

Describe the following:

The instructional methods and equipment, teaching methods and blending of the teaching methods to ensure the effectiveness of the training;

The maintenance training documentation/material to be delivered to the student;

Facilitated discussions, questioning session, additional practice-oriented training, etc.;

The homework, if developed;

The training provider's resources available to the learner.

It is acceptable to differentiate between issues which have to be led by an instructor and issues which may be delivered through interactive simulation training devices and/or covered by web-based elements. Overall time of the course will be allocated accordingly.

The maximum number of training hours per day for the theoretical element of type training should not be more than 6 hours. A training hour means 60 minutes of tuition excluding any breaks, examination, revision, preparation and aircraft visit. In exceptional cases, the Kuwait DGCA may allow deviation from this standard when it is properly justified that the

proposed number of hours follows pedagogical and human factors principles. These principles are especially important in those cases where:

Theoretical and practical training are performed at the same time;

Training and normal maintenance duty/apprenticeship are performed at the same time.

The minimum participation time for the trainee to meet the objectives of the course should not be less than 90% of the tuition hours of the theoretical training course.

Additional training may be provided by the training organisation in order to meet the minimum participation time. If the minimum participation defined for the course is not met, a certificate of recognition should not be issued.

The TNA is a living process and should be reviewed/updated based on operation feedback, maintenance occurrences, Airworthiness Directives, major service bulletins impacting maintenance activities or requiring new competencies for mechanics, alert service bulletins, feedback from trainees or customer satisfaction, evolution of the maintenance documentation such as MRBs, MPDs, MMs, etc. The frequency at which the TNA should be reviewed/updated is left to the discretion of the organisation conducting the course.

Note: The examination is not part of the TNA. However, it should be prepared in accordance with the learning objectives described in the TNA.

AMC to Paragraphs 1(b), 3.2 and 4.2 of Appendix III to Part-66 "Aircraft Type Training and Examination Standard On-the-Job Training"

Practical element of the aircraft type training

The practical training may include instruction in a classroom or in simulators but part of the practical training should be conducted in a real maintenance or manufacturer environment.

The tasks should be selected because of their frequency, complexity, variety, safety, criticality, novelty, etc. The selected tasks should cover all the chapters described in the table contained in paragraph 3.2 of Appendix III to Part-66.

The duration of the practical training should ensure that the content of training required by paragraph 3.2 of Appendix III to Part-66 is completed.

Nevertheless, for aeroplanes with a MTOM equal or above 30000 kg, the duration for the practical element of a type rating training course should not be less than two weeks unless a shorter duration meeting the objectives of the training and taking into account pedagogical aspects (maximum duration per day) is justified to the Kuwait DGCA.

The organisation providing the practical element of the type training should provide trainees with a schedule or plan indicating the list of tasks to be performed under instruction or supervision. A record of the tasks completed should be entered into a logbook which should be designed such that each task or group of tasks may be countersigned by the designated assessor. The logbook format and its use should be clearly defined.

In paragraph 4.2 of Appendix III to Part-66, the term "designated assessors appropriately qualified" means that the assessors should demonstrate training and experience on the assessment process being undertaken and be authorised to do so by the organisation.

Further guidance about the assessment and the designated assessors is provided in Appendix III to AMC to Part-66.

The practical element (for powerplant and avionics systems) of the Type Rating Training may be subcontracted by the approved Part-147 organisation under its quality system according to the provisions of 147.A.145 (d)3 and the corresponding Guidance Material.

AMC to Paragraph 1(c) of Appendix III to Part-66 "Aircraft Type Training and Examination Standard On-the-Job Training"

Differences training

Approved difference training is not required for different variants within the same aircraft type rating (as specified in Appendix I to AMC to Part-66) for the purpose of type rating endorsement on the aircraft maintenance licence.

However, this does not necessarily mean that no training is required before a certifying staff authorisation can be issued by the maintenance organisation (refer to AMC 66.A.20 (b)3).

AMC to Section 5 of Appendix III to Part-66 "Aircraft Type Training and Examination Standard On-the-Job Training"

Type Examination Standard

This Section 5 "Type Examination Standard" does not apply to the examination performed as part of type training. This Section only applies to those cases where type examination is performed as a substitute for type training.

AMC to Section 6 of Appendix III to Part-66 "Aircraft Type Training and Examination Standard On-the-Job Training"

On-the-Job Training (OJT)

"A maintenance organisation appropriately approved for the maintenance of the particular aircraft type" means a Part-145 or M.A. Subpart F approved maintenance organisation holding an A rating for such aircraft.

The OJT should include one-to-one supervision and should involve actual work task performance on aircraft/components, covering line and/or base maintenance tasks.

The use of simulators for OJT should not be allowed.

The OJT should cover at least 50% of the tasks contained in Appendix II to AMC to Part-66. Some tasks should be selected from each paragraph of the Appendix II list. Tasks should be selected among those applicable to the type of aircraft and licence (sub) category applied for. Other tasks than those in the Appendix II may be considered as a replacement when they are relevant. Typically, in addition to the variety and the complexity, the OJT tasks should be selected because of their frequency, safety, novelty, etc.

Up to 50% of the required OJT may be undertaken before the aircraft theoretical type training starts.

The organisation providing the on-the-job training should provide trainees with a schedule or plan indicating the list of tasks to be performed under supervision. A record of the tasks completed should be entered into a logbook which should be designed such that each task or

group of tasks is countersigned by the corresponding supervisor. The logbook format and its use should be clearly defined.

Regarding the day-to-day supervision of the OJT programme in the approved maintenance organisation and the role of the supervisor(s), the following should be considered:

It is sufficient that the completion of individual OJT tasks is confirmed by the direct supervisor(s), without being necessary the direct evaluation of the assessor.

During the day-to-day OJT performance, the supervision aims at overseeing the complete process, including task completion, use of manuals and procedures, observance of safety measures, warnings and recommendations and adequate behaviour in the maintenance environment.

The supervisor(s) should personally observe the work being performed to ensure the safe completeness and should be readily available for consultation, if needed during the OJT performance.

The supervisor(s) should countersign the tasks and release the maintenance tasks as the trainee is still not qualified to do so.

The supervisor(s) should therefore:

have certifying staff or support staff privileges relevant to the OJT tasks;

be competent for the selected tasks;

be safety-orientated;

be capable to coach (setting objectives, giving training, performing supervision, evaluating, handling trainee's reactions and cultural issues, managing objectively and positively debriefing sessions, determining the need for extra training or reorientate the training, reporting, etc.);

be designated by the approved maintenance organisation to carry out the supervision.

Regarding the assessor, the following should be considered:

The function of the assessor, as described in Section 6 of Appendix III to Part-66, is to conduct the final assessment of the completed OJT. This assessment should include confirmation of the completion of the required diversity and quantity of OJT and should be based on the supervisor(s) reports and feedback.

In Section 6 of Appendix III to Part-66, the term "designated assessor appropriately qualified" means that the assessor should demonstrate training and experience on the assessment process being undertaken and should be authorised to do so by the organisation.

Further guidance about the assessment and the designated assessors is provided in Appendix III to AMC to Part-66.

The procedures for OJT should be included into the Exposition Manual of the approved maintenance organisation (Chapter 3.15, as indicated in AMC 145.A.70(a)).

However, since these procedures in the Exposition Manual are approved by the Kuwait DGCA and providing training is not one of the privileges of a maintenance organisation, they can only be used when the Kuwait DGCA has oversight of the maintenance organisation. In other cases, it is up to the Kuwait DGCA to decide whether it accepts such procedures for the purpose of approving the OJT (refer to AMC 66.B.115).

AMC to Appendix III to Part-66 "Aircraft Type Training and Examination Standard On-the-Job Training"

Aircraft type training and On-the-Job Training

The theoretical and practical training providers, as well as the OJT provider, may contract the services of a language translator in the case where training is imparted to students not conversant in the language of the training material. Nevertheless, it remains essential that the students understand all the relevant maintenance documentation.

During the performance of examinations and assessments, the assistance of the translator should be limited to the translation of the questions, but should not provide clarifications or help in relation to those questions.

Appendices to AMC to Part-66

Appendix I- Aircraft Type Ratings for Part-66 Aircraft Maintenance Licence.

The following aircraft type ratings will be used to ensure a common standard within the State of Kuwait.

The inclusion of an aircraft type in the licence does not indicate that the aircraft type has been granted a type certificate in the State of Kuwait, this list being only intended for the purpose of maintenance.

In order to keep this list current and type ratings consistent, where the DGCA needs to issue a type rating that is not included in this list, such information should be first passed on to the DGCA.

Notes on TR endorsement covering several models/variant:

The endorsement of a type rating (TR) on the aircraft maintenance engineer license (AMEL), covering several models/variants, does not automatically imply that the AMEL holder has acquired the appropriate knowledge on each model/variant. The TR course received or the experience the AMEL holder has gained, may have been limited to one or several model(s)/variant(s) but not to all models/variants.

To demonstrate adequate competence on the relevant model(s)/variant(s), the AMEL holder and/or the maintenance organisation where the AMEL holder is contracted/employed, are responsible to verify whether the model/variant has been adequately covered by the TR course or gained experience.

Further explanation can be found in AMC 66.A.20(b)3 and AMC 145.A.35(a).

Notes on when the licence should be modified;

When a modification is introduced to an aircraft type rating or to an engine designation in the rating which affects licences already issued, the ratings on the AMEL licences may be modified at the next renewal or when the licence is reissued, unless there is an urgent reason to modify the licence.

Notes on aircraft modified by STC;

When an aircraft has been modified by an STC for installation of a different engine, the Part - 66 type rating of this aircraft may change. This is not reflected in this document. In case the applicant for a licence faces such a case, he/she or his/her company can inform the DGCA and a new type rating will be defined.

In the following tables:

The column “TC Holder” includes the TC holder as defined in the TCDS (DGCA,EASA,

FAA or other) or the Specific Airworthiness Specifications (SAS).

The column 'STC Holder' includes the STC holder as defined in the Supplemental Type Certificate Data Sheets (STCDS) (EASA, FAA or other).

Some TC holders' designations have been corrected to add the information: 'Aircraft with an SAS'. This means that the aircraft listed under this TC holder designation is considered an 'orphan aircraft'. An aircraft becomes orphan when the legal person, organisation or entity holding the Type Certificate (TC) ceases to exist; or The TC holder no longer complies with his regulatory obligations; or The TC holder surrenders the TC.

In Group 3, a third column has been added which is called 'Type of structure' which intends to assist the DGCA Licensing Department in identifying the experience required for this type with a view of removing existing limitations on the licence.

Wooden structure covered with fabric is considered to fall under wooden structure. For Aeroplanes with a combination of structures; e.g. metal tubing fuselage and wooden wings, both experience 'metal tube covered with fabric' and 'wooden structure' are required.

Only the designations of ratings included in the column "Part 66 Type rating endorsement" should be used for endorsing individual type ratings on a Part 66 licences.

GROUP 1 AEROPLANES			
TC holder	**Model**	**Commercial Designation**	**PART 66 Type rating endorsement**
328 Support Services	328-100 series		Dornier 328-100 (PWC PW119)
	328-300 series		Dornier 328-300 (PWC PW306)
AIR TRACTOR	AT-802 Series		Air Tractor AT-800 Series (PWC PT6)
AIRBUS	A300 B1 A300 B2-1A A300 B2-1C A300 B2-202 A300 B2-203 A300 B2K-3C A300 B4-102 A300 B4-103 A300 B4-203 A300 B4-2C A300 C4-203 A300 F4-203		Airbus A300 basic model (GE CF6)

TC holder	Model	Commercial Designation	PART 66 Type rating endorsement
AIRBUS	A300 B2-320 A300 B4-120 A300 B4-220		Airbus A300 basic model (PW JT9D)
	A300 B4-601 A300 B4-603 A300 B4-605 R A300 C4-605 R - Variant F A300 F4-605 R		Airbus A300-600 (GE CF6)
	A300 B4-622 A300 B4-622 R A300 F4-622 R		Airbus A300-600 (PW 4000)
	A300 B4-620 A300 C4-620		Airbus A300-600 (PW JT9D)
	A300F4-608ST	Beluga	Airbus A300-600ST (GE CF6)
	A310-203 A310-203 C A310-221 A310-304 A310-308		Airbus A310 (GE CF6)
	A310-324 A310- 325		Airbus A310 (PW 4000)
	A310-204 A310-222 A310-322		Airbus A310 (PW JT9D)
	A318-120 series		Airbus A318 (PW 6000)
	A318-110 series A319-110 series A320-111 A320-210 series A321-110 series A321-210 series		Airbus A318/A319/A320/A321 (CFM56)
	A319-130 series A320-230 series A321-130 series A321-230 series		Airbus A319/A320/A321 (IAE V2500)
	A319-170 A320-270 A321-270	A319 NEO A320 NEO A321 NEO	Airbus A319/A320/A321 (IAE PW1100G)
	A319-150 A320-250 A321-250	A319 NEO A320 NEO A321 NEO	Airbus A319/A320/A321 (CFM LEAP-1A)

TC holder	Model	Commercial Designation	PART 66 Type rating endorsement
	A330-200 series A330-300 series		Airbus A330 (GE CF6)
	A330-220 series A330-320 series		Airbus A330 (PW 4000)
	Model	**Commercial Designation**	**PART 66 Type rating endorsement**
	A330-240 series A330- 340 series A330-841 series A330-941 series	 A330 NEO A330 NEO	Airbus A330 (RR Trent 700) Airbus A330 (RR Trent 7000)
	A340-210 series A340-310 series		Airbus A340 (CFM56)
	A340-540 series A340-640 series		Airbus A340 (RR RB 211 Trent 500)
	A350-1000 A350-900 series		Airbus A350 (RR Trent XWB)
	A380-860 series		Airbus A380 (EA GP7200)
	A380-840 series		Airbus A380 (RR RB 211 Trent 900)
Airbus Military Sociedad Limitada (AMSL)	A400M-180		Airbus A400M (EPI TP400)
AIRCRAFT INDUSTRIES	L-410 M/UVP L-410 UVP-E L-410 UVP-E20 L-410 UVP-E20 CARGO L- 410 UVP-E9 L-410 UVP-E- LW L-410 UVP-LW	Turbolet Turbolet Turbolet Turbolet Turbolet Turbolet Turbolet	Let L-410 (Walter M601)
	L-410 UVP-E20 L-410 UVP-E20 CARGO	Turbolet	Let L- 410 (GE H80)
	L-420		Let L-420 (Walter M601)
ALENIA AERMACCHI	C-27J		Alenia C-27 (Allison/RR AE2100)
ANTONOV	AN-26 AN-26B		Antonov AN26 (Ivchenko AI-24)

TC holder	Model	Commercial Designation	PART 66 Type rating endorsement
ATR-GIE Avions de Transport Régional	ATR 42-200 ATR 42-300 ATR 42-320		ATR 42-200/300 series (PWC PW120)
	ATR 42-400 ATR 42-500 ATR 42-500 ATR 72-212 A ATR 72-212 A	 42-500 42-600 72-500 72-600	ATR 42-400/500/72-212A (PWC PW120)
	ATR 72-101 ATR 72-102 ATR 72-201 ATR 72-202 ATR 72-211 ATR 72-212		ATR 72-100/200 series (PWC PW120)
BAE SYSTEMS (OPERATIONS) Ltd	BAe ATP		ATP (PWC PW120)
	AVRO 146- RJ100 AVRO 146- RJ115 AVRO 146-RJ70 AVRO 146-RJ85 BAe 146 Series 100 BAe 146 Series 200 BAe 146 Series 300		BAe 146/ AVRO 146-RJ (Honeywell ALF500 Series)
	HP.137 Jetstream Mk.1 HP.137 Jetstream Mk.1	Jetstream 1 Jetstream 2	HP.137 (Turbomeca Astazou)
	HS 748 Series 2A HS 748 Series 2B HS.748 Series 1 HS.748 Series 2		HS748 (RRD Dart)
	Jetstream 200		Jetstream 200 (Turbomeca Astazou)
	Jetstream 3100 Jetstream 3200	Jetstream 31 Jetstream32/32EP	Jetstream 31/32 (Honeywell TPE331)
	Jetstream 4100		Jetstream 41 (Honeywell TPE331)
BERIEV Aircraft Company	Be-200ES-E		Beriev 200 (Ivchenko D-436TP)
B-N GROUP Ltd.	BN2T/-2/-2R/-4R/-4S	Turbine Islander	Britten-Norman BN2T Series (RR Corp 250)

TC holder	Model	Commercial Designation	PART 66 Type rating endorsement
BOEING COMPANY (THE)	B707-200 B707-200B B707-300 Series		Boeing 707 (PW JT4)
	B707-400 Series		Boeing 707 (RR Conway)
	B707-100 B707-100B B707 -100B B707-300B Series B707- 300C Series B720	Long Body Long Body Short Body	Boeing 707/720 (PW JT3D)
	B727 Series B727-100 Series B727-100C Series B727- 200 Series B727C Series		Boeing 727 (PW JT8D)
	B737-100 B737- 200 B737-200C		Boeing 737-100/200 (PW JT8D)
	B737-300 B737-400 B737-500		Boeing 737-300/400/500 (CFM56)
	B737-600 B737-700 B737-800 B737-900 B737-900ER		Boeing 737-600/700/800/900 (CFM56)
	B737-7 B737-8 B737-9	B737 MAX	Boeing 737-7/8/9 (CFM LEAP-1B)
	B747-100		Boeing 747-100 (PW JT9D)

TC holder	Model	Commercial Designation	PART 66 Type rating endorsement
	B747-200B B747-200C B747-200F B747 300		Boeing 747-200/300 (GE CF6)
	B747-200B B747-200C B747-200F B747-300		Boeing 747-200/300 (PW JT9D)
	B747-200B B747-200C B747-200F B747-300		Boeing 747-200/300 (RR RB211)
	B747-400 B747- 400F/SF(BCF)		Boeing 747-400 (GE CF6)
	B747-400 B747-400F/SF(BCF)		Boeing 747-400 (PW 4000)
	B747-400 B747-400F/SF(BCF)		Boeing 747-400 (RR RB211)
	B747-8F B747-8I	Freighter Intercontinental	Boeing 747-8 (GE GEnx)
	B747SP		Boeing 747SP (PW JT9D)
	B747SP		Boeing 747SP (RR RB211)
	B757-200 B757-200PF / B757-300		Boeing 757-200/300 (PW 2000)
	B757-200 B757-200PF B757-300		Boeing 757-200/300 (RR RB211)
	B767-200 B767-300 B767-300BCF		Boeing 767-200/300 (PW 4000)
	B767-200 B767-300 B767-300BCF		Boeing 767-200/300 (PW JT9D)
	B767-200 B767-300 B767-300BCF/B767-300F B767-400ER		Boeing 767-200/300/400 (GE CF6)
	B767-300		Boeing 767-300 (RR RB211)

TC holder	Model	Commercial Designation	PART 66 Type rating endorsement
	B777-200 B777-200LR B777-300ER B777F	Freighter	Boeing 777-200/300 (GE 90)
	B777-200 B777- 300		Boeing 777-200/300 (PW 4000)
	B777-200 B777-300		Boeing 777-200/300 (RR RB211 Trent 800)
	B787-8 B787-9 B787-10	Dreamliner	Boeing 787-8/9/10 (GE GEnx)
	B787-8 B787-9 B787-10	Dreamliner	Boeing 787-8/9/10 (RR RB 211 Trent 1000)
Bombardier	BD-100-1A10	Challenger 300 Challenger 350	Bombardier BD-100-1A10 (Honeywell AS907)
	BD-500-1A10 BD-500-1A11	C Series CS100 C Series CS300	Bombardier BD-500 Series (PW PW1500G) Bombardier BD-500 Series (PW PW1500G)
	BD-700-1A10 BD-700-1A11	Global Express Global6000 Global 5000 Global 5000 GVFD	Bombardier BD-700 Series (RRD BR710)
	CL600-1A11	Challenger 600	Bombardier CL-600-1A11 (Honeywell ALF502)
	CL-600-2A12 (601 Variant) CL-600-2B16 (601-3A Variant) CL-600-2B16 (601-3R Variant)	Challenger 601 Challenger 601-3A Challenger 601-3R	Bombardier CL-600-2A12/-2B16 (variant CL 601/601-3A/3R) (GE CF34)

TC holder	Model	Commercial Designation	PART 66 Type rating endorsement
	CL-600-2B16 (CL 604 Variant) CL-600-2B16 (CL 604 Variant)	Challenger-604 (MSN < 5701) Challenger-605 (MSN > 5701)	Bombardier CL-600-2B16 (variant CL 604) (GE CF34)
	CL-600-2B19	Regional Jet Series 100	Bombardier CL-600-2B19 (GE CF34)
	CL-600-2C10 CL-600-2D15 CL-600-2D24	Regional Jet 700/701/702 Regional Jet Series 705 Regional Jet	Bombardier CL-600-2C10/-2D15/-2D24/- (GE CF34)

		Series 900	
	CL-600-2E25	Regional Jet Series 1000	
	DHC-8-101	DHC-8 Series 100	Bombardier DHC-8-100/200/300 (PWC PW 120)
	DHC-8-102	DHC-8 Series 100	
	DHC-8-103	DHC-8 Series 100	
	DHC-8-106	DHC-8 Series 100	
	DHC-8-201	DHC-8 Series 200	
	DHC-8-202	DHC-8 Series 200	
	DHC-8-301	DHC-8 Series 300	
	DHC-8-311	DHC-8 Series 300	
	DHC-8-314	DHC-8 Series 300	
	DHC-8-315	DHC-8 Series 300	
	DHC-8-400	DHC-8 Series 400	Bombardier DHC-8-400 (PWC PW150)
	DHC-8-401	DHC-8 Series 400	
	DHC-8-402	DHC-8 Series 400	
	CL-215-1A10		Canadair CL-215 (PW R2800)
	CL-215-6B11 (CL-215T Variant)		Canadair CL-215 (PWC PW120)
	CL-215-6B11 (CL-415 Variant)		Canadair CL-415 (PWC PW123)

TC holder	Model	Commercial Designation	PART 66 Type rating endorsement
CESSNA AIRCRAFT Company	401/402 404 411 414 421		Cessna 400 Series (Continental)
	425	Corsair/ Conquest I	Cessna 425 (PWC PT6)
	441		Cessna 441 (Honeywell TPE331)
	500 501	Citation/ Citation I Citation I	Cessna 500/ 501 (PWC JT15D)
	510		Cessna 510 (PWC PW615)
	525 525A	Citation Jet CJ1 Citation Jet CJ2	Cessna 525/525A (Williams FJ 44)
	525B	Citation Jet CJ3	Cessna 525B (Williams FJ 44)
	525C	Citation Jet CJ4	Cessna 525C (Williams FJ44)
	550 560 560 S550 551	Citation II Citation V Citation Ultra Citation S/II Citation II	Cessna 550/551/560 (PWC JT15D)
	550 560 560	Citation Bravo Citation Encore Citation Encore +	Cessna 550/560 (PWC PW530/535)
	560 XLS 560 XLS+ 560 XL	Citation XLS Citation XLS+ Citation Excel	Cessna 560XL/XLS (PWC PW545)
	650 650	Citation III, VI Citation VII	Cessna 650 (Honeywell TFE731)
	680	Sovereign Sovereign+	Cessna 680 (PWC PW306)
	750	Citation X	Cessna 750 (RR Corp AE3007C)
DASSAU LT	Falcon 10		Falcon 10 (Honeywell TFE731)

AVIATION	Fan Jet Falcon Fan Jet Falcon Series C Fan Jet Falcon Series D Fan Jet Falcon Series E Fan Jet Falcon Series F	(Basic) Fan Jet Falcon	Falcon 20 (GE CF700)

TC holder	Model	Commercial Designation	PART 66 Type rating endorsement
	Fan Jet Falcon Series G Mystère Falcon 200 Mystère Falcon 20GF		Falcon 200 (Honeywell ATF 3-6)
	Falcon 2000		Falcon 2000 (CFE 738)
	Falcon 2000EX		Falcon 2000EX (PWC PW308)
	Falcon 2000EX	F2000EX EASy F2000DX F2000LX F2000LXS F2000S	Falcon 2000EX EASy (PWC PW308)
	Mystère Falcon 20-C5 Mystère Falcon 20-D5 Mystère Falcon 20-E5 Mystère Falcon 20-F5		Falcon 20-5 (Honeywell TFE731)
	Mystère Falcon 50		Falcon 50 (Honeywell TFE731)
	Mystère Falcon 50	F50EX	Falcon 50EX (Honeywell TFE731)
	Falcon 7X		Falcon 7X (PWC PW307A)
	Mystère Falcon 900 Mystère Falcon 900	 F900B	Falcon 900 (Honeywell TFE731)
	Mystère Falcon 900	F900C	Falcon 900C (Honeywell TFE731)
	Falcon 900EX		Falcon 900EX (Honeywell TFE731)
	Falcon 900EX Falcon 900EX Falcon 900EX	F900EX EASy F900DX F900LX	Falcon 900EX EASy (Honeywell TFE731)
DORNIER Seastar	Seastar CD2		Dornier Seastar CD2 (PWC PT6)
EADS CASA	C-212-CB C-212-CC C-212-CD C-212-CE C-212-CF	Aviocar Aviocar Aviocar Aviocar Aviocar	CASA C-212 (Honeywell TPE331)

	C-212-DD C-212-DF C-212-EE C-212-VA	Aviocar Aviocar Aviocar Aviocar	
TC holder	**Model**	**Commercial Designation**	**PART 66 Type rating endorsement**
	C-212-DE	Aviocar	CASA C-212 (PWC PT6)
	C-295		CASA C-295 (PWC PW127)
	CN-235 CN-235-100 CN-235-200		CASA CN-235 (GE CT7)
ECLIPSE AEROSPACE	EA500		Eclipse EA500 (PWC PW610)
EMBRAER	EMB-110P1 EMB-110P2	Bandeirante Bandeirante	Embraer EMB-110 (PWC PT6)
	EMB-121A EMB-121A1	Xingu I Xingu II	Embraer EMB-121 (PWC PT6)
	EMB-120 EMB-120ER EMB-120RT	Brasilia Brasilia Brasilia	Embraer EMB-120 (PWC PW110 Series)
	EMB-135BJ EMB-135ER EMB-135LR EMB-145/EMB-145EP EMB-145ER/EMB145EU EMB-145LR/ EMB-145LU EMB-145MK EMB-145MP	Legacy 600 Legacy 650	Embraer EMB-135/145 (RR Corp AE3007A)
	EMB-500	Phenom 100	Embraer EMB-500 (PWC PW617)
	EMB-505	Phenom 300	Embraer EMB-505 (PWC PW535)
	EMB-545	Legacy 450	Embraer EMB-545 (Honeywell AS907)
	EMB-550	Legacy 550	Embraer EMB-550 (Honeywell AS907)
	ERJ 170-100 LR ERJ 170-100 STD ERJ 170-200 LR ERJ 170-200 STD	ERJ-170 ERJ-170 ERJ-175 ERJ-175	Embraer ERJ-170 Series (GE CF34)

	ERJ 190-100 ECJ ERJ 190-100 IGW ERJ 190-100 LR ERJ 190-100 SR ERJ 190-100 STD ERJ 190-200 IGW ERJ 190-200 LR ERJ 190-200 STD	Lineage 1000 ERJ-190 AR ERJ-190 ERJ-190 ERJ-190 ERJ-195 AR ERJ-195 ERJ-195	Embraer ERJ-190 Series (GE CF34)

TC holder	Model	Commercial Designation	PART 66 Type rating endorsement
MARYLAND AIR INDUSTRIES (FOKKER-FAIRCHILD)	F-27A to -M FH-227 FH-227B FH-227C FH-227D FH-227E		Fokker F27/Fairchild F-27/FH-227 Series (RRD Dart)
FOKKER SERVICES	F27 Mark 100	Friendship	
	F27 Mark 200	Friendship	
	F27 Mark 300	Friendship	
	F27 Mark 400	Friendship	
	F27 Mark 500	Friendship	
	F27 Mark 600	Friendship	
	F27 Mark 700	Friendship	
FOKKER SERVICES	F27 Mark 050	Fokker 50	Fokker 50/60 Series (PWC PW 125/127)
	F27 Mark 0502	Fokker 50	
	F27 Mark 0604	Fokker 60	
	F28 Mark 0070	Fokker 70	Fokker 70/100 (RRD Tay)
	F28 Mark 0100	Fokker 100	
	F28 Mark 1000	Fellowship	Fokker F28 Series (RRD Spey)
	F28 Mark 1000C	Fellowship	
	F28 Mark 2000	Fellowship	
	F28 Mark 3000	Fellowship	
	F28 Mark 3000C	Fellowship	
	F28 Mark 3000R	Fellowship	
	F28 Mark 3000RC	Fellowship	
	F28 Mark 4000	Fellowship	
GOVERNMENT AIRCRAFT FACTORIES (ASTA)	N22/N22A to N22S N24/N24A		Nomad N22/24 Series (RR Corp 250)
GROB Aircraft AG			Grob G 520 Series (Honeywell TPE331)

TC holder	Model	Commercial Designation	PART 66 Type rating endorsement
GULFSTREAM AEROSPACE Corporation	G-1159 G-1159A G-1159B	Gulfstream II Gulfstream IIB Gulfstream III	Gulfstream G-1159 Series (RRD Spey)
	G-159	Gulfstream I	Gulfstream G-159 (RRD Dart)
	GIV (G300) GIV (G400) G- IV/GIV-SP	Gulfstream G300 Gulfstream G400 Gulfstream G-IV/ GIV-SP	Gulfstream G-IV Series (RRD Tay)
	GIV-X (G350) GIV-X (G450)	Gulfstream G350 Gulfstream G450	Gulfstream GIV-X Series (RRD Tay)
	GV	Gulfstream GV	Gulfstream GV basic model (RRD BR710)
	GV-SP (G500) GV-SP (G550)	Gulfstream G500 Gulfstream G550	Gulfstream GV-SP Series (RRD BR710)
	GVI	G650	Gulfstream GVI (RRD BR725)
GULFSTREAM AEROSPACE LP (GALP) c/o Israel Aircraft Industries	1125 Westwind Astra Astra SPX Astra SPX G100	 Gulfstream 100	Gulfstream (IAI) 100/1125/Astra SPX (Honeywell TFE731)
GULFSTREAM AEROSPACE LP (GALP) c/o Israel Aircraft Industries	Gulfstream 200 / IAI Galaxy	Galaxy 200	Gulfstream (IAI) 200/Galaxy (PWC PW306)
	Gulfstream G150	Gulfstream G150	Gulfstream (IAI) G150 (Honeywell TFE731)
	Gulfstream G280	Gulfstream G280	Gulfstream (IAI) G280 (Honeywell AS907)
HAWKER BEECHCRAFT	65-90 65-A90 65-A90-1 65-A90-2 65-A90-4 B90 C90 C90A C90GT C90GTi E90 F90 H90	King Air	Beech 90 Series (PWC PT6)

TC holder	Model	Commercial Designation	PART 66 Type rating endorsement
	200/A200 200C/A200C 200CT/A200CT 200T B200 B200C B200CGT B200CT B200GT B200T		Beech 200 Series (PWC PT6)
	390	Premier 1, 1A	Beech 390 (Williams FJ44)
	99 100 99A A100 A100A/C A99 A99A B99 C99	 King Air King Air King Air Airliner Airliner Airliner Airliner	Beech 99/100 Series (PWC PT6)
	B100		Beech B100 (Honeywell TPE331)
	1900 1900C 1900D	Airliner Airliner Airliner	Beech 1900 (PWC PT6)
	300 300LW B300 B300C	Super King Air Super King Air Super King Air 350 Super King Air	Beech 300 Series (PWC PT6)
	400 400A 400T MU-300	Beechjet Beechjet (Hawker 400XP) Beechjet Diamond I/IA	Beech 400/Mitsubishi MU-300 (PWC JT15)

	MU-300-10	Diamond II	

TC holder	Model	Commercial Designation	PART 66 Type rating endorsement
	BH.125 series 400 BH.125 series 600 DH.125 series 1 DH.125 series 3 DH.125 series 400 HS.125 series 1 HS.125 series 3 HS.125 series 400 HS.125 series 600 HS.125 series F3 HS.125 series F400 HS.125 series F600	"Beechcraft Hawker" "Beechcraft Hawker" "Hawker Siddeley" "Hawker Siddeley" "Hawker Siddeley" "Hawker Siddeley" "Hawker Siddeley" "Hawker Siddeley" "Hawker Siddeley" "Hawker Siddelev" "Hawker Siddelev" "Hawker Siddeley"	BAe 125 Series (RR Viper)
	BAe.125 series 800 BH.125 series 400 BH.125 series 600 DH.125 series 1 DH.125 series 3 DH.125 series 400 Hawker 800 HS.125 series 3 HS.125 series 600 HS.125 series 700 HS.125 series F3 HS.125 series F400 HS.125 series F600	 "Beechcraft Hawker" "Beechcraft Hawker" "Hawker Siddeley" "Hawker Siddeley" "Hawker Siddeley" "Hawker Siddeley" "Hawker Siddeley" "Hawker Siddeley" "Hawker Siddeley" "Hawker Siddeley" "Hawker Siddeley" "Hawker Siddeley"	BAe 125 Series /700/800 (Honeywell
	BAe.125 series 1000A/B Hawker 1000		BAe 125 Series 1000 (PWC PW305)

	Hawker 750 Hawker 800XP Hawker 850XP Hawker 900XP	Hawker750 Hawker800XP Hawker850XP Hawker 900XP	BAe 125 Series 750/800XP/850XP/900XP (Honeywell TFE731)
	4000	Hawker 4000	Hawker 4000 (PWC PW308)

TC holder	Model	Commercial Designation	PART 66 Type rating endorsement
JSC Sukhoi Civil Aircraft	RRJ-95B	Superjet 100	RRJ-95 (PowerJet SaM146)
KELOWNA (Convair)	440		Convair 580 (RR Corp 501)
LEARJET	LJ 23		Learjet 23 (GE CJ610)
	24 /24A 24B / 24B-A 24C 24D / 24D-A 24E 24F / 24F-A 25 25A 25B 25C 25D 25F		Learjet 24/25 (GE CJ610)
	31 / 31A		Learjet 31 (Honeywell TFE731)
	35 / 35A 36 / 36A		Learjet 35/36 (Honeywell TFE731)
	55 / 55B / 55C		Learjet 55 (Honeywell TFE731)
	Learjet 60	LJ60 LJ60XR	Learjet 60 (PWC PW305)
	Learjet 40 Learjet 45 Learjet 70 Learjet 75	LJ45 LJ40XR LJ45 LJ 45XR LJ 70 LJ 75	Learjet Model 45 (Honeywell TFE731)
LOCKHEED MARTIN Corporation	1329-25	JetStar II	Lockheed 1329 (Honeywell TFE731)
	1329-23D	JetStar	Lockheed 1329 PW (PW JT12)
	Model 188C Model L188A	Electra Electra	Lockheed 188 (RR Corp 501)

TC holder	Model	Commercial Designation	PART 66 Type rating endorsement
	382G	Hercules	Lockheed 382 (RR Corp 501)
	L-1011-385-1 L-1011-385-1-15 L-1011-385-3	TriStar TriStar TriStar	Lockheed L-1011 (RR RB211)
M7 AEROSPACE	SA-26-T		Fairchild SA26-T (PWC PT6)
	SA26AT		Fairchild SA26 AT (Honeywell TPE331)
	SA226-AT SA226-T SA226-T(B) SA226-TC		Fairchild SA226 Series (Honeywell TPE331)
	SA227-AC SA227-AT SA227-BC SA227-CC SA227-DC SA227-TT	Swearingen Metro	Fairchild SA227 Series (Honeywell
	SA227-PC	Swearingen Metro	Fairchild SA227 Series (PWC PT6)
McDonnell DOUGLAS Corporation Boeing Company	DC-10-10 DC-10-30 DC- 10-30F		DC-10/MD-10 (GE CF6)
	DC-8 Series 70 DC-8 Series 70F		DC-8 (CFM56)
	DC-8 Series 50 DC-8 Series 60 DC-8 Series 60F DC-8F		DC-8 (PW JT3D)
	DC-8 Series 40		DC-8 (RR Conway)
	DC-9-10 Series DC-9-20 Series DC-9-30 Series DC-9-40 Series DC-9-50 Series		DC-9 (PW JT8D)
	717-200		MD 717-200 (RRD BR700-715)

	MD-11 MD-11F		MD-11 (GE CF6)
	MD-11		MD-11 (PW 4000)

TC holder	Model	Commercial Designation	PART 66 Type rating endorsement
	DC-9-81 (MD-81) Series DC-9-82 (MD-82) Series DC-9-83 (MD-83) Series DC-9-87 (MD-87) Series MD-88	MD-81 MD-82 MD-83 MD-87	MD-80 Series (PW JT8D)
	MD-90 Series		MD-90 (IAE V2500)
MITSUBISHI Heavy Industries	MU-2B-26A MU-2B-36A MU-2B-40 MU-2B-60		Mitsubishi MU-2B (Honeywell TPE331)
PIAGGIO Aero Industries	P.166 DP1		Piaggio P166 (PWC PT6)
	P180 P180	Avanti Avanti II	Piaggio P180 Avanti/Avanti II (PWC PT6)
PILATUS AIRCRAFT	PC-12 PC-12/45 PC-12/47 PC- 12/47E		Pilatus PC-12 (PWC PT6)
PIPER AIRCRAFT	PA31T to T3	Cheyenne	Piper PA-31T Series (PWC PT6)
	PA-42-1000	Cheyenne 400LS	Piper PA-42 (Honeywell TPE-331)
	PA-42 PA-42-720 PA-42-720R	Cheyenne III Cheyenne IIIA	Piper PA-42 (PWC PT6)
	PA-46-500TP	Malibu Meridian	Piper PA-46-500TP (PWC PT6)
POLS KIE ZAKLA DY LOTNI CZE	PZL M28 00 PZL M28 02 PZL M28 05		PZL M 28 (PWC PT6)
REIMS AVIATION	F 406	Caravan II	Reims-Cessna F 406 (PWC PT6)
RUAG Aerospace Services GmbH	DO 28 D-6 Dornier 128-6		Dornier Do 28 Series (PWC PT6)
	228-100 series 228-200 series		Dornier 228 (Honeywell TPE331)

SAAB AB, SAAB Aerosystems	340A(SF340A) 340B	Saab-Fairchild 340A	Saab (SF) 340 (GE CT7)
	2000		Saab 2000 (RR Corp AE2100)

TC holder	Model	Commercial Designation	PART 66 Type rating endorsement
SABRELINER Corporation	NA-265-65		Sabreliner NA-265 (Honeywell TFE731)
	NA-265-65		Sabreliner NA-265 (PW JT12)
SHORT BROTHERS	SC7 Series 3	Skyvan	Shorts SC7 (Honeywell TPE331)
	SD3-30 SD3-60 SD3-60 SHERPA SD3-SHERPA	Variant 200 Variant 200 Variant 200 Variant 200	Shorts SD3 Series-30/SD3-60 (PWC PT6)
SOCATA	TBM 700 A TBM 700 B TBM 700 C1 TBM 700 C2 TBM 700 N	 TBM 850	Socata TBM 700/850 (PWC PT6)
TUPOLEV PSC	TU 204-120CE		Tupolev TU 204 (RR RB211)
TWIN COMMANDER AIRCRAFT Corporation	681 690 695 680-T 680-V 680-W 690A 690B 690C 690D 695A 695B		Twin Commander 680/681/690/695 (Honeywell TPE331)
VIKING AIR (Bombardier)(De Havilland)	DHC-6-1 DHC-6-100/110 DHC-6-200/210 DHC-6-300/310/320 DHC-6-400	Twin Otter	De Havilland DHC-6 (PWC PT6)
	DHC-7-100 DHC-7-101 DHC-7-102 DHC-7-103 DHC-7-110 DHC-7-111		De Havilland DHC-7 (PWC PT6)
VULCANAIR	AP68TP300 AP68TP600	Spartacus	Vulcanair AP68TP Series (RR Corp 250)

	SF600 SF600A SF600TP	Viator	Vulcanair SF600 (RR Corp 250)

STCs in AEROPLANES GROUP 1

GROUP 1 AEROPLANES			
STC Holder	**Model**	**Commercial designation**	**PART-66 Type rating endorsement**
GOMOLZIG FLUGZEUG-UND	Dornier DO 28 D-2		Dornier DO 28 (Walter M601)
JET AVIATION	Fan Jet Falcon Series E		Falcon 20E (Honeywell TFE731)
NEXTANT AEROSPACE	Beech 400A		Beech 400 A (Williams FJ44)

GROUP 1 HELICOPTERS			
TC holder	**Model**	**Commercial Designation**	PART 66 Type rating endorsement
AGUSTAWEST LAND	A109E/A109N/ A109S AW109SP		Agusta A109 Series (PWC PW206/207)
	A109 A109A A109AII A109C		Agusta A109 Series (RR Corp 250)
	A109K2		Agusta A109 (Turbomeca Arriel 1)
	A109E A109LUH		Agusta A109 Series (Turbomeca Arrius 2)
	AB139 AW139		Agusta AB139/AW139 (PWC PT6)
	EH101-500 Series EH101-510 Series EH101- 300		Agusta/Westland EH-101 (GE CT7)
	AW169		AW169 (PWC 210)
	Aw189		AW189 (GE CT7)
	AB 212		Bell 212/Agusta AB212 (PWC PT6)
BELL HELICOPTER	212		
AGUSTA	AB 204 B Series AB 205 A1		Agusta AB204, AB205/Bell 204, 205 (Honeywell T53)
BELL HELICOPTER TEXTRON	204B 205A-1		
BELL HELICOPTER TEXTRON, INC	412 412EP 412CF		Bell 412/Agusta AB412 (PWC PT6)
AGUSTA	AB 412 AB 412 EP		
BELL HELICOPTER TEXTRON	214B 214B-1		Bell 214 (Honeywell T5508)
	214ST		Bell 214ST(GE CT7)

TC holder	Model	Commercial Designation	PART 66 Type rating endorsement
BELL HELICOPTER CANADA	222 222B 222U		Bell 222 (Honeywell LTS 101)
	230 230 230	230 Executive 230 Utility 230 EMS	Bell 230 (RR Corp 250)
	427		Bell 427 (PWC PW207D)
	429		Bell 429 (PWC PW207D)
	430		Bell 430 (RR Corp 250)
ERICKSON AIR- CRANE	EAC S-64F		Erickson S-64 (PW JFTD 12)
AIRBUS HELICOPTERS	SA 330 J		Eurocopter SA 330 (Turbomeca Turmo)
	AS 332 C AS 332 L AS 332 C1 AS 332 L1		Eurocopter AS 332 (Turbomeca Makila 1A/1A1)
	AS 332 L2		Eurocopter AS 332 L2 (Turbomeca Makila 1A2)
	AS 355 E AS 355 F AS 355 F1 AS 355 F2		Eurocopter AS 355 (RR Corp 250)
	AS 355 N AS 355 NP		Eurocopter AS 355 (Turbomeca Arrius 1)
	SA 365 N SA 365 N1 AS 365 N2	 Dauphin Dauphin	Eurocopter SA 365 N/N1, AS 365 N2 (Turbomeca Arriel 1)
	AS 365 N3	Dauphin	Eurocopter AS 365 N3 (Turbomeca Arriel 2C)
	EC 155 B EC 155 B1		Eurocopter EC 155 (Turbomeca Arriel 2)
	EC 175 B		Eurocopter EC 175 (PWC PT6C)
	EC 225 LP		Eurocopter EC 225 (Turbomeca Makila
	SA 365 C SA 365 C1 SA 365 C2 SA 365 C3	Dauphin Dauphin Dauphin Dauphin	Eurocopter SA 365 C Series (Turbomeca Arriel 1)
	SA 366 G1	Dauphin	Eurocopter SA 366 G1 Series (Lycoming LTS101)

Philippine Aerospace Developme nt Corp	P-BO 105 C P-BO 105 S		BO 105 series (RR Corp 250)

TC holder	Model	Commercial Designation	PART 66 Type rating endorsement
AIRBUS HELICOPTERS DEUTSCHLAND GmbH	BO 105 A BO 105 C/ BO 105 D Series BO 105 LS A-1 BO 105 LS A-3 BO 105 S		BO 105 series (RR Corp 250)
	EC 135 P1/ EC135 P2 EC135 P2+/ EC 135 P3 EC 635 P2+/ EC 635 P3		Eurocopter EC 135 (PWC PW206)
	EC 135 T1/T2/T2+/T3 EC 635 T1/T2+/T3		Eurocopter EC 135 (Turbomeca Arrius 2B)
	MBB-BK 117 A Series MBB-BK 117 B Series		Eurocopter MBB-BK 117 A/B (Honeywell LTS 101)
	MBB-BK 117 C1		Eurocopter MBB-BK 117 C1 (Turbomeca Arriel 1)
	MBB-BK 117 C2	EC145	Eurocopter MBB-BK 117 C2 (Turbomeca Arriel 1)
	MBB-BK 117 D2	EC145 T2	Eurocopter MBB-BK 117 D2 (Turbomeca Arriel 2)
KAMAN AEROSPACE CORPORATIO	K-1200		Kaman K-1200 (Honeywell T5317)
KAMOV	Ka-32A11BC		Kamov Ka 32 (Klimov)
MD HELICOPTERS, Inc.	MD900		MD Helicopters MD900 (PWC PW206/207)
PZL-ŚWIDNIK	W-3A W-3AS		PZL-Swidnik W-3A/W-3AS (Rzeszow PZL-10W)
AGUSTA	AS61N AS61NI		Agusta AS61N/Sikorsky S-61N (GE CT58)
SIKORSKY AIRCRAFT	S-61N S-61NM		
SIKORSKY AIRCRAFT	S-58 BT to JT		Sikorsky S-58 (PWC PT6T)
	S-76A		Sikorsky S-76A (RR Corp 250)
	S-76A S-76A	S-76A+ S-76A++	Sikorsky S-76 (Turbomeca Arriel 1)
	S-76B	S-76B	Sikorsky S-76B (PWC PT6)
	S-76C		Sikorsky S-76C (Turbomeca Arriel 1)
	S-76C S-76C	S-76C+ S-76C++	Sikorsky S-76C (Turbomeca Arriel 2)
	S-76D		Sikorsky S-76D (PW210S)

	S-92A		Sikorsky S-92A (GE CT7-8)

STCs in HELICOPTERS GROUP 1

GROUP 1 HELICOPTERS			
STC holder	**Model**	**Commercial Designation**	**Part-66 Type rating endorsement**
Heli – Air Inc.	Bell 222		Bell 222 (RR Corp 250)

SUB-GROUP 2a: SINGLE TURBO-PROPELLER ENGINE AEROPLANES (Other than those in Group 1)	
TC holder	**PART 66 Type rating endorsement**
AERO VODOCHODY	Aero Ae-270 (PWC PT6)
AIR TRACTOR	Air Tractor AT-302 (Lycoming LTP-101) Air Tractor AT-400/500/600 Series (PWC PT6)
ALENIA AERMACCHI	Aermacchi SF260 (RR Corp 250)
ALLIED AG CAT Productions	Grumman G-164 (PWC PT6)
CESSNA AIRCRAFT Company	Cessna (Soloy) 206/207 (RR Corp 250) Cessna 208 Series (PWC PT6) Cessna 210 (RR Corp 250)
EADS PZL "WARSZAWA-OKECIE"	EADS PZL PZL-106 BT (Walter M601) EADS PZL PZL-106 BTU
EXTRA Flugzeugproduktions - und Vertriebs-GmbH	Extra EA-400-500 (RR Corp 250)
GROB Aircraft AG	Grob G 120TP (RR Corp 250)
MAULE AEROSPACE TECHNOLOGY	Maule MX-7 (RR Corp 250)
PACIFIC AEROSPACE Corporation	PAC 750XL (PWC PT6)
PILATUS AIRCRAFT	Pilatus PC-6 Series (Turbomeca Astazou) Pilatus PC-6 (PWC PT6) Pilatus PC-6 Series (Honeywell TPE 331)
THRUSH AIRCRAFT	Ayres S2R Series (PWC PT6)
VIKING AIR (Bombardier) (De Havilland)	De Havilland DHC-2 (PWC PT6)
ZLIN AIRCRAFT	Zlin Z-37 T Series (Walter M601)

STCs in AEROPLANES GROUP 2a

SUBGROUP 2a: SINGLE TURBO-PROPELLOER ENGINE AEROPLANES (Other than those in Group 1)	
STC Holder	**Part-66 Type rating endorsement**
AERO TWIN, Inc. / SUPERVAN SYSTEMS. LTD.	Cessna 208/208B (Honeywell TP3310)

JETPROPE, LLC	Piper PA-46 Pressurised (PWC PT6)
SOLOY, LLC	Cessna 206 (RR Corp 250)
SOLOY, LLC	Cessna 207 (RR Corp 250)
WEST PACIFIC AIR, LLC	Beech 36TC (PWC PT6)

SUB-GROUP 2b: SINGLE TURBINE ENGINE HELICOPTERS (Other than those in Group 1)			
TC holder	**Model**	**Commercial Designation**	**PART 66 Type rating endorsement**
AGUSTA	A119 AW119 MkII	Koala Koala	Agusta A119/ Agusta AW119MkII (PWC PT6)
BELL HELICOPTER CANADA	407		Bell 407 (RR Corp 250)
AGUSTA	AB 206A		Agusta AB206 / Bell 206 (RR Corp 250)
BELL HELICOPTER TEXTRON CANADA	206 Series from A to L		
THE ENSTROM HELICOPTER	480/480B		Enstrom 480 (RR Corp 250)
AIRBUS HELICOPTERS	AS 350 B AS 350 B1 AS 350 B2 AS 350 BA AS 350 BB	Écureuil	Eurocopter AS 350 (Turbomeca Arriel 1)
	AS 350 B3		Eurocopter AS 350 (Turbomeca
	AS 350 D		Eurocopter AS 350 (Honeywell LTS
	EC 120 B	Colibri	Eurocopter EC 120 (Turbomeca Arrius 2F)
	EC 130 B4 EC 130 T2		Eurocopter EC 130 (Turbomeca Arriel 2)
	SA 315 B	Lama	Eurocopter SA 315B (Turbomeca Artouste)
	SA 3180 SA 318 B SA 318 C	Alouette- Astazou	Eurocopter SA 318 (Turbomeca Astazou)
	SA 319 B	Alouette III	Eurocopter SA 319 (Turbomeca Astazou XIV)
	SA 341 G	Gazelle	Eurocopter SA 341 (Turbomeca Astazou)
	SA 342 J	Gazelle	Eurocopter SA 342 J (Turbomeca Astazou XIV)
	SE 3160 SA 316 B SA 316 C	Alouette III	Eurocopter SA 316 B/SA 316 C (Turbomeca Artouste)
MD HELICOPTERS INC. (MDHI)	369 H series 369 D, E and FF		MD Helicopters 369 Series/SEI NH-500D (RR Corp 250)
Macaer Aviation	NH-500D		

MD HELICOPTERS INC. (MDHI)	500N 600N		MD Helicopters 500N/600N AMD500N (RR Corp 250)
Mecaer Aviation	AMD-500N		

TC holder	Model	Commercial Designation	PART 66 Type rating endorsement
PZL-ŚWIDNIK	SW-4		PZL SW-4 (RR Corp 250)
ROBINSON HELICOPTER COMPANY	R66		Robinson R66 (RR Corp 250)
SCHWEIZER AIRCRAFT CORPORATIO	269D		Schweizer 269D (RR Corp 250)

SUB-GROUP 2c: SINGLE PISTON-ENGINE HELICOPTERS (Other than those in Group 1)

TC holder	Model	Commercial Designation	PART 66 Type rating endorsement
ANTARES INTERNATIONAL	SH-4		Silvercraft SH-4 (Franklin)
BRANTLY INTERNATIONAL, INC.	B-2		Brantly B2 (Lycoming)
HELICOPTÈRES GUIMBAL	G2	Cabri	Cabri G2 (Lycoming)
THE ENSTROM HELICOPTER CORPORATION	F-28 series 280 series		Enstrom F-28/280 (Lycoming)
Mecaer Aviation Group	NH 300C	Model 300C	Schweizer/Breda Nardi 269/300 (Lycoming)
SCHWEIZER AIRCRAFT CORPORATION	269A 269B 269C 269C-1	Model 300C Model 300C Model 300C Model 300C	
ROBINSON HELICOPTER COMPANY	R22 R22 ALPHA R22 BETA R22 MARINER R44 R44 II		Robinson R22/R44 Series (Lycoming)

SIKORSKY AIRCRAFT	S-58 A to J		Sikorsky S-58 (Wright Cyclone)

GROUP 3: PISTON-ENGINE AEROPLANES (Other than those in Group 1)		
TC holder	**PART 66 Type rating endorsement**	**Type of structure**
AD Holdings, Inc	Thorp T-211 (Continental)	Metal
	Thorp T-211 (Jabiru)	Metal
AERO Sp.z.o.o	Aero AT-3 (Rotax)	Metal
AEROSTAR AIRCRAFT Corporation	Piper PA-60/61 pressurised (Lycoming)	Metal
	Piper PA-60/61 Pressurised (Lycoming)	Metal + pressurised
AIR TRACTOR	Air Tractor AT-250/300 (PW R985) Air Tractor AT-301/401/501 (PW R1340) Air Tractor AT-401 (PZL-3S)	Metal Metal Metal
Air Transport Group Holdings, Inc.	Lake C/LA Series (Lycoming)	Metal
AIRCRAFT Design and Certification	(WD) D4 Fascination (Rotax)	Composite
	Lightwing AC4 (Rotax)	Composite
AIRCRAFT INDUSTRIES	Let L 200 (LOM) Let Z-37 Series (LOM)	Metal Metal tubing Fabric
ALENIA AERMACCHI	Aermacchi F260 Series (Lycoming) SIAI-Marchetti S.205 (Franklin) SIAI-Marchetti S.205/S.208 (Lycoming)	Metal Metal Metal
ALEXANDRIA Aircraft LLC	Bellanca 14-19 Series (Continental) Bellanca 17-30/17-31 Series (Continental)	Wood + Metal tubing Fabric Wood + Metal tubing Fabric
ALLIED AG CAT Productions	Grumman G-164 (Continental) Grumman G-164 (Jacobs) Grumman G-164 (PW R Series)	Metal Metal Metal
ALPHA AVIATION	Robin HR 200/ R 2000 series (Lycoming)	Metal
AMERICAN CHAMPION	Champion 7 (Superior) Champion 7 (Lycoming) Champion 7 (Continental) Champion 8 Series (Lycoming)	Wood + Metal tubing Fabric Wood + Metal tubing Fabric Wood + Metal tubing Fabric Wood + Metal tubing Fabric
AQUILA Aviation by Excellence AG	Aquila AT01 (Rotax)	Composite
AUGUSTAIR	VARGA 2150/2180 (Lycoming)	Metal

B-N GROUP Ltd. (Britten- Norman)	Britten-Norman BN.2A Mark III (Lycoming) Britten-Norman BN2A Series (Lycoming) Britten-Norman BN2B Series (Lycoming)	Metal Metal Metal
CEAPR	Robin ATL / ATL S (JPX 4T60) Robin ATL L (Limbach L2000) Robin Robin DR 200 series (Potez) Robin DR 220 series (Continental) Robin DR 221 series (Lycoming) Robin DR 250 series (Lycoming) Robin DR 253 series (Lycoming) Robin DR 300 series (Lycoming) Robin DR 400 series (Lycoming) Robin DR 400 Series (Technify) Robin DR 400RP (Porsche) Robin HR 100 series (Continental) Robin HR 100 series (Lycoming) Robin R 1180 series (Lycoming) Robin R 3000 series (Lycoming)	Wood + Composite Wood + Composite Wood Wood Wood Wood Wood Wood Wood Wood Wood Metal Metal Metal Metal

TC holder	PART 66 Type rating endorsement	Type of structure
CESSNA AIRCRAFT Company	Cessna 150 Series (Rotax)	Metal
	Cessna 175 Series (Continental)	Metal
	Cessna 176 Series (Continental)	Metal
	Cessna 177 Series (Lycoming)	Metal
	Cessna 180 Series (Continental)	Metal
	Cessna 185 Series (Continental)	Metal
	Cessna 188 (Continental)	Metal
	Cessna 206 Series (Continental)	Metal
	Cessna 206 Series (Lycoming)	Metal
	Cessna 207 Series (Continental)	Metal
	Cessna 210 Series (Continental)	Metal
	Cessna P210 (Continental)	Metal + Pressurised
	Cessna 310/320 Series (Continental)	Metal
	Cessna 335 (Continental)	Metal + Pressurised
	Cessna 336 (Continental)	Metal
	Cessna 340 (Continental)	Metal + Pressurised
	Cessna T303 (Continental)	Metal
	Cessna/Reims-Cessna 150/F150 Series (Continental)	Metal
	Cessna/Reims-Cessna 152/F152 Series (Lycoming)	Metal
	Cessna/Reims-Cessna 172/F172 Series (Continental)	Metal
	Cessna/Reims-Cessna 172/F172 Series (Lycoming)	Metal
	Cessna/Reims-Cessna 182/F182 Series (Continental)	Metal
	Cessna/Reims-Cessna 182/F182 Series (Lycoming)	Metal
	Cessna/Reims-Cessna 337 Series (Continental) (not pressurised)	Metal
	Cessna/Reims-Cessna 337 Series (Continental) (pressurised)	Metal + Pressurised
	Cessna C300/C350/C400 (Continental)	Composite

TC holder	PART 66 Type rating endorsement	Type of structure
CIRRUS Design Corporation	Cirrus SR20/SR22/SR22T Series (Continental)	Composite
COMMANDER PREMIER AIRCRAFT CO.	Commander 112 (Lycoming) Commander 114 (Lycoming)	Metal Metal
Czech Sport Aircraft a.s.	Czech Sport PS-28 (Rotax)	Metal
DE HAVILLAND Support	Beagle B.121 series 1 (Continental) Beagle B.121 series 2/3 (Lycoming)	Metal Metal
DIAMOND AIRCRAFT Industries	Diamond DA20 (Continental) Diamond DA20/DV20 (Rotax) Diamond DA40 (Austro Engine) Diamond DA40 (Lycoming) Diamond DA40 D (Technify) Diamond DA42 Series (Austro Engine) Diamond DA42 Series (Technify) Diamond DA62 (Austro Engine)	Composite Composite Composite Composite Composite Composite Composite Composite
DYNAC AEROSPACE Corporation	Aerocommander 100 (Lycoming)	Metal
Dyn'aviation	CAP 10 (Lycoming) CAP 20/21 (Lycoming) CAP 230 Series (Lycoming)	Wood Wood Composite/Wood
EADS Deutschland Military Air Syst	Bölkow BO 208 (Continental) Bölkow BO 209 (Lycoming) Bölkow F.207 (Lycoming) SIAT	Metal Metal Wood
EADS PZL "WARSZAWA- OKECIE"	PZL-104 Wilga (Lycoming) PZL-104 Wilga Series (PZL) PZL-104A Wilga (Ivchenko) PZL-110 Koliber (Franklin) PZL – Koliber 150 series (Lycoming) PZL – Koliber 160 (Lycoming) SIAT 223 (Lycoming)	Metal Metal Metal Metal Metal Metal Metal
EADS PZL 'WARSZAWA-OKE (Aircraft with SAS)	PZL-106 Series (PZL)	Metal
EIS GmbH	RS 180 (Lycoming)	Wood
EVEKTOR	Evektor EV-97 (Rotax) Sportstar RTC (Rotax)	Metal Metal
EXTRA Flugzeugproduktions- und Vertriebs-GmbH	Extra EA-200/300 Series (Lycoming) Extra EA-400 (Continental)	Composite Composite + Pressurised
FFA ALTENRHEIN	AS202 Series (Lycoming)	Metal
FFT GYROFLUG (Aircraft with SAS)	SC01 Series (Lycoming)	Composite
Flight Design GmbH	CTLS-ELA (Rotax)	Composite

FLS AEROSPACE (Aircraft with SAS)	Club Sprint/Sprint 160 (Lycoming) OA7 Optica Series (Lycoming)	Metal Metal

TC holder	PART 66 Type rating endorsement	Type of structure
Fournier, René	RF 47 (Limbach) RF 6B(Continental) RF 6B (Lycoming)	Wood Wood Wood
FUJI Heavy Industries	Fuji FA-200 Series (Lycoming)	Metal
GA8 Airvan Pty Ltd	Gippsland GA8 (Lycoming)	Metal
GARDAN (Aircraft with SAS)	Gardan GY 80 (Lycoming)	Metal
GENERAL AVIA Costruzioni Aeronautiche (Aircraft with SAS)	General Avia F.22 (Lycoming) General Avia F20 Series (Lycoming)	Metal Metal
Bernd Hager/Anatoli Stobbe GbR	Ruschmeyer R90-230RG (Lycoming)	Composite
GROB Aircraft AG	Grob G115/120 Series (Lycoming)	Composite
Hoffmann GmbH & Co. KG	H 40 (Lycoming)	Wood/Metal tubing Fabric
INIZIATIVE INDUSTRIALI ITALIANE	III Sky Arrow 650/710 (Rotax)	Composite
INSTYTUT LOTNICTWA	Instytut Lotnictwa I-23 Manager	Composite
INTERCEPTOR AIRCRAFT	Aerocommander 200 (Continental)	Metal
ISSOIRE AVIATION	Issoire APM 20/30 (Rotax) Issoire APM 40 (Continental)	Composite Composite
LAVIA ARGENTINA S.A. (LAVIASA)	Piper PA-25 Series (Lycoming)	Metal tubing fabric
LIBERTY AEROSPACE Incorporated	Liberty XL-2 (Continental)	Composite
MAULE AEROSPACE TECHNOLOGY	Maule M4 (Continental) Maule M4 (Franklin) Maule M5 (Continental) Maule M5 (Franklin) Maule M5 (Lycoming) Maule M6 (Lycoming) Maule M7 Series (Lycoming) Maule MX-7 (Lycoming) Maule M7 Series (Lycoming) Metal Maule MX-7 (Lycoming) Metal	Metal tubing fabric Metal tubing fabric Metal tubing fabric Metal tubing fabric Metal tubing fabric Metal tubing fabric Metal tubing fabric Metal tubing fabric

TC holder	PART 66 Type rating endorsement	
MOONEY AIRPLANE Company	Mooney M18L (Continental) Mooney M20 (Continental) Mooney M20/M20A (Lycoming) Mooney M20B to M20S/M22 (Lycoming)	Metal + Wood Metal Metal + Wood Metal
NIPPER	Nipper T-66 (Stark)	Wood + Metal tubing Fabric
OMA SUD SPA Sky Technologies	SKYCAR (Lycoming)	Metal
PIAGGIO Aero Industries	Piaggio P166 (Lycoming)	Metal
PILATUS AIRCRAFT	Pilatus PC-6 Series (Lycoming)	Metal
PIPER AIRCRAFT	Piper PA-23 Aztec (Lycoming) Piper PA-24 Series (Lycoming) Piper PA-28 Series (Continental) Piper PA-28 Series (Lycoming) Piper PA-28 Series (Thielert) Piper PA-30 Series (Lycoming) Piper PA-31 Series (Lycoming) Piper PA-31P (Lycoming) Piper PA-32 Series (Lycoming) Piper PA-34 Series (Continental) Piper PA-34 Series (Lycoming) Piper PA-36 Series (Continental) Piper PA-36 Series (Lycoming) Piper PA-38 Series (Lycoming) Piper PA-39/40 Series (Lycoming) Piper PA-44 Series (Lycoming) Piper PA-46 Pressurised (Continental) Piper PA-46 Pressurised (Lycoming) Piper PA-4 Series (Lycoming)	Metal Metal Metal Metal Metal Metal Metal Metal + Pressurised Metal Metal Metal Metal Metal Metal Metal Metal Metal Metal + Pressurised Metal + Pressurised Metal
Polskie Zakłady Lotnicze Sp. z o. o.	PZL M 18 (PZL) PZL M 26 (Lycoming)	Metal Metal
PZL MIELEC	PZL-M20 (PZL)	Metal
REGAL AIR, INC	REGAL AIR 305 Series (Continental)	Metal
REVO, Inc	REVO C/LA-4 Series (Lycoming)	Metal
RUAG AEROSPACE Services GmbH	Do 28 Series (Lycoming)	Metal
S.C.Constructii Aeronautice S.A	IAR-46 (Rotax)	Metal
SCHEIBE Flugzeugbau	SF 23 Series (Continental)	Wood + Metal tubing Fabric
SEASTAR CORP	TSC Series (Lycoming)	Composite
SKY INTERNATIONAL	Aviat Husky A (Lycoming) Pitts S-1 Series (Lycoming) Pitts S-2 Series (Lycoming)	Metal Wood + Metal tubing Fabric Wood + Metal tubing Fabric
Skyfox Aviation Ltd	CA25 Series (Rotax)	Wood + Metal tubing Fabric

SLINGSBY Aviation	Slingsby T67 (Lycoming) Slingsby T67A/T67B/T67C/T67M Series (Lycoming)	Wood Composite
SOCATA	Grumman GA-7 (Lycoming)	Metal
	SOCATA MS 881 (Potez)	Metal
	SOCATA MS 884/894/PZL Koliber (Franklin)	Metal
	SOCATA Rallye Series (Continental)	Metal
	SOCATA Rallye Series (Lycoming)	Metal
	SOCATA TB Series (Lycoming)	Metal

TC holder	PART 66 Type rating endorsement	Type of structure
STOL AIRCRAFT Corporation	Republic UC-1 (Lycoming)	Metal
SUKHOI	Sukhoi SU-29 (Vedeneyev) Sukhoi Su-29/31 (MGA) Sukhoi SU-31 (Vedeneyev)	Composite Composite Composite
Symphony Aircraft Industries Inc	Symphony OMF-100-160 (Lycoming)	Metal
TAYLORCRAFT 2000	Taylorcraft 19 Series (Continental) Taylorcraft F21/F22 Series (Lycoming)	Wood + Metal tubing Fabric Wood + Metal tubing Fabric
TECNAM Costruzioni Aeronautiche	Tecnam P2006T (Rotax) Tecnam P92 (Rotax) Tecnam P2002 (Rotax) Tecnam P2008 (Rotax) Tecnam P2010 (Rotax)	Metal Metal Metal Composite + Metal Composite + Metal
THRUSH Aircraft	Ayres S2R (PW R-985)	Metal tubing fabric
TRUE FLIGHT Holdings	Grumman/American AA-1 Series (Lycoming) Grumman/American AA-5	Metal Metal
TWIN COMMANDER AIRCRAFT Corporation	Commander 500 Series/680 Series Commander 680P (Lycoming) Commander 685 (Continental) Rockwell 700 (Lycoming) Commander 720 (Lycoming)	Metal Metal + Pressurised Metal + Pressurised Metal + Pressurised Metal + Pressurised
VULCANAIR	Partenavia P.64 (Lycoming) Partenavia P.66 (Lycoming) Partenavia P57 (Lycoming) Vulcanair F600A (Lycoming) Vulcanair P.68 Series (Lycoming)	Metal Metal Wood = Metal tubing Fabric Metal Metal
WACO Aircraft Company	Waco YMF (Jacobs)	Wood + Metal tubing Fabric
WACO Classic Aircraft Corp	Waco 2T Series (Lycoming)	Wood + Metal tubing Fabric
WASSMER	CERVA CE43 (Lycoming) CERVA CE44 (Continental) WA4/21 Series (Lycoming) WA40 Series (Lycoming) WA41 (Lycoming)	Metal Metal Wood + Metal tubing Fabric Wood + Metal tubing Fabric Wood + Metal tubing Fabric
XtremeAir GmbH	XtremeAir XA42 (Lycoming)	Composite
YAKOVLEV	Yakovlev YAK-18T (Vedeneyev)	Metal
ZAKLADY LOTNICZE	EM-11 (Lycoming)	Composite
ZENAIR LTD	Zenair CH2000 (Lycoming)	Metal
ZLIN AIRCRAFT (MORAVAN AVIATION)	Zlin Z-143 L (Lycoming) Zlin Z-242 L (Lycoming) Zlin Z-26 Series (Walter Minor/AVIA) Zlin Z-42 Series (LOM)	Metal Metal Metal Metal

	Zlin Z-43 Series (LOM)	Metal
	Zlin Z-50 Series (LOM)	Metal
	Zlin Z-50L Series (Lycoming)	Metal
	Zlin Z-526 L (Lycoming)	Metal

STCs in AEROPLANES GROUP 3

GROUP 3 PISTON-ENGINE AEROPLANES (Other than those in Group 1)		
STC holder	**Part 66 Type rating endorsement**	**Type of structure**
BARBARA AND ROPERT WILLIAMS	Cessna 150 Series (Lycoming)	Metal
HOFFMANN GmbH & Co. KG	Cessna 150/A150/F150/FA150 (Rotax)	Metal
LTB SAMMET GmbH	Cessna 150 (Rotax)	Metal
PORSCHE AG	Cessna 182Q/F182Q (Porsche)	Metal
SMA ENGINES INC.	Cessna 182Q/182R (SMA)	Metal
SPERL TECHNIK & ENTWICKLUNGEN	Cessna 150/A150/F150/FA150 (Rotax)	Metal
TECHNIFY MOTORS GmbH	Robin DR 400 (Technify) Cessna 172/F172 (Technify) Piper PA-28-140/150/151/160/161/180/181 (Technify) Cirrus SR22 (Technify) Cessna 206 (Technify)	Wood Metal Metal Composite Metal

Appendix II Aircraft Type Practical Experience and On-the-Job Training List of Tasks

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 maintenance 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/potable 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 coaxial 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.
Servicing of shock strut.
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.

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/borescope 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 III Evaluation of the competence: assessment and assessors

This Appendix applies to the competence assessment performed by the designated assessors (and their qualifications).

1) What does "competence" mean and areas of focus for assessment

The assessment should aim at measuring the competence by evaluating three major factors associated to the learning objectives:

Knowledge;

Skills;

Attitude.

Generally, knowledge is evaluated by examination. The purpose of this document is not to describe the examination process: this material mainly addresses the evaluation of "skills" and "attitude" after training containing practical elements. Nevertheless, the trainee needs to demonstrate sufficient knowledge to perform the required tasks.

"Attitude" is indivisible from the "skill" as this greatly contributes to the safe performance of the tasks.

The evaluation of the competence should be based on the learning objectives of the training, in particular:

the (observable) desired performance. This covers what the trainee is expected to be able to do and how the trainee is expected to behave at the end of the training;

the (measurable) performance standard that must be attained to confirm the trainee's level of competence in the form of tolerances, constraints, limits, performance rates or qualitative statements; and

the conditions under which the trainee will demonstrate competence. Conditions consist of the training methods, the environmental, situational and regulatory factors.

The assessment should focus on the competencies relevant to the aircraft type and its maintenance including, but not limited to:

Environmental awareness (act safely, apply safety precautions and prevent dangerous situations);

Systems integration (demonstrate understanding of aircraft systems interaction – identify, describe, explain, plan, execute);

Knowledge and understanding of areas requiring special emphasis or novelty (areas peculiar to the aircraft type, domains not covered by Part 66 Appendix I, practical training elements that cannot be imparted through simulation devices, etc.);

Using reports and indications (the ability to read and interpret);

Aircraft documentation finding and handling (identify the appropriate aircraft documentation, navigate, execute and obey the prescribed maintenance procedures);

Perform maintenance actions (demonstrate safe handling of aircraft, engines, components and tools);

Aircraft final/close-up and report (apply close up, initiate appropriate actions/follow-up/records of testing, establish and sign maintenance records/logbooks).

2) How to assess

As far as feasible, the objectives of the assessment should be associated with the learning objectives and the passing level; it means that observable criteria should be set to measure the performance and should remain as objective as possible.

The general characteristics of effective assessment are: objective, flexible, acceptable, comprehensive, constructive, organised and thoughtful. At the conclusion, the trainee should have no doubt about what he/she did well, what he/she did poorly and how he/she can improve.

The following is a non-exhaustive list of questions that may be posed to assist the assessment:

What are the success factors for the job?

What are typical characteristics of a correct behaviour for the task?

What criteria should be observed?

What level of expertise is expected?

Is there any standard available?

What is the pass mark? For example:

“Go-no go” situation;

How to allocate points? Minimum amount to succeed;

“Must know or execute” versus “Good to know or execute” versus “Don’t expect the candidate to be an expert”.

Minimum or maximum time to achieve? Use time effectively and efficiently.

What if the trainee fails? How many times is the trainee allowed to fail?

When and how should the trainee be prepared for the assessment?

What proportion of judgment by the instructor out of collaboration with the trainee is needed during the evaluation stage?

The assessment may be:

diagnostic (prior to a course), formative (reorientate the course on areas where there is a need to reinforce) or summative (partial or final evaluation);

performed task-by-task, as a group of tasks or as a final assessment.

One method might be an initial assessment to be performed by the trainee himself/herself, then discussing areas where the perceptions of the trainee’s performance by the assessors differ in order to:

develop the self-assessment habits;

make the assessment more acceptable and understandable to both parties.

A “box-ticking” exercise would be pointless. Experience has shown that assessment sheets have largely evolved over time into assessment of groups of “skills” because in practice such things eventually detracted from the training and assessment that it was intended to serve: evaluate at a point of time, encourage and orientate the training needs, improve safety and ultimately qualify people for their duties.

In addition, many other aspects should be appropriately considered during the assessment process such as stress and environmental conditions, difficulty of the test, history of evaluation (such as tangible progresses or sudden and unexpected poor performance made by the trainee), amount of time necessary to build competence, etc.

All these reasons place more emphasis on the assessor and highlight the function of the organisation's approval.

3) Who should assess

In order to qualify, the assessor should:

- Be proficient and have sufficient experience or knowledge in:
  - human performance and safety culture;
  - the aircraft type (necessary to have the certifying staff privileges in case of CRS issuances);
  - training/coaching/testing skills;
  - instructional tools to use;
- Understand the objective and the content of the practical elements of the training that is being assessed;
- Have interpersonal skills to manage the assessment process (professionalism, sincerity, objectivity and neutrality, analysis skills, sense of judgement, flexibility, capability of evaluating the supervisor's or instructor's reports, handling of trainee's reactions to failing assessment with the cultural environment, being constructive, etc.);
- Be ultimately designated by the organisation to carry out the assessment.

The roles may be combined for:

- the assessor and the instructor for the practical elements of the Type Rating Training; or
- the assessor and the supervisor for the On-the-Job Training.

provided that the objectives associated to each role are clearly understood and that the competence and qualification criteria according to the company's procedures are met for both functions. Whenever possible (depending on the size of the organisation), it is recommended to split the roles (two different persons) in order to avoid any conflicts of interests.

When the functions are not combined, the role of each function should be clearly understood.

END