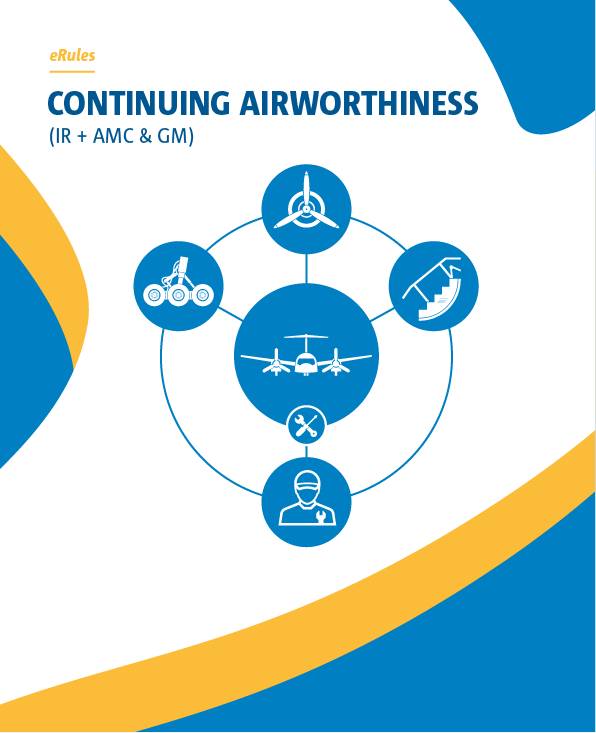


**ՓԱՐՏ-66 (PART-66)**



[](http://easa.europa.eu/)

Easy Access Rules

for Continuing Airworthiness

# Note from the editor

***Cover regulation article***

*Regulation*

**Implementing rule**

*Regulation*

**Acceptable means of compliance**

*ED Decision*

**Guidance material**

*ED Decision*

*Note 1: In some instances (e.g.* 145.A.30 Personnel requirements*), the source is indicated at the level of point paragraph* (e.g. 145.A.30(a))*.*

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**ANNEX III (PART-66)**

## GENERAL

* 1. **Competent authority**

(a) For the purpose of this [Annex (Part-66),](#_bookmark8) the competent authority shall be Civil Aviation Committee of the Republic of Armenia (CAC RA).

**AMC1 66.1(a) Competent Authority**

*[Regulatory source]*

Reserved.

## SECTION A — TECHNICAL REQUIREMENTS

### SUBPART A — AIRCRAFT MAINTENANCE LICENCE

* + 1. **Scope**

This section defines the aircraft maintenance license and establishes the requirements for application, issue and continuation of its validity.

* + 1. **Licence categories and subcategories**

Aircraft maintenance licenses include the following categories and, where applicable, subcategories and system ratings:

1. Category A, divided into the following subcategories:
   * A1 Aeroplanes Turbine;
   * A2 Aeroplanes Piston;
   * A3 Helicopters Turbine;
   * A4 Helicopters Piston.
2. Category B1, divided into the following subcategories:
   * B1.1 Aeroplanes Turbine;
   * B1.2 Aeroplanes Piston;
   * B1.3 Helicopters Turbine;
   * B1.4 Helicopters Piston.
3. Category B2

The B2 licence is applicable to all aircraft.

1. Category B2L

The B2L licence is applicable to all aircraft other than those in Group 1 as set out in Point 66.A.5(1) and is divided into the following ‘system ratings’:

* + communication/navigation (com/nav),
  + instruments,
  + autoflight,
  + surveillance,
  + airframe systems.

A B2L licence shall contain, as a minimum, one system rating.

1. Category B3

The B3 licence is applicable to piston-engine non-pressurised aeroplanes of 2 000 kg Maximum Take-off Mass (MTOM) and below.

1. Category L, divided into the following subcategories:
   * L1C: composite sailplanes,
   * L1: sailplanes,
   * L2C: composite powered sailplanes and composite ELA1 aeroplanes,
   * L2: powered sailplanes and ELA1 aeroplanes,
   * L3H: hot-air balloons,
   * L3G: gas balloons,
   * L4H: hot-air airships,
   * L4G: ELA2 gas airships,
   * L5: gas airships other than ELA2.
2. Category C

The C licence is applicable to aeroplanes and helicopters.

### GM 66.A.3 Licence categories

*[Regulatory source]*

‘ELA1 aeroplanes’ refers to those aeroplanes which meet the definition of ‘ELA1 aircraft’ that is contained in Article 2(k) of current regulation.

‘ELA2 gas airships’ refers to those gas airships which meet the definition of ‘ELA2 aircraft’ that is contained in Article 2(ka) of current regulation.

‘Gas airships other than ELA2’ refers to those gas airships which do not meet at least one condition of the definition of ‘ELA2 aircraft’ that is contained in Article 2(ka) of current regulation.

NOTE: The ‘ELA2 aircraft’ category includes all ‘ELA1 aircraft’. The term ‘powered sailplane’ includes:

* those powered sailplanes which may take off solely by means of their own power (self-launching sailplanes); and
* self-sustaining powered sailplanes; and
* touring motor gliders (TMGs).

While the L1C subcategory only includes composite sailplanes, the L1 subcategory includes all sailplanes (composite, metal and wood).

While the L2C subcategory only includes composite powered sailplanes and composite ELA1 aeroplanes, the L2 subcategory includes all powered sailplanes and ELA1 aeroplanes (composite, metal and wood).

In the case of maintenance of mixed balloons (combination of gas and hot air), it is required to hold both L3G and L3H subcategories.

For the B2L licence, a ‘system rating’ is a rating which gives privileges to release maintenance on the aircraft systems covered by the ‘system rating’ and electrical systems.

The sentence ‘shall contain, as a minimum, one system rating’ refers to the fact that the application for a B2L licence should be made for any of the system ratings or any combination of the system ratings specified in [66.A.3](#_bookmark13).

There is no specific order in which the system ratings should be applied for. Any combination of system ratings is possible.

The description of systems covered by the different system ratings is provided in Appendix I ‘Basic Knowledge Requirements’ under paragraph ‘2. Modularisation’, subparagraph related to ‘Categories B2 and B2L’.

### 66.A.5 Aircraft groups

*[Regulatory source]*

For the purpose of ratings on aircraft maintenance licenses, aircraft shall be classified into the following groups:

1. Group 1: complex motor-powered aircraft; multi-engine helicopters; other than piston-engine aeroplanes, with maximum certified operating altitude exceeding FL290; aircraft equipped with fly-by-wire systems; gas airships other than ELA2.

The EASA may decide to classify into Group 2, Group 3 or Group 4, as appropriate, an aircraft which meets the conditions set out in the first subparagraph, if it considers that the lower complexity of the particular aircraft justifies so.

1. Group 2: aircraft other than those in Group 1 belonging to the following subgroups:
   1. subgroup 2a:
      * single turboprop engine aeroplanes,
      * those turbine-engine aeroplanes classified by the EASA in this subgroup because of their lower complexity.
   2. subgroup 2b:
      * single turbine engine helicopters,
      * those multiple turbine engine helicopters classified by the EASA in this subgroup because of their lower complexity.
   3. subgroup 2c:
      * single piston engine helicopters,
      * those multiple piston engine helicopters classified by the EASA in this subgroup because of their lower complexity.
2. Group 3: piston engine aeroplanes other than those in Group 1.
3. Group 4: sailplanes, powered sailplanes, balloons and airships, other than those in Group 1.

**GM1 66.A.5 Aircraft groups**

*[Regulatory source]*

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

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Category/subcategory**  **Groups** | **A, B1**  **and C** | **B2** | **B2L** | **B3** | **L** | | | | |
| **L1C**  **and L1** | **L2C**  **and L2** | **L3H** | **L4H** | **L5** |
| **and**  **L3G** | **and**  **L4G** |
| **1**   * **Complex motor-powered aircraft** * **Multi-engine helicopters** * **other than piston-engine aeroplanes above FL290** * **Aircraft with fly-by-wire systems** * **Any other aircraft when defined by the EASA** | X | X |  |  |  |  |  |  |  |
| **1**  **— Gas airships other than ELA2** |  | X |  |  |  |  |  |  | X |
| **2**  **2a: Single-turboprop aeroplanes 2b: Single-turbine helicopters 2c: Single-piston-engine**  **helicopters** | X | X | X |  |  |  |  |  |  |
| **3**  **— Piston-engine aeroplanes** | X | X | X |  |  |  |  |  |  |
| **3**  **— Non-pressurised ELA2 piston- engine aeroplanes** | X | X | X | X |  |  |  |  |  |
| **3**  **— ELA1 piston-engine aeroplanes** | X | X | X | X |  | X |  |  |  |
| **4**   * **Sailplanes** * **Powered sailplanes** * **Balloons** * **Airships not in Group 1** |  | X X X  X | X X X  X |  | X | X X | X | X | X |

**66.A.10 Application**

*[Regulatory source]*

1. An application for an aircraft maintenance licence or change to such licence shall be made on an [CAC Form 19](#_bookmark153) (see Appendix V) in a manner established by the CAC RA and submitted thereto.
2. An application for the change to an aircraft maintenance licensee shall be made to the CAC RA.
3. In addition to the documents required in points [66.A.10(a)](#_bookmark17), [66.A.10(b)](#_bookmark17) and [66.B.105](#_bookmark71), as appropriate, the applicant for additional basic categories or subcategories to an aircraft maintenance licence shall submit his/her current original aircraft maintenance licence to the CAC RA together with the  [CAC Form 19.](#_bookmark153)
4. Reserved.
5. Reserved.
6. Each application shall be supported by documentation to demonstrate compliance with the applicable theoretical knowledge, practical training and experience requirements at the time of application.

**AMC 66.A.10 Application**

* 1. 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 years maintenance experience completed’ is not acceptable. A log book of maintenance experience is desirable and CAC RA may require such log book to be kept. It is acceptable to cross refer in the [CAC Form 19](#_bookmark153) to other documents containing information on maintenance.
  2. Applicants claiming the maximum reduction in [66.A.30(a)](#_bookmark32) total experience based upon having successfully completed 147.A.200 approved basic training should include the Part-147 certificate of recognition for approved basic training.
  3. Applicants claiming reduction in [66.A.30(a)](#_bookmark32) total experience based upon having successfully completed technical training in an organisation or institute recognised by the CAC RA as a competent organisation or institute, should include the relevant certificate of successful completion of training.

**GM 66.A.10(a) Application**

*[Regulatory source]*

When an application is made for a licence in the B2L category, the applicant should specify on the CAC Form 19:

* + - the system rating or the combination of system ratings the applicant applies for; and
    - the aircraft rating,

considering that according to [66.A.45(e)](#_bookmark40), a B2L licence endorsed with full subgroup 2b can be endorsed also with full subgroup 2c.

When applying for the addition of a system rating on a B2L licence, the applicant should provide together with the application, the demonstration of compliance with the experience requirements related to the system the applicant applies for.

When a B2L licence holder applies for the extension of a B2L licence to add a new system rating, he/she needs to demonstrate the practical experience required by [66.A.30(a)(2a)](#_bookmark32) for the system rating but also the practical experience required by [66.A.45(e)](#_bookmark40) and (f) in case the aircraft group is different.

When a B2L licence holder applies for the change of his/her B2L licence to the B2 category, he/she needs only to:

* + - demonstrate by examination the differences between the basic knowledge corresponding to the B2L licence held and the basic knowledge of the B2 licence, as described in [Appendix I](#_bookmark104); and
    - demonstrate the additional experience described in [Appendix IV.](#_bookmark152) These requirements can be found also for the CAC RA in [66.B.110.](#_bookmark73)

When an applicant applies for the extension of his/her B2L licence to a B2 licence and he/she meets the relevant requirements, the B2L licence is replaced by the B2 licence.

### 66.A.15 Eligibility

1. An applicant for an aircraft maintenance licensee shall be at least 18 years of age.
2. Reserved

### 66.A.20 Privileges

*[Regulatory source]*

1. The following privileges shall apply:
   1. A category A aircraft maintenance license permits the holder to issue certificates of release to service following minor scheduled line maintenance and simple defect rectification within the limits of tasks specifically endorsed on the certification authorization referred to in point 145.A.35 of Annex II (Part-145). The certification privileges shall be restricted to work that the license holder has personally performed in the maintenance organization that issued the certification authorization.
   2. A category B1 aircraft maintenance license shall permit the holder to issue certificates of release to service and to act as B1 support staff following:
      * maintenance performed on aircraft structure, power plant and mechanical and electrical systems,
      * Work on avionic systems requiring only simple tests to prove their serviceability and not requiring troubleshooting.

Category B1 includes the corresponding A subcategory.

* 1. A category B2 aircraft maintenance license shall permit the holder:

1. to issue certificates of release to service and to act as B2 support staff for following:
   * maintenance performed on avionic and electrical systems, and
   * electrical and avionics tasks within powerplant and mechanical systems, requiring only simple tests to prove their serviceability; and
2. to issue certificates of release to service following minor scheduled line maintenance and simple defect rectification within the limits of tasks specifically endorsed on the certification authorisation referred to in point 145.A.35 of Annex II (Part-145). This certification privilege shall be restricted to work that the licence holder has personally performed in the maintenance organisation which issued the certification authorisation and limited to the ratings already endorsed in the B2 licence.

The category B2 licence does not include any A subcategory.

* 1. A category B2L aircraft maintenance licence shall permit the holder to issue certificates of release to service and to act as B2L support staff for the following:
     + maintenance performed on electrical systems;
     + maintenance performed on avionics systems within the limits of the system ratings specifically endorsed on the licence, and
     + when holding the ‘airframe system’ rating, performance of electrical and avionics tasks within power plant and mechanical systems, requiring only simple tests to prove their serviceability.
  2. A category B3 aircraft maintenance licence shall permit the holder to issue certificates of release to service and to act as B3 support staff for the following:
     + maintenance performed on aeroplane structure, power plant and mechanical and electrical systems; and
     + work on avionics systems requiring only simple tests to prove their serviceability and not requiring troubleshooting.
  3. A category L aircraft maintenance licence shall permit the holder to issue certificates of release to service and to act as L support staff for the following:
     + maintenance performed on aircraft structure, power plant and mechanical and electrical systems;
     + work on radio, Emergency Locator Transmitters (ELT) and transponder systems; and
     + work on other avionics systems requiring simple tests to prove their serviceability.

Subcategory L2 includes subcategory L1. Any limitation to subcategory L2 in accordance with point 66.A.45(h) becomes also applicable to subcategory L1.

Subcategory L2C includes subcategory L1C.

* 1. A category C aircraft maintenance licence shall permit the holder to issue certificates of release to service following base maintenance of the aircraft. The privileges apply to the aircraft in its entirety.

A Category C aircraft maintenance licence issued with respect to complex motor-powered aircraft shall include the privileges of category C aircraft maintenance licence also with respect to other than complex motor-powered aircraft.

1. The holder of an aircraft maintenance licence may not exercise its privileges unless:
   1. in compliance with the applicable requirements of Annex I (Part-M), Annex II (Part-145), Annex Vb (Part-ML) and Annex Vd (Part-CAO); and
   2. in the preceding 2-year period he/she has, either had 6 months of maintenance experience in accordance with the privileges granted by the aircraft maintenance licence or, met the provision for the issue of the appropriate privileges; and
   3. he/she has the adequate competence to certify maintenance on the corresponding aircraft; and
   4. he/she is able to read, write and communicate to an understandable level in the language(s) in which the technical documentation and procedures necessary to support the issue of the certificate of release to service are written.

### GM1 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:

* + Autoflight;
  + 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 within the privileges of the B2 and B2L with system rating ‘instruments’. However, maintenance on electromechanical and pitot-static components may also be released by a B1, B3 or L licence 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, using approved maintenance data, in order to identify the root cause of a defect or malfunction. 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

1. The category B3 licence does not include any A subcategory. Nevertheless, this does not prevent the B3 licence holder from releasing maintenance tasks typical of the A1.2 subcategory for piston-engine non-pressurized aeroplanes of 2 000 kg MTOM and below, within the limitations contained in the B3 licence.
2. The B1.2 and B3 licences do not include any L subcategory. Nevertheless, the holder of a B1.2 or B3 licence with the appropriate ratings is entitled to receive, upon application, licences in the L1 and L2 subcategories under the conditions described in point [66.B.110(d)](#_bookmark73).
3. The privileges of the B2 licence with given aircraft ratings include the privileges of the B2L licence for all the system ratings for the same aircraft ratings. Nevertheless, the holder of a B2 licence with given aircraft ratings may apply for a B2L licence in order to include a different aircraft rating if the applicant only wants to demonstrate compliance with the experience requirements for certain system ratings.
4. 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, B2L, B3 and L 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, B2L, B3 and L support staff, as appropriate, before issue of the certificate of release to service. Only category C personnel who also hold category B1, B2, B2L, B3 or L qualifications may perform both roles in base maintenance.

### AMC 66.A.20(a)(4) Privileges

*[Regulatory source]*

‘Within the limits of the system ratings specifically endorsed on the licence’ refers to the fact that the privileges of the licence holder are limited:

* to the group/subgroup of aircraft endorsed on the licence, but also
* to the system rating(s) endorsed.

When an applicant wishes to get the privilege to issue certificates of release to service and to act as support staff for electrical and avionics tasks within powerplant and mechanical systems, he/she should apply for the rating ‘airframe system’ on the B2L licence. The reason is that the ‘airframe systems’ rating is the only rating which covers completely the electrical and avionics tasks of the powerplant and mechanical systems of the aircraft.

### AMC 66.A.20(b)(2) Privileges

*[Regulatory source]*

The 6 months of maintenance experience in the preceding 2-year period 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.

1. Duration:

Within an approved maintenance organisation:

* + 6 months of continuous employment within the same organisation; or
  + 6 months split up into different blocks, employed 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)1, or as a combination thereof.

When a licence holder maintains and releases aircraft in accordance with M.A.801(b)1, in certain circumstances this number of days may even be reduced by 50% when agreed in advance by the competent authority. These circumstances consider the cases where the licence holder happens to be the owner of an aircraft and carries out maintenance on his/her 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.

1. 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;
  + Trouble-shooting;
  + 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 authorization 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, B2L, B3 and L, for every aircraft 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 to be 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, hydro-mechanically powered controls or electro-mechanically 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 sub- group or full (sub)group) as defined in [66.A.45,](#_bookmark40) the holder should show experience on at least one aircraft type per (sub)group and per aircraft structure (metal, composite, wood).
  + In the case of a B2 or B2L licence endorsed with (sub)group ratings (either manufacturer subgroup or full (sub)group) as defined in [66.A.45,](#_bookmark40) 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,](#_bookmark40) the holder should show experience on at least one aircraft type per aircraft structure (metal, metal-tubing with fabric, composite, wooden).

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 log book 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 e.g. 100 FH check, MLG wheel change, engine oil check and complement, SB embodiment, trouble shooting, structural repair, STC embodiment, etc.;
  + In the particular case of Part-145 organisations, the type of maintenance i.e. base, line;
  + Type of activity i.e. perform, supervise, release;
  + Subcategory used (A1, A2, A3, A4, B1.1, B1.2, B1.3, B1.4, B2, B2L, B3, C or L1, L1C, L2, L2C, L3G, L3H, L4G, L4H, L5);
  + 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](#_bookmark21) 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](#_bookmark173) [Part-66](#_bookmark173) ‘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](#_bookmark173) [Part-66](#_bookmark173) ‘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](#_bookmark104) 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](#_bookmark24).
* Persons holding a [Part-66](#_bookmark8) licence with limitations, obtained through conversion of national qualifications ([66.A.70](#_bookmark49)), 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

1. Holders of a [Part-66](#_bookmark8) aircraft maintenance licence may not exercise certification privileges unless 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.
2. In all cases, the level of understanding should be compatible with the level of certification privileges exercised.

### 66.A.25 Basic knowledge requirements

*[Regulatory source]*

1. The applicant for an aircraft maintenance licence shall demonstrate by examination a level of knowledge of the related subject modules in accordance with [Appendix I](#_bookmark104) (applicable to category A, B1, B2, B2L, B3 and C licences) or [Appendix VII](#_bookmark155) (applicable to category L licences).
2. The basic knowledge examinations shall comply with the standard set out in [Appendix II](#_bookmark127) (applicable to category A, B1, B2, B2L, B3 and C licences) or [Appendix VIII](#_bookmark169) (applicable to category L licences) to this Annex and shall be conducted by either of the following:
   1. a training organisation approved in accordance with Annex IV (Part-147);
   2. the CAC RA;
   3. for category L licences, another organisation as agreed by the CAC RA.
3. The basic knowledge examinations shall have been passed within 10 years prior to the application for an aircraft maintenance licence or the addition of a category or subcategory to such a licence. If the basic knowledge examinations have not been passed within that 10-year period, credits for basic knowledge examinations may be alternatively obtained by the applicant in accordance with point (d).

The 10 years’ validity requirement applies to each individual module examination, except for those module examinations which were already passed as part of another licence category and the licence has already been issued.

1. The applicant may apply to the CAC RA for full or partial credits for the basic knowledge requirements for:
   1. basic knowledge examinations which were passed more than 10 years before the application for an aircraft maintenance licence was submitted (see point (c));
   2. any other national technical training and examination considered by the CAC RA as equivalent to the corresponding basic knowledge requirements of this Annex.

The applicant shall provide evidence of the granted credits by referring to an examination credit report approved by the CAC RA in accordance with Section B, Subpart E, of this Annex III (Part-66).

1. A basic training course without Modules 1 and 2 of [Appendix I](#_bookmark104) to this Annex is considered a full basic training course approved in accordance with Annex IV (Part-147) only when knowledge of those Modules is subsequently demonstrated by the applicant by examination and is credited by the CAC RA.
2. The holder of an aircraft maintenance licence applying for the addition of a different category or subcategory shall complement by examination the level of knowledge that is appropriate to the related subject modules in accordance with [Appendix I](#_bookmark104) (for category A, B1, B2, B2L, B3 and C licences) or [Appendix VII](#_bookmark155) (for category L licences).

[Appendix IV](#_bookmark152) details the modules of [Appendix I](#_bookmark104) (for category B1, B2, B2L, B3 and C licences) or [Appendix VII](#_bookmark155) (for category L licences) required for the addition of a new category or subcategory to an existing licence issued in accordance with this Annex A.

**AMC 66.A.25 Basic knowledge requirements**

1. For an applicant being a person qualified by holding an academic degree in an aeronautical, mechanical or electronic discipline from a recognised university or other higher educational institute the need for any examination will depend upon the course taken in relation to [Appendix I to Part-66.](#_bookmark104)
2. Knowledge gained and examinations passed during previous experiences, for example, in military aviation and civilian apprenticeships will be credited where the CAC RA is satisfied that such knowledge and examinations are equivalent to that required by [Appendix I to Part-66](#_bookmark104).

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

*[Regulatory source]*

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, B2L and B3 should demonstrate a complete level of knowledge in the appropriate subject modules.

**GM 66.A.25(b) Basic knowledge requirements**

*[Regulatory source]*

‘Or as agreed by the CAC RA’ refers to the examination that is conducted by an organisation under a formal agreement (and oversight) of the CAC RA.

**66.A.30 Basic experience requirements**

*[Regulatory source]*

* 1. An applicant for an aircraft maintenance licence shall have acquired:
     1. for category A, subcategories B1.2 and B1.4 and category B3:
        1. 3 years of practical maintenance experience on operating aircraft, if the applicant has no previous relevant technical training; or
        2. 2 years of practical maintenance experience on operating aircraft and completion of training considered relevant by the CAC RA as a skilled worker, in a technical trade; or
        3. 1 year of practical maintenance experience on operating aircraft and completion of a basic training course approved in accordance with Annex IV (Part-147);
     2. for category B2 and subcategories B1.1 and B1.3:
        1. 5 years of practical maintenance experience on operating aircraft if the applicant has no previous relevant technical training; or
        2. 3 years of practical maintenance experience on operating aircraft and completion of training considered relevant by the CAC RA as a skilled worker, in a technical trade; or
        3. 2 years of practical maintenance experience on operating aircraft and completion of a basic training course approved in accordance with Annex IV (Part-147);

2a. for category B2L:

1. 3 years of practical maintenance experience in operating aircraft, covering the corresponding system rating(s), if the applicant has no previous relevant technical training; or
2. 2 years of practical maintenance experience in operating aircraft, covering the corresponding system rating(s), and completion of training, considered relevant by the CAC RA, as a skilled worker in a technical trade; or
3. 1 year of practical maintenance experience in operating aircraft, covering the corresponding system rating(s), and completion of a Part-147 approved basic training course. For the addition of (a) new system rating(s) to an existing B2L licence, 3 months of practical maintenance experience relevant to the new system rating(s) shall be required for each system rating added.

2b. for category L:

1. 2 years of practical maintenance experience in operating aircraft covering a representative cross section of maintenance activities in the corresponding subcategory;
2. as a derogation from point (i), 1 year of practical maintenance experience in operating aircraft covering a representative cross section of maintenance activities in the corresponding subcategory, subject to the introduction of the limitation provided for in point [66.A.45(h)(ii)(3)](#_bookmark40).
   * 1. for category C with respect to complex motor-powered aircraft (CMPA):
        1. 3 years of experience in exercising category B1.1, B1.3 or B2 privileges as support staff, or both support staff and certifying staff, in accordance with point 145.A.35 of Annex II (Part-145), at a maintenance organisation working on CMPA, including 12 months of experience as base maintenance support staff; or
        2. 5 years of experience in exercising category B1.2, B1.4 or L5 privileges as support staff, or both support staff and certifying staff, in accordance with point 145.A.35 of Annex II (Part-145), at a maintenance organisation working on CMPA, including 12 months of experience as base maintenance support staff; or
        3. for applicants holding an academic degree, 3 years of experience in working at an aircraft maintenance environment, on a representative selection of tasks that are directly associated with aircraft maintenance, including 6 months of participation in the performance of base maintenance tasks in operating CMPA;
        4. to extend the endorsed category C with respect to other than CMPA to CMPA:
           1. 2 years of experience in exercising category B1.1, B1.2, B1.3, B1.4, B2 or L5 privileges as support staff, or both support staff and certifying staff, in accordance with point 145.A.35 of Annex II (Part- 145), at a maintenance organisation in operating CMPA, including 6 months of experience as base maintenance support staff; or
           2. when holding a category C licence based on an academic degree, 2 years of experience in working at an aircraft maintenance environment on a representative selection of tasks that are directly associated with aircraft

maintenance, including 3 months of participation in the performance of base maintenance tasks in operating CMPA;

* + 1. for category C with respect to other than CMPA:
       1. 3 years of experience in exercising category B1, B2, B2L, B3 or L privileges as support staff, or both support staff and certifying staff, in accordance with point

145.A.35 of Annex II (Part-145), at a maintenance organisation in operating other than CMPA, including 6 months of experience as base maintenance support staff; or

* + - 1. for holders of an academic degree, 3 years of experience in working at an aircraft maintenance environment, on a representative selection of tasks that are directly associated with aircraft maintenance, including 6 months of participation in the performance of base maintenance tasks in operating other than CMPA;
    1. the academic degree shall be in a relevant technical discipline, issued by a university or any other higher educational institution recognized by the CAC RA.
  1. An applicant for an extension to an aircraft maintenance license shall have a minimum civil aircraft maintenance experience requirement appropriate to the additional category or subcategory of licence applied for as defined in [Appendix IV to this Annex (Part-66)](#_bookmark152).
  2. The experience shall be practical and involve a representative cross section of maintenance tasks on aircraft.
  3. At least 1 year of the required experience shall be recent maintenance experience on aircraft of the category/subcategory for which the initial aircraft maintenance licence is sought. For subsequent category/subcategory additions to an existing aircraft maintenance licence, the additional recent maintenance experience required may be less than 1 year, but shall be at least 3 months. The required experience shall be dependent upon the difference between the licence category/subcategory held and applied for. Such additional experience shall be typical of the new licence category/subcategory sought.
  4. Notwithstanding point (a), experience in aircraft maintenance gained in organisations not approved in accordance with Annexes II (Part-145) or Vd (Part-CAO) may be recognised when such maintenance is equivalent to that required by this Annex as established by the CAC RA.

However, demonstration of additional experience in organisations approved in accordance with Annexes II or Vd or under the supervision of independent certifying staff, shall be required.

* 1. Experience shall have been acquired within the 10 years preceding the application for an aircraft maintenance licence or the addition of a category or subcategory to such a licence.

### AMC1 66.A.30(a) Basic experience requirements

*[Regulatory source]*

1. 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, aero clubs, owners, etc., as relevant to the licence category/subcategory;
   * should cover a wide range of tasks in terms of 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 gained within different types of maintenance organisations (Part-145, M.A. Subpart F, Part-CAO, FAR-145, etc.) or under the supervision of independent certifying staff;
   * may be combined with Part-147 approved training (or other training approved by the competent authority) 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 a professional or on a voluntary basis;
   * in the case of the L licence, it is acceptable that the 1 or 2 years of experience required by [66.A.30(a)(2b)](#_bookmark32) covers maintenance performed only during the weekends (or equivalent periods) as long as the applicant has achieved a sufficient level of competency related to the applicable licence subcategory as attested by the corresponding statement(s) issued by the maintenance organisation(s) or independent certifying staff that supervised the applicant.
2. A skilled worker is a person who has successfully completed a training, acceptable to the CAC RA, involving the manufacture, repair, overhaul or inspection of mechanical, electrical or electronic equipment. The training would include the use of tools and measuring devices.
3. 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 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.
4. For a category C applicant that holds an academic degree, the participation in the performance of maintenance tasks on operating aircraft may include maintenance, maintenance planning, quality assurance, record-keeping, spare parts management and engineering development.

‘Experience in working in a civil aircraft maintenance environment on a representative selection of tasks directly associated with aircraft maintenance’ means experience gained at an organisation that is approved in accordance with Part-145, Part-CAO, Part-CAMO or similar, or experience in performing comparable work that is directly related to the continuing airworthiness of aircraft within a competent authority. Similar work performed on ‘Annex I aircraft’ or state aircraft may be acceptable as well.

‘Including 6 months of participation in the performance of base maintenance tasks’ on operating aircraft means experience gained through the active participation in base maintenance checks at maintenance organisations.

If the applicant has acquired experience on operating CMPA, the corresponding category C licence should be issued. If the experience acquired has been limited to other than CMPA, then only the corresponding category C licence with respect to other than CMPA should be issued.

While it is strongly recommended that the participation in the performance of maintenance on aircraft should be at the level required for the issue of a B1 or B2 licence, the objective of the required experience is to gain insight into the performance of base maintenance. The applicant for an academic category C licence should be aware of the type of maintenance carried out before the signature of support staff and understand their roles in the release-to-service process of base maintenance. It is encouraged that the future category C licence holder participates in both simple and complex tasks during their experience in base maintenance and gains insight in some aircraft critical systems.

### GM1 66.A.30(a) Basic experience requirements

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

|  |  |  |
| --- | --- | --- |
| **To:**  **From:** | **Category C**  **for CMPA** | **Category C**  **for other than CMPA** |
| Holder of a licence with  **B1.1, B1.3, B2**, B3\*B2L\*,  or L\* | 3 years of experience as support staff, or both support staff and certifying staff, in operating CMPA, including  12 months as support staff in base  maintenance. | 3 years of experience as certifying staff or support staff, in operating other than CMPA, including 6 months as support staff in base maintenance. |
| Holder of a licence with  **B1.2, B1.4** or **L5\*\*** | 5 years of experience as support staff, or both support staff and certifying staff, in operating CMPA, including 12months as support staff in base  maintenance. |

|  |  |  |
| --- | --- | --- |
| **To:**  **From:** | **Category C for CMPA** | **Category C**  **for other than CMPA** |
| Holder of an academic degree, in a relevant technical discipline, issued by a university or any other higher educational institution recognised by the competent authority | 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 CMPA, including 6 months of participation in the performance of base maintenance tasks on operating  CMPA. | 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, B2 or L5 support staff, or both support staff and certifying staff, including  6 months as support staff in base  maintenance. |  |
| Holding an academic degree: 2 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 CMPA, including 3 months of participation in the performance of base maintenance tasks on operating  CMPA. |
| Holder of a licence with  category C for CMPA |  | Category C for CMPA includes category  C for other than CMPA. |

\* Only applicable to category C for other than CMPA.

\*\* Only applicable to category C for CMPA.

### AMC 66.A.30(c) Basic experience requirements

*[Regulatory source]*

In the case of the category B2L licence, the sentence ‘a representative cross section of maintenance tasks on aircraft’ refers to the person that has carried out some maintenance tasks that are representative of the systems corresponding to the system ratings for which he/she applies (see [66.A.3](#_bookmark13)). These tasks may include troubleshooting, modifications or repairs.

### 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](#_bookmark32) must be obtained within the 10 years prior to the application as required by [66.A.30(f)](#_bookmark32).

**AMC1 66.A.30(e) Basic experience requirements**

*[Regulatory source]*

1. If the licensing authority has established that the experience gained outside an aircraft maintenance organisation approved in accordance with Part-145 or Part-CAO is equivalent to that required by Part-66, the minimum additional experience in aircraft maintenance organisation(s) that is (are) approved in accordance with Part-145 or Part-CAO should be:
   1. for categories A and L: 6 months;
   2. for categories B1, B2, B2L, B3 and C: 12 months.
2. Experience in aircraft maintenance gained outside an aircraft maintenance organisation(s) that is (are) approved in accordance with Part-145 or Part-CAO may include experience in aircraft maintenance gained in the armed forces, coast guard, police, nationally approved organisations, organisations approved by CAC RA or in aircraft manufacturing.

**66.A.40 Continued validity of the aircraft maintenance license**

*[Regulatory source]*

1. The aircraft maintenance licence becomes invalid 5 years after its last issue or change, unless the holder submits his/her aircraft maintenance licence to the CAC RA that issued it, in order to verify that the information contained in the licence is the same as that contained in the CAC RA records, pursuant to point [66.B.120.](#_bookmark77)
2. The holder of an aircraft maintenance licence shall complete the relevant parts of [CAC Form 19](#_bookmark153) (see Appendix V) and submit it with the holder’s copy of the licence to the CAC RA that issued the original aircraft maintenance licence, unless the holder works in a maintenance organisation approved in accordance with Annex II (Part-145) or Annex Vd (Part-CAO) that has a procedure in its exposition whereby such organisation may submit the necessary documentation on behalf of the aircraft maintenance licence holder
3. Any certification privilege based upon a aircraft maintenance licence becomes invalid as soon as the aircraft maintenance licence is invalid.
4. The aircraft maintenance licence is only valid (i) when issued and/or changed by the competent authority and (ii) when the holder has signed the document.

**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](#_bookmark21) privileges is affected by maintenance experience as specified in [66.A.20(a)](#_bookmark21).

**66.A.45 Endorsement with aircraft ratings**

*[Regulatory source]*

1. In order to be entitled to exercise certification privileges on a specific aircraft type, the holder of an aircraft maintenance licence needs to have their licence endorsed with the relevant aircraft ratings:
   * For category B1, B2 or C, the relevant aircraft ratings are the following:
     1. for Group 1 aircraft, the appropriate aircraft type rating;
     2. for Group 2 aircraft, the appropriate aircraft type rating, manufacturer subgroup rating or full subgroup rating;
     3. for Group 3 aircraft, the appropriate aircraft type rating or full group rating;
     4. for Group 4 aircraft, for the category B2 licence, the full group rating.
   * For category B2L, the relevant aircraft ratings are the following:
     1. for Group 2 aircraft, the appropriate manufacturer subgroup rating or full subgroup rating;
     2. for Group 3 aircraft, the full group rating;
     3. for Group 4 aircraft, the full group rating.
   * For category B3, the relevant rating is ‘piston-engine non-pressurised aeroplanes of 2 000 kg MTOM and below’.
   * For category L, the relevant aircraft ratings are the following:
     1. for subcategory L1C, the rating ‘composite sailplanes’;
     2. for subcategory L1, the rating ‘sailplanes’;
     3. for subcategory L2C, the rating ‘composite powered sailplanes and composite ELA1 aeroplanes’;
     4. for subcategory L2, the rating ‘powered sailplanes and ELA1 aeroplanes’;
     5. for subcategory L3H, the rating ‘hot-air balloons’;
     6. for subcategory L3G, the rating ‘gas balloons’
     7. for subcategory L4H, the rating ‘hot-air airships’;
     8. for subcategory L4G, the rating ‘ELA2 gas airships’;
     9. for subcategory L5, the appropriate airship type rating.
   * For category A, no rating is required, subject to compliance with the requirements of point 145.A.35 of Annex II (Part-145).
2. The endorsement of aircraft type ratings requires the satisfactory completion of one of the following:
   * the relevant category B1, B2 or C aircraft type training in accordance with [Appendix III to](#_bookmark131) [Annex III (Part-66);](#_bookmark131)
   * in the case of gas airship type ratings on a B2 or L5 licence, a type training approved by the CAC RA in accordance with point [66.B.130.](#_bookmark80)
3. For other than category C licences, in addition to the requirements of point (b), the endorsement of the first aircraft type rating within a given category/subcategory requires satisfactory completion of the corresponding on-the-job training. This on-the-job training shall comply with [Appendix III to Annex III (Part-66),](#_bookmark131) except in the case of gas airships, where it shall be directly approved by the CAC RA.
4. By derogation from points (b) and (c), for Group 2 and 3 aircraft, aircraft type ratings may also be endorsed on a licence after completing the following steps:
   * satisfactory completion of the relevant category B1, B2 or C aircraft type evaluation in accordance with [Appendix III](#_bookmark131) to this Annex (Part-66);
   * in the case of B1 and B2 category, demonstration of practical experience in the aircraft type. In that case, the practical experience shall include a representative cross section of maintenance activities relevant to the licence category.

In the case of a category C rating, for a person qualified through the academic route as referred to in point (a)(5) of point [66.A.30,](#_bookmark32) the first relevant aircraft type evaluation shall be at the category B1 or B2 level.

1. For Group 2 aircraft:
2. the endorsement of manufacturer subgroup ratings for category B1 and C licence holders requires complying with the aircraft type rating requirements for at least two aircraft types from the same manufacturer, which combined are representative of the applicable manufacturer subgroup;
3. the endorsement of full subgroup ratings for category B1 and C licence holders requires complying with the aircraft type rating requirements for at least three aircraft types from different manufacturers, which combined are representative of the applicable subgroup;
4. the endorsement of manufacturer subgroup and full subgroup ratings for category B2 and B2L licence holders requires demonstration of practical experience which shall include a representative cross section of maintenance activities relevant to the licence category and to the applicable aircraft subgroup and, in the case of the B2L licence, relevant to the applicable system rating(s);
5. by derogation from point (e)(iii), the holder of a B2 or B2L licence, endorsed with a full subgroup 2b, is entitled to be endorsed with a full subgroup 2c.
6. For Group 3 and 4 aircraft:
7. the endorsement of the full Group 3 rating for category B1, B2, B2L and C licence holders and the endorsement of the full Group 4 rating for B2 and B2L licence holders require demonstration of practical experience, which shall include a representative cross section of maintenance activities relevant to the licence category and to Group 3 or 4, as applicable;
8. for category B1, unless the applicant provides evidence of appropriate experience, Group 3 rating shall be subject to the following limitations, which shall be endorsed on the licence:
   * pressurised aeroplanes,
   * metal-structure aeroplanes,
   * composite-structure aeroplanes,
   * wooden-structure aeroplanes,
   * aeroplanes with metal-tubing structure covered with fabric;
9. by derogation from point (f)(i), the holder of a B2L licence, endorsed with a full subgroup 2a or 2b, is entitled to be endorsed with Groups 3 and 4.
10. For the B3 licence:
11. the endorsement of the rating ‘piston engine non-pressurised aeroplanes of 2 000 kg MTOM and below’ requires demonstration of practical experience, which shall include a representative cross section of maintenance activities relevant to the licence category;
12. unless the applicant provides evidence of appropriate experience, the rating referred to in point (i) shall be subject to the following limitations, which shall be endorsed on the licence:
    * wooden-structure aeroplanes,
    * aeroplanes with metal-tubing structure covered with fabric,
    * metal-structure aeroplanes,
    * composite-structure aeroplanes.
13. For all L licence subcategories, other than L5:
14. the endorsement of ratings requires demonstration of practical experience which shall include a representative cross section of maintenance activities relevant to the licence subcategory;
15. unless the applicant provides evidence of appropriate experience, the ratings shall be subject to the following limitations, which shall be endorsed on the licence:
    1. for ratings ‘sailplanes’ and ‘powered sailplanes and ELA1 aeroplanes’:
       * wooden-structure aircraft covered with fabric,
       * aircraft with metal-tubing structure covered with fabric,
       * metal-structure aircraft,
       * composite-structure aircraft,
    2. for the rating ‘gas balloons’:
       * other than ELA1 gas balloons; and
    3. if the applicant has only provided evidence of 1-year experience in accordance with the derogation contained in point [66.A.30(a)(2b)(ii),](#_bookmark32) the following limitation shall be endorsed on the licence:

‘complex maintenance tasks provided for in Appendix VII to Annex I (Part-M), standard changes provided for in point 21.A.90B of Annex I (Part 21) and points 21L.A.62 and 21L.A.102 of Annex Ib (Part 21 Light) to Regulation on Initial Airworthiness and standard repairs provided for in point 21.A.431B of Annex I (Part 21) and in point 21L.A.202 or point 21L.A.222 of Annex Ib (Part 21 Light) to Regulation on Initial Airworthiness.’

### GM1 66.A.45 Endorsement with aircraft ratings

*[Regulatory source]*

The following table shows a summary of the aircraft rating requirements contained in [66.A.45](#_bookmark40), [66.A.50](#_bookmark46) and [Appendix III to Part-66.](#_bookmark131)

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), the B3 licence (piston-engine non-pressurised aeroplanes of 2 000 kg MTOM and below) and the L licences, which are the possible limitations and ratings 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](#_bookmark141)) and is only required for the first aircraft rating in the licence (sub)category.

|  |  |  |  |
| --- | --- | --- | --- |
| **Aircraft rating requirements** | | | |
| **Aircraft** | **B1/B3/L licence** | **B2/B2L licence** | **C licence** |
| Group 1 aircraft, except airships | (For B1) | (For B2) |  |
|  | **Individual TYPE RATING** | **Individual TYPE RATING** | **Individual TYPE RATING** |
| * 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 EASA. | Type training:   * Theory + examination * Practical + assessment   **PLUS**  OJT (for first aircraft in licence subcategory) | Type training:   * Theory + examination * Practical + assessment   **PLUS**  OJT (for first aircraft in licence subcategory) | Type training:  - Theory + examination |
| Group 1 airships | (For L5 licence) | (For B2) |  |
|  | **Individual TYPE RATING** | **Individual TYPE RATING** |  |
|  | Type training:   * Theory + examination * Practical + assessment   **PLUS**  OJT (for first aircraft in licence subcategory) | Type training:   * Theory + examination * Practical + assessment   **PLUS**  OJT (for first aircraft in licence category) | Not applicable |
| Group 2 aircraft | (For B1.1, B1.3, B1.4) | (For B2) |  |
| Subgroups:  2a: single turboprop aeroplanes (\*) | **Individual TYPE RATING** (type training + OJT) **or** (type evaluation + practical experience) | **Individual TYPE RATING** (type training + OJT) **or** (type evaluation + practical experience) | **Individual TYPE RATING** type training **or** type evaluation |
| 2b: single turbine engine helicopters (\*)  2c: single piston engine helicopters (\*)  (\*) Except those classified in Group 1. | **Full SUBGROUP RATING**  (type training + OJT) **or** (type evaluation + practical experience) on at least 3 aircraft representative of that subgroup | (For B2 and B2L)  **Full SUBGROUP RATING**  based on demonstration of practical experience | **Full SUBGROUP RATING**  type training **or** type evaluation on at least  3 aircraft representative of that subgroup |
|  | **Manufacturer**  **SUBGROUP RATING**  (type training + OJT)  **or** (type evaluation + practical experience) on at least 2 aircraft representative  of that manufacturer subgroup | **Manufacturer**  **SUBGROUP RATING**  based on demonstration of practical experience | **Manufacturer**  **SUBGROUP RATING**  type training **or** type evaluation on at least  2 aircraft representative of that manufacturer subgroup |

|  |  |  |  |
| --- | --- | --- | --- |
| **Aircraft rating requirements** | | | |
| **Aircraft** | **B1/B3/L licence** | **B2/B2L licence** | **C licence** |
| Group 3 aircraft | (For B1.2) | (For B2) |  |
| Piston engine aeroplanes (except those classified  in Group 1) | **Individual TYPE RATING** (type training + OJT) **or** (type evaluation + practical experience) | **Individual TYPE RATING**  (type training + OJT) **or** (type evaluation + practical experience) | **Individual TYPE RATING**  type training **or** type evaluation |
|  | **Full GROUP 3 RATING**  based on demonstration of practical experience **Limitations:**   * Pressurised aeroplanes * Metal aeroplanes * Composite aeroplanes * Wooden aeroplanes * Metal tubing and fabric aeroplanes | (For B2 and B2L)  **Full GROUP 3 RATING**  based on demonstration of appropriate experience | **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  **Limitations:**   * Metal aeroplanes * Composite aeroplanes * Wooden aeroplanes * Metal tubing & fabric aeroplanes | **This rating cannot be endorsed on a B2/B2L licence. These aircraft are already covered by the endorsement of ratings for Group 3 aircraft (see box above)** | **This rating cannot be endorsed on a C licence. These aircraft are already covered by the endorsement of ratings for Group 3 aircraft (see box above)** |
| Group 4 aircraft: | (For all L subcategories, except L5) | (For B2 and B2L) |  |
| Sailplanes, powered  sailplanes, balloons and airships other than those in Group 1 | − For L1C: ‘composite sailplanes’ rating,  − For L1: ‘sailplanes’ rating,  − For L2C: ‘composite powered sailplanes and composite ELA1 aeroplanes’ rating,  − For L2: ‘powered sailplanes and ELA1 aeroplanes’ rating,  − For L3H: ‘hot-air balloons’ rating,  − For L3G: ‘gas balloons’ rating,  − For L4H: ‘hot-air airships’ rating,  − For L4G: ‘ELA2 gas airships’ rating,  all based on demonstration of practical experience  **Limitations:** | **Full GROUP 4 RATING**  based on demonstration of practical experience | Not applicable |

|  |  |  |  |
| --- | --- | --- | --- |
| **Aircraft rating requirements** | | | |
| **Aircraft** | **B1/B3/L licence** | **B2/B2L licence** | **C licence** |
|  | see [66.A.45(h)](#_bookmark40) |  |  |

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

*[Regulatory source]*

An aircraft type rating includes all the aircraft models/variants listed in column 2 of [Appendix I to AMC](#_bookmark173) [to Part-66](#_bookmark173).

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](#_bookmark173) 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](#_bookmark21), 145.A.35(a), M.A.607(a), and CAO.A.040 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(d);(e)3;(f)1;(g)1;(h) Endorsement with aircraft ratings**

*[Regulatory source]*

1. The ‘practical experience’ should cover a representative cross section including at least:
   * for categories B1, B2, B2L and B3: 50 % of the tasks contained in [Appendix II](#_bookmark191) to the AMC relevant to the licence category and to the applicable aircraft type ratings or aircraft (sub)group ratings being endorsed;
   * for category L:
     + in the subcategories L1, L1C, L2 or L2C: 50 % as in the paragraph related to B1, B2, B2L or B3;
     + in the subcategories L3H and L3G for ‘Balloons’ or L4H, L4G and L5 for ‘Airships’, 80 % of the tasks should be demonstrated, and should include the tasks identified with an asterisk (\*) in the Appendix;

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.

1. 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](#_bookmark191) 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%.

1. Practical experience should be demonstrated by the submission of records or a log book 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.](#_bookmark24)

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

1. For the granting of manufacturer subgroup ratings for Group 2 aircraft, for B1 and C license 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 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.

1. 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.

1. 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](#_bookmark173) [Part-66.](#_bookmark173)

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.

**GM1 66.A.45(h)(ii) Endorsement with aircraft ratings**

*[Regulatory source]*

For subcategories L1 and L2, it is possible to endorse the corresponding ratings with limitations depending on the type of structures covered by the experience gained.

For subcategory L3G, it is possible to endorse the rating ‘gas balloons’ with a limitation to ‘other than ELA1 gas balloons’ if the experience gained only covers ELA1 gas balloons.

However, the limitations referred to in [66.A.45(h)(ii)](#_bookmark40) do not apply for subcategories L1C, L2C, L3H, L4H and L4G. The ratings on these licences can only be obtained after demonstration of the appropriate experience representative of the full scope of the licence subcategory.

**66.A.50 Limitations**

1. Limitations introduced on an aircraft maintenance licence are exclusions from the certification privileges and, in the case of limitations referred to in point [66.A.45,](#_bookmark40) they affect the aircraft in its entirety.
2. For limitations referred to in point [66.A.45,](#_bookmark40) limitations shall be removed upon:
   1. demonstration of appropriate experience; or
   2. after a satisfactory practical assessment performed by the CAC RA.
3. For limitations referred to in point [66.A.70,](#_bookmark49) limitations shall be removed upon satisfactory completion of examination on those modules/subjects defined in the applicable conversion report referred to in point [66.B.300.](#_bookmark87)

**AMC 66.A.50(b) Limitations**

*[Regulatory source]*

1. The appropriate experience required to remove the limitations referred to in [66.A.45(f),(g) and](#_bookmark40)

[(h)](#_bookmark40) should consist of the performance of a variety of tasks appropriate to the limitations under the supervision of authorized certifying staff. This should include the tasks required by a scheduled annual inspection. Alternatively, this experience may also be gained, if agreed by the CAC RA, by theoretical and practical training provided by the manufacturer, as long as an assessment is further carried out and recorded by this manufacturer.

1. It is acceptable to have this experience in just one aircraft type, provided this type is representative of the (sub)group in relation to the limitation being removed.
2. It is acceptable that this experience is gained in aircraft not covered by the Law on Aviation, provided that this experience is relevant and representative of the corresponding (sub)group. An example could be the experience required to remove a limitation such as ‘aircraft with metal tubing structure covered with fabric’, which may be gained in ultralight aircraft (Annex I aircraft).
3. 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.

### 66.A.55 Evidence of qualification

Personnel exercising certification privileges as well as support staff shall produce their licence, as evidence of qualification, within 24 hours upon request by an authorised person.

### 66.A.70 Conversion provisions

Reserved.

### GM 66.A.70 Conversion provisions

*[Regulatory source]*

Reserved

### GM 66.A.70(c) Conversion provisions

Reserved

### GM 66.A.70(d) Conversion provisions

*[Regulatory source]*

Reserved

## SECTION B — PROCEDURES FOR COMPETENT AUTHORITIES

### SUBPART A — GENERAL

### Scope

This section establishes the procedures including the administrative requirements to be followed by the CAC RA which is in charge of the implementation and the enforcement of [Section A of this Annex](#_bookmark12) [(Part-66)](#_bookmark12).

* + 1. **Means of compliance**

1. The MTAI shall develop acceptable means of compliance (“AMC”) that may be used to establish compliance with current regulation.
2. Alternative means of compliance may be used to establish compliance with this Regulation.
3. Reserved.

**GM1 66.B.2 Means of compliance**

**ALTERNATIVE MEANS OF COMPLIANCE — GENERAL**

1. A CAC RA may establish means to comply with the Regulation different from the AMC established by MTAI.

In that case, the CAC RA is responsible for demonstrating how this (these) alternative means of compliance (AltMoC) establish compliance with the Regulation.

1. AltMoC used by a CAC RAmay also be used by other competent authorities only if processed again in accordance with point [66.B.2](#_bookmark56).
2. AltMoC issued by the CAC RA may cover the following cases:
   * AltMoC to be used by persons under the oversight of the CAC RA and made available to these persons;
   * AltMoC to be used by the authority itself to discharge its responsibilities.

**AMC1 66.B.2(b);(c) Means of compliance**

**PROCESSING THE ALTERNATIVE MEANS OF COMPLIANCE**

To meet the objective of points (b) and (c) of point [66.B.2:](#_bookmark56)

1. the CAC RA should establish the means to consistently evaluate over time that all the AltMoC used by itself or by the persons under its oversight allow for the establishment of compliance with the Regulation;
2. if the CAC RA issues AltMoC for itself or for the persons under its oversight, it should:
   1. make them available to all relevant persons;
   2. Reserved.
3. Reserved.

All these elements describing the AltMoC form an integral part of the records to be kept in accordance with point [66.B.20.](#_bookmark62)

**GM1 66.B.2(b);(c) Means of compliance**

**CASE WHERE THE REGULATION HAS NO CORRESPONDING MTAI AMC**

When there is no MTAI AMC for a certain requirement in the Regulation, the CAC RA may choose to develop national guides or other types of documents to help the persons under its oversight in complying with the Regulation. The CAC RA may inform the MTAI, so that such guides or other documents may later be considered for transposition into an AMC published by the MTAI through the MTAI rulemaking process.

**66.B.10 Competent authority**

1. General

The CAC RA shall have allocated responsibilities for the issuance, continuation, change, suspension or revocation of aircraft maintenance licences.

The CAC RA shall establish an adequate organisational structure to ensure compliance with this [Annex (Part-66).](#_bookmark8)

1. Resources

The CAC RA shall be appropriately staffed to ensure the implementation of the requirements of this [Annex (Part-66).](#_bookmark8)

1. Procedures

The CAC RA shall establish documented procedures detailing how compliance with this [Annex](#_bookmark8) [(Part-66)](#_bookmark8) is accomplished. These procedures shall be reviewed and amended to ensure continued compliance.

**66.B.15 Information security management system**

Reserved.

**66.B.20 Record-keeping**

1. The CAC RA shall establish a system of record-keeping that allows adequate traceability of the process to issue, revalidate, change, suspend or revoke each aircraft maintenance licence.
2. These records shall include for each licence:
   1. the application for an aircraft maintenance licence or change to that licence, including all supporting documentation;
   2. a copy of the aircraft maintenance licence including any changes;
   3. copies of all relevant correspondence;
   4. details of any exemption and enforcement actions;
   5. any report from other competent authorities relating to the aircraft maintenance licence holder;
   6. the records of examinations conducted by the competent authority;
   7. the applicable conversion report used for conversion;
   8. the applicable credit report used for crediting.
3. Records referred to in points 1 to 5 of point (b) shall be kept at least 5 years after the end of the licence validity.
4. Records referred to in points 6, 7 and 8 of point (b) shall be kept for an unlimited period.

**AMC 66.B.20 Record-keeping**

* 1. The record-keeping system should ensure that all records are accessible whenever needed within a reasonable time. These records should be organized in a consistent way throughout the CAC RA (chronological, alphabetical order, etc.).
  2. 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.
  3. 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](#_bookmark62).

**66.B.25 Mutual exchange of information**

* + 1. The CAC RA shall participate in a mutual exchange of information.
    2. Reserved.

**66.B.30 Exemptions**

All exemptions granted shall be recorded and retained by the CAC RA.

### SUBPART B — ISSUE OF AN AIRCRAFT MAINTENANCE LICENCE

This Subpart provides the procedures to be followed by the CAC RA to issue, change or continue an aircraft maintenance licence.

**66.B.100 Procedure for the issue of an aircraft maintenance licence by the CAC RA**

1. On receipt of [CAC Form 19](#_bookmark153) and any supporting documentation, the CAC RA shall verify [CAC Form](#_bookmark153) [19](#_bookmark153) for completeness and ensure that the experience claimed meets the requirement of this [Annex (Part-66).](#_bookmark8)
2. The CAC RA shall verify an applicant's examination status and/or confirm the validity of any credits to ensure that all module requirements of [Appendix I](#_bookmark104) or [Appendix VII,](#_bookmark155) as applicable, have been met as required by this Annex (Part-66).
3. When having verified the identity and date of birth of the applicant and being satisfied that the applicant meets the standards of knowledge and experience required by this [Annex (Part-66)](#_bookmark8), the CAC RA shall issue the relevant aircraft maintenance licence to the applicant. The same information shall be kept on CAC RA records.
4. In the case where aircraft types or groups are endorsed at the time of the issuance of the first aircraft maintenance licence, the CAC RA shall verify compliance with point [66.B.115.](#_bookmark75)

**AMC 66.B.100 Procedure for the issue of an aircraft maintenance licence by the CAC RA**

* 1. Applicants claiming the maximum reduction in [66.A.30(a)](#_bookmark32) 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.
  2. Applicants claiming reduction in [66.A.30(a)](#_bookmark32) total experience based upon successful completion of training considered relevant by the CAC RA as a skilled worker in a technical trade, should include the relevant certificate of successful completion of training.
  3. Applicants claiming credit against the [66.A.30(a)](#_bookmark32) total experience requirement by virtue of [66.A.30(a)](#_bookmark32) non-civil aircraft maintenance experience may only be granted such credit where the RA has recognised such non-civil aircraft maintenance experience. The CAC RA in recognising non-civil aircraft maintenance experience should 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 CAC RA.
  4. The CAC RA should check that the experience record satisfies above paragraphs in terms of content and the countersigning signature.

**AMC 66.B.100 to 115**

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

**GM 66.B.100 Procedure for the issue of an aircraft maintenance licence by the CAC RA**

*[Regulatory source]*

At the issue or renewal of a B2L licence:

* one or several system ratings; and
* one or several group/subgroup ratings, should be endorsed on the licence ([CAC Form 26](#_bookmark154)).

A licences should be issued with a subcategory without type ratings.

B1, B2 and C licences may be issued without an aircraft type or group rating.

B2L licences may be issued without an aircraft type or group rating. The B2L licence should always be issued with at least one system rating. This is based on the demonstrated initial experience that at least should be sufficient to endorse one system rating.

B3 licences should be issued with the rating ‘piston engine non-pressurised aeroplanes of 2 000 kg MTOM and below’ endorsed as the experience requirement for the rating is at least covered by the 1, 2 or 3 years of experience for that category.

L licences should be issued with at least one subcategory and the relevant aircraft rating.

**66.B.105 Procedure for the issue of an aircraft maintenance licence via a maintenance organisation approved in accordance with Annex II (Part-145) or Annex Vd (Part-CAO)**

*[Regulatory source]*

* + 1. A maintenance organisation approved in accordance with Annex II (Part-145) or Annex Vd (Part- CAO), when authorised to carry out this activity by the CAC RA, may (i) prepare the aircraft maintenance licence on behalf of the CAC RA or (ii) make recommendations to the CAC RA regarding the application from an individual for a aircraft maintenance licence so that the CAC RA may prepare and issue such licence.
    2. Maintenance organisations referred to in point (a) shall ensure compliance with points [66.B.100(a) and (b).](#_bookmark67)
    3. In all cases, the aircraft maintenance licence can only be issued to the applicant by the CAC RA.

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

*[Regulatory source]*

1. The maintenance organisation approved under Part-145 should include the procedure in the organisation’s exposition (Chapter 3.21), and this procedure should be audited by the CAC RA 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 CAC RA for the Part-145 approval and for the [Part-66](#_bookmark8) licence is the same.
2. The Part-145 organisation should check that the experience records have been properly countersigned.
3. The maintenance organisation approved under Part-145 may keep the experience record of applicants in a different form from that of application [CAC Form 19](#_bookmark153) but such different form or manner should be acceptable to the CAC RA.

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

*[Regulatory source]*

* 1. At the completion of the procedures specified in points [66.B.100](#_bookmark67) or [66.B.105](#_bookmark71), the CAC RA shall endorse the additional basic category, subcategory or, for category B2L, system rating(s) on the aircraft maintenance licence by stamp and signature or shall reissue the licence.
  2. The record system of the CAC RA shall be changed accordingly.
  3. Upon request by the applicant, the CA RA shall replace a licence in category B2L with a licence in category B2 endorsed with the same aircraft rating(s) when the holder has demonstrated both of the following:
     1. by examination the differences between the basic knowledge corresponding to the B2L licence held and the basic knowledge of the B2 licence, as set out in [Appendix I](#_bookmark104);
     2. the practical experience required in [Appendix IV.](#_bookmark152)
  4. The experience and basic knowledge modules or partial modules required for adding a new licence category or subcategory to an existing licence issued in accordance with this Annex are outlined in the tables of [Appendix IV.](#_bookmark152)

**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.

*[Regulatory source]*

When the conditions set in the rule for extending a B2L licence to include the B2 category are met, the B2L licence should be replaced by a B2 licence.

The B2L licence replaced by a B2 licence should be retained by the CAC RA.

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

1. On receipt of a satisfactory [CAC Form 19](#_bookmark153) and any supporting documentation demonstrating compliance with the requirements of the applicable rating together with the accompanying aircraft maintenance licence, the competent authority shall either:
   1. endorse the applicant's aircraft maintenance licence with the applicable aircraft rating; or
   2. reissue the said licence to include the applicable aircraft rating; or
   3. remove the applicable limitations in accordance with point [66.A.50](#_bookmark46). The CAC RA record system shall be changed accordingly.
2. In the case where the complete type training is not conducted by maintenance training organisation appropriately approved in accordance with Annex IV (Part-147), the CAC RA shall be satisfied that all type training requirements are complied with before the type rating is issued.
3. In the case where the On the Job Training is not required, the aircraft type rating shall be endorsed based on a Certificate of Recognition issued by a maintenance training organisation approved in accordance with Annex IV (part-147).
4. In the case where the aircraft type training is not covered by a single course, the CAC RA shall be satisfied prior to the type rating endorsement that the content and length of the courses

fully satisfy the scope of the licence category and that the interface areas have been appropriately addressed.

1. In the case of differences training, the CAC RA shall be satisfied that (i) the applicant's previous qualification, supplemented by (ii) either a course approved in accordance with Annex IV (Part- 147) or a course directly approved by the CAC RA, are acceptable for type rating endorsement.
2. The CAC RA shall ensure that compliance with the practical elements of the type training is demonstrated by one of the following:
3. by the provision of detailed practical training records or a logbook provided by the organisation which delivered the course directly approved by the CAC RA in accordance with point [66.B.130;](#_bookmark80)
4. where available, by a training certificate, covering the practical training element, issued by a maintenance training organisation appropriately approved in accordance with Annex IV (Part-147).
5. Aircraft type endorsement shall use the aircraft type ratings specified by the MTAI.

**AMC1 66.B.115 Procedure for the change of an aircraft maintenance licence to include an aircraft rating or to remove limitations**

*[Regulatory source]*

1. Where the type training has not been conducted by a Part-147 organisation, there should be supporting documents confirming to the competent authority that:
   * The type training has been approved by the CAC RA in accordance with [66.B.130](#_bookmark80),
   * the applicant has completed the elements of the approved type training; and
   * the trainee has been successfully examined/assessed.
2. Aircraft type training may be subdivided in airframe and/or powerplant and/or avionics/electrical systems type training courses.
3. Airframe type training course means a type training course including all relevant aircraft structure and electrical and mechanical systems excluding the powerplant.
4. Powerplant type training course means a type training course on the bare engine, including the build-up to a quick engine change unit.
5. 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.
6. 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.
7. For the acceptance of the OJT tasks and programme, the licensing CAC RA should develop procedures compliant with [Section 6 of Appendix III to Part-66](#_bookmark141).

In the case where the licensing CAC RA is different from the competent authority of the maintenance organisation which provides the OJT, the licensing authority may take into consideration the fact that the maintenance organisation may already have the OJT programme accepted by their own CAC RA (directly approved or through Chapter 3.20 of the MOE, as described in AMC1 145.A.70(a)).

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

1. The CAC RA shall compare the holder's aircraft maintenance licence with the competent authority records and verify any pending revocation, suspension or change action pursuant to point [66.B.500.](#_bookmark102) If the documents are identical and no action is pending pursuant to point [66.B.500,](#_bookmark102) the holder's copy shall be renewed for 5 years and the file endorsed accordingly.
2. If the CAC RA records are different from the aircraft maintenance licence held by the licence holder:
   1. the CAC RA shall investigate the reasons for such differences and may choose not to renew the aircraft maintenance licence.
   2. the CAC RA shall inform the licence holder and any known maintenance organisation approved in accordance with Annex I (Part-M) Subpart F, Annex II (Part-145) or Annex Vd (Part-CAO) that may be directly affected by such fact.
   3. the CAC RA shall, if necessary, take action in accordance with point 66.B.500 to revoke, suspend or change the licence in question.

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

The CAC RA 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 a matter for the approved Part-145 / M.A. Subpart F / Part- CAO maintenance organisation or the certifying staff in accordance with M.A.801(b)1.

For the purpose of ensuring the continued validity of the certification privileges, the CAC RA may, when periodically reviewing the organisations in accordance with 145.B.305, M.B.604 or CAO.B.055, or during on-the-spot checks, request the licence holder to provide documentary evidence of compliance with [66.A.20(b)](#_bookmark21) when exercising certification privileges.

**66.B.125 Procedure for the conversion of licences including group ratings**

1. Individual aircraft type ratings already endorsed on the aircraft maintenance license referred to in point 4 of Article 5 shall remain on the license and shall not be converted to new ratings unless the license holder fully meets the requirements for endorsement defined in point

[66.A.45](#_bookmark40) of this [Annex (Part-66)](#_bookmark8) for the corresponding group/sub-group ratings.

1. The conversion shall be performed in accordance with the following conversion table:
   1. for category B1 or C:
      * helicopter piston engine, full group: converted to ‘full subgroup 2c’ plus the aircraft type ratings for those single piston engine helicopters which are in Group 1;
      * helicopter piston engine, manufacturer group: converted to the corresponding ‘manufacturer subgroup 2c’ plus the aircraft type ratings for those single piston engine helicopters of that manufacturer which are in Group 1;
      * helicopter turbine engine, full group: converted to ‘full subgroup 2b’ plus the aircraft type ratings for those single turbine engine helicopters which are in Group 1;
      * helicopter turbine engine, manufacturer group: converted to the corresponding ‘manufacturer subgroup 2b’ plus the aircraft type ratings for those single turbine engine helicopters of that manufacturer which are in Group 1;
      * aeroplane single piston engine — metal structure, either full group or manufacturer group: converted to ‘full group 3’. For the B1 licence, the following limitations shall be included: composite-structure aeroplanes, wooden-structure aeroplanes, and metal-tubing and fabric aeroplanes;
      * aeroplane multiple piston engines — metal structure, either full group or manufacturer group: converted to ‘full group 3’ plus the aircraft type ratings for those aeroplanes with multiple piston engines of the corresponding full/manufacturer group which are in Group 1. For the B1 licence, the following limitations shall be included: composite-structure aeroplanes, wooden-structure aeroplanes and metal-tubing and fabric aeroplanes;
      * aeroplane single piston engine — wooden structure, either full group or manufacturer group: converted to ‘full group 3’. For the B1 licence, the following limitations shall be included: pressurised aeroplanes, metal-structure aeroplanes, composite-structure aeroplanes and metal-tubing and fabric aeroplanes;
      * aeroplane multiple piston engines — wooden structure, either full group or manufacturer group: converted to ‘full group 3’. For the B1 licence, the following limitations shall be included: pressurised aeroplanes, metal-structure aeroplanes, composite-structure aeroplanes and metal-tubing and fabric aeroplanes;
      * aeroplane single piston engine — composite structure, either full group or manufacturer group: converted to ‘full group 3’. For the B1 licence, the following limitations shall be included: pressurised aeroplanes, metal-structure aeroplanes, wooden-structure aeroplanes and metal-tubing and fabric aeroplanes;
      * aeroplane multiple piston engines — composite structure, either full group or manufacturer group: converted to ‘full group 3’. For the B1 licence, the following limitations shall be included: pressurised aeroplanes, metal-structure aeroplanes, wooden-structure aeroplanes and metal-tubing and fabric aeroplanes;
      * aeroplane turbine — single engine, full group: converted to ‘full sub-group 2a’ plus the aircraft type ratings for those single turboprop aeroplanes which did not require an aircraft type rating in the previous system and are in Group 1;
      * aeroplane turbine — single engine, manufacturer group: converted to the corresponding ‘manufacturer subgroup 2a’ plus the aircraft type ratings for those single turboprop aeroplanes of that manufacturer which did not require an aircraft type rating in the previous system and are in Group 1;
      * aeroplane turbine — multiple engines, full group: converted to the aircraft type ratings for those aeroplanes with multiple turboprop engines which did not require an aircraft type rating in the previous system.
   2. for category B2:
      * aeroplane: converted to ‘full sub-group 2a’ and ‘full group 3’, plus the aircraft type ratings for those aeroplanes which did not require an aircraft type rating in the previous system and are in group 1,
      * helicopter: converted to ‘full sub-groups 2b and 2c’, plus the aircraft type ratings for those helicopters which did not require an aircraft type rating in the previous system and are in group 1;
   3. for category C:
      * aeroplane: converted to ‘full sub-group 2a’ and ‘full group 3’, plus the aircraft type ratings for those aeroplanes which did not require an aircraft type rating in the previous system and are in group 1,
      * helicopter: converted to ‘full sub-groups 2b and 2c’, plus the aircraft type ratings for those helicopters which did not require an aircraft type rating in the previous system and are in group 1.
2. If the licence was subject to limitations following the conversion process referred to in point [66.A.70,](#_bookmark49) these limitations shall remain on the licence, unless they are removed under the conditions defined in the relevant conversion report referred to in point [66.B.300.](#_bookmark87)

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

*[Regulatory source]*

1. In the case of type training for aircraft other than airships, the CAC RA may approve aircraft type training not conducted by a maintenance training organisation approved in accordance with Annex IV (Part-147), pursuant to [point 1 of Appendix III to this Annex (part-66).](#_bookmark132) In such case, the CAC RA shall have a procedure to ensure that the aircraft type training complies with [Appendix](#_bookmark131) [III to this Annex (Part-66).](#_bookmark131)
2. In the case of type training for airships in Group 1, the courses shall be directly approved by the CAC RA in all cases. The CAC RA shall have a procedure to ensure that the syllabus of the airship- type training covers all the elements contained in the maintenance data from the design approval holder (DAH) or the declarant of a declaration of design compliance.
3. The Certificate of Recognition (CoR) (CAC Form 149b) of Appendix III to Annex IV (Part-147) shall be used for the recognition of completion of either the theoretical elements, the practical elements or both the theoretical and practical elements of the type rating training course.

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

In the case of type training for aircraft other than airships:

*[Regulatory source]*

1. The procedure for the direct approval of type training courses by the CAC RA 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,](#_bookmark131) 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](#_bookmark198).
   * 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.
2. 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.
3. The procedure should also indicate how the competent authority is going to audit the proper performance of the approved course.
4. 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.

**66.B.135 Procedure for the approval of multimedia-based training (MBT) courses**

The CAC RA, whenever it approves courses, including multimedia-based training (MBT) courses, which are delivered in a physical environment or virtual environment or both, shall verify that the aircraft basic training and the aircraft type training comply with [Appendix I](#_bookmark104) and [Appendix III](#_bookmark131) respectively.

The approval procedure shall include the principles and criteria of [Appendix IX.](#_bookmark171)

### SUBPART C — EXAMINATIONS

This Subpart provides the procedures to be followed for the examinations conducted by the CAC RA.

### 66.B.200 Examination by the competent authority

*[Regulatory source]*

1. All examination questions shall be kept in a secure manner prior to an examination, to ensure that candidates will not know which particular questions will form the basis of the examination.
2. The CAC RA shall nominate:
   1. persons who control the questions to be used for each examination;
   2. examiners who shall be present during all examinations to ensure the integrity of the examination.
3. Basic examinations shall follow the standard specified in [Appendices I](#_bookmark104) and [II](#_bookmark127) or in [Appendices](#_bookmark155) [VII](#_bookmark155) and [VIII](#_bookmark169) as applicable.

The Certificate of Recognition (CoR) (CAC Form 148b) of Appendix III to Annex IV (Part-147) shall be used to attest completion of basic examinations.

1. Type training examinations and type evaluations shall follow the standard specified in [Appendix](#_bookmark131) [III.](#_bookmark131)

The Certificate of Recognition (CoR) (CAC Form 149b) of Appendix III to Annex IV (Part-147) shall be used to attest completion of aircraft type training or type evaluations.

1. New essay questions shall be raised at least every 6 months and questions already used withdrawn or rested from use. A record of the questions used shall be retained in the records for reference.
2. All examination papers shall be handed out at the start of the examination to the candidate and handed back to the examiner at the end of the allotted examination time period. No examination paper may be removed from the examination room during the allotted examination time period.
3. Apart from specific documentation needed for type evaluations, only the examination documents may be available to the candidate during the evaluation.
4. Examination candidates shall be separated from each other so that they cannot read each other's examination papers. They may not speak to any person other than the examiner.
5. Candidates who are proven to be cheating shall be banned from taking any further examination within 12 months of the date of the examination in which they were found cheating.

### GM 66.B.200 Examination by the competent authority

*[Regulatory source]*

1. Questions may be prepared in the national language but the use of aviation English is recommended wherever possible.
2. The primary purpose of essay questions is to determine that the candidate can express themselves in a clear and concise manner and can prepare a concise technical report for the maintenance record, which is why only a few essay questions are required.
3. 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 competent authority from meeting potential certifying staff for the purpose of ensuring they understand their obligations and responsibilities in the application of maintenance Parts.

1. For pass mark purposes, the essay questions should be considered as separate from the multiple choice questions.
2. Multiple choice question (MCQ) generation.

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

* 1. The examination should measure clearly formulated goals. Therefore the field and depth of knowledge to be measured by each question should be fully identified.
  2. All the questions should be of the multiple choice type with three alternative answers.
  3. Questions that require specialised knowledge of specific aircraft types should not be asked in a basic licence examination.
  4. 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°.
  5. 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.
  6. 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.
  7. Questions should have only one true answer.
  8. 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.
  9. The incorrect alternatives should seem equally plausible to anyone ignorant of the subject. All alternatives should be clearly related to the question and 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.
  10. Calculators are not allowed during examination. Therefore all calculations should be feasible without a calculator. Where a question involves calculations not feasible without

10

a calculator, such as

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, then the question should specify the approximate value of

* 1. Questions should be in accordance with Part-66 examination syllabus ([Appendix I](#_bookmark104) and [Appendix VII](#_bookmark155)).

1. Essay question generation
   1. The purpose of the essay is to allow the competent authority 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 to assess, in part, the technical knowledge retained by the individual and with a practical application relevant to a maintenance scenario.
   2. Questions should be written so as to be broad enough to be answered by candidates for any A or B licence category or subcategories 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](#_bookmark104) or [Appendix VII](#_bookmark155);
      * cover technology applicable to most areas of aircraft maintenance;
      * reflects common working practices;
      * it is not type- or manufacturer-specific and avoids subjects which are rarely found in practice;
      * when drafting a question, there is need to ensure consideration is given to the limited practical experience that most candidates will have.
   3. To make the questions and the marking procedures are as consistent as possible, each question and model answer, with the required key areas required (see below), should be reviewed independently by at least 2 technical staff members.
   4. 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.

* 1. 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.
  2. 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.
  3. 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.
  4. 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.
  5. The question answer 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.
  6. The answer should show the candidate's ability to express himself in technical language. This includes readability of the language, basic grammar and use of terminology.
  7. The report starts in the beginning and has logical process to reach a conclusion.
  8. Supporting diagrams should not be encouraged but if used should supplement the answer and not replace the need for a broad text answer.
  9. The report should not be indexed, itemised or listed.
  10. Within reason the candidate should not be penalised for incorrect spelling.
  11. 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 up to the maximum percentage allowed.
  12. The two allocated marks should be added together and written into the answer paper.
  13. If a question 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.

### SUBPART D — CONVERSION OF CERTIFYING STAFF QUALIFICATIONS

Reserved.

### 66.B.300 General

Reserved.

**GM 66.B.300 General**

Reserved.

**66.B.305 Conversion report for national qualifications**

Reserved.

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

Reserved.

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

Reserved.

**66.B.310 Conversion report for approved maintenance organisations authorisations**

Reserved.

**AMC 66.B.310(a) Conversion report for approved maintenance organisations' authorisations**

Reserved.

*[Regulatory source]*

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

Reserved.

### SUBPART E — EXAMINATION CREDITS

*[Regulatory source]*

This Subpart provides the procedures for granting examination credits referred to in point [66.A.25(d)](#_bookmark28).

**66.B.400 General**

*[Regulatory source]*

1. The CAC RA may only grant credit on the basis of a credit report prepared in accordance with point [66.B.405](#_bookmark98).
2. The credit report shall be either
   1. developed by the CAC RA or
   2. approved by the CAC RA to ensure compliance with this [Annex (Part-66)](#_bookmark8).
3. Credit reports together with any change of these shall be dated and kept on record by the CAC RA in accordance with point [66.B.20.](#_bookmark62)
4. When an applicant refers to a credit report approved by another CAC RA, the licencing authority shall consider such credit report and seek advice from the other authority for the use of the credit report.

**GM1 66.B.400(d) General**

Reserved.

**66.B.405 Examination credit report**

1. The credit report shall include a comparison between the following:

*[Regulatory source]*

* 1. the modules, submodules, subjects and knowledge levels contained in [Appendices I](#_bookmark104) or [VII](#_bookmark155) to this Annex (Part-66), as applicable;
  2. the syllabus of the technical qualification concerned, relevant to the particular category being sought.

This comparison shall state whether compliance has been demonstrated and shall contain the justifications for each statement and the possible conditions or additional considerations, or both.

1. Credits for examinations, other than basic knowledge examinations carried out in maintenance training organisations approved in accordance with Annex IV (Part-147), can only be granted by the CAC RA in which the qualification has been obtained, unless a formal agreement exists with CAC RA advising otherwise.
2. No credit can be granted unless there is a statement of compliance for each module and submodule, indicating where the equivalent standard can be found in the technical qualification.
3. The CAC RA shall check on a regular basis whether the following have changed:
   1. the national qualification standard;
   2. Appendices I or VII to this Annex (Part-66), as applicable.

The CAC RA shall also assess if changes to the credit report are consequently required. Such changes shall be documented, dated and recorded.

**66.B.410 Examination credit validity**

1. The CAC RA shall notify to the applicant in writing any credits granted together with the reference to the credit report used.
2. Credits shall expire 10 years after they are granted.
3. Upon expiration of the credits, the applicant may apply for new credits. The CAC RA shall extend the validity of the credits for an additional period of 10 years without further consideration if the basic knowledge requirements defined in [Appendices I](#_bookmark104) or [VII](#_bookmark155) to this Annex (Part-66), as applicable, have not been changed.

**GM 66.B.410 Examination credit validity**

In the case of credits expired in accordance with [66.A.25(d)](#_bookmark28) and [66.B.410(b)](#_bookmark99), the new application for credits will lead to a reassessment in accordance with [66.B.405](#_bookmark98) and [66.B.410](#_bookmark99) only in those cases where the requirements contained in [Appendix I to Part-66](#_bookmark104) have changed. This may lead to a requirement for further examinations on particular modules/sub-modules/subjects.

### SUBPART F — CONTINUING OVERSIGHT

This Subpart describes the procedures for the continuing oversight of the aircraft maintenance licence and in particular for the revocation, suspension or limitation of the aircraft maintenance licence.

**66.B.500 Revocation, suspension or limitation of the aircraft maintenance licence**

The CAC RA shall suspend, limit or revoke the aircraft maintenance licence where it has identified a safety issue or if it has clear evidence that the person has carried out or been involved in one or more of the following activities:

1. obtaining the aircraft maintenance licence and/or the certification privileges by falsification of documentary evidence;
2. failing to carry out requested maintenance combined with failure to report such fact to the organisation or person who requested the maintenance;
3. failing to carry out required maintenance resulting from own inspection combined with failure to report such fact to the organisation or person for whom the maintenance was intended to be carried out;
4. negligent maintenance;
5. falsification of the maintenance record;
6. issuing a certificate of release to service knowing that the maintenance specified on the certificate of release to service has not been carried out or without verifying that such maintenance has been carried out;
7. carrying out maintenance or issuing a certificate of release to service when adversely affected by alcohol or drugs;
8. issuing certificate of release to service while not in compliance with this Regulation.

## APPENDICES TO ANNEX III (PART-66)

**Appendix I — Basic Knowledge Requirements (except for category L licence)**

1. Knowledge levels for Category A, B1, B2, B2L, B3 and C aircraft maintenance licences

*Regulation (EU) 2018/1142*

Basic knowledge for categories A, B1, B2, B2L and B3 is indicated by knowledge levels (1, 2 or 3) of each applicable subject. Category C applicants shall meet either the category B1 or the category B2 basic knowledge levels.

The knowledge level indicators are defined on 3 levels as follows:

* *LEVEL 1: A familiarisation with the principal elements of the subject.*

Objectives:

* 1. The applicant should be familiar with the basic elements of the subject.
  2. The applicant should be able to give a simple description of the whole subject, using common words and examples.
  3. The applicant should be able to use typical terms.
* *LEVEL 2: A general knowledge of the theoretical and practical aspects of the subject and an ability to apply that knowledge.*

Objectives:

* 1. The applicant should be able to understand the theoretical fundamentals of the subject.
  2. The applicant should be able to give a general description of the subject using, as appropriate, typical examples.
  3. The applicant should be able to use mathematical formulae in conjunction with physical laws describing the subject.
  4. The applicant should be able to read and understand sketches, drawings and schematics describing the subject.
  5. The applicant should be able to apply his knowledge in a practical manner using detailed procedures.
* *LEVEL 3: A detailed knowledge of the theoretical and practical aspects of the subject and a capacity to combine and apply the separate elements of knowledge in a logical and comprehensive manner.*

Objectives:

* 1. The applicant should know the theory of the subject and interrelationships with other subjects.
  2. The applicant should be able to give a detailed description of the subject using theoretical fundamentals and specific examples.
  3. The applicant should understand and be able to use mathematical formulae related to the subject.
  4. The applicant should be able to read, understand and prepare sketches, simple drawings and schematics describing the subject.
  5. The applicant should be able to apply his knowledge in a practical manner using manufacturer's instructions.
  6. The applicant should be able to interpret results from various sources and measurements and apply corrective action where appropriate.

1. Modularisation

*Regulation (EU) 2023/989*

Qualification on basic subjects for each aircraft maintenance licence category or subcategory shall be in accordance with the following matrix, where applicable subjects are indicated by an ‘X’, while ‘n/a’ means that the subject module is neither applicable nor required.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Subject module** | **B1.1 A1** | **B1.2 A2** | **B1.3 A3** | **B1.4 A4** | **B3** | **B2** | **B2L** | **C** |
| **Turbine engine** | **Piston engine** | **Turbine engine** | **Piston engine** | **Piston- engine non- pressurised aeroplanes**  **MTOM ≤ 2 t** |
| **1. MATHEMATICS** | X | X | X | X | X | X | X | X |
| **2. PHYSICS** | X | X | X | X | X | X | X | X |
| **3. ELECTRICAL FUNDAMENTALS** | X | X | X | X | X | X | X | X |
| **4. ELECTRONICS FUNDAMENTALS** | X  (n/a for A1) | X  (n/a for A2) | X  (n/a for A3) | X  (n/a for A4) | X | X | X | X |
| **5. DIGITAL TECHNIQUES/ELECTR- ONIC INSTRUMENT**  **SYSTEMS** | X | X | X | X | X | X | X | X |
| **6. MATERIALS AND HARDWARE** | X | X | X | X | X | X | X | X |
| **7. MAINTENANCE**  **PRACTICES** | X | X | X | X | X | X | X | X |
| **8. BASIC**  **AERODYNAMICS** | X | X | X | X | X | X | X | X |
| **9. HUMAN FACTORS** | X | X | X | X | X | X | X | X |
| **10. AVIATION LEGISLATION** | X | X | X | X | X | X | X | X |

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| **11. AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS** | X | X | n/a | n/a | X | n/a | n/a | 11,  15 &  17  as B1.1  or  11,  16 &  17  as B1.2  or  12 &  15  as B1.3  or  12 &  16  as B1.4  or  13 &  14  as B2 |
| **12. HELICOPTER AERODYNAMICS, STRUCTURES AND**  **SYSTEMS** | n/a | n/a | X | X | n/a | n/a | n/a |
| **13. AIRCRAFT AERODYNAMICS, STRUCTURES AND**  **SYSTEMS** | n/a | n/a | n/a | n/a | n/a | X | X |
| **14. PROPULSION** | n/a | n/a | n/a | n/a | n/a | X | X |
| **15. GAS TURBINE ENGINES** | X | n/a | X | n/a | n/a | n/a | n/a |
| **16. PISTON ENGINE** | n/a | X | n/a | X | X | n/a | n/a |
| **17. PROPELLER** | X | X | n/a | n/a | X | n/a | n/a |

###### MODULE 1. MATHEMATICS

*Regulation (EU) 2023/989*

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| **MODULE 1. MATHEMATICS** | **LEVEL** | |
| **A** | **B1 B2 B2L**  **B3** |
| *1.1 Arithmetic* | 1 | 2 |
| *1.2 Algebra*   1. Simple algebraic expressions; 2. Equations. | 1 | 2 |
| — | 1 |
| *1.3 Geometry*   1. Simple geometrical constructions; 2. Graphical representation; 3. Trigonometry. | — | 1 |
| 2 | 2 |
| — | 2 |

###### MODULE 2. PHYSICS

*Regulation (EU) 2023/989*

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| **MODULE 2. PHYSICS** | **LEVEL** | |
| **A B3** | **B1 B2 B2L** |
| *2.1 Matter* | 1 | 2 |
| * 1. *Mechanics*      1. *Statics* | 1 | 2 |
| *2.2.2 Kinetics* | 1 | 2 |
| * + 1. *Dynamics*        1. Mass, force and energy;        2. Momentum and conservation of momentum. | 1 | 2 |
| 1 | 2 |
| *2.2.4 Fluid dynamics*   1. Gravity and density; 2. Viscosity; compressibility on fluids; static, dynamic, and total pressure. | 2 | 2 |
| 1 | 2 |
| *2.3 Thermodynamics*   1. Temperature; 2. Heat. | 2 | 2 |
| 1 | 2 |
| *2.4 Optics (light)* | — | 2 |
| *2.5 Wave motion and sound* | — | 2 |

###### MODULE 3. ELECTRICAL FUNDAMENTALS

*Regulation (EU) 2023/989*

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| **MODULE 3. ELECTRICAL FUNDAMENTALS** | **LEVEL** | | |
| **A** | **B1 B2**  **B2L** | **B3** |
| *3.1 Electron theory* | 1 | 1 | 1 |
| *3.2 Static electricity and conduction* | 1 | 2 | 1 |
| *3.3 Electrical terminology* | 1 | 2 | 1 |
| *3.4 Generation of electricity* | 1 | 1 | 1 |
| *3.5 Sources of DC electricity* | 1 | 2 | 2 |
| *3.6 DC circuits* | 1 | 2 | 1 |
| *3.7 Resistance/resistor*   1. Resistance; 2. Resistors. | — | 2 | 1 |
| — | 1 | — |
| *3.8 Power* | — | 2 | 1 |
| *3.9 Capacitance/capacitor* | — | 2 | 1 |
| *3.10 Magnetism*  (a) Theory of magnetism; | — | 2 | 1 |

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| **MODULE 3. ELECTRICAL FUNDAMENTALS** | **LEVEL** | | |
| **A** | **B1 B2**  **B2L** | **B3** |
| (b) Magnetomotive force. | — | 2 | 1 |
| *3.11 Inductance/inductor* | — | 2 | 1 |
| *3.12 DC motor/generator theory* | — | 2 | 1 |
| *3.13 AC theory* | 1 | 2 | 1 |
| *3.14 Resistive (R), capacitive (C) and inductive (L) circuits* | — | 2 | 1 |
| *3.15 Transformers* | — | 2 | 1 |
| *3.16 Filters* | — | 1 | — |
| *3.17 AC generators* | — | 2 | 1 |
| *3.18 AC motors* | — | 2 | 1 |
| ***MODULE 4. ELECTRONIC FUNDAMENTALS*** | *Regulation (EU) 2023/989* | | |
| **MODULE 4. ELECTRONICS FUNDAMENTALS** | **LEVEL** | | |
| **A** | **B1**  **B3** | **B2**  **B2L** |
| * 1. *Semiconductors*      1. *Diodes*         1. Description and characteristics;         2. Operation and function. | — | 2 | 2 |
| — | — | 2 |
| *4.1.2 Transistors*   1. Description and characteristics; 2. Filters. | — | 1 | 2 |
| — | — | 2 |
| *4.1.3 Integrated circuits*   1. Basic description and operation; 2. Description and operation. | — | 1 | 2 |
| — | — | 2 |
| 4.2 *Printed circuit boards* | — | 1 | 2 |
| *4.3 Servomechanisms*   1. Principles; 2. Construction, operation, and use. | — | 1 | 2 |
| — | — | 2 |

###### MODULE 5. DIGITAL TECHNIQUES/ELECTRONIC INSTRUMENT SYSTEMS

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| **MODULE 5. DIGITAL TECHNIQUES/ELECTRONIC INSTRUMENT SYSTEMS** | **LEVEL** | | | |
| **A** | **B3** | **B1** | **B2**  **B2L** |
| *5.1 Electronic instrument systems* | 1 | 1 | 1 | 1 |
| *5.2 Numbering systems* | — | — | 1 | 2 |

**MODULE 5. DIGITAL TECHNIQUES/ELECTRONIC INSTRUMENT**

**SYSTEMS**

**LEVEL**

**A**

**B3**

**B1**

* 1. *Data conversion*
  2. *Data buses*
  3. *Logic circuits*

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**B2**

**B2L**

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1. Identification and applications; — — 2 2
2. Interpretation of logic diagrams. — — — 2

*5.6 Basic computer structure*

1. Computer terminology and technology;
2. Computer operation.
   1. *Microprocessors*
   2. *Integrated circuits*
   3. *Multiplexing*
   4. *Fibre optics*
   5. *Electronic displays*
   6. *Electrostatic sensitive devices*
   7. *Software management control*
   8. *Electromagnetic environment*
   9. *Typical electronic/digital aircraft systems*

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###### MODULE 6. MATERIALS AND HARDWARE

*Regulation (EU) 2023/989*

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| **MODULE 6. MATERIALS AND HARDWARE** | **LEVEL** | | |
| **A** | **B1 B3** | **B2 B2L** |
| * 1. *Aircraft materials — ferrous*      1. Alloy steels used in aircraft;      2. Testing of ferrous materials;      3. Repair and inspection procedures. | 1 | 2 | 1 |
| — | 1 | 1 |
| — | 2 | 1 |
| *6.2 Aircraft materials — non-ferrous*   1. Characteristics; 2. Testing of non-ferrous materials; 3. Repair and inspection procedures. | 1 | 2 | 1 |
| — | 1 | 1 |
| — | 2 | 1 |
| * 1. *Aircraft materials – composite and non-metallic*      1. *Composite and non-metallic other than wood and fabric*         1. Characteristics;         2. Detection of defects         3. Repairs and inspection procedures. | 1 | 2 | 2 |
| 1 | 2 | — |
| — | 2 | 1 |
| *6.3.2 Wooden structures* | 1 | 1 | — |
| *6.3.3 Fabric covering* | — | 1 | — |
| *6.4 Corrosion*   1. Chemical fundamentals; 2. Types of corrosion. | 1 | 1 | 1 |
| 2 | 3 | 2 |
| * 1. *Fasteners*      1. *Screw threads* | 2 | 2 | 2 |

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| **MODULE 6. MATERIALS AND HARDWARE** | **LEVEL** | | |
| **A** | **B1 B3** | **B2 B2L** |
| *6.5.2 Bolts, studs and screws* | 2 | 2 | 2 |
| *6.5.3 Locking devices* | 2 | 2 | 2 |
| *6.5.4 Aircraft rivets* | 1 | 2 | 1 |
| *6.6 Pipes and unions*   1. Identification; 2. Standard unions. | 2 | 2 | 2 |
| 2 | 2 | 1 |
| *6.7 Springs* | — | 2 | 1 |
| *6.8 Bearings* | 1 | 2 | 2 |
| *6.9 Transmissions* | 1 | 2 | 2 |
| *6.10 Control cables* | 1 | 2 | 1 |
| *6.11 Electrical cables and connectors* | 1 | 2 | 2 |

###### MODULE 7. MAINTENANCE PRACTICES

*Regulation (EU) 2023/989*

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| **MODULE 7. MAINTENANCE PRACTICES** | **LEVEL** | | |
| **A** | **B1 B3** | **B2 B2L** |
| *7.1 Safety precautions – aircraft and workshop* | 3 | 3 | 3 |
| *7.2 Workshop practices* | 3 | 3 | 3 |
| *7.3 Tools* | 3 | 3 | 3 |
| *7.4 (Reserved)* | — | — | — |
| *7.5 Engineering drawings, diagrams and standards* | 1 | 2 | 2 |
| *7.6 Fits and Clearances* | 1 | 2 | 1 |
| *7.7 Electrical wiring interconnection system (EWIS)* | 1 | 3 | 3 |
| *7.8 Riveting* | 1 | 2 | — |
| *7.9 Pipes and Hoses* | 1 | 2 | — |
| *7.10 Springs* | 1 | 2 | — |
| *7.11 Bearings* | 1 | 2 | — |
| *7.12 Transmissions* | 1 | 2 | — |
| *7.13 Control cables* | 1 | 2 | — |
| * 1. *Material handling*      1. *Sheet metal* | — | 2 | — |
| *7.14.2 Composite and non-metallic* | — | 2 | — |
| *7.14.3 Additive manufacturing* | 1 | 1 | 1 |
| *7.15 (Reserved)* |  |  |  |
| *7.16 Aircraft weight and balance*   1. Centre-of-gravity calculation; 2. Aircraft weighing. | — | 2 | 2 |
| — | 2 | — |
| *7.17 Aircraft handling and storage* | 2 | 2 | 2 |
| *7.18 Disassembly, inspection, repair and assembly techniques*  (a) Types of defects and visual inspection techniques; | 2 | 3 | 3 |

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| **MODULE 7. MAINTENANCE PRACTICES** | **LEVEL** | | |
| **A** | **B1 B3** | **B2 B2L** |
| 1. General repair methods – structural repair manual; 2. Non-destructive inspection techniques; 3. Disassembly and re-assembly techniques; 4. Troubleshooting techniques. | — | 2 | — |
| — | 2 | 1 |
| 2 | 2 | 2 |
| — | 2 | 2 |
| *7.19 Abnormal events*   1. Inspections following lightning strikes and HIRF penetration; 2. Inspections following abnormal events such as heavy landings and flight through turbulence. | 2 | 2 | 2 |
| 2 | 2 | — |
| *7.20 Maintenance Procedures* | 1 | 2 | 2 |
| *7.21 Documentation & communication* | 1 | 2 | 2 |

###### MODULE 8. BASIC AERODYNAMICS

*Regulation (EU) 2023/989*

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| --- | --- | --- |
| **MODULE 8. BASIC AERODYNAMICS** | **LEVEL** | |
| **A B3** | **B1 B2**  **B2L** |
| *8.1 Physics of the atmosphere*  International Standard Atmosphere (ISA), application to aerodynamics. | 1 | 2 |
| *8.2 Aerodynamics* | 1 | 2 |
| *8.3 Theory of flight* | 1 | 2 |
| *8.4 High-speed airflow* | 1 | 2 |
| *8.5 Flight stability and dynamics* | 1 | 2 |

###### MODULE 9. HUMAN FACTORS

*Regulation (EU) 2023/989*

**MODULE 9. HUMAN FACTORS**

* 1. *General*
  2. *Human performance and limitations*
  3. *Social psychology*
  4. *Factors that affect performance*
  5. *Physical Environment*
  6. *Tasks*
  7. *Communication*
  8. *Human error*
  9. *Safety management*
  10. *The ‘Dirty Dozen’ and risk mitigation*

**LEVEL**

**ALL**

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###### MODULE 10. AVIATION LEGISLATION

*Regulation (EU) 2023/989*

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| **MODULE 10. AVIATION LEGISLATION** | **LEVEL** | |
| **A** | **B1 B2 B2L**  **B3** |
| *10.1 Regulatory framework* | 1 | 1 |
| *10.2 Certifying Staff — maintenance* | 2 | 2 |
| *10.3 Approved maintenance organisations* | 2 | 2 |
| *10.4 Independent certifying staff* | *—* | 3 |
| *10.5 Air operations* | 1 | 1 |
| *10.6 Certification of aircraft, parts, and appliances* | 2 | 2 |
| *10.7 Continuing airworthiness* | 2 | 2 |
| *10.8 Oversight principles in continuing airworthiness* | 1 | 1 |
| *10.9 Maintenance and certification beyond the current EU regulations (if not*  *superseded by EU requirements)* | *—* | 1 |
| *10.10 Cybersecurity in aviation maintenance* | 1 | 1 |

###### MODULE 11. TURBINE AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS

*Regulation (EU) 2023/989*

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| --- | --- | --- | --- | --- | --- |
| **MODULE 11. AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | | | | |
| **A1** | **A2** | **B1.1** | **B1.2** | **B3** |
| * 1. *Theory of flight*      1. Aeroplane aerodynamics and flight controls;      2. Aeroplane, other aerodynamic devices. | 1 | 1 | 2 | 2 | 1 |
| 1 | 1 | 2 | 2 | 1 |
| *11.2 Airframe structures (ATA 51)*   1. General concepts; 2. Airworthiness requirements for structural strength; 3. Construction methods. | 2 | 2 | 2 | 2 | 2 |
| 2 | 2 | 2 | 2 | 2 |
| 1 | 1 | 2 | 2 | 2 |
| * 1. *Airframe Structures — aeroplanes*      1. *Fuselage, doors, windows (ATA 52/53/56)*         1. Construction principles;         2. Airborne towing devices;         3. Doors. | 1 | 1 | 2 | 2 | 1 |
| 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 2 | 1 | *-* |
| *11.3.2 Wings (ATA 57)* | 1 | 1 | 2 | 2 | 1 |
| *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)*   1. Pressurisation; 2. Air supply; 3. Air conditioning; 4. Safety and warning devices; 5. Heating and ventilation system. | 1 | 1 | 3 | 3 | *—* |
| 1 | *—* | 3 | *—* | *—* |
| 1 | *—* | 3 | *—* | *—* |
| 1 | 1 | 3 | 3 | *—* |
| *—* | 1 | *—* 3 | | 1 |
| *11.5 Instruments/avionic systems* |  |  |  |  |  |

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| --- | --- | --- | --- | --- | --- |
| **MODULE 11. AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | | | | |
| **A1** | **A2** | **B1.1** | **B1.2** | **B3** |
| *11.5.1 Instrument systems (ATA 31)* | 1 | 1 | 2 | 2 | 2 |
| *11.5.2 Avionic Systems*  Fundamentals of system layouts and operation of:   * Autoflight *(ATA 22)*, * Communications *(ATA 23)*, * Navigation Systems *(ATA 34)*. | 1 | 1 | 1 | 1 | 1 |
| *11.6 Electrical power (ATA 24)* | 1 | 1 | 3 | 3 | 3 |
| *11.7 Equipment and furnishings (ATA 25)*   1. Emergency equipment; 2. Cabin and cargo layout. | 2 | 2 | 2 | 2 | 2 |
| 1 | 1 | 1 | 1 | *—* |
| *11.8 Fire protection (ATA 26)*   1. Fire and smoke detection system and fire extinguishing systems; 2. Portable fire extinguisher. | 1 | 1 | 1 | 1 | *—* |
| 1 | 1 | 1 | 1 | 1 |
| *11.9 Flight controls (ATA 27)*   1. Primary and secondary flight controls; 2. Actuation and protection; 3. System operation; 4. Balancing and rigging. | 1 | 1 | 3 | 2 | 2 |
| 1 | *—* | 3 | *—* | *—* |
| 1 | *—* | 3 | *—* | *—* |
| 1 | 1 | 3 | 3 | 2 |
| *11.10 Fuel systems (ATA 28, ATA 47)*   1. Systems layout; 2. Fuel handling; 3. Indication and warnings; 4. Special systems; 5. Balancing. | 1 | 1 | 3 | 3 | 1 |
| 1 | 1 | 3 | 3 | 1 |
| 1 | 1 | 3 | 3 | 1 |
| 1 | *—* | 3 | *—* | *—* |
| 1 | *—* | 3 | *—* | *—* |
| *11.11 Hydraulic power (ATA 29)*   1. System description; 2. System operation (1); 3. System operation (2). | 1 | 1 | 3 | 3 | 2 |
| 1 | 1 | 3 | 3 | 2 |
| 1 | *—* | 3 | *—* | *—* |
| *11.12 Ice and rain protection (ATA 30)*   1. Principles; 2. De-icing; 3. Anti-icing; 4. Wipers;   (d) Tail protection. | 1 | 1 | 3 | 3 | 1 |
| 1 | 1 | 3 | 3 | 1 |
| 1 | *—* | 3 | *—* | *—* |
| 1 | 1 | 3 | 3 | 1 |
| 1 | *—* | 3 | *—* | *—* |
| *11.13 Landing Gear (ATA 32)*   1. Description; 2. System operation; 3. Air-ground sensing; 4. Tail protection. | 2 | 2 | 3 | 3 | 2 |
| 2 | 2 | 3 | 3 | 2 |
| 2 | *—* | 3 | *—* | *—* |
| 2 | 2 | 3 | 3 | 2 |
| *11.14 Lights (ATA 33)* | 2 | 2 | 3 | 3 | 2 |
| *11.15 Oxygen (ATA 35)* | 1 | 1 | 3 | 3 | 2 |
| *11.16 Pneumatic/vacuum (ATA 36)*   1. Systems; 2. Pumps. | 1 | 1 | 3 | 3 | 2 |
| 1 | 1 | 3 | 3 | 2 |

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| **MODULE 11. AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | | | | |
| **A1** | **A2** | **B1.1** | **B1.2** | **B3** |
| *11.17 Water/waste (ATA 38)*   1. Systems; 2. Corrosion. | 2 | 2 | 3 | 3 | 2 |
| 2 | 2 | 3 | 3 | 2 |
| *11.18 On-board maintenance systems (ATA 45)* | 1 | *—* | 2 | *—* | *—* |
| *11.19 Integrated Modular Avionics (ATA 42)*   1. Overall system description and theory; 2. Typical system layouts. | 1 | *—* | 2 | *—* | *—* |
| 1 | *—* | 2 | *—* | *—* |
| *11.20 Cabin systems (ATA 44)* | 1 | *—* | 2 | *—* | *—* |
| *11.21 Information systems (ATA 46)* | 1 | *—* | 2 | *—* | *—* |

###### MODULE 12. HELICOPTER AERODYNAMICS, STRUCTURES AND SYSTEMS

*Regulation (EU) 2023/989*

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| **MODULE 12. HELICOPTER AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | |
| **A3 A4** | **B1.3 B1.4** |
| *12.1 Theory of flight — rotary wing aerodynamics* | 1 | 2 |
| *12.2 Flight control systems (ATA 67)* | 2 | 3 |
| *12.3 Blade tracking and vibration analysis (ATA 18)* | 1 | 3 |
| *12.4 Transmission* | 1 | 3 |
| *12.5 Airframe structures (ATA 51)*   1. General concept; 2. Construction methods of the principal elements. | 2 | 2 |
| 1 | 2 |
| * 1. *Air conditioning (ATA 21)*      1. *Air supply* | 1 | 2 |
| *12.6.2 Air conditioning* | 1 | 3 |
| * 1. *Instruments/avionic systems*      1. *Instrument systems (ATA 31)* | 1 | 2 |
| *12.7.2 Avionic systems*  Fundamentals of system layouts and operation of: Auto Flight *(ATA 22)*;  Communications *(ATA 23)*;  Navigation Systems *(ATA 34)*. | 1 | 1 |
| *12.8 Electrical Power (ATA 24)* | 1 | 3 |
| *12.9 Equipment and furnishings (ATA 25)*   1. Emergency equipment; Seats, harnesses, and belts; Lifting systems; 2. Emergency flotation systems; Cabin layout, cargo retention; Equipment layout;   Cabin furnishing installation. | 2 | 2 |
| 1 | 1 |
| *12.10 Fire Protection (ATA 26)*  (a) Fire and smoke detection systems and Fire-extinguishing systems; | 1 | 3 |

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| **MODULE 12. HELICOPTER AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | |
| **A3 A4** | **B1.3 B1.4** |
| (b) Portable fire extinguishers. | 1 | 1 |
| *12.11 Fuel Systems (ATA 28)* | 1 | 3 |
| *12.12 Hydraulic Power (ATA 29)* | 1 | 3 |
| *12.13 Ice and Rain Protection (ATA 30)* | 1 | 3 |
| *12.14 Landing Gear (ATA 32)*   1. System description and operation; 2. Sensors. | 2 | 3 |
| 2 | 3 |
| *12.15 Lights (ATA 33)* | 2 | 3 |
| *12.16 (Reserved)* | 2 | 3 |
| *12.17 Integrated Modular Avionics (ATA 42)*  (a) Overall system description and theory | 1 | 2 |
| (b) Typical system layouts | 1 | 2 |
| *12.18 On-board Maintenance Systems (ATA 45)*  Central maintenance computers; Data-loading system;  Electronic library system. | 1 | 2 |
| *12.19 Information Systems (ATA 46)* | 1 | 2 |

###### MODULE 13. AIRCRAFT AERODYNAMICS, STRUCTURES AND SYSTEMS

*Regulation (EU) 2023/989*

C/N: Communication & Navigation; Ins.: Instruments; A/F: Autoflight; Sur.: Surveillance; A/S: Airframe & Systems

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| **MODULE 13. AIRCRAFT AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | | | | | | |
| **B2** | **B2L**  **Basic** | **B2L**  **C/N** | **B2L**  **Ins.** | **B2L**  **A/F** | **B2L**  **Sur.** | **B2L**  **A/S** |
| * 1. *Theory of Flight*      1. Aeroplane Aerodynamics and Flight Controls;      2. Rotary Wing Aerodynamics. | 1 | 1 | — | — | — | — | — |
| 1 | 1 | — | — | — | — | — |
| 13.2 *Structures – General Concepts (ATA 51)*   1. General concept; 2. Fundamentals of structural systems; | 2 | 2 | — | — | — | — | — |
| 1 | 1 | — | — | — | — | — |
| 13.3 *Autoflight (ATA 22)*   1. Fundamentals of automatic flight control; 2. Autothrottle systems and automatic landing systems. | 3 | — | — | — | 3 | — | — |
| 3 | — | — | — | 3 | — | — |
| 13.4 *Communication/Navigation (ATA 23/34)*  *(a)* Fundamentals of communication and navigation systems; | 3 |  |  |  |  |  |  |
| — | 3 | — | — | — | — |

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| **MODULE 13. AIRCRAFT AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | | | | | | |
| **B2** | **B2L**  **Basic** | **B2L**  **C/N** | **B2L**  **Ins.** | **B2L**  **A/F** | **B2L**  **Sur.** | **B2L**  **A/S** |
| *(b)* Fundamentals of aircraft surveillance systems*.* | 3 | — | — | — | — | 3 | — |
| 13.5 *Electrical power (ATA 24)* | 3 | 3 | — | — | — | — | — |
| 13.6 *Equipment and furnishings (ATA 25)* | 3 | — | — | — | — | — | — |
| 13.7 *Flight Controls*   1. Primary and secondary flight controls   *(ATA 27)***;**   1. Actuation and protection; 2. System operation; 3. Rotorcraft flight controls *(ATA 67)*. | 2 | — | — | — | 2 | — | — |
| 2 | — | — | — | 2 | — | — |
| 3 | — | — | — | 3 | — | — |
| 2 | — | — | — | 2 | — | — |
| 13.8 *Instruments (ATA 31)* | 3 | — | — | 3 | — | — | — |
| 13.9 *Lights (ATA 33)* | 3 | 3 | — | — | — | — | — |
| 13.10 *On-board maintenance systems (ATA 45)* | 3 | — | — | — | — | — | — |
| 13.11 *Air conditioning and cabin pressurisation (ATA 21)*   1. Pressurisation; 2. Air supply; 3. Air conditioning; 4. Safety and warning devices. | 3 | — | — | — | — | — | 3 |
| 1 | — | — | — |  | — | 1 |
| 3 | — | — | — | — | — | 3 |
| 3 | — | — | — | — | — | 3 |
| 13.12 *Fire protection (ATA 26)*   1. Fire and smoke detection system and fire-extinguishing systems; 2. Portable fire extinguisher. | 3 | — | — | — | — | — | 3 |
| 1 | — | — | — | — | — | 1 |
| 13.13 *Fuel systems (ATA 28, ATA 47)*   1. System layout; 2. Fuel handling; 3. Indications and warnings; 4. Special systems; 5. Balancing | 1 | — | — | — | — | — | 1 |
| 2 | — | — | — | — | — | 2 |
| 3 | — | — | — | — | — | 3 |
| 1 | — | — | — | — | — | 1 |
| 3 | — | — | — | — | — | 3 |
| 13.14 *Hydraulic power (ATA 29)*   1. System layout; 2. System operation (1); 3. System operation (2); | 1 | — | — | — | — | — | 1 |
| 3 | — | — | — | — | — | 3 |
| 3 | — | — | — | — | — | 3 |
| 13.15 *Ice and rain protection (ATA 30)*   1. Principles; 2. De-icing; 3. Anti-icing; 4. Wiper systems; 5. Rain repellent | 2 | — | — | — | — | — | 2 |
| 3 | — | — | — | — | — | 3 |
| 2 | — | — | — | — | — | 2 |
| 1 | — | — | — | — | — | 1 |
| 1 | — | — | — | — | — | 1 |
| 13.16 *Landing gear (ATA 32)*   1. Description; 2. System; 3. Air-ground sensing. | 1 | — | — | — | — | — | 1 |
| 3 | — | — | — | — | — | 3 |
| 3 | — | — | — | — | — | 3 |
| 13.17 *Oxygen (ATA 35)* | 3 | — | — | — | — | — | 3 |

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| **MODULE 13. AIRCRAFT AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | | | | | | |
| **B2** | **B2L** | **B2L** | **B2L** | **B2L** | **B2L** | **B2L**  **A/S** |
| **Basic** | **C/N** | **Ins.** | **A/F** | **Sur.** |
| 13.18 *Pneumatic/vacuum (ATA 36)* | 2 |  | — | — | — | — | 2 |
| 13.19 *Water/waste (ATA 38)* | 2 | — | — | — | — | — | 2 |
| 13.20 *Integrated modular avionics (ATA 42)*   1. Overall system description and theory; 2. Typical system layouts. | 3 | - | — | — | — | — | — |
| 3 | - | — | — | — | — | — |
| 13.21 *Cabin systems (ATA 44)* | 3 | — | — | — | — | — | — |
| 13.22 *Information systems (ATA 46)* | 3 | — | — | — | — | — | — |

###### MODULE 14. PROPULSION

*Regulation (EU) 2023/989*

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| **MODULE 14. PROPULSION** | **LEVEL** |
| **B2**  **B2L Instruments**  **B2L Airframe & Systems** |
| *14.1 Engines* |  |
| (a) Turbine engines; | 1 |
| (b) Auxiliary power units (APUs); | 1 |
| (c) Piston engines; | 1 |
| (d) Electric and hybrid engines; | 2 |
| (e) Engine control. | 2 |
| *14.2 Electric/electronic engine indication systems* | 2 |
| *14.3 Propeller systems* | 2 |
| *14.4 Starting and ignition systems* | 2 |

###### MODULE 15. GAS TURBINE ENGINE

*Regulation (EU) 2023/989*

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| **MODULE 15. GAS TURBINE ENGINE** | **LEVEL** | |
| **A1 A3** | **B1.1 B1.3** |
| *15.1 Fundamentals* | 1 | 2 |
| *15.2 Engine performance* | — | 2 |
| *15.3 Inlet* | 2 | 2 |
| *15.4 Compressors* | 1 | 2 |
| *15.5 Combustion section* | 1 | 2 |
| *15.6 Turbine section* | 2 | 2 |
| *15.7 Exhaust* | 1 | 2 |
| *15.8 Bearings and seals* | — | 2 |
| *15.9 Lubricants and fuels* | 1 | 2 |
| *15.10 Lubrication systems* | 1 | 2 |
| *15.11 Fuel systems* | 1 | 2 |
| *15.12 Air systems* | 1 | 2 |

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| **MODULE 15. GAS TURBINE ENGINE** | **LEVEL** | |
| **A1 A3** | **B1.1 B1.3** |
| *15.13 Starting and ignition systems* | 1 | 2 |
| *15.14 Engine indication systems* | 1 | 2 |
| *15.15 Alternate turbine constructions* | — | 1 |
| *15.16 Turboprop engines* | 1 | 2 |
| *15.17 Turboshaft engines* | 1 | 2 |
| *15.18 Auxiliary power units (APUs)* | 1 | 2 |
| *15.19 Power plant installation* | 1 | 2 |
| *15.20 Fire protection systems* | 1 | 2 |
| *15.21 Engine monitoring and ground operation* | 1 | 3 |
| *15.22 Engine storage and preservation* | — | 2 |

###### MODULE 16. PISTON ENGINE

*Regulation (EU) 2023/989*

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| **MODULE 16. PISTON ENGINE** | **LEVEL** | |
| **A2 A4** | **B1.2 B1.4**  **B3** |
| *16.1 Fundamentals* | 1 | 2 |
| *16.2 Engine performance* | 1 | 2 |
| *16.3 Engine construction* | 1 | 2 |
| * 1. *Engine fuel systems*      1. *Carburettors* | 1 | 2 |
| *16.4.2 Fuel injection systems* | 1 | 2 |
| *16.4.3 Electronic engine control* | 1 | 2 |
| *16.5 Starting and ignition systems* | 1 | 2 |
| *16.6 Induction, exhaust and cooling systems* | 1 | 2 |
| *16.7 Supercharging/turbocharging* | 1 | 2 |
| *16.8 Lubricants and fuels* | 1 | 2 |
| *16.9 Lubrication systems* | 1 | 2 |
| *16.10 Engine indication systems* | 1 | 2 |
| *16.11 Power plant installation* | 1 | 2 |
| *16.12 Engine monitoring and ground operation* | 1 | 3 |
| *16.13 Engine storage and preservation* | — | 2 |
| *16.14 Alternative piston engine constructions* | 1 | 1 |
| ***MODULE 17. PROPELLER*** | *Regulation (EU) 2023/989* | |
| **MODULE 17A. PROPELLER** | **LEVEL** | |
| **A1 A2** | **B1.1 B1.2**  **B3** |
| *17.1 Fundamentals* | 1 | 2 |

**LEVEL**

**MODULE 17A. PROPELLER**

**A1**

**A2**

* 1. *Propeller construction*
  2. *Propeller pitch control*
  3. *Propeller synchronising*
  4. *Propeller ice protection*
  5. *Propeller maintenance*
  6. *Propeller storage and preservation*

1

1

— 1

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1

**B1.1**

**B1.2 B3** 2

2

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1. Basic training methods

*Regulation (EU) 2023/989*

An appropriate training method, or combination of methods, shall be determined for the entire course or for each of its modules or submodules, with regard to the scope and objectives of each training phase and taking into consideration the benefits and limitations of the available training methods.

Multimedia-based training (MBT) methods may be used in order to achieve the training objectives either in a physically or in a virtually controlled environment.

**AMC1 Appendix I — Basic Knowledge Requirements (except for category L licence) Section 2**

*ED Decision 2023/019/R*

**MODULARISATION**

**MODULE 1 — MATHEMATICS**

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| **MODULE 1 — MATHEMATICS** | **LEVEL** | |
| **A1 A2 A3**  **A4** | **B1 B2 B2L**  **B3** |
| 1.1 *Arithmetic*  Arithmetical terms and signs, methods of multiplication and division, fractions and decimals, factors and multiples, weights, measures and conversion factors, ratio and proportion, averages and percentages, areas and volumes, squares, cubes, square and  cube roots. | 1 | 2 |
| 1.2 *Algebra*   1. Evaluating simple algebraic expressions, addition, subtraction, multiplication and division, use of brackets, simple algebraic fractions; 2. Linear equations and their solutions;   Indices and powers, negative and fractional indices; Binary and other applicable numbering systems;  Simultaneous equations and second-degree equations with one unknown;  Logarithms. | 1 | 2 |
| — | 1 |

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| 1.3 *Geometry*   1. Simple geometrical constructions; 2. Graphical representation: nature and uses of graphs, graphs of equations/functions; 3. Simple trigonometry: trigonometrical relationships, use of tables and rectangular and polar coordinates. | — | 1 |
| 2 | 2 |
| — | 2 |

**MODULE 2 — PHYSICS**

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| **MODULE 2 — PHYSICS** | **LEVEL** | |
| **A1** | **B1 B2 B2L** |
| **A2**  **A3**  **A4**  **B3** |
| 2.1 *Matter*  Nature of matter: the chemical elements, structure of atoms, molecules; Chemical compounds;  States: solid, liquid, and gaseous;  Changes between states. | 1 | 2 |
| * 1. *Mechanics*      1. *Statics*   Forces, moments and couples, representation as vectors; Centre of gravity;  Elements of theory of stress, strain, and elasticity: tension, compression, shear, and torsion;  Nature and properties of solid, fluid, and gas matter;  Pressure and buoyancy in liquids (barometers). | 1 | 2 |
| 2.2.2 *Kinetics*  Linear movement: uniform motion in a straight line, motion under constant acceleration (motion under gravity);  Rotational movement: uniform circular motion (centrifugal/centripetal forces); Periodic motion: pendular movement;  Simple theory of vibration, harmonics, and resonance; Velocity ratio, mechanical advantage, and efficiency. | 1 | 2 |
| * + 1. *Dynamics*        1. Mass;   Force, inertia, work, power, energy (potential, kinetic and total energy), heat, efficiency;   * + - 1. Momentum, conservation of momentum; Impulse;   Gyroscopic principles;  Friction: nature and effects, coefficient of friction (rolling resistance). | 1 | 2 |
| 1 | 2 |
| 2.2.4 *Fluid dynamics*   1. Specific gravity and density; 2. Viscosity, fluid resistance, effects of streamlining; Effects of compressibility on fluids;   Static, dynamic, and total pressure: Bernoulli’s Theorem, venturi. | 2 | 2 |
| 1 | 2 |
| 2.3 *Thermodynamics*  (a) Temperature: thermometers and temperature scales (Celsius, Fahrenheit and Kelvin); definition of heat; | 2 | 2 |

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| **MODULE 2 — PHYSICS** | **LEVEL** | |
| **A1** | **B1 B2 B2L** |
| **A2**  **A3**  **A4**  **B3** |
| (b) Heat capacity, specific heat;  Heat transfer: convection, radiation and conduction; Volumetric expansion;  First and second law of thermodynamics;  Gases: ideal gases laws; specific heat at constant volume and constant pressure, work done by expanding gas;  Isothermal, adiabatic expansion and compression, engine cycles, constant volume and constant pressure, refrigerators and heat pumps;  Latent heats of fusion and evaporation, thermal energy, heat of combustion. | 1 | 2 |
| 2.4 *Optics* (Light)  Nature of light; speed of light;  Laws of reflection and refraction: reflection at plane surfaces, reflection by spherical mirrors, refraction, lenses;  Fibre optics. | – | 2 |
| 2.5 *Wave motion and sound*  Wave motion: mechanical waves, sinusoidal wave motion, interference phenomena, standing waves;  Sound: speed of sound, production of sound, intensity, pitch and quality, Doppler effect. | – | 2 |

**MODULE 3 — ELECTRICS FUNDAMENTALS**

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| **MODULE 3 — ELECTRICS FUNDAMENTALS** | **LEVEL** | | |
| **A1** | **B1 B2 B2L** | **B3** |
| **A2**  **A3**  **A4** |
| 3.1 *Electron theory*  Structure and distribution of electrical charges within atoms, molecules, ions, and compounds;  Molecular structure of conductors, semiconductors, and insulators. | 1 | 1 | 1 |
| 3.2 *Static electricity and conduction*  Static electricity and distribution of electrostatic charges; Electrostatic laws of attraction and repulsion;  Units of charge, Coulomb’s law;  Conduction of electricity in solids, liquids, gases and in vacuum. | 1 | 2 | 1 |
| 3.3 *Electrical terminology*  The following terms, their units and factors affecting them: potential difference, electromotive force, voltage, current, resistance, conductance, charge, conventional  current flow, electron flow. | 1 | 2 | 1 |
| 3.4 Generation of electricity  Production of electricity by the following methods: light, heat, friction, pressure, chemical reaction, magnetism, and motion. | 1 | 1 | 1 |
| 3.5 *Sources of DC electricity*  Construction and basic chemical reaction of primary cells, secondary cells, lead acid cells, nickel cadmium cells, lithium cells, nickel cells and other alkaline cells;  Cells connected in series and in parallel; Internal resistance and its effect on a battery;  Construction, materials, and operation of thermocouples;  Operation of photocells. | 1 | 2 | 2 |
| 3.6 *DC circuits*  Ohm’s law, Kirchhoff’s voltage, and current laws;  Calculations using the above laws to find resistance, voltage, and current;  Significance of the internal resistance of a supply. | 1 | 2 | 1 |
| 3.7 *Resistance/Resistor*  (a) Resistance  Specific resistance;  Calculation of total resistance using series, parallel and series–parallel combinations;  Operation and use of potentiometers and rheostats; Operation of Wheatstone Bridge. | — | 2 | 1 |

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| (b) Resistor  Positive and negative temperature coefficient conductance;  Resistor colour code, values and tolerances, preferred values, wattage ratings; Resistors in series and in parallel;  Fixed resistors, stability, tolerance and limitations, methods of construction; Variable resistors, thermistors, voltage-dependent resistors;  Construction of potentiometers and rheostats; Construction of Wheatstone Bridge. | — | 1 | — |
| 3.8 *Power*  Power, work, and energy (kinetic and potential); Dissipation of power by a resistor;  Power formula;  Calculations involving power, work, and energy. | — | 2 | 1 |
| 3.9 *Capacitance/Capacitor*  Operation and function of a capacitor;  Factors that affect the capacitance area of plates, distance between plates, number of plates, dielectric and dielectric constant, working voltage, voltage rating;  Capacitor types, construction, and function; Capacitor colour-coding;  Calculations of capacitance and voltage in series and in parallel circuits; Exponential charge and discharge of a capacitor, time constants;  Testing of capacitors. | — | 2 | 1 |
| 3.10 *Magnetism*   1. Theory of magnetism; Properties of a magnet;   Action of a magnet suspended in the Earth’s magnetic field; Magnetisation and demagnetisation;  Magnetic shielding;  Various types of magnetic material;  Electromagnet construction and principles of operation;  Handclasp rules to determine magnetic field around current-carrying conductor.   1. Magnetomotive force, field strength, magnetic flux density, permeability, hysteresis loop, retentivity, coercive force reluctance, saturation point, eddy currents;   Precautions for care and storage of magnets. | — | 2 | 1 |
| — | 2 | 1 |
| 3.11 *Inductance/Inductor* | — | 2 | 1 |

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| Faraday’s law;  Action of inducing a voltage in a conductor that moves in a magnetic field; Induction principles;  Effects of the following on the magnitude of an induced voltage: magnetic field strength, rate of change of flux, number of conductor turns;  Mutual induction;  The effect that the rates of change of primary current and mutual inductance have on induced voltage;  Factors that affect mutual inductance: number of turns in the coil, physical size of the coil, permeability of the coil, position of coils with respect to each other;  Lenz’s law and polarity determining rules; Back EMF, self-induction;  Saturation point;  Principal uses of inductors. |  |  |  |
| 3.12 *DC motor/generator theory*  Basic motor and generator theory;  Construction and purpose of components in a DC generator;  Operation of and factors that affect the output and direction of the current in DC generators;  Operation of and factors that affect the output power, torque, speed, and direction of rotation of DC motors;  Series-wound, shunt-wound and compound motors;  Starter generator construction. | – | 2 | 1 |
| 3.13 *AC theory*  Sinusoidal waveform: phase, period, frequency, cycle;  Instantaneous, average, root mean square, peak, peak-to-peak current values and calculations of these values in relation to voltage, current and power; Triangular/Square waves;  Single-phase/Three-phase principles. | 1 | 2 | 1 |
| 3.14 *Resistive (R), capacitive (C) and inductive (L) circuits*  Phase the relationship of voltage and current in L, C and R circuits, parallel, series and series–parallel;  Power dissipation in L, C and R circuits;  Impedance, phase angle, power factor and current calculations;  True power, apparent power, and reactive power calculations. | — | 2 | 1 |
| 3.15 *Transformers*  Transformer construction principles and operation; Transformer losses and methods for overcoming them; Transformer action under load and no-load conditions; Power transfer, efficiency, polarity markings;  Line and phase voltages and currents; Power in a three-phase system;  Primary and secondary current, voltage, turn ratio, power, efficiency; Auto-transformers. | — | 2 | 1 |
| 3.16 *Filters*  Operation, application, and uses of the following filters: low pass, high pass, band pass, band stop. | — | 1 | — |
| 3.17 *AC generators* | — | 2 | 1 |

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| Rotation of loop in a magnetic field and waveform produced;  Operation and construction of revolving armature and revolving field type AC generators;  Single-phase, two-phase, and three-phase alternators;  Three-phase star and delta connection advantages, and uses;  Permanent magnet generators. |  |  |  |
| 3.18 *AC motors*  Construction, principles of operation and characteristics of: AC synchronous and induction motors both single-phase and polyphase;  Methods of speed control and direction of rotation;  Methods of producing a rotating field: capacitor, shaded or split pole. | — | 2 | 1 |

**MODULE 4 — ELECTRONICS FUNDAMENTALS**

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| **MODULE 4 — ELECTRONICS FUNDAMENTALS** | **LEVEL** | | |
| **A1** | **B1 B3** | **B2 B2L** |
| **A2**  **A3**  **A4** |
| * 1. *Semiconductors*      1. *Diodes*         1. Description and characteristics Diode symbols;   Diode characteristics and properties; Diodes in series and in parallel;  Materials, electron configuration, electrical properties;  P and N type materials: effects of impurities on conduction, majority and minority characters;  P–N junction in a semiconductor, development of a potential across a P–N junction in unbiased, forward-biased and reverse-biased conditions;  Diode parameters: peak inverse voltage, maximum forward current, temperature, frequency, leakage current, power dissipation;  Main characteristics and use of silicon-controlled rectifiers (thyristors), light- emitting diodes (LEDs), photo-conductive diodes, rectifier diodes.   * + - 1. Operation and function   Operation and function of diodes in the following circuits: clippers, clampers, full- and half-wave rectifiers, bridge rectifiers, voltage doublers and triplers;  Detailed operation and characteristics of the following devices: silicon- controlled rectifier (thyristor), light-emitting diode (LED), Schottky diode, photo-conductive diode, varactor diode, varistor, rectifier diodes, Zener diode.  Functional testing of diodes. | — | 2 | 2 |
| — | — | 2 |
| 4.1.2 *Transistors*   1. Description and characteristics Transistor symbols;   Component description and orientation; Transistor characteristics and properties.   1. Construction and operation   Construction and operation of PNP and NPN transistors; Base, collector and emitter configurations;  Testing of transistors;  Basic appreciation of other transistor types, including types of FET and their uses;  Application of transistors: amplifier classes (A, B, C); | — | 1 | 2 |
| — | — | 2 |

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| Simple circuits including bias, decoupling, feedback and stabilisation;  Multistage circuit principles: cascades, push–pull, oscillators, multivibrators, flip-flop circuits;  Operation and amplifier stages connecting methods: resistive, capacitive, direct, inverting, non-inverting and adding. |  |  |  |
| 4.1.3 *Integrated circuits*   1. Description and operation of logic circuits and linear circuits/operational amplifiers; 2. Introduction to the operation and function of an operational amplifier used as: an integrator, a differentiator, a voltage follower, a comparator;   Advantages and disadvantages of positive and negative feedback. | — | 1 | 2 |
| — | — | 2 |
| 4.2 *Printed circuit boards*  Description and use of printed circuit boards. | — | 1 | 2 |
| 4.3 *Servomechanisms*   1. Principles   Understanding of the following principles: open- and closed-loop systems, servomechanism, feedback, follow-up, null, overshoot, damping, deadband, hunting, proximity switches, analogue transducers, synchro systems and components, digital tachometers and encoders, inductance, and capacitance transmitters;   1. Construction operation and use of the following synchro-system components: resolvers, differential, control and torque, E and I transformers, inductance transmitters, capacitance transmitters, synchronous transmitters;   Construction, operation and use of servomechanism and PID controller; Fault-finding of servo defects, reversal of synchro leads, hunting. | — | 1 | 2 |
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**MODULE 5 — DIGITAL TECHNIQUES / ELECTRONIC INSTRUMENT SYSTEMS**

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| **MODULE 5 — DIGITAL TECHNIQUES / ELECTRONIC INSTRUMENT SYSTEMS** | **LEVEL** | | | |
| **A1 A2 A3**  **A4** | **B3** | **B1** | **B2 B2L** |
| 5.1 *Electronic instrument systems*  Typical arrangements of systems and cockpit layout of electronic instrument systems. | 1 | 1 | 1 | 1 |
| 5.2 *Numbering systems*  Numbering systems: binary, octal, and hexadecimal;  Demonstration of conversions between the decimal and binary systems, octal and hexadecimal systems and vice versa. | — | — | 1 | 2 |
| 5.3 *Data conversion*  Analogue data, Digital data;  Operation and application of analogue-to-digital and digital-to-analogue  converters, inputs and outputs, limitations of various types. | — | — | 1 | 2 |
| 5.4 *Data buses*  Operation of data buses in aircraft systems, including knowledge of ARINC and other specifications.  Aircraft network/Ethernet. | — | — | 2 | 2 |
| 5.5 *Logic circuits*   1. Identification of common logic gate symbols, tables and equivalent circuits;   Applications used for aircraft systems, schematic diagrams.   1. Interpretation of logic diagrams. | — | — | 2 | 2 |
| — | — | — | 2 |
| 5.6 *Basic computer structure*   1. Computer terminology (including bit, byte, software, hardware, CPU, IC, and various memory devices such as RAM, ROM, PROM);   Computer technology (as applied in aircraft systems).   1. Computer operation, layout, and interface of the major components in a microcomputer, including their associated bus systems;   Information contained in single- and multi-address instruction words; Memory-associated terms;  Operation of typical memory devices;  Operation, advantages, and disadvantages of the various data storage systems. | 1 | 1 | 2 | 2 |
| — | — | — | 2 |
| 5.7 *Microprocessors*  Functions performed and overall operation of a microprocessor;  Basic operation of each of the following microprocessor elements: control  and processing unit, clock, register, arithmetic logic unit. | — | — | — | 2 |
| 5.8 *Integrated circuits*  Operation and use of encoders and decoders;  Function of encoder types. | — | — | — | 2 |
| 5.9 *Multiplexing* | — | — | — | 2 |

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| **MODULE 5 — DIGITAL TECHNIQUES / ELECTRONIC INSTRUMENT SYSTEMS** | **LEVEL** | | | |
| **A1** | **B3** | **B1** | **B2 B2L** |
| **A2**  **A3**  **A4** |
| Operation, application and identification in logic diagrams of multiplexers and demultiplexers. |  |  |  |  |
| 5.10 *Fibre optics*  Advantages and disadvantages of fibre optic data transmission over electrical wire propagation;  Fibre optic data bus; Fibre-optic-related terms; Terminations;  Couplers, control terminals, remote terminals;  Application of fibre optics in aircraft systems. | — | — | 1 | 2 |
| 5.11 *Electronic displays*  Principles of operation of common types of displays used in modern aircraft, including cathode-ray tubes (CRTs), light-emitting diodes (LEDs) and liquid crystal displays (LCDs). | 1 | 1 | 2 | 2 |
| 5.12 *Electrostatic-sensitive devices*  Special handling of components sensitive to electrostatic discharges; Awareness of risks and possible damage, component, and personnel  antistatic protection devices. | 1 | 1 | 2 | 2 |
| 5.13 *Software management control*  Awareness of restrictions, airworthiness requirements and possible  catastrophic effects of unapproved changes to software programs. | — | 1 | 2 | 2 |
| 5.14 *Electromagnetic environment*  Influence of the following phenomena on maintenance practices for electronic systems:  EMC — Electromagnetic Compatibility, EMI — Electromagnetic Interference, HIRF — High-Intensity Radiated Field,  Lightning / lightning protection. | — | 1 | 2 | 2 |
| 5.15 *Typical electronic/digital aircraft systems*  General arrangement of typical electronic/digital aircraft systems and associated BITE (Built-In Test Equipment), such as:  (a)  ACARS — ARINC Communication and Addressing and Reporting System,  FBW — Fly-by-Wire,  FMS — flight management system, IRS — inertial reference system;  (b)  ECAM — electronic centralised aircraft monitoring, EICAS — engine indication and crew alerting system, EFIS — electronic flight instrument system,  GNSS — global navigation satellite system, TCAS — traffic alert collision avoidance system, Integrated Modular Avionics,  Cabin Systems, | 1 | 1 | 1 | 1 |

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| **MODULE 5 — DIGITAL TECHNIQUES / ELECTRONIC INSTRUMENT SYSTEMS** | **LEVEL** | | | |
| **A1** | **B3** | **B1** | **B2 B2L** |
| **A2**  **A3** |
| **A4** |
| Information Systems. |  |  |  |  |

**MODULE 6 — MATERIALS AND HARDWARE**

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| **MODULE 6 — MATERIALS AND HARDWARE** | **LEVEL** | | |
| **A1** | **B1 B3** | **B2 B2L** |
| **A2**  **A3**  **A4** |
| * 1. *Aircraft materials — ferrous*      1. Characteristics, properties and identification of common alloy steels used in aircraft;   Heat treatment and application of alloy steels.   * + 1. Testing of ferrous materials for hardness, tensile strength, fatigue strength and impact resistance.     2. Repair and inspection procedures for ferrous materials, structures, and airframes. | 1 | 2 | 1 |
| — | 1 | 1 |
| — | 2 | 1 |
| 6.2 *Aircraft materials — non-ferrous*   1. Characteristics, properties and identification of common non-ferrous materials used in aircraft;   Heat treatment and application of non-ferrous materials.   1. Testing of non-ferrous material for hardness, tensile strength, fatigue strength and impact resistance. 2. Repair and inspection procedures for non-ferrous materials, structures, and airframes. | 1 | 2 | 1 |
| — | 1 | 1 |
| — | 2 | 1 |
| * 1. *Aircraft materials — composite and non-metallic*      1. *Composite and non-metallic materials other than wood and fabric*         1. Characteristics, properties and identification of common composite and non-metallic materials, other than wood, used in aircraft;   Sealant and bonding agents.   * + - 1. Detection of defects/deterioration in composite and non-metallic materials.       2. Repair of and inspection procedures for composite and non-metallic materials, structures, and airframes. | 1 | 2 | 2 |
| 1 | 2 | — |
| — | 2 | 1 |
| 6.3.2 *Wooden structures*  Construction methods of wooden airframe structures;  Characteristics, properties and types of wood and glue used in aeroplanes; Preservation and maintenance of wooden structures;  Types of defects in wood material and wooden structures; Detection of defects in wooden structures;  Repair of wooden structures. | 1 | 1 | — |
| 6.3.3 *Fabric covering* | — | 1 | — |

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| Characteristics, properties and types of fabrics used in aeroplanes; Inspection methods for fabrics;  Types of defects in fabrics; Repair of fabric covering. |  |  |  |
| 6.4 *Corrosion*   1. Chemical fundamentals;   Formation by galvanic action process, microbiological contamination, mechanical stress.   1. Types of corrosion and their identification; Causes of corrosion;   Material types, and their susceptibility to corrosion. | 1 | 1 | 1 |
| 2 | 3 | 2 |
| * 1. *Fasteners*      1. *Screw threads*   Screw nomenclature;  Thread forms, dimensions and tolerances for standard threads used in aircraft; Measuring screw threads. | 2 | 2 | 2 |
| 6.5.2 *Bolts, studs, and screws*  Bolt types: specification, identification and marking of aircraft bolts, international standards;  Nuts: self-locking, anchor, standard types; Machine screws: aircraft specifications; Studs: types and uses, insertion, and removal;  Self-tapping screws, dowels. | 2 | 2 | 2 |
| 6.5.3 *Locking devices*  Tab and spring washers, locking plates, split pins, pal-nuts, wire locking, quick- release fasteners, keys, circlips, cotter pins. | 2 | 2 | 2 |
| 6.5.4 *Aircraft rivets*  Types of solid and blind rivets: specifications and identification, heat treatment. | 1 | 2 | 1 |
| 6.6 *Pipes and unions*   1. Identification and types of rigid and flexible pipes and their connectors used in aircraft; 2. Standard unions for aircraft hydraulic, fuel, oil, pneumatic and air system pipes. | 2 | 2 | 2 |
| 2 | 2 | 1 |
| 6.7 *Springs*  Types of springs, materials, characteristics, and applications. | — | 2 | 1 |
| 6.8 *Bearings*  Purpose of bearings, loads, material, construction; Types of bearings and their application. | 1 | 2 | 2 |
| 6.9 *Transmissions* | 1 | 2 | 2 |

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| Gear types and their application;  Gear ratios, reduction and multiplication gear systems, driven and driving gears, idler gears, mesh patterns;  Belts and pulleys, chains and sprockets. |  |  |  |
| 6.10 *Control cables*  Types of cables;  End fittings, turnbuckles and compensation devices; Pulleys and cable system components;  Bowden cables;  Aircraft flexible control systems. | 1 | 2 | 1 |
| 6.11 *Electrical cables and connectors*  Cable types, construction and characteristics; High-tension and coaxial cables;  Crimping;  Connector types, pins, plugs, sockets, insulators, current and voltage rating,  coupling, identification codes. | 1 | 2 | 2 |

**MODULE 7 — MAINTENANCE PRACTICES**

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| **MODULE 7 — MAINTENANCE PRACTICES** | **LEVEL** | | |
| **A1** | **B1 B3** | **B2 B2L** |
| **A2**  **A3**  **A4** |
| 7.1 *Safety precautions — aircraft and workshop*  Aspects of safe working practices including precautions to be taken when working with electricity, gases (especially oxygen), oils, and chemicals.  Fuel tank safety and fuel tank entry procedures and precautions. Awareness and precautions regarding aircraft equipped with ballistic recovery systems. Also, instructions for the remedial action to be taken in the event of a fire or another accident with one or more of these hazards, including information on fire-  extinguishing agents. | 3 | 3 | 3 |
| 7.2 *Workshop practices*  Care of tools, control of tools, use of workshop materials; Dimensions, allowances and tolerances, workmanship standards;  Calibration of tools and equipment, calibration standards. | 3 | 3 | 3 |
| 7.3 *Tools*  Common hand-tool types; Common power-tool types;  Operation and use of precision-measuring tools; Lubrication equipment and methods;  Operation, function, and use of electrical general test equipment. | 3 | 3 | 3 |
| 7.4 *(Reserved)* |  |  |  |
| 7.5 *Engineering drawings, diagrams, and standards*  Drawing types and diagrams, their symbols, dimensions, tolerances and projections; Identification of title block information;  Microfilm, microfiche, and computerised presentations; Specification 100 of the Air Transport Association (ATA) of America;  Aeronautical and other applicable standards including ISO, AN, MS, NAS and MIL; Wiring diagrams and schematic diagrams. | 1 | 2 | 2 |
| 7.6 *Fits and clearances*  Drill sizes for bolt holes, classes of fits; Common system for fits and clearances;  Schedule of fits and clearances for aircraft and engines; Limits for bow, twist and wear;  Standard methods for checking shafts, bearings, and other parts. | 1 | 2 | 1 |
| 7.7 *Electrical wiring interconnection system (EWIS)* | 1 | 3 | 3 |

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| Continuity, insulation and bonding techniques and testing; Use of crimp tools: hand and hydraulic operated;  Testing of crimp joints;  Connector pin removal and insertion;  Coaxial cables: testing and installation precautions;  Identification of wire types, their inspection criteria and damage tolerance; Wiring protection techniques: cable looming and loom support, cable clamps, protective sleeving techniques including heat shrink wrapping, shielding; High-Intensity Radiated Fields (HIRF) and protection principles;  Soldering of electrical wires, EWIS installations, inspection, repair, maintenance, and cleanliness standards. |  |  |  |
| 7.8 *Riveting*  Riveted joints, rivet spacing and pitch; Tools used for riveting and dimpling;  Inspection of riveted joints. | 1 | 2 | – |
| 7.9 *Pipes and hoses*  Bending and belling/flaring aircraft pipes; Inspection and testing of aircraft pipes and hoses; Installation and clamping of pipes. | 1 | 2 | – |
| 7.10 *Springs*  Inspection and testing of springs. | 1 | 2 | – |
| 7.11 *Bearings*  Testing, cleaning and inspection of bearings; Lubrication requirements for bearings;  Defects in bearings and their causes. | 1 | 2 | – |
| 7.12 *Transmissions*  Inspection of gears, backlash;  Inspection of belts and pulleys, chains and sprockets;  Inspection of screw jacks, lever devices, push–pull rod systems. | 1 | 2 | – |
| 7.13 *Control cables*  Swaging of end fittings;  Inspection and testing of control cables;  Bowden cables; aircraft flexible control systems. | 1 | 2 | – |
| * 1. *Material handlin*g      1. *Sheet metal*   Marking out and calculation of bend allowance; Sheet metal working, including bending and forming; Inspection of sheet metal work. | – | 2 | – |
| 7.14.2 *Composite and non-metallic* Bonding practices; Environmental conditions;  Inspection methods. | – | 2 | – |
| 7.14.3 *Additive manufacturing*  Common additive manufacturing techniques and their influence on the mechanical properties of the finished part;  Inspection of additive manufactured parts and common production failures. | 1 | 1 | 1 |
| 7.15 *(Reserved)* |  |  |  |
| 7.16 *Aircraft weight and balance*  (a) Calculation of centre-of-gravity / balance limits: use of relevant documents. | – | 2 | 2 |

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| (b) Preparation of aircraft for weighing;  Aircraft weighing. | – | 2 | – |
| 7.17 *Aircraft handling and storage*  Aircraft taxiing/towing and associated safety precautions;  Aircraft jacking, chocking, securing and associated safety precautions; Aircraft storage methods;  Refuelling/defuelling procedures; De-icing/anti-icing procedures;  Electrical, hydraulic, and pneumatic ground supplies;  Effects of environmental conditions on aircraft handling and operation. | 2 | 2 | 2 |
| 7.18 *Disassembly, inspection, repair, and assembly techniques*   1. Types of defects and visual inspection techniques; Corrosion removal, assessment and reprotection; 2. General repair methods, structural repair manual; Ageing, fatigue, and corrosion control programmes; 3. Non-destructive inspection techniques including penetrant, radiographic, eddy current, magnetic particle, ultrasonic and borescope inspections; including practical training in colour contrast penetrant inspection; 4. Disassembly and reassembly techniques; 5. Troubleshooting techniques. | 2 | 3 | 3 |
| – | 2 | – |
| – | 2 | 1 |
| 2 | 2 | 2 |
| – | 2 | 2 |
| 7.19 *Abnormal events*   1. Inspections following lightning strikes and HIRF penetration; 2. Inspections following abnormal events such as heavy landings and flight through turbulence. | 2 | 2 | 2 |
| 2 | 2 | – |
| 7.20 *Maintenance procedures* Maintenance planning; Modification procedures;  Stores procedures;  Certification/release procedures; Interface with aircraft operation;  Maintenance Inspection / Quality Control / Quality Assurance; Additional maintenance procedures;  Control of life-limited components. | 1 | 2 | 2 |
| 7.21 Documentation and communication  Documentation: elements and criteria for writing work reports, troubleshooting reports, and shift handover instructions.  Communication: clear, comprehensive, and concise. | 1 | 2 | 2 |

**MODULE 8 — BASIC AERODYNAMICS**

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| **MODULE 8 — BASIC AERODYNAMICS** | **LEVEL** | |
| **A1** | **B1 B2 B2L** |
| **A2**  **A3**  **A4**  **B3** |
| 8.1 *Physics of the atmosphere*  International Standard Atmosphere (ISA), and its application to aerodynamics. | 1 | 2 |
| 8.2 *Aerodynamics*  Airflow around a body;  Boundary layer, laminar and turbulent flow, free stream flow, relative airflow, upwash and downwash, vortices, stagnation;  The terms: camber, chord, mean aerodynamic chord, profile (parasite) drag, induced drag, centre of pressure, angle of attack, wash-in and wash-out, fineness ratio, wing shape and aspect ratio;  Thrust, weight, aerodynamic resultant;  Generation of lift and drag angle of attack, lift coefficient, drag coefficient, polar curve, stall;  Aerofoil contamination including ice, snow, and frost. | 1 | 2 |
| 8.3 *Theory of flight*  Relationship between lift, weight, thrust and drag; Glide ratio;  Steady-state flights, performance; Theory of the turn;  Influence of load factor: stall, flight envelope, and structural limitations;  Lift augmentation. | 1 | 2 |
| 8.4 *High-speed airflow*  Speed of sound, subsonic flight, transonic flight, supersonic flight, Mach number, critical Mach number, compressibility buffet, shock wave, aerodynamic heating, area rule; Factors that affect airflow in engine intakes of high-speed aircraft;  Effects of sweepback on critical Mach number. | 1 | 2 |
| 8.5 *Flight stability and dynamics*  Longitudinal, lateral, and directional stability (active and passive). | 1 | 2 |

**MODULE 9 — HUMAN FACTORS**

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| **MODULE 9 — HUMAN FACTORS** | **LEVEL** |
| **ALL** |
| 9.1 *General*  The need to take human factors into account when performing maintenance; Incidents attributable to human factors/human error;  Murphy’s law. | 2 |
| 9.2 *Human performance and limitations*  Vision; Hearing;  Information processing; Attention and perception; Memory;  Claustrophobia and physical access. | 2 |
| 9.3 *Social psychology*  Accountability and responsibility: individual and group; Motivation and demotivation;  Peer pressure; Cultural issues; Teamwork;  Management, supervision, and leadership. | 1 |
| 9.4 *Factors that affect performance*  Fitness/health;  Stress: domestic and work related; Time pressure and deadlines;  Workload: overload, underload, and workload management; Sleep and fatigue, shift work;  Alcohol, medication, drug abuse;  Lack of manpower. | 2 |
| 9.5 *Physical environment* Noise and fumes; Illumination;  Climate and temperature;  Motion and vibration; Working environment;  Situational awareness. | 1 |
| 9.6 *Tasks*  Physical work;  Repetitive tasks, complacency; Visual inspection;  Complex systems;  Critical maintenance tasks and error-capturing methods;  Technical documentation: access, use, and quality. | 1 |
| 9.7 *Communication*  Within and between teams; Work logging and recording; Shift handover;  Keeping up to date, currency;  Dissemination of information. | 2 |
| 9.8 *Human error* | 2 |

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| Error models and theories;  Types of error in maintenance tasks; Implications of errors (e.g. accidents); Organisational errors;  Avoiding and managing errors. |  |
| 9.9 *Safety management* Risk management; Occurrence reporting;  Safety culture  Just culture;  Identifying, avoiding, and reporting hazards;  Organisational human-factors programme: professionalism and integrity, error-provoking behaviour, reporting errors, disciplinary policy, error investigation, action to address problems, feedback, assertiveness;  Dealing with emergencies. | 2 |
|  |
| 9.10 *The ‘Dirty Dozen’ and risk-mitigation*  The ‘Dirty Dozen’: the twelve most common human-factors errors in maintenance: Lack of communication,  Lack of teamwork, Lack of assertiveness, Complacency, Fatigue,  Stress,  Lack of knowledge, Lack of resources, Lack of awareness, Distraction, Pressure,  Norms.  Risk-mitigation methods. | 2 |

**MODULE 10 — AVIATION LEGISLATION**

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| **MODULE 10 — AVIATION LEGISLATION** | **LEVEL** | |
| **A1** | **B1 B2 B2L**  **B3** |
| **A2**  **A3**  **A4** |
| * 1. *Regulatory framework*   Role of:   * + - the International Civil Aviation Organization (ICAO);     - the Civil Aviation Committee of the Republic of Armenia;     - the European Union Aviation Safety EASA;     - Law on Aviation and its implementing acts:   Regulations On Initial Airworthiness and Continuing Airworthiness;   * + - the relationship between regulations (hard law) and AMC, GM and CSs (soft law);     - occurrence reporting according to Regulation 451-L ;     - the relationship between the various annexes (parts) relating to Initial and Continuing Airworthiness (such as Part 21, Part-M, Part-145, Part-66, Part-147, Part- T, Part-ML, Part-CAMO, and Part-CAO) and Regulations 2-N 2022 and 3-N 2022. | 1 | 1 |
| 10.2 *Certifying staff — maintenance*  Deep understanding of Part-66 maintenance licences with the associated privileges and authorisations, and how to exercise them properly for the different aircraft categories. | 2 | 2 |
| 10.3 *Approved maintenance organisations*  General understanding of Part-145 and Part-CAO. | 2 | 2 |
| 10.4 *Independent certifying staff*  Privileges, responsibilities, record-keeping, limitations, and oversight according to Part-M, Part-66 and Part-ML. | — | 3 |
| 10.5 *Air operations*  General understanding of Regulation (EU) No 965/2012 (the Air Operations Regulation); Differences between commercial and non-commercial air operations, and their influence on aircraft maintenance;  Air Operator Certificates (AOCs) and self-declaration authorisations;  Air operator responsibilities, in particular regarding continuing airworthiness and maintenance;  Specialised operations / specific approvals: ETOPS, CAT I/II/III, and BRNAV. Minimum Equipment List (MEL) and Configuration Deviation List (CDL); Aircraft placarding and markings;  Documents to be carried on board:   * Certificate of Airworthiness / Restricted Certificate of Airworthiness; * Airworthiness Review Certificate; * Permit to Fly; * Certificate of Registration; * Noise Certificate; * Weight and Balance report; * Radio Station Licence. | 1 | 1 |
| 10.6 *Certification of aircraft, parts, and appliances*  Basic understanding of Part 21 and of the following EASA certification specifications: CS-22, CS-23, CS-25, CS-27, CS-29, and CS-STAN. | 2 | 2 |
| 10.7 *Continuing airworthiness* | 2 | 2 |

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| **MODULE 10 — AVIATION LEGISLATION** | **LEVEL** | |
| **A1** | **B1 B2 B2L**  **B3** |
| **A2**  **A3**  **A4** |
| General understanding of the Part 21 requirements on continuing airworthiness; General understanding of Part-M, Part-ML and Part-CAMO;  Aircraft Maintenance Programme. |  |  |
| 10.8 *Oversight principles in continuing airworthiness* | 1 | 1 |
| 10.9 *Maintenance and certification beyond current EU regulations (if not superseded by EU requirements)*  Maintenance of European Union aircraft that are not within the scope of Regulation (EU) 2018/1139 (Annex I aircraft);  European military airworthiness requirement (EMAR) 66 licence;  Applicable national and international requirements for component maintenance,  welding, painting, NDT, etc. (if not superseded by EU requirements). | – | 1 |
| 10.10 *Cybersecurity in aviation maintenance*  Regulation on the introduction of organisation requirements for the management of information security risks related to aeronautical information systems used in civil  aviation. | 1 | 1 |

**MODULE 11 — AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS**

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| **MODULE 11 — AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | | | | |
| **A1** | **A2** | **B1.1** | **B1.2** | **B3** |
| 11.1 *Theory of flight*   1. Aeroplane aerodynamics and flight controls Operation and effect of:    * roll control: ailerons and spoilers;    * pitch control: elevators, stabilators, variable incidence stabilisers and canards;    * yaw control, rudder limiters;    * elevons, ruddervators;    * high-lift devices, slots, slats, flaps, flaperons;    * drag-inducing devices, spoilers, lift dumpers, speed brakes;    * trim tabs, servo tabs, control surface bias. 2. Aeroplane: other aerodynamic devices Operation and effect of:    * balance and antibalance (leading) tabs;    * spring tabs, mass balance, aerodynamic balance panels;    * mass balance, aerodynamic balance panels;    * effects of wing fences, saw tooth leading edges;    * boundary layer control using vortex generators, stall wedges or leading-edge devices. | 1 | 1 | 2 | 2 | 1 |
| 1 | 1 | 2 | 2 | 1 |
| 11.2 *Airframe structures (ATA 51)*   1. General concepts:    * Zonal and station identification systems;    * Electrical bonding;    * Lightning strike protection provisions. 2. Airworthiness requirements for structural strength:    * Structural classification: primary, secondary, and tertiary;    * Fail-safe, safe-life, damage-tolerance concepts;    * Stress, strain, bending, compression, shear, torsion, tension, hoop stress, fatigue;    * Drains and ventilation provisions;    * System installation provisions. | 2 | 2 | 2 | 2 | 2 |
| 2 | 2 | 2 | 2 | 2 |

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| **MODULE 11 — AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | | | | |
| **A1** | **A2** | **B1.1** | **B1.2** | **B3** |
| 1. Construction methods    * Stressed skin fuselage, formers, stringers, longerons, bulkheads, frames, doublers, struts, ties, beams, floor structures, reinforcement, skinning, anticorrosive protection, wing, empennage and engine attachments;    * Structure assembly techniques: riveting, bolting, bonding;    * Methods of surface protection, such as chromating, anodising, painting;    * Surface cleaning;    * Airframe symmetry: methods of alignment and symmetry checks. | 1 | 1 | 2 | 2 | 2 |
| * 1. *Airframe structures — aeroplanes*      1. *Fuselage, doors, windows (ATA 52/53/56)*         1. Construction principles            + Construction and pressurisation sealing;            + Wing, stabiliser, pylon, and undercarriage attachments;            + Seat installation and cargo loading system;            + Doors and emergency exits: construction, mechanisms, operation and safety devices;            + Windows and windscreen construction and mechanisms.  1. Airborne towing devices (glider, banner, target). 2. Doors    * Doors and emergency exits: safety devices;    * Cargo loading system. | 1 | 1 | 2 | 2 | 1 |
| 1 | 1 | 1 | 1 | 1 |
| 1 | 1 | 2 | 1 | — |
| 11.3.2 *Wings (ATA 57)*  Construction; Fuel storage;  Landing gear, pylon, control surface and high lift/drag  attachments. | 1 | 1 | 2 | 2 | 1 |
| 11.3.3 *Stabilisers (ATA 55)*  Construction;  Control surface attachment. | 1 | 1 | 2 | 2 | 1 |
| 11.3.4 *Flight control surfaces (ATA 55/57)*  Construction and attachments; Balancing — mass and aerodynamics. | 1 | 1 | 2 | 2 | 1 |
| 11.3.5 *Nacelles/pylons (ATA 54)*  Nacelles/Pylons:   * Construction, * Firewalls, * Engine mounts. | 1 | 1 | 2 | 2 | 1 |
| 11.4 *Air conditioning and cabin pressurisation (ATA 21)*   1. Pressurisation Pressurisation systems;   Cabin pressure controllers, control, and safety valves; Control and indication.   1. Air supply | 1 | 1 | 3 | 3 | — |
| 1 | - | 3 | - | — |

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| **MODULE 11 — AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | | | | |
| **A1** | **A2** | **B1.1** | **B1.2** | **B3** |
| Sources of air supply including engine bleed, APU and ground cart;  Distribution systems.   1. Air conditioning   Air-conditioning systems;  Air cycle and vapour cycle machines;  Flow, temperature and humidity control system; Control and indication control valves.   1. Safety and warning devices Protection and warning devices. 2. Heating and ventilation systems. |  |  |  |  |  |
| 1 | — | 3 | - | — |
| 1 | 1 | 3 | 3 | — |
| — | 1 | - | 3 | 1 |
| * 1. *Instruments / avionics systems*      1. *Instrument systems (ATA 31)*   Pitot-static:  Airspeed indicators, Vertical speed indicators, Altimeters;  Gyroscopic:  Gyroscopic principles, Artificial horizons, Attitude directors, Direction indicators,  Horizontal situation indicators (HSI),  Slip indicators, Turn indicators, Turn coordinators; Compass systems: systems, direct reading, remote reading,  Stall-warning systems and angle-of-attack indicating systems, Glass cockpit,  Indications of other aircraft systems. | 1 | 1 | 2 | 2 | 2 |
| 11.5.2 *Avionics systems*  Fundamentals of system layouts and operation of: Autoflight **(ATA 22)**;  Communication systems **(ATA 23)**:   * Very High Frequency (VHF) communications, * High Frequency (HF) communications, * Satellite Communications (SATCOM), * Controller–pilot data link communications (CPDLC), * Audio systems, * Emergency Locator Transmitters (ELTs), * Cockpit Voice Recorder (CVR); Navigation systems **(ATA 34)**: * Very high frequency omnidirectional range (VOR), * Automatic direction finder (ADF), * Instrument landing system (ILS), * Microwave landing system (MLS), * Flight director systems (FDSs), distance-measuring equipment (DME), * Area navigation (RNAV) systems, * Flight management systems (FMSs), * Satellite navigation systems, | 1 | 1 | 1 | 1 | 1 |

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| **MODULE 11 — AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | | | | |
| **A1** | **A2** | **B1.1** | **B1.2** | **B3** |
| * Air traffic control transponder, secondary surveillance radar, * Traffic alert and collision avoidance system (TCAS), * Weather avoidance radar, * Radio altimeter, * Inertial navigation system (INS), * ARINC (Aeronautical Radio Incorporated) communication and reporting.   Types and uses of avionics general test equipment. |  |  |  |  |  |
| 11.6 *Electrical power* ***(ATA 24)***   * Installation and operation of batteries; * DC power generation; * AC power generation; * Emergency power generation; * Voltage regulation; * Power distribution; * Inverters, transformers, rectifiers; * Circuit protection; * External/ground power. | 1 | 1 | 3 | 3 | 3 |
| 11.7 *Equipment and furnishings* ***(ATA 25)***   1. Emergency equipment:   Emergency equipment requirements.   1. Cabin and cargo layout:    * Seats, harnesses, and belts;    * Cabin layout;    * Equipment layout;    * Cabin furnishing installation;    * Galley installation;    * Cargo handling and retention equipment;    * Airstairs. | 2 | 2 | 2 | 2 | 2 |
| 1 | 1 | 1 | 1 | — |
| 11.8 *Fire protection* ***(ATA 26)***   1. Fire and smoke detection system, and fire-extinguishing systems:    * Fire and smoke detection and warning systems;    * Fire-extinguishing systems;    * System tests.   (b) Portable fire extinguisher. | 1 | 1 | 1 | 1 | — |
| 1 | 1 | 1 | 1 | 1 |
| *11.9 Flight controls* ***(ATA 27)***   1. Primary and secondary flight controls:    * Primary controls: aileron, elevator, rudder, spoiler;    * Trim control, trim tabs;    * High-lift devices;    * System operation: manual;    * Gust locks and gust lock systems;    * Artificial feel, yaw damper, Mach trim, rudder limiter;    * Stall-warning systems.   (b) Actuation and protection: | 1 | 1 | 3 | 3 | 2 |
| 1 | — | 3 | — | — |

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| **MODULE 11 — AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | | | | |
| **A1** | **A2** | **B1.1** | **B1.2** | **B3** |
| * Active load control; * Lift dump, speed brakes; * Hydraulic, pneumatic systems; * Stall-protection systems.  1. System operation:   Electrical systems, fly-by-wire systems.   1. Balancing and rigging. |  |  |  |  |  |
| 1 | — | 3 | — | — |
| 1 | 1 | 3 | 3 | 2 |
| 11.10 *Fuel systems* ***(ATA 28, ATA 47)***  (a) Systems:   * System layout; * Fuel tanks; * Supply systems.   (b) Fuel handling:   * Cross-feed and transfer; * Refuelling and defuelling.  1. Indication and warnings. 2. Special systems:    * Dumping, venting, and draining;    * Inert gas systems.   (e) Balancing:  Longitudinal balance fuel systems. | 1 | 1 | 3 | 3 | 1 |
| 1 | 1 | 3 | 3 | 1 |
| 1 | 1 | 3 | 3 | 1 |
| 1 | — | 3 | — | — |
| 1 | — | 3 | — | — |
| 11.11 *Hydraulic power* ***(ATA 29)***   1. System description:   System layout;  Hydraulic fluids;  Hydraulic reservoirs and accumulators; Filters;  Power distribution.   1. System operation (1):   Pressure generation: electric and mechanical; Pressure control;  Indication and warning systems; Servicing.   1. System operation (2): Pressure generation: pneumatic; Emergency pressure generation;   Interface with other systems. | 1 | 1 | 3 | 3 | 2 |
| 1 | 1 | 3 | 3 | 2 |
| 1 | — | 3 | — | — |
| 11.12 *Ice and rain protection* ***(ATA 30)***   1. Principles:   Ice formation, classification, and detection.   1. De-icing:   De-icing systems: electrical, hot-air, pneumatic, chemical; Probe and drain heating.   1. Anti-icing:   Anti-icing systems: electrical, hot-air, chemical. | 1 | 1 | 3 | 3 | 1 |
| 1 | 1 | 3 | 3 | 1 |
| 1 | — | 3 | — | — |

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| **MODULE 11 — AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | | | | |
| **A1** | **A2** | **B1.1** | **B1.2** | **B3** |
| 1. Wipers:   Wiper systems.   1. Rain-repellent systems. | 1 | 1 | 3 | 3 | 1 |
| 1 | — | 3 | — | — |
| 11.13 *Landing gear* ***(ATA 32)***   1. Description:   Construction, shock absorbing; Tyres.   1. Systems:   Extension and retraction systems: normal and emergency; Indications and warnings;  Wheels, brakes, antiskid, and autobraking; Steering.   1. Air–ground sensing. 2. Tail protection: Skids. | 2 | 2 | 3 | 3 | 2 |
| 2 | 2 | 3 | 3 | 2 |
| 2 | — | 3 | — | — |
| 2 | 2 | 3 | 3 | 2 |
| 11.14 *Lights* ***(ATA 33)***  External: navigation, anticollision, landing, taxiing, ice; Internal: cabin, cockpit, cargo;  Emergency. | 2 | 2 | 3 | 3 | 2 |
| 11.15 *Oxygen* ***(ATA 35)***  System layout: cockpit, cabin;  Sources, storage, charging and distribution; Supply regulation;  Indications and warnings. | 1 | 1 | 3 | 3 | 2 |
| 11.16 *Pneumatic / vacuum* ***(ATA 36)***   1. Systems:   System layout;  Sources: engine / APU (Auxiliary Power Unit), compressors, reservoirs, ground supply;  Pressure control;  Distribution;  Indications and warnings; Interface with other systems.   1. Pumps:   Pressure and vacuum pumps. | 1 | 1 | 3 | 3 | 2 |
| 1 | 1 | 3 | 3 | 2 |
| 11.17 *Water / waste* ***(ATA 38)***   1. Systems:   Water system layout, supply, distribution, servicing and draining; Toilet system layout, flushing and servicing.   1. Corrosion: Corrosion aspects. | 2 | 2 | 3 | 3 | 2 |
| 2 | 2 | 3 | 3 | 2 |
| 11.18 *Onboard maintenance systems* ***(ATA 45)*** | 1 | — | 2 | — | — |

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| **MODULE 11 — AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | | | | |
| **A1** | **A2** | **B1.1** | **B1.2** | **B3** |
| Central maintenance computers; Data-loading system;  Electronic library system; Printing systems;  Structure monitoring (damage-tolerance monitoring). |  |  |  |  |  |
| 11.19 *Integrated modular avionics (IMA)* ***(ATA 42)***   1. Overall system description and theory:   Core system; network components;  Functions that may be typically integrated in the integrated modular avionics (IMA) modules are, among others:  Bleed management, air pressure control, air ventilation and control, avionics and cockpit ventilation control, temperature control, air traffic communication, avionics communication router, electrical load management, circuit breaker monitoring, electrical system BITE, fuel management, braking control, steering control, landing gear extension and retraction, tyre pressure indication, oleo pressure indication, brake temperature monitoring, etc.   1. Typical system layout. | 1 | — | 2 | — | — |
| 1 | — | 2 | — | — |
| 11.20 *Cabin systems* ***(ATA 44)***  System architecture, operation, and control of systems for:   * passenger in-flight entertainment; * communication within the aircraft (Cabin intercommunication data system (CIDS); * communication between the aircraft cabin and ground stations; * including voice, data, music, and video transmission. CIDS interface between cockpit/cabin crew and cabin systems.   Data exchange between the different related line replaceable units (LRUs).  Flight attendant panels (FAPs).  Cabin network server (CNS) and interfaces with the following systems:   * Data/radio communication; * Cabin core system (CCS); * In-flight entertainment system (IFES); * External communication system (ECS); * Cabin mass memory system (CMMS); * Cabin monitoring system (CMS); * Miscellaneous cabin systems (MCSs); and * Other systems.   Cabin network server (CNS) hosting functions:   * Access to predeparture/departure reports; * Email/intranet/internet access; passenger database; * In-flight entertainment system; * External communication system; * Cabin mass memory system; * Cabin monitoring system; * Miscellaneous cabin system. | 1 | — | 2 | — | — |
| 11.21 *Information systems* ***(ATA 46)*** | 1 | — | 2 | — | — |

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| **MODULE 11 — AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | | | | |
| **A1** | **A2** | **B1.1** | **B1.2** | **B3** |
| System architecture, operation, and control of:   * Storage and electronic library; * Updating; * Retrieving of digital information; * Air traffic and information management systems (ATIMS) and network server systems; * Aircraft general information system; * Flight deck information system; * Maintenance information system; * Passenger cabin information system; * Miscellaneous information systems; * Other linked systems. |  |  |  |  |  |

**MODULE 12 — HELICOPTER AERODYNAMICS, STRUCTURES AND SYSTEMS**

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| **MODULE 12 — HELICOPTER AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | |
| **A3 A4** | **B1.3 B1.4** |
| 12.1 *Theory of flight — rotary wing aerodynamics*  Terminology;  Effects of gyroscopic precession; Torque reaction and directional control; Dissymmetry of lift, blade tip stall; Translating tendency and its correction; Coriolis effect and compensation;  Vortex ring state, power setting, overpitching; Auto-rotation;  Ground effect. | 1 | 2 |
| 12.2 *Flight control systems* ***(ATA 67)***  Cyclic control;  Collective control;  Swashplate;  Yaw control: antitorque control, tail rotor, bleed air; Main-rotor head: design and operation features; Blade dampers: function and construction;  Rotor blades: main- and tail-rotor blade construction and attachment; Trim control, fixed and adjustable stabilisers;  System operation: manual, hydraulic, electrical, fly-by-wire; Artificial feel;  Balancing and rigging. | 2 | 3 |
| 12.3 *Blade tracking and vibration analysis* ***(ATA 18)***  Rotor alignment;  Main-rotor and tail-rotor tracking; Static and dynamic balancing;  Vibration types, and vibration reduction methods; Ground resonance. | 1 | 3 |
| 12.4 *Transmission*  Gear boxes, main and tail rotors;  Clutches, free wheel units and rotor brake;  Tail-rotor drive shafts, flexible couplings, bearings, vibration dampers and bearing hangers. | 1 | 3 |
| 12.5 *Airframe structures*   1. General concept   Airworthiness requirements for structural strength; Structural classification: primary, secondary, tertiary; Fail-safe, safe-life, damage-tolerance concepts; Zonal and station identification systems;  Stress, strain, bending, compression, shear, torsion, tension, hoop stress, fatigue;  Drains and ventilation provisions; System installation provisions; Lightning strike protection provisions.   1. Construction methods for the principal elements | 2 | 2 |
| 1 | 2 |

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| **MODULE 12 — HELICOPTER AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | |
| **A3 A4** | **B1.3 B1.4** |
| Stressed skin fuselage, formers, stringers, longerons, bulkheads, frames, doublers, struts, ties, beams, floor structures, reinforcement, skinning and anticorrosive protection;  Pylon, stabiliser and undercarriage attachments; Seat installation;  Doors: construction, mechanisms, operation, and safety devices; Windows and windscreen construction;  Fuel storage; Firewalls; Engine mounts;  Structure assembly techniques: riveting, bolting, bonding;  Methods for surface protection, such as chromating, anodising, painting; Surface cleaning;  Airframe symmetry: methods for alignment and symmetry checks. |  |  |
| * 1. *Air conditioning* ***(ATA 21)***      1. *Air supply*   Sources of air supply, including engine bleed and ground cart. | 1 | 2 |
| 12.6.2 *Air conditioning*  Air-conditioning systems; Distribution systems;  Flow and temperature control systems;  Protection and warning devices. | 1 | 3 |
| * 1. *Instruments / avionics systems*      1. *Instrument systems* ***(ATA 31)***   Pitot-static: altimeter, airspeed indicator, vertical speed indicator; Gyroscopic: artificial horizon, attitude director, direction indicator, horizontal situation indicator, turn and slip indicator, turn coordinator;  Compasses: direct reading, remote reading;  Vibration indicating systems / health and usage monitoring systems (HUMSs); Glass cockpit;  Indications of other aircraft systems. | 1 | 2 |
| 12.7.2 *Avionics systems*  Fundamentals of system layouts and operation of: Autoflight **(ATA 22)**;  Communications **(ATA 23)**:   * Very high frequency (VHF) communications, * High-frequency (HF) communications, * Satellite communications (SATCOM), * Controller–pilot data link communications (CPDLC), * Audio systems, * Emergency locator transmitters (ELTs), * Cockpit voice recorder (CVR); Navigation systems **(ATA 34)**: | 1 | 1 |

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| **MODULE 12 — HELICOPTER AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | |
| **A3 A4** | **B1.3 B1.4** |
| * Very high frequency omnidirectional range (VOR), * Automatic direction finding (ADF), * Instrument landing system (ILS), * Microwave landing system (MLS), * Flight director systems (FDSs), distance-measuring equipment (DME), * Area navigation (RNAV) systems, * Flight management systems (FMSs), * Satellite navigation systems, * Inertial navigation system (INS), * Air traffic control transponder, secondary surveillance radar, * Traffic alert and collision avoidance system (TCAS), * Weather avoidance radar, * Radio altimeter, * ARINC communication and reporting.   Types and uses of general test equipment for avionics. |  |  |
| 12.8 *Electric power* ***(ATA 24)***  Installation and operation of batteries;  DC power generation, AC power generation; Emergency power generation;  Voltage regulation, circuit protection; Power distribution;  Inverters, transformers, rectifiers; External/Ground power. | 1 | 3 |
| 12.9 *Equipment and furnishings* ***(ATA 25)***   1. Emergency equipment requirements; Seats, harnesses, and belts;   Lifting systems.   1. Emergency flotation systems; Cabin layout, cargo retention; Equipment layout;   Cabin furnishing installation. | 2 | 2 |
| 1 | 1 |
| 12.10 *Fire protection* ***(ATA 26)***   1. Fire and smoke detection and warning systems; Fire-extinguishing systems;   System tests.   1. Portable fire extinguishers. | 1 | 3 |
| 1 | 1 |
| 12.11 *Fuel systems* ***(ATA 28)*** | 1 | 3 |

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| **MODULE 12 — HELICOPTER AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | |
| **A3 A4** | **B1.3 B1.4** |
| System layout;  Fuel tanks;  Supply systems;  Dumping, venting, and draining; Cross-feed and transfer; Indications and warnings; Refuelling and defuelling. |  |  |
| 12.12 *Hydraulic power* ***(ATA 29)***  System layout;  Hydraulic fluids;  Hydraulic reservoirs and accumulators;  Pressure generation: electric, mechanical, pneumatic; Emergency pressure generation;  Filters;  Pressure control;  Power distribution;  Indication and warning systems; Interface with other systems;  Servicing. | 1 | 3 |
| 12.13 *Ice and rain protection (ATA 30)*  Ice formation, classification, and detection;  Anti-icing and de-icing systems: electrical, hot-air, and chemical; Rain repellent and removal;  Probe and drain heating; Wiper system. | 1 | 3 |
| 12.14 *Landing gear* ***(ATA 32)***   1. System description and operation:   Construction, shock absorbing;  Extension and retraction systems: normal and emergency; Wheels, tyres, brakes;  Steering; Skids, floats.   1. Sensors:   Indications and warning; Air–ground sensing. | 2 | 3 |
| 2 | 3 |
| 12.15 *Lights* ***(ATA 33)***  External: navigation, landing, taxiing; Internal: cabin, cockpit, cargo;  Emergency. | 2 | 3 |
| 12.16 *(Reserved)* |  |  |
| 12.17 *Integrated modular avionics (IMA)* ***(ATA 42)*** | 1 | 2 |

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| **MODULE 12 — HELICOPTER AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | |
| **A3 A4** | **B1.3 B1.4** |
| 1. Overall system description and theory   Functions that may be typically integrated in the integrated modular avionics (IMA) modules:  Bleed management, air pressure control, air ventilation and control, avionics and cockpit ventilation control, temperature control, air traffic communication, avionics communication router, electrical load management, circuit breaker monitoring, electrical system BITE, fuel management, steering control, landing gear extension and retraction, tyre pressure indication, oleo pressure indication, brake temperature monitoring, etc.;  Core System;  Network Components.   1. Typical system layouts. |  |  |
| 1 | 2 |
| 12.18 *Onboard maintenance systems* ***(ATA 45)***  Central maintenance computers; Data-loading system;  Electronic library system. | 1 | 2 |
| 12.19 *Information systems* ***(ATA 46)***  The units and components which furnish a means of storing, updating, and retrieving digital information traditionally provided on paper, microfilm or microfiche. They include units that are dedicated to the information storage and retrieval function, such as the electronic library mass storage and controller. They do not include units or components installed for other uses and shared with other systems, such as flight deck printer or general-use display.  Typical examples include air traffic and information management systems and network server systems.  Aircraft general information system. Flight deck information system.  Maintenance information system.  Miscellaneous information system. | 1 | 2 |

**MODULE 13 — AIRCRAFT AERODYNAMICS, STRUCTURES AND SYSTEMS**

**C/N**: Communication and Navigation; **Ins.**: Instruments; **A/F**: Autoflight; **Sur.**: Surveillance; **A/S**: Airframe and Systems

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| **MODULE 13 — AIRCRAFT AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | | | | | | |
| **B2** | **B2L** | **B2L** | **B2L** | **B2L** | **B2L** | **B2L**  **A/S** |
| **Basic** | **C/N** | **Ins.** | **A/F** | **Sur.** |
| * 1. *Theory of flight*      1. Aeroplane aerodynamics and flight controls Operation and effect of:         + roll control: ailerons and spoilers;         + pitch control: elevators, stabilators, variable incidence stabilisers and canards; and         + yaw control: rudder limiters;         + control using elevons, ruddervators;         + high-lift devices: slots, slats, flaps;         + drag-inducing devices: spoilers, lift dumpers, speed brakes;         + trim tabs, servo tabs, and control surface bias.   (b) Rotary wing aerodynamics Terminology;  Operation and effect of cyclic, collective, and antitorque controls. | 1 | 1 | — | — | — | — | — |
| 1 | 1 | — | — | — | — | — |
| 13.2 *Structures — general concepts*   1. General concepts;   Zonal and station identification systems; Electrical bonding;  Lightning strike protection provisions.   1. Fundamentals of structural systems. | 2 | 2 | — | — | — | — | — |
| 1 | 1 | — | — | — | — | — |
| 13.3 *Autoflight* ***(ATA 22)***   1. Fundamentals of automatic flight control:    * Working principles and current terminology;    * Command signal processing;    * Modes of operation: roll, pitch, and yaw channels;    * Yaw dampers;    * Stability augmentation system in helicopters;    * Automatic trim control;    * Autopilot navigation aids interface. |  |  |  |  |  |  |  |
| 3 | — | — | — | 3 | — | — |

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| **MODULE 13 — AIRCRAFT AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | | | | | | |
| **B2** | **B2L** | **B2L** | **B2L** | **B2L** | **B2L** | **B2L**  **A/S** |
| **Basic** | **C/N** | **Ins.** | **A/F** | **Sur.** |
| 1. Autothrottle systems and automatic landing systems:    * Principles and categories;    * Modes of operation;    * Approach;    * Glideslope;    * Land, go-around;    * System monitors and failure conditions. | 3 | — | — | — | 3 | — | — |
| 13.4 *Communication/navigation (ATA 23/34)*   1. Fundamentals of communication and navigation systems:    * Radio wave propagation, antennas, transmission lines, communication, receiver, and transmitter;   Working principles of the following systems:   * + Very high frequency (VHF) communications;   + High-frequency (HF) communications;   + Satellite communications (SATCOM);   + Controller–pilot data link communications (CPDLC);   + Audio systems;   + Emergency locator transmitters (ELTs);   + Cockpit voice recorder (CVR);   + Very high frequency omnidirectional range (VOR);   + Automatic direction finding (ADF);   + Instrument landing system (ILS);   + Flight director systems (FDSs), distance- measuring equipment (DME);   + Area navigation (RNAV) systems;   + Flight management systems (FMSs);   + Global navigation satellite systems (GNSSs), Global Positioning System (GPS), ground-based augmentation system (GBAS), satellite-based augmentation system (SBAS) such as the European geostationary navigation overlay service (EGNOS) and the wide area augmentation system (WAAS);   + Data link and two-way data link. | 3 | — | 3 | — | — | — | — |

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| **MODULE 13 — AIRCRAFT AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | | | | | | |
| **B2** | **B2L** | **B2L** | **B2L** | **B2L** | **B2L** | **B2L**  **A/S** |
| **Basic** | **C/N** | **Ins.** | **A/F** | **Sur.** |
| 1. Fundamentals of aircraft surveillance systems:    * Air traffic control transponder, secondary surveillance radar;    * Traffic alert and collision avoidance system (TCAS);    * Weather avoidance radar;    * Radio altimeter;    * Automatic dependent surveillance — broadcast (ADS-B) and its other associated services such as FIS-B, TIS-B and multilink;    * Inertial navigation system (INS);    * ARINC (Aeronautical Radio Incorporated) communication and reporting. | 3 | — | — | — | — | 3 | — |
| 13.5 *Electric power* ***(ATA 24)***   * Installation and operation of batteries; * DC power generation; * AC power generation; * Emergency power generation; * Voltage regulation; * Power distribution; * Inverters, transformers, rectifiers; * Circuit protection; * External/ground power. | 3 | 3 | — | — | — | — | — |
| 13.6 *Equipment and furnishings* ***(ATA 25)***  Electronic emergency equipment requirements. | 3 | — | — | — | — | — | — |
| 13.7 *Flight controls*   1. Primary and secondary flight controls **(ATA 27)**:    * Primary controls: aileron, elevator, rudder, spoiler;    * Trim control: trim tabs;    * High-lift devices;    * System operation: manual;    * Gust locks and gust lock systems;    * Artificial feel, yaw damper, Mach trim, rudder limiter;    * Stall-warning systems.   (b) Actuation and protection:   * Active load control; * Lift dump, speed brakes; * Hydraulic, pneumatic systems; * Stall-protection systems. | 2 | — | — | — | 2 | — | — |
| 2 | — | — | — | 2 | — | — |

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| **MODULE 13 — AIRCRAFT AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | | | | | | |
| **B2** | **B2L** | **B2L** | **B2L** | **B2L** | **B2L** | **B2L**  **A/S** |
| **Basic** | **C/N** | **Ins.** | **A/F** | **Sur.** |
| (c) System operation:  — System operation: electrical, fly-by-wire.  (d) Rotorcraft flight controls **(ATA 67)**:  Rotorcraft controls: cyclic control, collective control, swashplate, yaw control. | 3 | — | — | — | 3 | — | — |
| 2 | — | — | — | 2 | — | — |
| 13.8 *Instruments* ***(ATA 31)***   * Classification; * Atmosphere; * Terminology; * Pressure-measuring devices and systems; * Pitot-static systems; * Altimeters; * Vertical speed indicators; * Airspeed indicators; * Machmeters; * Altitude-reporting/-alerting systems; * Air-data computers; * Instrument pneumatic systems; * Direct-reading pressure and temperature gauges; * Temperature-indicating systems; * Gyroscopic principles; * Artificial horizons; * Slip indicators; * Directional gyros; * Ground proximity warning systems (GPWSs); * Compass systems; * Flight data recording systems (FDRSs); * Electronic flight instrument systems (EFISs) — typical system arrangements and cockpit layout; * Instrument warning systems, including master warning systems and centralised warning panels; * Stall-warning systems and angle-of-attack indicating systems; * Vibration measurement and indication; * Glass cockpit; * Types and uses of general test equipment for avionics. | 3 | — | — | 3 | — | — | — |
| 13.9 *Lights* ***(ATA 33)***  External: navigation, anticollision, landing, taxiing, ice; Internal: cabin, cockpit, cargo;  Emergency. | 3 | 3 | — | — | — | — | — |
| 13.10 *Onboard maintenance systems* ***(ATA 45)***  Central maintenance computers; Data-loading system;  Electronic library system; | 3 | — | — | — | — | — | — |

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| **MODULE 13 — AIRCRAFT AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | | | | | | |
| **B2** | **B2L** | **B2L** | **B2L** | **B2L** | **B2L** | **B2L**  **A/S** |
| **Basic** | **C/N** | **Ins.** | **A/F** | **Sur.** |
| Printing system;  Structure monitoring system (damage-tolerance monitoring). |  |  |  |  |  |  |  |
| 13.11 *Air conditioning and cabin pressurisation* ***(ATA 21)***  (a) Pressurisation:   * Pressurisation systems; * Cabin pressure controllers, control and safety valves; * Control and indication.  1. Air supply:   Sources of air supply including engine bleed, APU and ground cart;  Distribution systems.   1. Air conditioning. 2. Safety and warning devices. | 3 | — | — | — | — | — | 3 |
| 1 | — | — | — | — | — | 1 |
| 3 | — | — | — | — | — | 3 |
| 3 | — | — | — | — | — | 3 |
| 13.12 Fire protection **(ATA 26)**   1. Fire and smoke detection system and fire- extinguishing systems;    * Fire and smoke detection and warning systems;    * Fire-extinguishing systems;    * System tests.   (b) Portable fire extinguisher. | 3 | — | — | — | — | — | 3 |
| 1 | — | — | — | — | — | 1 |
| 13.13 *Fuel systems* ***(ATA 28, ATA 47)***   1. System layout:   System layout; Fuel tanks; Supply systems.   1. Fuel handling;   Cross-feed and transfer; Refuelling and defuelling.   1. Indications and warnings. 2. Special systems:   Dumping, venting and draining; Inert gas systems.   1. Balancing:   Longitudinal balance fuel systems. | 1 | — | — | — | — | — | 1 |
| 2 | — | — | — | — | — | 2 |
| 3 | — | — | — | — | — | 3 |
| 1 | — | — | — | — | — | 1 |
| 3 | — | — | — | — | — | 3 |
| 13.14 *Hydraulic power* ***(ATA 29)***   1. System layout:   System layout; Hydraulic fluids;  Hydraulic reservoirs and accumulators; Filters;  Power distribution.   1. System operation (1):   Pressure generation: electric and mechanical; Pressure control;  Indication and warning systems;  Servicing. | 1 | — | — | — | — | — | 1 |
| 3 | — | — | — | — | — | 3 |

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **MODULE 13 — AIRCRAFT AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | | | | | | |
| **B2** | **B2L** | **B2L** | **B2L** | **B2L** | **B2L** | **B2L**  **A/S** |
| **Basic** | **C/N** | **Ins.** | **A/F** | **Sur.** |
| (c) System operation (2):  Pressure generation: pneumatic; Emergency pressure generation;  Interface with other systems. | 3 | — | — | — | — | — | 3 |
| 13.15 *Ice and rain protection* ***(ATA 30)***   1. Principles:   Ice formation, classification, and detection.   1. De-icing:   De-icing systems: electrical, hot-air, pneumatic, and chemical;  Probe and drain heating.   1. Anti-icing:   Anti-icing systems: electrical, hot-air, and chemical.   1. Wiper systems. 2. Rain repellent. | 2 | — | — | — | — | — | 2 |
| 3 | — | — | — | — | — | 3 |
| 2 | — | — | — | — | — | 2 |
| 1 | — | — | — | — | — | 1 |
| 1 | — | — | — | — | — | 1 |
| 13.16 *Landing gear* ***(ATA 32)***   1. Description:   Construction, shock absorbing; Tyres.   1. Systems:   Extension and retraction systems: normal and emergency;  Indications and warnings;  Wheels, brakes, antiskid, and autobraking; Steering.   1. Air–ground sensing. | 1 | — | — | — | — | — | 1 |
| 3 | — | — | — | — | — | 3 |
| 3 | — | — | — | — | — | 3 |
| 13.17 *Oxygen (ATA 35)*  System layout: cockpit, cabin;  Sources, storage, charging, and distribution; Supply regulation;  Indications and warnings. | 3 | — | — | — | — | — | 3 |
| 13.18 *Pneumatic/vacuum* ***(ATA 36)***   * System layout; * Sources: engine/APU, compressors, reservoirs, ground supply; * Pressure control; * Distribution; * Indications and warnings; * Interfaces with other systems. | 2 | — | — | — | — | — | 2 |
| 13.19 *Water/waste* ***(ATA 38)***   * Water system layout, supply, distribution, servicing, and draining; * Toilet system layout, flushing and servicing. | 2 | — | — | — | — | — | 2 |
| 13.20 *Integrated modular avionics (IMA)* ***(ATA 42)***  (a) Overall system description and theory: Core system; | 3 | — | — | — | — | — | — |

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| **MODULE 13 — AIRCRAFT AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | | | | | | |
| **B2** | **B2L** | **B2L** | **B2L** | **B2L** | **B2L** | **B2L**  **A/S** |
| **Basic** | **C/N** | **Ins.** | **A/F** | **Sur.** |
| Network components.  Note: Functions that may be typically integrated into the integrated modular avionics (IMA) modules are, among others:   * Bleed management; * Air pressure control; * Air ventilation and control; * Avionics and cockpit ventilation control, temperature control; * Air traffic communication; * Avionics communication router; * Electrical load management; * Circuit breaker monitoring; * Electrical system built-in test equipment (BITE); * Fuel management; * Braking control; * Steering control; * Landing gear extension and retraction; * Tyre pressure indication; * Oleo pressure indication; * Brake temperature monitoring.   (b) Typical system layouts. |  |  |  |  |  |  |  |
| 3 | — | — | — | — | — | — |
| 13.21 *Cabin systems* ***(ATA 44)***  System architecture, operation and control of systems for:   * passenger in-flight entertainment; * communication within the aircraft (cabin intercommunication data system (CIDS); * communication between the aircraft cabin and ground stations,   including voice, data, music and video transmission. CIDS interface between cockpit/cabin crew and cabin systems;  Data exchange between the different related line replaceable units (LRUs);  Flight attendant panels (FAPs).  CNS server and interfaces with the following systems:   * Data/radio communication system; * Cabin core system (CCS); * In-flight entertainment system (IFES); * External communication system (ECS); * Cabin mass memory system (CMMS); * Cabin monitoring system (CMS); * Miscellaneous cabin systems (MCSs). The CNS may host functions such as: * access to predeparture/departure reports; * email/intranet/internet access; * passenger database. | 3 | — | — | — | — | — | — |

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| **MODULE 13 — AIRCRAFT AERODYNAMICS, STRUCTURES AND SYSTEMS** | **LEVEL** | | | | | | |
| **B2** | **B2L** | **B2L** | **B2L** | **B2L** | **B2L** | **B2L**  **A/S** |
| **Basic** | **C/N** | **Ins.** | **A/F** | **Sur.** |
| 13.22 *Information systems* ***(ATA 46)***  The units and components which furnish a means of storing, updating, and retrieving digital information traditionally provided on paper, microfilm or microfiche. They include units that are dedicated to the information storage and retrieval function, such as the electronic library mass storage and controller, but they do not include units or components installed for other uses and shared with other systems, such as flight deck printer or general-use display.  Typical examples include:   * air traffic and information management systems and network server systems; * aircraft general information system; * flight deck information system; * maintenance information system; * passenger cabin information system; * miscellaneous information systems; * other linked systems. | 3 | — | — | — | — | — | — |

**MODULE 14 — PROPULSION**

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| --- | --- |
| **MODULE 14 — PROPULSION** | **LEVEL** |
| **B2**  **B2L Instruments B2L Airframe &**  **Systems** |
| * 1. *Engines*      1. Constructional arrangement and operation of turbojet, turbofan, turboshaft, and turboprop engines.      2. Constructional arrangement and operation of auxiliary power units (APUs).      3. Constructional arrangement and operation of piston engines.      4. Constructional arrangement and operation of electric and hybrid engines, their electric energy storage and control systems.      5. Electronic engine control and fuel-metering systems (full authority digital engine control (FADEC)). | 1 |
| 1 |
| 1 |
| 2 |
| 2 |
| 14.2 *Electric/electronic engine indication systems*   * Exhaust gas temperature / interstage turbine temperature systems; * Cylinder head temperature, engine coolant temperature, engine speed; * Engine thrust indication: engine pressure ratio, engine turbine discharge pressure or jet pipe pressure systems; * Vibration measurement systems; * Oil pressure and temperature; * Fuel pressure, temperature, and flow; * Manifold pressure; * Engine torque. | 2 |
| 14.3 *Propeller systems*   * Propeller speed indication; * Speed control and pitch change methods — electrical/electronic; * Synchronising and synchrophasing equipment; * Electrical anti-icing/de-icing equipment. | 2 |
| 14.4 *Starting and ignition systems*   * Operation of engine start systems and components; * Ignition systems and components; * Maintenance safety requirements. | 2 |

**MODULE 15 — GAS-TURBINE ENGINE**

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| **MODULE 15 — GAS-TURBINE ENGINE** | **LEVEL** | |
| **A1** | **B1.1 B1.3** |
| **A3** |
| * 1. *Fundamentals*      + Potential energy, kinetic energy, Newton’s laws of motion, Brayton cycle;      + The relationship between force, work, power, energy, velocity, and acceleration;      + Constructional arrangement and operation of turbojet, turbofan, turboshaft, turboprop, and geared turbofan engines. | 1 | 2 |
| 15.2 *Engine performance*   * Gross thrust, net thrust, choked nozzle thrust, thrust distribution, resultant thrust, thrust horsepower, equivalent shaft horsepower, specific fuel consumption; * Engine efficiencies; * By-pass ratio and engine pressure ratio; * Pressure, temperature, and velocity of the gas flow; * Engine ratings, static thrust, influence of speed, altitude and hot climate, flat   rating, limitations. | – | 2 |
| 15.3 *Inlet*   * Compressor inlet ducts; * Effects of various inlet configurations; * Ice protection. | 2 | 2 |
| 15.4 *Compressors*   * Axial and centrifugal types; * Constructional features, operating principles, and applications; * Fan balancing; * Operation: * Causes and effects of compressor stall and surge; * Methods of air-flow control: bleed valves, variable inlet guide vanes, variable stator vanes, rotating stator blades; * Compressor ratio. | 1 | 2 |
| 15.5 *Combustion section*  Constructional features and principles of operation. | 1 | 2 |
| 15.6 *Turbine section*   * Operation and characteristics of different turbine blade types; * Blade-to-disk attachment; * Nozzle guide vanes; * Causes and effects of turbine blade stress and creep. | 2 | 2 |
| 15.7 *Exhaust*   * Constructional features and principles of operation; * Convergent, divergent, and variable area nozzles; * Engine noise reduction; * Thrust reversers. | 1 | 2 |
| 15.8 *Bearings and seals*  Constructional features and principles of operation. | — | 2 |
| 15.9 *Lubricants and fuels*   * Properties and specifications of standard, alternate, and drop-in fuel; * Properties and specifications of lubricants; * Fuel additives; * Safety precautions. | 1 | 2 |

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| **MODULE 15 — GAS-TURBINE ENGINE** | **LEVEL** | |
| **A1** | **B1.1 B1.3** |
| **A3** |
| 15.10 *Lubrication systems*  System operation/layout and components. | 1 | 2 |
| 15.11 *Fuel systems*   * Operation of engine control and fuel-metering systems, including electronic engine control (full authority digital engine control (FADEC)) and electronic power augmentation; * System layout and components. | 1 | 2 |
| 15.12 *Air systems*  Operation of engine air distribution and anti-icing control systems, including internal cooling and sealing, and external air services. | 1 | 2 |
| 15.13 *Starting and ignition systems*   * Operation of engine start systems and components; * Ignition systems and components; * Maintenance safety requirements. | 1 | 2 |
| 15.14 *Engine indication systems*   * Exhaust gas temperature / interstage turbine temperature; * Engine thrust indication: engine pressure ratio, engine turbine discharge pressure or jet pipe pressure systems; * Oil pressure and temperature; * Fuel pressure and flow; * Engine speed; * Vibration measurement and indication; * Torque; * Power. | 1 | 2 |
| 15.15 *Alternate turbine constructions*   * Geared turbofan (GTF); * Variable fan blades; * Open rotor/propfan; * Hybrid turbine-electric concepts and electric power augmentation; * Future trends and developments. | — | 1 |
| 15.16 *Turboprop engines*   * Gas-coupled/free-turbine and gear-coupled turbines; * Reduction gears; * Integrated engine and propeller controls; * Overspeed safety devices. | 1 | 2 |
| 15.17 *Turboshaft engines*  Arrangements, drive systems, reduction gearing, couplings, control systems. | 1 | 2 |
| 15.18 *Auxiliary power units (APUs)*  Purpose, operation, protective systems. | 1 | 2 |
| 15.19 *Power plant installation*  Configuration of firewalls, cowlings, acoustic panels, engine mounts, antivibration mounts, hoses, pipes, feeders, connectors, wiring looms, control cables and rods, lifting  points and drains. | 1 | 2 |
| 15.20 *Fire protection systems*  Operation of fire-detection and fire-extinguishing systems. | 1 | 2 |

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| --- | --- | --- |
| **MODULE 15 — GAS-TURBINE ENGINE** | **LEVEL** | |
| **A1** | **B1.1 B1.3** |
| **A3** |
| 15.21 *Engine monitoring and ground operation*   * Procedures for starting and ground run-up; * Interpretation of engine power output and parameters; * Trend (including oil analysis, vibration and borescope) monitoring; * Inspection of engine and components to criteria, tolerances and data specified by the engine manufacturer; * Compressor washing/cleaning; * Foreign object damage (FOD). | 1 | 3 |
| 15.22 *Engine storage and preservation*  Preservation and depreservation for the engine and its accessories/systems. | — | 2 |

**MODULE 16 — PISTON ENGINE**

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| **MODULE 16 — PISTON ENGINE** | **LEVEL** | |
| **A2 A4** | **B1.2 B1.4**  **B3** |
| * 1. *Fundamentals*      + Mechanical, thermal, and volumetric efficiencies;      + Operating principles: 2-stroke, 4-stroke, Otto, diesel, and rotary (Wankel);      + Piston displacement and compression ratio;      + Engine configuration and firing order. | 1 | 2 |
| 16.2 *Engine performance*   * Power calculation and measurement; * Factors that affect engine power; * Mixtures/leaning, pre-ignition. | 1 | 2 |
| 16.3 *Engine construction*   * Crank case, crank shaft, cam shafts, sumps; * Accessory gearbox; * Cylinder and piston assemblies; * Connecting rods, inlet and exhaust manifolds; * Valve mechanisms; * Propeller reduction gearboxes. | 1 | 2 |
| * 1. *Engine fuel systems*      1. *Carburettors*         + Types, construction, and principles of operation;         + Icing and heating. |  |  |
| 1 | 2 |
| 16.4.2 *Fuel injection systems*  Types, construction, and principles of operation. | 1 | 2 |
| 16.4.3 *Electronic engine control*   * Operation of engine control and fuel-metering systems including electronic engine control (full authority digital engine control (FADEC)); * System layout and components. | 1 | 2 |
| 16.5 *Starting and ignition systems*   * Starting systems, preheat systems; * Magneto types, construction, and principles of operation; * Ignition harnesses, spark plugs; * Low- and high-tension systems. | 1 | 2 |
| 16.6 *Induction, exhaust, and cooling systems*   * Construction and operation of induction systems, including alternate air systems; * Exhaust systems, engine cooling systems — air and liquid. | 1 | 2 |
| 16.7 *Supercharging/turbocharging*   * Principles and purpose of supercharging and its effects on engine parameters; * Construction and operation of supercharging/turbocharging systems; * System terminology; * Control systems; * System protection. | 1 | 2 |
| 16.8 *Lubricants and fuels*   * Properties and specifications of standard, alternate, and drop-in fuel; * Properties and specifications of lubricants; | 1 | 2 |

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| **MODULE 16 — PISTON ENGINE** | **LEVEL** | |
| **A2 A4** | **B1.2 B1.4**  **B3** |
| * Fuel additives; * Safety precautions. |  |  |
| 16.9 *Lubrication systems*  System operation/layout and components. | 1 | 2 |
| 16.10 *Engine indication systems*   * Engine speed; * Cylinder head temperature; * Coolant temperature; * Oil pressure and temperature; * Exhaust gas temperature; * Fuel pressure and flow; * Manifold pressure. | 1 | 2 |
| 16.11 *Power plant installation*  Configuration of firewalls, cowlings, acoustic panels, engine mounts, antivibration mounts, hoses, pipes, feeders, connectors, wiring looms, control cables and rods, lifting  points and drains. | 1 | 2 |
| 16.12 *Engine monitoring and ground operation*   * Procedures for starting and ground run-up; * Interpretation of engine power output and parameters; * Inspection of engine and components: criteria, tolerances, and data specified by the engine manufacturer. | 1 | 3 |
| 16.13 *Engine storage and preservation*  Preservation and depreservation for the engine and its accessories/systems. | — | 2 |
| 16.14 *Alternate piston-engine constructions*  Hybrid piston–electric concepts and electric power augmentation. | 1 | 1 |

#### MODULE 17 — PROPELLER

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| --- | --- | --- |
| **MODULE 17 — PROPELLER** | **LEVEL** | |
| **A1 A2** | **B1.1 B1.2**  **B3** |
| * 1. *Fundamentals*      + Blade element theory;      + High/low blade angle, reverse angle, angle of attack, rotational speed;      + Propeller slip;      + Aerodynamic, centrifugal, and thrust forces;      + Torque;      + Relative airflow on blade angle of attack;      + Vibration and resonance. | 1 | 2 |
| 17.2 *Propeller construction*   * Construction methods and materials used in wooden, composite and metal propellers; * Blade station, blade face, blade shank, blade back / thrust face and hub assembly; * Fixed pitch, controllable pitch, constant speeding propeller; * Propeller/spinner installation. | 1 | 2 |
| 17.3 *Propeller pitch control*   * Speed control and pitch change methods — mechanical and electrical/electronic; * Feathering and reverse pitch; * Overspeed protection. | 1 | 2 |
| 17.4 *Propeller synchronising*  Synchronising and synchrophasing equipment. | — | 2 |
| 17.5 *Propeller ice protection*  Fluid and electrical de-icing equipment. | 1 | 2 |
| 17.6 *Propeller maintenance*   * Static and dynamic balancing; * Blade tracking; * Assessment of blade damage, erosion, corrosion, impact damage, delamination; * Propeller treatment/repair schemes; * Propeller engine running. | 1 | 3 |
| 17.7 *Propeller storage and preservation*  Propeller preservation and depreservation. | 1 | 2 |

**AMC1 Appendix I — Basic Knowledge Requirements (except for category L licence) Section 3**

*ED Decision 2023/019/R*

**Basic training methods**

Training methods are categorised as follows: ‘instructor-centred training’, ‘student-centred training’, and ‘blended training’.

The actual training method and training tools should be adapted to suit the training subject and be chosen considering their intrinsic characteristics, such as but not limited to their efficiency and the pedagogical benefits of the training method/tool.

Basic training modules 7, 9, 11, 12, 13, 14, 15, 16 and 17 should not normally be taught solely through a student-centred method unless provisions are in place to verify the actual and progressive acquisition of knowledge, skills and attitude by the student.

**Appendix II — Basic examination standard (except for category L licence)**

1. General

*Regulation (EU) 2023/989*

* 1. All basic examinations shall be carried out using the multi-choice question format and essay questions as specified below. The incorrect alternatives shall seem equally plausible to anyone ignorant of the subject. All of the alternatives shall be clearly related to the question and of similar vocabulary, grammatical construction and length. In numerical questions, the incorrect answers shall correspond to procedural errors such as corrections applied in the wrong sense or incorrect unit conversions: they shall not be mere random numbers.
  2. Each multi-choice question shall have three alternative answers of which only one shall be the correct answer and the candidate shall be allowed a time per module which is based upon a nominal average of 75 seconds per question.
  3. Each essay question requires the preparation of a written answer and the candidate shall be allowed 20 minutes to answer each such question.
  4. Suitable essay questions shall be drafted and evaluated using the knowledge syllabus in [Appendix I](#_bookmark104) Module 7.
  5. Each question will have a model answer drafted for it, which will also include any known alternative answers that may be relevant for other subdivisions.
  6. The model answer will also be broken down into a list of the important points known as Key Points.
  7. The pass mark for each module and sub-module multi-choice part of the examination is 75 %.
  8. The pass mark for each essay question is 75 % in that the candidates answer shall contain 75 % of the required key points addressed by the question and no significant error related to any required key point.
  9. If either the multi-choice part only or the essay part only is failed, then it is only necessary to retake the multi-choice or essay part, as appropriate.
  10. Penalty marking systems shall not be used to determine whether a candidate has passed.
  11. An examination in a module may not be retaken earlier than 90 days following the date of a failed examination in that module, except in the case of a maintenance training organisation approved in accordance with Annex IV (Part-147) which delivers a course of retraining tailored to the failed subjects in the particular module; the failed module may be retaken after 30 days.
  12. Basic knowledge examinations with a maximum allowed time of more than 90 or more than 180 minutes may be split in two or three partial exams respectively.

Each partial exam shall:

* + 1. be complementary to the other partial exam or exams taken by the candidate, ensuring that the combination of partial exams meets the examination requirements for the subject module;
    2. be of similar allowed time;
    3. be passed with 75 % or more of the questions answered correctly;
    4. contain a number of questions that is multiple of four;
    5. be listed on the same certificate of recognition issued after the last partial exam has been successfully passed. That certificate of recognition shall list the dates and the results of the partial exams – without averaging the results;
    6. be taken within the same organisation, following the normal examination provisions for retaking failed exams.
  1. The maximum number of attempts for each examination is three in a 12-month period.

The applicant shall provide in a written statement to the approved maintenance training organisation or the competent authority to which they apply for an examination, the number, and dates of attempts during the 12 months preceding the examination, and the organisation or the competent authority where those attempts took place. The approved maintenance training organisation or the competent authority is responsible for checking the number of attempts within the applicable time frames.

1.14 While it is accepted that the subject matter of the questions may be the same, the questions used as part of the MBT learning programme shall not be used in examinations.

1. Number of questions per module
   1. MODULE 1 – MATHEMATICS

Category A: 16 multiple-choice, no essay questions. Time allowed: 20 minutes.

Category B1, B2, B2L and B3: 32 multiple-choice, no essay questions. Time allowed: 40 minutes.

* 1. MODULE 2 – PHYSICS

Category A and B3: 32 multiple-choice, no essay questions. Time allowed: 40 minutes.

Category B1, B2 and B2L: 52 multiple-choice, no essay questions. Time allowed: 65 minutes.

* 1. MODULE 3 – ELECTRICAL FUNDAMENTALS

Category A: 20 multiple-choice, no essay questions. Time allowed: 25 minutes.

Category B3: 24 multiple-choice, no essay questions.

Time allowed: 30 minutes.

*Regulation (EU) 2023/989*

Category B1, B2 and B2L: 52 multiple-choice, no essay questions. Time allowed: 65 minutes.

* 1. MODULE 4 —ELECTRONICS FUNDAMENTALS

Category B1 and B3: 20 multiple-choice, no essay questions. Time allowed: 25 minutes.

Category B2 and B2L: 40 multiple-choice, no essay questions. Time allowed: 50 minutes.

* 1. MODULE 5 – DIGITAL TECHNIQUES/ELECTRONIC INSTRUMENT SYSTEMS

Category A and B3: 20 multiple-choice, no essay questions. Time allowed: 25 minutes.

Category B1: 40 multiple-choice, no essay questions. Time allowed: 50 minutes.

Category B2 and B2L: 72 multiple-choice, no essay questions. Time allowed: 90 minutes.

* 1. MODULE 6 – MATERIALS AND HARDWARE

Category A: 52 multiple-choice, no essay questions. Time allowed: 65 minutes.

Category B1 and B3: 80 multiple-choice, no essay questions. Time allowed: 100 minutes.

Category B2 and B2L: 60 multiple-choice, no essay questions. Time allowed: 75 minutes.

* 1. MODULE 7 – MAINTENANCE PRACTICES

Category A: 76 multiple-choice and 2 essay questions. Time allowed: 95 minutes plus 40 minutes.

Category B1 and B3: 80 multiple-choice and 2 essay questions. Time allowed: 100 minutes plus 40 minutes.

Category B2 and B2L: 60 multiple-choice and 2 essay questions. Time allowed: 75 minutes plus 40 minutes.

* 1. MODULE 8 – BASIC AERODYNAMICS

Category A, B3, B1, B2 and B2L: 24 multiple-choice, no essay questions. Time allowed: 30 minutes.

* 1. MODULE 9 – HUMAN FACTORS

Category A, B1, B3, B2 and B2L: 28 multiple-choice, no essay questions. Time allowed: 35 minutes.

* 1. MODULE 10 – AVIATION LEGISLATION

Category A: 32 multiple-choice, no essay questions. Time allowed: 40 minutes.

Category B1, B3, B2 and B2L: 44 multiple-choice, no essay questions. Time allowed: 55 minutes.

* 1. MODULE 11 AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS

Category A1: 108 multiple-choice, no essay questions. Time allowed: 135 minutes.

Category A2: 72 multiple-choice, no essay questions. Time allowed: 90 minutes.

Category B1.1: 140 multiple-choice, no essay questions. Time allowed: 175 minutes.

Category B1.2: 100 multiple-choice, no essay questions. Time allowed: 125 minutes.

Category B3: 60 multiple-choice, no essay questions. Time allowed: 75 minutes.

* 1. MODULE 12 – HELICOPTER AERODYNAMICS, STRUCTURES AND SYSTEMS:

Category A: 100 multiple-choice, no essay questions. Time allowed: 125 minutes.

Category B1.3 and B1.4: 128 multiple-choice, no essay questions. Time allowed: 160 minutes.

* 1. MODULE 13 – AIRCRAFT AERODYNAMICS, STRUCTURES AND SYSTEMS

Category B2: 188 multiple-choice, no essay questions. Time allowed: 235 minutes.

Category B2L:

|  |  |  |
| --- | --- | --- |
| **System rating** | **Number of multiple- choice questions** | **Time allowed (minutes)** |
| **Basic requirements**  **(Submodules 13.1, 13.2, 13.5 and 13.9)** | 32 | 40 |
| **COM/NAV**  **(Submodule 13.4(a))** | 24 | 30 |
| **INSTRUMENTS**  **(Submodule 13.8)** | 20 | 25 |
| **AUTOFLIGHT**  **(Submodules 13.3 and 13.7)** | 28 | 35 |
| **SURVEILLANCE**  **(Submodule 13.4(b))** | 20 | 25 |
| **AIRFRAME SYSTEMS** | 52 | 65 |

**(Submodules 13.11 to 13.19)**

* 1. MODULE 14 — PROPULSION

Category B2 and B2L: 32 multiple-choice, no essay questions. Time allowed: 40 minutes.

NOTE: The B2L examination for Module 14 is only applicable to the ‘Instruments’ and ‘Airframe Systems’ ratings.

* 1. MODULE 15 – GAS TURBINE ENGINE

Category A1 and A3: 60 multiple-choice, no essay questions. Time allowed: 75 minutes.

Category B1.1 and B1.3: 92 multiple-choice, no essay questions. Time allowed: 115 minutes.

* 1. MODULE 16 – PISTON ENGINE

Category A2 and A4: 52 multiple-choice, no essay questions. Time allowed: 65 minutes.

Category B3, B1.2 and B1.4: 76 multiple-choice, no essay questions. Time allowed: 95 minutes.

* 1. MODULE 17 – PROPELLER

Category A1 and A2: 20 multiple-choice, no essay questions. Time allowed: 25 minutes.

Category B3, B1.1 and B1.2: 32 multiple-choice, no essay questions. Time allowed: 40 minutes.

**AMC1 Appendix II — Basic examination standard (except for category L licence)**

*ED Decision 2023/019/R*

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 B2L**  **B3** |
| Total number for the module: | 16 | 32 |

|  |  |  |
| --- | --- | --- |
| *1.1 Arithmetic* | 6 | 6 |
| *1.2 Algebra*:   1. Simple algebraic expressions; 2. Equations. |  |  |
| 5 | 4 |
| — | 12 |
| *1.3 Geometry*:   1. Simple geometrical constructions; 2. Graphical representation; 3. Trigonometry. |  |  |
| — | 3 |
| 5 | 4 |
| — | 3 |

**MODULE 2 — PHYSICS**

|  |  |  |
| --- | --- | --- |
| **MODULE 2 — PHYSICS** | **Nr of questions** | |
| **A B3** | **B1 B2 B2L** |
| Total number for the module: | 32 | 52 |
| *2.1 Matter* | 4 | 5 |
| * 1. *Mechanics*      1. *Statics* | 6 | 7 |
| *2.2.2 Kinetics* | 6 | 7 |
| * + 1. *Dynamics:*        1. Mass, force, and energy;        2. Momentum and conservation of momentum. |  |  |
| 4 | 5 |
| 4 | 4 |
| *2.2.4 Fluid dynamics:*   1. Gravity and density; 2. Viscosity; compressibility on fluids; static, dynamic, and total pressure. |  |  |
| 2 | 2 |
| 2 | 3 |
| *2.3 Thermodynamics:*   1. Temperature; 2. Heat. |  |  |
| 2 | 2 |
| 2 | 8 |
| *2.4 Optics (light)* | — | 5 |
| *2.5 Wave motion and sound* | — | 4 |

**MODULE 3 — ELECTRICS FUNDAMENTALS**

**Nr of questions**

**MODULE 3 — ELECTRICAL FUNDAMENTALS**

**A**

**B1**

**B2 B2L** 52

**B3**

Total number for the module:

20

24

* 1. *Electron theory*
  2. *Static electricity and conduction*
  3. *Electrical terminology*
  4. *Generation of electricity*
  5. *Sources of DC electricity*
  6. *DC circuits*

2

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2 2

3 2

2 2

2 2

3 3

2 1

* 1. Resistance/resistor:
     1. Resistance;
     2. Resistors.
  2. *Power*
  3. *Capacitance/capacitor*
  4. *Magnetism:*

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3 1

2 —

3 1

4 1

1. Theory of magnetism; — 3 1
2. Magnetomotive force. — 1 1
   1. *Inductance/inductor* — 4 1
   2. *DC motor/generator theory* — 3 1
   3. *AC theory* 5 3 1
   4. *Resistive (R), capacitive (C) and inductive (L) circuits* — 3 1
   5. *Transformers* — 3 1
   6. *Filters* — 1 —
   7. *AC generators* — 3 1
   8. *AC motors* — 2 1

**MODULE 4 — ELECTRONICS FUNDAMENTALS**

|  |  |  |  |
| --- | --- | --- | --- |
| **MODULE 4 — ELECTRONICS FUNDAMENTALS** | **Nr of questions** | | |
| **A** | **B1**  **B3** | **B2**  **B2L** |
| Total number for the module: | — | 20 | 40 |
| * 1. *Semiconductors* |  |  |  |
| * + 1. *Diodes:*        1. Description and characteristics;        2. Operation and function. | — | 8 | 8 |
| — | — | 7 |
| *4.1.2 Transistors:*   1. Description and characteristics; 2. Construction and operation. | — | 4 | 4 |
| — | — | 7 |
| *4.1.3 Integrated circuits:*   1. Basic description and operation; 2. Description and operation. | — | 3 | 2 |
| — | — | 4 |
| *4.2 Printed circuit boards* | — | 2 | 3 |
| *4.3 Servomechanisms:*   1. Principles; 2. Construction, operation, and use. | — | 3 | 2 |
| — | — | 3 |

**MODULE 5 — DIGITAL TECHNIQUES / ELECTRONIC INSTRUMENT SYSTEMS**

**Nr of questions**

**MODULE 5 — DIGITAL TECHNIQUES / ELECTRONIC INSTRUMENT SYSTEMS**

**A**

**B3 B1**

Total number for the module: 20 20 40

**B2**

**B2L**

72

* 1. *Electronic instrument systems*
  2. *Numbering systems*
  3. *Data conversion*
  4. *Data buses*
  5. *Logic circuits:*

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* — 3
* — 3

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1. Identification and applications; — — 3 4
2. Interpretation of logic diagrams. — — — 4

*5.6 Basic computer structure:*

1. Computer terminology and technology;
2. Computer operation.
   1. *Microprocessors*
   2. *Integrated circuits*
   3. *Multiplexing*
   4. *Fibre optics*
   5. *Electronic displays*
   6. *Electrostatic sensitive devices*
   7. *Software management control*
   8. *Electromagnetic environment*

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* — — 4
* — 3 3

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6 6 4 5

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* 1 3 4

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| *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 B2L** |
| Total number for the module: | 52 | 80 | 60 |
| * 1. *Aircraft materials — ferrous:*      1. Alloy steels used in aircraft;      2. Testing of ferrous materials;      3. Repair and inspection procedures. | 3 | 3 | 3 |
| — | 2 | 1 |
| — | 2 | 1 |
| *6.2 Aircraft materials — non-ferrous:*   1. Characteristics; 2. Testing of non-ferrous materials; 3. Repair and inspection procedures. | 3 | 4 | 3 |
| — | 3 | 2 |
| — | 2 | 1 |
| * 1. *Aircraft materials — composite and non-metallic*      1. Composite and non-metallic other than wood and fabric:         1. Characteristics;         2. Detection of defects;         3. Repairs and inspection procedures. | 2 | 4 | 3 |
| 2 | 4 | — |
| — | 2 | 2 |
| *6.3.2 Wooden structures* | 3 | 4 | — |
| *6.3.3 Fabric covering* | — | 4 | — |
| *6.4 Corrosion:*   1. Chemical fundamentals; 2. Types of corrosion. | 3 | 3 | 3 |
| 4 | 5 | 3 |
| * 1. *Fasteners*      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:*   1. Identification; 2. Standard unions. | 1 | 1 | 1 |
| 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** | **B2 B2L** |
| **B3** |
| 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 | — |
| * 1. *Material handling*      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:*   1. Centre-of-gravity calculation; 2. Aircraft weighing. | — | 2 | 2 |
| — | 1 | — |
| *7.17 Aircraft handling and storage* | 7 | 5 | 6 |
| *7.18 Disassembly, inspection, repair, and assembly techniques:*   1. Types of defects and visual inspection techniques; 2. General repair methods — structural repair manual; 3. Non-destructive inspection techniques; 4. Disassembly and reassembly techniques; 5. Troubleshooting techniques. | 2 | 2 | 2 |
| — | 2 | — |
| — | 1 | 1 |
| 2 | 1 | 1 |
| — | 1 | 1 |
| *7.19 Abnormal events:*   1. Inspections following lightning strikes and HIRF penetration; 2. Inspections following abnormal events such as heavy landing and flight through turbulence. | 2 | 1 | 2 |
| 2 | 1 | — |
| *7.20 Maintenance procedures* | 6 | 6 | 6 |
| *7.21 Documentation and communication* | 4 | 4 | 4 |

**MODULE 8 — BASIC AERODYNAMICS**

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| --- | --- | --- | --- |
| **MODULE 8 — BASIC AERODYNAMICS** | | **Nr of questions** | |
| **A B3** | **B1 B2**  **B2L** |
| 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**

Total number for the module:

**Nr of questions ALL**

28

* 1. *General* 3
  2. *Human performance and limitations* 3
  3. *Social psychology* 2
  4. *Factors that affect human performance* 3
  5. *Physical environment* 2
  6. *Tasks* 2
  7. *Communication* 3
  8. *Human error* 4
  9. *Safety management* 2
  10. *The ‘Dirty Dozen’ and risk-mitigation* 4

#### MODULE 10 — AVIATION LEGISLATION

**Nr of questions**

**B1**

**MODULE 10 — AVIATION LEGISLATION**

**A**

Total number for the module:

32

**B2**

**B2L B3** 44

* 1. *Regulatory framework*
  2. *Certifying staff — maintenance*
  3. *Approved maintenance organisations*
  4. *Independent certifying staff*
  5. *Air operations*
  6. *Certification of aircraft, parts, and appliances*
  7. *Continuing airworthiness*
  8. *Oversight principles in continuing airworthiness*
  9. *Maintenance and certification beyond the current EU regulations (if not superseded by EU requirements)*
  10. *Cybersecurity in aviation maintenance*

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**MODULE 11 — AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS**

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| **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)****:* |  |  |  |  |  |
| 1. General concepts; 2. Airworthiness requirements for structural strength; | 3 | 3 | 4 | 3 | 2 |
| 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 |

**MODULE 11 — AEROPLANE AERODYNAMICS, STRUCTURES**

**Nr of questions**

**AND SYSTEMS**

* 1. *Air conditioning and cabin pressurisation* ***(ATA 21)****:*

1. Pressurisation;
2. Air supply;
3. Air conditioning;
4. Safety and warning devices;
5. Heating and ventilation system.
   1. *Instruments / avionics systems*
      1. *Instrument systems* ***(ATA 31)***

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**B1.2 B3**

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* + 1. *Avionics systems*

Fundamentals of system layouts and operation of:

* + - * Autoflight **(ATA 22)**;
      * Communications **(ATA 23)**;
      * Navigation systems **(ATA 34)**.
  1. *Electrical power* ***(ATA 24)***
  2. *Equipment and furnishings* ***(ATA 25)***

1. Emergency equipment;
2. Cabin and cargo layout.
   1. *Fire protection* ***(ATA 26)***
3. Fire and smoke detection system and fire- extinguishing systems;
4. Portable fire extinguisher.
   1. *Flight controls* ***(ATA 27)***
5. Primary and secondary flight controls;
6. Actuation and protection;
7. System operation;
8. Balancing and rigging.
   1. *Fuel systems* ***(ATA 28/47)***
9. Systems layout;
10. Fuel handling;
11. Indications and warnings;
12. Special systems;
13. Balancing.
    1. *Hydraulic power* ***(ATA 29)***
14. System description;
15. System operation (1);

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| **MODULE 11 — AEROPLANE AERODYNAMICS, STRUCTURES AND SYSTEMS** | **Nr of questions** | | | | |
| **A1** | **A2** | **B1.1** | **B1.2** | **B3** |
| (c) System operation (2). | 2 | — | 2 | — | — |
| *11.12 Ice and rain protection* ***(ATA 30)***   1. Principles; 2. De-icing; 3. Anti-icing; 4. Wipers; 5. Rain-repellent systems. | 1 | 1 | 2 | 2 | 1 |
| 1 | 1 | 2 | 2 | 1 |
| 1 | — | 2 | — | — |
| 1 | 1 | 2 | 2 | 1 |
| 2 | — | 2 | — | — |
| *11.13 Landing gear* ***(ATA 32****)*   1. Description; 2. System operation; 3. Air–ground sensing; 4. Tail protection. | 3 | 3 | 4 | 3 | 1 |
| 3 | 3 | 4 | 2 | 1 |
| 1 | — | 1 | — | — |
| 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)***   1. Systems; 2. Pumps. | 3 | 3 | 3 | 3 | 2 |
| 3 | 3 | 3 | 3 | 2 |
| *11.17 Water/waste* ***(ATA 38)***   1. Systems; 2. Corrosion. | 2 | 2 | 2 | 2 | 1 |
| 1 | 1 | 1 | 1 | 1 |
| *11.18 Onboard maintenance systems* ***(ATA 45)*** | 3 | — | 3 | — | — |
| *11.19 Integrated modular avionics (IMA)* ***(ATA 42)***   1. Overall system description and theory; 2. Typical system layouts. | 1 | — | 1 | — | — |
| 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

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| **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 |

**MODULE 12 — HELICOPTER AERODYNAMICS, STRUCTURES AND SYSTEMS**

**Nr of questions**

* 1. Blade tracking and vibration analysis (ATA 18)
  2. Transmission
  3. Airframe structures (ATA 51)

1. General concept;
2. Construction methods of the principal elements.
   1. Air conditioning (ATA 21)
      1. Air supply
      2. Air conditioning
   2. Instruments / avionics systems
      1. Instrument systems (ATA 31)
      2. Avionics systems

Fundamentals of system layouts and operation of:

* + - * Autoflight (ATA 22);
      * Communications (ATA 23);
      * Navigation systems (ATA 34).
  1. Electrical power (ATA 24)
  2. Equipment and furnishings (ATA 25)

1. Emergency equipment: Seats, harnesses, and belts; Lifting systems.
2. Emergency flotation systems: Cabin layout, cargo retention; Equipment layout;

Cabin furnishing installation.

* 1. Fire protection (ATA 26)

1. Fire and smoke detection systems and fire-extinguishing systems;
2. Portable fire extinguishers.
   1. Fuel systems (ATA 28)
   2. Hydraulic power (ATA 29)
   3. Ice and rain protection (ATA 30)
   4. Landing gear (ATA 32)
3. System description and operation;
4. Sensors.
   1. Lights (ATA 33)
   2. (Reserved)
   3. Integrated modular avionics (IMA) (ATA 42)
5. Overall system description and theory;
6. Typical system layouts.
   1. Onboard maintenance systems (ATA 45) Central maintenance computers;

Data-loading system;

Electronic library system.

* 1. Information systems (ATA 46)

**A3 B1.3**

**A4 B1.4**

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3 4

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2 2

#### MODULE 13 — AIRCRAFT AERODYNAMICS, STRUCTURES AND SYSTEMS

**C/N**: Communication and Navigation; **Ins.**: instruments; **A/F**: Autoflight; **Sur.**: Surveillance; **A/S**: Airframe and Systems

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| **MODULE 13 — AIRCRAFT AERODYNAMICS, STRUCTURES AND SYSTEMS** | **Nr of questions** | | | | | | |
| **B2** | **B2L**  **Basic** | **B2L**  **C/N** | **B2L**  **Ins.** | **B2L**  **A/F** | **B2L**  **Sur.** | **B2L**  **A/S** |
| Total number for the module: | 188 | 32 | 24 | 20 | 28 | 20 | 50 |
| * 1. *Theory of flight*      1. Aeroplane aerodynamics and flight controls;      2. Rotary wing aerodynamics. | 3 | 3 | — | — | — | — | — |
| 1 | 1 | — | — | — | — | — |
| *13.2 Structures — general concepts* ***(ATA 51*)**   1. General concepts; 2. Fundamentals of structural systems. | 4 | 4 | — | — | — | — | — |
| 4 | 4 | — | — | — | — | — |
| *13.3 Autoflight* ***(ATA 22)***   1. Fundamentals of automatic flight control; 2. Autothrottle systems and automatic landing systems. | 16 | — | — | — | 8 | — | — |
| 8 | — | — | — | 8 | — | — |
| *13.4 Communication/navigation* ***(ATA 23/34)***   1. Fundamentals of communication and navigation systems; 2. Fundamentals of aircraft surveillance systems. | 24 | — | 24 | — | — | — | — |
| 3 | — | — | — | — | 20 | — |
| *13.5 Electrical power (ATA 24)* | 13 | 13 | — | — | — | — | — |
| *13.6 Equipment and furnishings* ***(ATA 25)*** | 5 | — | — | — | — | — | — |
| 13.7 *Flight controls*   1. Primary and secondary flight controls **(ATA 27)**; 2. Actuation and protection; 3. System operation; 4. Rotorcraft flight controls **(ATA 67)**. | 4 | — | — | — | 3 | — | — |
| 4 | — | — | — | 3 | — | — |
| 2 | — | — | — | 3 | — | — |
| 2 | — | — | — | 3 | — | — |
| *13.8 Instruments (ATA 31)* | 20 | — | — | 20 | — | — | — |
| *13.9 Lights (ATA 33)* | 7 | 7 | — | — | — | — | — |
| *13.10 Onboard maintenance systems* ***(ATA 45)*** | 5 | – | – | – | – | – | – |
| *13.11 Air conditioning and cabin pressurisation* ***(ATA 21)***   1. Pressurisation; 2. Air supply; 3. Air conditioning; 4. Safety and warning devices. | 2 | — | — | — | — | — | 2 |
| 2 | — | — | — | — | — | 2 |
| 2 | — | — | — | — | — | 2 |
| 2 | — | — | — | — | — | 2 |
| 13.12 *Fire protection* ***(ATA 26)***   1. Fire and smoke detection system and fire- extinguishing systems; 2. Portable fire extinguisher. | 2 | — | — | — | — | — | 2 |
| 1 | — | — | — | — | — | 1 |
| 13.13 *Fuel systems* ***(ATA 28, ATA 47)***   1. System layout; 2. Fuel handling; 3. Indications and warnings; 4. Special systems; 5. Balancing. | 2 | — | — | — | — | — | 2 |
| 2 | — | — | — | — | — | 2 |
| 2 | — | — | — | — | — | 2 |
| 2 | — | — | — | — | — | 2 |
| 1 | — | — | — | — | — | 1 |

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| **MODULE 13 — AIRCRAFT AERODYNAMICS, STRUCTURES AND SYSTEMS** | **Nr of questions** | | | | | | |
| **B2** | **B2L**  **Basic** | **B2L** | **B2L** | **B2L** | **B2L** | **B2L**  **A/S** |
| **C/N** | **Ins.** | **A/F** | **Sur.** |
| *13.14 Hydraulic power* ***(ATA 29)***   1. System layout; 2. System operation (1); 3. System operation (2). | 1 | — | — | — | — | — | 1 |
| 5 | — | — | — | — | — | 4 |
| 5 | — | — | — | — | — | 4 |
| *13.15 Ice and rain protection* ***(ATA 30)***   1. Principles; 2. De-icing; 3. Anti-icing; 4. Wiper systems; 5. Rain repellent. | 1 | — | — | — | — | — | 1 |
| 2 | — | — | — | — | — | 2 |
| 1 | — | — | — | — | — | 1 |
| 1 | — | — | — | — | — | 1 |
| 1 | — | — | — | — | — | 1 |
| *13.16 Landing gear* ***(ATA 32)***   1. Description; 2. System; 3. Air–ground sensing. | 1 | — | — | — | — | — | 1 |
| 3 | — | — | — | — | — | 3 |
| 3 | — | — | — | — | — | 3 |
| *13.17 Oxygen* ***(ATA 35)*** | 2 | – | — | — | — | — | — |
| *13.18 Pneumatic/vacuum* ***(ATA 36)*** | 6 | – | — | — | — | — | 6 |
| *13.19 Water/waste* ***(ATA 38)*** | 2 | – | — | — | — | — | 2 |
| *13.20 Integrated modular avionics (IMA)* ***(ATA 42)***   1. Overall system description and theory; 2. Typical system layouts. | 2 | — | — | — | — | — | — |
| 1 | — | — | — | — | — | — |
| *13.21 Cabin systems* ***(ATA 44)*** | 3 | — | — | — | — | — | — |
| *13.22 Information systems* ***(ATA 46)*** | 3 | — | — | — | — | — | — |

**MODULE 14 — PROPULSION**

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| **MODULE 14 — PROPULSION** | **Nr of questions** |
| **B2**  **B2L Instruments**  **B2L Airframe and Systems** |
| 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**

Total number for the module: 60

**B1.1**

**B1.3**

92

* 1. *Fundamentals*
  2. *Engine performance*
  3. *Inlet*
  4. *Compressors*
  5. *Combustion section*
  6. *Turbine section*
  7. *Exhaust*
  8. *Bearings and seals*
  9. *Lubricants and fuels*
  10. *Lubrication systems*
  11. *Fuel systems*
  12. *Air systems*
  13. *Starting and ignition systems*
  14. *Engine indication systems*
  15. *Alternate turbine constructions*
  16. *Turboprop engines*
  17. *Turboshaft engines*
  18. *Auxiliary power units (APUs)*
  19. *Power plant installation*
  20. *Fire protection systems*
  21. *Engine monitoring and ground operation*
  22. *Engine storage and preservation*

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**MODULE 16 — PISTON ENGINE**

**Nr of**

**questions**

**MODULE 16 — PISTON ENGINE**

**A2**

**A4**

Total number for the module: 52

**B1.2**

**B1.4 B3** 76

* 1. *Fundamentals of piston engines*
  2. *Engine performance*
  3. *Engine construction*
  4. *Engine fuel systems*
     1. *Carburettors*
     2. *Fuel injection systems*
     3. *Electronic engine control*
  5. *Starting and ignition systems*
  6. *Induction, exhaust, and cooling systems*
  7. *Supercharging/turbocharging*
  8. *Lubricants and fuels*
  9. *Lubrication systems*
  10. *Engine indication systems*
  11. *Power plant installation*
  12. *Engine monitoring and ground operation*
  13. *Engine storage and preservation*
  14. *Alternative piston-engine constructions*

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**MODULE 17 — PROPELLER**

**Nr of**

**questions**

**MODULE 17 — PROPELLER**

**A1**

**A2**

Total number for the module: 20

**B1.1**

**B1.2 B3** 32

* 1. *Fundamentals of propellers*
  2. *Propeller construction*
  3. *Propeller pitch control*
  4. *Propeller synchronising*
  5. *Propeller ice protection*
  6. *Propeller maintenance*
  7. *Propeller storage and preservation*

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**Appendix III Aircraft type training and type evaluation standard – on-the-job training (OJT)**

1. General

*Regulation (EU) 2023/989*

Aircraft type training shall consist of theoretical training and examination, and, except for the category C ratings, practical training and assessment.

1. Theoretical training and examination shall comply with the following requirements:
   1. Shall be conducted by a maintenance training organisation appropriately approved in accordance with Annex IV (Part-147) or, when conducted by other organisations, as directly approved by the competent authority.
   2. Shall comply with the standard set out in [point 3.1 of this Appendix](#_bookmark135) and, if existing, the elements defined in the operational suitability data (OSD) established in accordance with Regulation On initial Airowrthiness.
   3. In the case of a category C person qualified by holding an academic degree as specified in point [66.A.30(a)(5),](#_bookmark32) the first relevant aircraft type theoretical training shall be at the category B1 or B2 level.
   4. Shall have been started and completed within the 3 years preceding the application for a type rating endorsement.
2. Practical training and assessment shall comply with the following requirements:
   1. Shall be conducted by a maintenance training organisation appropriately approved in accordance with Annex IV (Part-147) or, when conducted by other organisations, as directly approved by the competent authority.
   2. Shall comply with the standard set out in [point 3.2 of this Appendix](#_bookmark136) and, if existing, the elements defined in the OSD established in accordance with Regulation On initial Airowrthiness.
   3. Shall include a representative cross section of maintenance activities relevant to the aircraft type.
   4. Shall include demonstrations using equipment, components, maintenance simulation training devices (MSTDs), maintenance training devices (MTDs), or real aircraft.
   5. Shall have been started and completed within the 3 years preceding the application for a type rating endorsement.
3. Differences training
   1. Differences training is the training required to cover the training differences between:
      1. two different aircraft type ratings of the same manufacturer as determined by the EASA; or
      2. two different licence categories in respect of the same aircraft type rating.
   2. Differences training has to be defined on a case-to-case basis taking into account the requirements contained in this Appendix III in respect of both theoretical and practical elements of type rating training.
   3. A type rating shall only be endorsed on a licence after differences training when the applicant also complies with one of the following conditions:

* having already endorsed on the licence the aircraft type rating from which the differences are being identified, or
* having completed the type training requirements for the aircraft from which the differences are being identified.
  1. the differences training shall have been started and completed within 3 years preceding the application for the new type rating in the same category (case (a)) or in another category (case (b)).

1. Aircraft type training levels

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

* *Level 1: A brief overview of the airframe, systems and powerplant as outlined in the Systems Description Section of the Aircraft Maintenance Manual/Instructions for Continued Airworthiness.*

Course objectives: Upon completion of Level 1 training, the student will be able to:

* 1. provide a simple description of the whole subject, using common words and examples, using typical terms and identify safety precautions related to the airframe, its systems and powerplant;
  2. identify aircraft manuals, maintenance practices important to the airframe, its systems and powerplant;
  3. define the general layout of the aircraft's major systems;
  4. define the general layout and characteristics of the powerplant;
  5. identify special tooling and test equipment used with the aircraft.
* *Level 2: Basic system overview of controls, indicators, principal components, including their location and purpose, servicing and minor troubleshooting. General knowledge of the theoretical and practical aspects of the subject.*

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

* 1. understand the theoretical fundamentals; apply knowledge in a practical manner using detailed procedures;
  2. recall the safety precautions to be observed when working on or near the aircraft, powerplant and systems;
  3. describe systems and aircraft handling particularly access, power availability and sources;
  4. identify the locations of the principal components;
  5. explain the normal functioning of each major system, including terminology and nomenclature;
  6. perform the procedures for servicing associated with the aircraft for the following systems: Fuel, Power Plants, Hydraulics, Landing Gear, Water/Waste, and Oxygen;
  7. demonstrate proficiency in use of crew reports and on-board reporting systems (minor troubleshooting) and determine aircraft airworthiness per the MEL/CDL;
  8. demonstrate the use, interpretation and application of appropriate documentation including instructions for continued airworthiness, maintenance manual, illustrated parts catalogue, etc.
* *Level 3: Detailed description, operation, component location, removal/installation and bite and troubleshooting procedures to maintenance manual level.*

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

* 1. demonstrate a theoretical knowledge of aircraft systems and structures and interrelationships with other systems, provide a detailed description of the subject using theoretical fundamentals and specific examples and to interpret results from various sources and measurements and apply corrective action where appropriate;
  2. perform system, powerplant, component and functional checks as specified in the aircraft maintenance manual;
  3. demonstrate the use, interpret and apply appropriate documentation including structural repair manual, troubleshooting manual, etc.;
  4. correlate information for the purpose of making decisions in respect of fault diagnosis and rectification to maintenance manual level;
  5. describe procedures for replacement of components unique to aircraft type.

1. Aircraft type training standard

*Regulation (EU) 2023/989*

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

An appropriate training method, or combination of training methods, shall be determined for the entire course or for each of its parts with regard to the scope and objectives of each training phase and taking into consideration the benefits and limitations of the available training methods.

Multimedia-based training (MBT) methods may be used in order to achieve the training objectives either in a physically or in a virtually controlled environment.

* 1. Theoretical element

1. Objective:

*Regulation (EU) 2023/989*

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

1. Level of training:

Training levels are those levels defined in point 2 above.

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

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

1. Duration:

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

|  |  |
| --- | --- |
| **Category** | **Hours** |
| Aeroplanes with a maximum take-off mass above 30000 kg: | |
| B1.1 | 150 |
| B1.2 | 120 |
| B2 | 100 |
| C | 30 |
| Aeroplanes with a maximum take-off mass equal or less than 30000 kg and above 5700 kg: | |
| B1.1 | 120 |
| B1.2 | 100 |
| B2 | 100 |
| C | 25 |
| Aeroplanes with a maximum take-off mass of 5700 kg and below1 | |
| B1.1 | 80 |
| B1.2 | 60 |
| B2 | 60 |
| C | 15 |
| Helicopters2 | |
| B1.3 | 120 |
| B1.4 | 100 |
| B2 | 100 |
| C | 25 |

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

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

1. Justification of course duration:

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

* + the design of the aircraft type, its maintenance needs and the types of operation,
  + detailed analysis of applicable chapters — see contents table in point 3.1(e) below,

1 For non-pressurised piston engine aeroplanes below 2 000 kg MTOM, the minimum duration can be reduced by 50 %.

2 For helicopters in Group 2 (as defined in point 66.A.5), the minimum duration can be reduced by 30 %.

* + detailed competency analysis showing that the objectives as stated in point 3.1(a) above are fully met.

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

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

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

* + The minimum physical and/or virtual classroom attendance required of the trainee, in order to meet the objectives of the course.
  + The maximum number of hours of physical and/or virtual classroom training per day, taking into account pedagogical and human factors principles.

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

1. Content:

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

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

If it exists, the minimum syllabus of the operational suitability data (OSD), established in accordance with Regulation On initial Airworthiness, shall be included.

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| **Level**  **Chapters** | **Aeroplanes turbine** | | **Aeroplanes piston** | | **Helicopters turbine** | | **Helicopters piston** | | **Avionics** |
| **Licence category** | **B1** | **C** | **B1** | **C** | **B1** | **C** | **B1** | **C** | **B2** |
| *Introduction module:* |  |  |  |  |  |  |  |  |  |
| 05 Time limits/maintenance checks | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 06 Dimensions/Areas (MTOM, etc.) | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 07 Lifting and Shoring | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 08 Levelling and weighing | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 09 Towing and taxiing | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 10 Parking/mooring, Storing  and Return to Service | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 11 Placards and Markings | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 12 Servicing | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 20 Standard practices — only type particular | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

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| **Level**  **Chapters** | **Aeroplanes turbine** | | **Aeroplanes piston** | | **Helicopters turbine** | | **Helicopters piston** | | **Avionics** |
| **Licence category** | **B1** | **C** | **B1** | **C** | **B1** | **C** | **B1** | **C** | **B2** |
| *Helicopters* |  |  |  |  |  |  |  |  |  |
| 18 Vibration and Noise Analysis (Blade tracking) | — | — | — | — | 3 | 1 | 3 | 1 | — |
| 60 Standard Practices Rotor | — | — | — | — | 3 | 1 | 3 | 1 | — |
| 62 Rotors | — | — | — | — | 3 | 1 | 3 | 1 | 1 |
| 62A Rotors — Monitoring and indicating | — | — | — | — | 3 | 1 | 3 | 1 | 3 |
| 63 Rotor Drives | — | — | — | — | 3 | 1 | 3 | 1 | 1 |
| 63A Rotor Drives —  Monitoring and indicating | — | — | — | — | 3 | 1 | 3 | 1 | 3 |
| 64 Tail Rotor | — | — | — | — | 3 | 1 | 3 | 1 | 1 |
| 64A Tail rotor — Monitoring and indicating | — | — | — | — | 3 | 1 | 3 | 1 | 3 |
| 65 Tail Rotor Drive | — | — | — | — | 3 | 1 | 3 | 1 | 1 |
| 65A Tail Rotor Drive — Monitoring and indicating | — | — | — | — | 3 | 1 | 3 | 1 | 3 |
| 66 Folding Blades/Pylon | — | — | — | — | 3 | 1 | 3 | 1 | — |
| 67 Rotors Flight Control | — | — | — | — | 3 | 1 | 3 | 1 | — |
| 53 Airframe Structure (Helicopter) | — | — | — | — | 3 | 1 | 3 | 1 | — |
| 25 Emergency Flotation  Equipment | — | — | — | — | 3 | 1 | 3 | 1 | 1 |
| *Airframe structures* |  |  |  |  |  |  |  |  |  |
| 51 Standard practices and structures (damage classification, assessment and  repair) | 3 | 1 | 3 | 1 | — | — | — | — | 1 |
| 53 Fuselage | 3 | 1 | 3 | 1 | — | — | — | — | 1 |
| 54 Nacelles/Pylons | 3 | 1 | 3 | 1 | — | — | — | — | 1 |
| 55 Stabilisers | 3 | 1 | 3 | 1 | — | — | — | — | 1 |
| 56 Windows | 3 | 1 | 3 | 1 | — | — | — | — | 1 |
| 57 Wings | 3 | 1 | 3 | 1 | — | — | — | — | 1 |
| 52 Doors | 3 | 1 | 3 | 1 | — | — | — | — | 1 |
| Zonal and Station Identification Systems. | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| *Airframe systems:* |  |  |  |  |  |  |  |  |  |
| 21 Air Conditioning | 3 | 1 | 3 | 1 | 3 | 1 | 3 | 1 | 3 |
| 21A Air Supply | 3 | 1 | 3 | 1 | 3 | 1 | 3 | 1 | 2 |
| 21B Pressurisation | 3 | 1 | 3 | 1 | 3 | 1 | 3 | 1 | 3 |
| 21C Safety and Warning Devices | 3 | 1 | 3 | 1 | 3 | 1 | 3 | 1 | 3 |

**Chapters**

**Level**

**Aeroplanes turbine**

**Aeroplanes piston**

**Helicopters turbine**

**Helicopters piston**

**Avionics**

**Licence category B1**

1. Autoflight 2
2. Communications 2
3. Electrical Power 3
4. Equipment and Furnishings 3

25A Electronic Equipment 1

including emergency equipment

1. Fire Protection 3
2. Flight Controls 3

27A Sys. Operation: 3

Electrical/Fly-by-Wire

1. Fuel Systems 3

28A Fuel Systems — 3

Monitoring and indicating

1. Hydraulic Power 3

29A Hydraulic Power — 3

Monitoring and indicating

1. Ice and Rain Protection 3
2. Indicating/Recording 3

Systems

31A Instrument Systems 3

1. Landing Gear 3

32A Landing Gear — 3

Monitoring and indicating

1. Lights 3
2. Navigation 2
3. Oxygen 3
4. Pneumatic 3

36A Pneumatic — Monitoring 3

and indicating

1. Vacuum 3
2. Water/Waste 3

41 Water Ballast 3

42 Integrated modular 2

avionics

44 Cabin Systems 2

45 On-Board Maintenance 3

System (or covered in 31)

46 Information Systems 2

47 Nitrogen generation 3

system

50 Cargo and Accessory 3

Compartments

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| **Level**  **Chapters** | **Aeroplanes turbine** | | **Aeroplanes piston** | | **Helicopters turbine** | | **Helicopters piston** | | **Avionics** |
| **Licence category** | **B1** | **C** | **B1** | **C** | **B1** | **C** | **B1** | **C** | **B2** |
| 55/57 Flight control surfaces (All) | 3 | 1 | 3 | 1 | — | — | — | — | 1 |
| *Turbine Engine* |  |  |  |  |  |  |  |  |  |
| 70 Standard Practices — Engines, | 3 | 1 | — | — | 3 | 1 | — | — | 1 |
| 70A constructional arrangement and operation (Installation Inlet, Compressors, Combustion Section, Turbine Section, Bearings and Seals,  Lubrication Systems). | 3 | 1 | — | — | 3 | 1 | — | — | 1 |
| 70B Engine Performance | 3 | 1 | — | — | 3 | 1 | — | — | 1 |
| 71 Powerplant | 3 | 1 | — | — | 3 | 1 | — | — | 1 |
| 72 Engine Turbine/Turbo Prop/Ducted Fan/Unducted fan | 3 | 1 | — | — | 3 | 1 | — | — | 1 |
| 73 Engine Fuel and Control | 3 | 1 | — | — | 3 | 1 | — | — | 1 |
| 75 Air | 3 | 1 | — | — | 3 | 1 | — | — | 1 |
| 76 Engine controls | 3 | 1 | — | — | 3 | 1 | — | — | 1 |
| 78 Exhaust | 3 | 1 | — | — | 3 | 1 | — | — | 1 |
| 79 Oil | 3 | 1 | — | — | 3 | 1 | — | — | 1 |
| 80 Starting | 3 | 1 | — | — | 3 | 1 | — | — | 1 |
| 82 Water Injections | 3 | 1 | — | — | 3 | 1 | — | — | 1 |
| 83 Accessory Gear Boxes | 3 | 1 | — | — | 3 | 1 | — | — | 1 |
| 84 Propulsion Augmentation | 3 | 1 | — | — | 3 | 1 | — | — | 1 |
| 73A FADEC | 3 | 1 | — | — | 3 | 1 | — | — | 3 |
| 74 Ignition | 3 | 1 | — | — | 3 | 1 | — | — | 3 |
| 77 Engine Indicating Systems | 3 | 1 | — | — | 3 | 1 | — | — | 3 |
| 49 Auxiliary Power Units  (APUs) | 3 | 1 | — | — | — | — | — | — | 2 |
| *Piston Engine* |  |  |  |  |  |  |  |  |  |
| 70 Standard Practices — Engines | — | — | 3 | 1 | — | — | 3 | 1 | 1 |
| 70A Constructional arrangement and operation (Installation, Carburettors, Fuel injection systems, Induction, Exhaust and Cooling Systems, Supercharging/Turbochargin,  Lubrication Systems). | — | — | 3 | 1 | — | — | 3 | 1 | 1 |
| 70B Engine Performance | — | — | 3 | 1 | — | — | 3 | 1 | 1 |

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| **Level**  **Chapters** | **Aeroplanes turbine** | | **Aeroplanes piston** | | **Helicopters turbine** | | **Helicopters piston** | | **Avionics** |
| **Licence category** | **B1** | **C** | **B1** | **C** | **B1** | **C** | **B1** | **C** | **B2** |
| 71 Powerplant | — | — | 3 | 1 | — | — | 3 | 1 | 1 |
| 73 Engine Fuel and Control | — | — | 3 | 1 | — | — | 3 | 1 | 1 |
| 76 Engine Control | — | — | 3 | 1 | — | — | 3 | 1 | 1 |
| 79 Oil | — | — | 3 | 1 | — | — | 3 | 1 | 1 |
| 80 Starting | — | — | 3 | 1 | — | — | 3 | 1 | 1 |
| 81 Turbines | — | — | 3 | 1 | — | — | 3 | 1 | 1 |
| 82 Water Injections | — | — | 3 | 1 | — | — | 3 | 1 | 1 |
| 83 Accessory Gear Boxes | — | — | 3 | 1 | — | — | 3 | 1 | 1 |
| 84 Propulsion Augmentation | — | — | 3 | 1 | — | — | 3 | 1 | 1 |
| 73A FADEC | — | — | 3 | 1 | — | — | 3 | 1 | 3 |
| 74 Ignition | — | — | 3 | 1 | — | — | 3 | 1 | 3 |
| 77 Engine Indication Systems | — | — | 3 | 1 | — | — | 3 | 1 | 3 |
| *Propellers* |  |  |  |  |  |  |  |  |  |
| 60A Standard Practices —  Propeller | 3 | 1 | 3 | 1 | — | — | — | — | 1 |
| 61 Propellers/Propulsion | 3 | 1 | 3 | 1 | — | — | — | — | 1 |
| 61A Propeller Construction | 3 | 1 | 3 | 1 | — | — | — | — | — |
| 61B Propeller Pitch Control | 3 | 1 | 3 | 1 | — | — | — | — | — |
| 61C Propeller Synchronising | 3 | 1 | 3 | 1 | — | — | — | — | 1 |
| 61D Propeller Electronic  control | 2 | 1 | 2 | 1 | — | — | — | — | 3 |
| 61E Propeller Ice Protection | 3 | 1 | 3 | 1 | — | — | — | — | — |
| 61F Propeller Maintenance | 3 | 1 | 3 | 1 | — | — | — | — | 1 |

* 1. Practical element

1. Objective:

*Regulation (EU) 2023/989*

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

1. Content:

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

Tasks crossed represent subjects that are important for practical training purposes to ensure that the operation, function, installation and safety significance of key maintenance tasks is adequately addressed; particularly where these cannot be fully explained by theoretical training

alone. Although the list details the minimum practical training subjects, other items may be added where applicable to the particular aircraft type.

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

If it exists, the minimum list of practical tasks of the operational suitability data (OSD), established in accordance with Regulation On initial Airworthiness, shall be part of the practical elements to be selected.

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

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| **Chapters** | **B1/B2** | **B1** | | | | | **B2** | | | | |
| **LOC** | **FOT** | **SGH** | **R/I** | **MEL** | **TS** | **FOT** | **SGH** | **R/I** | **MEL** | **TS** |
| *Introduction module:* |  |  |  |  |  |  |  |  |  |  |  |
| 5 Time limits/maintenance  checks | X/X | — | — | — | — | — | — | — | — | — | — |
| 6 Dimensions/Areas (MTOM, etc.) | X/X | — | — | — | — | — | — | — | — | — | — |
| 7 Lifting and Shoring | X/X | — | — | — | — | — | — | — | — | — | — |
| 8 Levelling and  weighing | X/X | — | X | — | — | — | — | X | — | — | — |
| 9 Towing and taxiing | X/X | — | X | — | — | — | — | X | — | — | — |
| 10 Parking/mooring, Storing and Return to Service | X/X | — | X | — | — | — | — | X | — | — | — |
| 11 Placards and Markings | X/X | — | — | — | — | — | — | — | — | — | — |
| 12 Servicing | X/X | — | X | — | — | — | — | X | — | — | — |
| 20 Standard practices  — only type  particular | X/X | — | X | — | — | — | — | X | — | — | — |
| *Helicopters:* |  |  |  |  |  |  |  |  |  |  |  |
| 18 Vibration and Noise Analysis (Blade  tracking) | X/— | — | — | — | — | X | — | — | — | — | — |
| 60 Standard Practices Rotor — only type  specific | X/X | — | X | — | — | — | — | X | — | — | — |
| 62 Rotors | X/— | — | X | X | — | X | — | — | — | — | — |
| 62A Rotors — Monitoring and indicating | X/X | X | X | X | X | X | — | — | X | — | X |
| 63 Rotor Drives | X/— | X | — | — | — | X | — | — | — | — | — |

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| **Chapters** | **B1/B2** | **B1** | | | | | **B2** | | | | |
| **LOC** | **FOT** | **SGH** | **R/I** | **MEL** | **TS** | **FOT** | **SGH** | **R/I** | **MEL** | **TS** |
| 63A Rotor Drives — Monitoring and indicating | X/X | X | — | X | X | X | — | — | X | — | X |
| 64 Tail Rotor | X/— | — | X | — | — | X | — | — | — | — | — |
| 64A Tail rotor - Monitoring and  indicating | X/X | X | — | X | X | X | — | — | X | — | X |
| 65 Tail Rotor Drive | X/— | X | — | — | — | X | — | — | — | — | — |
| 65A Tail Rotor Drive  — Monitoring and indicating | X/X | X | — | X | X | X | — | — | X | — | X |
| 66 Folding Blades/Pylon | X/— | X | X | — | — | X | — | — | — | — | — |
| 67 Rotors Flight  Control | X/— | X | X | — | X | X | — | — | — | — | — |
| 53 Airframe Structure (Helicopter)  Note: covered under  Airframe structures |  |  |  |  |  |  |  |  |  |  |  |
| 25 Emergency Flotation Equipment | X/X | X | X | X | X | X | X | X | — | — | — |
| *Airframe structures:* |  |  |  |  |  |  |  |  |  |  |  |
| 51 Standard Practices and Structures (damage classification, assessment and  repair) |  |  |  |  |  |  |  |  |  |  |  |
| 53 Fuselage | X/— | — | — | — | — | X | — | — | — | — | — |
| 54 Nacelles/Pylons | X/— | — | — | — | — | — | — | — | — | — | — |
| 55 Stabilisers | X/— | — | — | — | — | — | — | — | — | — | — |
| 56 Windows | X/— | — | — | — | — | X | — | — | — | — | — |
| 57 Wings | X/— | — | — | — | — | — | — | — | — | — | — |
| 52 Doors | X/X | X | X | — | — | — | — | X | — | — | — |
| *Airframe systems:* |  |  |  |  |  |  |  |  |  |  |  |
| 21 Air Conditioning | X/X | X | X | — | X | X | X | X | — | X | X |
| 21A Air Supply | X/X | X | — | — | — | — | X | — | — | — | — |
| 21B Pressurisation | X/X | X | — | — | X | X | X | — | — | X | X |
| 21C Safety and warning Devices | X/X | — | X | — | — | — | — | X | — | — | — |
| 22 Autoflight | X/X | — | — | — | X | — | X | X | X | X | X |
| 23 Communications | X/X | — | X | — | X | — | X | X | X | X | X |
| 24 Electrical Power | X/X | X | X | X | X | X | X | X | X | X | X |

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| **Chapters** | **B1/B2** | **B1** | | | | | **B2** | | | | |
| **LOC** | **FOT** | **SGH** | **R/I** | **MEL** | **TS** | **FOT** | **SGH** | **R/I** | **MEL** | **TS** |
| 25 Equipment and Furnishings | X/X | X | X | X | — | — | X | X | X | — | — |
| 25A Electronic Equipment including emergency  equipment | X/X | X | X | X | — | — | X | X | X | — | — |
| 26 Fire Protection | X/X | X | X | X | X | X | X | X | X | X | X |
| 27 Flight Controls | X/X | X | X | X | X | X | X | — | — | — | — |
| 27A Sys. Operation: Electrical/Fly-by-Wire | X/X | X | X | X | X | — | X | — | X | — | X |
| 28 Fuel Systems | X/X | X | X | X | X | X | X | X | — | X | — |
| 28A Fuel Systems — Monitoring and  indicating | X/X | X | — | — | — | — | X | — | X | — | X |
| 29 Hydraulic Power | X/X | X | X | X | X | X | X | X | — | X | — |
| 29A Hydraulic Power  — Monitoring and indicating | X/X | X | — | X | X | X | X | — | X | X | X |
| 30 Ice and Rain Protection | X/X | X | X | — | X | X | X | X | — | X | X |
| 31  Indicating/Recording Systems | X/X | X | X | X | X | X | X | X | X | X | X |
| 31A Instrument Systems | X/X | X | X | X | X | X | X | X | X | X | X |
| 32 Landing Gear | X/X | X | X | X | X | X | X | X | X | X | — |
| 32A Landing Gear — Monitoring and  indicating | X/X | X | — | X | X | X | X | — | X | X | X |
| 33 Lights | X/X | X | X | — | X | — | X | X | X | X | — |
| 34 Navigation | X/X | — | X | — | X | — | X | X | X | X | X |
| 35 Oxygen | X/— | X | X | X | — | — | X | X | — | — | — |
| 36 Pneumatic | X/— | X | — | X | X | X | X | — | X | X | X |
| 36A Pneumatic — Monitoring and  indicating | X/X | X | X | X | X | X | X | X | X | X | X |
| 37 Vacuum | X/— | X | — | X | X | X | — | — | — | — | — |
| 38 Water/Waste | X/— | X | X | — | — | — | X | X | — | — | — |
| 41 Water Ballast | X/— | — | — | — | — | — | — | — | — | — | — |
| 42 Integrated modular avionics | X/X | — | — | — | — | — | X | X | X | X | X |
| 44 Cabin Systems | X/X | — | — | — | — | — | X | X | X | X | X |
| 45 On-Board Maintenance System  (or covered in 31) | X/X | X | X | X | X | X | X | X | X | X | X |

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| **Chapters** | **B1/B2** | **B1** | | | | | **B2** | | | | |
| **LOC** | **FOT** | **SGH** | **R/I** | **MEL** | **TS** | **FOT** | **SGH** | **R/I** | **MEL** | **TS** |
| 46 Information Systems | X/X | — | — | — | — | — | X | — | X | X | X |
| 47 Nitrogen  generation system | X/X | X | X | X | X | X | X | — | — | — | X |
| 50 Cargo and Accessory  Compartments | X/X | — | X | — | — | — | — | — | — | — | — |
| 55/57 Flight control surfaces | X/— | — | — | — | — | X | — | — | — | — | — |
| *Turbine/Piston Engine Module:* |  |  |  |  |  |  |  |  |  |  |  |
| 70 Standard Practices  — Engines — only type particular | — | — | X | — | — | — | — | X | — | — | — |
| 70A Constructional arrangement and operation (Installation Inlet, Compressors, Combustion Section, Turbine Section, Bearings and Seals,  Lubrication Systems) | X/X | — | — | — | — | — | — | — | — | — | — |
| *Turbine engines:* |  |  |  |  |  |  |  |  |  |  |  |
| 70B Engine  Performance | — | — | — | — | — | X | — | — | — | — | — |
| 71 Power Plant | X/— | X | X | — | — | — | — | X | — | — | — |
| 72 Engine Turbine/Turbo  Prop/Ducted Fan/ Unducted fan | X/— | — | — | — | — | — | — | — | — | — | — |
| 73 Engine Fuel and Control | X/X | X | — | — | — | — | — | — | — | — | — |
| 73A FADEC Systems | X/X | X | — | X | X | X | X | — | X | X | X |
| 74 Ignition | X/X | X | — | — | — | — | X | — | — | — | — |
| 75 Air | X/— | — | — | X | — | X | — | — | — | — | — |
| 76 Engine Controls | X/— | X | — | — | — | X | — | — | — | — | — |
| 77 Engine Indicating | X/X | X | — | — | X | X | X | — | — | X | X |
| 78 Exhaust | X/— | X | — | — | X | — | — | — | — | — | — |
| 79 Oil | X/— | — | X | X | — | — | — | — | — | — | — |
| 80 Starting | X/— | X | — | — | X | X | — | — | — | — | — |
| 82 Water Injection | X/— | X | — | — | — | — | — | — | — | — | — |
| 83 Accessory Gearboxes | X/— | — | X | — | — | — | — | — | — | — | — |

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| **Chapters** | **B1/B2** | **B1** | | | | | **B2** | | | | |
| **LOC** | **FOT** | **SGH** | **R/I** | **MEL** | **TS** | **FOT** | **SGH** | **R/I** | **MEL** | **TS** |
| 84 Propulsion Augmentation | X/— | X | — | — | — | — | — | — | — | — | — |
| *Auxiliary Power Units (APUs):* |  |  |  |  |  |  |  |  |  |  |  |
| 49 Auxiliary Power Units (APUs) | X/— | X | X | — | — | X | — | — | — | — | — |
| *Piston Engines:* |  |  |  |  |  |  |  |  |  |  |  |
| 70 Standard Practices  — Engines — only  type particular | — | — | X | — | — | — | — | X | — | — | — |
| 70A Constructional arrangement and operation (Installation Inlet, Compressors, Combustion Section, Turbine Section, Bearings and Seals,  Lubrication Systems) | X/X | — | — | — | — | — | — | — | — | — | — |
| 70B Engine Performance | — | — | — | — | — | X | — | — | — | — | — |
| 71 Power Plant | X/— | X | X | — | — | — | — | X | — | — | — |
| 73 Engine Fuel and  Control | X/X | X | — | — | — | — | — | — | — | — | — |
| 73A FADEC Systems | X/X | X | — | X | X | X | X | X | X | X | X |
| 74 Ignition | X/X | X | — | — | — | — | X | — | — | — | — |
| 76 Engine Controls | X/— | X | — | — | — | X | — | — | — | — | — |
| 77 Engine Indicating | X/X | X | — | — | X | X | X | — | — | X | X |
| 78 Exhaust | X/— | X | — | — | X | X | — | — | — | — | — |
| 79 Oil | X/— | — | X | X | — | — | — | — | — | — | — |
| 80 Starting | X/— | X | — | — | X | X | — | — | — | — | — |
| 81 Turbines | X/— | X | X | X | — | X | — | — | — | — | — |
| 82 Water Injection | X/— | X | — | — | — | — | — | — | — | — | — |
| 83 Accessory Gearboxes | X/— | — | X | X | — | — | — | — | — | — | — |
| 84 Propulsion  Augmentation | X/— | X | — | — | — | — | — | — | — | — | — |
| *Propellers:* |  |  |  |  |  |  |  |  |  |  |  |
| 60A Standard Practices — Propeller | — | — | — | X | — | — | — | — | — | — | — |
| 61 Propellers/ Propulsion | X/X | X | X | — | X | X | — | — | — | — | — |
| 61A Propeller  Construction | X/X | — | X | — | — | — | — | — | — | — | — |

**Chapters**

61B Propeller Pitch Control

61C Propeller Synchronising 61D Propeller

Electronic control

61E Propeller Ice Protection

61F Propeller Maintenance

**B1/B2 B1 B2**

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1. Type training examination and assessment standard
   1. ***Theoretical element examination standard***

*Regulation (EU) 2023/989*

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

1. Format of the examination is of the multi-choice type. Each multi-choice question shall have 3 alternative answers of which only one shall be the correct answer. The total time is based on the total number of questions and the time for answering is based upon a nominal average of 90 seconds per question.
2. The incorrect alternatives shall seem equally plausible to anyone ignorant of the subject. All the alternatives shall be clearly related to the question and of similar vocabulary, grammatical construction and length.
3. In numerical questions, the incorrect answers shall correspond to procedural errors such as the use of incorrect sense (+ versus -) or incorrect measurement units. They shall not be mere random numbers.
4. The level of examination for each chapter1 shall be the one defined in point 2 ‘Aircraft type training levels’. However, the use of a limited number of questions at a lower level is acceptable.
5. The examination shall be of the closed book type. No reference material is permitted. An exception will be made for the case of examining a B1 or B2 candidate's ability to interpret technical documents.
6. The number of questions shall be at least one question per hour of training. The number of questions for each chapter and level shall be proportionate to:
   * the effective training hours spent on teaching at that chapter and level; or
   * in case of student-centred methods, the anticipated average time to complete the training; and
   * the learning objectives as given by the training needs analysis.

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

The competent authority shall assess the number and the level of the questions when approving the course.

1. The minimum examination pass mark is 75 %. When the type training examination is split in several examinations, each examination shall be passed with at least a 75 % mark. In order to be possible to achieve exactly a 75 % pass mark, the number of questions in the examination shall be a multiple of 4.
2. Penalty marking (negative points for failed questions) is not to be used.
3. End of module phase examinations cannot be used as part of the final examination unless they contain the correct number and level of questions required.
4. Whilst it is accepted that the subject matter of the questions may be the same, the questions used as part of the MBT learning programme shall not be used in course or phase examinations.
   1. Practical element assessment standard

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

1. The assessment shall be performed by designated assessors appropriately qualified.
2. The assessment shall evaluate the knowledge and skills of the trainee.
3. Type evaluation standard for Group 2 and Group 3 aircraft

*Regulation (EU) 2023/989*

Type evaluation relative to aircraft of Group 2 or Group 3 shall be conducted by training organisations appropriately approved in accordance with Annex IV (Part-147) or by the competent authority.

The evaluation shall consist of practical assessment and oral examination and comply with the following requirements:

1. The practical assessment shall determine the candidate’s competence to perform maintenance tasks applicable to the particular aircraft type.
2. The oral examination shall be on a sample of chapters drawn from point 3. ‘Aircraft type training standard’, at the indicated level in point 3.1.(e).
3. Both oral examinations and practical assessments shall ensure that the following objectives are met:
   1. properly discuss with confidence the aircraft type and its systems;
   2. ensure safe performance of maintenance, inspections, and routine work according to the maintenance manual and other relevant instructions and tasks as appropriate for the type of aircraft, for example, troubleshooting, repairs, adjustments, replacements, rigging and functional checks such as engine run, etc., if required;.
   3. correctly use all technical literature and documentation for the aircraft;
   4. correctly use specialist/special tooling and test equipment, perform removal and replacement of components and modules unique to type, including any on-wing maintenance activity.
4. The following conditions apply to the type evaluation:
   1. The maximum number of attempts for each examination is three in a 12-month period. A waiting period of 30 days is required after the first failed attempt within one set, and a waiting period of 60 days is required after the second failed attempt.

The applicant shall confirm in writing to the maintenance training organisation or the competent authority to which they apply for an examination, the number, and dates of attempts during the last 12-month period and the maintenance training organisation or the competent authority where these attempts took place. The maintenance training organisation or the competent authority is responsible for checking the number of attempts within the applicable time frames.

* 1. The type evaluation shall be passed, and the required practical experience shall be completed within the 3 years preceding the application for the rating endorsement on the aircraft maintenance licence.
  2. Type evaluation shall be performed with at least one examiner present. The examiner(s) shall not have been involved in the applicant’s training.

1. A written and signed report shall be prepared and made available to the candidate by the examiner(s) to explain why the candidate has passed or failed.
2. On-the-job training (OJT)
   1. General

*Regulation (EU) 2023/989*

The OJT is the training that the applicant is given on a particular aircraft type in a real workplace, having the possibility to learn maintenance best practices and correct release-to-service procedures. The OJT shall comply with the following requirements:

* + 1. The list of the OJT tasks and programme shall be accepted by the competent authority which has issued the maintenance licence before starting the OJT training.
    2. The OJT shall be conducted at one or more maintenance organisations appropriately approved according to this Regulation for the maintenance of that aircraft type. One of those organisations shall control the OJT.
    3. The applicant shall have a category A, B or L5 licence before undergoing the OJT or have finished the theoretical type training and cumulated at least 50 % of the basic experience requirement (point 66.A.30) as regards the category of aircraft he or she is trained for.
    4. The applicant shall start and complete the OJT within 3 years preceding the application for the first type rating endorsement. At least 50 % of the OJT tasks shall take place after the related aircraft theoretical type training has been completed.
    5. The applicant shall undergo the OJT under the mentorship of a qualified mentor or mentors, on a one-to-one supervision basis, during which the mentors verify the technical knowledge, the skills, and responsibilities of a typical certifying staff. During the OJT, the mentors transmit also knowledge and experience to the applicant, providing the necessary advice, support, and guidance.
    6. Each task shall be signed off by the applicant and refer to an actual job card/work sheet, etc. The mentors shall verify and countersign off the tasks performed during the OJT, because they shall assume the responsibility for the tasks at support staff or certifying staff level, as applicable, depending on the release-to-service procedure.
    7. At the satisfactory completion of the OJT programme, the mentors shall issue a recommendation for the final assessment of the applicant to be conducted by designated assessors.
  1. OJT content and OJT logbook

The OJT shall include a series of activities and tasks representative of the aircraft type rating, systems, and licence category applied for and may cover more than one licence category.

The OJT shall be documented in an OJT logbook reporting the following:

* + 1. name of the applicant;
    2. date of birth of the applicant;
    3. the approved maintenance organisation(s) where the OJT was carried out;
    4. aircraft rating and licence categories applied for;
    5. list of tasks, including:
       1. task description;
       2. reference to job card/work order/aircraft tech log, etc.;
       3. location of task completion;
       4. date of task completion;
       5. aircraft registration(s).
    6. names of the mentors (including licence number, if applicable);
    7. a signed recommendation of the mentors for the successive final assessment of the applicant.
  1. Final assessment of the applicant

The final assessment of the applicant may only be performed once the OJT logbook has been completed and the mentors have signed the related recommendation.

The designated assessor(s) conducting the final assessment shall notify the date of the assessment to the licensing authority well in advance to allow a possible participation of the same authority.

The objective of the final assessment is to verify that the applicant has sufficient technical knowledge as well as the appropriate skills and attitude and that he or she is competent to work independently as type-rated certifying staff on a particular aircraft type.

The final assessment shall have a minimum duration of one working day.

* + 1. The assessment shall sample:

1. the general technical knowledge required for the particular licence category;
2. the aircraft-type-specific knowledge and skills for the particular licence category;
3. the understanding of the licence privileges relevant to the aircraft and to the licence category;
4. the appropriate behaviour and safety attitude of the applicant in relation to the maintenance environment.
   * 1. The assessment shall be recorded in a report containing the following information:
5. identification data of the applicant;
6. identification data of the assessor(s);
7. date and time frame of the assessment;
8. content of the assessment;
9. result of the assessment: Passed or Failed.
10. signature of the assessor(s), the candidate and, if applicable, the independent observer(s).
11. A failed assessment may be retaken after 3 months or, if additional training has been received and a new recommendation by the mentors has been made, earlier than 3 months if agreed by the assessor(s). After three failed attempts, the complete OJT shall be repeated.
    1. Requirements for mentors and assessors

Mentors and assessors are maintenance staff with the following qualifications:

1. Mentors:
   * hold a valid aircraft maintenance licence (AML) issued in accordance with this Annex or a valid and fully compliant with ICAO Annex 1 AML in accordance with Appendix IV to Annex II (Part-145), which is acceptable to the competent authority;
   * have been holding, for at least 1 year, an AML in the same category, when compared to the one for which the OJT is being mentored, that is endorsed with a type rating appropriate to exercise the privileges on the related aircraft;
   * have the necessary release or sign-off privileges in the maintenance organisation where the OJT is performed;
   * have experience in training other people (such as being apprenticeship instructors, instructors in accordance with Annex IV (Part-147), having received train-the- trainer courses or having any other comparable national qualification, or having a training to do so that is acceptable to the competent authority).
2. Assessors of the final assessment:
   * hold a valid AML issued in accordance with this Annex or a valid and fully compliant with ICAO Annex 1 AML in accordance with Appendix IV to Annex II (Part-145), which is acceptable to the competent authority;
   * have been holding, for at least 3 years, an AML in the same category, when compared to the one for which the OJT is being assessed, endorsed with the same or similar aircraft type rating;
   * have experience and/or have received training in assessing others (such as being apprenticeship instructors, examiners in accordance with Annex IV (Part-147), having received train-the-trainer courses, or having any other comparable national qualification, or having a training to do so that is acceptable to the competent authority);
   * shall not have been involved as a mentor of the applicant in the OJT; when the assessor has taken part in the OJT performance, then an independent observer shall be present during the OJT assessment.
   1. OJT documentation and records

The satisfactory accomplishment of the OJT shall be attested to the applicant with the final assessment report and the OJT logbook.

The OJT documentation shall be provided to the competent authority to support the application for the issue or change of the licence as laid down in Section B, Subpart B, of this Annex.

Records of the OJT documentation shall be kept by the maintenance organisation where the OJT is conducted, in accordance with the procedures agreed with the competent authority of the maintenance organisation.

**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

*ED Decision 2015/029/R*

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.

**AMC1 Appendix III Aircraft type training and type evaluation standard — on-the-job training (OJT) Section 1**

##### Aircraft Type Training

*ED Decision 2023/019/R*

1. Aircraft type training may be sub-divided 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.
2. Practical training may be performed either following or integrated with the theoretical elements. However, it should not be performed before theoretical training.
3. 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 where 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](#_bookmark173).

1. 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.
2. Electrical systems should be included in both categories of B1 and B2 type training.
3. 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, maintenance simulation training devices (MSTDs) and maintenance training devices (MTDs).
4. The integration and usage of MSTDs and MTDs, as defined in AMC 147.A.30(a), in maintenance type training (theoretical and/or practical) should consider the following:
   * The use of actual aircraft components should be allowed for any MSTD or MTD, even if the components are in a non-airworthy condition.
   * The complexity and degree of simulation for an MSTD may vary and should support type training elements that address a component, a system or the entire aircraft. Based on its characteristics and capabilities, the MSTD may be:
     + a training device capable of providing, for the respective component or system, the representation of aircraft location, access and layout, and for servicing with an acceptable level of accuracy and limited simulation; or
     + a training device capable of providing, for the respective component or system, the representation of aircraft location, access and layout with sufficient accuracy and with interactive simulation for servicing, and the applicable maintenance data for operational (O) and functional (F) test elements including built-in test (BIT) initiation and monitoring from outside the cockpit; such representation should have the capability to accommodate some troubleshooting scenarios; or
     + a training device capable of providing, for the respective component or system, the representation of onboard (flight deck/cockpit or cabin) indication and controls with an acceptable level of accuracy and limited interactive simulation; or
     + a training device capable of providing, for the respective component or system, the representation of onboard (flight deck/cockpit or cabin) indication and controls with sufficient accuracy and with interactive simulation for servicing, and the applicable maintenance data for operational (O) and functional (F) test elements including built-in test (BIT) initiation and monitoring; such representation should have the capability to accommodate some troubleshooting scenarios; or
     + any combination of the above.
   * Flight simulation training devices (FSTDs) may be used as MSTDs whenever their characteristics and capabilities are considered appropriate for, and supportive of, the delivery of the respective maintenance training element(s).
   * An MTD is any training device other than an MSTD used for maintenance training and/or examination and/or assessment.

**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

*ED Decision 2015/029/R*

1. 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.
2. 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.](#_bookmark136)
3. The duration of the practical training should ensure that the content of training required by [paragraph 3.2 of Appendix III to Part-66](#_bookmark136) is completed.

Nevertheless, for aeroplanes with a MTOM equal or above 30000kg, 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 competent authority.

1. The organisation providing the practical element of the type training should provide trainees 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.
2. In [paragraph 4.2 of Appendix III to Part-66,](#_bookmark139) 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](#_bookmark198) [III to AMC to Part-66](#_bookmark198).

1. The practical element (for powerplant and avionic 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

*ED Decision 2015/029/R*

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](#_bookmark173)) 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](#_bookmark26)).

**GM1 Appendix III Aircraft type training and type evaluation standard — on-the-job training (OJT) Section 1(c)**

*ED Decision 2023/019/R*

**DIFFERENCES TRAINING**

If the holder of a B1 and B2 licence, without any type rating, successfully completes a combined type training course (B1 + B2) followed by an OJT tailored only to B1 tasks, they can obtain only the type- rating endorsement that is applicable to the B1 subcategory.

Within the next 3 years from the completion of the combined training course, endorsement of the aircraft type for the B2 category is possible after carrying out an OJT programme limited to the tasks relevant to the B2 category only.

When instead, the aircraft type endorsement would be requested after more than 3 years, the applicant would be required to also pass a differences type training course (from B1 to B2) plus the

OJT programme limited to the tasks relevant to the B2 category only. All common theoretical and practical elements, and OJT tasks, already demonstrated as B1, shall be considered fulfilled.

**AMC1 Appendix III Aircraft type training and type evaluation standard — on-the-job training (OJT) Section 3**

*ED Decision 2023/019/R*

**AIRCRAFT TYPE TRAINING STANDARD**

Training methods are categorised as ‘instructor-centred’, ‘student-centred’ and ‘blended training’.

The actual training method and the training tools should be adapted to suit the training subject and be chosen considering their intrinsic characteristics, such as but not limited to their efficiency and the pedagogical benefits of the method/tool.

A complex or critical subject should not normally be taught solely through a student-centred method unless provisions are in place to verify the actual and progressive acquisition of knowledge of the student.

Complex and critical areas should be identified by the training needs analysis (TNA). The complexity and criticality of the areas could differ on a case-by-case basis (that is, areas proven to be critical by organisations’ ‘in-service events’, occurrence reporting, human factors, safety, etc.), but should in any case cover the maintenance areas with special emphasis (MASE) identified by the type-certificate holder (TCH) in its operational suitability data (OSD).

**AMC1 Appendix III Aircraft type training and type evaluation – on- the-job training (OJT) Section 3.1(d)**

*ED Decision 2023/019/R*

##### Training needs analysis (TNA) for the theoretical element of the aircraft type training

1. The minimum duration for the theoretical element of the type rating training course, as described in [Appendix III to Part-66](#_bookmark131), has been determined based on:
   * generic categories of aircraft and minimum standard equipment fit
   * the estimated average duration of standard courses imparted in Europe
2. 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](#_bookmark131).

In the particular case of type training courses approved on the basis of the requirements valid before Regulation (EU) No 1149/2011 was applicable (1 August 2012) and having a duration for the theoretical element equal to or above the minimum duration contained in [paragraph 3.1(c)](#_bookmark135) [of Appendix III to Part-66,](#_bookmark135) it is acceptable that the TNA only covers the differences introduced by Regulation (EU) No 1149/2011 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.

1. The content and the duration deriving from this TNA may be supported by an analysis from the Type Certificate holder.
2. In order to approve the reduction of such minimum duration, the competent authority should perform an assessment on a case-by-case basis, and the assessment should be appropriate to the aircraft type and to the training methods and tools proposed.

For example:

1. While it would be exceptional for a theoretical course for a large transport category aircraft, such as an A330 or a B777, to be below the minimum duration shown, it would not necessarily be exceptional in the case of a business aircraft, such as a Learjet 45 or similar. The TNA for a business aircraft course could demonstrate that a course of a shorter duration satisfies the applicable requirements.
2. The use of an MSTD (i.e. flat panel trainer) comprising aircraft-type-specific software may result in the duration of the training being reduced due to a more effective transfer of knowledge.
3. The use of multimedia-based training (MBT), or blending the training methods, may improve the efficiency of the training and, consequently, contribute to the reduction of the overall time needed to achieve the learning objectives.
4. When developing the TNA, the following should be considered:
5. 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 in order to meet the learning objectives.
6. 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](#_bookmark135) and associated AMCs.
7. 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.](#_bookmark135)
8. For each chapter described in the theoretical element table contained in [paragraph 3.1](#_bookmark135) [of Part-66 Appendix III,](#_bookmark135) the corresponding training time should be recorded.
9. Typical documents to be used in order 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.
10. 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](#_bookmark104));
      + 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
11. 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](#_bookmark135));
    * Organise the training into modules in a logical sequence (adequate combination of chapters as defined in [Appendix III of Part-66](#_bookmark131));
    * Determine the sequence of learning (within a lesson and for the whole syllabus);
    * Identify the scope of information and level of detail with regard 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:
        1. Complexity of the system (e.g. the need of further break down into subsystems, etc.);
        2. Design specifics which may require more detailed presentation or may contribute to maintenance errors;
        3. Normal and emergency functioning;
        4. Troubleshooting;
        5. Interpretation of indications and malfunctions;
        6. Use of maintenance publications;
        7. Identification of special tools and equipment required for servicing and maintaining the aircraft;
        8. Maintenance Practices;
        9. Routine inspections, functional or operational tests, rigging/adjustment, etc.
    * Describe the following:
      + The instructional methods and training tools and their blended application in order 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, i.e. to support the achievement of the learning objectives while using asynchronous distance-learning or self-learning methods.
      + The training provider’s resources available to the learner.
12. It is acceptable to differentiate between subjects which have to be led by an instructor and subjects which may be delivered through interactive simulation training devices and/or covered by self-paced elements. The overall time of the course will be allocated accordingly.
13. 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 competent authority 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.
14. The minimum participation time in order for the trainee to meet the objectives of the course should not be less than 90 % of the tuition hours, or 95 % completion of the content in case of student-centred methods in a 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.
15. 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.

**AMC1 Appendix III Aircraft type training and type evaluation standard — on-the-job training (OJT) Section 4.1**

*ED Decision 2023/019/R*

##### Type training examination and assessment standard

* 1. Theoretical element examination standard

Examinations may be computer or paper based, or a combination of both. Refer to point 147.A.135.

**AMC to Section 5 of Appendix III to Part-66 ‘Aircraft Type Training and Examination Standard. On-the-Job Training’**

##### Type Examination Standard

*ED Decision 2015/029/R*

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.

**AMC1 Appendix III Aircraft type training and type evaluation standard — on-the-job training (OJT) Section 6**

*ED Decision 2023/019/R*

##### On-the-job training (OJT)

General

‘Maintenance organisations appropriately approved according to this Regulation for the maintenance of that aircraft type’ means Part-145 or Part-CAO approved maintenance organisations (AMO) that hold an ‘A’ rating for such aircraft.

The OJT may be split in several parts and carried out at different AMOs, also combining line and base facilities from the same or different organisations. The organisation at which the final assessment is carried out, should control and coordinate the OJT activities and have the responsibility for the entire OJT programme.

The procedures for the OJT should be included in the Exposition Manual of the approved maintenance organisation.

‘Skills and responsibilities of a typical certifying staff’ include but are not limited to:

* understanding the importance of professional integrity, behaviour and having an appropriate attitude towards safety;
* understanding the conditions for ensuring the continuing airworthiness of aircraft and components;
* the ability to identify and rectify existing and potential unsafe conditions;
* the ability to prioritise tasks, coordinate with a team, and report discrepancies;
* the ability to determine the required qualifications for the performance of maintenance tasks;
* the ability to confirm the proper accomplishment of maintenance tasks;
* the ability to compile and control completed work cards;
* knowledge of safety risks linked to a particular working environment;
* understanding of human performance and limitations;
* understanding of the AMO’s (where the OJT is performed) privileges and limitations;
* understanding of the AMO’s personnel authorisations and limitations;
* being familiar with the AMO’s documents/forms (work packages, work orders, work cards, etc.);
* being familiar with AMO’s release-to-service procedures: use of the aircraft technical logbook (ATLB), deferral of items and dispatch under MEL/CDL;
* access, use and control of the required tools and equipment;
* access, use and control of the required ICAs (AMM, TSM, SRM, etc.).

OJT content and OJT logbook

If the aircraft manufacturer has defined the OJT tasks during the type certification of a particular aircraft type (e.g. the operational suitability data (OSD) has been approved for a particular aircraft type), those tasks should be selected. In particular, the analysis performed for the maintenance areas of specific emphasis (MASE), as defined in point 430 of CS-MCSD, helps the organisation identify the more appropriate tasks.

Where no such data exists, the task list in [Appendix II to the AMC to Annex III (Part-66)](#_bookmark191) serves as the basis to develop an OJT programme including the applicable tasks for a particular aircraft type, based typically on the AMM. The tasks may be selected from the table in [Appendix II](#_bookmark191) in order to cover a broader representative sample of both simple and complex tasks on the particular aircraft type in order to reach a balanced distribution of the tasks between line and base maintenance. The tasks should be selected among those that are applicable to the aircraft type and the licence (sub)category applied for; for example, the selection could exclude location tasks (LOC) and tasks that can be considered under the category A licence privileges (seat covers, boilers, wheels, etc.).

A minimum number of tasks, as described in point 2 ‘List of tasks for OJT’ of [Appendix II](#_bookmark191), of each of the following categories should be performed: INS/inspections, FOT/functional or operational, SGH/servicing, R/I removal and installation, MEL, and T/S troubleshooting. The licensing authority may accept that a limited number of tasks is not performed as long as the relevant cross section of the tasks as regards quality, quantity and complexity is still assured.

A task may be performed on the analogous system installed on a different aircraft type when the systems are similar in terms of design architecture, technology, and functionality. This can be the case, for example, for tasks performed on engines or landing gear of aircraft of the same manufacturer. Such task should be clearly identified and recorded.

Certain maintenance tasks could be performed on non-airworthy aircraft that still maintain functionality of systems to the extent that the maintenance tasks can be completely performed without any deviation from the maintenance instructions. Tasks circumscribed to system components may be performed at the workshop. This can be the case, for example, for avionics functional tests. Such scenarios should be limited to specific tasks that may not occur often in the maintenance of operational aircraft.

The use of MSTDs and MTDs for OJT should be restricted to a minimum.

When an existing licence is changed to include an additional category with a type rating, a different OJT from the category held to the new one may be permissible. In those cases, only tasks corresponding to the differences between the two categories should be performed.

The OJT may be partly performed on aircraft whose maintenance is not subject to Regulation (EU) 2018/1139 (for example, aircraft subject to the FAA regulatory framework or training helicopters used by the military) provided that the maintenance is subject to the same procedures and manuals.

A minimum of maintenance activity on aircraft that are subject to Regulation (EU) 2018/1139 is, however, required in order to gain sufficient insight into the European civil aviation regulatory framework and into release-to-service procedures. The acceptance of the OJT is up to the licensing authority.

The organisation that has control over the OJT should provide candidates with a schedule or plan which indicates the list of tasks to be performed under supervision. A record of the completed tasks is to be entered into a logbook whose design and format should be such that each task or group of tasks is countersigned by the corresponding mentor(s).

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

* + - It is sufficient for the completion of the individual OJT tasks to be confirmed by the direct mentor(s), without the direct evaluation of the assessor being necessary.
    - During the day-to-day OJT performance, the aim of the supervision is for mentors to oversee the whole process, including task completion, use of manuals, adherence to procedures, observance of safety measures, warnings, cautions and recommendations, and demonstration of appropriate behaviour in the maintenance environment.
    - The mentor(s) should personally observe the work being performed to ensure its safe completion, and should be readily available for consultation if needed during the OJT.
    - The mentor(s) should sign the tasks and release the maintenance tasks as the candidate is still not qualified to do so.
    - The mentor(s) should be designated by the approved maintenance organisation to supervise.

For training in release-to-service procedures, following the completion of the performance of a specific task chosen by the mentor, the candidate should prepare a document with simulated release to service which has to be marked as ‘for training purposes only’ (e.g. ATL page, maintenance task card, CRS). If both the task and the simulated release to service have been performed to the satisfaction of the mentor, the task may be countersigned in the OJT task list by the mentor. A physical or electronic copy of the document with simulated release should be added to the syllabus.

Tasks which are usually performed with more than one person may be performed by more than one candidate under the supervision of one mentor. During the performance of the tasks, the mentor is limited to overseeing three candidates at the same time, given that the candidates can be properly

seen ‘at a glance’ from the mentor’s position. Those tasks should be marked as ‘group tasks’ when applying for the approval. All other tasks should be a one-to-one mentorship. In such cases, all the candidates involved should be noted on the work order.

At the end of the performance of the OJT, a compliance report shall be made which verifies and documents the correct and complete performance and the recommendation of the mentor(s) for the following assessment. The mentor(s) may deny a recommendation if the candidate has not demonstrated the knowledge, skills, behaviour and/or ethics required from certifying staff.

Final assessment of the applicant

The OJT assessment should consist of a theoretical part and a practical part.

The theoretical part comprises the regulatory framework, safety procedures, knowledge of aircraft and its systems, maintenance procedures, and other typical certifying staff activities such as:

* + - the review and acceptance of work orders;
    - shift-handover procedures and team coordination;
    - communication and interaction with the flight crew;
    - dispatch with unserviceable items;
    - clear aircraft logbook entries and reporting notes;
    - checks before release to service.

The practical part should include maintenance tasks on the aircraft (e.g. rem./inst., TS, R/I, FOT, MEL dispatch). The assessor may decide to simulate some aspects of the maintenance tasks.

The aircraft type on which the OJT is performed needs to be available for the assessment together with access to the required maintenance data, equipment, and tools. A training aircraft may be acceptable. It is good practice to assess the practical skills on the aircraft in question while the assessment of knowledge may be performed either on the aircraft or in theory.

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

If an independent observer is required for the OJT, they shall be selected by the maintenance organisation among the maintenance personnel that have not taken part in the OJT performance but do have an adequate understanding of the OJT procedures.

**Appendix IV Experience and basic knowledge modules or partial modules required for extending an aircraft maintenance licence under Annex III (Part-66)**

##### Experience requirements

*Regulation (EU) 2023/989*

Table A below shows the experience requirements, in months, for adding a new category or subcategory to a licence granted in accordance with Annex III (Part-66).

The experience requirements can be reduced by 50 % if the applicant has completed an approved Part-147 basic training course relevant to a particular subcategory.

**Table A**

**To:**

**From:**

**A1**

**A1**

**A2**

**A3**

**A4**

**B1.1**

**B1.2**

**B1.3**

**B1.4**

**B2**

**B2L**

**B3**

**L1**

**L2**

**L3**

**L4**

**L5**

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**A2**

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**A3**

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**A4**

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**B1.1**

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**B1.2**

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**B1.3**

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**B1.4**

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**B2**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **B2L** | 6 | 6 | 6 | 6 | 12 | 12 | 12 | 12 | 12 | — | 12 | 6 | 6 | 12 | 12 | 24 |
| **B3** | 6 | — | 6 | 6 | 24 | 6 | 24 | 12 | 24 | 12 | — | — | — | 12 | 12 | 12 |
| **L1** | 24 | 24 | 24 | 24 | 36 | 24 | 36 | 24 | 36 | 24 | 24 | — | 6 \*1 | 12 \* | 12 \* | 24 \* |
| **L2** | 24 | 12 | 24 | 24 | 36 | 12 | 36 | 24 | 36 | 24 | 12 | — | — | 12 \* | 12 \* | 24 \* |
| **L3** | 30 | 30 | 30 | 30 | 48 | 30 | 48 | 30 | 48 | 30 | 30 | 12 \* | 12 \* | — | 6 \* | 24 \* |
| **L4** | 30 | 30 | 30 | 30 | 48 | 30 | 48 | 30 | 48 | 30 | 30 | 12 \* | 12 \* | — | — | 24 \* |
| **L5** | 24 | 24 | 24 | 24 | 36 | 24 | 36 | 24 | 36 | 24 | 24 | 12 \* | 12 \* | 12 \* | — | — |

##### Basic knowledge modules or partial modules required

The purpose of this table is to outline the examinations required to add a new basic category/subcategory to an AML granted in accordance with this Annex.

The syllabi prepared in accordance with Appendix I and Appendix VII require different levels of knowledge for different licence categories within a module; therefore, there are additional examinations applicable to certain modules for licence holders wishing to extend an AML granted in accordance with this Annex to include another category/subcategory and an analysis of the module shall be conducted to determine the subjects missing or passed at a lower level.

**Table B**

\* Experience may be reduced by 50 % but allowing a licence with limitations, i.e. a licence endorsed with the exclusion of ‘complex maintenance tasks provided for in Appendix VII to Annex I (Part-M), standard changes provided for in point 21.A.90B of Annex I (Part 21) to Regulation On Initial Airworhiness, and standard repairs provided for in point 21.A.431B of Annex I (Part 21) to Regulation On Initial Airworhiness’.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **To From** | **A1** | **A2** | **A3** | **A4** | **B1.1** | **B1.2** | **B1.3** | **B1.4** | **B2** | **B2L** | **B3** | **L1C** | **L1** | **L2C** | **L2** | **L3H** | **L3G** | **L4H** | **L4G** | **L5** |
| **A1** | None | 16. | 12. | 12, 16. | All except 9. | All except 9. | All except 9. | All except 9. | All except 9. | All except 9. | All except 2, 8, 9. | All except 2L. | All except 2L. | All except 2L. | All except 2L. | All except 2L. | All except 2L. | All except 2L. | All except 2L. | All except 9. |
| **A2** | 11, 15. | None | 12, 15. | 12. | All except 9. | All except 9. | All except 9. | All except 9. | All except 9. | All except 9. | All except 2, 8, 9. | All except 2L. | All except 2L. | All except 2L. | All except 2L. | All except 2L. | All except 2L. | All except 2L. | All except 2L. | All except 9. |
| **A3** | 11, 17. | 11, 16,  17. | None | 16. | All except 9. | All except 9. | All except 9. | All except 9. | All except 9. | All except 9. | All except 2, 8, 9. | All except 2L. | All except 2L. | All except 2L. | All except 2L. | All except 2L. | All except 2L. | All except 2L. | All except 2L. | All except 9. |
| **A4** | 11, 15,  17. | 11, 17. | 15. | None | All except 9. | All except 9. | All except 9. | All except 9. | All except 9. | All except 9. | All except 2, 8, 9. | All except 2L. | All except 2L. | All except 2L. | All except 2L. | All except 2L. | All except 2L. | All except 2L. | All except 2L. | All except 9. |
| **B1.1** | None | 16. | 12. | 12, 16. | None | 16. | 12. | 12, 16. | 4, 5,  13,14 | 4, 5,  13SQ,  14SQ | 16. | 12L. | 12L. | 8L\*\*,  12L. | 8L\*\*,  12L. | 9L. | 10L. | 9L,  11L. | 10L,  11L. | 8L\*\*,  10L,11  , 12L. |
| **B1.2** | 11,15. | None | 12, 15. | 12. | 11, 15. | None | 12, 15. | 12. | 4, 5,  13, 14 | 4, 5,  13SQ.  14SQ | None | 12L. | 12L. | 8L\*,  12L. | 8L\*,  12L. | 9L. | 10L. | 9L,  11L. | 10L,  11L. | 8L\*,  10L,11  ,12L. |
| **B1.3** | 11, 17. | 11, 16,  17. | None | 16. | 11, 17. | 11, 16,  17. | None | 16. | 4, 5,  13, 14 | 4, 5,  13SQ.  14SQ | 11, 16,  17. | 7L,12L  . | 7L,12L  . | 7L,  8L\*\*,  12L. | 7L,  8L\*\*,  12L. | 9L. | 10L. | 9L,  11L. | 10L,  11L. | 8L\*\*,  10L,11  , 12L. |
| **B1.4** | 11, 15,  17. | 11, 17. | 15. | None | 11, 15,  17. | 11, 17. | 15. | None | 4, 5,  13, 14 | 4, 5,  13SQ.  14SQ | 11, 17. | 7L,12L  . | 7L,12L  . | 7L,8L\*  , 12L. | 7L,8L\*  , 12L. | 9L. | 10L. | 9L,11L  . | 10L,  11L. | 8L\*,  10L,  11,  12L. |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **To From** | **A1** | **A2** | **A3** | | **A4** | | **B1.1** | | **B1.2** | | **B1.3** | | **B1.4** | | **B2** | | **B2L** | | **B3** | | **L1C** | | **L1** | | **L2C** | | **L2** | | **L3H** | | **L3G** | | **L4H** | **L4G** | **L5** |
| **B2** | 6, 7,  11, 15,  17. | 6, 7,  11, 16,  17. | 6, 7,  12, 15. | | 6, 7,  12, 16. | | 6, 7,  11, 15,  17. | | 6, 7,  11,  16, 17. | | 6, 7,  12,  15. | | 6, 7,  12,  16. | | None | | None | | 6, 7,  11,  16, 17. | | 5L, 7L. | | 4L, 5L,  6L,7L. | | 5L,7L,  8L. | | 4L,5L,  6L,7L,  8L. | | 9L. | | 10L. | | 9L,  11L. | 10L,  11L. | 6, 7,  11 or  12, 15  or 16,  17, 8L,  10L |
| **B2L** | 6, 7,  11, 15,  17. | 6, 7,  11, 16,  17. | 6, 7,  12, 15. | | 6, 7,  12, 16. | | 6, 7,  11, 15,  17. | | 6, 7,  11, 16,  17. | | 6, 7,  12, 15. | | 6, 7,  12, 16. | | 13SQ,  14SQ. | | None | | 6, 7,  11, 16,  17. | | 5L, 7L,  12LSQ  . | | 4L, 5L,  6L, 7L,  12LSQ  . | | 5L, 7L,  8L,  12LSQ  . | | 4L, 5L,  6L, 7L,  8L,  12LSQ. | | 9L. | | 10L. | | 9L,  11L. | 10L,  11L. | 6, 7,  11 or  12, 15  or 16,  17, 8L,  10L |
| **B3** | 11, 15. | 11 | 12,  15. | | 12. | | 2,3,5,  8, 11,  15. | | 2,3,5,8  , 11. | | 2,3,5,8  , 12,  15. | | 2,3,5,8  , 12. | | 2,3,4,  5, 8,  13,  14. | | 2,3,4,  5, 8,  13SQ. | | None | | 12L. | | 12L. | | 8L\*,  12L. | | 8L\*,  12L. | | 9L. | | 10L. | | 9L,  11L. | 10L,  11L. | 2,3,5,8  , 11 or  12,  8L\*,  10L,  11L,  12L. |
|  |  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **To From** | **A1** | **A2** | | **A3** | | **A4** | | **B1.1** | | **B1.2** | | **B1.3** | | **B1.4** | | **B2** | | **B2L** | | **B3** | | **L1C** | | **L1** | | **L2C** | | **L2** | | **L3H** | | **L3G** | | **L4H** | **L4G** |
| **L1C** | All | All | | All | | All | | All | | All | | All | | All | | All | | All | | All | | None | | 4L, 6L. | | 8L. | | 4L, 6L,  8L. | | 9L. | | 10L. | | 8L,9L,  11L. | 8L,  10L,  11L. |
| **L1** | All | All | | All | | All | | All | | All | | All | | All | | All | | All | | All | | None | | None | | 8L. | | 8L. | | 9L. | | 10L. | | 8L,9L,  11L. | 8L,10L,  11L. |
| **L2C** | All | All | | All | | All | | All | | All | | All | | All | | All | | All | | All | | None | | 4L,6L. | | None | | 4L, 6L. | | 9L. | | 10L. | | 9L,11L. | 10L,  11L. |
| **L2** | All | All | | All | | All | | All | | All | | All | | All | | All | | All | | All | | None | | None | | None | | None | | 9L. | | 10L. | | 9L,11L. | 10L,  11L. |
| **L3H** | All | All | | All | | All | | All | | All | | All | | All | | All | | All | | All | | 5L,7L. | | 4L,5L,  6L,7L. | | 5L,7L,  8L. | | 4L,5L,  6L,7L,  8L. | | None | | 10L. | | 8L,11L. | 8L,10L,  11L. |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **L3G** | All | All | All | All | All | All | All | All | All | All | All | 5L,7L. | 4L,5L,  6L,7L. | 5L,7L,  8L. | 4L,5L,  6L,7L,  8L. | 9L. | None | 8L,9L,  11L. | 8L,11L. |
| **L4H** | All | All | All | All | All | All | All | All | All | All | All | 5L,7L. | 4L,5L,  6L,7L. | 5L,7L. | 4L,5L,  6L,7L. | None | 10L. | None | 10L. |
| **L4G** | All | All | All | All | All | All | All | All | All | All | All | 5L,7L. | 4L,5L,  6L,7L. | 5L,7L. | 4L,5L,  6L,7L. | 9L. | None | 9L. | None |

SQ = it depends on system qualification

\*: excluding the subjects related to piston engines

\*\*: excluding the subjects related to turbine engines;

### Appendix V — Application Form — CAC Form 19

*Regulation (EU) 2021/700*

1. This Appendix contains an example of the form used for applying for the aircraft maintenance licence referred to in [Annex III (Part-66)](#_bookmark8).
2. The competent authority of the Member State may modify the CAC Form 19 only to include additional information necessary to support the case where the national requirements permit or require the aircraft maintenance licence issued in accordance with Annex III (Part-66) to be used outside the requirements of this Regulation.

|  |  |
| --- | --- |
| APPLICATION FOR INITIAL/AMENDMENT/RENEWAL OF PART-66 AIRCRAFT MAINTENANCE LICENCE (AML) | **CAC** FORM 19 |
| APPLICANT’S DETAILS:  Name: ……………………………………………………………………………………………………………………………………………………… Address: …………………………………………………………………………………………………………………………………………………… Tel: ……………………………………………………………………….. E-mail: …………………………………………………………………….  Nationality: …………………………………………………………... Date and Place of Birth: …………………………………………. | |
| PART-66 AML DETAILS (if applicable):  Licence No: …………………………………………………………………. Date of Issue: ……………………………………………………. | |
| EMPLOYER’S DETAILS:  Name: ……………………………………………………………………………………………………………………………………………………… Address: ……………………………………………………………………………………………………………………………………………………  …………………………………………………………………………………………………………………………………………………………………. Maintenance Organisation Approval Reference: ………………………………………………………………………………………  Tel: …………………………………………………………………………….. Fax: …………………………………………………………………… | |
| APPLICATION FOR: (Tick relevant boxes)  Initial AML Amendment of AML Renewal of AML  **(Sub)categories A B1 B2 B2L B3 C L (see below)**  Aeroplane Turbine Aeroplane Piston Helicopter Turbine Helicopter Piston  Avionics See system ratings below  Piston engine non-pressurised aeroplanes of MTOM of 2t and below Complex motor-powered aircraft  Aircraft other than complex motor-powered aircraft  **System ratings for B2L licence:**   1. autoflight 2. instruments 3. com/nav 4. surveillance 5. airframe systems   **L-licence subcategories:** L1C: Composite sailplanes L1: Sailplanes | |

|  |
| --- |
| L2C: Composite powered sailplanes and composite ELA1 aeroplanes L2: Powered sailplanes and ELA1 aeroplanes  L3H: Hot-air balloons L3G: Gas balloons L4H: Gas balloons L4H: Hot-air airships L4G: ELA2 gas airships  L5: Gas airship other than ELA2  Type endorsements/Rating endorsement/Limitation removal (if applicable):  ……………………………………………………………………………………………………………………………………………………………………. |
| I wish to apply for initial/amendment of/renewal of Part-66 AML, as indicated, and confirm that the information contained in this form was correct at the time of application.  I herewith confirm that:  I never had a Part-66 AML issued in another State which was revoked or suspended in any other State. I also understand that any incorrect information could disqualify me from holding a Part-66 AML.  Signed: …………………………………………………………………. Name: ……………………………………………………………………….  Date: …………………………………………………………………………………………………………………………………………………………. |
| I wish to claim the following credits (if applicable):  …………………………………………………………………………………………………………………………………………………………………….  …………………………………………………………………………………………………………………………………………………………………….  ……………………………………………………………………………………………………………………………………………………………………. Experience credits for Part-147 training  …………………………………………………………………………………………………………………………………………………………………….  …………………………………………………………………………………………………………………………………………………………………….  ……………………………………………………………………………………………………………………………………………………………………. Examination credits for equivalent exam certificates  …………………………………………………………………………………………………………………………………………………………………….  …………………………………………………………………………………………………………………………………………………………………….  ……………………………………………………………………………………………………………………………………………………………………. Please enclose all relevant certificates |
| Recommendation (if applicable): It is hereby certified that the applicant has met the relevant Part-66 maintenance knowledge and experience requirements and it is recommended that the CAC RA grants or endorses the Part-66 AML.  Signed: .............................................................. Name: ..................................................................................  Position: ........................................................... Date: .................................................................................... |

CAC Form 19 Issue 5

**Appendix VI — Aircraft Maintenance Licence referred to in Annex III (Part-66) — CAC Form 26**

*Regulation (EU) 2023/989*

1. An example of the aircraft maintenance licence referred to in [Annex III (Part-66)](#_bookmark8) can be found on the following pages.
2. The document shall be printed in the standardised form shown but may be reduced in size to allow it being generated by computer. When the size is reduced, care shall be taken to ensure that sufficient space is available in those places where official seals or stamps are required. Computer-generated documents need not have all the boxes incorporated when any such box remains blank, so long as the document can clearly be recognised as an aircraft maintenance licence issued in accordance with Annex III (Part-66).
3. The document may be filled in either in English or the official language of the Member State of the competent authority. In the latter case, a second copy in English shall be attached to the document for any licence holder who needs to use the licence outside that Member State to ensure understanding for the purpose of mutual recognition.
4. Each licence holder shall have a unique licence holder number, established on the basis of a national identifier and an alpha-numeric designator.
5. The document may have the pages in a different order to the one of this example and needs not have some or any divider lines as long as the information contained is positioned in such a manner that each page lay-out can clearly be identified with the format of the example of the aircraft maintenance licence contained herein.
6. The document shall be prepared by the competent authority. However, it may also be prepared by any maintenance organisation approved in accordance with Annex II (Part-145), where the competent authority agrees to this and the preparation takes place in accordance with a procedure laid down in the maintenance organisation exposition referred to in point 145.A.70 of Annex II (Part-145). In all cases, the competent authority shall issue the document.
7. The preparation of any change to an existing aircraft maintenance licence shall be carried out by the competent authority. However, it may also be prepared by any maintenance organisation approved in accordance with Annex II (Part-145), where the competent authority agrees to this and the preparation takes place in accordance with a procedure laid down in the maintenance organisation exposition referred to in point 145.A.70 of Annex II (Part-145). In all cases, the competent authority shall change the document.
8. The holder of the aircraft maintenance licence shall keep it in good condition and shall ensure that no unauthorised entries are made. Failure to comply with this rule may invalidate the license or lead to the holder not being permitted to hold any certification privilege. It may also result in prosecution under national law.
9. The aircraft maintenance licence issued in accordance with Annex III (Part-66) shall be recognised in all Member States and it is not required to exchange the document when working in another Member State.
10. The Annex to [CAC Form 26](#_bookmark154) is optional and may only be used to include national privileges, where such privileges are covered by national law outside the scope of Annex III (Part-66).
11. With regard to the aircraft type rating page of the aircraft maintenance licence, the competent authority may decide not to issue this page until the first aircraft type rating needs to be endorsed and may need to issue more than one aircraft type rating page depending on the number of type ratings to be listed.
12. Notwithstanding point 11, each page issued shall be in the format of this example and contain the specified information for that page.
13. The aircraft maintenance licence shall clearly indicate that the limitations are exclusions from the certification privileges. If there are no limitations applicable, the LIMITATIONS page shall state ‘No limitations’.
14. Where a pre-printer format is used for issuing the aircraft maintenance licence, any category, subcategory or type rating box which does not contain a rating entry shall be marked to show that the rating is not held.

**I. [STATE]**

**[AUTHORITY NAME & LOGO]**

**II.**

**Part-66 AIRCRAFT MAINTENANCE**

**LICENCE**

**III.**

**Licence No. [RA CODE].66.[XXXX]**

CAC FORM 26 Issue 6

|  |
| --- |
| IVa. Full name of holder: |
| IVb. Date and place of birth: |
| V. Address of holder: |
| VI. Nationality of holder: |
| VII. Signature of holder: |
|  |
| III. Licence No: |

VIII. CONDITIONS:

This licence shall be signed by the holder and be accompanied by an identity document containing a photograph of the licence holder.

Endorsement of any categories on the page(s) entitled 'Part-66 CATEGORIES' only, does not permit the holder to issue a certificate of release to service for an aircraft.

This licence, when endorsed with an aircraft rating, meets the intent of ICAO Annex 1.

The privileges of this license holder are prescribed by Regulation Continuing Airworthiness and, in particular, Annex III (Part-66) thereto.

This licence remains valid until the date specified on the limitation page unless previously suspended or revoked.

The privileges of this licence may not be exercised unless in the preceding two-year period, the holder had either six months of maintenance experience in accordance with the privileges

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| IX. Part-66 CATEGORIES | | | | | | | |
| VALIDITY | A | B1 | B2 | B2L | B3 | L | C |
| Aeroplanes Turbine |  |  | n/a | | n/a | n/a | n/a |
| Aeroplanes Piston |  |  | n/a | | n/a | n/a | n/a |
| Helicopters Turbine |  |  | n/a | | n/a | n/a | n/a |
| Helicopters Piston |  |  | n/a | | n/a | n/a | n/a |
| Avionics | n/a | n/a |  |  | n/a | n/a | n/a |
| Complex motor-powered aircraft | n/a | n/a | n/a | | n/a | n/a |  |
| Aircraft other than complex motor-powered aircraft | n/a | n/a | n/a | | n/a | n/a |  |
| Sailplanes, powered sailplanes, ELA1 aeroplanes, balloons and airships | n/a | n/a | n/a | | n/a |  | n/a |

granted by the licence, or met the provisions for the issue of the appropriate privileges.

III. Licence No:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Piston engine non pressurised aeroplanes of 2 000 kg MTOM and below | n/a | n/a | n/a |  | n/a | n/a |
| X. Signature of issuing officer & date:  XI. Seal or stamp of issuing authority:  III. Licence No: | | | | | | |

|  |  |  |
| --- | --- | --- |
| XII. PART-66 RATINGS | | |
| Aircraft Rating/ System ratings | Category/Subcategory | Stamp & Date |
|  |  |  |
| III. Licence No: | | |

|  |
| --- |
| XIII. PART-66 LIMITATIONS |
|  |
| Licence valid until: |
| III. Licence No: |

|  |
| --- |
| **Annex to CAC FORM 26**  XIV. NATIONAL PRIVILEGES outside the scope of Part-66, in accordance with [National Legislation] (Valid only in [Member State]) |
|  |
| Official Stamp & Date |
| III. Licence No: |

|  |
| --- |
| INTENTIONALLY LEFT BLANK |

CAC Form 26 Issue 5

**Composite sailplanes**

**Sailplanes**

**Hot-air balloons**

**Gas balloons**

**Hot-air airships**

**ELA2 gas airships**

**Gas airships above ELA2**

**Appendix VII — Basic knowledge requirements for category L aircraft maintenance licence**

*Regulation (EU) 2023/989*

The definitions of the different levels of knowledge required in this Appendix are the same as those set out in [point 1](#_bookmark105) of Appendix I.

1. Modularisation

The modules required for each aircraft licence subcategory/category shall be in accordance with the following matrix. Where applicable, the subject modules are indicated by an ‘X’, while ‘n/a’ means that the subject module is not applicable nor required.

The basic knowledge requirement for L5 shall be the same as for any B1 subcategory (as indicated in Appendix I) plus other modules as shown in the matrix.

**Licence subcategories**

**Subject modules**

**1L ‘Basic knowledge’ 2L ‘Human factors’**

**3L ‘Aviation legislation’**

**4L ‘Wooden and/or metal-tube structure covered with fabric’**

**5L ‘Composite structure’ 6L ‘Metallic structure’**

**7L ‘Airframe – general, mechanical and electrical systems’**

**8L ‘Power plant’**

**9L ‘Balloons – hot-air balloons’**

**L1C**

X X X

n/a

**L1 L2C L2 L3H L3G**

X X X X X

X X X X X

X X X X X

X n/a X n/a n/a

**L4H L4G L5**

X X n/a

X X n/a

X X n/a

n/a n/a n/a

X

n/a X

X

X X

X

n/a X

X

X X

n/a

n/a n/a

n/a

n/a n/a

n/a

n/a n/a

n/a

n/a n/a

n/a

n/a n/a

n/a

n/a

n/a

n/a

X

n/a

X

n/a

n/a

X

n/a

n/a

X

X

X

n/a

X (1)

n/a

**10L ‘Balloons – gas (free/tethered)**

**balloons’**

n/a n/a n/a

n/a n/a X

n/a X

X

**Composite powered sailplanes and**

**composite ELA1 aeroplanes**

**Powered sailplanes and ELA1 aeroplanes**

1 Only applicable propulsion subjects of Module 8L are required; these depend on the B1 subcategory the applicant comes from.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **11L ‘Airships – hot-air/gas AIRSHIPS’** | n/a | n/a | n/a | n/a | n/a | n/a | X | X | X |
| **12L ‘Radio Com/ELT/Transponder/ Instruments’** | X | X | X | X | n/a | n/a | X | X | X |

*MODULE 1L – BASIC KNOWLEDGE*

**MODULE 1L – BASIC KNOWLEDGE**

**Level**

1L.1

—

—

— 1L.2

—

—

—

1L.3

Mathematics

Arithmetic Algebra Geometry

Physics Matter Mechanics Temperature

Electrics

1

1

1

— AC and DC circuits

1L.4 Aerodynamics/aerostatics 1

1L.5 Workplace safety and environmental protection

2

*MODULE 2L – HUMAN FACTORS*

**MODULE 2L – HUMAN FACTORS**

**Level**

2L.1 General

1

2L.2 Human performance and limitations

1

2L.3 Social psychology

1

2L.4 Factors that affect performance

1

2L.5 Physical environment

1

2L.6 The ‘Dirty Dozen’ and risk mitigation

2

*MODULE 3L – AVIATION LEGISLATION*

**MODULE 3L – AVIATION LEGISLATION**

**Level**

3L.1 Regulatory framework

1

3L.2 Continuing airworthiness regulations

1

3L.3 Repairs and modifications (Part-ML)

2

3L.4 Maintenance data (Part-ML)

2

3L.5 Licence privileges and how to exercise them properly (Part-66, Part-ML)

2

*MODULE 4L – WOODEN AND/OR METAL-TUBE STRUCTURE COVERED WITH FABRIC*

**MODULE 4L – WOODEN AND/OR METAL-TUBE STRUCTURE COVERED WITH FABRIC**

4L.1 Airframe wooden/combination of metal tube and fabric

**Level**

2

4L.2 Materials

2

4L.3 Identifying damages and defects

3

4L.4 Standard repair and maintenance procedures

3

*MODULE 5L – COMPOSITE STRUCTURE*

**MODULE 5L – COMPOSITE STRUCTURE**

**Level**

5L.1 Airframe fibre-reinforced plastic (FRP)

2

5L.2 Materials

2

5L.3 Identifying damages and defects

3

5L.4 Standard repair and maintenance procedures

3

*MODULE 6L – METALLIC STRUCTURE*

**MODULE 6L – METALLIC STRUCTURE**

**Level**

6L.1 Metallic airframe

2

6L.2 Materials

2

6L.3 Identifying damages and defects

3

6L.4 Standard repair and maintenance procedures

3

*MODULE 7L – AIRFRAME – GENERAL, MECHANICAL AND ELECTRICAL SYSTEMS*

**MODULE 7L – AIRFRAME – GENERAL, MECHANICAL AND ELECTRICAL SYSTEMS**

**Level**

7L.1 Theory of flight – gliders and aeroplanes

1

7L.2 Airframe structure – gliders and aeroplanes

1

7L.3 Air conditioning (ATA 21)

1

7L.4 Electrical power, cables and connectors (ATA 24)

2

7L.5 Equipment and furnishing (ATA 25)

2

7L.6 Fire protection and other safety systems (ATA 26)

2

7L.7 Flight controls (ATA 27)

3

7L.8 Fuel system (ATA 28)

2

7L.9 Hydraulic power (ATA 29)

2

7L.10 Ice and rain protection (ATA 30)

1

7L.11 Landing gear (ATA 32)

2

**MODULE 7L – AIRFRAME – GENERAL, MECHANICAL AND ELECTRICAL SYSTEMS**

7L.12 Lights (ATA 33)

**Level**

2

7L.13 Oxygen (ATA 35)

2

7L.14 Pneumatic/vacuum (ATA 36)

2

7L.15 Water ballast (ATA 41)

2

7L.16 Fasteners

2

7L.17 Pipes, hoses and connectors

2

7L.18 Springs

2

7L.19 Bearings

2

7L.20 Transmissions

2

7L.21 Control cables

2

7L.22 Fits and clearances

2

7L.23 Aircraft weight and balance

2

7L.24 Workshop practices and tools

2

7L.25 Disassembly, inspection, repair and assembly techniques

2

7L.26 Abnormal events

2

7L.27 Maintenance procedures

2

*MODULE 8L – POWER PLANT*

**MODULE 8L – POWER PLANT**

**Piston**

**Turbine Electrical**

**Level**

8L.1 General engine fundamentals

X

X

X

2

8L.2 Piston engine fundamentals and performance

X

2

8L.3 Piston engine construction

X

2

8L.4 Piston engine fuel system (non-electronic)

X

2

8L.5 Starting and ignition system

X

2

8L.6 Air intake, exhaust and cooling system

X

2

8L.7 Supercharging/turbocharging

X

2

8L.8 Lubrication systems of piston engines

X

2

8L.9 Engine indication systems

X

X

X

2

8L.10 Electric aircraft engines

X

2

8L.11 Turbine engine fundamentals and performance

X

2

8L.12 Inlet and compressor

X

2

**MODULE 8L – POWER PLANT**

**Piston**

**Turbine Electrical**

**Level**

8L.13 Combustion chamber, starting and ignition system

X

2

8L.14 Turbine section and exhaust

X

2

8L.15 Other turbine engine components and systems

X

2

8L.16 Turbine engine inspections and ground operation

X

2

8L.17 Propeller

X

X

X

2

8L.18 Full authority digital engine control (FADEC)

X

X

X

2

8L.19 Lubricants and fuels

X

X

X

2

8L.20 Engine and propeller installation

X

X

X

2

8L.21 Engine monitoring and ground operation

X

X

X

2

8L.22 Engine/propeller storage and preservation

X

X

X

2

*MODULE 9L – BALLOONS – HOT-AIR BALLOONS*

**MODULE 9L – BALLOONS – HOT-AIR BALLOONS**

9L.1 Theory of flight – hot-air balloons

**Level**

1

9L.2 General airframe of hot-air balloons

2

9L.3 Envelope

3

9L.4 Heater system/burner

3

9L.5 Basket and basket suspension (including alternative devices)

3

9L.6 Instruments

2

9L.7 Equipment

2

9L.8 Hot-air balloon handling and storage

2

9L.9 Disassembly, inspection, repair and assembly techniques

3

*MODULES 10L – BALLOONS – GAS (FREE/TETHERED) BALLOONS*

**MODULES 10L – BALLOONS – GAS (FREE/TETHERED) BALLOONS**

10L.1 Theory of flight – gas balloons

**Level**

1

10L.2 General airframe of gas balloons

2

10L.3 Envelope

3

10L.4 Netting

3

10L.5 Valves, parachutes and other related systems

3

10L.6 Load ring

3

10L.7 Basket (including alternative devices)

3

10L.8 Ropes and lines

3

10L.9 Instruments

2

10L.10 Tethered gas balloon (TGB) systems

3

10L.11 Equipment

2

10L.12 Gas balloon handling and storage

2

10L.13 Disassembly, inspection, repair and assembly techniques

3

*MODULES 11L – AIRSHIPS – HOT-AIR/GAS AIRSHIPS*

**MODULES 11L – AIRSHIPS – HOT-AIR/GAS AIRSHIPS**

11L.1 Theory of flight and control of airships

**Level**

2

11L.2 Airship airframe structure – general concepts

2

11L.3 Airship envelope

2

11L.4 Gondola

3

11L.5 Airship flight control (ATA 27/55)

3

11L.6 Electrical power (ATA 24)

3

11L.7 Lights (ATA 33)

2

11L.8 Ice and rain protection

3

11L.9 Fuel systems (ATA 28)

2

11L.10 Engine and propellers in airships

2

11L.11 Airship handling and storage

2

11L.12 Disassembly, inspection, repair and assembly techniques

2

*MODULE 12L – RADIO COM/ELT/TRANSPONDER/INSTRUMENTS*

**MODULE 12L – RADIO COM/ELT/TRANSPONDER/INSTRUMENTS**

**Level**

12L.1 Radio Com/ELT

2

12L.2 Transponder and FLARM

2

12L.3 Instruments

2

12L.4 Avionics general test equipment

1

**AMC1 Appendix VII Basic knowledge requirements for category L aircraft maintenance licence**

#### MODULE 1L — BASIC KNOWLEDGE

*ED Decision 2023/019/R*

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| **MODULE 1L — BASIC KNOWLEDGE** | **Level** |
| *1L.1 Mathematics*  Arithmetic:   * Arithmetical terms and signs; * Methods of multiplication and division; * Fractions and decimals; * Factors and multiples; * Weights, measures, and conversion factors; * Ratio and proportion; * Averages and percentages; * Areas and volumes, squares, cubes. Algebra: * Evaluating simple algebraic expressions: addition, subtraction, multiplication, and division; * Use of brackets; * Simple algebraic fractions. Geometry: * Simple geometrical constructions; * Graphical representation: nature and uses of graphs. | 1 |
| *1L.2 Physics*  Matter:   * Nature of matter: the chemical elements; * Chemical compounds; * States: solid, liquid, gaseous; * Changes between states. Mechanics: * Forces, moments and couples, and representation as vectors; * Centre of gravity; * Tension, compression, shear, and torsion; * Nature and properties of solids, fluids, and gases. Temperature: * Thermometers and temperature scales: Celsius, Fahrenheit, and Kelvin; * Definition. | 1 |
| *1L.3 Electrics*  AC and DC circuits:   * Ohm’s law, Kirchhoff’s voltage, and current laws; * Significance of the internal resistance of a supply; * Resistance/resistor; * Resistor colour code, values and tolerances, preferred values, wattage ratings; * Resistors in series and in parallel. | 1 |
| *1L.4 Aerodynamics/aerostatics*  International Standard Atmosphere (ISA), application to aerodynamics and aerostatics. | 1 |
| *1L.5 Workplace safety and environmental protection*   Safe working practices and precautions when working with electricity, gases (especially oxygen), oils, and chemicals;   * Labelling, storage and disposal of hazardous (to workplace safety and environment) materials; * Remedial action in the event of a fire or another accident with one or more hazards,   including knowledge of fire-extinguishing agents. | 2 |

#### MODULE 2L — HUMAN FACTORS

**MODULE 2L — HUMAN FACTORS**

*2L.1 General*

**Level**

1

* The need to take human factors into account in the maintenance domain;
* Incidents attributable to human factors/human error;
* Murphy’s law.

*2L.2 Human performance and limitations* 1

Vision, hearing, information processing, attention and perception, memory.

*2L.3 Social psychology*

Responsibility, motivation, peer pressure, teamwork.

*2L.4 Factors that affect performance*

Fitness, physical and mental health, stress, sleep, fatigue, alcohol, medication, drug abuse.

*2L.5 Physical environment*

Working environment (climate, noise, illumination).

1

1

1

*2L.6 The ‘Dirty Dozen’ and risk-mitigation* 2

The ‘Dirty Dozen’:

* lack of communication
* lack of teamwork
* lack of assertiveness
* complacency
* fatigue
* stress
* lack of knowledge
* lack of resources
* lack of awareness
* distraction
* pressure
* norms.

Risk-mitigation methods.

#### MODULE 3L — AVIATION LEGISLATION

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| **MODULE 3L — AVIATION LEGISLATION** | **Level** |
| *3L.1 Regulatory framework*   * Role of the European Commission (EC), the European Union Aviation Safety EASA and Civil Aviation Committee of the Republic of Armenia (CAC RA); * Scope and limitations of the regulatory framework. | 1 |
| *3L.2 Continuing airworthiness regulations*   * General understanding of the applicable parts of Part-66; * General understanding of the applicable parts of Part-ML; * General understanding of the applicable parts of Part-CAO; * General understanding of Part-M, Part-CAMO and Part-145. | 1 |
| *3L.3 Repairs and modifications (Part-ML)*   * Approval of changes (repairs and modifications); * Standard changes and standard repairs. | 2 |
| *3L.4 Maintenance data (Part-ML)*   * Airworthiness directives (ADs), safety information bulletins (SIBs); * Service bulletins (SBs), instructions for Continuing Airworthiness (ICAs) (AMM, IPC, etc.), aircraft flight manual (AFM), maintenance records, maintenance programmes. | 2 |
| *3L.5 Licence privileges and how to exercise them properly (Part-66, Part-ML)*  Conditions for release to service:   * in a maintenance organisation; * as independent certifying staff; * release-to-service procedures. | 2 |
| **MODULE 4L — WOODEN AND/OR METAL-TUBE STRUCTURE COVERED WITH FABRIC** |  |
| **MODULE 4L — WOODEN AND/OR METAL-TUBE STRUCTURE COVERED WITH FABRIC** | **Level** |
| *4L.1 Airframe wooden/combination of metal tube and fabric*   * General construction principles for wooden structures covered with fabric, metal-tube structures covered with fabric, and combination of wooden and metal-tube structures; * Wood as a technical material (heartwood, sapwood, grain, etc.); * Wood defects (types, acceptable/ not acceptable); * Different woodcuts (tangential cuts, radial cuts, etc.) and their properties (tangential cuts, radial cuts, etc.); * Metal tubing (mechanical and stress properties of metal tubes); * Types of welding and welding joints; * General characteristics of aircraft coverings; * General characteristics of paint;   — Transmission of loads in and between structures. | 2 |
| *4L.2 Materials*   Types of wood (solid wood, laminated wood, plywood, wood composites), suitable wood materials and their properties (spruce, firs, etc.), wood defects (acceptable / not acceptable), stability, deterioration (temperature, humidity, ageing, etc.); | 2 |

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| **MODULE 4L — WOODEN AND/OR METAL-TUBE STRUCTURE COVERED WITH FABRIC** | **Level** |
| * Types of covering and technologies (natural and synthetic polymers), deterioration; * Types of glues, adhesives, paints and other associated materials; * Types of metal-tubing material (steel, light alloy tubes, etc.); * Welding seams, fittings, screws and bolts (material and properties); * Proper storage of those materials;   — Plastics (overview and understanding of their properties). |  |
| *4L.3 Identifying damages and defects*   * Inspection procedures; * Damage identification in wooden structures (heavy landing, rot, glue failure, fungi, shrinkage, stress damage, cracks, fatigue, etc.); * Damage identification in metal-tube structures (hard landing, stress, corrosion, fatigue, dents, cracks, fatigue, etc.); * Damage identification in welded seams; * Damage identification in fabric coverings (tears, strains, UV damage, hard landing, etc.). | 3 |
| *4L.4 Standard repair and maintenance procedures*   * Repair and conservation of wooden aircraft structures: wing rib, wing spar, bolt and brushing holes, patches (fabric, splayed, surface, plug, scarf); * Repair and reapplication of fabric on aircraft (fabric, tape, lacing, threads, seams, fabric protection, stitching, knots, fasteners, finishing tape, rings and grommets, dope); * Repair and corrosion protection/prevention methods for metal-tube aircraft structures (welding, patch plates, reinforcement tubes, sleeves, etc.); * Repair, removal and application of paint and dope on airframes in wooden / combination of metal tube and fabric (surface preparation, application and finish). | 3 |

**MODULE 5L — COMPOSITE STRUCTURE**

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| **MODULE 5L — COMPOSITE STRUCTURE** | **Level** |
| *5L.1 Airframe fibre-reinforced plastic (FRP)*   * General construction principles of airframes in FRP and its properties; * Characteristics of laminated structures (matrix and fibres); * Fibre (fibre orientation, strength characteristics, isotropic, anisotropic, filament, strands, tows, yarns, rovings, impreg and prepreg); * Fabric weave styles (plain weave, twill weave, atlas weave, unidirectional) and non-woven material (stitched and knotted) and their characteristics; * Matrix (thermosetting, thermoplastic, curing stages); * Characteristics of sandwich structures and their supporting cores (honeycombs, foams, wooden cores, pseudo-cores); * General characteristics of accelerators and additives/modifiers; * Transmission of loads in and between structures. | 2 |
| *5L.2 Materials*   * Types of fibres (fibreglass, E-glass, aramid, carbon/graphite, boron, ceramic, lightning protection fibre); * Types of matrices (different types, properties and application); * Types of resin filler materials (fumed silica, glass powder, hollow glass, phenolic and plastic microballoons, cotton, flox, colour pigments, fire retardants); * Types of sandwich structure core materials (honeycombs: aramid paper, kraft paper, thermoplastic, aluminium, fibreglass, carbon; foams: polystyrene, phenolic, polyurethane, polypropylene, PVC, polymethacylimide; balsa wood); * Behaviour, interaction, and technological aspects of composites made of those materials; * Storage and handling of those materials. | 2 |
| *5L.3 Identifying damages and defects*   * Inspection procedures (visual inspection, tapping, NDT testing, etc.); * Types of manufacturing defects and damages and their causes (fibre breakage, matrix imperfections, delamination, debonding, improper drilling, environmental degradation, impact damage, fatigue, erosion, corrosion, UV damage, hard landing, stress, etc.). | 3 |
| *5L.4 Standard repair and maintenance procedures*   * Repairs of aircraft structures: wing, rib, wing spar, aerofoil, bolt and brushing holes, patches, sandwich core and faceplate repairs, bolted and bonded repairs; * Proper construction and repair fittings, and load-bearing points for composites and composite sandwich structures; * Creation and use of repair moulds from the airframe or intact parts (types, procedures, coatings, etc.); * Proper procedure for the mixing of resins, fibre layering and curing of composites; | 3 |

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| **MODULE 5L — COMPOSITE STRUCTURE** | **Level** |
| * Bonding metals and other materials; * Composite painting and finish. |  |
| **MODULE 6L — METALLIC STRUCTURE** |  |
| **MODULE 6L — METALLIC STRUCTURE** | **Level** |
| *6L.1 Metallic airframe*   * General construction principles for metal-structure airframes; * General knowledge of the properties of metal as a technical material (classification; physical, mechanical and electrical properties; manufacturing properties; chemical properties); * General knowledge of the properties of pure metals and alloys; * Metal grain structure of pure metals and alloys and its impact on behaviour (grain boundaries; corrosion; hardening; annealing; differences between forged, machined and cast metals); * Stresses in structural members (tension, compression, torsion, shearing, bearing, bending); * Types of corrosion and corrosion protection (electrochemical oxidation, galvanic corrosion, stress-corrosion cracking, corrosion in passivated materials, high-temperature corrosion); * Types of rivets and fasteners (solid shank rivet, blind rivets, self-plugging rivets (mechanical and friction lock), pull-thru rivets, pin rivets, head styles, taper-lok, rivet nut, lockbolt, high shear fastener, identification, measuring); * Types of welding and welding joints; * Transmission of loads in and between structures. | 2 |
| *6L.2 Materials*   * Types of iron and steel, and their alloys in aviation (cast, forged, tempering, corrosion, strength properties); * Types of aluminium and aluminium alloys in aviation in airframes, rivets, and fasteners (strength properties, corrosion); * Common alloying elements for steel and aluminium (influence on the mechanical and physical properties of the alloy); * Common paint and surface protection materials; * Common adhesives for use with metals. | 2 |
| *6L.3 Identifying damages and defects*   * Inspection procedures (sheet metal, structure, bonded joints, soldered joints, welded and brazed joints, riveted joints, corrosion); * Identification and classification of cracks, fatigue, and corrosion in metallic structures. | 3 |
| *6L.4 Standard repair and maintenance procedures* | 3 |

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| **MODULE 6L — METALLIC STRUCTURE** | **Level** |
| * Metal and sheet metal (marking out and calculation of bend allowance, cutting, drilling, bending and forming, inspection of metal work); * Welding, brazing, soldering and bonding (soldering methods, welding and brazing methods, bonding methods); * Riveting (riveted joints, rivet spacing and pitch; tools used for riveting and dimpling; inspection of riveted joints); * Repairing by patching, insertion, and replacement of parts; * Corrosion treatment; * Problems in multiple-material systems. |  |
| **MODULE 7L — AIRFRAME: GENERAL, MECHANICAL AND ELECTRICAL SYSTEMS** |  |
| **MODULE 7L — AIRFRAME: GENERAL, MECHANICAL AND ELECTRICAL SYSTEMS** | **Level** |
| *7L.1 Theory of flight — gliders and aeroplanes*  Aerodynamics and flight controls:   * Airflow around a body; * Boundary layer, laminar and turbulent flow; * Thrust, weight, aerodynamic resultant; * Generation of lift and drag angle of attack, polar curve, stall.   Operation and effect of roll control, pitch control, yaw control and rudder limiters:   * Control using dual-purpose controls; * High-lift devices, slots, slats, flaps, flaperons; * Drag-inducing devices, lift dumpers, speed brakes, dive brakes; * Effects of wing fences, saw tooth leading edges; * Boundary layer control using vortex generators, stall wedges or leading-edge devices;   — Operation and effect of trim tabs, balance and antibalance (leading) tabs, servo tabs, spring tabs, mass balance, control surface bias, aerodynamic balance panels. | 1 |
| *7L.2 Airframe structure — gliders and aeroplanes*   * Fuselage: construction (truss type, monocoque, semimonocoque), attach points (wing, tail plane, undercarriage); * Wings: construction (monospar, multispar, box beam), configurations (cantilever, semicantilever, strut/wire braced), fairing; * Stabilisers: construction, control surface attachments; * Flight control surfaces: construction and attachment, balancing (mass and aerodynamics); * Tow hooks (Schweizer and Tost hook); * Aircraft assembly, storage, jacking, chocking, securing and associated safety precautions; * Effects of environmental conditions on aircraft handling and operation. | 1 |
| *7L.3 Air conditioning* ***(ATA 21)*** | 1 |

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| **MODULE 7L — AIRFRAME: GENERAL, MECHANICAL AND ELECTRICAL SYSTEMS** | **Level** |
| Heating and ventilation for small aircraft. |  |
| *7L.4 Electrical power, cables, and connectors* ***(ATA 24)***   * Installation and operation of batteries; * Power generation / power sources (AC/DC) on small aircraft, voltage regulation, power distribution and circuit protection; * Cable types, construction and characteristics, high-tension and coaxial cables, testing and installation precautions; * Connector types, pins, plugs, sockets, insulators, current and voltage rating, coupling, identification codes, pin insertion and removal; * Crimping (crimping, tools, testing of crimp joints); * Continuity, insulation and bonding techniques and testing; * Wiring protection techniques (cable looming and loom support, cable clamps, protective sleeving techniques (including heat shrink wrapping), shielding). | 2 |
| *7L.5 Equipment and furnishing* ***(ATA 25)***   Emergency equipment requirements;  — Seats, harnesses, and belts. | 2 |
| *7L.6 Fire protection and other safety systems* ***(ATA 26)***   Portable fire extinguisher;  — Rescue systems (safety parachute, recovery parachute, launching systems, including safety measures for pyrotechnics). | 2 |
| *7L.7 Flight controls* ***(ATA 27)***   * Primary controls: aileron, elevator/stabilator, rudder, dual-purpose controls (stabilator, ruddervator, flaperons); * Secondary controls: elevator trim systems, wing flaps, slats and spoilers / dive breaks; * System operation: manual; * Gust locks, balancing and rigging of flight controls; * Simple stall-warning systems. | 3 |
| *7L.8 Fuel system* ***(ATA 28)***   * System layout; * Fuel tanks; * Supply systems; * Indications and warnings; * Refuelling and defuelling. | 2 |
| *7L.9 Hydraulic power* ***(ATA 29)***   * System layout; * Hydraulic fluids; | 2 |

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| **MODULE 7L — AIRFRAME: GENERAL, MECHANICAL AND ELECTRICAL SYSTEMS** | **Level** |
|  Hydraulic reservoirs and accumulators, pressure generation (electric, mechanical), filters, pressure control, power distribution, indication and warning systems. |  |
| *7L.10 Ice and rain protection* ***(ATA 30)***   Hydrophobic coatings;  — Pitot probe heating. | 1 |
| *7L.11 Landing gear* ***(ATA 32)***   * Construction (tricycle, tailwheel, outrigger wheels, skids), shock absorbing; * Extension and retraction systems: normal and emergency operation; * Indications and warnings; * Wheels, brakes, tyres, and steering;   — Standard repair and maintenance procedures for the landing gear. | 2 |
| *7L.12 Lights* ***(ATA 33)***   External lights: navigation, anticollision, landing, taxiing;  — Internal lights: cockpit. | 2 |
| *7L.13 Oxygen* ***(ATA 35)***   * System layout: storage system (containers), delivery system (continuous flow, diluter demand and pressure demand) and masks/nasal cannula; * System operation, including charging and discharging;   — The ‘PRICE’ check. | 2 |
| *7L.14 Pneumatic/vacuum* ***(ATA 36)***   * System layout; * Sources, pumps, control and distribution;   — Indication and warnings. | 2 |
| *7L.15 Water ballast* ***(ATA 41)***  Water tanks (main tank, fin tank), drain valves, vents. | 2 |
| *7L.16 Fasteners*   * Screw threads: nomenclature, forms, dimensions and tolerances, and measuring; * Bolts, studs and screws: types (specifications, identification, markings, international standards), nuts (self-locking, anchor, standard types), machine screws (aircraft specifications), studs (types and uses, insertion and removal), self-tapping screws, dowels; * Locking devices: tab and spring washers, locking plates, split pins, pal-nuts, wire locking, quick-release fasteners, keys, circlips, cotter pins; * Aircraft rivets: types of solid and blind rivets: specifications and identification, heat treatment. | 2 |
| *7L.17 Pipes, hoses, and connectors*   Types and connectors of pipes and hoses for hydraulic, fuel, oil, pneumatic and air; | 2 |

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| **MODULE 7L — AIRFRAME: GENERAL, MECHANICAL AND ELECTRICAL SYSTEMS** | **Level** |
|  Bending, belling/flaring, inspection, testing and installation of pipes and hoses. |  |
| *7L.18 Springs*  Types of springs, materials, characteristics, applications, inspection, and testing. | 2 |
| *7L.19 Bearings*   * Purpose of bearings, loads, material, construction; * Types of bearings, their application, testing, cleaning, inspection, lubrication requirements, and common defects in bearings and their causes. | 2 |
| *7L.20 Transmission*   * Gear types, their application, gear ratios, reduction and multiplication gear systems, driven and driving gears, idler gears, mesh patterns, inspection of gears, backlash/play; * Types, application and inspection of belts and pulleys, chains and sprockets; * Inspection of screw jacks, lever devices, push–pull rod systems. | 2 |
| *7L.21 Control cables*   * Types of cables, end fittings, turnbuckles, compensation devices, pulleys, cable system components, Bowden cables and aircraft flexible control systems; * Swaging of end fittings; * Inspection and testing of control cables, Bowden cables, and aircraft flexible control systems. | 2 |
| *7L.22 Fits and clearances*  Common system of fits, clearances and tolerances, drill sizes for bolt holes, classes of fits, schedule of fits and clearances for aircraft and engines, limits for bow, twist and wear, standard methods for checking shafts, bearings and other parts. | 2 |
| *7L.23 Aircraft weight and balance*  Calculation of centre-of-gravity / balance limits: use of relevant documents, preparation of aircraft for weighing, aircraft weighing. | 2 |
| *7L.24 Workshop practices and tools*   * Common hand-tool types, power-tool types, precision tool types and equipment, their operation, care, control, calibration, and standards; * Operation, function and use of electrical general test equipment; * Proper handling of engineering drawings, diagrams and standards, and comprehension of the information presented thereupon (symbols, schematics and diagrams); * Use of workshop materials; * Dimensions, allowances and tolerances, standards of workmanship; * Lubrication equipment and methods. | 2 |
| *7L.25 Disassembly, inspection, repair, and assembly techniques* | 2 |

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| **MODULE 7L — AIRFRAME: GENERAL, MECHANICAL AND ELECTRICAL SYSTEMS** | **Level** |
| * Types of defects and visual inspection techniques; corrosion removal, assessment and reprotection; * General repair methods, structural repair manual; ageing, fatigue and corrosion control programmes; * Non-destructive inspection techniques, including penetrant, radiographic, eddy current, ultrasonic and borescope methods; * Disassembly and reassembly techniques; * Troubleshooting techniques. |  |
| *7L.26 Abnormal events*  Inspection following lightning strike, HIRF penetration, heavy landing, and flight through  turbulence. | 2 |
| *7L.27 Maintenance procedures*  Maintenance planning, modification procedures, stores procedures, maintenance inspection / quality control / quality assurance, additional maintenance procedures, control of life-limited  components. | 2 |

**MODULE 8L — POWER PLANT**

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| **MODULE 8L — POWER PLANT** | **Level** |
| *8L.1 Engine fundamentals — general*   * Potential energy, kinetic energy, Newton’s laws of motion, Brayton cycle; * The relationship between force, work, power, energy, velocity, and acceleration; * Mechanical, thermal, and volumetric efficiencies. | 2 |
| *8L.2 Piston-engine fundamentals and performance*   * Operating principles: 2-stroke, 4-stroke, Otto, Diesel, and Rotary (Wankel); * Piston displacement and compression ratio; * Engine configuration and firing order; * Power calculation and measurement; * Factors that affect engine power; * Mixtures/leaning, pre-ignition. | 2 |
| *8L.3 Piston-engine construction*   * Crank case, crank shaft, cam shafts, sumps; * Accessory gearbox; * Cylinder and piston assemblies; * Connecting rods, inlet and exhaust manifolds; * Valve mechanisms; * Propeller reduction gearboxes. | 2 |
| *8L.4 Piston-engine fuel system (non-electronic)*   * Carburettors (types, construction and principles of operation, icing and heating); * Fuel injection systems (types, construction, and principles of operation). | 2 |
| *8L.5 Starting and ignition systems*   * Starting systems, preheat systems; * Magneto types, construction, and principles of operation; * Ignition harnesses, spark plugs; * Low- and high-tension systems. | 2 |
| *8L.6 Air-intake, exhaust, and cooling systems*   * Construction and operation of induction systems, including alternate air systems; * Exhaust systems, engine cooling systems — air and liquid. | 2 |
| *8L.7 Supercharging/turbocharging*   * Principles and purpose of supercharging and its effects on engine parameters; * Construction and operation of supercharging/turbocharging systems; * System-associated terminology; * Control systems; * System protection. | 2 |
| *8L.8 Lubrication systems of piston engines*  System operation/layout and components. | 2 |
| *8L.9 Engine indication systems*   Indication systems specific to general combustion engines (coolant temperature, oil pressure and temperature, exhaust gas temperature, fuel pressure and flow); | 2 |

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| **MODULE 8L — POWER PLANT** | **Level** |
| * Indication systems specific to piston engines (cylinder head temperature, manifold pressure, engine speed); * Indication systems specific to turbine engines (exhaust gas temperature, engine thrust indication, engine speed); * Indication systems specific to electric engines (voltage). |  |
| *8L.10 Electric aircraft engines*   * Types and construction of electric motors (AC and DC motors, rotor, stator, bearings, windings, commutator, self-commutated, externally commutated, outrunner and inrunner, motor cooling, etc.); * Power electronics; * Transformer, transducer, and inverter; * Engine control systems; * Power storage systems (common high-density batteries, chemistry batteries, load cycles, degradation, effects of charging and overcharging, thermal runaway); * Battery management systems (general functions, battery balancing, monitoring); * Wiring of electric power storage, power electronics, and electric motor; * High-energy safety procedures. | 2 |
| *8L.11 Turbine-engine fundamentals and performance*   * Constructional arrangement and operation of turbojet and turboprop engines; * Thrust: thrust horsepower, shaft horsepower, specific fuel consumption; * Engine pressure ratio; * Pressure, temperature, and velocity of gas flow; * Engine ratings, static thrust, limitations. | 2 |
| *8L.12 Inlet and compressor*   * Compressor inlet; * Axial and centrifugal compressor types, constructional features, operating principles and applications; * Compressor (stator, rotor, blisk, disk, blades, compressor stall and surge); * Compressor ratio. | 2 |
| *8L.13 Combustion chamber, starting and ignition system*   * Constructional features and principles of operation; * Operation of engine start systems and components; * Ignition systems and components (exciter, ignition plugs and glow plugs). | 2 |
| *8L.14 Turbine section and exhaust*   * Operation and characteristics of different turbine blade types, nozzle guide vanes; * Gas producer turbine and power turbine, blade-to-disk attachment; * Causes and effects of turbine blade stress and creep; * Engine exhaust nozzle and noise reduction. | 2 |
| *8L.15 Other turbine-engine components and systems*   * General knowledge of the type features and principles of bearings and seals in turbine engines; * System operation, layout and components of lubrication systems in small turbine engines (separate lubrication, as part of the fuel system); | 2 |

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| **MODULE 8L — POWER PLANT** | **Level** |
| * System operation, layout and components of air and fuel systems in small turbine engines; * Turboprop reduction gears. |  |
| *8L.16 Turbine-engine inspection and ground operation*   * Standard procedures for starting and ground run-up and interpretation of engine power output and parameters; * Inspection of engine and components to criteria, tolerances and data specified by the engine manufacturer; * Foreign object damage (FOD). | 2 |
| *8L.17 Propeller*   * Propeller fundamentals (blade element theory, blade angles, angle of attack, rotational speed, propeller slip, aerodynamic/centrifugal/thrust forces, torque, relative airflow, vibration and resonance); * Propeller construction (methods of construction and materials used in wooden/composite/metal propellers, blade station, blade face, blade shank, blade back/thrust face and hub assembly, fixed pitch, controllable pitch, constant speed propeller, propeller/spinner installation); * Propeller pitch control (speed control and mechanical/electrical pitch change methods, feathering, propeller accumulators, overspeed protection); * Environmental protection (de-icing and metal tipping); * Propeller balancing (static and dynamic) and blade tracking; * Damage assessment, erosion, corrosion, impact damage, delamination and decay; * Standard treatment and repair methods for propellers. | 2 |
| *8L.18 Full authority digital engine control (FADEC)*   * Operation of engine control and fuel-metering systems in piston and turbine engines, including electronic engine control (FADEC); * System layout and components. | 2 |
| *8L.19 Lubricants and fuels*  — Properties and specifications of standard, alternate and drop-in fuels, fuel additives, and lubricants. | 2 |
| *8L.20 Engine and propeller installation*   * Construction of nacelles; * Configuration of firewalls, cowlings, acoustic panels, engine mounts, antivibration mounts, hoses, pipes, feeders, connectors, wiring looms, control cables and rods, lifting points and drains; * Extension and retraction systems, including propeller position control; * Propeller installation. | 2 |
| *8L.21 Engine monitoring and ground operation*   * Procedures for starting and ground run-up; * Interpretation of engine power output and parameters; * Inspection of engine and components to criteria, tolerances and data specified by the engine manufacturer; * Foreign object damage (FOD). | 2 |
| *8L.22 Engine/propeller storage and preservation* | 2 |

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| **MODULE 8L — POWER PLANT** | **Level** |
| — Preservation and depreservation of the engine, the propeller, and accessories/systems. |  |

**MODULE 9L — BALLOONS: HOT-AIR BALLOONS**

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| MODULE 9L — BALLOONS: HOT-AIR BALLOONS | Level |
| *9L.1 Theory of flight — hot-air balloons*   * Aerostatics and controls; * Principles; * Effect on envelopes, wind effect, altitude, and temperature effects. | 1 |
| *9L.2 General airframe of hot-air balloons*  Components and assembly of a hot-air balloon:   * Identification plate; * Envelope; * Heater system / burner; * Suspension cables; * Basket; * Lines and ropes (crown line, actuationline). | 2 |
| *9L.3 Envelope*   * Shape and assembly of envelope (poles, equator, panels, gores, special shapes); * Fabrics, seams, and materials; * Crown ring; * Deflation port/parachute and ripping panel; * Load tapes (horizontal and vertical) and rip stoppers; * Turning vent; * Mouth; * Skirt/scoop; * Diaphragms/catenaries (special shapes). | 3 |
| *9L.4 Heater system / burner*   * System layout (burner, fuel tanks, fuel lines); * Types of burners (whisper-/cow-burner, main/take-off burner); * Functionality, materials, use, inspection, and care of: * fuel tanks (propane cylinders, material, valves, fittings, fuel quantity gauge), * fuel lines / gas hoses, * burner (piezo igniter, pilot light and valve, blast valve, heat exchanger / burner coils, nozzle, etc.). | 3 |
| *9L.5 Basket and basket suspension (including alternative devices)*   * Common assembly of and materials for hot-air balloon baskets; * Rigging points, burner frame, burner support rods, metal frame, basket padding and leather trim; * Basket weave, grab handles, cylinder attachment, take-off aid and rope; * Basket wire and basket wire routing; * Basket floor, basket frame / load-bearing frame, sliders, rawhide protective covering. | 3 |
| *9L.6 Instruments*  Basic operation, maintenance, and testing of:   * altimeter (mechanical and electronic); * variometer (mechanical and electronic); * pyrometer / temperature sensors; * Mode S transponder; | 2 |

|  |  |
| --- | --- |
| MODULE 9L — BALLOONS: HOT-AIR BALLOONS | Level |
| * VHF radio; * Emergency locator transmitter (ELT) and personal locator beacon (PLB). |  |
| *9L.7 Equipment*  — Required equipment for free-ballooning operation and its care. | 2 |
| *9L.8 Hot-air balloon handling and storage*   * Ground procedures for hot-air balloons, rigging and launch preparation; * Safe handling of propane; * Effects of environmental conditions on hot-air balloon handling. | 2 |
| *9L.9 Disassembly, inspection, repair, and assembly techniques*   * Types of defects and visual inspection techniques; * Allowable damage to and tolerance of envelope, basket, lines, ropes, etc.; * Common test procedures (grab test); * General repair methods for envelopes, load ring, ropes and lines, basket; * Inspection methods for envelopes, ropes and lines, basket; * Ageing, fatigue; * Disassembly and reassembly techniques; * Troubleshooting techniques. | 3 |

**MODULE 10L — BALLOONS: GAS (FREE/TETHERED) BALLOONS**

|  |  |
| --- | --- |
| MODULE 10L — BALLOONS: GAS (FREE/TETHERED) BALLOONS | Level |
| *10L.1 Theory of flight — gas balloons*  Aerostatics and controls:   * Principles; * Effect on envelopes, wind effect, altitude, and temperature effects. | 1 |
| *10L.2 General airframe of gas balloons*  Components and assembly of a gas balloon:   * Identification plate; * Envelope; * Valve; * Netting; * Load ring (hoop); * Basket; * Lines and ropes (drag rope, mooring line, valve line, emergency opening rope, ripping line,   neckline). | 2 |
| *10L.3 Envelope*   * Shape and assembly of envelope (poles, equator, panels); * Fabrics, seams, and materials; * Deflation opening and parachute; * Load belt; * Ripping panel; * Appendix; * Emergency opening; * Holding-down patches; * Ballonets; | 3 |

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| --- | --- |
| — Electrostatic properties. |  |
| *10L.4 Netting*   * Netting assembly (net ring, net, mesh); * Mesh dimensions (knots, sizes, angles); * Materials for netting and accessories; * Electrostatic properties. | 3 |
| *10L.5 Valves, parachutes, and other related systems*   * Construction, operation, maintenance and testing of manoeuvring/helium valves, pressure relief valves, gas-tight parachutes, and ballonet fans; * Construction, operation, maintenance and testing of parachute-centring belt and pull-   down belts. | 3 |
| *10L.6 Load ring*  — Function, material, and common problems (steel pipe, strops, toggles). | 3 |
| *10L.7 Basket (including alternative devices)*  Common assembly of and materials for hot-air/gas balloon baskets:   * Metal frame, basket padding and leather trim; * Basket weave, grab handles, basket strops and toggles, ballast system (bags, support and sand dumpers); * Basket wire and basket wire routing; * Basket floor, basket frame / load-bearing frame, sliders, rawhide protective covering. | 3 |
| *10L.8 Ropes and lines*  Functionality, materials, use, inspection, and care of:   * Shroud lines / envelope ropes / bridles; * Trail rope /drag rope and trail-rope bag; * Holding ropes; * Valve line/ valve cord and parachute rope; * Emergency opening rope; * Appendix pull-close rope; * Appendix anchor line; * Inflation aid. | 3 |
| *10L.9 Instruments*  Basic operation, maintenance, and testing of:   * Altimeter (mechanical and electronic); * Variometer (mechanical and electronic); * Mode-S transponder; * VHF radio; * Emergency locator transmitter (ELT) and personal locator beacon (PLB). | 2 |
| *10L.10 Tethered gas balloon (TGB) systems*  Functionality, operation, materials, use, inspection, and care of:   * Launch platform; * Winch system: winch (electric, hydraulic, emergency operation), tether cable (cable, sheaves, swivel, clamps), and control panel; * Gondola (metal-tubing construction); * Night lighting. | 3 |
| *10L.11 Equipment* | 2 |

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| --- | --- |
| — Required equipment for free-ballooning and for tethered operations, and its care. |  |
| *10L.12 Gas-balloon handling and storage*   * Ground procedures and mooring for gas balloons and tethered gas balloons, ballasting, rigging and launch preparation; * Safe handling of hydrogen, helium, illuminating gas, and other lifting gases; * Lifting gas (charging, purifying and leak testing, pressure monitoring); * Effects of environmental conditions on gas-balloon handling. | 2 |
| *10L.13 Disassembly, inspection, repair, and assembly techniques*   * Types of defects and visual inspection techniques; * Allowable damage to and tolerance of envelope, basket, lines, ropes, etc.; * Common test procedures (grab test, tensile strength, tear growth, porosity, electric resistivity, etc.); * General repair methods for envelopes, load ring, ropes and lines, basket/gondola; * Inspection methods for envelopes, load ring, ropes and lines, basket/gondola (especially for steel frames and welds on TGB gondolas); * Ageing, fatigue and corrosion control programmes; * Disassembly and reassembly techniques; * Troubleshooting techniques. | 3 |

**MODULE 11L — AIRSHIPS: HOT-AIR/GAS AIRSHIPS**

|  |  |
| --- | --- |
| MODULE 11L — AIRSHIPS: HOT-AIR/GAS AIRSHIPS | Level |
| *11L.1 Theory of flight and control of airships*   * Control using fins, rudders and elevators; * Aerodynamic lift and aerodynamic balance; * Stability and control; * Free ballooning; * Operation of trim tabs, balance and antibalance (leading) tabs, servo tabs, spring tabs, mass balance, control surface bias, aerodynamic balance panels; * Vectored thrust; * Fire and lightning protection. | 2 |
| *11L.2 Airship airframe structure — general concepts*   * Classification of airships (rigid airship, semi-rigid airship, non-rigid airship); * Construction of semi-rigid airships (envelope, ballonet, membranes, nose cone, internal structures, keel, trusses, longerons, suspension lines); * Construction of non-rigid airships (envelope, ballonet, catenary curtains, suspension lines, air scoops); * Attachment of stabilisers and control surfaces to the airframe. | 2 |
| *11L.3 Airship envelope*   * Nose cone battens / bow strips; * Catenary systems (catenary curtain, support/suspension cables); * Ballonets and their positioning (forward, aft); * Air systems (air scoops, ballonet fans, empennage air system, dampers and transfer fans). | 2 |
| *11L.4 Gondola* | 3 |

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| --- | --- |
| MODULE 11L — AIRSHIPS: HOT-AIR/GAS AIRSHIPS | Level |
| * General knowledge of gondola construction (metal-tubing gondolas, metal-structure gondolas, composite gondolas); * Doors, windows, and hatches; * Attachment of the gondola to the airframe/envelope; * Gondola layout, equipment and furnishing (emergency equipment requirements, seats, harnesses and belts); * Simple water/waste systems in airships; * Gondola heating and ventilation (ventilations and heating systems, heat exchanger, blower); * Landing gear (construction, shock absorbing, tyres, weight-on-wheels). |  |
| *11L.5 Airship flight controls (ATA 27/55)*   * Primary controls (rudder, elevator, asymmetric thrust, thrust vectoring); * Trim control; * System operation: manual, hydraulic, pneumatic, electrical, fly-by-wire; * Balancing and rigging. | 3 |
| *11L.6 Electrical power (ATA 24)*   * Installation and operation of batteries; * DC power generation; * AC power generation; * Voltage regulation; * Power distribution; * Wiring, electrical connections; * Inverters, transformers, rectifiers; * Circuit protection; * External/ground power. | 3 |
| *11L.7 Lights (ATA 33)*   * External: navigation, anticollision, landing, taxiing, ground approach light, aft landing light; * Internal: flight compartment (cockpit) and passenger compartment (cabin); * Emergency. | 2 |
| *11L.8 Ice and rain protection*   * Windscreen wipers and windscreen de-misting systems; * Surface de-icing systems. | 3 |
| *11L.9 Fuel systems (ATA 28)*   * System layout; * Fuel tanks: venting, draining; * Supply systems; * Cross-feed and transfer; * Indications and warnings; * Refuelling and defuelling. | 2 |
| *11L.10 Engine and propellers in airships*  — General understanding of engine layout, thrust vectoring, swivel systems, ducted propellers and control system. | 2 |
| *11L.11 Airship handling and storage* | 2 |

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| --- | --- |
| MODULE 11L — AIRSHIPS: HOT-AIR/GAS AIRSHIPS | Level |
| * Ground procedures and mooring with and without mooring mast, ballasting, hangaring, rigging and launch preparation; * Lifting gas (charging, purifying and leak testing, pressure monitoring); * Effects of environmental conditions on airship handling. |  |
| *11L.12 Disassembly, inspection, repair, and assembly techniques*   * Types of defects and visual inspection techniques; * Corrosion removal, assessment and reprotection; * General repair methods, structural repair manual; * Ageing, fatigue and corrosion control programmes; * Non-destructive inspection techniques; * Disassembly and reassembly techniques; * Troubleshooting techniques. | 2 |

##### MODULE 12L — RADIO COM / ELTs / TRANSPONDERS / INSTRUMENTS

|  |  |
| --- | --- |
| **MODULE 12L — RADIO COM / ELTs / TRANSPONDERS / INSTRUMENTS** | **Level** |
| *12L.1 Radio COM / ELTs*  Fundamentals of radio-wave propagation, antennas, transmission lines, communication, receiver, and transmitter.  Working principle of:   * Emergency locator transmitters (ELTs); * Very-high-frequency (VHF) communications; * installation and testing of ELTs and VHF radio and antennas. | 2 |
| *12L.2 Transponder and FLARM*   * Air traffic control transponder, secondary surveillance radar (basic operation, configuration, modes); * FLARM; * Installation and testing. | 2 |
| *12L.3 Instruments*   * Pitot-static: altimeter, airspeed indicator, vertical speed indicator, total energy probes; * Gyroscopic: artificial horizon, attitude director, direction indicator, horizontal situation indicator, turn and slip indicator, turn coordinator; * Compasses: direct reading, remote reading; * Angle-of-attack indication, stall-warning systems; * Glass and analogue cockpit; * Indications of other aircraft systems; * Installation and testing of instruments. | 2 |
| *12L.4 Avionics general test equipment*  — Operation, function, and use of general test equipment for avionics. | 1 |

**Appendix VIII — Basic examination standard for category L aircraft maintenance licence**

*Regulation (EU) 2023/989*

1. The standardisation basis for examinations related to the [Appendix VII](#_bookmark155) basic knowledge requirements shall be as follows:
   1. all examinations must be carried out using the multiple-choice question format as specified in point (ii). The incorrect alternatives must seem equally plausible to anyone ignorant of the subject. All of the alternatives should be clearly related to the question and of similar vocabulary, grammatical construction 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 must not be mere random numbers;
   2. each multiple-choice question must have three alternative answers of which only one must be the correct answer and the candidate must be allowed a time per module which is based upon a nominal average of 75 seconds per question;
   3. the pass mark for each module is 75 %;
   4. penalty marking (negative points for failed questions) is not to be used;
   5. the level of knowledge required in the questions must be proportionate to the level of technology of the aircraft category.
   6. a failed module may not be retaken for at least 90 days from the date of the failed module examination;
   7. the maximum number of attempts for each examination is three in a 12-month period.
2. The number of questions per module shall be as follows:
   1. module 1L ‘BASIC KNOWLEDGE’: 20 questions. Time allowed: 25 minutes;
   2. module 2L ‘HUMAN FACTORS’: 20 questions. Time allowed: 25 minutes;
   3. module 3L ‘AVIATION LEGISLATION’: 28 questions. Time allowed: 35 minutes;
   4. module 4L ‘WOODEN AND/OR METAL-TUBE STRUCTURE COVERED WITH FABRIC’: 40

questions.

Time allowed: 50 minutes;

* 1. module 5L ‘COMPOSITE STRUCTURE’: 32 questions. Time allowed: 40 minutes;
  2. module 6L ‘METALLIC STRUCTURE’: 32 questions. Time allowed: 40 minutes;
  3. module 7L ‘AIRFRAME – GENERAL, MECHANICAL AND ELECTRICAL SYSTEMS’: 60

questions.

Time allowed: 75 minutes;

* 1. module 8L ‘POWER PLANT’: 64 questions. Time allowed: 80 minutes;
  2. module 9L ‘BALLOONS – HOT-AIR BALLOONS’: 36 questions. Time allowed: 45 minutes;
  3. module 10L ‘BALLOONS – GAS (FREE/TETHERED) BALLOONS’: 44 questions.

Time allowed: 55 minutes;

* 1. module 11L ‘AIRSHIPS – HOT-AIR/GAS AIRSHIPS’: 40 questions. Time allowed: 50 minutes;
  2. Module 12L ‘RADIO COM/ELT/TRANSPONDER/INSTRUMENTS’: 20 questions. Time allowed: 25 minutes.

**AMC1 Appendix VIII — Basic examination standard for category L aircraft maintenance licence**

*ED Decision 2023/019/R*

**NUMBER OF QUESTIONS PER SUBMODULE**

The tables below show the number of questions recommended for each submodule. Justified deviations from these values are also acceptable, provided that the sum of the questions for the submodules equals the total number for a given module.

#### MODULE 1L — BASIC KNOWLEDGE

1L.1 Mathematics 1L.2 Physics

1L.3 Electrics

**MODULE 1L — BASIC KNOWLEDGE**

**Nr of questions 20**

4

5

4

1L.4 Aerodynamics/aerostatics 2

1L.5 Workplace safety and environmental protection 5

#### MODULE 2L — HUMAN FACTORS

2L.1 General

**MODULE 2L — HUMAN FACTORS**

**Nr of questions**

**20**

3

2L.2 Human performance and limitations 2

2L.3 Social psychology 2

2L.4 Factors that affect performance 4

2L.5 Physical environment 4

2L.6 The ‘Dirty Dozen’ and risk-mitigation 5

#### MODULE 3L — AVIATION LEGISLATION

**MODULE 3L — AVIATION LEGISLATION**

3L.1 Regulatory framework

3L.2 Continuing airworthiness regulations 3L.3 Repairs and modifications (Part-ML) 3L.4 Maintenance data (Part-ML)

3L.5 Licence privileges and how to exercise them properly (Part-66, Part-ML)

**Nr of questions**

**28**

4

6

5

5

8

#### MODULE 4L — WOODEN AND/OR METAL-TUBE STRUCTURE COVERED WITH FABRIC

|  |  |
| --- | --- |
| **MODULE 4L — WOODEN AND/OR METAL-TUBE STRUCTURE COVERED WITH FABRIC** | **Nr of questions**  **40** |
| 4L.1 Combined structures made of wood, metal tube and fabric | 8 |
| 4L.2 Materials | 8 |

**MODULE 4L — WOODEN AND/OR METAL-TUBE STRUCTURE COVERED WITH FABRIC**

4L.3 Identifying damages and defects

4L.4 Standard repair and maintenance procedures

**Nr of questions 40**

12

12

#### MODULE 5L — COMPOSITE STRUCTURE

**MODULE 5L — COMPOSITE STRUCTURE**

5L.1 Fibre-reinforced plastic (FRP) airframe 5L.2 Materials

5L.3 Identifying damages and defects

5L.4 Standard repair and maintenance procedures

**Nr of questions 32**

6

6

10

10

#### MODULE 6L — METALLIC STRUCTURE

6L.1 Metallic airframe 6L.2 Materials

**MODULE 6L — METALLIC STRUCTURE**

**Nr of questions 32**

6

6

6L.3 Identifying damages and defects 10

6L.4 Standard repair and maintenance procedures 10

#### MODULE 7L — AIRFRAME: GENERAL, MECHANICAL AND ELECTRICAL SYSTEMS

**MODULE 7L — AIRFRAME: GENERAL, MECHANICAL AND ELECTRICAL SYSTEMS**

7L.1 Theory of Flight — gliders and aeroplanes 7L.2 Airframe Structure — gliders and aeroplanes 7L.3 Air conditioning (ATA 21)

7L.4 Electrical power, cables, and connectors (ATA 24) 7L.5 Equipment and furnishing (ATA 25)

7L.6 Fire protection and other safety systems (ATA 26) 7L.7 Flight controls (ATA 27)

7L.8 Fuel system (ATA 28) 7L.9 Hydraulic power (ATA 29)

7L.10 Ice and rain protection (ATA 30) 7L.11 Landing gear (ATA 32)

7L.12 Lights (ATA 33)

7L.13 Oxygen (ATA 35)

7L.14 Pneumatic/vacuum (ATA 36) 7L.15 Water ballast (ATA 41)

7L.16 Fasteners

7L.17 Pipes, hoses, and connectors 7L.18 Springs

7L.19 Bearings

**Nr of questions 60**

4

4

1

3

2

2

3

2

2

1

3

1

1

1

1

2

2

1

1

|  |  |  |
| --- | --- | --- |
| **MODULE 7L — AIRFRAME: GENERAL, MECHANICAL AND ELECTRICAL SYSTEMS** | **Nr of questions** |  |
| **60** |  |
| 7L.20 Transmissions | 2 |  |
| 7L.21 Control cables | 3 |  |
| 7L.22 Fits and clearances | 1 |  |
| 7L.23 Aircraft weight and balance | 2 |  |
| 7L.24 Workshop practices and tools | 4 |  |
| 7L.25 Disassembly, inspection, repair, and assembly techniques | 4 |  |
| 7L.26 Abnormal events | 3 |  |
| 7L.27 Maintenance procedures | 4 |  |
| **MODULE 8L — POWER PLANT** |  | |
| **MODULE 8L — POWER PLANT** | **Nr of questions** | |
| **64** | |
| 8L.1 Engine fundamentals — general | 2 | |
| 8L.2 Piston-engine fundamentals and performance | 2 | |
| 8L.3 Piston-engine construction | 3 | |
| 8L.4 Piston-engine fuel system (non-electronic) | 2 | |
| 8L.5 Starting and ignition systems | 3 | |
| 8L.6 Air intake, exhaust, and cooling systems | 2 | |
| 8L.7 Supercharging/turbocharging | 2 | |
| 8L.8 Lubrication systems of piston engines | 2 | |
| 8L.9 Engine indication systems | 3 | |
| 8L.10 Electric and hybrid aircraft engines | 9 | |
| 8L.11 Turbine-engine fundamentals and performance | 2 | |
| 8L.12 Inlet and compressor | 2 | |
| 8L.13 Combustion chamber, starting and ignition system | 2 | |
| 8L.14 Turbine section and exhaust | 2 | |
| 8L.15 Other turbine-engine components and systems | 2 | |
| 8L.16 Turbine-engine inspections and ground operation | 3 | |
| 8L.17 Propeller | 7 | |
| 8L.18 Full authority digital engine control (FADEC) | 2 | |
| 8L.19 Lubricants and fuels | 3 | |
| 8L.20 Engine and propeller installation | 4 | |
| 8L.21 Engine monitoring and ground operation | 3 | |
| 8L.22 Engine/propeller storage and preservation | 2 | |

*Note*: In accordance with Appendix VII ‘1. Modularisation’ to Annex III, Module 8L training subjects for L5 category AML and, therefore, the number of questions, should be limited to the relevant propulsion system. As such, in the above table, certain submodules may not be applicable and should not be taken into account, and the total number of questions should also be adapted accordingly.

#### MODULE 9L — BALLOONS: HOT-AIR BALLOONS

|  |  |
| --- | --- |
| **MODULE 9L — BALLOONS: HOT-AIR BALLOONS** | **Nr of questions** |
| 36 |
| 9L.1 Theory of flight — hot-air balloons | 2 |
| 9L.2 Airframe of hot-air balloons | 3 |
| 9L.3 Envelope | 4 |
| 9L.4 Heater system / burner | 4 |
| 9L.5 Basket and basket suspension (including alternative devices) | 4 |
| 9L.6 Instruments | 5 |
| 9L.7 Equipment | 2 |
| 9L.8 Hot-air balloon handling and storage | 4 |
| 9L.9 Disassembly, inspection, repair, and assembly techniques | 8 |

**MODULE 10L — BALLOONS: GAS (FREE/TETHERED) BALLOONS**

**MODULE 10L — BALLOONS: GAS (FREE/TETHERED) BALLOONS**

10L.1 Theory of flight of gas balloons 10L.2 Airframe of gas balloons

10L.3 Envelope 10L.4 Netting

10L.5 Valves, parachutes, and other related systems 10L.6 Load ring

10L.7 Basket (including alternative devices) 10L.8 Ropes and lines

10L.9 Instruments

10L.10 Tethered gas balloon (TGB) systems 10L.11 Equipment

10L.12 Gas-balloon handling and storage

10L.13 Disassembly, inspection, repair, and assembly techniques

**Nr of questions 44**

2

3

3

1

1

1

4

2

5

8

2

4

8

#### MODULE 11L — AIRSHIPS: HOT-AIR/GAS AIRSHIPS

|  |  |
| --- | --- |
| **MODULE 11L — AIRSHIPS: HOT-AIR/GAS AIRSHIPS** | **Nr of questions** |
| **40** |
| 11L.1 Theory of flight and control of airships | 3 |
| 11L.2 Airship airframe structure — general concepts | 3 |
| 11L.3 Airship envelope | 3 |
| 11L.4 Gondola | 6 |
| 11L.5 Airship flight controls (ATA 27/55) | 2 |
| 11L.6 Electrical power (ATA 24) | 3 |
| 11L.7 Lights (ATA 33) | 1 |
| 11L.8 Ice and rain protection | 2 |
| 11L.9 Fuel systems (ATA 28) | 3 |
| 11L.10 Engines and propellers in airships | 2 |
| 11L.11 Airship handling and storage | 4 |
| 11L.12 Disassembly, inspection, repair, and assembly techniques | 8 |

##### MODULE 12L — RADIO COM / ELTs / TRANSPONDERS / INSTRUMENTS

**MODULE 12L — RADIO COM / ELTs / TRANSPONDER / INSTRUMENTS**

12L.1 Radio COM / ELTs

12L.2 Transponder and FLARM 12L.3 Instruments

12L.4 Avionics general test equipment

**Nr of questions 20**

6

5

8

1

**Appendix IX Assessment method for the multimedia-based training (MBT)**

*Regulation (EU) 2023/989*

1. The purpose of this Appendix is to establish the requirements for the assessment and approval by a competent authority of any course that includes MBT in accordance with point [66.B.135](#_bookmark82).

This Appendix may be used for the assessment of other training courses if the competent authority decides that the assessment method laid down in this Appendix are appropriate for such other courses.

The assessment shall be conducted by the competent authority against all the criteria laid down in Table (A), grouped in four categories from (a) to (d). The competent authority shall clearly identify in the table the MBT product being assessed and its production and update versions.

1. The competent authority carrying out the assessment shall put itself in the position of the student or the end user and shall rate each criterion listed in Table (A) individually on a rating scale from 1 to 5, as follows:

1: Not acceptable. Does not meet the required criteria.

2: Partially acceptable, but improvement is needed to meet the required criteria. 3: Acceptable. Meets the required criteria.

4: Good. Meets the required criteria with enhancements made. 5: Excellent. Exceeds the required criteria.

1. If one or more of the criteria is rated below 3, an alternative learning process shall be requested by the competent authority in order to enhance the suitability of the product to an acceptable level.
2. Once the competent authority has rated each of the individual criteria listed in Table (A) , the following combined rating scale shall be used by the competent authority to determine the overall suitability level for each MBT learning resource:
   * 100–80: Excellent learning resource. It offers different functionalities and meets the required suitability criteria.
   * 79–60: The learning resource meets the required suitability criteria.
   * 59–40: The learning resource does not allow for a sufficiently worthy educational use. It can be used for ‘informal’ training only.
   * 39–20: The learning resource is below the average. It does not meet several required suitability criteria.

Before approving the product, the competent authority shall check that the final score of the MBT is equal to or above 60, and that there is no single criterion that is rated below 3.

Table (A): Assessment for the multimedia-based training (MBT)

|  |  |  |
| --- | --- | --- |
| **Assessment table for the multimedia-based training (MBT)** | | |
| Product identification: | | |
| Name: | Version: | |
|  | | **SCORE (1–5)** |
| **Category (a) ‘academic quality’** | | |
| **Information reliability** | 1. The information is reliable. |  |
| **Information relevance** | 2. The information is relevant. |  |
| **Category (b) ‘pedagogical quality’** | | |
| **Pedagogical formulation/ construction** | 3. The quality of the resource simplification is adequate. |  |
| 4. The educational resource presents an appropriate number of overviews and summaries. |  |
| 5. The resource is clearly structured (summaries, plans). |  |
| 6. The structure promotes its use in the pedagogical context. |  |
| **Pedagogical strategies** | 7. The learning objectives are stated. |  |
| 8. The resource includes stimuli to promote learning. |  |
| 9. The resource creates interaction between student and instructor. |  |
| 10. The active engagement of the student is fostered. |  |
| 11. Student-centred learning is present. |  |
| 12. Problem-solving tasks encourage learning. |  |
| 13. The resource enables communication between students. |  |
| 14. The student is able to see their learning progress. |  |
| **Student assessment methods** | 15. The resource provides a self-assessment procedure. |  |

|  |  |  |
| --- | --- | --- |
| Category (c) ‘didactic quality’ | | |
| **Learning activities** | 16. The content refers to real-life situations that the student could possibly face in an actual maintenance environment. |  |
| **Learning content** | 17. The content is adequate to meet the learning objectives. |  |
| **Category (d) ‘technical quality’** | | |
| **Design** | 18. The content and organisation of the learning resource includes the appropriate use of colours, interactivity, graphic quality, animations, and illustrations. |  |
| **Browsing** | 19. Navigation methods are clear, consistent, and intuitive. |  |
| **Technological aspects** | 20. Multimedia techniques promote the transfer of information. |  |
| **Final score:** | |  |

*Notes:*

The following shall be taken into account by the competent authority when assessing the MBT against the individual criteria listed in Table (A):

##### Categories:

1. **Academic quality**

The information presented in the multimedia resource shall have two characteristics:

* 1. Reliability: the information is reliable, current, and relatively free of errors. The information complies with the current regulatory requirements.
  2. Relevance: the information is relevant to the learning objectives defined for the course. It supports the student in achieving the learning objectives.

##### Pedagogical quality

The MBT emphasises the activities which promote the development of the required knowledge and skills.

The main criteria for each product are related to three aspects:

* 1. Pedagogical formulation/construction: it is characterised by the quality of simplification, the presence of summaries as well as the use of diagrams, figures, animations, and illustrations. It evaluates whether the structure of the learning resource promotes its use in a pedagogical context. This refers to the ease of orientation (summary, lesson plan), presence of appropriate interactions, usability (back, forward, scroll boxes, etc.), and communication resources (questions and answers, FAQs, forum, etc.)
  2. Pedagogical strategies: teaching and learning styles should be based on active teaching approaches to build meaningful situations related to learning objectives and to learner motivation.
  3. Student assessment methods: methods are implemented to measure the achievement of learning objectives.

##### Didactic quality

* 1. Learning activities: the content refers to real-life situations the student could possibly face in an actual maintenance environment.
  2. Learning content: the content is adequate to meet the learning objectives.

##### Technical quality

This section assesses the design, browsing and technological aspects of the learning resources:

* 1. Design: the content and organisation of the learning resource shall promote the appropriate use of colours, interactivity, graphic quality for selected images, animations, and illustrations.
  2. Browsing: while navigating, the student should be able to find a plan, an index, or a detailed table of contents. The suggested choices or guidelines shall be clear and the groupings within the menus shall be consistent.
  3. Technological aspects: multimedia techniques aim to combine and exploit the capacities of any new technology in education to enhance the transfer of knowledge. Therefore, the system shall favour the use of animations, simulations, or any other interactive elements.

## APPENDICES TO AMC TO ANNEX III (PART-66)

**Appendix I to AMC to Annex III — Aircraft Type Ratings for Part-66 Aircraft Maintenance Licences**

*ED Decision 2023/019/R*

The instructions on how to endorse a modified type rating (for example, in the case of combined or split TRs) are included in the chapter ‘Details of the changes’ of explanatory note of the decision.

Notes on aircraft modified by a Supplemental Type Certificate (STC):

* This Appendix intends to include the type ratings of aircraft resulting from STCs for installation of a different engine. These STCs are those approved by EASA and those approved by the Member States before 2003 and grandfathered by EASA. STCs other than those for engines are not considered.

Example: The STC from JET AVIATION AG, approved by the LBA for replacement of GE CF 700 by Honeywell TFE731 on Fan Jet Falcon Series E, results in a new rating called ‘Falcon 20E (Honeywell TFE731)’.

* However, the ratings from STCs for installation of an engine:
  + on part of the original airframe models, or
  + from the same manufacturer, but of a type very similar to the original one, have not been added because they would have resulted in an already existing rating.

Examples:

* + The STC from SILVERHAWK CONVERSIONS approved by EASA for installation of PT6A- 135A on Beech C90, C90A and E90 would result in the Beech C90/C90A/E90 (PWC PT6)

rating, but this is not listed because it is already included in the original Beech 90 Series (PWC PT6) rating.

* + The STC from Air-Service Wildgruber GmbH approved by LBA for replacement of PWC PT6A-20 by PWC PT6A-27 would result in the De Havilland DHC-6-100 (PWC PT6) rating, but this is not listed because it is already included in the De Havilland DHC-6 (PWC PT6) rating in the table.
* EASA has not received all the information concerning STCs that have been previously approved by the Member States. As a result, not all STCs are considered by this publication.
* When the STC concerns the installation of an engine that falls under a different subcategory,

e.g. replacement of a piston engine by a turboprop (a turbine engine), then the new type rating endoresment requires compliance with all the relevant criteria for basic knowledge, experience, type training, and on-the-job training (OJT).

* In case a type rating resulting from an STC has not been yet defined by EASA, the latter shall be contacted by the competent authority to agree on a new type rating to be used.

In the following tables:

* The table is alphabetically sorted first by TC/STC Holder, then by TR endorsement, and finally by Model.
* The column ‘*TC Holder*’ includes the TC holder as defined in the type certificate data sheets (TCDS) (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 to be an ‘orphan aircraft’or General Aviation aircraft form CIS (former Sovjet Union) countries.
* In Group 3, the column ‘Type of structure’ intends to assist the competent authorities in identifying the experience required for this type with a view to removing existing limitations on the licence.
* In Group 4, the column ‘Type of structure’ intends to assist the competent authorities in identifying the required ‘L’ subcategories.
* 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 experiences ‘metal tube covered with fabric’ and ‘wooden structure’ are required.
* In Group 3, the column ‘MTOM’ intends to assist the competent authorities in identifying the aeroplane types where the maximum take-off mass (MTOM) is:
  + above 2t requires a B1.2 and B2 or B2L licence, or
  + 2t and below requires a B1.2 or B3 and B2 or B2L licence.
* The column ‘NOTE’ in every table includes some useful information, when relevant, e.g.:
  + ELA1 or ELA2 aircraft.
  + ‘OSD Approved’ or ‘Pending OSD Approval’ means that an OSD-MCS (operational suitability data for maintenance certifying staff) exists or is still under the approval

process at the date of publication of this ED Decision. OSD data is owned by the TCH (see TCHs contact list: [https://www.easa.europa.eu/document-library/operational-](https://www.easa.europa.eu/document-library/operational-suitability-data/osd-contact-list) [suitability-data/osd-contact-list](https://www.easa.europa.eu/document-library/operational-suitability-data/osd-contact-list)).

Type training courses approved before the approval of the OSD-MCS shall include the OSD elements within 2 years after the OSD-MCS approval.

* + STC reference number.
  + ‘TC (or STC) not yet released’ means that the type certificate (or STC) has not yet been released by EASA at the date of publication of this ED Decision, but the final model configuration is sufficiently mature that the type rating endorsement can be already defined. In this case, the initial training and licensing may start and be used for approval of type training courses and Part-66 licence endorsement. On the contrary, the associated rating for the maintenance organisation can be granted only after the type certification of the aircraft (or after the approval of the STC).

###### GROUP 1 AEROPLANES

*ED Decision 2023/019/R*

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **328 Support**  **Services** | Dornier 328-  100 |  | **Dornier 328-100 (PWC PW119)** |  |
| **328 Support Services** | Dornier 328-  300 |  | **Dornier 328-300 (PWC PW306)** |  |
| **AIR TRACTOR,**  **INC.** | AT-802 |  | **Air Tractor AT-800 Series (PWC PT6)** |  |
| **AIR TRACTOR,**  **INC.** | AT-802A |  | **Air Tractor AT-800 Series (PWC PT6)** |  |
| **AIRBUS** | A300 B1 |  | **Airbus A300 basic model (GE CF6)** |  |
| **AIRBUS** | A300 B2-1A |  | **Airbus A300 basic model (GE CF6)** |  |
| **AIRBUS** | A300 B2-1C |  | **Airbus A300 basic model (GE CF6)** |  |
| **AIRBUS** | A300 B2-202 |  | **Airbus A300 basic model (GE CF6)** |  |
| **AIRBUS** | A300 B2-203 |  | **Airbus A300 basic model (GE CF6)** |  |
| **AIRBUS** | A300 B2K-3C |  | **Airbus A300 basic model (GE CF6)** |  |
| **AIRBUS** | A300 B4-102 |  | **Airbus A300 basic model (GE CF6)** |  |
| **AIRBUS** | A300 B4-103 |  | **Airbus A300 basic model (GE CF6)** |  |
| **AIRBUS** | A300 B4-203 |  | **Airbus A300 basic model (GE CF6)** |  |
| **AIRBUS** | A300 B4-2C |  | **Airbus A300 basic model (GE CF6)** |  |
| **AIRBUS** | A300 C4-203 |  | **Airbus A300 basic model (GE CF6)** |  |
| **AIRBUS** | A300 F4-203 |  | **Airbus A300 basic model (GE CF6)** |  |
| **AIRBUS** | A300 B2-320 |  | **Airbus A300 basic model (PW JT9D)** |  |
| **AIRBUS** | A300 B4-120 |  | **Airbus A300 basic model (PW JT9D)** |  |
| **AIRBUS** | A300 B4-220 |  | **Airbus A300 basic model (PW JT9D)** |  |
| **AIRBUS** | A300 B4-601 |  | **Airbus A300-600 (GE CF6)** |  |
| **AIRBUS** | A300 B4-603 |  | **Airbus A300-600 (GE CF6)** |  |
| **AIRBUS** | A300 B4-605 R |  | **Airbus A300-600 (GE CF6)** |  |
| **AIRBUS** | A300 C4-605 R  Variant F |  | **Airbus A300-600 (GE CF6)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **AIRBUS** | A300 F4-605 R |  | **Airbus A300-600 (GE CF6)** |  |
| **AIRBUS** | A300 B4-622 |  | **Airbus A300-600 (PW 4000)** |  |
| **AIRBUS** | A300 B4-622 R |  | **Airbus A300-600 (PW 4000)** |  |
| **AIRBUS** | A300 F4-622 R |  | **Airbus A300-600 (PW 4000)** |  |
| **AIRBUS** | A300 B4-620 |  | **Airbus A300-600 (PW JT9D)** |  |
| **AIRBUS** | A300 C4-620 |  | **Airbus A300-600 (PW JT9D)** |  |
| **AIRBUS** | A300F4-608ST | Beluga | **Airbus A300-600ST (GE CF6)** |  |
| **AIRBUS** | A310-203 |  | **Airbus A310 (GE CF6)** |  |
| **AIRBUS** | A310-203 C |  | **Airbus A310 (GE CF6)** |  |
| **AIRBUS** | A310-204 |  | **Airbus A310 (GE CF6)** |  |
| **AIRBUS** | A310-304 |  | **Airbus A310 (GE CF6)** |  |
| **AIRBUS** | A310-308 |  | **Airbus A310 (GE CF6)** |  |
| **AIRBUS** | A310-324 |  | **Airbus A310 (PW 4000)** |  |
| **AIRBUS** | A310-325 |  | **Airbus A310 (PW 4000)** |  |
| **AIRBUS** | A310-221 |  | **Airbus A310 (PW JT9D)** |  |
| **AIRBUS** | A310-222 |  | **Airbus A310 (PW JT9D)** |  |
| **AIRBUS** | A310-322 |  | **Airbus A310 (PW JT9D)** |  |
| **AIRBUS** | A318-121 |  | **Airbus A318 (PW 6000)** |  |
| **AIRBUS** | A318-122 |  | **Airbus A318 (PW 6000)** |  |
| **AIRBUS** | A318-111 |  | **Airbus A318/A319/A320/A321**  **(CFM56)** |  |
| **AIRBUS** | A318-112 |  | **Airbus A318/A319/A320/A321**  **(CFM56)** |  |
| **AIRBUS** | A319-111 |  | **Airbus A318/A319/A320/A321 (CFM56)** |  |
| **AIRBUS** | A319-112 |  | **Airbus A318/A319/A320/A321 (CFM56)** |  |
| **AIRBUS** | A319-113 |  | **Airbus A318/A319/A320/A321**  **(CFM56)** |  |
| **AIRBUS** | A319-114 |  | **Airbus A318/A319/A320/A321**  **(CFM56)** |  |
| **AIRBUS** | A319-115 |  | **Airbus A318/A319/A320/A321**  **(CFM56)** |  |
| **AIRBUS** | A320-211 |  | **Airbus A318/A319/A320/A321 (CFM56)** |  |
| **AIRBUS** | A320-212 |  | **Airbus A318/A319/A320/A321 (CFM56)** |  |
| **AIRBUS** | A320-214 |  | **Airbus A318/A319/A320/A321**  **(CFM56)** |  |
| **AIRBUS** | A320-215 |  | **Airbus A318/A319/A320/A321**  **(CFM56)** |  |
| **AIRBUS** | A320-216 |  | **Airbus A318/A319/A320/A321**  **(CFM56)** |  |
| **AIRBUS** | A321-111 |  | **Airbus A318/A319/A320/A321 (CFM56)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **AIRBUS** | A321-112 |  | **Airbus A318/A319/A320/A321 (CFM56)** |  |
| **AIRBUS** | A321-211 |  | **Airbus A318/A319/A320/A321**  **(CFM56)** |  |
| **AIRBUS** | A321-212 |  | **Airbus A318/A319/A320/A321 (CFM56)** |  |
| **AIRBUS** | A321-213 |  | **Airbus A318/A319/A320/A321**  **(CFM56)** |  |
| **AIRBUS** | A319-151N | A319 NEO | **Airbus A319/A320/A321 (CFM LEAP- 1A)** |  |
| **AIRBUS** | A319-152N | A319 NEO | **Airbus A319/A320/A321 (CFM LEAP-**  **1A)** |  |
| **AIRBUS** | A319-153N | A319 NEO | **Airbus A319/A320/A321 (CFM LEAP-**  **1A)** |  |
| **AIRBUS** | A320-251N | A320 NEO | **Airbus A319/A320/A321 (CFM LEAP- 1A)** |  |
| **AIRBUS** | A320-252N | A320 NEO | **Airbus A319/A320/A321 (CFM LEAP- 1A)** |  |
| **AIRBUS** | A320-253N | A320 NEO | **Airbus A319/A320/A321 (CFM LEAP- 1A)** |  |
| **AIRBUS** | A321-251N | A321 NEO | **Airbus A319/A320/A321 (CFM LEAP-**  **1A)** |  |
| **AIRBUS** | A321-251NX | A321 NEO | **Airbus A319/A320/A321 (CFM LEAP-**  **1A)** |  |
| **AIRBUS** | A321-252N | A321 NEO | **Airbus A319/A320/A321 (CFM LEAP- 1A)** |  |
| **AIRBUS** | A321-252NX | A321 NEO | **Airbus A319/A320/A321 (CFM LEAP- 1A)** |  |
| **AIRBUS** | A321-253N | A321 NEO | **Airbus A319/A320/A321 (CFM LEAP-**  **1A)** |  |
| **AIRBUS** | A321-253NX | A321 NEO | **Airbus A319/A320/A321 (CFM LEAP- 1A)** |  |
| **AIRBUS** | A319-171N | A319 NEO | **Airbus A319/A320/A321 (IAE**  **PW1100G)** |  |
| **AIRBUS** | A319-172N | A319 NEO | **Airbus A319/A320/A321 (IAE PW1100G)** | TC not yet released |
| **AIRBUS** | A319-173N | A319 NEO | **Airbus A319/A320/A321 (IAE PW1100G)** | TC not yet released |
| **AIRBUS** | A320-271N | A320 NEO | **Airbus A319/A320/A321 (IAE**  **PW1100G)** |  |
| **AIRBUS** | A320-272N | A320 NEO | **Airbus A319/A320/A321 (IAE**  **PW1100G)** |  |
| **AIRBUS** | A320-273N | A320 NEO | **Airbus A319/A320/A321 (IAE**  **PW1100G)** |  |
| **AIRBUS** | A321-271N | A321 NEO | **Airbus A319/A320/A321 (IAE PW1100G)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **AIRBUS** | A321-271NX | A321 NEO | **Airbus A319/A320/A321 (IAE PW1100G)** |  |
| **AIRBUS** | A321-272N | A321 NEO | **Airbus A319/A320/A321 (IAE**  **PW1100G)** |  |
| **AIRBUS** | A321-272NX | A321 NEO | **Airbus A319/A320/A321 (IAE PW1100G)** |  |
| **AIRBUS** | A319-131 |  | **Airbus A319/A320/A321 (IAE V2500)** |  |
| **AIRBUS** | A319-132 |  | **Airbus A319/A320/A321 (IAE V2500)** |  |
| **AIRBUS** | A319-133 |  | **Airbus A319/A320/A321 (IAE V2500)** |  |
| **AIRBUS** | A320-231 |  | **Airbus A319/A320/A321 (IAE V2500)** |  |
| **AIRBUS** | A320-232 |  | **Airbus A319/A320/A321 (IAE V2500)** |  |
| **AIRBUS** | A320-233 |  | **Airbus A319/A320/A321 (IAE V2500)** |  |
| **AIRBUS** | A321-131 |  | **Airbus A319/A320/A321 (IAE V2500)** |  |
| **AIRBUS** | A321-231 |  | **Airbus A319/A320/A321 (IAE V2500)** |  |
| **AIRBUS** | A321-232 |  | **Airbus A319/A320/A321 (IAE V2500)** |  |
| **AIRBUS** | A330-201 |  | **Airbus A330 (GE CF6)** |  |
| **AIRBUS** | A330-202 |  | **Airbus A330 (GE CF6)** |  |
| **AIRBUS** | A330-203 |  | **Airbus A330 (GE CF6)** |  |
| **AIRBUS** | A330-301 |  | **Airbus A330 (GE CF6)** |  |
| **AIRBUS** | A330-302 |  | **Airbus A330 (GE CF6)** |  |
| **AIRBUS** | A330-303 |  | **Airbus A330 (GE CF6)** |  |
| **AIRBUS** | A330-223 |  | **Airbus A330 (PW 4000)** |  |
| **AIRBUS** | A330-223F |  | **Airbus A330 (PW 4000)** |  |
| **AIRBUS** | A330-321 |  | **Airbus A330 (PW 4000)** |  |
| **AIRBUS** | A330-322 |  | **Airbus A330 (PW 4000)** |  |
| **AIRBUS** | A330-323 |  | **Airbus A330 (PW 4000)** |  |
| **AIRBUS** | A330-743L | Beluga XL | **Airbus A330 (RR Trent 700)** |  |
| **AIRBUS** | A330-243 |  | **Airbus A330 (RR Trent 700)** |  |
| **AIRBUS** | A330-243F |  | **Airbus A330 (RR Trent 700)** |  |
| **AIRBUS** | A330-341 |  | **Airbus A330 (RR Trent 700)** |  |
| **AIRBUS** | A330-342 |  | **Airbus A330 (RR Trent 700)** |  |
| **AIRBUS** | A330-343 |  | **Airbus A330 (RR Trent 700)** |  |
| **AIRBUS** | A330-841 | A330 NEO | **Airbus A330 (RR Trent 7000)** |  |
| **AIRBUS** | A330-941 | A330 NEO | **Airbus A330 (RR Trent 7000)** |  |
| **AIRBUS** | A340-211 |  | **Airbus A340 (CFM56)** |  |
| **AIRBUS** | A340-212 |  | **Airbus A340 (CFM56)** |  |
| **AIRBUS** | A340-213 |  | **Airbus A340 (CFM56)** |  |
| **AIRBUS** | A340-311 |  | **Airbus A340 (CFM56)** |  |
| **AIRBUS** | A340-312 |  | **Airbus A340 (CFM56)** |  |
| **AIRBUS** | A340-313 |  | **Airbus A340 (CFM56)** |  |
| **AIRBUS** | A340-541 |  | **Airbus A340 (RR Trent 500)** |  |
| **AIRBUS** | A340-542 |  | **Airbus A340 (RR Trent 500)** |  |
| **AIRBUS** | A340-642 |  | **Airbus A340 (RR Trent 500)** |  |
| **AIRBUS** | A340-643 |  | **Airbus A340 (RR Trent 500)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **AIRBUS** | A350-1041 |  | **Airbus A350 (RR Trent XWB)** |  |
| **AIRBUS** | A350-941 |  | **Airbus A350 (RR Trent XWB)** |  |
| **AIRBUS** | A380-861 |  | **Airbus A380 (EA GP7200)** |  |
| **AIRBUS** | A380-841 |  | **Airbus A380 (RR Trent 900)** |  |
| **AIRBUS** | A380-842 |  | **Airbus A380 (RR Trent 900)** |  |
| **Airbus Canada**  **Limited Partnership** | BD-500-1A10 | A220-100 | **Bombardier BD-500 Series (PW PW1500G)** |  |
| **Airbus Canada Limited Partnership** | BD-500-1A11 | A220-300 | **Bombardier BD-500 Series (PW PW1500G)** |  |
| **Airbus Military Sociedad Limitada (AMSL)** | A400M-180 |  | **Airbus A400M (EPI TP400)** |  |
| **Aircraft Industries, a.s.** | L410 NG | Turbolet | **Let L-410 (GE H80)** |  |
| **Aircraft**  **Industries, a.s.** | L410 UVP-E20 | Turbolet | **Let L-410 (GE H80)** |  |
| **Aircraft Industries, a.s.** | L410 UVP-E20 CARGO | Turbolet | **Let L-410 (GE H80)** |  |
| **Aircraft Industries, a.s.** | L410 M  Turbolet | Turbolet | **Let L-410 (Walter M601)** |  |
| **Aircraft Industries, a.s.** | L410 UVP -  Turbolet | Turbolet | **Let L-410 (Walter M601)** |  |
| **Aircraft**  **Industries, a.s.** | L410 UVP-E | Turbolet | **Let L-410 (Walter M601)** |  |
| **Aircraft Industries, a.s.** | L410 UVP-E20 | Turbolet | **Let L-410 (Walter M601)** |  |
| **Aircraft**  **Industries, a.s.** | L410 UVP-E20  CARGO | Turbolet | **Let L-410 (Walter M601)** |  |
| **Aircraft Industries, a.s.** | L410 UVP-E9 | Turbolet | **Let L-410 (Walter M601)** |  |
| **Aircraft Industries, a.s.** | L410 UVP-E- LW | Turbolet | **Let L-410 (Walter M601)** |  |
| **Aircraft**  **Industries, a.s.** | L410 UVP-LW | Turbolet | **Let L-410 (Walter M601)** |  |
| **Aircraft Industries, a.s.** | L420 |  | **Let L-420 (Walter M601)** |  |
| **ALENIA**  **AERMACCHI** | C-27J |  | **Alenia C-27 (Allison/RR AE2100)** |  |
| **ANTONOV** | AN-26 |  | **Antonov AN26 (Ivchenko AI-24)** |  |
| **ANTONOV** | AN-26B |  | **Antonov AN26 (Ivchenko AI-24)** |  |

**GROUP 1 AEROPLANES**

**TC Holder**

**Antonov Aeronautical Scientific and Technical Complex (Aircraft with SAS)**

**ASI AVIATION**

**ATR-GIE Avions de Transport Régional**

**ATR-GIE Avions de Transport Régional**

**ATR-GIE Avions de Transport Régional**

**ATR-GIE Avions de Transport Régional**

**ATR-GIE Avions de Transport Régional**

**ATR-GIE Avions de Transport Régional**

**ATR-GIE Avions de Transport Régional**

**ATR-GIE Avions de Transport Régional**

**ATR-GIE Avions de Transport Régional**

**ATR-GIE Avions de Transport Régional**

**ATR-GIE Avions de Transport Régional**

**ATR-GIE Avions de Transport Régional**

**BAE SYSTEMS (OPERATIONS)**

**Ltd**

**Model**

Antonov An-28

F 406

ATR 42-200

ATR 42-300

ATR 42-320

ATR 42-400

ATR 42-500

ATR 72-212 A

ATR 72-101

ATR 72-102

ATR 72-201

ATR 72-202

ATR 72-211

ATR 72-212

ATP

**Com. des.**

42-500

42-600

72-500

72-600

**Part-66 type rating endorsement Antonov An-28 (ТВД)**

**Reims-Cessna F 406 (PWC PT6)**

**ATR 42-200/300 series (PWC PW120)**

**ATR 42-200/300 series (PWC PW120)**

**ATR 42-200/300 series (PWC PW120)**

**ATR 42-400/500/72-212A (PWC PW120)**

**ATR 42-400/500/72-212A (PWC PW120)**

**ATR 42-400/500/72-212A (PWC PW120)**

**ATR 72-100/200 series (PWC PW120)**

**ATR 72-100/200 series (PWC PW120)**

**ATR 72-100/200 series (PWC PW120)**

**ATR 72-100/200 series (PWC PW120)**

**ATR 72-100/200 series (PWC PW120)**

**ATR 72-100/200 series (PWC PW120)**

**ATP (PWC PW120)**

**Note**

Refer to EASA.SAS.A.

091 for s/n applicability.

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **BAE SYSTEMS (OPERATIONS)**  **Ltd** | AVRO 146- RJ100 |  | **BAe 146/ AVRO 146-RJ (Honeywell ALF500 Series)** |  |
| **BAE SYSTEMS (OPERATIONS)**  **Ltd** | AVRO 146- RJ115 |  | **BAe 146/ AVRO 146-RJ (Honeywell ALF500 Series)** |  |
| **BAE SYSTEMS (OPERATIONS)**  **Ltd** | AVRO 146- RJ70 |  | **BAe 146/ AVRO 146-RJ (Honeywell ALF500 Series)** |  |
| **BAE SYSTEMS (OPERATIONS)**  **Ltd** | AVRO 146- RJ85 |  | **BAe 146/ AVRO 146-RJ (Honeywell ALF500 Series)** |  |
| **BAE SYSTEMS (OPERATIONS)**  **Ltd** | BAe 146 Series  100 |  | **BAe 146/ AVRO 146-RJ (Honeywell ALF500 Series)** |  |
| **BAE SYSTEMS (OPERATIONS)**  **Ltd** | BAe 146 Series  200 |  | **BAe 146/ AVRO 146-RJ (Honeywell ALF500 Series)** |  |
| **BAE SYSTEMS (OPERATIONS)**  **Ltd** | BAe 146 Series  300 |  | **BAe 146/ AVRO 146-RJ (Honeywell ALF500 Series)** |  |
| **BAE SYSTEMS (OPERATIONS)**  **Ltd** | HS 748 Series  1 |  | **HS748 (RRD Dart)** |  |
| **BAE SYSTEMS (OPERATIONS)**  **Ltd** | HS 748 Series  2 |  | **HS748 (RRD Dart)** |  |
| **BAE SYSTEMS (OPERATIONS)**  **Ltd** | HS 748 Series 2A |  | **HS748 (RRD Dart)** |  |
| **BAE SYSTEMS (OPERATIONS)**  **Ltd** | HS 748 Series 2B |  | **HS748 (RRD Dart)** |  |
| **BAE SYSTEMS (OPERATIONS)**  **Ltd** | Jetstream 3100 Series | Jetstream 31 | **Jetstream 31/32 (Honeywell TPE331)** |  |
| **BAE SYSTEMS (OPERATIONS)**  **Ltd** | Jetstream 3200 Series | Jetstream 32/32EP | **Jetstream 31/32 (Honeywell TPE331)** |  |
| **BAE SYSTEMS (OPERATIONS)**  **Ltd** | Jetstream 4100 Series |  | **Jetstream 41 (Honeywell TPE331)** |  |
| **BEECHCRAFT**  **Corporation** | 200 |  | **Beech 200 Series (PWC PT6)** |  |
| **BEECHCRAFT**  **Corporation** | 300LW | Super King Air | **Beech 300 Series (PWC PT6)** |  |
| **BEECHCRAFT**  **Corporation** | F90 | King Air | **Beech 90 Series (PWC PT6)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **BEECHCRAFT**  **Corporation** | A99 | Airliner | **Beech 99/100 Series (PWC PT6)** |  |
| **BEECHCRAFT**  **Corporation** | A99A | Airliner | **Beech 99/100 Series (PWC PT6)** |  |
| **BEECHCRAFT**  **Corporation** | B99 | Airliner | **Beech 99/100 Series (PWC PT6)** |  |
| **BEECHCRAFT**  **Corporation** | C99 | Airliner | **Beech 99/100 Series (PWC PT6)** |  |
| **BEECHCRAFT**  **Corporation** | 100 | King Air | **Beech 99/100 Series (PWC PT6)** |  |
| **BEECHCRAFT**  **Corporation** | A100 | King Air | **Beech 99/100 Series (PWC PT6)** |  |
| **BEECHCRAFT**  **Corporation** | A100A | King Air | **Beech 99/100 Series (PWC PT6)** |  |
| **BEECHCRAFT**  **Corporation** | 99 |  | **Beech 99/100 Series (PWC PT6)** |  |
| **BEECHCRAFT**  **Corporation** | 99A |  | **Beech 99/100 Series (PWC PT6)** |  |
| **BEECHCRAFT**  **Corporation** | B100 |  | **Beech B100 (Honeywell TPE331)** |  |
| **BERIEV Aircraft**  **Company** | Be-200ES-E |  | **Beriev 200 (Ivchenko D-436TP)** |  |
| **B-N GROUP Ltd.**  **(Britten-**  **Norman)** | BN2T | Turbine Islander | **Britten-Norman BN2T Series (RR Corp 250)** |  |
| **B-N GROUP Ltd.**  **(Britten-**  **Norman)** | BN2T-2 | Turbine Islander | **Britten-Norman BN2T Series (RR Corp 250)** |  |
| **B-N GROUP Ltd.**  **(Britten-**  **Norman)** | BN2T-2R | Turbine Islander | **Britten-Norman BN2T Series (RR Corp 250)** |  |
| **B-N GROUP Ltd.**  **(Britten-**  **Norman)** | BN2T-4R | Turbine Islander | **Britten-Norman BN2T Series (RR Corp 250)** |  |
| **B-N GROUP Ltd.**  **(Britten- Norman)** | BN2T-4S | Turbine Islander | **Britten-Norman BN2T Series (RR Corp 250)** |  |
| **BOEING COMPANY (THE)** | 707-200 | B707 | **Boeing 707 (PW JT4)** |  |
| **BOEING**  **COMPANY (THE)** | 707-300 Series | B707 | **Boeing 707 (PW JT4)** |  |
| **BOEING COMPANY (THE)** | 707-400 | B707 | **Boeing 707 (RR Conway)** |  |
| **BOEING COMPANY (THE)** | 720 | B707 | **Boeing 707/720 (PW JT3D)** |  |
| **BOEING**  **COMPANY (THE)** | 707-100 Long  Body | B707 | **Boeing 707/720 (PW JT3D)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **BOEING COMPANY (THE)** | 707-100B Long  Body | B707 | **Boeing 707/720 (PW JT3D)** |  |
| **BOEING**  **COMPANY (THE)** | 707-100B  Short Body | B707 | **Boeing 707/720 (PW JT3D)** |  |
| **BOEING COMPANY (THE)** | 707-300 | B707 | **Boeing 707/720 (PW JT3D)** |  |
| **BOEING**  **COMPANY (THE)** | 707-300C | B707 | **Boeing 707/720 (PW JT3D)** |  |
| **BOEING COMPANY (THE)** | 720B | B707 | **Boeing 707/720 (PW JT3D)** |  |
| **BOEING**  **COMPANY (THE)** | 727 | B727 | **Boeing 727 (PW JT8D)** |  |
| **BOEING**  **COMPANY (THE)** | 727-100 | B727 | **Boeing 727 (PW JT8D)** |  |
| **BOEING COMPANY (THE)** | 727-100C | B727 | **Boeing 727 (PW JT8D)** |  |
| **BOEING COMPANY (THE)** | 727-200 | B727 | **Boeing 727 (PW JT8D)** |  |
| **BOEING COMPANY (THE)** | 727-200F | B727 | **Boeing 727 (PW JT8D)** |  |
| **BOEING**  **COMPANY (THE)** | 727C | B727 | **Boeing 727 (PW JT8D)** |  |
| **BOEING**  **COMPANY (THE)** | 737-100 | B737 Classic | **Boeing 737-100/200 (PW JT8D)** |  |
| **BOEING COMPANY (THE)** | 737-200 | B737 Classic | **Boeing 737-100/200 (PW JT8D)** |  |
| **BOEING COMPANY (THE)** | 737-200C | B737 Classic | **Boeing 737-100/200 (PW JT8D)** |  |
| **BOEING**  **COMPANY (THE)** | 737-300 | B737 Classic | **Boeing 737-300/400/500 (CFM56)** |  |
| **BOEING COMPANY (THE)** | 737-400 | B737 Classic | **Boeing 737-300/400/500 (CFM56)** |  |
| **BOEING**  **COMPANY (THE)** | 737-500 | B737 Classic | **Boeing 737-300/400/500 (CFM56)** |  |
| **BOEING COMPANY (THE)** | 737-600 | B737 Next Generation | **Boeing 737-600/700/800/900 (CFM56)** |  |
| **BOEING COMPANY (THE)** | 737-700 | B737 Next Generation | **Boeing 737-600/700/800/900 (CFM56)** |  |
| **BOEING**  **COMPANY (THE)** | 737-800 | B737 Next  Generation | **Boeing 737-600/700/800/900**  **(CFM56)** |  |
| **BOEING**  **COMPANY (THE)** | 737-900 | B737 Next  Generation | **Boeing 737-600/700/800/900**  **(CFM56)** |  |
| **BOEING**  **COMPANY (THE)** | 737-900ER | B737 Next  Generation | **Boeing 737-600/700/800/900**  **(CFM56)** |  |
| **BOEING COMPANY (THE)** | 737-7 | B737 MAX | **Boeing 737-7/8/9 (CFM LEAP-1B)** | TC not yet released |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **BOEING COMPANY (THE)** | 737-8 | B737 MAX | **Boeing 737-7/8/9 (CFM LEAP-1B)** |  |
| **BOEING**  **COMPANY (THE)** | 737-8200 | B737 MAX | **Boeing 737-7/8/9 (CFM LEAP-1B)** |  |
| **BOEING COMPANY (THE)** | 737-9 | B737 MAX | **Boeing 737-7/8/9 (CFM LEAP-1B)** |  |
| **BOEING**  **COMPANY (THE)** | 747-100 | B747 | **Boeing 747-100 (PW JT9D)** |  |
| **BOEING COMPANY (THE)** | 747-200 | B747 | **Boeing 747-200/300 (GE CF6)** |  |
| **BOEING**  **COMPANY (THE)** | 747-200C | B747 | **Boeing 747-200/300 (GE CF6)** |  |
| **BOEING**  **COMPANY (THE)** | 747-200F | B747 | **Boeing 747-200/300 (GE CF6)** |  |
| **BOEING COMPANY (THE)** | 747-300 | B747 | **Boeing 747-200/300 (GE CF6)** |  |
| **BOEING COMPANY (THE)** | 747-200 | B747 | **Boeing 747-200/300 (PW JT9D)** |  |
| **BOEING COMPANY (THE)** | 747-200C | B747 | **Boeing 747-200/300 (PW JT9D)** |  |
| **BOEING**  **COMPANY (THE)** | 747-200F | B747 | **Boeing 747-200/300 (PW JT9D)** |  |
| **BOEING**  **COMPANY (THE)** | 747-300 | B747 | **Boeing 747-200/300 (PW JT9D)** |  |
| **BOEING COMPANY (THE)** | 747-200 | B747 | **Boeing 747-200/300 (RR RB211)** |  |
| **BOEING COMPANY (THE)** | 747-200C | B747 | **Boeing 747-200/300 (RR RB211)** |  |
| **BOEING**  **COMPANY (THE)** | 747-200F | B747 | **Boeing 747-200/300 (RR RB211)** |  |
| **BOEING COMPANY (THE)** | 747-300 | B747 | **Boeing 747-200/300 (RR RB211)** |  |
| **BOEING**  **COMPANY (THE)** | 747-400 | B747 | **Boeing 747-400 (GE CF6)** |  |
| **BOEING COMPANY (THE)** | 747-400F | B747 | **Boeing 747-400 (GE CF6)** |  |
| **BOEING COMPANY (THE)** | 747-400BCF | B747F/SF | **Boeing 747-400 (GE CF6)** |  |
| **BOEING**  **COMPANY (THE)** | 747-400 | B747 | **Boeing 747-400 (PW 4000)** |  |
| **BOEING**  **COMPANY (THE)** | 747-400F | B747 | **Boeing 747-400 (PW 4000)** |  |
| **BOEING**  **COMPANY (THE)** | 747-400CF | B747F/SF | **Boeing 747-400 (PW 4000)** |  |
| **BOEING COMPANY (THE)** | 747-400 | B747 | **Boeing 747-400 (RR RB211)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **BOEING COMPANY (THE)** | 747-400F | B747 | **Boeing 747-400 (RR RB211)** |  |
| **BOEING**  **COMPANY (THE)** | 747-400CF | B747F/SF | **Boeing 747-400 (RR RB211)** |  |
| **BOEING COMPANY (THE)** | 747-8 | B747 | **Boeing 747-8 (GE GEnx)** |  |
| **BOEING**  **COMPANY (THE)** | 747-8F | Freighter | **Boeing 747-8 (GE GEnx)** |  |
| **BOEING COMPANY (THE)** | 747SP |  | **Boeing 747SP (PW JT9D)** |  |
| **BOEING**  **COMPANY (THE)** | 757-200 | B757 | **Boeing 757-200/300 (PW 2000)** |  |
| **BOEING**  **COMPANY (THE)** | 757-200PF | B757 | **Boeing 757-200/300 (PW 2000)** |  |
| **BOEING COMPANY (THE)** | 757-300 | B757 | **Boeing 757-200/300 (PW 2000)** |  |
| **BOEING**  **COMPANY (THE)** | 757-200 | B757 | **Boeing 757-200/300 (RR RB211)** |  |
| **BOEING**  **COMPANY (THE)** | 757-200PF | B757 | **Boeing 757-200/300 (RR RB211)** |  |
| **BOEING COMPANY (THE)** | 757-300 | B757 | **Boeing 757-200/300 (RR RB211)** |  |
| **BOEING COMPANY (THE)** | 767-200 | B767 | **Boeing 767-200/300 (PW 4000)** |  |
| **BOEING**  **COMPANY (THE)** | 767-300 | B767 | **Boeing 767-200/300 (PW 4000)** |  |
| **BOEING COMPANY (THE)** | 767-300CF | B767 | **Boeing 767-200/300 (PW 4000)** |  |
| **BOEING**  **COMPANY (THE)** | 767-200 | B767 | **Boeing 767-200/300 (PW JT9D)** |  |
| **BOEING COMPANY (THE)** | 767-300 | B767 | **Boeing 767-200/300 (PW JT9D)** |  |
| **BOEING COMPANY (THE)** | 767-300CF | B767 | **Boeing 767-200/300 (PW JT9D)** |  |
| **BOEING**  **COMPANY (THE)** | 767-200 | B767 | **Boeing 767-200/300/400 (GE CF6)** |  |
| **BOEING COMPANY (THE)** | 767-300 | B767 | **Boeing 767-200/300/400 (GE CF6)** |  |
| **BOEING**  **COMPANY (THE)** | 767-300CF | B767 | **Boeing 767-200/300/400 (GE CF6)** |  |
| **BOEING COMPANY (THE)** | 767-300F | B767 | **Boeing 767-200/300/400 (GE CF6)** |  |
| **BOEING COMPANY (THE)** | 767-400ER | B767 | **Boeing 767-200/300/400 (GE CF6)** |  |
| **BOEING**  **COMPANY (THE)** | 767-300 | B767 | **Boeing 767-300 (RR RB211)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **BOEING COMPANY (THE)** | 777-200 | B777 | **Boeing 777-200/300 (GE 90)** |  |
| **BOEING**  **COMPANY (THE)** | 777-200LR | B777 | **Boeing 777-200/300 (GE 90)** |  |
| **BOEING COMPANY (THE)** | 777-300ER | B777 | **Boeing 777-200/300 (GE 90)** |  |
| **BOEING**  **COMPANY (THE)** | 777F | Freighter | **Boeing 777-200/300 (GE 90)** |  |
| **BOEING COMPANY (THE)** | 777-200 | B777 | **Boeing 777-200/300 (PW 4000)** |  |
| **BOEING**  **COMPANY (THE)** | 777-300 | B777 | **Boeing 777-200/300 (PW 4000)** |  |
| **BOEING**  **COMPANY (THE)** | 777-200 | B777 | **Boeing 777-200/300 (RR Trent 800)** |  |
| **BOEING COMPANY (THE)** | 777-300 | B777 | **Boeing 777-200/300 (RR Trent 800)** |  |
| **BOEING COMPANY (THE)** | 787-10 | Dreamliner | **Boeing 787-8/9/10 (GEnx)** |  |
| **BOEING COMPANY (THE)** | 787-8 | Dreamliner | **Boeing 787-8/9/10 (GEnx)** |  |
| **BOEING**  **COMPANY (THE)** | 787-9 | Dreamliner | **Boeing 787-8/9/10 (GEnx)** |  |
| **BOEING**  **COMPANY (THE)** | 787-10 | Dreamliner | **Boeing 787-8/9/10 (RR Trent 1000)** |  |
| **BOEING COMPANY (THE)** | 787-8 | Dreamliner | **Boeing 787-8/9/10 (RR Trent 1000)** |  |
| **BOEING COMPANY (THE)** | 787-9 | Dreamliner | **Boeing 787-8/9/10 (RR Trent 1000)** |  |
| **BOMBARDIER** | BD-100-1A10 | Challenger 300  Challenger 350 | **Bombardier BD-100-1A10 (Honeywell**  **AS907)** |  |
| **BOMBARDIER** | BD-700-1A11 | Global 5000  Global 5000 GVFD  Global 5500 | **Bombardier BD-700 Series (RRD BR700-710)** |  |
| **BOMBARDIER** | BD-700-1A10 | Global Express Global 6000  Global 6500 | **Bombardier BD-700 Series (RRD BR700-710)** |  |
| **BOMBARDIER** | BD-700-2A12 | Global 7500 | **Bombardier BD-700 2A12 (GE Passport 20)** |  |
| **BOMBARDIER** | CL-600-1A11  (600) | Challenger 600 | **Bombardier CL-600-1A11**  **(Honeywell ALF502)** |  |
| **BOMBARDIER** | CL-600-2A12  (601 Variant) | Challenger 601 | **Bombardier CL-600-2A12/2B16**  **(601/601-3A/3R Variant) (GE CF34)** |  |
| **BOMBARDIER** | CL-600-2B16 (601-3A  Variant) | Challenger 601-3A | **Bombardier CL-600-2A12/2B16 (601/601-3A/3R Variant) (GE CF34)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **BOMBARDIER** | CL-600-2B16 (601-3R  Variant) | Challenger 601-3R | **Bombardier CL-600-2A12/2B16 (601/601-3A/3R Variant) (GE CF34)** |  |
| **BOMBARDIER** | CL-600-2B16  (604 Variant) | Challenger 604  (MSN < 5701)  Challenger 605 (5701<=MSN  <= 5990)  Challenger 650  (MSN ≥ 6050) | **Bombardier CL-600-2B16 (604 Variant) (GE CF34)** |  |
| **CIRRUS Design Corporation** | SF50 |  | **CIRRUS SF50 (Williams FJ33)** |  |
| **DAHER**  **AEROSPACE** | TBM700 A |  | **Socata TBM700 (PWC PT6)** |  |
| **DAHER**  **AEROSPACE** | TBM700 B |  | **Socata TBM700 (PWC PT6)** |  |
| **DAHER AEROSPACE** | TBM700 C1 |  | **Socata TBM700 (PWC PT6)** |  |
| **DAHER**  **AEROSPACE** | TBM700 C2 |  | **Socata TBM700 (PWC PT6)** |  |
| **DAHER AEROSPACE** | TBM700 N |  | **Socata TBM700 (PWC PT6)** |  |
| **DASSAULT**  **AVIATION** | Falcon 10 |  | **Falcon 10 (Honeywell TFE731)** |  |
| **DASSAULT**  **AVIATION** | Fan Jet Falcon | (Basic) Fan Jet  Falcon | **Falcon 20 (GE CF700)** |  |
| **DASSAULT AVIATION** | Fan Jet Falcon C |  | **Falcon 20 (GE CF700)** |  |
| **DASSAULT AVIATION** | Fan Jet Falcon D |  | **Falcon 20 (GE CF700)** |  |
| **DASSAULT AVIATION** | Fan Jet Falcon E |  | **Falcon 20 (GE CF700)** |  |
| **DASSAULT**  **AVIATION** | Fan Jet Falcon  F |  | **Falcon 20 (GE CF700)** |  |
| **DASSAULT**  **AVIATION** | Fan Jet Falcon  G |  | **Falcon 200 (Honeywell ATF 3-6)** |  |
| **DASSAULT AVIATION** | Mystère Falcon 200 |  | **Falcon 200 (Honeywell ATF 3-6)** |  |
| **DASSAULT AVIATION** | Mystère Falcon 20GF |  | **Falcon 200 (Honeywell ATF 3-6)** |  |
| **DASSAULT**  **AVIATION** | Falcon 2000 |  | **Falcon 2000 (CFE 738)** |  |
| **DASSAULT AVIATION** | Falcon 2000EX |  | **Falcon 2000EX (PWC PW308)** | OSD  approved on 30.10.2015. |
| **DASSAULT AVIATION** | Falcon 2000EX | F2000EX EASy F2000DX | **Falcon 2000EX EASy (PWC PW308C)** | OSD  approved |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
|  |  | F2000LX F2000LXS F2000S |  | on 30.10.2015. |
| **DASSAULT AVIATION** | Mystère Falcon 20-C5 |  | **Falcon 20-5 (Honeywell TFE731)** |  |
| **DASSAULT**  **AVIATION** | Mystère  Falcon 20-D5 |  | **Falcon 20-5 (Honeywell TFE731)** |  |
| **DASSAULT AVIATION** | Mystère Falcon 20-E5 |  | **Falcon 20-5 (Honeywell TFE731)** |  |
| **DASSAULT AVIATION** | Mystère Falcon 20-F5 |  | **Falcon 20-5 (Honeywell TFE731)** |  |
| **DASSAULT**  **AVIATION** | Mystère  Falcon 50 |  | **Falcon 50 (Honeywell TFE731)** |  |
| **DASSAULT AVIATION** | Mystère Falcon 50 | F50EX | **Falcon 50EX (Honeywell TFE731)** |  |
| **DASSAULT**  **AVIATION** | Falcon 6X | Falcon 6X | **Falcon 6X (PW812D)** | OSD  mandatory. |
| **DASSAULT AVIATION** | Falcon 7X | Falcon 7X Falcon 8X | **Falcon 7X (PW307)** | OSD  approved on  30.6.2016. |
| **DASSAULT AVIATION** | Mystère Falcon 900 | Falcon 900 Falcon 900B | **Falcon 900 (Honeywell TFE731)** |  |
| **DASSAULT**  **AVIATION** | Mystère  Falcon 900 | F900C | **Falcon 900C/EX (Honeywell TFE 731)** |  |
| **DASSAULT AVIATION** | Falcon 900EX |  | **Falcon 900C/EX (Honeywell TFE 731)** |  |
| **DASSAULT AVIATION** | Falcon 900EX | F900EX EASy F900DX F900LX | **Falcon 900EX EASy (Honeywell TFE731)** |  |
| **DE HAVILLAND AIRCRAFT OF CANADA**  **LIMITED** | DHC-8-102 | DHC-8 Series 100 | **Bombardier DHC-8-100/200/300 (PWC PW 120)** |  |
| **DE HAVILLAND AIRCRAFT OF CANADA**  **LIMITED** | DHC-8-103 | DHC-8 Series 100 | **Bombardier DHC-8-100/200/300 (PWC PW 120)** |  |
| **DE HAVILLAND AIRCRAFT OF CANADA**  **LIMITED** | DHC-8-106 | DHC-8 Series 100 | **Bombardier DHC-8-100/200/300 (PWC PW 120)** |  |
| **DE HAVILLAND AIRCRAFT OF CANADA**  **LIMITED** | DHC-8-201 | DHC-8 Series 200 | **Bombardier DHC-8-100/200/300 (PWC PW 120)** |  |
| **DE HAVILLAND**  **AIRCRAFT OF** | DHC-8-202 | DHC-8 Series  200 | **Bombardier DHC-8-100/200/300**  **(PWC PW 120)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **CANADA LIMITED** |  |  |  |  |
| **DE HAVILLAND AIRCRAFT OF CANADA**  **LIMITED** | DHC-8-301 | DHC-8 Series 300 | **Bombardier DHC-8-100/200/300 (PWC PW 120)** |  |
| **DE HAVILLAND AIRCRAFT OF**  **CANADA LIMITED** | DHC-8-311 | DHC-8 Series 300 | **Bombardier DHC-8-100/200/300 (PWC PW 120)** |  |
| **DE HAVILLAND AIRCRAFT OF CANADA**  **LIMITED** | DHC-8-314 | DHC-8 Series 300 | **Bombardier DHC-8-100/200/300 (PWC PW 120)** |  |
| **DE HAVILLAND AIRCRAFT OF CANADA**  **LIMITED** | DHC-8-315 | DHC-8 Series 300 | **Bombardier DHC-8-100/200/300 (PWC PW 120)** |  |
| **DE HAVILLAND AIRCRAFT OF CANADA**  **LIMITED** | DHC-8-401 | DHC-8 Series 400 | **Bombardier DHC-8-400 (PWC PW150)** |  |
| **DE HAVILLAND AIRCRAFT OF CANADA**  **LIMITED** | DHC-8-402 | DHC-8 Series 400 | **Bombardier DHC-8-400 (PWC PW150)** |  |
| **DORNIER SEAWINGS**  **GmbH** | Seastar CD2 |  | **Dornier Seastar CD2 (PWC PT6)** |  |
| **EADS CASA** | C-212-CB | Aviocar | **CASA C-212 (Honeywell TPE331)** |  |
| **EADS CASA** | C-212-CC | Aviocar | **CASA C-212 (Honeywell TPE331)** |  |
| **EADS CASA** | C-212-CD | Aviocar | **CASA C-212 (Honeywell TPE331)** |  |
| **EADS CASA** | C-212-CE | Aviocar | **CASA C-212 (Honeywell TPE331)** |  |
| **EADS CASA** | C-212-CF | Aviocar | **CASA C-212 (Honeywell TPE331)** |  |
| **EADS CASA** | C-212-DD | Aviocar | **CASA C-212 (Honeywell TPE331)** |  |
| **EADS CASA** | C-212-DF | Aviocar | **CASA C-212 (Honeywell TPE331)** |  |
| **EADS CASA** | C-212-EE | Aviocar | **CASA C-212 (Honeywell TPE331)** |  |
| **EADS CASA** | C-212-VA | Aviocar | **CASA C-212 (Honeywell TPE331)** |  |
| **EADS CASA** | C-212-DE | Aviocar | **CASA C-212 (PWC PT6)** |  |
| **EADS CASA** | C-295 |  | **CASA C-295 (PWC PW127)** |  |
| **EADS CASA** | CN-235 |  | **CASA CN-235 (GE CT7)** |  |
| **EADS CASA** | CN-235-100 |  | **CASA CN-235 (GE CT7)** |  |
| **EADS CASA** | CN-235-200 |  | **CASA CN-235 (GE CT7)** |  |
| **EADS CASA** | CN-235-300 |  | **CASA CN-235 (GE CT7)** |  |
| **ECLIPSE AEROSPACE Inc.** | EA500 |  | **Eclipse EA500 (PWC PW610)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **EMBRAER S.A.** | EMB-110K1 | Bandeirante | **Embraer EMB-110 (PWC PT6)** |  |
| **EMBRAER S.A.** | EMB-110P1 | Bandeirante | **Embraer EMB-110 (PWC PT6)** |  |
| **EMBRAER S.A.** | EMB-110P2 | Bandeirante | **Embraer EMB-110 (PWC PT6)** |  |
| **EMBRAER S.A.** | EMB-120 | Brasilia | **Embraer EMB-120 (PWC PW110 Series)** |  |
| **EMBRAER S.A.** | EMB-120ER | Brasilia | **Embraer EMB-120**  **(PWC PW110 Series)** |  |
| **EMBRAER S.A.** | EMB-120RT | Brasilia | **Embraer EMB-120 (PWC PW110 Series)** |  |
| **EMBRAER S.A.** | EMB-121A | Xingu I | **Embraer EMB-121 (PWC PT6)** |  |
| **EMBRAER S.A.** | EMB-121A1 | Xingu II | **Embraer EMB-121 (PWC PT6)** |  |
| **EMBRAER S.A.** | EMB-135BJ | Legacy 600  Legacy 650 | **Embraer EMB-135/145 (RR Corp AE3007A)** |  |
| **EMBRAER S.A.** | EMB-135ER |  | **Embraer EMB-135/145**  **(RR Corp AE3007A)** |  |
| **EMBRAER S.A.** | EMB-135LR |  | **Embraer EMB-135/145 (RR Corp AE3007A)** |  |
| **EMBRAER S.A.** | EMB-145 |  | **Embraer EMB-135/145 (RR Corp AE3007A)** |  |
| **EMBRAER S.A.** | EMB-145EP |  | **Embraer EMB-135/145 (RR Corp AE3007A)** |  |
| **EMBRAER S.A.** | EMB-145ER |  | **Embraer EMB-135/145 (RR Corp AE3007A)** |  |
| **EMBRAER S.A.** | EMB-145EU |  | **Embraer EMB-135/145**  **(RR Corp AE3007A)** |  |
| **EMBRAER S.A.** | EMB-145LR |  | **Embraer EMB-135/145 (RR Corp AE3007A)** |  |
| **EMBRAER S.A.** | EMB-145LU |  | **Embraer EMB-135/145**  **(RR Corp AE3007A)** |  |
| **EMBRAER S.A.** | EMB-145MK |  | **Embraer EMB-135/145 (RR Corp AE3007A)** |  |
| **EMBRAER S.A.** | EMB-145MP |  | **Embraer EMB-135/145 (RR Corp AE3007A)** |  |
| **EMBRAER S.A.** | EMB-500 | Phenom 100 | **Embraer EMB-500 (PWC PW617)** |  |
| **EMBRAER S.A.** | EMB-505 | Phenom 300 | **Embraer EMB-505 (PWC PW535)** |  |
| **EMBRAER S.A.** | EMB-545 | Legacy 450 | **Embraer EMB-545/550 (Honeywell AS907)** |  |
| **EMBRAER S.A.** | EMB-550 | Legacy 500 | **Embraer EMB-545/550**  **(Honeywell AS907)** |  |
| **EMBRAER S.A.** | ERJ 170-100 LR | ERJ-170 | **Embraer ERJ-170 Series (GE CF34)** |  |
| **EMBRAER S.A.** | ERJ 170-100 STD | ERJ-170 | **Embraer ERJ-170 Series (GE CF34)** |  |
| **EMBRAER S.A.** | ERJ 170-200 LR | ERJ-175 | **Embraer ERJ-170 Series (GE CF34)** |  |
| **EMBRAER S.A.** | ERJ 170-200 STD | ERJ-175 | **Embraer ERJ-170 Series (GE CF34)** |  |
| **EMBRAER S.A.** | ERJ 190-100 LR | ERJ-190 | **Embraer ERJ-190 Series (GE CF34)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **EMBRAER S.A.** | ERJ 190-100 SR | ERJ-190 | **Embraer ERJ-190 Series (GE CF34)** |  |
| **EMBRAER S.A.** | ERJ 190-100  STD | ERJ-190 | **Embraer ERJ-190 Series (GE CF34)** |  |
| **EMBRAER S.A.** | ERJ 190-100 IGW | ERJ-190 AR | **Embraer ERJ-190 Series (GE CF34)** |  |
| **EMBRAER S.A.** | ERJ 190-200 LR | ERJ-195 | **Embraer ERJ-190 Series (GE CF34)** |  |
| **EMBRAER S.A.** | ERJ 190-200 STD | ERJ-195 | **Embraer ERJ-190 Series (GE CF34)** |  |
| **EMBRAER S.A.** | ERJ 190-200  IGW | ERJ-195 AR | **Embraer ERJ-190 Series (GE CF34)** |  |
| **EMBRAER S.A.** | ERJ 190-100 ECJ | Lineage 1000 | **Embraer ERJ-190 Series (GE CF34)** |  |
| **EMBRAER S.A.** | ERJ 190-300 | EMBRAER  190E2 | **Embraer ERJ-190 Series (PW 1900G)** |  |
| **EMBRAER S.A.** | ERJ 190-400 | EMBRAER 195-E2 | **Embraer ERJ-190 Series (PW 1900G)** |  |
| **FOKKER**  **SERVICES** | F27 Mark 050 | Fokker 50 | **Fokker 50/60 Series**  **(PWC PW 125/127)** |  |
| **FOKKER SERVICES** | F27 Mark 0502 | Fokker 50 | **Fokker 50/60 Series (PWC PW 125/127)** |  |
| **FOKKER**  **SERVICES** | F27 Mark 0604 | Fokker 60 | **Fokker 50/60 Series**  **(PWC PW 125/127)** |  |
| **FOKKER**  **SERVICES** | F28 Mark 0100 | Fokker 100 | **Fokker 70/100 (RRD Tay)** |  |
| **FOKKER SERVICES** | F28 Mark 0070 | Fokker 70 | **Fokker 70/100 (RRD Tay)** |  |
| **FOKKER SERVICES** | F27 Mark 100 | Friendship | **Fokker F27 / Fairchild F-27/FH-227 Series (RRD Dart)** |  |
| **FOKKER**  **SERVICES** | F27 Mark 200 | Friendship | **Fokker F27 / Fairchild F-27/FH-227**  **Series (RRD Dart)** |  |
| **FOKKER SERVICES** | F27 Mark 300 | Friendship | **Fokker F27 / Fairchild F-27/FH-227 Series (RRD Dart)** |  |
| **FOKKER**  **SERVICES** | F27 Mark 400 | Friendship | **Fokker F27 / Fairchild F-27/FH-227**  **Series (RRD Dart)** |  |
| **FOKKER SERVICES** | F27 Mark 500 | Friendship | **Fokker F27 / Fairchild F-27/FH-227 Series (RRD Dart)** |  |
| **FOKKER SERVICES** | F27 Mark 600 | Friendship | **Fokker F27 / Fairchild F-27/FH-227 Series (RRD Dart)** |  |
| **FOKKER**  **SERVICES** | F27 Mark 700 | Friendship | **Fokker F27 / Fairchild F-27/FH-227**  **Series (RRD Dart)** |  |
| **FOKKER SERVICES** | F28 Mark 1000 | Fellowship | **Fokker F28 Series (RRD Spey)** |  |
| **FOKKER**  **SERVICES** | F28 Mark  1000C | Fellowship | **Fokker F28 Series (RRD Spey)** |  |
| **FOKKER SERVICES** | F28 Mark 2000 | Fellowship | **Fokker F28 Series (RRD Spey)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **FOKKER SERVICES** | F28 Mark 3000 | Fellowship | **Fokker F28 Series (RRD Spey)** |  |
| **FOKKER**  **SERVICES** | F28 Mark  3000C | Fellowship | **Fokker F28 Series (RRD Spey)** |  |
| **FOKKER SERVICES** | F28 Mark 3000R | Fellowship | **Fokker F28 Series (RRD Spey)** |  |
| **FOKKER**  **SERVICES** | F28 Mark  3000RC | Fellowship | **Fokker F28 Series (RRD Spey)** |  |
| **FOKKER SERVICES** | F28 Mark 4000 | Fellowship | **Fokker F28 Series (RRD Spey)** |  |
| **GROB Aircraft**  **AG** | G520 EGRETT |  | **Grob G 520 Series**  **(Honeywell TPE331)** |  |
| **GROB Aircraft**  **AG** | G520T |  | **Grob G 520 Series**  **(Honeywell TPE331)** |  |
| **GULFSTREAM AEROSPACE**  **Corporation** | G-1159 | Gulfstream II | **Gulfstream G-1159 Series (RRD Spey)** |  |
| **GULFSTREAM AEROSPACE**  **Corporation** | G-1159A | Gulfstream IIB | **Gulfstream G-1159 Series (RRD Spey)** |  |
| **GULFSTREAM AEROSPACE**  **Corporation** | G-1159B | Gulfstream III | **Gulfstream G-1159 Series (RRD Spey)** |  |
| **GULFSTREAM AEROSPACE**  **Corporation** | G-159 | Gulfstream I | **Gulfstream G-159 (RRD Dart)** |  |
| **GULFSTREAM AEROSPACE**  **Corporation** | G-IV | Gulfstream G-IV/GIV-SP | **Gulfstream GIV/GIV-SP Series (RRD Tay)** |  |
| **GULFSTREAM AEROSPACE**  **Corporation** | GIV-X | Gulfstream G350  Gulfstream  G450 | **Gulfstream GIV-X Series (RRD Tay)** |  |
| **GULFSTREAM AEROSPACE**  **Corporation** | GV | Gulfstream GV | **Gulfstream GV basic model (RRD BR710)** |  |
| **GULFSTREAM AEROSPACE**  **Corporation** | GVI (G650) | G650 G650ER | **Gulfstream GVI (RRD BR725)** |  |
| **GULFSTREAM AEROSPACE**  **Corporation** | GVII-G500 | G500 | **Gulfstream GVII (PWC PW800GA)** | OSD  mandatory. |
| **GULFSTREAM AEROSPACE**  **Corporation** | GVII-G600 | G600 | **Gulfstream GVII (PWC PW800GA)** | OSD  mandatory. |
| **GULFSTREAM AEROSPACE**  **Corporation** | GVIII-2 |  | **Gulfstream GVIII-2 (RR BR700)** | Not yet certified. |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
|  |  |  |  | OSD  mandatory. |
| **GULFSTREAM AEROSPACE**  **Corporation** | GV-SP | Gulfstream G500  Gulfstream  G550 | **Gulfstream GV-SP Series (RRD BR710)** |  |
| **GULFSTREAM**  **AEROSPACE LP (GALP)** | 1125  Westwind Astra | Astra | **Gulfstream (IAI) 100/1125/Astra SPX (Honeywell TFE731)** |  |
| **GULFSTREAM AEROSPACE LP (GALP)** | Gulfstream 100/Astra SPX | G100/Astra SPX | **Gulfstream (IAI) 100/1125/Astra SPX (Honeywell TFE731)** |  |
| **GULFSTREAM AEROSPACE LP (GALP)** | 1125 Astra SP |  | **Gulfstream (IAI) 100/1125/Astra SPX (Honeywell TFE731)** |  |
| **GULFSTREAM AEROSPACE LP (GALP)** | Gulfstream 200/Galaxy | G200/Galaxy | **Gulfstream (IAI) 200/Galaxy (PWC PW306)** |  |
| **GULFSTREAM AEROSPACE LP**  **(GALP)** | Gulfstream G150 | G150 | **Gulfstream (IAI) G150 (Honeywell TFE731)** |  |
| **GULFSTREAM AEROSPACE LP**  **(GALP)** | Gulfstream G280 | G280 | **Gulfstream (IAI) G280 (Honeywell AS907)** |  |
| **HAWKER BEECHCRAFT** | BAe.125 Series 800A | BAe.125 | **BAe 125 Series (Honeywell TFE731)** |  |
| **HAWKER BEECHCRAFT** | BAe.125 Series 800B | BAe.125 | **BAe 125 Series (Honeywell TFE731)** |  |
| **HAWKER**  **BEECHCRAFT** | BH.125 Series  400A | BH.125 | **BAe 125 Series (Honeywell TFE731)** |  |
| **HAWKER BEECHCRAFT** | BH.125 Series 600A | BH.125 | **BAe 125 Series (Honeywell TFE731)** |  |
| **HAWKER**  **BEECHCRAFT** | DH.125 Series  1A | DH.125 | **BAe 125 Series (Honeywell TFE731)** |  |
| **HAWKER BEECHCRAFT** | DH.125 Series 3A | DH.125 | **BAe 125 Series (Honeywell TFE731)** |  |
| **HAWKER BEECHCRAFT** | DH.125 Series 3A/RA | DH.125 | **BAe 125 Series (Honeywell TFE731)** |  |
| **HAWKER**  **BEECHCRAFT** | DH.125 Series  400A | DH.125 | **BAe 125 Series (Honeywell TFE731)** |  |
| **HAWKER BEECHCRAFT** | HS.125 Series 400A | HS.125 | **BAe 125 Series (Honeywell TFE731)** |  |
| **HAWKER**  **BEECHCRAFT** | HS.125 Series  600A | HS.125 | **BAe 125 Series (Honeywell TFE731)** |  |
| **HAWKER BEECHCRAFT** | HS.125 Series 700A | HS.125 | **BAe 125 Series (Honeywell TFE731)** |  |
| **HAWKER BEECHCRAFT** | HS.125 Series 700B | HS.125 | **BAe 125 Series (Honeywell TFE731)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **HAWKER BEECHCRAFT** | HS.125 Series F3B | HS.125 | **BAe 125 Series (Honeywell TFE731)** |  |
| **HAWKER BEECHCRAFT** | HS.125 series F3B/RA | HS.125 | **BAe 125 Series (Honeywell TFE731)** |  |
| **HAWKER BEECHCRAFT** | HS.125 Series F400B | HS.125 | **BAe 125 Series (Honeywell TFE731)** |  |
| **HAWKER**  **BEECHCRAFT** | HS.125 Series  F403B | HS.125 | **BAe 125 Series (Honeywell TFE731)** |  |
| **HAWKER BEECHCRAFT** | HS.125 series F600B | HS.125 | **BAe 125 Series (Honeywell TFE731)** |  |
| **HAWKER**  **BEECHCRAFT** | Hawker 800 |  | **BAe 125 Series (Honeywell TFE731)** |  |
| **HAWKER**  **BEECHCRAFT** | HS.125 series  F400 | ‘Hawker  Siddeley’ | **BAe 125 Series (RR Viper)** |  |
| **HAWKER BEECHCRAFT** | HS.125 series F600 | ‘Hawker Siddeley’ | **BAe 125 Series (RR Viper)** |  |
| **HAWKER BEECHCRAFT** | BH.125 Series 400A | BH.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER BEECHCRAFT** | BH.125 Series 600A | BH.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER**  **BEECHCRAFT** | DH.125 Series  1A | DH.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER**  **BEECHCRAFT** | DH.125 Series  1A/R-522 | DH.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER BEECHCRAFT** | DH.125 Series 1A/S-522 | DH.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER BEECHCRAFT** | DH.125 Series 1A-522 | DH.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER**  **BEECHCRAFT** | DH.125 Series  3A/R | DH.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER BEECHCRAFT** | DH.125 Series 400A | DH.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER**  **BEECHCRAFT** | HS.125 Series  1B | HS.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER BEECHCRAFT** | HS.125 Series 1B/R-522 | HS.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER BEECHCRAFT** | HS.125 Series 1B/S-522 | HS.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER**  **BEECHCRAFT** | HS.125 Series  1B-522 | HS.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER**  **BEECHCRAFT** | HS.125 Series  3B | HS.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER**  **BEECHCRAFT** | HS.125 Series  3B/R | HS.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER BEECHCRAFT** | HS.125 Series 3B/RA | HS.125 | **BAe 125 Series (RR Viper)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **HAWKER BEECHCRAFT** | HS.125 Series 3B/RB | HS.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER**  **BEECHCRAFT** | HS.125 Series  3B/RC | HS.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER BEECHCRAFT** | HS.125 Series 400A | HS.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER**  **BEECHCRAFT** | HS.125 Series  400B | HS.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER BEECHCRAFT** | HS.125 Series 400B/1 | HS.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER**  **BEECHCRAFT** | HS.125 Series  401B | HS.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER**  **BEECHCRAFT** | HS.125 Series  403A(C) | HS.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER BEECHCRAFT** | HS.125 Series 403B | HS.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER BEECHCRAFT** | HS.125 Series 600A | HS.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER BEECHCRAFT** | HS.125 Series 600B | HS.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER**  **BEECHCRAFT** | HS.125 Series  600B/1 | HS.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER**  **BEECHCRAFT** | HS.125 Series  600B/2 | HS.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER BEECHCRAFT** | HS.125 Series 600B/3 | HS.125 | **BAe 125 Series (RR Viper)** |  |
| **HAWKER BEECHCRAFT** | BAe.125 Series 1000A | BAe.125 | **BAe 125 Series 1000 (PWC PW305)** |  |
| **HAWKER**  **BEECHCRAFT** | BAe.125 Series  1000B | BAe.125 | **BAe 125 Series 1000 (PWC PW305)** |  |
| **HAWKER BEECHCRAFT** | Hawker 1000 |  | **BAe 125 Series 1000 (PWC PW305)** |  |
| **HAWKER BEECHCRAFT** | Hawker 750 | Hawker 750 | **BAe 125 Series 750/800XP/850XP/900XP**  **(Honeywell TFE731)** |  |
| **HAWKER BEECHCRAFT** | Hawker 800XP | Hawker 800XP | **BAe 125 Series 750/800XP/850XP/900XP**  **(Honeywell TFE731)** |  |
| **HAWKER BEECHCRAFT** | Hawker 850XP | Hawker 850XP | **BAe 125 Series 750/800XP/850XP/900XP**  **(Honeywell TFE731)** |  |
| **HAWKER BEECHCRAFT** | Hawker 900XP | Hawker 900XP | **BAe 125 Series 750/800XP/850XP/900XP**  **(Honeywell TFE731)** |  |
| **HAWKER BEECHCRAFT** | 400T | (TX) Beechjet | **Beech 400/Mitsubishi MU-300 (PWC JT15)** |  |
| **HAWKER**  **BEECHCRAFT** | 400 | Beechjet | **Beech 400/Mitsubishi MU-300**  **(PWC JT15)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **HAWKER BEECHCRAFT** | 400A | Beechjet (Hawker 400XP) | **Beech 400/Mitsubishi MU-300 (PWC JT15)** |  |
| **HAWKER BEECHCRAFT** | MU-300  (Diamond I) | Diamond I Diamond IA | **Beech 400/Mitsubishi MU-300 (PWC JT15)** |  |
| **HAWKER**  **BEECHCRAFT** | MU-300-10  (Diamond II) | Diamond II | **Beech 400/Mitsubishi MU-300**  **(PWC JT15)** |  |
| **HONDA AIRCRAFT**  **COMPANY LLC.** | HA-420 | HondaJet | **Honda Aircraft HA-420 (HF120)** |  |
| **ISRAEL AIRCRAFT**  **INDUSTRIES** | IAI 1123 | Commodore Jet | **IAI 1121/1123 (GE CJ610)** |  |
| **ISRAEL AIRCRAFT**  **INDUSTRIES** | IAI 1121 | Jetcommander | **IAI 1121/1123 (GE CJ610)** |  |
| **ISRAEL AIRCRAFT**  **INDUSTRIES** | IAI 1121A | Jetcommander | **IAI 1121/1123 (GE CJ610)** |  |
| **ISRAEL AIRCRAFT**  **INDUSTRIES** | IAI 1121B | Jetcommander | **IAI 1121/1123 (GE CJ610)** |  |
| **ISRAEL AIRCRAFT INDUSTRIES** | IAI 1124 | Westwind | **IAI 1124 (Honeywell TFE731)** |  |
| **ISRAEL AIRCRAFT INDUSTRIES** | IAI 1124A | Westwind | **IAI 1124 (Honeywell TFE731)** |  |
| **JSC Sukhoi Civil Aircraft** | RRJ-95B | Superjet 100 | **RRJ-95 (PowerJet SaM146)** |  |
| **LEARJET** | 23 (Learjet) |  | **Learjet 23 (GE CJ610)** |  |
| **LEARJET** | 24 |  | **Learjet 24/25 (GE CJ610)** |  |
| **LEARJET** | 25 |  | **Learjet 24/25 (GE CJ610)** |  |
| **LEARJET** | 24A |  | **Learjet 24/25 (GE CJ610)** |  |
| **LEARJET** | 24B |  | **Learjet 24/25 (GE CJ610)** |  |
| **LEARJET** | 24B-A |  | **Learjet 24/25 (GE CJ610)** |  |
| **LEARJET** | 24D |  | **Learjet 24/25 (GE CJ610)** |  |
| **LEARJET** | 24D-A |  | **Learjet 24/25 (GE CJ610)** |  |
| **LEARJET** | 24F |  | **Learjet 24/25 (GE CJ610)** |  |
| **LEARJET** | 24F-A |  | **Learjet 24/25 (GE CJ610)** |  |
| **LEARJET** | 25B |  | **Learjet 24/25 (GE CJ610)** |  |
| **LEARJET** | 25C |  | **Learjet 24/25 (GE CJ610)** |  |
| **LEARJET** | 25D |  | **Learjet 24/25 (GE CJ610)** |  |
| **LEARJET** | 25F |  | **Learjet 24/25 (GE CJ610)** |  |
| **LEARJET** | 31 |  | **Learjet 31 (Honeywell TFE731)** |  |
| **LEARJET** | 31A |  | **Learjet 31 (Honeywell TFE731)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **LEARJET** | 35 |  | **Learjet 35/36 (Honeywell TFE731)** |  |
| **LEARJET** | 36 |  | **Learjet 35/36 (Honeywell TFE731)** |  |
| **LEARJET** | 35A |  | **Learjet 35/36 (Honeywell TFE731)** |  |
| **LEARJET** | 36A |  | **Learjet 35/36 (Honeywell TFE731)** |  |
| **LEARJET** | Learjet Model 45 | Learjet 45  Learjet 40  Learjet 75  Learjet 70 | **Learjet 45 (Honeywell TFE731)** |  |
| **LEARJET** | 55 |  | **Learjet 55 (Honeywell TFE731)** |  |
| **LEARJET** | 55B |  | **Learjet 55 (Honeywell TFE731)** |  |
| **LEARJET** | 55C |  | **Learjet 55 (Honeywell TFE731)** |  |
| **LEARJET** | 60 | Learjet 60 | **Learjet 60 (PWC PW305)** |  |
| **LOCKHEED MARTIN**  **Corporation** | 1329-25 | JetStar II | **Lockheed 1329 (Honeywell TFE731)** |  |
| **LOCKHEED MARTIN**  **Corporation** | 1329-23D | JetStar | **Lockheed 1329 PW (PW JT12)** |  |
| **LOCKHEED MARTIN**  **Corporation** | 188A | Electra | **Lockheed 188 (RR Corp 501)** |  |
| **LOCKHEED MARTIN**  **Corporation** | 188C | Electra | **Lockheed 188 (RR Corp 501)** |  |
| **LOCKHEED MARTIN**  **Corporation** | 382G | Hercules | **Lockheed 382 (RR Corp 501)** |  |
| **LOCKHEED MARTIN**  **Corporation** | L-1011-385-1 | TriStar | **Lockheed L-1011 (RR RB211)** |  |
| **LOCKHEED MARTIN**  **Corporation** | L-1011-385-1- 15 | TriStar | **Lockheed L-1011 (RR RB211)** |  |
| **LOCKHEED MARTIN**  **Corporation** | L-1011-385-3 | TriStar | **Lockheed L-1011 (RR RB211)** |  |
| **M7 AEROSPACE** | SA226-AT |  | **Fairchild SA226 Series (Honeywell TPE331)** |  |
| **M7 AEROSPACE** | SA226-T |  | **Fairchild SA226 Series (Honeywell TPE331)** |  |
| **M7 AEROSPACE** | SA226-T(B) |  | **Fairchild SA226 Series**  **(Honeywell TPE331)** |  |
| **M7 AEROSPACE** | SA226-TC |  | **Fairchild SA226 Series**  **(Honeywell TPE331)** |  |
| **M7 AEROSPACE** | SA227-AC | Swearingen  Metro | **Fairchild SA227 Series**  **(Honeywell TPE331)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **M7 AEROSPACE** | SA227-BC | Swearingen Metro | **Fairchild SA227 Series (Honeywell TPE331)** |  |
| **M7 AEROSPACE** | SA227-AT |  | **Fairchild SA227 Series**  **(Honeywell TPE331)** |  |
| **M7 AEROSPACE** | SA227-CC |  | **Fairchild SA227 Series (Honeywell TPE331)** |  |
| **M7 AEROSPACE** | SA227-DC |  | **Fairchild SA227 Series**  **(Honeywell TPE331)** |  |
| **M7 AEROSPACE** | SA227-TT |  | **Fairchild SA227 Series (Honeywell TPE331)** |  |
| **M7 AEROSPACE** | SA227-PC | Swearingen  Metro | **Fairchild SA227 Series (PWC PT6)** |  |
| **M7 AEROSPACE** | SA26AT |  | **Fairchild SA26AT (Honeywell TPE331)** |  |
| **M7 AEROSPACE** | SA-26-T |  | **Fairchild SA26-T (PWC PT6)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-10-10 |  | **DC-10/MD-10 (GE CF6)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-10-30 |  | **DC-10/MD-10 (GE CF6)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-10-30F |  | **DC-10/MD-10 (GE CF6)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-8-71 | DC-8-70 | **DC-8 (CFM56)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-8-71F | DC-8-70 | **DC-8 (CFM56)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-8-72 | DC-8-70 | **DC-8 (CFM56)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-8-73 | DC-8-70 | **DC-8 (CFM56)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-8-73F | DC-8-70 | **DC-8 (CFM56)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-8-52 | DC-8 | **DC-8 (PW JT3D)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-8-53 | DC-8 | **DC-8 (PW JT3D)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-8-55 | DC-8 | **DC-8 (PW JT3D)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-8F-54 | DC-8 | **DC-8 (PW JT3D)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-8F-55 | DC-8 | **DC-8 (PW JT3D)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-8-61 | DC-8-60 | **DC-8 (PW JT3D)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-8-61F | DC-8-60 | **DC-8 (PW JT3D)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-8-62 | DC-8-60 | **DC-8 (PW JT3D)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-8-62F | DC-8-60 | **DC-8 (PW JT3D)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-8-63 | DC-8-60 | **DC-8 (PW JT3D)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-8-63F | DC-8-60 | **DC-8 (PW JT3D)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-8-33 | DC-8 | **DC-8 (PW JT4A)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-9-14 | DC-9 | **DC-9 (PW JT8D)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-9-15 | DC-9 | **DC-9 (PW JT8D)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-9-21 | DC-9 | **DC-9 (PW JT8D)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-9-32 | DC-9 | **DC-9 (PW JT8D)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-9-33F | DC-9 | **DC-9 (PW JT8D)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-9-34 | DC-9 | **DC-9 (PW JT8D)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-9-34F | DC-9 | **DC-9 (PW JT8D)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-9-41 | DC-9 | **DC-9 (PW JT8D)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-9-51 | DC-9 | **DC-9 (PW JT8D)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | 717-200 | 717 | **MD 717-200 (RRD BR700-715)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | MD-11 | MD-11 | **MD-11 (GE CF6)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | MD-11F | MD-11 | **MD-11 (GE CF6)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | MD-11 | MD-11 | **MD-11 (PW 4000)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | MD-11F | MD-11 | **MD-11 (PW 4000)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-9-81 (MD- 81) | MD-81 | **MD-80 Series (PW JT8D)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-9-82 (MD- 82) | MD-82 | **MD-80 Series (PW JT8D)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-9-83 (MD- 83) | MD-83 | **MD-80 Series (PW JT8D)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | DC-9-87 (MD- 87) | MD-87 | **MD-80 Series (PW JT8D)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | MD-88 |  | **MD-80 Series (PW JT8D)** |  |
| **McDONNELL DOUGLAS**  **Corporation BOEING**  **COMPANY** | MD-90 Series |  | **MD-90 (IAE V2500)** |  |
| **MHI RJ AVIATION ULC.** | CL-600-2B19  (RJ Series 100) | Regional Jet Series 100/200/440/  Challenger  850/ CRJ SE | **Bombardier CL-600-2B19 (GE CF34)** |  |
| **MHI RJ AVIATION ULC.** | CL-600-2E25  (RJ Series  1000) | Regional Jet Series 1000 | **Bombardier CL-600- 2C10/2D15/2D24/2E25 (GE CF34)** |  |
| **MHI RJ AVIATION ULC.** | CL-600-2C10 (RJ 700/701/  702) | Regional Jet Series  700/701/702 | **Bombardier CL-600- 2C10/2D15/2D24/2E25 (GE CF34)** |  |
| **MHI RJ AVIATION ULC.** | CL-600-2D15  (RJ Series 705) | Regional Jet Series 705 | **Bombardier CL-600- 2C10/2D15/2D24/2E25 (GE CF34)** |  |
| **MHI RJ AVIATION ULC.** | CL-600-2D24  (RJ Series 900) | Regional Jet Series 900 | **Bombardier CL-600- 2C10/2D15/2D24/2E25 (GE CF34)** |  |
| **MITSUBISHI**  **Heavy Industries** | MU-2B |  | **Mitsubishi MU-2B (Honeywell**  **TPE331)** |  |
| **MITSUBISHI**  **Heavy Industries** | MU-2B-10 (USA) |  | **Mitsubishi MU-2B (Honeywell TPE331)** |  |
| **MITSUBISHI**  **Heavy Industries** | MU-2B-20 |  | **Mitsubishi MU-2B (Honeywell**  **TPE331)** |  |
| **MITSUBISHI**  **Heavy Industries** | MU-2B-20 (USA) |  | **Mitsubishi MU-2B (Honeywell TPE331)** |  |
| **MITSUBISHI**  **Heavy Industries** | MU-2B-25 |  | **Mitsubishi MU-2B (Honeywell TPE331)** |  |
| **MITSUBISHI**  **Heavy Industries** | MU-2B-25  (USA) |  | **Mitsubishi MU-2B (Honeywell**  **TPE331)** |  |
| **MITSUBISHI**  **Heavy Industries** | MU-2B-26 (USA) |  | **Mitsubishi MU-2B (Honeywell TPE331)** |  |
| **MITSUBISHI**  **Heavy Industries** | MU-2B-26A |  | **Mitsubishi MU-2B (Honeywell**  **TPE331)** |  |
| **MITSUBISHI**  **Heavy Industries** | MU-2B-26A (USA) |  | **Mitsubishi MU-2B (Honeywell TPE331)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **MITSUBISHI**  **Heavy Industries** | MU-2B-30 |  | **Mitsubishi MU-2B (Honeywell TPE331)** |  |
| **MITSUBISHI**  **Heavy Industries** | MU-2B-35 |  | **Mitsubishi MU-2B (Honeywell**  **TPE331)** |  |
| **MITSUBISHI**  **Heavy Industries** | MU-2B-36 |  | **Mitsubishi MU-2B (Honeywell TPE331)** |  |
| **MITSUBISHI**  **Heavy Industries** | MU-2B-36A  (USA) |  | **Mitsubishi MU-2B (Honeywell**  **TPE331)** |  |
| **MITSUBISHI**  **Heavy Industries** | MU-2B-40 (USA) |  | **Mitsubishi MU-2B (Honeywell TPE331)** |  |
| **MITSUBISHI**  **Heavy Industries** | MU-2B-60  (USA) |  | **Mitsubishi MU-2B (Honeywell**  **TPE331)** |  |
| **Nomad TC Pty**  **Ltd** | N22 |  | **Nomad N22/24 Series (RR Corp 250)** |  |
| **Nomad TC Pty Ltd** | N22B |  | **Nomad N22/24 Series (RR Corp 250)** |  |
| **Nomad TC Pty Ltd** | N22C |  | **Nomad N22/24 Series (RR Corp 250)** |  |
| **Nomad TC Pty Ltd** | N22S |  | **Nomad N22/24 Series (RR Corp 250)** |  |
| **Nomad TC Pty**  **Ltd** | N24 |  | **Nomad N22/24 Series (RR Corp 250)** |  |
| **Nomad TC Pty**  **Ltd** | N24A |  | **Nomad N22/24 Series (RR Corp 250)** |  |
| **PIAGGIO Aero**  **Industries** | P.166 DP1 |  | **Piaggio P166 (PWC PT6)** |  |
| **PIAGGIO Aero**  **Industries** | P180 | Avanti | **Piaggio P180 Avanti/Avanti II (PWC PT6)** |  |
| **PIAGGIO Aero**  **Industries** | P180 | Avanti II | **Piaggio P180 Avanti/Avanti II**  **(PWC PT6)** |  |
| **PILATUS AIRCRAFT** | PC-12 |  | **Pilatus PC-12 (PWC PT6)** |  |
| **PILATUS**  **AIRCRAFT** | PC-12/45 |  | **Pilatus PC-12 (PWC PT6)** |  |
| **PILATUS AIRCRAFT** | PC-12/47 |  | **Pilatus PC-12 (PWC PT6)** |  |
| **PILATUS AIRCRAFT** | PC-12/47E |  | **Pilatus PC-12 (PWC PT6)** |  |
| **PILATUS**  **AIRCRAFT** | PC-24 |  | **Pilatus PC-24 (Williams FJ44)** |  |
| **PIPER AIRCRAFT** | PA-31T  (Cheyenne/  Cheyenne II) | Cheyenne / Cheyenne II | **Piper PA-31T Series (PWC PT6)** |  |
| **PIPER AIRCRAFT** | PA-31T1  (Chey. I/ Cheyenne IA) | Cheyenne I / Cheyenne 1A | **Piper PA-31T Series (PWC PT6)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **PIPER AIRCRAFT** | PA-31T2  (Cheyenne IIXL) | Cheyenne IIXL | **Piper PA-31T Series (PWC PT6)** |  |
| **PIPER AIRCRAFT** | PA-31T3 | T-1040 | **Piper PA-31T Series (PWC PT6)** |  |
| **PIPER AIRCRAFT** | PA-42-1000  (Cheyenne  400LS) | Cheyenne 400LS | **Piper PA-42 (Honeywell TPE-331)** |  |
| **PIPER AIRCRAFT** | PA-42  (Cheyenne III) | Cheyenne III | **Piper PA-42 (PWC PT6)** |  |
| **PIPER AIRCRAFT** | PA-42-720R | Cheyenne III | **Piper PA-42 (PWC PT6)** |  |
| **PIPER AIRCRAFT** | PA-42-720  (Cheyenne  IIIA) | Cheyenne IIIA | **Piper PA-42 (PWC PT6)** |  |
| **PIPER AIRCRAFT** | PA-46-600TP | M600 | **Piper PA-46-500TP/600TP (PWC PT6)** |  |
| **PIPER AIRCRAFT** | PA-46-500TP | Malibu Meridian | **Piper PA-46-500TP/600TP (PWC PT6)** |  |
| **POLSKIE ZAKLADY**  **LOTNICZE** | PZL M28 00 |  | **PZL M 28 (PWC PT6)** |  |
| **POLSKIE ZAKLADY**  **LOTNICZE** | PZL M28 02 |  | **PZL M 28 (PWC PT6)** |  |
| **POLSKIE ZAKLADY LOTNICZE** | PZL M28 05 |  | **PZL M 28 (PWC PT6)** |  |
| **PT. DIRGANTARA INDONESIA** | CN-235 |  | **CASA CN-235 (GE CT7)** |  |
| **PT. DIRGANTARA**  **INDONESIA** | CN-235-100 |  | **CASA CN-235 (GE CT7)** |  |
| **PT. DIRGANTARA INDONESIA** | CN-235-110 |  | **CASA CN-235 (GE CT7)** |  |
| **RUAG**  **Aerospace GmbH**  **(DORNIER)** | Dornier 228-  100 |  | **Dornier 228 (Honeywell TPE331)** |  |
| **RUAG**  **Aerospace GmbH**  **(DORNIER)** | Dornier 228-  101 |  | **Dornier 228 (Honeywell TPE331)** |  |
| **RUAG**  **Aerospace GmbH (DORNIER)** | Dornier 228-  200 |  | **Dornier 228 (Honeywell TPE331)** |  |
| **RUAG**  **Aerospace** | Dornier 228-  201 |  | **Dornier 228 (Honeywell TPE331)** |  |

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| **GmbH (DORNIER)** |  |  |  |  |
| **RUAG**  **Aerospace** | Dornier 228-  202 |  | **Dornier 228 (Honeywell TPE331)** |  |
| **GmbH** |  |  |  |  |
| **(DORNIER)** |  |  |  |  |
| **RUAG** | Dornier 228- |  | **Dornier 228 (Honeywell TPE331)** |  |
| **Aerospace** | 212 |  |  |  |
| **GmbH** |  |  |  |  |
| **(DORNIER)** |  |  |  |  |
| **RUAG** | Do 28 D-6 |  | **Dornier Do 28 Series (PWC PT6)** |  |
| **Aerospace**  **GmbH** |  |  |  |  |
| **(DORNIER)** |  |  |  |  |
| **RUAG**  **Aerospace** | Dornier 128-6 |  | **Dornier Do 28 Series (PWC PT6)** |  |
| **GmbH** |  |  |  |  |
| **(DORNIER)** |  |  |  |  |
| **SAAB AB, SAAB** | Saab SF340A | Saab-Fairchild | **Saab (SF) 340 (GE CT7)** |  |
| **Aerosystems** |  | 340A |  |  |
| **SAAB AB, SAAB** | Saab 340B |  | **Saab (SF) 340 (GE CT7)** |  |
| **Aerosystems** |  |  |  |  |
| **SAAB AB, SAAB**  **Aerosystems** | Saab 2000 |  | **Saab 2000 (RR Corp AE2100)** |  |
| **SHORT** | SC7 Series 3 | Skyvan | **Shorts SC7 (Honeywell TPE331)** |  |
| **BROTHERS PLC** |  |  |  |  |
| **SHORT** | SD3-30 | Variant 200 | **Shorts SD3 Series-30/SD3-60** |  |
| **BROTHERS PLC** |  |  | **(PWC PT6)** |  |
| **SHORT** | SD3-60 | Variant 200 | **Shorts SD3 Series-30/SD3-60** |  |
| **BROTHERS PLC** |  |  | **(PWC PT6)** |  |
| **SHORT** | SD3-60 | Variant 200 | **Shorts SD3 Series-30/SD3-60** |  |
| **BROTHERS PLC** | SHERPA |  | **(PWC PT6)** |  |
| **SHORT**  **BROTHERS PLC** | SD3-SHERPA | Variant 200 | **Shorts SD3 Series-30/SD3-60**  **(PWC PT6)** |  |
| **Textron Aviation** | Model 3000 |  | **Textron Defense 3000 (PWC PT6)** | Pending |
| **Defense LLC** | (PM Series) |  |  | OSD  approval. |
| **TEXTRON** | 1900 | Airliner | **Beech 1900 (PWC PT6)** |  |
| **AVIATION Inc.** |  |  |  |  |
| **TEXTRON** | 1900C | Airliner | **Beech 1900 (PWC PT6)** |  |
| **AVIATION Inc.** |  |  |  |  |
| **TEXTRON** | 1900D | Airliner | **Beech 1900 (PWC PT6)** |  |
| **AVIATION Inc.** |  |  |  |  |
| **TEXTRON** | 200C |  | **Beech 200 Series (PWC PT6)** |  |
| **AVIATION Inc.** |  |  |  |  |
| **TEXTRON**  **AVIATION Inc.** | 200CT |  | **Beech 200 Series (PWC PT6)** |  |

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| **TEXTRON AVIATION Inc.** | 200T |  | **Beech 200 Series (PWC PT6)** |  |
| **TEXTRON**  **AVIATION Inc.** | A200 |  | **Beech 200 Series (PWC PT6)** |  |
| **TEXTRON** | A200C |  | **Beech 200 Series (PWC PT6)** |  |
| **AVIATION Inc.** |  |  |  |  |
| **TEXTRON** | A200CT |  | **Beech 200 Series (PWC PT6)** |  |
| **AVIATION Inc.** |  |  |  |  |
| **TEXTRON** | B200 |  | **Beech 200 Series (PWC PT6)** |  |
| **AVIATION Inc.** |  |  |  |  |
| **TEXTRON** | B200C |  | **Beech 200 Series (PWC PT6)** |  |
| **AVIATION Inc.** |  |  |  |  |
| **TEXTRON**  **AVIATION Inc.** | B200CGT |  | **Beech 200 Series (PWC PT6)** |  |
| **TEXTRON** | B200CT |  | **Beech 200 Series (PWC PT6)** |  |
| **AVIATION Inc.** |  |  |  |  |
| **TEXTRON** | B200GT |  | **Beech 200 Series (PWC PT6)** |  |
| **AVIATION Inc.** |  |  |  |  |
| **TEXTRON** | B200T |  | **Beech 200 Series (PWC PT6)** |  |
| **AVIATION Inc.** |  |  |  |  |
| **TEXTRON** | 300 | Super King Air | **Beech 300 Series (PWC PT6)** |  |
| **AVIATION Inc.** |  |  |  |  |
| **TEXTRON**  **AVIATION Inc.** | B300 | Super King Air  350 | **Beech 300 Series (PWC PT6)** |  |
| **TEXTRON** | B300C | Super King Air | **Beech 300 Series (PWC PT6)** |  |
| **AVIATION Inc.** |  | 350 C |  |  |
| **TEXTRON** | 390 | Premier I | **Beech 390 (Williams FJ44)** |  |
| **AVIATION Inc.** |  | (RB s/n 1-101 |  |  |
|  |  | and 103-134).  Premier IA |  |  |
|  |  | (avionics and |  |  |
|  |  | interior  upgrades s/n |  |  |
|  |  | 102 and 135). |  |  |
| **TEXTRON**  **AVIATION Inc.** | 65-90 | King Air | **Beech 90 Series (PWC PT6)** |  |
| **TEXTRON** | 65-A90 | King Air | **Beech 90 Series (PWC PT6)** |  |
| **AVIATION Inc.** |  |  |  |  |
| **TEXTRON** | 65-A90-1 | King Air | **Beech 90 Series (PWC PT6)** |  |
| **AVIATION Inc.** |  |  |  |  |
| **TEXTRON** | 65-A90-2 | King Air | **Beech 90 Series (PWC PT6)** |  |
| **AVIATION Inc.** |  |  |  |  |
| **TEXTRON** | 65-A90-3 | King Air | **Beech 90 Series (PWC PT6)** |  |
| **AVIATION Inc.** |  |  |  |  |
| **TEXTRON**  **AVIATION Inc.** | 65-A90-4 | King Air | **Beech 90 Series (PWC PT6)** |  |
| **TEXTRON** | B90 | King Air | **Beech 90 Series (PWC PT6)** |  |
| **AVIATION Inc.** |  |  |  |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **TEXTRON AVIATION Inc.** | C90 | King Air | **Beech 90 Series (PWC PT6)** |  |
| **TEXTRON**  **AVIATION Inc.** | C90A | King Air | **Beech 90 Series (PWC PT6)** |  |
| **TEXTRON AVIATION Inc.** | C90GT | King Air | **Beech 90 Series (PWC PT6)** |  |
| **TEXTRON**  **AVIATION Inc.** | C90GTi | King Air | **Beech 90 Series (PWC PT6)** |  |
| **TEXTRON AVIATION Inc.** | E90 | King Air | **Beech 90 Series (PWC PT6)** |  |
| **TEXTRON**  **AVIATION Inc.** | H90 | King Air | **Beech 90 Series (PWC PT6)** |  |
| **TEXTRON**  **AVIATION Inc.** | A100-1 | King Air | **Beech 99/100 Series (PWC PT6)** |  |
| **TEXTRON AVIATION Inc.** | 425 | Corsair / Conquest I | **Cessna 425 (PWC PT6)** |  |
| **TEXTRON AVIATION Inc.** | 441 | Conquest | **Cessna 441 (Honeywell TPE331)** |  |
| **TEXTRON AVIATION Inc.** | 560 | Citation V Citation Ultra | **Cessna 500/550/560 (PWC JT15D)** |  |
| **TEXTRON**  **AVIATION Inc.** | 500 | Citation /  Citation I | **Cessna 500/550/560 (PWC JT15D)** |  |
| **TEXTRON**  **AVIATION Inc.** | 550 | Citation II | **Cessna 500/550/560 (PWC JT15D)** |  |
| **TEXTRON AVIATION Inc.** | S550 | Citation S/II C | **Cessna 500/550/560 (PWC JT15D)** |  |
| **TEXTRON AVIATION Inc.** | 501 | Citation I | **Cessna 501/551 (PWC JT15D)** |  |
| **TEXTRON**  **AVIATION Inc.** | 551 | Citation II | **Cessna 501/551 (PWC JT15D)** |  |
| **TEXTRON AVIATION Inc.** | 510 | Citation Mustang | **Cessna 510 (PWC PW615)** |  |
| **TEXTRON AVIATION Inc.** | 525 | Citation Jet (CJ) (s/n 1 - 359);  Citation Jet 1 (CJ1) (s/n 360 - 599);  Citation Jet1+ (CJ1+) (s/n 600 - 684 and  686 - 701);  M2 (s/n 800 – and up). | **Cessna 525/525A/525B (Williams FJ44)** |  |
| **TEXTRON**  **AVIATION Inc.** | 525A | Citation Jet  CJ2 | **Cessna 525/525A/525B**  **(Williams FJ44)** |  |
| **TEXTRON AVIATION Inc.** | 525B | Citation Jet CJ3 | **Cessna 525/525A/525B (Williams FJ44)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **TEXTRON AVIATION Inc.** | 525C | Citation Jet CJ4 | **Cessna 525C (Williams FJ44)** |  |
| **TEXTRON**  **AVIATION Inc.** | 550 | Citation Bravo | **Cessna 550/560 (PWC PW530/535)** |  |
| **TEXTRON AVIATION Inc.** | 560 | Citation Encore Citation  Encore + | **Cessna 550/560 (PWC PW530/535)** |  |
| **TEXTRON AVIATION Inc.** | 560XL | Citation Excel Citation XLS  Citation XLS+ | **Cessna 560XL/XLS (PWC PW545)** |  |
| **TEXTRON AVIATION Inc.** | 650 | Citation III Citation VI Citation VII | **Cessna 650 (Honeywell TFE731)** |  |
| **TEXTRON AVIATION Inc.** | 680 | Citation Sovereign Citation Sovereign + | **Cessna 680 (PWC PW306)** |  |
| **TEXTRON**  **AVIATION Inc.** | 680A | Latitude | **Cessna 680 (PWC PW306)** |  |
| **TEXTRON AVIATION Inc.** | 700 | Citation Longitude | **Cessna 700 (Honeywell HTF7000)** |  |
| **TEXTRON**  **AVIATION Inc.** | 750 | Citation X | **Cessna 750 (RR AE3007C)** |  |
| **TEXTRON**  **AVIATION Inc.** | 4000 | Hawker 4000 | **Hawker 4000 (PWC PW308)** |  |
| **TUPOLEV PSC** | TU 204-120CE |  | **Tupolev TU 204 (RR RB211)** |  |
| **Turkish Aerospace Industries, Inc.**  **(TAI)** | TT32 | HÜRKUŞ | **TAI TT32 (PWC PT6)** |  |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 681 | Twin Commander | **Twin Commander 680/681/690/695 Series (Honeywell TPE331)** |  |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 690 | Twin Commander | **Twin Commander 680/681/690/695 Series (Honeywell TPE331)** |  |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 695 | Twin Commander | **Twin Commander 680/681/690/695 Series (Honeywell TPE331)** |  |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 680T | Twin Commander | **Twin Commander 680/681/690/695 Series (Honeywell TPE331)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 680V | Twin Commander | **Twin Commander 680/681/690/695 Series (Honeywell TPE331)** |  |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 680W | Twin Commander | **Twin Commander 680/681/690/695 Series (Honeywell TPE331)** |  |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 690A | Twin Commander | **Twin Commander 680/681/690/695 Series (Honeywell TPE331)** |  |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 690B | Twin Commander | **Twin Commander 680/681/690/695 Series (Honeywell TPE331)** |  |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 690C | Twin Commander | **Twin Commander 680/681/690/695 Series (Honeywell TPE331)** |  |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 690D | Twin Commander | **Twin Commander 680/681/690/695 Series (Honeywell TPE331)** |  |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 695A | Twin Commander | **Twin Commander 680/681/690/695 Series (Honeywell TPE331)** |  |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 695B | Twin Commander | **Twin Commander 680/681/690/695 Series (Honeywell TPE331)** |  |
| **VIKING AIR**  **(Bombardier) (De Havilland)** | DHC-6 Series 400 | Twin Otter | **De Havilland DHC-6 (PWC PT6)** | OSD  approved on  28.2.2017. |
| **VIKING AIR**  **(Bombardier) (De Havilland)** | DHC-6 Series 1 | Twin Otter | **De Havilland DHC-6 (PWC PT6)** |  |
| **VIKING AIR**  **(Bombardier) (De Havilland)** | DHC-6 Series 100 | Twin Otter | **De Havilland DHC-6 (PWC PT6)** |  |
| **VIKING AIR**  **(Bombardier) (De Havilland)** | DHC-6 Series 110 | Twin Otter | **De Havilland DHC-6 (PWC PT6)** |  |
| **VIKING AIR**  **(Bombardier) (De Havilland)** | DHC-6 Series 200 | Twin Otter | **De Havilland DHC-6 (PWC PT6)** |  |

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| **GROUP 1 AEROPLANES** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **VIKING AIR**  **(Bombardier) (De Havilland)** | DHC-6 Series 210 | Twin Otter | **De Havilland DHC-6 (PWC PT6)** |  |
| **VIKING AIR**  **(Bombardier) (De Havilland)** | DHC-6 Series 300 | Twin Otter | **De Havilland DHC-6 (PWC PT6)** |  |
| **VIKING AIR**  **(Bombardier) (De Havilland)** | DHC-6 Series 310 | Twin Otter | **De Havilland DHC-6 (PWC PT6)** |  |
| **VIKING AIR**  **(Bombardier) (De Havilland)** | DHC-6 Series 320 | Twin Otter | **De Havilland DHC-6 (PWC PT6)** |  |
| **VIKING AIR**  **(Bombardier) (De Havilland)** | DHC-7-100 |  | **De Havilland DHC-7 (PWC PT6)** |  |
| **VIKING AIR**  **(Bombardier) (De Havilland)** | DHC-7-101 |  | **De Havilland DHC-7 (PWC PT6)** |  |
| **VIKING AIR**  **(Bombardier)**  **(De Havilland)** | DHC-7-102 |  | **De Havilland DHC-7 (PWC PT6)** |  |
| **VIKING AIR**  **(Bombardier)**  **(De Havilland)** | DHC-7-103 |  | **De Havilland DHC-7 (PWC PT6)** |  |
| **VIKING AIR**  **(Bombardier)**  **(De Havilland)** | DHC-7-110 |  | **De Havilland DHC-7 (PWC PT6)** |  |
| **VIKING AIR**  **(Bombardier)**  **(De Havilland)** | DHC-7-111 |  | **De Havilland DHC-7 (PWC PT6)** |  |
| **VIKING AIR**  **LIMITED** | CL-215-1A10 |  | **Canadair CL-215 (PW R2800)** |  |
| **VIKING AIR LIMITED** | CL-215-6B11 (CL-215T  Variant) |  | **Canadair CL-215 (PWC PW123)** |  |
| **VIKING AIR LIMITED** | CL-215-6B11 (CL-415  Variant) |  | **Canadair CL-415 (PWC PW123)** |  |
| **VULCANAIR** | AP68TP-300  ‘Spartacus’ | Spartacus | **Vulcanair AP68TP Series (RR Corp 250)** |  |
| **VULCANAIR** | AP68TP-600  ‘Viator’ | Viator | **Vulcanair AP68TP Series (RR Corp 250)** |  |
| **VULCANAIR** | SF600 |  | **Vulcanair SF600 (RR Corp 250)** |  |
| **VULCANAIR** | SF600A |  | **Vulcanair SF600 (RR Corp 250)** |  |

STCs in GROUP 1 AEROPLANES

*ED Decision 2019/024/R*

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| **GROUP 1 AEROPLANES (STC)** | | | | |
| **STC holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **AEROSERVIS s.r.o.** | L 410 UVP-E |  | **Let-410 (PWC PT6)** | STC not yet  released. |
| **AEROSERVIS s.r.o.** | L 410 UVP-E9 |  | **Let-410 (PWC PT6)** | STC not yet  released. |
| **AEROSERVIS s.r.o.** | L 410 UVP-E20 |  | **Let-410 (PWC PT6)** | STC not yet released. |
| **GOMOLZIG FLUGZEUG- UND MASCHINENBAU (STC)** | Dornier DO 28 D-2 |  | **Dornier Do 28 (Walter M601)** | STC No 10015031 |
| **JET AVIATION AG (STC)** | Fan Jet Falcon E |  | **Falcon 20E (Honeywell TFE731)** |  |
| **NEXTANT AEROSPACE**  **L.L.C. (STC)** | Beech 400A |  | **Beech 400A (Williams FJ44)** | STC No  10042353 |
| **Sierra Industries Ltd.** | 501 | Citation | **Cessna 501 (Williams FJ44)** | STC No EASA.IM.A.  S.01937 |
| **THE MONROE**  **COMPANY, LLC (STC)** | Cessna 550 |  | **Cessna 550/S550 (Williams FJ 44)** | STC No  10053014 |
| **THE MONROE COMPANY, LLC (STC)** | Cessna S550 |  | **Cessna 550/S550 (Williams FJ 44)** | STC No 10053014 |

###### GROUP 1 HELICOPTERS

*ED Decision 2023/019/R*

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| **GROUP 1 HELICOPTERS** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **AGUSTA** | AB 204 B |  | **Agusta AB204, AB205 / Bell 204, 205**  **(Honeywell T53)** |  |
| **AGUSTA** | AB 205 A-1 |  | **Agusta AB204, AB205 / Bell 204, 205 (Honeywell T53)** |  |
| **AGUSTA** | AS-61N |  | **Agusta AS61N/Sikorsky S-61N (GE CT58)** |  |
| **AGUSTA** | AS-61N1 |  | **Agusta AS61N/Sikorsky S-61N**  **(GE CT58)** |  |
| **AIRBUS**  **HELICOPTERS** | AS 332 C | SUPER PUMA  Mk I | **Eurocopter AS 332**  **(Turbomeca Makila 1A/1A1)** |  |
| **AIRBUS**  **HELICOPTERS** | AS 332 C1 | SUPER PUMA  Mk I | **Eurocopter AS 332**  **(Turbomeca Makila 1A/1A1)** |  |
| **AIRBUS HELICOPTERS** | AS 332 L | SUPER PUMA  Mk I | **Eurocopter AS 332 (Turbomeca Makila 1A/1A1)** |  |
| **AIRBUS HELICOPTERS** | AS 332 L1 | SUPER PUMA  Mk I | **Eurocopter AS 332 (Turbomeca Makila 1A/1A1)** |  |
| **AIRBUS HELICOPTERS** | AS 332 L2 |  | **Eurocopter AS 332 L2 (Turbomeca Makila 1A2)** |  |
| **AIRBUS**  **HELICOPTERS** | AS 355 E | Ecureuil II /  TwinStar | **Eurocopter AS 355 (RR Corp 250)** |  |

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| **GROUP 1 HELICOPTERS** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **AIRBUS HELICOPTERS** | AS 355 F | Ecureuil II / TwinStar | **Eurocopter AS 355 (RR Corp 250)** |  |
| **AIRBUS**  **HELICOPTERS** | AS 355 F1 | Ecureuil II /  TwinStar | **Eurocopter AS 355 (RR Corp 250)** |  |
| **AIRBUS HELICOPTERS** | AS 355 F2 | Ecureuil II / TwinStar | **Eurocopter AS 355 (RR Corp 250)** |  |
| **AIRBUS**  **HELICOPTERS** | AS 355 N | Ecureuil II /  TwinStar | **Eurocopter AS 355**  **(Turbomeca Arrius 1)** |  |
| **AIRBUS HELICOPTERS** | AS 355 NP | Ecureuil II / TwinStar | **Eurocopter AS 355**  **(Turbomeca Arrius 1)** |  |
| **AIRBUS**  **HELICOPTERS** | AS 365 N3 | Dauphin | **Eurocopter AS 365 N3**  **(Turbomeca Arriel 2C)** |  |
| **AIRBUS**  **HELICOPTERS** | EC 155 B |  | **Eurocopter EC 155**  **(Turbomeca Arriel 2)** |  |
| **AIRBUS HELICOPTERS** | EC 155 B1 |  | **Eurocopter EC 155**  **(Turbomeca Arriel 2)** |  |
| **AIRBUS HELICOPTERS** | EC 175 B |  | **Eurocopter EC 175 (PWC PT6C)** |  |
| **AIRBUS HELICOPTERS** | EC 225 LP | SUPER PUMA  Mk II+ or LP | **Eurocopter EC 225 (Turbomeca Makila 2A)** |  |
| **AIRBUS**  **HELICOPTERS** | SA 330 J |  | **Eurocopter SA 330**  **(Turbomeca Turmo)** |  |
| **AIRBUS**  **HELICOPTERS** | SA 365 C1 | Dauphin | **Eurocopter SA 365 C Series**  **(Turbomeca Arriel 1)** |  |
| **AIRBUS HELICOPTERS** | SA 365 C2 | Dauphin | **Eurocopter SA 365 C Series (Turbomeca Arriel 1)** |  |
| **AIRBUS HELICOPTERS** | SA 365 C3 | Dauphin | **Eurocopter SA 365 C Series (Turbomeca Arriel 1)** |  |
| **AIRBUS**  **HELICOPTERS** | AS 365 N2 | Dauphin | **Eurocopter SA 365 N/N1, AS 365 N2**  **(Turbomeca Arriel 1)** |  |
| **AIRBUS HELICOPTERS** | SA 365 N1 | Dauphin | **Eurocopter SA 365 N/N1, AS 365 N2 (Turbomeca Arriel 1)** |  |
| **AIRBUS**  **HELICOPTERS** | SA 365 N |  | **Eurocopter SA 365 N/N1, AS 365 N2**  **(Turbomeca Arriel 1)** |  |
| **AIRBUS HELICOPTERS** | H160-B |  | **AIRBUS HELICOPTERS H160 (SAFRAN ARRANO 1)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | EC135 P3H |  | **AIRBUS HELICOPTERS EC135 P3H (PWC PW206)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | EC635 P3H |  | **AIRBUS HELICOPTERS EC135 P3H (PWC PW206)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | EC135 T3H |  | **AIRBUS HELICOPTERS EC135 T3H**  **(Turbomeca Arrius 2B)** |  |

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| **GROUP 1 HELICOPTERS** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | EC635 T3H |  | **AIRBUS HELICOPTERS EC135 T3H**  **(Turbomeca Arrius 2B)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | BO 105 A |  | **BO 105 series (RR Corp 250)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | BO 105 C |  | **BO 105 series (RR Corp 250)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | BO 105 D |  | **BO 105 series (RR Corp 250)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | BO 105 LS A-1 |  | **BO 105 series (RR Corp 250)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | BO 105 LS A-3 |  | **BO 105 series (RR Corp 250)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | BO 105 S |  | **BO 105 series (RR Corp 250)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | EC135 P1 (CDS) |  | **Eurocopter EC 135 (PWC PW206)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | EC135 P1 (CPDS) |  | **Eurocopter EC 135 (PWC PW206)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | EC135 P2 (CPDS) |  | **Eurocopter EC 135 (PWC PW206)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | EC135 P2+ |  | **Eurocopter EC 135 (PWC PW206)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | EC135 P3 (CPDS) |  | **Eurocopter EC 135 (PWC PW206)** |  |

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| **GROUP 1 HELICOPTERS** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | EC635 P2+ |  | **Eurocopter EC 135 (PWC PW206)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | EC635 P3 (CPDS) |  | **Eurocopter EC 135 (PWC PW206)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | EC 135 T2+ |  | **Eurocopter EC 135 (Turbomeca Arrius 2B)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | EC135 T1 (CDS) |  | **Eurocopter EC 135 (Turbomeca Arrius 2B)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | EC135 T1 (CPDS) |  | **Eurocopter EC 135 (Turbomeca Arrius 2B)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | EC135 T2 (CPDS) |  | **Eurocopter EC 135 (Turbomeca Arrius 2B)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | EC135 T3 (CPDS) |  | **Eurocopter EC 135 (Turbomeca Arrius 2B)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | EC635 T1 (CPDS) |  | **Eurocopter EC 135 (Turbomeca Arrius 2B)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | EC635 T2+ |  | **Eurocopter EC 135 (Turbomeca Arrius 2B)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | EC635 T3 (CPDS) |  | **Eurocopter EC 135 (Turbomeca Arrius 2B)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | MBB-BK117 A-1 |  | **Eurocopter MBB-BK 117 A/B (Honeywell LTS 101)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | MBB-BK117 A-3 |  | **Eurocopter MBB-BK 117 A/B (Honeywell LTS 101)** |  |

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| **GROUP 1 HELICOPTERS** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | MBB-BK117 A-4 |  | **Eurocopter MBB-BK 117 A/B (Honeywell LTS 101)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | MBB-BK117 B-1 |  | **Eurocopter MBB-BK 117 A/B (Honeywell LTS 101)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | MBB-BK117 B-2 |  | **Eurocopter MBB-BK 117 A/B (Honeywell LTS 101)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | MBB-BK117 C-1 |  | **Eurocopter MBB-BK 117 C1 (Turbomeca Arriel 1)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | MBB-BK117 C-2 | EC145 | **Eurocopter MBB-BK 117 C2 (Turbomeca Arriel 1)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | MBB-BK117 C-2e | EC145 | **Eurocopter MBB-BK 117 C2 (Turbomeca Arriel 1)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | MBB-BK117 D-2 | EC145 T2 | **Eurocopter MBB-BK 117 D2 (Turbomeca Arriel 2)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | MBB-BK117 D-2m | H145 | **Eurocopter MBB-BK 117 D2 (Turbomeca Arriel 2)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | MBB-BK117 D-3 | H145 | **Eurocopter MBB-BK 117 D23 (Safran Arriel 2)** |  |
| **AIRBUS HELICOPTERS DEUTSCHLAND**  **GmbH** | MBB-BK117 D-3m | H145 | **Eurocopter MBB-BK 117 D23 (Safran Arriel 2)** |  |
| **BELL HELICOPTER**  **CANADA** | 222 |  | **Bell 222 (Honeywell LTS 101)** |  |
| **BELL HELICOPTER**  **CANADA** | 222B |  | **Bell 222 (Honeywell LTS 101)** |  |
| **BELL HELICOPTER**  **CANADA** | 222U |  | **Bell 222 (Honeywell LTS 101)** |  |

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| **GROUP 1 HELICOPTERS** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **BELL HELICOPTER CANADA** | 230 | 230 Executive  230 Utility  230 EMS | **Bell 230 (RR Corp 250)** |  |
| **BELL HELICOPTER CANADA** | 427 |  | **Bell 427 (PWC PW207D)** |  |
| **BELL**  **HELICOPTER CANADA** | 429 |  | **Bell 429 (PWC PW207D)** |  |
| **BELL HELICOPTER CANADA** | 430 |  | **Bell 430 (RR Corp 250)** |  |
| **BELL HELICOPTER TEXTRON, INC.** | 204B |  | **Agusta AB204, AB205 / Bell 204, 205 (Honeywell T53)** |  |
| **BELL HELICOPTER TEXTRON, INC.** | 205A-1 |  | **Agusta AB204, AB205 / Bell 204, 205 (Honeywell T53)** |  |
| **BELL HELICOPTER**  **TEXTRON, INC.** | 212 |  | **Bell 212 / Agusta AB212 (PWC PT6)** |  |
| **BELL HELICOPTER**  **TEXTRON, INC.** | 214B |  | **Bell 214 (Honeywell T5508)** |  |
| **BELL HELICOPTER**  **TEXTRON, INC.** | 214B-1 |  | **Bell 214 (Honeywell T5508)** |  |
| **BELL HELICOPTER**  **TEXTRON, INC.** | 214ST |  | **Bell 214ST (GE CT7)** |  |
| **BELL HELICOPTER**  **TEXTRON, INC.** | 412 |  | **Bell 412 / Agusta AB412 (PWC PT6)** |  |
| **BELL HELICOPTER**  **TEXTRON, INC.** | 412EP |  | **Bell 412 / Agusta AB412 (PWC PT6)** |  |
| **ERICKSON AIR-**  **CRANE** | S-64F |  | **Erickson S-64 (PW JFTD 12)** |  |
| **ERICKSON AIR-**  **CRANE** | S-64E |  | **Erickson S-64 (Erickson JFTD 12)** |  |
| **KAMAN AEROSPACE**  **CORPORATION** | K-1200 |  | **Kaman K-1200 (Honeywell T5317)** |  |
| **KAMOV** | Ka-32A11BC |  | **Kamov Ka 32 (Klimov)** |  |
| **LEONARDO S.p.A.** | A109K2 |  | **Agusta A109 (Turbomeca Arriel 1)** |  |
| **LEONARDO**  **S.p.A.** | A109S | Grand  AW109S | **Agusta A109 Series (PWC PW206/207)** |  |

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| **GROUP 1 HELICOPTERS** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **LEONARDO S.p.A.** | AW109SP | GrandNew | **Agusta A109 Series (PWC PW206/207)** |  |
| **LEONARDO**  **S.p.A.** | A109N | Nexus  AW109N | **Agusta A109 Series (PWC PW206/207)** |  |
| **LEONARDO S.p.A.** | A109E | Power AW109E | **Agusta A109 Series (PWC PW206/207)** |  |
| **LEONARDO**  **S.p.A.** | A109 |  | **Agusta A109 Series (RR Corp 250)** |  |
| **LEONARDO S.p.A.** | A109A |  | **Agusta A109 Series (RR Corp 250)** |  |
| **LEONARDO**  **S.p.A.** | A109AII |  | **Agusta A109 Series (RR Corp 250)** |  |
| **LEONARDO**  **S.p.A.** | A109C |  | **Agusta A109 Series (RR Corp 250)** |  |
| **LEONARDO S.p.A.** | A109LUH | AW109LUH | **Agusta A109 Series (Turbomeca Arrius 2)** |  |
| **LEONARDO S.p.A.** | A109E | Power AW109E | **Agusta A109 Series (Turbomeca Arrius 2)** |  |
| **LEONARDO S.p.A.** | AB139 |  | **Agusta AB139 / AW139 (PWC PT6)** |  |
| **LEONARDO**  **S.p.A.** | AW139 |  | **Agusta AB139 / AW139 (PWC PT6)** |  |
| **LEONARDO**  **S.p.A.** | EH 101-300 |  | **Agusta/Westland EH-101 (GE CT7)** |  |
| **LEONARDO S.p.A.** | EH 101-500 |  | **Agusta/Westland EH-101 (GE CT7)** |  |
| **LEONARDO S.p.A.** | EH 101-510 |  | **Agusta/Westland EH-101 (GE CT7)** |  |
| **LEONARDO**  **S.p.A.** | AW169 |  | **AW169 (PWC 210)** |  |
| **LEONARDO S.p.A.** | AW189 |  | **AW189 (GE CT7)** |  |
| **LEONARDO**  **S.p.A.** | AW189 | AW189K | **AW189 (Safran ANETO-1K)** |  |
| **LEONARDO S.p.A.** | AB 212 |  | **Bell 212 / Agusta AB212 (PWC PT6)** |  |
| **LEONARDO S.p.A.** | AB 412 |  | **Bell 412 / Agusta AB412 (PWC PT6)** |  |
| **LEONARDO**  **S.p.A.** | AB 412 EP |  | **Bell 412 / Agusta AB412 (PWC PT6)** |  |
| **MD HELICOPTERS,**  **Inc.** | MD900 |  | **MD Helicopters MD900 (PWC PW206/207)** |  |
| **Philippine Aerospace Development Corp** | P-BO 105 C |  | **BO 105 series (RR Corp 250)** |  |

**GROUP 1 HELICOPTERS**

**TC Holder**

**Philippine Aerospace Development Corp**

**PZL-ŚWIDNIK**

**Model**

P-BO 105 S

**Com. des.**

**Part-66 type rating endorsement**

**BO 105 series (RR Corp 250)**

**Note**

W-3A

**PZL-ŚWIDNIK**

W-3AS

**SIKORSKY**

**AIRCRAFT SIKORSKY AIRCRAFT**

**SIKORSKY AIRCRAFT SIKORSKY**

**AIRCRAFT**

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**AIRCRAFT**

S-61N

S-61NM S-58BT

**PZL-Swidnik W-3A/W-3AS**

**(Rzeszow PZL-10W)**

**PZL-Swidnik W-3A/W-3AS (Rzeszow PZL-10W)**

**Agusta AS61N/Sikorsky S-61N (GE CT58)**

**Agusta AS61N/Sikorsky S-61N (GE CT58)**

**Sikorsky S-58 (PWC PT6T)**

S-58DT

**Sikorsky S-58 (PWC PT6T)**

S-58ET

**Sikorsky S-58 (PWC PT6T)**

S-58FT

**Sikorsky S-58 (PWC PT6T)**

S-58HT

**Sikorsky S-58 (PWC PT6T)**

S-58JT

**Sikorsky S-58 (PWC PT6T)**

S-76A

S-76A+

S-76A++

**Sikorsky S-76 (Turbomeca Arriel 1)**

S-76A

**Sikorsky S-76A (RR Corp 250)**

S-76B

S-76B

**Sikorsky S-76B (PWC PT6)**

S-76C

**Sikorsky S-76C (Turbomeca Arriel 1)**

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 GROUP 1 HELICOPTERS

*ED Decision 2019/024/R*

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| **GROUP 1 HELICOPTERS** | | | | |
| **STC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **Heli-Air Inc. (STC)** | Bell 222 |  | **Bell 222 (RR Corp 250)** |  |

GROUP 1 GAS AIRSHIPS (other than ELA2)

*ED Decision 2019/024/R*

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| **GROUP 1 GAS AIRSHIPS (other than ELA2)** | | | | |
| **TC Holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **NOTE** |
| **Skyship Services** | Skyship 600 |  | **Skyship (Porsche)** |  |
| **Worldwide Aeros Corporation** | Aeros 40B |  | **Worldwide Aeros (Continental)** |  |
| **Zeppelin Luftschifftechnik**  **GmbH & Co KG** | LZ N07-100 |  | **Zeppelin LZ N07 (Lycoming)** |  |
| **Zeppelin Luftschifftechnik GmbH & Co KG** | LZ N07-101 |  | **Zeppelin LZ N07 (Lycoming)** |  |

SUBGROUP 2a: SINGLE TURBO-PROPELLER ENGINE AEROPLANES (other than those in Group 1)

*ED Decision 2019/024/R*

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| **SUBGROUP 2a: SINGLE TURBO-PROPELLER ENGINE AEROPLANES (Other than those in Group 1)** | | | | |
| **TC holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **AERO VODOCHODY** | Ae 270 |  | **Aero Ae-270 (PWC PT6)** |  |
| **AIR TRACTOR, INC.** | AT-302 |  | **Air Tractor AT-302 (Lycoming LTP101)** |  |
| **AIR TRACTOR, INC.** | AT-400 |  | **Air Tractor AT-400/500/600 Series (PWC PT6)** |  |
| **AIR TRACTOR, INC.** | AT-400A |  | **Air Tractor AT-400/500/600 Series**  **(PWC PT6)** |  |
| **AIR TRACTOR, INC.** | AT-402 |  | **Air Tractor AT-400/500/600 Series (PWC PT6)** |  |
| **AIR TRACTOR, INC.** | AT-402A |  | **Air Tractor AT-400/500/600 Series**  **(PWC PT6)** |  |
| **AIR TRACTOR, INC.** | AT-402B |  | **Air Tractor AT-400/500/600 Series (PWC PT6)** |  |
| **AIR TRACTOR, INC.** | AT-502 |  | **Air Tractor AT-400/500/600 Series (PWC PT6)** |  |
| **AIR TRACTOR, INC.** | AT-502A |  | **Air Tractor AT-400/500/600 Series (PWC PT6)** |  |
| **AIR TRACTOR, INC.** | AT-502B |  | **Air Tractor AT-400/500/600 Series**  **(PWC PT6)** |  |
| **AIR TRACTOR, INC.** | AT-503 |  | **Air Tractor AT-400/500/600 Series**  **(PWC PT6)** |  |
| **AIR TRACTOR, INC.** | AT-503A |  | **Air Tractor AT-400/500/600 Series (PWC PT6)** |  |
| **AIR TRACTOR, INC.** | AT-602 |  | **Air Tractor AT-400/500/600 Series (PWC PT6)** |  |
| **ALLIED AG CAT**  **Productions** | G-164D |  | **Grumman G-164 (PWC PT6)** |  |
| **ALLIED AG CAT**  **Productions** | G-164D with 73' wing gap |  | **Grumman G-164 (PWC PT6)** |  |
| **EADS PZL**  **‘WARSZAWA-OKECIE’** | PZL-106 BT-601  TURBO KRUK |  | **EADS PZL PZL-106 BT (Walter M601)** |  |

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| **SUBGROUP 2a: SINGLE TURBO-PROPELLER ENGINE AEROPLANES (Other than those in Group 1)** | | | | |
| **TC holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **EADS PZL**  **‘WARSZAWA-OKECIE’** | PZL-106 BTU-34 TURBO KRUK |  | **EADS PZL PZL-106 BTU (PWC PT6)** |  |
| **GROB Aircraft AG** | G 120TP-A |  | **Grob G 120TP (RR Corp 250)** |  |
| **LEONARDO S.p.A.** | SF260TP |  | **Aermacchi SF260 (RR M250)** | ELA1 |
| **PACIFIC AEROSPACE**  **Corporation** | 750XL |  | **PAC 750XL (PWC PT6)** |  |
| **PILATUS AIRCRAFT** | PC-6/B1-H2 |  | **Pilatus PC-6 (PWC PT6)** | ELA2 |
| **PILATUS AIRCRAFT** | PC-6/B2-H2 |  | **Pilatus PC-6 (PWC PT6)** | ELA2 |
| **PILATUS AIRCRAFT** | PC-6/B2-H4 |  | **Pilatus PC-6 (PWC PT6)** | ELA2 |
| **PILATUS AIRCRAFT** | PC-6/B-H2 |  | **Pilatus PC-6 (PWC PT6)** | ELA2 |
| **PILATUS AIRCRAFT** | PC-6/C1-H2 |  | **Pilatus PC-6 Series (Honeywell TPE 331)** | ELA2 |
| **PILATUS AIRCRAFT** | PC-6/C-H2 |  | **Pilatus PC-6 Series**  **(Honeywell TPE 331)** | ELA2 |
| **PILATUS AIRCRAFT** | PC-6/A |  | **Pilatus PC-6 Series**  **(Turbomeca Astazou)** | ELA2 |
| **PILATUS AIRCRAFT** | PC-6/A1-H2 |  | **Pilatus PC-6 Series (Turbomeca Astazou)** | ELA2 |
| **PILATUS AIRCRAFT** | PC-6/A2-H2 |  | **Pilatus PC-6 Series (Turbomeca Astazou)** | ELA2 |
| **PILATUS AIRCRAFT** | PC-6/A-H1 |  | **Pilatus PC-6 Series**  **(Turbomeca Astazou)** | ELA2 |
| **PILATUS AIRCRAFT** | PC-6/A-H2 |  | **Pilatus PC-6 Series (Turbomeca Astazou)** | ELA2 |
| **Quest Aircraft Design**  **LLC** | Kodiak 100 |  | **Quest Kodiak 100 (PWC PT6)** |  |
| **SST FLUGTECHNIK**  **GmbH** | EA 400-500 | *EXTRA 500* | **Extra EA-400-500 (RR Corp 250)** |  |
| **TEXTRON AVIATION**  **Inc.** | 208 | *Caravan I* | **Cessna 208 Series (PWC PT6)** |  |
| **TEXTRON AVIATION**  **Inc.** | 208B | *Caravan II* | **Cessna 208 Series (PWC PT6)** |  |
| **THRUSH AIRCRAFT** | S2R-H80 |  | **Thrush S2R Series (GEAC H80)** |  |
| **THRUSH AIRCRAFT** | 600 S-2D |  | **Thrush S2R Series (PWC PT6)** |  |
| **THRUSH AIRCRAFT** | S2RHG-T34 |  | **Thrush S2R Series (PWC PT6)** |  |
| **THRUSH AIRCRAFT** | S2RHG-T65 |  | **Thrush S2R Series (PWC PT6)** |  |
| **THRUSH AIRCRAFT** | S2R-T11 |  | **Thrush S2R Series (PWC PT6)** |  |
| **THRUSH AIRCRAFT** | S2R-T15 |  | **Thrush S2R Series (PWC PT6)** |  |
| **THRUSH AIRCRAFT** | S2R-T34 |  | **Thrush S2R Series (PWC PT6)** |  |
| **THRUSH AIRCRAFT** | S2R-T45 |  | **Thrush S2R Series (PWC PT6)** |  |
| **THRUSH AIRCRAFT** | S2R-T65 |  | **Thrush S2R Series (PWC PT6)** |  |
| **THRUSH AIRCRAFT** | S2R-T660 |  | **Thrush S2R Series (PWC PT6)** |  |
| **THRUSH AIRCRAFT** | S2R-G1 |  | **Thrush S2R Series (TPE331)** |  |
| **THRUSH AIRCRAFT** | S2R-G10 |  | **Thrush S2R Series (TPE331)** |  |
| **THRUSH AIRCRAFT** | S2R-G5 |  | **Thrush S2R Series (TPE331)** |  |
| **THRUSH AIRCRAFT** | S2R-G6 |  | **Thrush S2R Series (TPE331)** |  |

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| **SUBGROUP 2a: SINGLE TURBO-PROPELLER ENGINE AEROPLANES (Other than those in Group 1)** | | | | |
| **TC holder** | **Model** | **Com. des.** | **Part-66 type rating endorsement** | **Note** |
| **VIKING AIR**  **(Bombardier) (De**  **Havilland)** | DHC-2 MK III  (Turbo-Beaver) | *Turbo- Beaver* | **De Havilland DHC-2 (PWC PT6)** |  |
| **ZLIN AIRCRAFT** | Z 137 T |  | **Zlin Z-37 T Series (Walter M601)** |  |
| **ZLIN AIRCRAFT** | Z 37 T |  | **Zlin Z-37 T Series (Walter M601)** |  |

STCs in SUBGROUP 2a AEROPLANES

*ED Decision 2019/024/R*

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| **SUBGROUP 2a: SINGLE TURBO-PROPELLER ENGINE AEROPLANES (Other than those in Group 1) (STC)** | | | | |
| **STC holder** | Model | Com. des. | Part-66 type rating endorsement | Note |
| **AERO TWIN, Inc. (STC)** | Cessna 208 | *Cessna 208* | **Cessna 208/208B (Honeywell TPE331)** | STC No 10033295 |
| **AERO TWIN, Inc.**  **(STC)** | Cessna 208B | *Cessna 208B* | **Cessna 208/208B**  **(Honeywell TPE331)** | STC No  10033295 |
| **Eichenberger Aviation AG (STC)** | P210N |  | **Cessna P210N (RR Corp 250)** | ELA2. STC FAA SA1003NE  LBA ref.: 0779/625b  EASA ref.:  10060053 |
| **JETPROP, LLC. (STC)** | PA-46-350P | *Mirage* | **Piper PA-46 Pressurised (PWC PT6)** | ELA2. STC Nos 10015707,  10016000. |
| **JETPROP, LLC. (STC)** | PA-46-310P |  | **Piper PA-46 Pressurised (PWC PT6)** | ELA2. STC Nos 10015707,  10016000. |
| **SOLOY, LLC (STC)** | 206H |  | **Cessna 206 (RR Corp 250)** | ELA2. STC No  10027209 |
| **SOLOY, LLC (STC)** | T206H |  | **Cessna 206 (RR Corp 250)** | ELA2. STC No 10027209 |
| **SOLOY, LLC (STC)** | TU206G |  | **Cessna 206 (RR Corp 250)** | ELA2. STC No 10027209 |
| **SOLOY, LLC (STC)** | U206G |  | **Cessna 206 (RR Corp 250)** | ELA2. STC No  10027209 |
| **SOLOY, LLC (STC)** | 207 |  | **Cessna 207 (RR Corp 250)** | ELA2. STC |
| **SOLOY, LLC (STC)** | 207A |  | **Cessna 207 (RR Corp 250)** | ELA2. STC |
| **SOLOY, LLC (STC)** | T207 |  | **Cessna 207 (RR Corp 250)** | ELA2. STC |
| **SOLOY, LLC (STC)** | T207A |  | **Cessna 207 (RR Corp 250)** | ELA2. STC |
| **SUPERVAN SYSTEMS, Ltd. (STC)** | Cessna 208 | *Cessna 208* | **Cessna 208/208B (Honeywell TPE331)** | STC No 10033267 |
| **SUPERVAN**  **SYSTEMS, Ltd. (STC)** | Cessna 208B | *Cessna 208B* | **Cessna 208/208B**  **(Honeywell TPE331)** | STC No  10033267 |
| **Tradewind Turbines/Soloy (STC)** | Beech A36 |  | **Beech 36 Series (RR Corp 250)** | ELA2. STC LBA ref.: SA 1034. FAA STC  SA3523NM. |

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| **Tradewind Turbines/Soloy (STC)** | Beech A36TC |  | **Beech 36 Series (RR Corp 250)** | ELA2. STC LBA ref.: SA 1034. FAA STC SA3523NM. |
| **Turbine Conversions, LTD (STC)** | 206 |  | **Cessna 206 (PWC PT6)** | ELA2. STC No 10061949 |
| **Turbine Conversions,**  **LTD (STC)** | 206H |  | **Cessna 206 (PWC PT6)** | ELA2. STC No  10061949 |
| **Turbine Conversions,**  **LTD (STC)** | P206 |  | **Cessna 206 (PWC PT6)** | ELA2. STC No  10061949 |
| **Turbine Conversions,**  **LTD (STC)** | P206A |  | **Cessna 206 (PWC PT6)** | ELA2. STC No  10061949 |
| **Turbine Conversions, LTD (STC)** | P206B |  | **Cessna 206 (PWC PT6)** | ELA2. STC No 10061949 |
| **Turbine Conversions, LTD (STC)** | P206C |  | **Cessna 206 (PWC PT6)** | ELA2. STC No 10061949 |
| **Turbine Conversions,**  **LTD (STC)** | P206D |  | **Cessna 206 (PWC PT6)** | ELA2. STC No  10061949 |
| **Turbine Conversions,**  **LTD (STC)** | P206E |  | **Cessna 206 (PWC PT6)** | ELA2. STC No  10061949 |
| **Turbine Conversions,**  **LTD (STC)** | T206H |  | **Cessna 206 (PWC PT6)** | ELA2. STC No  10061949 |
| **Turbine Conversions, LTD (STC)** | TP206A |  | **Cessna 206 (PWC PT6)** | ELA2. STC No 10061949 |
| **Turbine Conversions, LTD (STC)** | TP206B |  | **Cessna 206 (PWC PT6)** | ELA2. STC No 10061949 |
| **Turbine Conversions,**  **LTD (STC)** | TP206C |  | **Cessna 206 (PWC PT6)** | ELA2. STC No  10061949 |
| **Turbine Conversions,**  **LTD (STC)** | TP206D |  | **Cessna 206 (PWC PT6)** | ELA2. STC No  10061949 |
| **Turbine Conversions,**  **LTD (STC)** | TP206E |  | **Cessna 206 (PWC PT6)** | ELA2. STC No  10061949 |
| **Turbine Conversions, LTD (STC)** | TU206A |  | **Cessna 206 (PWC PT6)** | ELA2. STC No 10061949 |
| **Turbine Conversions, LTD (STC)** | TU206B |  | **Cessna 206 (PWC PT6)** | ELA2. STC No 10061949 |
| **Turbine Conversions,**  **LTD (STC)** | TU206C |  | **Cessna 206 (PWC PT6)** | ELA2. STC No  10061949 |
| **Turbine Conversions,**  **LTD (STC)** | TU206D |  | **Cessna 206 (PWC PT6)** | ELA2. STC No  10061949 |
| **Turbine Conversions,**  **LTD (STC)** | TU206E |  | **Cessna 206 (PWC PT6)** | ELA2. STC No  10061949 |
| **Turbine Conversions, LTD (STC)** | TU206F |  | **Cessna 206 (PWC PT6)** | ELA2. STC No 10061949 |
| **Turbine Conversions, LTD (STC)** | TU206G |  | **Cessna 206 (PWC PT6)** | ELA2. STC No 10061949 |
| **Turbine Conversions,**  **LTD (STC)** | U206 |  | **Cessna 206 (PWC PT6)** | ELA2. STC No  10061949 |
| **Turbine Conversions,**  **LTD (STC)** | U206A |  | **Cessna 206 (PWC PT6)** | ELA2. STC No  10061949 |

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| **Turbine Conversions, LTD (STC)** | U206B |  | **Cessna 206 (PWC PT6)** | ELA2. STC No 10061949 |
| **Turbine Conversions,**  **LTD (STC)** | U206C |  | **Cessna 206 (PWC PT6)** | ELA2. STC No  10061949 |
| **Turbine Conversions, LTD (STC)** | U206D |  | **Cessna 206 (PWC PT6)** | ELA2. STC No 10061949 |
| **Turbine Conversions, LTD (STC)** | U206E |  | **Cessna 206 (PWC PT6)** | ELA2. STC No 10061949 |
| **Turbine Conversions,**  **LTD (STC)** | U206F |  | **Cessna 206 (PWC PT6)** | ELA2. STC No  10061949 |
| **Turbine Conversions, LTD (STC)** | U206G |  | **Cessna 206 (PWC PT6)** | ELA2. STC No 10061949 |
| **WEST PACIFIC AIR,**  **LLC (STC)** | B36TC |  | **Beech 36TC (PWC PT6)** | ELA2. STC No  10030059 |

SUBGROUP 2b: SINGLE TURBINE-ENGINE HELICOPTERS (other than those in Group 1)

*ED Decision 2019/024/R*

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| **SUBGROUP 2b: SINGLE TURBINE-ENGINE HELICOPTERS (other than those in Group 1)** | | | | |
| **TC Holder** | Model | Com. des. | Part-66 type rating endorsement | Note |
| **AIRBUS HELICOPTERS** | AS 350 D |  | **Eurocopter AS 350 (Lycoming LTS101)** |  |
| **AIRBUS**  **HELICOPTERS** | AS 350 B | *Écureuil* | **Eurocopter AS 350 (Turbomeca Arriel 1)** |  |
| **AIRBUS HELICOPTERS** | AS 350 B1 | *Écureuil* | **Eurocopter AS 350 (Turbomeca Arriel 1)** |  |
| **AIRBUS HELICOPTERS** | AS 350 B2 | *Écureuil* | **Eurocopter AS 350 (Turbomeca Arriel 1)** |  |
| **AIRBUS**  **HELICOPTERS** | AS 350 BA | *Écureuil* | **Eurocopter AS 350 (Turbomeca Arriel 1)** |  |
| **AIRBUS HELICOPTERS** | AS 350 BB | *Écureuil* | **Eurocopter AS 350 (Turbomeca Arriel 1)** |  |
| **AIRBUS**  **HELICOPTERS** | AS 350 B3 | *Écureuil* | **Eurocopter AS 350 (Turbomeca Arriel 2)** |  |
| **AIRBUS HELICOPTERS** | EC 120 B | *Colibri* | **Eurocopter EC 120 (Turbomeca Arrius 2F)** |  |
| **AIRBUS HELICOPTERS** | EC 130 B4 |  | **Eurocopter EC 130 (Turbomeca Arriel 2)** |  |
| **AIRBUS**  **HELICOPTERS** | EC 130 T2 |  | **Eurocopter EC 130 (Turbomeca Arriel 2)** |  |
| **AIRBUS HELICOPTERS** | SA 315 B | *Alouette III Lama* | **Eurocopter SA 315B (Turbomeca Artouste)** |  |
| **AIRBUS**  **HELICOPTERS** | SA 316 B | *Alouette III* | **Eurocopter SA 316 B/SA 316 C**  **(Turbomeca Artouste)** |  |
| **AIRBUS HELICOPTERS** | SA 316 C | *Alouette III* | **Eurocopter SA 316 B/SA 316 C (Turbomeca Artouste)** |  |
| **AIRBUS HELICOPTERS** | SE 3160 | *Alouette III* | **Eurocopter SA 316 B/SA 316 C (Turbomeca Artouste)** |  |

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| **AIRBUS HELICOPTERS** | SA 318 B | *Alouette- Astazou* | **Eurocopter SA 318 (Turbomeca Astazou)** |  |
| **AIRBUS**  **HELICOPTERS** | SA 318 C | *Alouette-*  *Astazou* | **Eurocopter SA 318**  **(Turbomeca Astazou)** |  |
| **AIRBUS HELICOPTERS** | SA 3180 | *Alouette- Astazou* | **Eurocopter SA 318 (Turbomeca Astazou)** |  |
| **AIRBUS HELICOPTERS** | SA 319 B | *Alouette III* | **Eurocopter SA 319 (Turbomeca Astazou XIV)** |  |
| **AIRBUS**  **HELICOPTERS** | SA 341 G | *Gazelle* | **Eurocopter SA 341**  **(Turbomeca Astazou)** |  |
| **AIRBUS HELICOPTERS** | SA 342 J | *Gazelle* | **Eurocopter SA 342 J (Turbomeca Astazou XIV)** |  |
| **BELL HELICOPTER**  **CANADA** | 407 |  | **Bell 407 (RR Corp 250)** |  |
| **BELL HELICOPTER TEXTRON CANADA**  **LIMITED** | 206A |  | **Agusta AB206 / Bell 206 (RR Corp 250)** |  |
| **BELL HELICOPTER TEXTRON CANADA**  **LIMITED** | 206A-1 |  | **Agusta AB206 / Bell 206 (RR Corp 250)** |  |
| **BELL HELICOPTER TEXTRON CANADA**  **LIMITED** | 206B |  | **Agusta AB206 / Bell 206 (RR Corp 250)** |  |
| **BELL HELICOPTER TEXTRON CANADA**  **LIMITED** | 206L |  | **Agusta AB206 / Bell 206 (RR Corp 250)** |  |
| **BELL HELICOPTER TEXTRON CANADA**  **LIMITED** | 206L-1 |  | **Agusta AB206 / Bell 206 (RR Corp 250)** |  |
| **BELL HELICOPTER TEXTRON CANADA**  **LIMITED** | 206L-3 |  | **Agusta AB206 / Bell 206 (RR Corp 250)** |  |
| **BELL HELICOPTER TEXTRON CANADA LIMITED** | 206L-4 |  | **Agusta AB206 / Bell 206 (RR Corp 250)** |  |
| **BELL HELICOPTER TEXTRON CANADA LIMITED** | 505 |  | **Bell 505 (Safran Arrius 2R)** |  |
| **LEONARDO S.p.A.** | A119 | *Koala* | **Agusta A119/ Agusta AW119MkII (PWC PT6)** |  |
| **LEONARDO S.p.A.** | AW119MkII | *Koala*  *enhanced AW119Ke* | **Agusta A119/ Agusta AW119MkII (PWC PT6)** |  |
| **LEONARDO S.p.A.** | AB206 A |  | **Agusta AB206 / Bell 206 (RR Corp 250)** |  |
| **LEONARDO S.p.A.** | AB206 B |  | **Agusta AB206 / Bell 206 (RR Corp 250)** |  |
| **MD HELICOPTERS INC. (MDHI)** | 369D |  | **MD Helicopters 369 Series / SEI NH-500D (RR Corp 250)** |  |
| **MD HELICOPTERS**  **INC. (MDHI)** | 369E |  | **MD Helicopters 369 Series /**  **SEI NH-500D (RR Corp 250)** |  |

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| **MD HELICOPTERS INC. (MDHI)** | 369FF |  | **MD Helicopters 369 Series / SEI NH-500D (RR Corp 250)** |  |
| **MD HELICOPTERS**  **INC. (MDHI)** | 369H |  | **MD Helicopters 369 Series /**  **SEI NH-500D (RR Corp 250)** |  |
| **MD HELICOPTERS INC. (MDHI)** | 369HE |  | **MD Helicopters 369 Series / SEI NH-500D (RR Corp 250)** |  |
| **MD HELICOPTERS INC. (MDHI)** | 369HM |  | **MD Helicopters 369 Series / SEI NH-500D (RR Corp 250)** |  |
| **MD HELICOPTERS**  **INC. (MDHI)** | 369HS |  | **MD Helicopters 369 Series /**  **SEI NH-500D (RR Corp 250)** |  |
| **MD HELICOPTERS INC. (MDHI)** | 600N | *HU60* | **MD Helicopters 500N/600N AMD500N (RR Corp 250)** |  |
| **MD HELICOPTERS**  **INC. (MDHI)** | 500N |  | **MD Helicopters 500N/600N AMD500N**  **(RR Corp 250)** |  |
| **Mecaer Aviation Group** | NH-500D |  | **MD Helicopters 369 Series / SEI NH-500D (RR Corp 250)** |  |
| **Mecaer Aviation Group** | NH-AMD500N |  | **MD Helicopters 500N/600N AMD500N (RR Corp 250)** |  |
| **PZL-ŚWIDNIK** | SW-4 |  | **PZL SW-4 (RR Corp 250)** |  |
| **ROBINSON HELICOPTER**  **COMPANY** | R 66 |  | **Robinson R66 (RR Corp 250)** |  |
| **Schweizer RSG LLC** | 269D |  | **Schweizer 269D (RR Corp 250)** |  |
| **THE ENSTROM HELICOPTER CORPORATION** | 480 |  | **Enstrom 480 (RR Corp 250)** |  |
| **THE ENSTROM HELICOPTER CORPORATION** | 480B |  | **Enstrom 480 (RR Corp 250)** |  |

SUBGROUP 2c: SINGLE PISTON-ENGINE HELICOPTERS (other than those in Group 1)

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| **SUBGROUP 2c: SINGLE PISTON-ENGINE HELICOPTERS (other than those in Group 1)** | | | | |
| **TC Holder** | **Model** | **Comm. Des.** | **Part-66 type rating endorsement** | **Note** |
| **ANTARES INTERNATIONAL**  **(Aircraft with SAS)** | SH-4 |  | **Silvercraft SH-4 (Franklin)** |  |
| **BRANTLY INTERNATIONAL, INC.** | B-2 | *Military YHO 3BR* | **Brantly B2 (Lycoming)** |  |
| **BRANTLY**  **INTERNATIONAL, INC.** | 305 |  | **Brantly B2 (Lycoming)** |  |
| **BRANTLY INTERNATIONAL, INC.** | B-2A |  | **Brantly B2 (Lycoming)** |  |
| **BRANTLY INTERNATIONAL, INC.** | B-2B |  | **Brantly B2 (Lycoming)** |  |
| **HELICOPTÈRES**  **GUIMBAL** | CABRI G2 | *Cabri* | **Cabri G2 (Lycoming)** |  |

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| **SUBGROUP 2c: SINGLE PISTON-ENGINE HELICOPTERS (other than those in Group 1)** | | | | |
| **TC Holder** | **Model** | **Comm. Des.** | **Part-66 type rating endorsement** | **Note** |
| **Mecaer Aviation Group** | NH-300C | *Model 300C* | **Mecaer 269/300 (Lycoming)** |  |
| **ROBINSON HELICOPTER**  **COMPANY** | R 22 |  | **Robinson R22/R44 Series (Lycoming)** |  |
| **ROBINSON HELICOPTER**  **COMPANY** | R 44 | *Astro Raven* | **Robinson R22/R44 Series (Lycoming)** |  |
| **ROBINSON HELICOPTER COMPANY** | R22 Alpha |  | **Robinson R22/R44 Series (Lycoming)** |  |
| **ROBINSON HELICOPTER COMPANY** | R22 Beta |  | **Robinson R22/R44 Series (Lycoming)** |  |
| **ROBINSON HELICOPTER COMPANY** | R22  Mariner |  | **Robinson R22/R44 Series (Lycoming)** |  |
| **ROBINSON HELICOPTER**  **COMPANY** | R44 II | *Raven II* | **Robinson R22/R44 Series (Lycoming)** |  |
| **SIKORSKY AIRCRAFT** | S-58B |  | **Sikorsky S-58 (Wright Cyclone)** |  |
| **SIKORSKY AIRCRAFT** | S-58C |  | **Sikorsky S-58 (Wright Cyclone)** |  |
| **SIKORSKY AIRCRAFT** | S-58D |  | **Sikorsky S-58 (Wright Cyclone)** |  |
| **SIKORSKY AIRCRAFT** | S-58E |  | **Sikorsky S-58 (Wright Cyclone)** |  |
| **SIKORSKY AIRCRAFT** | S-58F |  | **Sikorsky S-58 (Wright Cyclone)** |  |
| **SIKORSKY AIRCRAFT** | S-58G |  | **Sikorsky S-58 (Wright Cyclone)** |  |
| **SIKORSKY AIRCRAFT** | S-58H |  | **Sikorsky S-58 (Wright Cyclone)** |  |
| **SIKORSKY AIRCRAFT** | S-58J |  | **Sikorsky S-58 (Wright Cyclone)** |  |
| **Schweizer RSG LLC** | 269A | *Model 300C* | **Schweizer 269/300 (Lycoming)** |  |
| **Schweizer RSG LLC** | 269B | *Model 300C* | **Schweizer 269/300 (Lycoming)** |  |
| **Schweizer RSG LLC** | 269C | *Model 300C* | **Schweizer 269/300 (Lycoming)** |  |
| **Schweizer RSG LLC** | 269C-1 | *Model 300C* | **Schweizer 269/300 (Lycoming)** |  |
| **THE ENSTROM HELICOPTER**  **CORPORATION** | 280 |  | **Enstrom F-28/280 (Lycoming)** |  |
| **THE ENSTROM HELICOPTER**  **CORPORATION** | 280C |  | **Enstrom F-28/280 (Lycoming)** |  |
| **THE ENSTROM HELICOPTER**  **CORPORATION** | 280F |  | **Enstrom F-28/280 (Lycoming)** |  |
| **THE ENSTROM HELICOPTER**  **CORPORATION** | 280FX |  | **Enstrom F-28/280 (Lycoming)** |  |
| **THE ENSTROM HELICOPTER**  **CORPORATION** | F-28A |  | **Enstrom F-28/280 (Lycoming)** |  |

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| **SUBGROUP 2c: SINGLE PISTON-ENGINE HELICOPTERS (other than those in Group 1)** | | | | |
| **TC Holder** | **Model** | **Comm. Des.** | **Part-66 type rating endorsement** | **Note** |
| **THE ENSTROM HELICOPTER CORPORATION** | F-28C |  | **Enstrom F-28/280 (Lycoming)** |  |
| **THE ENSTROM HELICOPTER CORPORATION** | F-28C-2 |  | **Enstrom F-28/280 (Lycoming)** |  |
| **THE ENSTROM**  **HELICOPTER CORPORATION** | F-28F |  | **Enstrom F-28/280 (Lycoming)** |  |
| **THE ENSTROM HELICOPTER CORPORATION** | F-28F-R |  | **Enstrom F-28/280 (Lycoming)** |  |

GROUP 3: PISTON-ENGINE AEROPLANES (other than those in Group 1)

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| **GROUP 3: PISTON-ENGINE AEROPLANES (other than those in Group 1)** | | | | | | |
| **TC Holder** | **Model** | **Type of structure** | **Part-66**  **type rating endorsement** | **Note** | **MTOM** | |
| **≤2T** | **>2T** |
| **AD Holdings, Inc** | T-211 | *Metal* | **Thorp T-211 (Continental)** | ELA1 | X |  |
| **AD Holdings, Inc** | T-211 | *Metal* | **Thorp T-211 (Jabiru)** | ELA1 | X |  |
| **AERO Sp.z.o.o** | AT-3 R100 | *Metal* | **Aero AT-3 (Rotax)** | ELA1 | X |  |
| **AEROCLUBUL ROMANIEI** | IAR-46 | *Metal* | **IAR-46 (Rotax)** | ELA1 | X |  |
| **AEROCLUBUL**  **ROMANIEI** | IAR-46S | *Metal* | **IAR-46 (Rotax)** | ELA1 | X |  |
| **Aerospool, spol. s**  **r. o.** | Club | *Composite* | **Aerospool Club (Rotax)** | ELA1 | X |  |
| **AEROSTAR AIRCRAFT**  **Corporation** | PA-60-601P  (Aerostar  601P) | *Metal + Pressurised* | **Piper PA-60/61 Pressurised (Lycoming)** |  |  | X |
| **AEROSTAR AIRCRAFT**  **Corporation** | PA-60-602P  (Aerostar  602P) | *Metal + Pressurised* | **Piper PA-60/61 Pressurised (Lycoming)** |  |  | X |
| **AEROSTAR AIRCRAFT**  **Corporation** | PA-60-700P  (Aerostar  700P) | *Metal + Pressurised* | **Piper PA-60/61 Pressurised (Lycoming)** |  |  | X |
| **AEROSTAR AIRCRAFT**  **Corporation** | PA-60-600  (Aerostar  600) | *Metal* | **Piper PA-60/61 Series (Lycoming)** |  |  | X |
| **AEROSTAR AIRCRAFT**  **Corporation** | PA-60-601  (Aerostar 601) | *Metal* | **Piper PA-60/61 Series (Lycoming)** |  |  | X |
| **AIR TRACTOR, INC.** | AT-250 | *Metal* | **Air Tractor AT-250/300 (PW R985)** |  |  | X |
| **AIR TRACTOR,**  **INC.** | AT-300 | *Metal* | **Air Tractor AT-250/300**  **(PW R985)** |  |  | X |

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| **AIR TRACTOR, INC.** | AT-301 | *Metal* | **Air Tractor AT-301/401/501 (PW R1340)** |  |  | X |
| **AIR TRACTOR,**  **INC.** | AT-401 | *Metal* | **Air Tractor AT-301/401/501**  **(PW R1340)** |  |  | X |
| **AIR TRACTOR, INC.** | AT-401B | *Metal* | **Air Tractor AT-301/401/501 (PW R1340)** |  |  | X |
| **AIR TRACTOR, INC.** | AT-501 | *Metal* | **Air Tractor AT-301/401/501 (PW R1340)** |  |  | X |
| **AIR TRACTOR,**  **INC.** | AT-401A | *Metal* | **Air Tractor AT-401 (PZL-3S)** |  |  | X |
| **AIRBUS DEFENCE AND SPACE**  **GmbH** | Bölkow 207 | *Wood* | **Bölkow BO 207 (Lycoming)** | ELA1 | X |  |
| **AIRBUS DEFENCE AND SPACE**  **GmbH** | Bölkow 207T | *Wood* | **Bölkow BO 207 (Lycoming)** | ELA1 | X |  |
| **AIRBUS DEFENCE AND SPACE**  **GmbH** | Bölkow BO 208 C Junior | *Metal* | **Bölkow BO 208 (Continental)** | ELA1 | X |  |
| **AIRBUS DEFENCE AND SPACE**  **GmbH** | Bölkow Junior | *Metal* | **Bölkow BO 208 (Continental)** | ELA1 | X |  |
| **AIRBUS DEFENCE AND SPACE**  **GmbH** | Bölkow BO 209 S | *Metal* | **Bölkow BO 209 (Continental)** | ELA1 | X |  |
| **AIRBUS DEFENCE AND SPACE**  **GmbH** | Bölkow BO 209 Monsun | *Metal* | **Bölkow BO 209 (Lycoming)** | ELA1 | X |  |
| **AIRBUS DEFENCE AND SPACE**  **GmbH** | 223 A1 | *Metal* | **SIAT 223 (Lycoming)** | ELA1 | X |  |
| **AIRBUS DEFENCE AND SPACE**  **GmbH** | 223 K1 | *Metal* | **SIAT 223 (Lycoming)** | ELA1 | X |  |
| **AIRBUS DEFENCE AND SPACE**  **GmbH** | 223 V | *Metal* | **SIAT 223 (Lycoming)** | ELA1 | X |  |
| **AIRCRAFT Design and Certification** | D4  Fascination | *Composite* | **(WD) D4 Fascination (Rotax)** | ELA1 | X |  |
| **AIRCRAFT INDUSTRIES** | L-200 A | *Metal* | **Let L 200 (LOM)** | ELA2 | X |  |
| **AIRCRAFT**  **INDUSTRIES** | L-200 D | *Metal* | **Let L 200 (LOM)** | ELA2 | X |  |
| **AIRCRAFT**  **INDUSTRIES** | Z-37-2 | *Metal tubing*  *Fabric* | **Let Z-37 Series (LOM)** | ELA2 | X |  |
| **AIRCRAFT**  **INDUSTRIES** | Z-37A | *Metal tubing*  *Fabric* | **Let Z-37 Series (LOM)** | ELA2 | X |  |
| **AIRCRAFT INDUSTRIES** | Z-37A-2 | *Metal tubing Fabric* | **Let Z-37 Series (LOM)** | ELA2 | X |  |

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| **ALEXANDRIA**  **Aircraft LLC** | 17-30 | *Wood + Metal tubing Fabric* | **Bellanca 17-30 (Continental)** | ELA2 | X |  |
| **ALEXANDRIA**  **Aircraft LLC** | 17-30A | *Wood + Metal tubing Fabric* | **Bellanca 17-30 (Continental)** | ELA2 | X |  |
| **ALEXANDRIA**  **Aircraft LLC** | 17-31 | *Wood + Metal tubing Fabric* | **Bellanca 17-31 Series (Lycoming)** | ELA2 | X |  |
| **ALEXANDRIA**  **Aircraft LLC** | 17-31A | *Wood + Metal tubing Fabric* | **Bellanca 17-31 Series (Lycoming)** | ELA2 | X |  |
| **ALEXANDRIA**  **Aircraft LLC** | 17-31ATC | *Wood + Metal tubing Fabric* | **Bellanca 17-31 Series (Lycoming)** | ELA2 | X |  |
| **ALEXANDRIA**  **Aircraft LLC** | 17-31TC | *Wood + Metal tubing Fabric* | **Bellanca 17-31 Series (Lycoming)** | ELA2 | X |  |
| **ALLIED AG CAT**  **Productions** | G-164 | *Metal* | **Grumman G-164 (Continental)** | ELA2 | X |  |
| **ALLIED AG CAT**  **Productions** | G-164B | *Metal* | **Grumman G-164 (Continental)** | ELA2 | X |  |
| **ALLIED AG CAT**  **Productions** | G-164B with 73’ wing gap | *Metal* | **Grumman G-164 (Continental)** | ELA2 | X |  |
| **ALLIED AG CAT**  **Productions** | G-164B-15T | *Metal* | **Grumman G-164 (Continental)** | ELA2 | X |  |
| **ALLIED AG CAT**  **Productions** | G-164B-20T | *Metal* | **Grumman G-164 (Continental)** | ELA2 | X |  |
| **ALLIED AG CAT**  **Productions** | G-164B-34T | *Metal* | **Grumman G-164 (Continental)** | ELA2 | X |  |
| **ALLIED AG CAT**  **Productions** | G-164 | *Metal* | **Grumman G-164 (Jacobs)** | ELA2 | X |  |
| **ALLIED AG CAT**  **Productions** | G-164 | *Metal* | **Grumman G-164 (PW R Series)** | ELA2 | X |  |
| **ALLIED AG CAT**  **Productions** | G-164A | *Metal* | **Grumman G-164**  **(PW R Series)** | ELA2 | X |  |
| **ALLIED AG CAT**  **Productions** | G-164B | *Metal* | **Grumman G-164 (PW R Series)** | ELA2 | X |  |
| **ALLIED AG CAT**  **Productions** | G-164B with 73’ wing gap | *Metal* | **Grumman G-164 (PW R Series)** | ELA2 | X |  |
| **ALLIED AG CAT**  **Productions** | G-164B-15T | *Metal* | **Grumman G-164**  **(PW R Series)** | ELA2 | X |  |
| **ALLIED AG CAT**  **Productions** | G-164B-20T | *Metal* | **Grumman G-164 (PW R Series)** | ELA2 | X |  |
| **ALLIED AG CAT**  **Productions** | G-164B-34T | *Metal* | **Grumman G-164**  **(PW R Series)** | ELA2 | X |  |
| **ALLIED AG CAT**  **Productions** | G-164C | *Metal* | **Grumman G-164 (PW R Series)** | ELA2 | X |  |
| **ALPHA AVIATION** | HR 200-100 | *Metal* | **Robin HR 200/ R 2000 series (Lycoming)** | ELA1 | X |  |

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| **ALPHA AVIATION** | HR 200-100 S | *Metal* | **Robin HR 200/ R 2000 series (Lycoming)** | ELA1 | X |  |
| **ALPHA AVIATION** | HR 200-120 | *Metal* | **Robin HR 200/ R 2000 series**  **(Lycoming)** | ELA1 | X |  |
| **ALPHA AVIATION** | HR 200-120 B | *Metal* | **Robin HR 200/ R 2000 series (Lycoming)** | ELA1 | X |  |
| **ALPHA AVIATION** | HR 200-160 | *Metal* | **Robin HR 200/ R 2000 series (Lycoming)** | ELA1 | X |  |
| **ALPHA AVIATION** | R 2100 | *Metal* | **Robin HR 200/ R 2000 series**  **(Lycoming)** | ELA1 | X |  |
| **ALPHA AVIATION** | R 2100A | *Metal* | **Robin HR 200/ R 2000 series (Lycoming)** | ELA1 | X |  |
| **ALPHA AVIATION** | R 2112 | *Metal* | **Robin HR 200/ R 2000 series**  **(Lycoming)** | ELA1 | X |  |
| **ALPHA AVIATION** | R 2120U | *Metal* | **Robin HR 200/ R 2000 series (Lycoming)** | ELA1 | X |  |
| **ALPHA AVIATION** | R 2160 | *Metal* | **Robin HR 200/ R 2000 series (Lycoming)** | ELA1 | X |  |
| **ALPHA AVIATION** | R 2160D | *Metal* | **Robin HR 200/ R 2000 series**  **(Lycoming)** | ELA1 | X |  |
| **ALPHA AVIATION** | R 2160i | *Metal* | **Robin HR 200/ R 2000 series (Lycoming)** | ELA1 | X |  |
| **AMERICAN CHAMPION**  **Aircraft Corp.** | 7GCAA | *Wood + Metal tubing*  *Fabric* | **Champion 7 (Superior)** | ELA1 | X |  |
| **AMERICAN CHAMPION**  **Aircraft Corp.** | 7GCBC (180HP) | *Wood + Metal tubing*  *Fabric* | **Champion 7 (Superior)** | ELA1 | X |  |
| **AMERICAN CHAMPION**  **Aircraft Corp.** | 7ECA | *Wood + Metal tubing*  *Fabric* | **Champion 7 (Lycoming)** | ELA1 | X |  |
| **AMERICAN CHAMPION**  **Aircraft Corp.** | 7GCAA | *Wood +*  *Metal tubing Fabric* | **Champion 7 (Lycoming)** | ELA1 | X |  |
| **AMERICAN CHAMPION**  **Aircraft Corp.** | 7GCBC (160HP) | *Wood + Metal tubing Fabric* | **Champion 7 (Lycoming)** | ELA1 | X |  |
| **AMERICAN CHAMPION**  **Aircraft Corp.** | 8GCBC | *Wood + Metal tubing Fabric* | **Champion 8 Series (Lycoming)** | ELA1 | X |  |
| **AMERICAN CHAMPION**  **Aircraft Corp.** | 8KCAB | *Wood + Metal tubing Fabric* | **Champion 8 Series (Lycoming)** | ELA1 | X |  |
| **AQUILA Aviation**  **by Excellence AG** | AQUILA  AT01 | *Composite* | **Aquila AT01 (Rotax)** | ELA1 | X |  |
| **AQUILA Aviation by Excellence AG** | AQUILA AT01-100 | *Composite* | **Aquila AT01 (Rotax)** | ELA1 | X |  |
| **AQUILA Aviation**  **by Excellence AG** | AQUILA  AT01-200 | *Composite* | **Aquila AT01 (Rotax)** | ELA1 | X |  |
| **AUGUSTAIR, INC.** | VARGA 2180 | *Metal* | **Varga (Lycoming)** | ELA1 | X |  |

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| **AUGUSTAIR, INC.** | VARGA 2150A | *Metal* | **Varga (Lycoming)** | ELA1 | X |  |
| **AUGUSTAIR, INC.** | VARGA 2150 | *Metal* | **Varga (Lycoming)** | ELA1 | X |  |
| **AVIAT AIRCRAFT**  **INC** | A-1 | *Metal* | **Aviat Husky A (Lycoming)** | ELA1 | X |  |
| **AVIAT AIRCRAFT INC** | A-1A | *Metal* | **Aviat Husky A (Lycoming)** | ELA1 | X |  |
| **AVIAT AIRCRAFT INC** | A-1B | *Metal* | **Aviat Husky A (Lycoming)** | ELA1 | X |  |
| **AVIAT AIRCRAFT INC** | A-1C-180 | *Metal* | **Aviat Husky A (Lycoming)** | ELA1 | X |  |
| **AVIAT AIRCRAFT INC** | S-1S | *Wood + Metal tubing*  *Fabric* | **Pitts S-1 Series (Lycoming)** | ELA1 | X |  |
| **AVIAT AIRCRAFT INC** | S-2A | *Wood + Metal tubing Fabric* | **Pitts S-2 Series (Lycoming)** | ELA1 | X |  |
| **AVIAT AIRCRAFT INC** | S-2B | *Wood + Metal tubing Fabric* | **Pitts S-2 Series (Lycoming)** | ELA1 | X |  |
| **AVIAT AIRCRAFT INC** | S-2C | *Wood +*  *Metal tubing Fabric* | **Pitts S-2 Series (Lycoming)** | ELA1 | X |  |
| **AVIAT AIRCRAFT INC** | S-2S | *Wood + Metal tubing Fabric* | **Pitts S-2 Series (Lycoming)** | ELA1 | X |  |
| **BEECHCRAFT**  **Corporation** | 19A | *Metal* | **Beech 19 Series (Lycoming)** | ELA2 | X |  |
| **BEECHCRAFT**  **Corporation** | B19 | *Metal* | **Beech 19 Series (Lycoming)** | ELA2 | X |  |
| **BEECHCRAFT**  **Corporation** | M19A | *Metal* | **Beech 19 Series (Lycoming)** | ELA2 | X |  |
| **BEECHCRAFT**  **Corporation** | 23 | *Metal* | **Beech 23 Series (Lycoming)** | ELA2 | X |  |
| **BEECHCRAFT**  **Corporation** | A23-19 | *Metal* | **Beech 23 Series (Lycoming)** | ELA2 | X |  |
| **BEECHCRAFT**  **Corporation** | A23-24 | *Metal* | **Beech 23 Series (Lycoming)** | ELA2 | X |  |
| **BEECHCRAFT**  **Corporation** | B23 | *Metal* | **Beech 23 Series (Lycoming)** | ELA2 | X |  |
| **BEECHCRAFT**  **Corporation** | C23 | *Metal* | **Beech 23 Series (Lycoming)** | ELA2 | X |  |
| **BEECHCRAFT**  **Corporation** | A24 | *Metal* | **Beech 24 Series (Lycoming)** | ELA2 | X |  |
| **BEECHCRAFT**  **Corporation** | A24R | *Metal* | **Beech 24 Series (Lycoming)** | ELA2 | X |  |
| **BEECHCRAFT**  **Corporation** | B24R | *Metal* | **Beech 24 Series (Lycoming)** | ELA2 | X |  |
| **BEECHCRAFT**  **Corporation** | C24R | *Metal* | **Beech 24 Series (Lycoming)** | ELA2 | X |  |

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| **BEECHCRAFT**  **Corporation** | 50 | *Metal* | **Beech 50 Series (Lycoming)** |  |  | X |
| **BEECHCRAFT**  **Corporation** | B50 | *Metal* | **Beech 50 Series (Lycoming)** |  |  | X |
| **BEECHCRAFT**  **Corporation** | C50 | *Metal* | **Beech 50 Series (Lycoming)** |  |  | X |
| **BEECHCRAFT**  **Corporation** | D50 | *Metal* | **Beech 50 Series (Lycoming)** |  |  | X |
| **BEECHCRAFT**  **Corporation** | D50A | *Metal* | **Beech 50 Series (Lycoming)** |  |  | X |
| **BEECHCRAFT**  **Corporation** | D50B | *Metal* | **Beech 50 Series (Lycoming)** |  |  | X |
| **BEECHCRAFT**  **Corporation** | D50C | *Metal* | **Beech 50 Series (Lycoming)** |  |  | X |
| **BEECHCRAFT**  **Corporation** | D50E | *Metal* | **Beech 50 Series (Lycoming)** |  |  | X |
| **BEECHCRAFT**  **Corporation** | D50E-5990 | *Metal* | **Beech 50 Series (Lycoming)** |  |  | X |
| **BEECHCRAFT**  **Corporation** | E50 | *Metal* | **Beech 50 Series (Lycoming)** |  |  | X |
| **BEECHCRAFT**  **Corporation** | F50 | *Metal* | **Beech 50 Series (Lycoming)** |  |  | X |
| **BEECHCRAFT**  **Corporation** | G50 | *Metal* | **Beech 50 Series (Lycoming)** |  |  | X |
| **BEECHCRAFT**  **Corporation** | H50 | *Metal* | **Beech 50 Series (Lycoming)** |  |  | X |
| **BEECHCRAFT**  **Corporation** | J50 | *Metal* | **Beech 50 Series (Lycoming)** |  |  | X |
| **BEECHCRAFT**  **Corporation** | 58P | *Metal + Pressurised* | **Beech 58P (Continental)** |  |  | X |
| **BEECHCRAFT**  **Corporation** | 58PA | *Metal +*  *Pressurised* | **Beech 58P (Continental)** |  |  | X |
| **BEECHCRAFT**  **Corporation** | 58TC | *Metal* | **Beech 58TC (Continental)** |  |  | X |
| **BEECHCRAFT**  **Corporation** | 58TCA | *Metal* | **Beech 58TC (Continental)** |  |  | X |
| **BEECHCRAFT**  **Corporation** | 60 | *Metal* | **Beech 60 Series (Lycoming)** |  |  | X |
| **BEECHCRAFT**  **Corporation** | A60 | *Metal* | **Beech 60 Series (Lycoming)** |  |  | X |
| **BEECHCRAFT**  **Corporation** | B60 | *Metal* | **Beech 60 Series (Lycoming)** |  |  | X |
| **BEECHCRAFT**  **Corporation** | 76 | *Metal* | **Beech 76 (Lycoming)** | ELA2 | X |  |
| **BEECHCRAFT**  **Corporation** | 77 | *Metal* | **Beech 77 (Lycoming)** | ELA2 | X |  |
| **BEECHCRAFT**  **Corporation** | A23 | *Metal* | **Beech A23 (Continental)** | ELA2 | X |  |

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| **BEECHCRAFT**  **Corporation** | A23A | *Metal* | **Beech A23 (Continental)** | ELA2 | X |  |
| **BERIEV** | Be 103 | *Metal* | **Beriev Be-103 (Continental)** |  |  | X |
| **Bernd Hager/Anatoli**  **Stobbe GbR** | R 90-230RG | *Composite* | **Ruschmeyer R90-230RG (Lycoming)** | ELA2 | X |  |
| **BLACKSHAPE**  **S.p.A.** | BS 115 | *Composite* | **Blackshape BS 115/BK 160**  **(Lycoming)** | ELA1 | X |  |
| **BLACKSHAPE S.p.A.** | BK 160 | *Composite* | **Blackshape BS 115/BK 160 (Lycoming)** | ELA1 | X |  |
| **BLACKSHAPE S.p.A.** | BK 160-200 | *Composite* | **Blackshape BS 115/BK 160 (Lycoming)** | ELA1 | X |  |
| **BLACKSHAPE**  **S.p.A.** | BK 160TR | *Composite* | **Blackshape BS 115/BK 160**  **(Lycoming)** | ELA1 | X |  |
| **B-N GROUP Ltd.**  **(Britten-Norman)** | BN.2A MARK III | *Metal* | **Britten-Norman BN.2A Mark III (Lycoming)** |  |  | X |
| **B-N GROUP Ltd.**  **(Britten-Norman)** | BN.2A MARK  III-1 | *Metal* | **Britten-Norman BN.2A Mark III**  **(Lycoming)** |  |  | X |
| **B-N GROUP Ltd.**  **(Britten-Norman)** | BN.2A MARK III-2 | *Metal* | **Britten-Norman BN.2A Mark III (Lycoming)** |  |  | X |
| **B-N GROUP Ltd.**  **(Britten-Norman)** | BN.2A MARK III-3 | *Metal* | **Britten-Norman BN.2A Mark III (Lycoming)** |  |  | X |
| **B-N GROUP Ltd.**  **(Britten-Norman)** | BN2 | *Metal* | **Britten-Norman BN2A Series (Lycoming)** |  |  | X |
| **B-N GROUP Ltd.**  **(Britten-Norman)** | BN2A | *Metal* | **Britten-Norman BN2A Series**  **(Lycoming)** |  |  | X |
| **B-N GROUP Ltd.**  **(Britten-Norman)** | BN2A-2 | *Metal* | **Britten-Norman BN2A Series**  **(Lycoming)** |  |  | X |
| **B-N GROUP Ltd.**  **(Britten-Norman)** | BN2A-20 | *Metal* | **Britten-Norman BN2A Series (Lycoming)** |  |  | X |
| **B-N GROUP Ltd.**  **(Britten-Norman)** | BN2A-21 | *Metal* | **Britten-Norman BN2A Series (Lycoming)** |  |  | X |
| **B-N GROUP Ltd.**  **(Britten-Norman)** | BN2A-26 | *Metal* | **Britten-Norman BN2A Series (Lycoming)** |  |  | X |
| **B-N GROUP Ltd.**  **(Britten-Norman)** | BN2A-27 | *Metal* | **Britten-Norman BN2A Series**  **(Lycoming)** |  |  | X |
| **B-N GROUP Ltd.**  **(Britten-Norman)** | BN2A-3 | *Metal* | **Britten-Norman BN2A Series**  **(Lycoming)** |  |  | X |
| **B-N GROUP Ltd.**  **(Britten-Norman)** | BN2A-6 | *Metal* | **Britten-Norman BN2A Series (Lycoming)** |  |  | X |
| **B-N GROUP Ltd.**  **(Britten-Norman)** | BN2A-7 | *Metal* | **Britten-Norman BN2A Series (Lycoming)** |  |  | X |
| **B-N GROUP Ltd.**  **(Britten-Norman)** | BN2A-8 | *Metal* | **Britten-Norman BN2A Series**  **(Lycoming)** |  |  | X |
| **B-N GROUP Ltd.**  **(Britten-Norman)** | BN2A-9 | *Metal* | **Britten-Norman BN2A Series (Lycoming)** |  |  | X |
| **B-N GROUP Ltd.**  **(Britten-Norman)** | BN2B-20 | *Metal* | **Britten-Norman BN2B Series**  **(Lycoming)** |  |  | X |

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| **B-N GROUP Ltd.**  **(Britten-Norman)** | BN2B-21 | *Metal* | **Britten-Norman BN2B Series (Lycoming)** |  |  | X |
| **B-N GROUP Ltd.**  **(Britten-Norman)** | BN2B-26 | *Metal* | **Britten-Norman BN2B Series**  **(Lycoming)** |  |  | X |
| **B-N GROUP Ltd.**  **(Britten-Norman)** | BN2B-27 | *Metal* | **Britten-Norman BN2B Series (Lycoming)** |  |  | X |
| **Breezer Aircraft GmbH & Co. KG** | B600 | *Metal* | **Breezer B600 (Rotax)** | ELA1 | X |  |
| **BRM Aero s.r.o.** | Bristell B23 | *Metal* | **Bristell B23 (Rotax)** | ELA1 | X |  |
| **BRM Aero s.r.o.** | Bristell B23- 915 | *Metal* | **Bristell B23 (Rotax)** | ELA1 | X |  |
| **CEAPR** | CAP10 | *Wood* | **CAP 10 (Lycoming)** | ELA1 | X |  |
| **CEAPR** | CAP10B | *Wood* | **CAP 10 (Lycoming)** | ELA1 | X |  |
| **CEAPR** | CAP20 | *Wood* | **CAP 20/21 (Lycoming)** | ELA1 | X |  |
| **CEAPR** | CAP20L/S20 0 | *Wood* | **CAP 20/21 (Lycoming)** | ELA1 | X |  |
| **CEAPR** | CAP21 | *Wood* | **CAP 20/21 (Lycoming)** | ELA1 | X |  |
| **CEAPR** | CAP231 | *Wood* | **CAP 230 Series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | CAP231EX | *Composite +*  *Wood* | **CAP 230 Series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | CAP232 | *Composite + Wood* | **CAP 230 Series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | CAP230 | *Wood* | **CAP 230 Series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | ATL | *Wood + Composite* | **Robin ATL / ATL S (JPX 4T60)** | ELA1 | X |  |
| **CEAPR** | ATL S | *Wood +*  *Composite* | **Robin ATL / ATL S**  **(JPX 4T60)** | ELA1 | X |  |
| **CEAPR** | ATL L | *Wood + Composite* | **Robin ATL L (Limbach L2000)** | ELA1 | X |  |
| **CEAPR** | DR 200 | *Wood* | **Robin DR 200 series (Potez)** | ELA1 | X |  |
| **CEAPR** | DR 220 | *Wood* | **Robin DR 220 series**  **(Continental)** | ELA1 | X |  |
| **CEAPR** | DR 220 A | *Wood* | **Robin DR 220 series (Continental)** | ELA1 | X |  |
| **CEAPR** | DR 220 AB | *Wood* | **Robin DR 220 series**  **(Continental)** | ELA1 | X |  |
| **CEAPR** | DR 220 B | *Wood* | **Robin DR 220 series**  **(Continental)** | ELA1 | X |  |
| **CEAPR** | DR 221 | *Wood* | **Robin DR 221 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 221 B | *Wood* | **Robin DR 221 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 250 | *Wood* | **Robin DR 250 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 250 B | *Wood* | **Robin DR 250 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 250 B-  160 | *Wood* | **Robin DR 250 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 250-160 | *Wood* | **Robin DR 250 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 253 | *Wood* | **Robin DR 253 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 253 B | *Wood* | **Robin DR 253 series (Lycoming)** | ELA1 | X |  |

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| **CEAPR** | DR 300/108 | *Wood* | **Robin DR 300 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 300/120 | *Wood* | **Robin DR 300 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 300/125 | *Wood* | **Robin DR 300 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 300/140 | *Wood* | **Robin DR 300 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 300/180 R | *Wood* | **Robin DR 300 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 315 | *Wood* | **Robin DR 300 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 340 | *Wood* | **Robin DR 300 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 360 | *Wood* | **Robin DR 300 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 380 | *Wood* | **Robin DR 300 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 400/125 i | *Wood* | **Robin DR 400 series**  **(Continental)** | ELA1 | X |  |
| **CEAPR** | DR 400/200 I | *Wood* | **Robin DR 400 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 400/100 | *Wood* | **Robin DR 400 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 400/120 | *Wood* | **Robin DR 400 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 400/120  A | *Wood* | **Robin DR 400 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 400/120 D | *Wood* | **Robin DR 400 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 400/125 | *Wood* | **Robin DR 400 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 400/140 | *Wood* | **Robin DR 400 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 400/140 B | *Wood* | **Robin DR 400 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 400/160 | *Wood* | **Robin DR 400 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 400/160 D | *Wood* | **Robin DR 400 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 400/180 | *Wood* | **Robin DR 400 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 400/180  R | *Wood* | **Robin DR 400 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 400/180  S | *Wood* | **Robin DR 400 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 400/2+2 | *Wood* | **Robin DR 400 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 400/200 R | *Wood* | **Robin DR 400 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 400/500 | *Wood* | **Robin DR 400 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 400/NGL | *Wood* | **Robin DR 400 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | DR 400/RP | *Wood* | **Robin DR 400RP (Porsche)** | ELA1 | X |  |
| **CEAPR** | HR 100-210 | *Metal* | **Robin HR 100 series (Continental)** | ELA1 | X |  |
| **CEAPR** | HR 100-210  D | *Metal* | **Robin HR 100 series**  **(Continental)** | ELA1 | X |  |
| **CEAPR** | HR 100-285 C | *Metal* | **Robin HR 100 series (Continental)** | ELA1 | X |  |
| **CEAPR** | HR 100-285  TIARA | *Metal* | **Robin HR 100 series**  **(Continental)** | ELA1 | X |  |
| **CEAPR** | HR 100-200 | *Metal* | **Robin HR 100 series (Lycoming)** | ELA1 | X |  |

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| **CEAPR** | HR 100-200 B | *Metal* | **Robin HR 100 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | HR 100-250  TR | *Metal* | **Robin HR 100 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | R 1180 T | *Metal* | **Robin R 1180 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | R 1180 TD | *Metal* | **Robin R 1180 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | R 3000/100 | *Metal* | **Robin R 3000 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | R 3000/120 | *Metal* | **Robin R 3000 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | R 3000/120 D | *Metal* | **Robin R 3000 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | R 3000/140 | *Metal* | **Robin R 3000 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | R 3000/160 | *Metal* | **Robin R 3000 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | R 3000/160 S | *Metal* | **Robin R 3000 series (Lycoming)** | ELA1 | X |  |
| **CEAPR** | R 3000/180 | *Metal* | **Robin R 3000 series (Lycoming)** | ELA1 | X |  |
| **CESSNA AIRCRAFT**  **Company** | F177RG | *Metal* | **Cessna 177 Series (Lycoming)** | ELA2 | X |  |
| **CESSNA AIRCRAFT**  **Company** | F150F | *Metal* | **Cessna/Reims-Cessna 150/F150 Series (Continental)** | ELA1 | X |  |
| **CESSNA AIRCRAFT**  **Company** | F150G | *Metal* | **Cessna/Reims-Cessna**  **150/F150 Series (Continental)** | ELA1 | X |  |
| **CESSNA AIRCRAFT**  **Company** | F150H | *Metal* | **Cessna/Reims-Cessna 150/F150 Series (Continental)** | ELA1 | X |  |
| **CESSNA AIRCRAFT**  **Company** | F150J | *Metal* | **Cessna/Reims-Cessna 150/F150 Series (Continental)** | ELA1 | X |  |
| **CESSNA AIRCRAFT**  **Company** | F150K | *Metal* | **Cessna/Reims-Cessna**  **150/F150 Series (Continental)** | ELA1 | X |  |
| **CESSNA AIRCRAFT**  **Company** | F150L | *Metal* | **Cessna/Reims-Cessna 150/F150 Series (Continental)** | ELA1 | X |  |
| **CESSNA AIRCRAFT**  **Company** | F150M | *Metal* | **Cessna/Reims-Cessna**  **150/F150 Series (Continental)** | ELA1 | X |  |
| **CESSNA AIRCRAFT**  **Company** | FA150K | *Metal* | **Cessna/Reims-Cessna 150/F150 Series (Continental)** | ELA1 | X |  |
| **CESSNA AIRCRAFT**  **Company** | FA150L | *Metal* | **Cessna/Reims-Cessna 150/F150 Series (Continental)** | ELA1 | X |  |
| **CESSNA AIRCRAFT**  **Company** | FA150M | *Metal* | **Cessna/Reims-Cessna**  **150/F150 Series (Continental)** | ELA1 | X |  |
| **CESSNA AIRCRAFT**  **Company** | FRA150L | *Metal* | **Cessna/Reims-Cessna 150/F150 Series (Continental)** | ELA1 | X |  |
| **CESSNA AIRCRAFT**  **Company** | FRA150M | *Metal* | **Cessna/Reims-Cessna**  **150/F150 Series (Continental)** | ELA1 | X |  |
| **CESSNA AIRCRAFT**  **Company** | F152 | *Metal* | **Cessna/Reims-Cessna 152/F152 Series (Lycoming)** | ELA1 | X |  |
| **CESSNA AIRCRAFT**  **Company** | FA152 | *Metal* | **Cessna/Reims-Cessna 152/F152 Series (Lycoming)** | ELA1 | X |  |
| **CESSNA AIRCRAFT**  **Company** | F172D | *Metal* | **Cessna/Reims-Cessna**  **172/F172 Series (Continental)** | ELA1 | X |  |
| **CESSNA AIRCRAFT**  **Company** | F172E | *Metal* | **Cessna/Reims-Cessna 172/F172 Series (Continental)** | ELA1 | X |  |

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| **CESSNA AIRCRAFT**  **Company** | F172F | *Metal* | **Cessna/Reims-Cessna 172/F172 Series (Continental)** | ELA1 | X |  |
| **CESSNA AIRCRAFT**  **Company** | F172G | *Metal* | **Cessna/Reims-Cessna**  **172/F172 Series (Continental)** | ELA1 | X |  |
| **CESSNA AIRCRAFT**  **Company** | F172H | *Metal* | **Cessna/Reims-Cessna 172/F172 Series (Continental)** | ELA1 | X |  |
| **CESSNA AIRCRAFT**  **Company** | F172K | *Metal* | **Cessna/Reims-Cessna 172/F172 Series (Continental)** | ELA1 | X |  |
| **CESSNA AIRCRAFT**  **Company** | FP172D | *Metal* | **Cessna/Reims-Cessna**  **172/F172 Series (Continental)** | ELA1 | X |  |
| **CESSNA AIRCRAFT**  **Company** | FR172E | *Metal* | **Cessna/Reims-Cessna 172/F172 Series (Continental)** | ELA2 | X |  |
| **CESSNA AIRCRAFT**  **Company** | FR172F | *Metal* | **Cessna/Reims-Cessna**  **172/F172 Series (Continental)** | ELA2 | X |  |
| **CESSNA AIRCRAFT**  **Company** | FR172G | *Metal* | **Cessna/Reims-Cessna 172/F172 Series (Continental)** | ELA2 | X |  |
| **CESSNA AIRCRAFT**  **Company** | FR172H | *Metal* | **Cessna/Reims-Cessna 172/F172 Series (Continental)** | ELA2 | X |  |
| **CESSNA AIRCRAFT**  **Company** | FR172J | *Metal* | **Cessna/Reims-Cessna**  **172/F172 Series (Continental)** | ELA2 | X |  |
| **CESSNA AIRCRAFT**  **Company** | FR172K | *Metal* | **Cessna/Reims-Cessna 172/F172 Series (Continental)** | ELA2 | X |  |
| **CESSNA AIRCRAFT**  **Company** | F172L | *Metal* | **Cessna/Reims-Cessna**  **172/F172 Series (Lycoming)** | ELA1 | X |  |
| **CESSNA AIRCRAFT**  **Company** | F172M | *Metal* | **Cessna/Reims-Cessna 172/F172 Series (Lycoming)** | ELA1 | X |  |
| **CESSNA AIRCRAFT**  **Company** | F172N | *Metal* | **Cessna/Reims-Cessna 172/F172 Series (Lycoming)** | ELA1 | X |  |
| **CESSNA AIRCRAFT**  **Company** | F172P | *Metal* | **Cessna/Reims-Cessna**  **172/F172 Series (Lycoming)** | ELA1 | X |  |
| **CESSNA AIRCRAFT**  **Company** | F182P | *Metal* | **Cessna/Reims-Cessna 182/F182 Series (Continental)** | ELA2 | X |  |
| **CESSNA AIRCRAFT**  **Company** | F182Q | *Metal* | **Cessna/Reims-Cessna**  **182/F182 Series (Continental)** | ELA2 | X |  |
| **CESSNA AIRCRAFT**  **Company** | FR182 | *Metal* | **Cessna/Reims-Cessna 182/F182 Series (Lycoming)** | ELA2 | X |  |
| **CESSNA AIRCRAFT**  **Company** | F337E | *Metal* | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** |  |  | X |
| **CESSNA AIRCRAFT**  **Company** | F337F | *Metal* | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** |  |  | X |
| **CESSNA AIRCRAFT**  **Company** | F337G | *Metal* | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** |  |  | X |
| **CESSNA AIRCRAFT**  **Company** | F337H | *Metal* | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** |  |  | X |

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| **CESSNA AIRCRAFT**  **Company** | FT337E | *Metal* | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** |  |  | X |
| **CESSNA AIRCRAFT**  **Company** | FT337F | *Metal* | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** |  |  | X |
| **CESSNA AIRCRAFT**  **Company** | FT337GP | *Metal + Pressurised* | **Cessna/Reims-Cessna 337 Series (Continental) (pressurised)** |  |  | X |
| **CESSNA AIRCRAFT**  **Company** | FT337HP | *Metal + Pressurised* | **Cessna/Reims-Cessna 337 Series (Continental) (pressurised)** |  |  | X |
| **CIRRUS Design Corporation** | SR20 | *Composite* | **Cirrus SR20 / SR22 / SR22T Series (Lycoming)** | ELA2 | X |  |
| **CIRRUS Design**  **Corporation** | SR20 | *Composite* | **Cirrus SR20 / SR22 / SR22T**  **Series (Continental)** | ELA2 | X |  |
| **CIRRUS Design**  **Corporation** | SR22 | *Composite* | **Cirrus SR20 / SR22 / SR22T**  **Series (Continental)** | ELA2 | X |  |
| **CIRRUS Design Corporation** | SR22T | *Composite* | **Cirrus SR20 / SR22 / SR22T Series (Continental)** | ELA2 | X |  |
| **COMMANDER PREMIER**  **AIRCRAFT CO.** | 112 | *Metal* | **Commander 112 (Lycoming)** | ELA1 | X |  |
| **COMMANDER PREMIER**  **AIRCRAFT CO.** | 112B | *Metal* | **Commander 112 (Lycoming)** | ELA1 | X |  |
| **COMMANDER PREMIER**  **AIRCRAFT CO.** | 112TC | *Metal* | **Commander 112 (Lycoming)** | ELA1 | X |  |
| **COMMANDER PREMIER**  **AIRCRAFT CO.** | 112TCA | *Metal* | **Commander 112 (Lycoming)** | ELA1 | X |  |
| **COMMANDER PREMIER**  **AIRCRAFT CO.** | 114 | *Metal* | **Commander 114 (Lycoming)** | ELA2 | X |  |
| **COMMANDER PREMIER**  **AIRCRAFT CO.** | 114A | *Metal* | **Commander 114 (Lycoming)** | ELA2 | X |  |
| **COMMANDER PREMIER**  **AIRCRAFT CO.** | 114B | *Metal* | **Commander 114 (Lycoming)** | ELA2 | X |  |
| **COMMANDER PREMIER AIRCRAFT CO.** | 114TC | *Metal* | **Commander 114 (Lycoming)** | ELA2 | X |  |
| **CUB CRAFTERS,**  **Inc.** | CC19-180 | *Metal tubing*  *Fabric* | **Cub Crafters 19-180 (Lycoming)** | ELA1 | X |  |
| **Czech Sport**  **Aircraft a.s.** | PS-28  Cruiser | *Metal* | **Czech Sport PS-28 (Rotax)** | ELA1 | X |  |
| **Czech Sport Aircraft a.s.** | PS-28 N  Cruiser | *Composite + Metal* | **Czech Sport PS-28 (Rotax)** | ELA1 | X |  |

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| **DAHER AEROSPACE** | MS 880 B | *Metal* | **SOCATA MS 880/885**  **(Continental)** | ELA1 | X |  |
| **DAHER**  **AEROSPACE** | MS 880 B-D | *Metal* | **SOCATA MS 880/885**  **(Continental)** | ELA1 | X |  |
| **DAHER AEROSPACE** | MS 885 | *Metal* | **SOCATA MS 880/885**  **(Continental)** | ELA1 | X |  |
| **DAHER AEROSPACE** | MS 881 | *Metal* | **SOCATA MS 881 (Potez)** | ELA1 | X |  |
| **DAHER**  **AEROSPACE** | MS 884 | *Metal* | **SOCATA MS 884/894/PZL**  **Koliber (Franklin)** | ELA1 | X |  |
| **DAHER AEROSPACE** | MS 894 A | *Metal* | **SOCATA MS 884/894/PZL**  **Koliber (Franklin)** | ELA1 | X |  |
| **DAHER**  **AEROSPACE** | MS 894 C | *Metal* | **SOCATA MS 884/894/PZL**  **Koliber (Franklin)** | ELA1 | X |  |
| **DAHER AEROSPACE** | MS 894 E | *Metal* | **SOCATA MS 884/894/PZL**  **Koliber (Franklin)** | ELA1 | X |  |
| **DAHER AEROSPACE** | MS 890 A | *Metal* | **SOCATA MS 890 (Continental)** | ELA1 | X |  |
| **DAHER**  **AEROSPACE** | MS 890 B | *Metal* | **SOCATA MS 890 (Continental)** | ELA1 | X |  |
| **DAHER AEROSPACE** | MS 883 | *Metal* | **SOCATA MS 892/883/886/887**  **(Lycoming)** | ELA1 | X |  |
| **DAHER**  **AEROSPACE** | MS 886 | *Metal* | **SOCATA MS 892/883/886/887**  **(Lycoming)** | ELA1 | X |  |
| **DAHER AEROSPACE** | MS 887 | *Metal* | **SOCATA MS 892/883/886/887**  **(Lycoming)** | ELA1 | X |  |
| **DAHER AEROSPACE** | MS 892 A.150 | *Metal* | **SOCATA MS 892/883/886/887**  **(Lycoming)** | ELA1 | X |  |
| **DAHER**  **AEROSPACE** | MS 892  B.150 | *Metal* | **SOCATA MS 892/883/886/887**  **(Lycoming)** | ELA1 | X |  |
| **DAHER AEROSPACE** | MS 892 E.150 | *Metal* | **SOCATA MS 892/883/886/887**  **(Lycoming)** | ELA1 | X |  |
| **DAHER**  **AEROSPACE** | MS 892 E-  D.150 | *Metal* | **SOCATA MS 892/883/886/887**  **(Lycoming)** | ELA1 | X |  |
| **DAHER AEROSPACE** | MS 893 A | *Metal* | **SOCATA MS 892/883/886/887**  **(Lycoming)** | ELA1 | X |  |
| **DAHER AEROSPACE** | MS 893 B | *Metal* | **SOCATA MS 892/883/886/887**  **(Lycoming)** | ELA1 | X |  |
| **DAHER**  **AEROSPACE** | MS 893 E | *Metal* | **SOCATA MS 892/883/886/887**  **(Lycoming)** | ELA1 | X |  |
| **DAHER AEROSPACE** | MS 893 E-D | *Metal* | **SOCATA MS 892/883/886/887**  **(Lycoming)** | ELA1 | X |  |
| **DAHER**  **AEROSPACE** | RALLYE 100  S | *Metal* | **SOCATA Rallye Series**  **(Continental)** | ELA1 | X |  |
| **DAHER AEROSPACE** | RALLYE 100 S-D | *Metal* | **SOCATA Rallye Series (Continental)** | ELA1 | X |  |
| **DAHER AEROSPACE** | RALLYE 100 ST | *Metal* | **SOCATA Rallye Series (Continental)** | ELA1 | X |  |

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| **DAHER AEROSPACE** | RALLYE 100 ST-D | *Metal* | **SOCATA Rallye Series (Continental)** | ELA1 | X |  |
| **DAHER**  **AEROSPACE** | RALLYE 110  ST | *Metal* | **SOCATA Rallye Series**  **(Lycoming)** | ELA1 | X |  |
| **DAHER AEROSPACE** | RALLYE 150 ST | *Metal* | **SOCATA Rallye Series (Lycoming)** | ELA1 | X |  |
| **DAHER AEROSPACE** | RALLYE 150 ST-D | *Metal* | **SOCATA Rallye Series (Lycoming)** | ELA1 | X |  |
| **DAHER**  **AEROSPACE** | RALLYE 150  SV | *Metal* | **SOCATA Rallye Series**  **(Lycoming)** | ELA1 | X |  |
| **DAHER AEROSPACE** | RALLYE 150 SVS | *Metal* | **SOCATA Rallye Series (Lycoming)** | ELA1 | X |  |
| **DAHER**  **AEROSPACE** | RALLYE 150  T | *Metal* | **SOCATA Rallye Series**  **(Lycoming)** | ELA1 | X |  |
| **DAHER AEROSPACE** | RALLYE 150 T-D | *Metal* | **SOCATA Rallye Series (Lycoming)** | ELA1 | X |  |
| **DAHER AEROSPACE** | RALLYE 180 T | *Metal* | **SOCATA Rallye Series (Lycoming)** | ELA1 | X |  |
| **DAHER**  **AEROSPACE** | RALLYE 180  T-D | *Metal* | **SOCATA Rallye Series**  **(Lycoming)** | ELA1 | X |  |
| **DAHER AEROSPACE** | RALLYE 180 TS | *Metal* | **SOCATA Rallye Series (Lycoming)** | ELA1 | X |  |
| **DAHER**  **AEROSPACE** | RALLYE 235  A | *Metal* | **SOCATA Rallye Series**  **(Lycoming)** | ELA1 | X |  |
| **DAHER AEROSPACE** | RALLYE 235 C | *Metal* | **SOCATA Rallye Series (Lycoming)** | ELA1 | X |  |
| **DAHER AEROSPACE** | RALLYE 235 E | *Metal* | **SOCATA Rallye Series (Lycoming)** | ELA1 | X |  |
| **DAHER**  **AEROSPACE** | RALLYE 235  E-D | *Metal* | **SOCATA Rallye Series**  **(Lycoming)** | ELA1 | X |  |
| **DAHER AEROSPACE** | RALLYE 235 F | *Metal* | **SOCATA Rallye Series (Lycoming)** | ELA1 | X |  |
| **DAHER**  **AEROSPACE** | TB 10 | *Metal* | **SOCATA TB Series (Lycoming)** | ELA1 | X |  |
| **DAHER AEROSPACE** | TB 20 | *Metal* | **SOCATA TB Series (Lycoming)** | ELA2 | X |  |
| **DAHER AEROSPACE** | TB 200 | *Metal* | **SOCATA TB Series (Lycoming)** | ELA2 | X |  |
| **DAHER**  **AEROSPACE** | TB 21 | *Metal* | **SOCATA TB Series (Lycoming)** | ELA2 | X |  |
| **DAHER AEROSPACE** | TB 9 | *Metal* | **SOCATA TB Series (Lycoming)** | ELA2 | X |  |
| **DE HAVILLAND**  **Support (Aircraft**  **with SAS)** | Beagle series 1. | *Metal* | **Beagle B.121 series 1 (Continental)** | ELA1 | X |  |
| **DE HAVILLAND**  **Support (Aircraft**  **with SAS)** | Beagle series 2/3. | *Metal* | **Beagle B.121 series 2/3 (Lycoming)** | ELA1 | X |  |

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| **DECOURT**  **(Aircraft with SAS)** | DMS 884-1 | *Wood* | **Decourt DMS 884 (Franklin)** | ELA1 | X |  |
| **DIAMOND AIRCRAFT**  **Industries** | DA 42 M-NG | *Composite* | **Diamond DA42 Series (Austro Engine)** | ELA2. MTOM >2T  with MÄM 42-659 and  MÄM 42-  678 and  OÄM 42-  260. Ref.:  TCDS | X |  |
| **DIAMOND AIRCRAFT**  **Industries** | DA 42 NG | *Composite* | **Diamond DA42 Series (Austro Engine)** | ELA2. MTOM >2T  with MÄM 42-659 and  MÄM 42-  678 and  OÄM 42-  260. Ref.:  TCDS | X |  |
| **DIAMOND AIRCRAFT**  **Industries** | DA 42 | *Composite* | **Diamond DA42 Series (Technify)** | ELA2 | X |  |
| **DIAMOND AIRCRAFT**  **Industries** | DA 42 M | *Composite* | **Diamond DA42 Series (Technify)** | ELA2 | X |  |
| **DIAMOND AIRCRAFT**  **Industries** | DA20-C1 | *Composite* | **Diamond DA20 (Continental)** | ELA1 | X |  |
| **DIAMOND AIRCRAFT**  **Industries** | DA20-A1 | *Composite* | **Diamond DA20/DV20 (Rotax)** | ELA1 | X |  |
| **DIAMOND AIRCRAFT**  **Industries** | DV 20 | *Composite* | **Diamond DA20/DV20 (Rotax)** | ELA1 | X |  |
| **DIAMOND AIRCRAFT**  **Industries** | DV 20 E | *Composite* | **Diamond DA20/DV20 (Rotax)** | ELA1 | X |  |
| **DIAMOND AIRCRAFT**  **Industries** | DA 40 NG | *Composite* | **Diamond DA40 (Austro Engine)** | ELA2 | X |  |
| **DIAMOND AIRCRAFT**  **Industries** | DA 40 | *Composite* | **Diamond DA40 (Lycoming)** | ELA1 | X |  |
| **DIAMOND AIRCRAFT**  **Industries** | DA 40 F | *Composite* | **Diamond DA40 (Lycoming)** | ELA1 | X |  |
| **DIAMOND AIRCRAFT**  **Industries** | DA 40 D | *Composite* | **Diamond DA40 D (Technify)** | ELA1 | X |  |
| **DIAMOND AIRCRAFT**  **Industries** | DA 50 C | *Composite* | **Diamond DA50 (Continental)** | ELA2 | X |  |

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| **DIAMOND AIRCRAFT**  **Industries** | DA 62 | *Composite* | **Diamond DA62 (Austro Engine)** |  |  | X |
| **DYNAC AEROSPACE**  **Corporation** | Aero Commander 100 | *Metal* | **Aerocommander 100 (Lycoming)** | ELA1 | X |  |
| **E.I.S Aircraft GmbH** | RS 180 | *Wood + Composite* | **RS 180 (Lycoming)** | ELA1 | X |  |
| **E.I.S. HOLDING**  **GmbH** | RS 180 | *Wood +*  *Composite* | **Sportavia Putzer RS180**  **(Lycoming)** | ELA1 | X |  |
| **EADS PZL ‘WARSZAWA-**  **OKECIE’ (Aircraft**  **with SAS)** | PZL-106  series | *Metal* | **PZL-106 Series (PZL)** |  |  | X |
| **EVEKTOR** | EV-97 VLA | *Metal* | **Evektor EV-97 (Rotax)** | ELA1 | X |  |
| **EVEKTOR** | SportStar RTC | *Metal* | **SportStar RTC (Rotax)** | ELA1 | X |  |
| **Extra Aerobatic**  **Aircraft GmbH** | EA 300 | *Composite* | **Extra EA-300 Series (Lycoming)** | ELA1 | X |  |
| **Extra Aerobatic Aircraft GmbH** | EA 300/200 | *Composite* | **Extra EA-300 Series (Lycoming)** | ELA1 | X |  |
| **Extra Aerobatic Aircraft GmbH** | EA 300/L | *Composite* | **Extra EA-300 Series (Lycoming)** | ELA1 | X |  |
| **Extra Aerobatic**  **Aircraft GmbH** | EA 300/LC | *Composite* | **Extra EA-300 Series (Lycoming)** | ELA1 | X |  |
| **Extra Aerobatic Aircraft GmbH** | EA 300/LT | *Composite* | **Extra EA-300 Series (Lycoming)** | ELA1 | X |  |
| **Extra Aerobatic**  **Aircraft GmbH** | EA 300/S | *Composite* | **Extra EA-300 Series (Lycoming)** | ELA1 | X |  |
| **Extra Aerobatic Aircraft GmbH** | EA 300/SC | *Composite* | **Extra EA-300 Series (Lycoming)** | ELA1 | X |  |
| **Extra Aerobatic**  **Aircraft GmbH** | EXTRA NG | *Composite* | **Extra NG (Lycomimg)** | ELA1 | X |  |
| **FFT GYROFLUG**  **(Aircraft with SAS)** | SC01 Series | Composite | **SC01 Series (Lycoming)** | ELA1 | X |  |
| **Flight Design general aviation GmbH** | F2-CS23 | *Composite* | **F2-CS23 (Rotax)** | ELA1 | X |  |
| **Flight Design general aviation**  **GmbH** | CTLS-ELA | Composite | **CTLS-ELA (Rotax)** | ELA1 | X |  |
| **FLS AEROSPACE**  **(Aircraft with**  **SAS)** | Club Sprint Sprint 160 | Metal | **Club Sprint/Sprint 160 (Lycoming)** | ELA1 | X |  |
| **FLS AEROSPACE**  **(Aircraft with**  **SAS)** | OA7 Series | Metal | **OA7 Optica Series (Lycoming)** | ELA2 | X |  |
| **FUJI Heavy Industries** | FA-200-160 | Metal | **Fuji FA-200 Series (Lycoming)** | ELA1 | X |  |

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| **FUJI Heavy Industries** | FA-200-180 | Metal | **Fuji FA-200 Series (Lycoming)** | ELA1 | X |  |
| **FUJI Heavy**  **Industries** | FA-200-  180AO | Metal | **Fuji FA-200 Series (Lycoming)** | ELA1 | X |  |
| **GA8 Airvan Pty Ltd** | GA8 | Metal | **Gippsland GA8 (Lycoming)** | ELA2 | X |  |
| **GA8 Airvan Pty Ltd** | GA8-TC 320 | Metal | **Gippsland GA8 (Lycoming)** | ELA2 | X |  |
| **Game Composite**  **LLC** | GB1  GameBird | Composite | **GameBird1 (Lycoming)** | ELA1 | X |  |
| **GARDAN (Aircraft with SAS)** | GY80 Series | Metal | **Gardan GY 80 (Lycoming)** | ELA1 | X |  |
| **GENERAL AVIA**  **Costruzioni Aeronautiche (Aircraft with**  **SAS)** | F.20 Pegaso | Metal | **General Avia F.20 Series (Continental)** |  |  | X |
| **GENERAL AVIA**  **Costruzioni Aeronautiche (Aircraft with**  **SAS)** | F.22 series | Metal | **General Avia F.22 (Lycoming)** | ELA1 | X |  |
| **GOMOLZIG FLUGZEUG- UND MASCHINENBAU**  **GmbH** | AS202/15 | Metal | **AS202 Series (Lycoming)** | ELA1 | X |  |
| **GOMOLZIG FLUGZEUG- UND MASCHINENBAU**  **GmbH** | AS202/15-1 | Metal | **AS202 Series (Lycoming)** | ELA1 | X |  |
| **GOMOLZIG FLUGZEUG- UND MASCHINENBAU**  **GmbH** | AS202/18A | Metal | **AS202 Series (Lycoming)** | ELA1 | X |  |
| **GOMOLZIG FLUGZEUG- UND MASCHINENBAU**  **GmbH** | AS202/18A1 | Metal | **AS202 Series (Lycoming)** | ELA1 | X |  |
| **GOMOLZIG FLUGZEUG- UND MASCHINENBAU**  **GmbH** | AS202/18A2 | Metal | **AS202 Series (Lycoming)** | ELA1 | X |  |
| **GOMOLZIG FLUGZEUG- UND MASCHINENBAU**  **GmbH** | AS202/18A3 | Metal | **AS202 Series (Lycoming)** | ELA1 | X |  |
| **GOMOLZIG FLUGZEUG- UND MASCHINENBAU**  **GmbH** | AS202/18A4 | Metal | **AS202 Series (Lycoming)** | ELA1 | X |  |

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| **GROB Aircraft AG** | G 115 | Composite | **Grob G115/120 Series (Lycoming)** | ELA1 | X |  |
| **GROB Aircraft AG** | G 115A | Composite | **Grob G115/120 Series**  **(Lycoming)** | ELA1 | X |  |
| **GROB Aircraft AG** | G 115B | Composite | **Grob G115/120 Series (Lycoming)** | ELA1 | X |  |
| **GROB Aircraft AG** | G 115C | Composite | **Grob G115/120 Series (Lycoming)** | ELA1 | X |  |
| **GROB Aircraft AG** | G 115C2 | Composite | **Grob G115/120 Series**  **(Lycoming)** | ELA1 | X |  |
| **GROB Aircraft AG** | G 115D | Composite | **Grob G115/120 Series (Lycoming)** | ELA1 | X |  |
| **GROB Aircraft AG** | G 115D2 | Composite | **Grob G115/120 Series**  **(Lycoming)** | ELA1 | X |  |
| **GROB Aircraft AG** | G 115E | Composite | **Grob G115/120 Series (Lycoming)** | ELA1 | X |  |
| **GROB Aircraft AG** | G 115EG | Composite | **Grob G115/120 Series (Lycoming)** | ELA1 | X |  |
| **GROB Aircraft AG** | G 115TA | Composite | **Grob G115/120 Series**  **(Lycoming)** | ELA2 | X |  |
| **GROB Aircraft AG** | G 120A | Composite | **Grob G115/120 Series (Lycoming)** | ELA2 | X |  |
| **GROB Aircraft AG** | G 120A-I | Composite | **Grob G115/120 Series**  **(Lycoming)** | ELA2 | X |  |
| **Hoffmann GmbH & Co. KG** | H 40 | Composite | **H 40 (Lycoming)** | ELA1 | X |  |
| **INSTYTUT LOTNICTWA** | I-23  ‘Manager’ | Composite | **Instytut Lotnictwa I-23 Manager (Lycoming)** | ELA1 | X |  |
| **INTERCEPTOR AIRCRAFT**  **Corporation** | 200D | Metal | **Aerocommander 200 (Continental)** | ELA2 | X |  |
| **ISSOIRE**  **AVIATION** | APM 20 | Composite | **Issoire APM 20/30 (Rotax)** | ELA1 | X |  |
| **ISSOIRE AVIATION** | APM 30 | Composite | **Issoire APM 20/30 (Rotax)** | ELA1 | X |  |
| **ISSOIRE**  **AVIATION** | APM 40 | Composite | **Issoire APM 40 (Continental)** | ELA1 | X |  |
| **ISSOIRE AVIATION** | APM41 | *Composite* | **Issoire APM 40 (Rotax)** | ELA1 | X |  |
| **LAVIA ARGENTINA S.A.**  **(LAVIASA)** | PA-25 | *Metal tubing Fabric* | **Piper PA-25 Series (Lycoming)** | ELA2 | X |  |
| **LAVIA ARGENTINA S.A.**  **(LAVIASA)** | PA-25-235 | *Metal tubing Fabric* | **Piper PA-25 Series (Lycoming)** | ELA2 | X |  |
| **LAVIA ARGENTINA S.A.**  **(LAVIASA)** | PA-25-260 | *Metal tubing Fabric* | **Piper PA-25 Series (Lycoming)** | ELA2 | X |  |
| **LEONARDO S.p.A.** | F260 | Metal | **Aermacchi F260 Series (Lycoming)** | ELA1 | X |  |

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| **LEONARDO S.p.A.** | F260B | Metal | **Aermacchi F260 Series (Lycoming)** | ELA1 | X |  |
| **LEONARDO S.p.A.** | F260C | Metal | **Aermacchi F260 Series**  **(Lycoming)** | ELA1 | X |  |
| **LEONARDO S.p.A.** | F260D | Metal | **Aermacchi F260 Series (Lycoming)** | ELA1 | X |  |
| **LEONARDO S.p.A.** | F260E | Metal | **Aermacchi F260 Series (Lycoming)** | ELA1 | X |  |
| **LEONARDO S.p.A.** | F260F | Metal | **Aermacchi F260 Series**  **(Lycoming)** | ELA1 | X |  |
| **LEONARDO S.p.A.** | S205-22/R | Metal | **SIAI-Marchetti S.205 (Franklin)** | ELA2 | X |  |
| **LEONARDO S.p.A.** | S205-18/F | Metal | **SIAI-Marchetti S.205/S.208 (Lycoming)** | ELA1 | X |  |
| **LEONARDO S.p.A.** | S205-18/R | Metal | **SIAI-Marchetti S.205/S.208**  **(Lycoming)** | ELA1 | X |  |
| **LEONARDO S.p.A.** | S205-20/F | Metal | **SIAI-Marchetti S.205/S.208 (Lycoming)** | ELA2 | X |  |
| **LEONARDO S.p.A.** | S205-20/R | Metal | **SIAI-Marchetti S.205/S.208 (Lycoming)** | ELA2 | X |  |
| **LEONARDO S.p.A.** | S208 | Metal | **SIAI-Marchetti S.205/S.208**  **(Lycoming)** | ELA2 | X |  |
| **LEONARDO S.p.A.** | S208A | Metal | **SIAI-Marchetti S.205/S.208 (Lycoming)** | ELA2 | X |  |
| **LIBERTY AEROSPACE**  **Incorporated** | XL-2 | Composite | **Liberty XL-2 (Continental)** | ELA1 | X |  |
| **Light Wing AG** | LightWing  AC4 | Metal tubing  Fabric | **Lightwing AC4 (Rotax)** | ELA1 | X |  |
| **Magnaghi Aeronautica**  **S.p.A.** | Sky Arrow 600 Sport | Composite | **III Sky Arrow 600 (Rotax)** | ELA1 | X |  |
| **Magnaghi Aeronautica**  **S.p.A. (INIZIATIVE INDUSTRIALI**  **ITALIANE)** | Sky Arrow 650 TC | Composite | **III Sky Arrow 650/710 (Rotax)** | ELA1 | X |  |
| **Magnaghi Aeronautica**  **S.p.A. (INIZIATIVE INDUSTRIALI**  **ITALIANE)** | Sky Arrow 650 TCN | Composite | **III Sky Arrow 650/710 (Rotax)** | ELA1 | X |  |
| **Magnaghi Aeronautica**  **S.p.A. (INIZIATIVE INDUSTRIALI**  **ITALIANE)** | Sky Arrow 650 TCNS | Composite | **III Sky Arrow 650/710 (Rotax)** | ELA1 | X |  |
| **Magnaghi Aeronautica**  **S.p.A. (INIZIATIVE** | Sky Arrow 650 TCS | Composite | **III Sky Arrow 650/710 (Rotax)** | ELA1 | X |  |

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| **INDUSTRIALI ITALIANE)** |  |  |  |  |  |  |
| **Magnaghi Aeronautica**  **S.p.A. (INIZIATIVE INDUSTRIALI**  **ITALIANE)** | Sky Arrow 710 RG | Composite | **III Sky Arrow 650/710 (Rotax)** | ELA1 | X |  |
| **MAULE AEROSPACE**  **TECHNOLOGY** | Bee Dee M-4 | Metal tubing Fabric | **Maule M4 (Continental)** | ELA1 | X |  |
| **MAULE AEROSPACE**  **TECHNOLOGY** | M-4 | Metal tubing Fabric | **Maule M4 (Continental)** | ELA1 | X |  |
| **MAULE AEROSPACE**  **TECHNOLOGY** | M-4-210 | Metal tubing Fabric | **Maule M4 (Continental)** | ELA1 | X |  |
| **MAULE AEROSPACE**  **TECHNOLOGY** | M-4-210C | Metal tubing Fabric | **Maule M4 (Continental)** | ELA1 | X |  |
| **MAULE AEROSPACE**  **TECHNOLOGY** | M-4C | Metal tubing Fabric | **Maule M4 (Continental)** | ELA1 | X |  |
| **MAULE AEROSPACE**  **TECHNOLOGY** | M-4S | Metal tubing Fabric | **Maule M4 (Continental)** | ELA1 | X |  |
| **MAULE AEROSPACE**  **TECHNOLOGY** | M-4T | Metal tubing Fabric | **Maule M4 (Continental)** | ELA1 | X |  |
| **MAULE AEROSPACE**  **TECHNOLOGY** | M-4-220 | Metal tubing Fabric | **Maule M4 (Franklin)** | ELA1 | X |  |
| **MAULE AEROSPACE**  **TECHNOLOGY** | M-4-220C | Metal tubing Fabric | **Maule M4 (Franklin)** | ELA1 | X |  |
| **MAULE AEROSPACE TECHNOLOGY** | M-4-220S | Metal tubing Fabric | **Maule M4 (Franklin)** | ELA1 | X |  |
| **MAULE AEROSPACE TECHNOLOGY** | M-4-180V | Metal tubing Fabric | **Maule M4 (Lycoming)** | ELA1 | X |  |
| **MAULE AEROSPACE TECHNOLOGY** | M-5-180C | Metal tubing Fabric | **Maule M5 (Lycoming)** | ELA1 | X |  |
| **MAULE AEROSPACE**  **TECHNOLOGY** | M-5-210C | Metal tubing Fabric | **Maule M5 (Lycoming)** | ELA1 | X |  |
| **MAULE AEROSPACE TECHNOLOGY** | M-5-235C | Metal tubing Fabric | **Maule M5 (Lycoming)** | ELA1 | X |  |

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| **MAULE AEROSPACE TECHNOLOGY** | M-6-235 | Metal tubing Fabric | **Maule M6 (Lycoming)** | ELA1 | X |  |
| **MAULE AEROSPACE TECHNOLOGY** | M-7-235 | Metal tubing Fabric | **Maule M7 Series (Lycoming)** | ELA1 | X |  |
| **MAULE AEROSPACE TECHNOLOGY** | M-7-235B | Metal tubing Fabric | **Maule M7 Series (Lycoming)** | ELA2 | X |  |
| **MAULE AEROSPACE TECHNOLOGY** | MT-7-235 | Metal tubing Fabric | **Maule M7 Series (Lycoming)** | ELA1 | X |  |
| **MAULE AEROSPACE TECHNOLOGY** | MT-7-235C | Metal tubing Fabric | **Maule M7 Series (Lycoming)** | ELA1 | X |  |
| **MAULE AEROSPACE TECHNOLOGY** | MX-7-160 | Metal + Metal tubing Fabric | Maule MX-7 (Lycoming) | ELA1. Wing is metal, fuselage is metal tubing with fabric. | X |  |
| **MAULE AEROSPACE TECHNOLOGY** | MX-7-180 | Metal + Metal tubing Fabric | **Maule MX-7 (Lycoming)** | ELA1. Wing is metal, fuselage is metal tubing with fabric. | X |  |
| **MAULE AEROSPACE TECHNOLOGY** | MX-7-180A | Metal + Metal tubing Fabric | **Maule MX-7 (Lycoming)** | ELA1. Wing is metal, fuselage is metal tubing with fabric. | X |  |
| **MAULE AEROSPACE TECHNOLOGY** | MX-7-180B | Metal + Metal tubing Fabric | **Maule MX-7 (Lycoming)** | ELA1. Wing is metal, fuselage is metal tubing with fabric. | X |  |
| **MAULE AEROSPACE TECHNOLOGY** | MX-7-180C | Metal + Metal tubing Fabric | **Maule MX-7 (Lycoming)** | ELA1. Wing is metal, fuselage is metal tubing with fabric. | X |  |
| **MAULE AEROSPACE TECHNOLOGY** | MX-7-235 | Metal + Metal tubing Fabric | **Maule MX-7 (Lycoming)** | ELA1. Wing is metal, fuselage is metal tubing with fabric. | X |  |
| **MAULE AEROSPACE TECHNOLOGY** | MXT-7-160 | Metal tubing Fabric | **Maule MX-7 (Lycoming)** | ELA1 | X |  |

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| **MAULE AEROSPACE TECHNOLOGY** | MXT-7-180 | Metal tubing Fabric | **Maule MX-7 (Lycoming)** | ELA1 | X |  |
| **MAULE AEROSPACE TECHNOLOGY** | MXT-7-180A | Metal tubing Fabric | **Maule MX-7 (Lycoming)** | ELA1 | X |  |
| **MOONEY AIRPLANE**  **Company** | M20K | Metal | **Mooney M20 (Continental)** | ELA2 | X |  |
| **MOONEY AIRPLANE**  **Company** | M20R | Metal | **Mooney M20 (Continental)** | ELA2 | X |  |
| **MOONEY AIRPLANE**  **Company** | M20S | Metal | **Mooney M20 (Continental)** | ELA2 | X |  |
| **MOONEY AIRPLANE**  **Company** | M20 | Metal + Wood | **Mooney M20/M20A (Lycoming)** | ELA2 | X |  |
| **MOONEY AIRPLANE**  **Company** | M20A | Metal + Wood | **Mooney M20/M20A (Lycoming)** | ELA2 | X |  |
| **MOONEY AIRPLANE**  **Company** | M20B | Metal | **Mooney M20B to M20S/M22 (Lycoming)** | ELA2 | X |  |
| **MOONEY AIRPLANE**  **Company** | M20C | Metal | **Mooney M20B to M20S/M22 (Lycoming)** | ELA2 | X |  |
| **MOONEY AIRPLANE**  **Company** | M20D | Metal | **Mooney M20B to M20S/M22 (Lycoming)** | ELA2 | X |  |
| **MOONEY AIRPLANE**  **Company** | M20E | Metal | **Mooney M20B to M20S/M22 (Lycoming)** | ELA2 | X |  |
| **MOONEY AIRPLANE**  **Company** | M20F | Metal | **Mooney M20B to M20S/M22 (Lycoming)** | ELA2 | X |  |
| **MOONEY AIRPLANE**  **Company** | M20G | Metal | **Mooney M20B to M20S/M22 (Lycoming)** | ELA2 | X |  |
| **MOONEY AIRPLANE**  **Company** | M20J | Metal | **Mooney M20B to M20S/M22 (Lycoming)** | ELA2 | X |  |
| **MOONEY AIRPLANE**  **Company** | M20M | Metal | **Mooney M20B to M20S/M22 (Lycoming)** | ELA2 | X |  |
| **MOONEY AIRPLANE**  **Company** | M22 | Metal | **Mooney M20B to M20S/M22 (Lycoming)** | ELA2 | X |  |
| **MOONEY AIRPLANE**  **Company** | M20L | Metal | **Mooney M20L (Porsche)** | ELA2 | X |  |

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| **OMA SUD SPA**  **Sky Technologies** | SKYCAR | Metal | **SKYCAR (Lycoming)** | ELA2 | X |  |
| **PIAGGIO Aero**  **Industries** | P.166 | Metal | **Piaggio P166 (Lycoming)** |  |  | X |
| **PIAGGIO Aero**  **Industries** | P.166 B | Metal | **Piaggio P166 (Lycoming)** |  |  | X |
| **PIAGGIO Aero**  **Industries** | P.166 C | Metal | **Piaggio P166 (Lycoming)** |  |  | X |
| **PIAGGIO Aero**  **Industries** | P.166 DL3 | Metal | **Piaggio P166 (Lycoming)** |  |  | X |
| **PIAGGIO Aero**  **Industries** | P.166 S | Metal | **Piaggio P166 (Lycoming)** |  |  | X |
| **PILATUS**  **AIRCRAFT** | PC-6 | Metal | **Pilatus PC-6 Series (Lycoming)** | ELA2 | X | X |
| **PILATUS AIRCRAFT** | PC-6/350 | Metal | **Pilatus PC-6 Series (Lycoming)** | ELA2 | X | X |
| **PILATUS AIRCRAFT** | PC-6/350-H1 | Metal | **Pilatus PC-6 Series (Lycoming)** | ELA2 | X | X |
| **PILATUS**  **AIRCRAFT** | PC-6/350-H2 | Metal | **Pilatus PC-6 Series (Lycoming)** | ELA2 | X | X |
| **PILATUS AIRCRAFT** | PC-6-H1 | Metal | **Pilatus PC-6 Series (Lycoming)** | ELA2 | X | X |
| **PILATUS**  **AIRCRAFT** | PC-6-H2 | Metal | **Pilatus PC-6 Series (Lycoming)** | ELA2 | X | X |
| **PIPER AIRCRAFT** | PA-23-235 | Metal | **Piper PA-23 Aztec (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-23-250 | Metal | **Piper PA-23 Aztec (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-E23-250 | Metal | **Piper PA-23 Aztec (Lycoming)** |  |  | X |
| **PIPER AIRCRAFT** | PA-24 | Metal | **Piper PA-24 Series (Lycoming)** | ELA1 | X |  |
| **PIPER AIRCRAFT** | PA-24-250 | Metal | **Piper PA-24 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-24-260 | Metal | **Piper PA-24 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-24-400 | Metal | **Piper PA-24 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-28-201T  (Turbo  Dakota) | Metal | **Piper PA-28 Series (Continental)** | ELA1 | X |  |
| **PIPER AIRCRAFT** | PA-28R-201T  (Turbo  Arrow III) | Metal | **Piper PA-28 Series (Continental)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-28RT-  201T (Turbo  Arrow IV) | Metal | **Piper PA-28 Series (Continental)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-28-140  (Cherokee  Cruiser) | Metal | **Piper PA-28 Series (Lycoming)** | ELA1 | X |  |
| **PIPER AIRCRAFT** | PA-28-150  (Cherokee) | Metal | **Piper PA-28 Series (Lycoming)** | ELA1 | X |  |
| **PIPER AIRCRAFT** | PA-28-151  (Cherokee  Warrior) | Metal | **Piper PA-28 Series (Lycoming)** | ELA1 | X |  |

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| **PIPER AIRCRAFT** | PA-28-160  (Cherokee) | Metal | **Piper PA-28 Series (Lycoming)** | ELA1 | X |  |
| **PIPER AIRCRAFT** | PA-28-161 | Metal | **Piper PA-28 Series (Lycoming)** | ELA1 | X |  |
| **PIPER AIRCRAFT** | PA-28-161  (Warrior II) | Metal | **Piper PA-28 Series (Lycoming)** | ELA1 | X |  |
| **PIPER AIRCRAFT** | PA-28-161  (Warrior III) | Metal | **Piper PA-28 Series (Lycoming)** | ELA1 | X |  |
| **PIPER AIRCRAFT** | PA-28-180  (Archer) | Metal | **Piper PA-28 Series (Lycoming)** | ELA1 | X |  |
| **PIPER AIRCRAFT** | PA-28-180  (Cherokee) | Metal | **Piper PA-28 Series (Lycoming)** | ELA1 | X |  |
| **PIPER AIRCRAFT** | PA-28-181  (Archer II) | Metal | **Piper PA-28 Series (Lycoming)** | ELA1 | X |  |
| **PIPER AIRCRAFT** | PA-28-181  (Archer III) | Metal | **Piper PA-28 Series (Lycoming)** | ELA1 | X |  |
| **PIPER AIRCRAFT** | PA-28-235  (Cher.  Pathfinder) | Metal | **Piper PA-28 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-28-236  (Dakota) | Metal | **Piper PA-28 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-28R-180  (Arrow) | Metal | **Piper PA-28 Series (Lycoming)** | ELA1 | X |  |
| **PIPER AIRCRAFT** | PA-28R-200  (Arrow II) | Metal | **Piper PA-28 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-28R-200  (Arrow) | Metal | **Piper PA-28 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-28R-201  (Arrow III) | Metal | **Piper PA-28 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-28RT-201  (Arrow IV) | Metal | **Piper PA-28 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-28S-160  (Cherokee) | Metal | **Piper PA-28 Series (Lycoming)** | ELA1 | X |  |
| **PIPER AIRCRAFT** | PA-28S-180  (Cherokee) | Metal | **Piper PA-28 Series (Lycoming)** | ELA1 | X |  |
| **PIPER AIRCRAFT** | PA-30 | Metal | **Piper PA-30 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-31 | Metal | **Piper PA-31 Series (Lycoming)** |  |  | X |
| **PIPER AIRCRAFT** | PA-31-300 | Metal | **Piper PA-31 Series (Lycoming)** |  |  | X |
| **PIPER AIRCRAFT** | PA-31-325 | Metal | **Piper PA-31 Series (Lycoming)** |  |  | X |
| **PIPER AIRCRAFT** | PA-31-350  (Chieftain) | Metal | **Piper PA-31 Series (Lycoming)** |  |  | X |
| **PIPER AIRCRAFT** | PA-31P  (Pressurized  Navajo) | Metal + Pressurised | **Piper PA-31P (Lycoming)** |  |  | X |
| **PIPER AIRCRAFT** | PA-31P-350  (Mojave) | Metal + Pressurised | **Piper PA-31P (Lycoming)** |  |  | X |
| **PIPER AIRCRAFT** | PA-32-260  (Cherokee  Six 260) | Metal | **Piper PA-32 Series (Lycoming)** | ELA2 | X |  |

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| **PIPER AIRCRAFT** | PA-32-300  (Cherokee Six 300) | Metal | **Piper PA-32 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-32-301  (Saratoga) | Metal | **Piper PA-32 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-32-301FT  (Piper 6X) | Metal | **Piper PA-32 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-32-301T  (Turbo  Saratoga) | Metal | **Piper PA-32 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-32- 301XTC  (Piper 6XT) | Metal | **Piper PA-32 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-32R-300  (Lance) | Metal | **Piper PA-32 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-32R-301  (Saratoga II  HP) | Metal | **Piper PA-32 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-32R-301  (Saratoga  SP) | Metal | **Piper PA-32 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-32R-301T  (Saratoga II  TC) | Metal | **Piper PA-32 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-32R-301T  (Turbo  SaratogaSP) | Metal | **Piper PA-32 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-32RT-300  (Lance II) | Metal | **Piper PA-32 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-32RT-  300T (Turbo  Lance II) | Metal | **Piper PA-32 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-32S-300  (Cher.Six  Seaplane) | Metal | **Piper PA-32 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-34-200T  (Seneca II) | Metal | **Piper PA-34 Series**  **(Continental)** |  |  | X |
| **PIPER AIRCRAFT** | PA-34-220T  (Seneca III) | Metal | **Piper PA-34 Series (Continental)** |  |  | X |
| **PIPER AIRCRAFT** | PA-34-220T  (Seneca IV) | Metal | **Piper PA-34 Series (Continental)** |  |  | X |
| **PIPER AIRCRAFT** | PA-34-220T  (Seneca V) | Metal | **Piper PA-34 Series**  **(Continental)** |  |  | X |
| **PIPER AIRCRAFT** | PA-34-200  (Seneca) | Metal | **Piper PA-34 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-36-285  (Normal  category) | Metal | **Piper PA-36 Series (Continental)** | ELA2 | X |  |

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| **PIPER AIRCRAFT** | PA-36-300  (Normal category) | Metal | **Piper PA-36 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-36-375  (Normal category) | Metal | **Piper PA-36 Series (Lycoming)** | ELA2 |  | X |
| **PIPER AIRCRAFT** | PA-38-112 | Metal | **Piper PA-38 Series (Lycoming)** | ELA1 | X |  |
| **PIPER AIRCRAFT** | PA-39 | Metal | **Piper PA-39/40 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-40 | Metal | **Piper PA-39/40 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-44-180  (Seminole) | Metal | **Piper PA-44 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-44-180T  (Turbo Seminole) | Metal | **Piper PA-44 Series (Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-46-310P | Metal + Pressurised | **Piper PA-46 Pressurised (Continental)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-46-350P  (Mirage) | Metal +  Pressurised | **Piper PA-46 Pressurised**  **(Lycoming)** | ELA2 | X |  |
| **PIPER AIRCRAFT** | PA-46R-350T  (Matrix) | Metal | **Piper PA-46 Series (Lycoming)** | ELA2 | X |  |
| **Pipistrel Vertical Solutions d.o.o.** | Virus SW 121 | Composite | **Pipistrel Virus (Rotax)** | ELA11 | X |  |
| **Pipistrel Vertical Solutions d.o.o.** | Virus SW 128 | Composite | **Pipistrel Virus Electro (Pipistrel E-811)** | ELA12 | X |  |
| **Polskie Zakłady**  **Lotnicze Sp. z o.o.** | PZL M18 | Metal | **PZL M 18 (PZL)** |  |  | X |
| **Polskie Zakłady**  **Lotnicze Sp. z o.o.** | PZL M18A | Metal | **PZL M 18 (PZL)** |  |  | X |
| **Polskie Zakłady**  **Lotnicze Sp. z o.o.** | PZL M18AS | Metal | **PZL M 18 (PZL)** |  |  | X |
| **Polskie Zakłady Lotnicze Sp. z o.o.** | PZL M18B | Metal | **PZL M 18 (PZL)** |  |  | X |
| **Polskie Zakłady Lotnicze Sp. z o.o.** | PZL M18BS | Metal | **PZL M 18 (PZL)** |  |  | X |
| **Polskie Zakłady**  **Lotnicze Sp. z o.o.** | PZL M26 01 | Metal | **PZL M 26 (Lycoming)** | ELA2 | X |  |
| **Polskie Zakłady Lotnicze Sp. z o.o.**  **(Aircrat with SAS)** | PZL M20 | Metal | **PZL M 20 (PZL)** |  |  | X |
| **PZL WARSZAWAOKEC IE S.A.** | PZL-104M  Wilga 2000 | Metal | **PZL-104 Wilga (Lycoming)** | ELA2 | X |  |

1 Electrical Virus variants certified (within the L2 licence privilege)

2 Classified as Group 3 per 66.A.5(1) par. 2, within L2 the licence privilege

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| **PZL WARSZAWAOKEC IE S.A.** | PZL-104MA  Wilga 2000 | Metal | PZL-104 Wilga (Lycoming) | ELA2 | X |  |
| **PZL WARSZAWAOKEC IE S.A.** | PZL-104MF  Wilga 2000 | Metal | PZL-104 Wilga (Lycoming) | ELA2 | X |  |
| **PZL WARSZAWAOKEC IE S.A.** | PZL-104MN  Wilga 2000 | Metal | PZL-104 Wilga (Lycoming) | ELA2 | X |  |
| **PZL WARSZAWAOKEC IE S.A.** | PZL-104  Wilga 32 | Metal | **PZL-104 Wilga Series (Continental)** | ELA2 | X |  |
| **PZL WARSZAWAOKEC IE S.A.** | PZL-104  Wilga 32A | Metal | **PZL-104 Wilga Series (Continental)** | ELA2 | X |  |
| **PZL WARSZAWAOKEC IE S.A.** | PZL-104  Wilga 35 | Metal | **PZL-104A Wilga (Ivchenko)** | ELA2 | X |  |
| **PZL WARSZAWAOKEC**  **IE S.A.** | PZL-104  Wilga 35A | Metal | **PZL-104A Wilga (Ivchenko)** | ELA2 | X |  |
| **PZL WARSZAWAOKEC**  **IE S.A.** | PZL-104  Wilga 80 | Metal | **PZL-104A Wilga (Ivchenko)** | ELA2 | X |  |
| **PZL WARSZAWAOKEC**  **IE S.A.** | PZL-110 KOLIBER | Metal | **PZL-110 Koliber (Franklin)** | ELA1 | X |  |
| **PZL WARSZAWAOKEC**  **IE S.A.** | PZL-KOLIBER 150 | Metal | **PZL-Koliber 150 Series (Lycoming)** | ELA1 | X |  |
| **PZL WARSZAWAOKEC**  **IE S.A.** | PZL-KOLIBER 150A | Metal | **PZL-Koliber 150 Series (Lycoming)** | ELA1 | X |  |
| **PZL WARSZAWAOKEC**  **IE S.A.** | PZL-KOLIBER 160A | Metal | **PZL-Koliber 160 (Lycoming)** | ELA1 | X |  |
| **Reims Aviation (Aircraft with**  **SAS)** | FTB337G | Metal | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** | Ref.: SAS.A.11  5. |  | X |
| **Reims Aviation (Aircraft with**  **SAS)** | FTB337GA | Metal | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** | Ref.: SAS.A.11  5. |  | X |
| **REVO, Inc** | LA-4A | Metal | **REVO C/LA-4 Series (Lycoming)** | ELA1 | X |  |
| **REVO, Inc** | LA-4P | Metal | **REVO C/LA-4 Series (Lycoming)** | ELA1 | X |  |
| **REVO, Inc** | Lake 250 | Metal | **REVO C/LA-4 Series (Lycoming)** | ELA2 | X |  |
| **REVO, Inc.** | LA-4-200 | Metal | **Lake C/LA Series (Lycoming)** | ELA1 | X |  |
| **RUAG AEROSPACE**  **Services GmbH** | Do 28 A-1 | Metal | **Do 28 Series (Lycoming)** |  |  | X |

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| **RUAG AEROSPACE**  **Services GmbH** | Do 28 A-1[R] | Metal | **Do 28 Series (Lycoming)** |  |  | X |
| **RUAG AEROSPACE**  **Services GmbH** | Do 28 B-1 | Metal | **Do 28 Series (Lycoming)** |  |  | X |
| **RUAG AEROSPACE**  **Services GmbH** | Do 28 D | Metal | **Do 28 Series (Lycoming)** |  |  | X |
| **RUAG AEROSPACE**  **Services GmbH** | Do 28 D-1 | Metal | **Do 28 Series (Lycoming)** |  |  | X |
| **RUAG AEROSPACE**  **Services GmbH** | Do 28 D-2 | Metal | **Do 28 Series (Lycoming)** |  |  | X |
| **SCHEIBE**  **Flugzeugbau** | SF 23 A | Wood + Metal tubing Fabric | **SF 23 Series (Continental)** | ELA1 | X |  |
| **SCHEIBE**  **Flugzeugbau** | SF 23 A1 | Wood + Metal tubing  Fabric | **SF 23 Series (Continental)** | ELA1 | X |  |
| **SCHEIBE**  **Flugzeugbau** | SF 23 B | Wood + Metal tubing  Fabric | **SF 23 Series (Continental)** | ELA1 | X |  |
| **SCHEIBE**  **Flugzeugbau (Aircraft with**  **SAS)** | SF 23 C | Wood + Metal tubing Fabric | **SF 23 Series (Lycoming)** | ELA1 | X |  |
| **SEASTAR CORP** | TSC-1A | Composite | **TSC Series (Lycoming)** | ELA1 | X |  |
| **SEASTAR CORP** | TSC-1A1 | Composite | **TSC Series (Lycoming)** | ELA1 | X |  |
| **SEASTAR CORP** | TSC-1A2 | Composite | **TSC Series (Lycoming)** | ELA1 | X |  |
| **Skyfox Aviation Ltd** | CA25 | Wood + Metal tubing  Fabric | **CA25 Series (Rotax)** | ELA1 | X |  |
| **Skyfox Aviation Ltd** | CA25N | Wood + Metal tubing  Fabric | **CA25 Series (Rotax)** | ELA1 | X |  |
| **SLINGSBY**  **Aviation** | T67A | Wood | **Slingsby T67A (Lycoming)** | ELA1 | X |  |
| **SLINGSBY**  **Aviation** | T67B Firefly | Composite | **Slingsby T67B/T67C/T67M Series (Lycoming)** | ELA1 | X |  |
| **SLINGSBY**  **Aviation** | T67C Firefly | Composite | **Slingsby T67B/T67C/T67M**  **Series (Lycoming)** | ELA1 | X |  |
| **SLINGSBY**  **Aviation** | T67M Firefly | Composite | **Slingsby T67B/T67C/T67M**  **Series (Lycoming)** | ELA1 | X |  |
| **SLINGSBY**  **Aviation** | T67M200  Firefly | Composite | **Slingsby T67B/T67C/T67M**  **Series (Lycoming)** | ELA1 | X |  |
| **SLINGSBY**  **Aviation** | T67M260  Firefly | Composite | **Slingsby T67B/T67C/T67M Series (Lycoming)** | ELA1 | X |  |

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| **SLINGSBY**  **Aviation** | T67M260-  T3A Firefly | Composite | **Slingsby T67B/T67C/T67M Series (Lycoming)** | ELA1 | X |  |
| **SLINGSBY**  **Aviation** | T67M-MKII  Firefly | Composite | **Slingsby T67B/T67C/T67M**  **Series (Lycoming)** | ELA1 | X |  |
| **SOCATA(Aircraft with SAS)** | RALLYE 235 CA | Metal | **SOCATA Rallye Series (Lycoming)** | ELA2 | X |  |
| **SOCATA (Aircraft with SAS)** | RALLYE 235 CA-M | Metal | **SOCATA Rallye Series (Lycoming)** | ELA2 | X |  |
| **SOCATA (Aircraft**  **with SAS)** | ST10 | Metal | **SOCATA ST10 (Lycoming)** | ELA2 | X |  |
| **SONACA AIRCRAFT S.A.** | S200 | Metal | **SONACA 200 (Rotax)** | ELA1 | X |  |
| **SONACA**  **AIRCRAFT S.A.** | S201 | *Metal* | **SONACA 200 (Rotax)** | ELA1 | X |  |
| **SST FLUGTECHNIK**  **GmbH** | EA 400 | Composite | **Extra EA-400 (Continental)** | ELA2 | X |  |
| **STEMME AG** | S15-1 | Composite | **Stemme ASP S15-1 (Rotax)** | ELA1 | X |  |
| **SUKHOI (Aircraft with SAS)** | Su-29 | Composite | **Sukhoi SU-29 (Vedeneyev)** | ELA2 | X |  |
| **SUKHOI (Aircraft**  **with SAS)** | Su-31 | Composite | **Sukhoi SU-31 (Vedeneyev)** | ELA1 | X |  |
| **SYMPHONY AIRCRAFT INDUSTRIES** | OMF-100- 160 | Metal | **Symphony OMF-100-160 (Lycoming)** | ELA1 | X |  |
| **TAYLORCRAFT 2000** | 19 | Wood + Metal tubing Fabric | **Taylorcraft 19 Series (Continental)** | ELA1 | X |  |
| **TAYLORCRAFT 2000** | F19 | Wood + Metal tubing Fabric | **Taylorcraft 19 Series (Continental)** | ELA1 | X |  |
| **TAYLORCRAFT 2000** | F21 | Wood + Metal tubing  Fabric | **Taylorcraft F21/F22 Series (Lycoming)** | ELA1 | X |  |
| **TAYLORCRAFT 2000** | F21A | Wood + Metal tubing Fabric | **Taylorcraft F21/F22 Series (Lycoming)** | ELA1 | X |  |
| **TAYLORCRAFT 2000** | F21B | Wood + Metal tubing Fabric | **Taylorcraft F21/F22 Series (Lycoming)** | ELA1 | X |  |
| **TAYLORCRAFT 2000** | F22 | Wood + Metal tubing  Fabric | **Taylorcraft F21/F22 Series (Lycoming)** | ELA1 | X |  |
| **TAYLORCRAFT 2000** | F22A | Wood + Metal tubing  Fabric | **Taylorcraft F21/F22 Series (Lycoming)** | ELA1 | X |  |
| **TAYLORCRAFT 2000** | F22B | Wood + Metal tubing  Fabric | **Taylorcraft F21/F22 Series (Lycoming)** | ELA1 | X |  |

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| **TAYLORCRAFT 2000** | F22C | Wood + Metal tubing Fabric | **Taylorcraft F21/F22 Series (Lycoming)** | ELA1 | X |  |
| **TECNAM**  **Costruzioni Aeronautiche** | P-Mentor | Metal | **Tecnam P2002 (Rotax)** | ELA1 | X |  |
| **TECNAM**  **Costruzioni Aeronautiche** | P2006T | Metal | **Tecnam P2006T (Rotax)** | ELA1 | X |  |
| **TECNAM**  **Costruzioni Aeronautiche** | P2010 TDI | *Composite + Metal* | **Tecnam P2010 (Continental)** | ELA1 | X |  |
| **TECNAM**  **Costruzioni Aeronautiche** | P92-JS | Metal | **Tecnam P92 (Rotax)** | ELA1 | X |  |
| **TECNAM**  **Costruzioni Aeronautiche** | P2002-JF | Metal | **Tecnam P2002 (Rotax)** | ELA1 | X |  |
| **TECNAM**  **Costruzioni**  **Aeronautiche** | P2002-JR | Metal | **Tecnam P2002 (Rotax)** | ELA1 | X |  |
| **TECNAM**  **Costruzioni**  **Aeronautiche** | P2008 JC | Composite + Metal | **Tecnam P2008 (Rotax)** | ELA1 | X |  |
| **TECNAM**  **Costruzioni**  **Aeronautiche** | P2010 | Composite + Metal | **Tecnam P2010 (Lycoming)** | ELA1 | X |  |
| **TECNAM**  **Costruzioni**  **Aeronautiche** | P2012  Traveller | Metal | **Tecnam P2012 (Lycoming)** |  |  | X |
| **TECNAM**  **Costruzioni**  **Aeronautiche** | P92-J | Metal | **Tecnam P92 (Rotax)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | E33 | Metal | **Beech 33 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | E33A | Metal | **Beech 33 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | E33C | Metal | **Beech 33 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | F33 | Metal | **Beech 33 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | F33A | Metal | **Beech 33 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | F33C | Metal | **Beech 33 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | G33 | Metal | **Beech 33 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 35-33 | Metal | **Beech 35 Series (Continental)** | ELA2 | X |  |

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| **TEXTRON AVIATION Inc.** | 35-A33 | Metal | **Beech 35 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 35-B33 | Metal | **Beech 35 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 35-C33 | Metal | **Beech 35 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 35-C33A | Metal | **Beech 35 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | H35 | Metal | **Beech 35 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | J35 | Metal | **Beech 35 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | K35 | Metal | **Beech 35 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | M35 | Metal | **Beech 35 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | N35 | Metal | **Beech 35 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | P35 | Metal | **Beech 35 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | S35 | Metal | **Beech 35 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | V35 | Metal | **Beech 35 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | V35A | Metal | **Beech 35 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | V35B | Metal | **Beech 35 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 36 | Metal | **Beech 36 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | A36 | Metal | **Beech 36 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | A36TC | Metal | **Beech 36 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | B36TC | Metal | **Beech 36 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | G36 | Metal | **Beech 36 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | D55 | Metal | **Beech 55 Series (Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | D55A | Metal | **Beech 55 Series (Continental)** |  |  | X |
| **TEXTRON**  **AVIATION Inc.** | E55 | Metal | **Beech 55 Series (Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | E55A | Metal | **Beech 55 Series (Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 56TC | Metal | **Beech 56 Series (Lycoming)** |  |  | X |

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| **TEXTRON AVIATION Inc.** | A56TC | Metal | **Beech 56 Series (Lycoming)** |  |  | X |
| **TEXTRON**  **AVIATION Inc.** | 58 | Metal | **Beech 58 Series (Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 58A | Metal | **Beech 58 Series (Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | G58 | Metal | **Beech 58 Series (Continental)** |  |  | X |
| **TEXTRON**  **AVIATION Inc.** | 65 | Metal | **Beech 65-80 Series (Lycoming)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 70 | Metal | **Beech 65-80 Series (Lycoming)** |  |  | X |
| **TEXTRON**  **AVIATION Inc.** | 65-80 | Metal | **Beech 65-80 Series (Lycoming)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 65-88 | Metal | **Beech 65-80 Series (Lycoming)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 65-A80 | Metal | **Beech 65-80 Series (Lycoming)** |  |  | X |
| **TEXTRON**  **AVIATION Inc.** | 65-A80-8800 | Metal | **Beech 65-80 Series (Lycoming)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 65-B80 | Metal | **Beech 65-80 Series (Lycoming)** |  |  | X |
| **TEXTRON**  **AVIATION Inc.** | A65 | Metal | **Beech 65-80 Series (Lycoming)** |  |  | X |
| **TEXTRON AVIATION Inc.** | A65-8200 | Metal | **Beech 65-80 Series (Lycoming)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 95-B55 | Metal | **Beech 95 Series (Continental)** |  |  | X |
| **TEXTRON**  **AVIATION Inc.** | 95-B55A | Metal | **Beech 95 Series (Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 95-B55B | Metal | **Beech 95 Series (Continental)** |  |  | X |
| **TEXTRON**  **AVIATION Inc.** | 95-C55 | Metal | **Beech 95 Series (Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 95-C55A | Metal | **Beech 95 Series (Continental)** |  |  | X |
| **TEXTRON AVIATION Inc** | 95 | Metal | **Beech 95 Series (Lycoming)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc** | 95-55 | Metal | **Beech 95 Series (Lycoming)** |  |  | X |
| **TEXTRON AVIATION Inc** | 95-A55 | Metal | **Beech 95 Series (Lycoming)** |  |  | X |
| **TEXTRON**  **AVIATION Inc** | B95 | Metal | **Beech 95 Series (Lycoming)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc** | B95A | Metal | **Beech 95 Series (Lycoming)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc** | D95A | Metal | **Beech 95 Series (Lycoming)** | ELA2 | X |  |

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| **TEXTRON AVIATION Inc** | E95 | Metal | **Beech 95 Series (Lycoming)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 175 | Metal | **Cessna 175 Series (Continental)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | 175A | Metal | **Cessna 175 Series (Continental)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | 175B | Metal | **Cessna 175 Series (Continental)** | ELA1 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 175C | Metal | **Cessna 175 Series (Continental)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | 177 | Metal | **Cessna 177 Series (Lycoming)** | ELA1 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 177A | Metal | **Cessna 177 Series (Lycoming)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | 177B | Metal | **Cessna 177 Series (Lycoming)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | 177RG | Metal | **Cessna 177 Series (Lycoming)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 180 | Metal | **Cessna 180 Series (Continental)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | 180A | Metal | **Cessna 180 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 180B | Metal | **Cessna 180 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 180C | Metal | **Cessna 180 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 180D | Metal | **Cessna 180 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 180E | Metal | **Cessna 180 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 180F | Metal | **Cessna 180 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 180G | Metal | **Cessna 180 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 180H | Metal | **Cessna 180 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 180J | Metal | **Cessna 180 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 180K | Metal | **Cessna 180 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 185 | Metal | **Cessna 185 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 185A | Metal | **Cessna 185 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 185B | Metal | **Cessna 185 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 185C | Metal | **Cessna 185 Series (Continental)** | ELA2 | X |  |

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| **TEXTRON AVIATION Inc.** | 185D | Metal | **Cessna 185 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 185E | Metal | **Cessna 185 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | A185E | Metal | **Cessna 185 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | A185F | Metal | **Cessna 185 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 188 | Metal | **Cessna 188 (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 188A | Metal | **Cessna 188 (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 188B | Metal | **Cessna 188 (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | A188 | Metal | **Cessna 188 (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | A188A | Metal | **Cessna 188 (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | A188B | Metal | **Cessna 188 (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | T188C | Metal | **Cessna 188 (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 206 | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | P206 | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | P206A | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | P206B | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | P206C | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | P206D | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | P206E | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | TP206A | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | TP206B | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | TP206C | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | TP206D | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | TP206E | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | TU206A | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |

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| **TEXTRON AVIATION Inc.** | TU206B | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | TU206C | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | TU206D | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | TU206E | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | TU206F | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | TU206G | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | U206 | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | U206A | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | U206B | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | U206C | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | U206D | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | U206E | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | U206F | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | U206G | Metal | **Cessna 206 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 206H | Metal | **Cessna 206 Series (Lycoming)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | T206H | Metal | **Cessna 206 Series (Lycoming)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 207 | Metal | **Cessna 207 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 207A | Metal | **Cessna 207 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | T207 | Metal | **Cessna 207 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | T207A | Metal | **Cessna 207 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 210 | Metal | **Cessna 210 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 210-5 (205) | Metal | **Cessna 210 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 210-5A (205A) | Metal | **Cessna 210 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 210A | Metal | **Cessna 210 Series (Continental)** | ELA2 | X |  |

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| **TEXTRON AVIATION Inc.** | 210B | Metal | **Cessna 210 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 210C | Metal | **Cessna 210 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 210D | Metal | **Cessna 210 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 210E | Metal | **Cessna 210 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 210F | Metal | **Cessna 210 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 210G | Metal | **Cessna 210 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 210H | Metal | **Cessna 210 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 210J | Metal | **Cessna 210 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 210K | Metal | **Cessna 210 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 210L | Metal | **Cessna 210 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 210M | Metal | **Cessna 210 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 210N | Metal | **Cessna 210 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 210R | Metal | **Cessna 210 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 310 | Metal | **Cessna 310/320 Series (Continental)** |  |  | X |
| **TEXTRON**  **AVIATION Inc.** | 320 | Metal | **Cessna 310/320 Series**  **(Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 310B | Metal | **Cessna 310/320 Series (Continental)** |  |  | X |
| **TEXTRON**  **AVIATION Inc.** | 310C | Metal | **Cessna 310/320 Series**  **(Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 310D | Metal | **Cessna 310/320 Series (Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 310F | Metal | **Cessna 310/320 Series (Continental)** |  |  | X |
| **TEXTRON**  **AVIATION Inc.** | 310G | Metal | **Cessna 310/320 Series**  **(Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 310H | Metal | **Cessna 310/320 Series (Continental)** |  |  | X |
| **TEXTRON**  **AVIATION Inc.** | 310I | Metal | **Cessna 310/320 Series**  **(Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 310J | Metal | **Cessna 310/320 Series (Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 310J-1 | Metal | **Cessna 310/320 Series (Continental)** |  |  | X |

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| **TEXTRON AVIATION Inc.** | 310K | Metal | **Cessna 310/320 Series (Continental)** |  |  | X |
| **TEXTRON**  **AVIATION Inc.** | 310L | Metal | **Cessna 310/320 Series**  **(Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 310N | Metal | **Cessna 310/320 Series (Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 310P | Metal | **Cessna 310/320 Series (Continental)** |  |  | X |
| **TEXTRON**  **AVIATION Inc.** | 310Q | Metal | **Cessna 310/320 Series**  **(Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 310R | Metal | **Cessna 310/320 Series (Continental)** |  |  | X |
| **TEXTRON**  **AVIATION Inc.** | 320-1 | Metal | **Cessna 310/320 Series**  **(Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 320A | Metal | **Cessna 310/320 Series (Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 320B | Metal | **Cessna 310/320 Series (Continental)** |  |  | X |
| **TEXTRON**  **AVIATION Inc.** | 320C | Metal | **Cessna 310/320 Series**  **(Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 320D | Metal | **Cessna 310/320 Series (Continental)** |  |  | X |
| **TEXTRON**  **AVIATION Inc.** | 320E | Metal | **Cessna 310/320 Series**  **(Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 320F | Metal | **Cessna 310/320 Series (Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | E310H | Metal | **Cessna 310/320 Series (Continental)** |  |  | X |
| **TEXTRON**  **AVIATION Inc.** | E310J | Metal | **Cessna 310/320 Series**  **(Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | T310P | Metal | **Cessna 310/320 Series (Continental)** |  |  | X |
| **TEXTRON**  **AVIATION Inc.** | T310Q | Metal | **Cessna 310/320 Series**  **(Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | T310R | Metal | **Cessna 310/320 Series (Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 321 | Metal | **Cessna 321 (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 335 | Metal | **Cessna 335 (Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 336 | Metal | **Cessna 336 (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 340 | Metal +  Pressurised | **Cessna 340 (Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 340A | Metal + Pressurised | **Cessna 340 (Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 402C | Composite | **Cessna 400 Series (Continental)** |  | X |  |

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| **TEXTRON AVIATION Inc.** | 414A | Composite | **Cessna 400 Series (Continental)** |  | X |  |
| **TEXTRON**  **AVIATION Inc.** | 421B | Composite | **Cessna 400 Series (Continental)** |  | X |  |
| **TEXTRON AVIATION Inc.** | 421C | Composite | **Cessna 400 Series (Continental)** |  | X |  |
| **TEXTRON AVIATION Inc.** | 404 | Composite | **Cessna 400 Series (Continental)** |  | X |  |
| **TEXTRON**  **AVIATION Inc.** | 401 | Composite | **Cessna 400 Series (Continental)** |  | X |  |
| **TEXTRON AVIATION Inc.** | 402 | Composite | **Cessna 400 Series (Continental)** |  | X |  |
| **TEXTRON**  **AVIATION Inc.** | 411 | Composite | **Cessna 400 Series (Continental)** |  | X |  |
| **TEXTRON AVIATION Inc.** | 414 | Composite | **Cessna 400 Series (Continental)** |  | X |  |
| **TEXTRON AVIATION Inc.** | 421 | Composite | **Cessna 400 Series (Continental)** |  | X |  |
| **TEXTRON**  **AVIATION Inc.** | 401A | Composite | **Cessna 400 Series (Continental)** |  | X |  |
| **TEXTRON AVIATION Inc.** | 401B | Composite | **Cessna 400 Series (Continental)** |  | X |  |
| **TEXTRON**  **AVIATION Inc.** | 402A | Composite | **Cessna 400 Series (Continental)** |  | X |  |
| **TEXTRON AVIATION Inc.** | 402B | Composite | **Cessna 400 Series (Continental)** |  | X |  |
| **TEXTRON AVIATION Inc.** | LC40-550FG | Composite | **Cessna C300/C350/C400 (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | LC41-550FG | Composite | **Cessna C300/C350/C400**  **(Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | LC42-550FG | Composite | **Cessna C300/C350/C400 (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | T240 | Composite | **Cessna C300/C350/C400**  **(Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | P210N | Metal + Pressurised | **Cessna P210 (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | P210R | Metal + Pressurised | **Cessna P210 (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | T210F | Metal | **Cessna T210 (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | T210G | Metal | **Cessna T210 (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | T210H | Metal | **Cessna T210 (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | T210J | Metal | **Cessna T210 (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | T210K | Metal | **Cessna T210 (Continental)** | ELA2 | X |  |

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| **TEXTRON AVIATION Inc.** | T210L | Metal | **Cessna T210 (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | T210M | Metal | **Cessna T210 (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | T210N | Metal | **Cessna T210 (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | T210R | Metal | **Cessna T210 (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | T303 | Metal | **Cessna T303 (Continental)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 150 | Metal | **Cessna/Reims-Cessna 150/F150 Series (Continental)** | ELA1 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 150A | Metal | **Cessna/Reims-Cessna**  **150/F150 Series (Continental)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | 150B | Metal | **Cessna/Reims-Cessna 150/F150 Series (Continental)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | 150C | Metal | **Cessna/Reims-Cessna 150/F150 Series (Continental)** | ELA1 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 150D | Metal | **Cessna/Reims-Cessna**  **150/F150 Series (Continental)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | 150E | Metal | **Cessna/Reims-Cessna 150/F150 Series (Continental)** | ELA1 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 150F | Metal | **Cessna/Reims-Cessna**  **150/F150 Series (Continental)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | 150G | Metal | **Cessna/Reims-Cessna 150/F150 Series (Continental)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | 150H | Metal | **Cessna/Reims-Cessna 150/F150 Series (Continental)** | ELA1 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 150J | Metal | **Cessna/Reims-Cessna**  **150/F150 Series (Continental)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | 150K | Metal | **Cessna/Reims-Cessna 150/F150 Series (Continental)** | ELA1 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 150L | Metal | **Cessna/Reims-Cessna**  **150/F150 Series (Continental)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | 150M | Metal | **Cessna/Reims-Cessna 150/F150 Series (Continental)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | A150K | Metal | **Cessna/Reims-Cessna 150/F150 Series (Continental)** | ELA1 | X |  |
| **TEXTRON**  **AVIATION Inc.** | A150L | Metal | **Cessna/Reims-Cessna**  **150/F150 Series (Continental)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | A150M | Metal | **Cessna/Reims-Cessna 150/F150 Series (Continental)** | ELA1 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 152 | Metal | **Cessna/Reims-Cessna**  **152/F152 Series (Lycoming)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | A152 | Metal | **Cessna/Reims-Cessna 152/F152 Series (Lycoming)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | 172 | Metal | **Cessna/Reims-Cessna 172/F172 Series (Continental)** | ELA1 | X |  |

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| **TEXTRON AVIATION Inc.** | 172A | Metal | **Cessna/Reims-Cessna 172/F172 Series (Continental)** | ELA1 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 172B | Metal | **Cessna/Reims-Cessna**  **172/F172 Series (Continental)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | 172C | Metal | **Cessna/Reims-Cessna 172/F172 Series (Continental)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | 172D | Metal | **Cessna/Reims-Cessna 172/F172 Series (Continental)** | ELA1 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 172E | Metal | **Cessna/Reims-Cessna**  **172/F172 Series (Continental)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | 172F | Metal | **Cessna/Reims-Cessna 172/F172 Series (Continental)** | ELA1 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 172G | Metal | **Cessna/Reims-Cessna**  **172/F172 Series (Continental)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | 172H | Metal | **Cessna/Reims-Cessna 172/F172 Series (Continental)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | P172D | Metal | **Cessna/Reims-Cessna 172/F172 Series (Continental)** | ELA1 | X |  |
| **TEXTRON**  **AVIATION Inc.** | R172E | Metal | **Cessna/Reims-Cessna**  **172/F172 Series (Continental)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | R172F | Metal | **Cessna/Reims-Cessna 172/F172 Series (Continental)** | ELA1 | X |  |
| **TEXTRON**  **AVIATION Inc.** | R172G | Metal | **Cessna/Reims-Cessna**  **172/F172 Series (Continental)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | R172H | Metal | **Cessna/Reims-Cessna 172/F172 Series (Continental)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | R172J | Metal | **Cessna/Reims-Cessna 172/F172 Series (Continental)** | ELA1 | X |  |
| **TEXTRON**  **AVIATION Inc.** | R172K | Metal | **Cessna/Reims-Cessna**  **172/F172 Series (Continental)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | 172I | Metal | **Cessna/Reims-Cessna 172/F172 Series (Lycoming)** | ELA1 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 172K | Metal | **Cessna/Reims-Cessna**  **172/F172 Series (Lycoming)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | 172L | Metal | **Cessna/Reims-Cessna 172/F172 Series (Lycoming)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | 172M | Metal | **Cessna/Reims-Cessna 172/F172 Series (Lycoming)** | ELA1 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 172N | Metal | **Cessna/Reims-Cessna**  **172/F172 Series (Lycoming)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | 172P | Metal | **Cessna/Reims-Cessna 172/F172 Series (Lycoming)** | ELA1 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 172Q | Metal | **Cessna/Reims-Cessna**  **172/F172 Series (Lycoming)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | 172R | Metal | **Cessna/Reims-Cessna 172/F172 Series (Lycoming)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | 172RG | Metal | **Cessna/Reims-Cessna 172/F172 Series (Lycoming)** | ELA2 | X |  |

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| **TEXTRON AVIATION Inc.** | 172S | Metal | **Cessna/Reims-Cessna 172/F172 Series (Lycoming)** | ELA1 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 182 | Metal | **Cessna/Reims-Cessna**  **182/F182 Series (Continental)** | ELA1 | X |  |
| **TEXTRON AVIATION Inc.** | 182A | Metal | **Cessna/Reims-Cessna 182/F182 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 182B | Metal | **Cessna/Reims-Cessna 182/F182 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 182C | Metal | **Cessna/Reims-Cessna**  **182/F182 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 182D | Metal | **Cessna/Reims-Cessna 182/F182 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 182E | Metal | **Cessna/Reims-Cessna**  **182/F182 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 182F | Metal | **Cessna/Reims-Cessna 182/F182 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 182G | Metal | **Cessna/Reims-Cessna 182/F182 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 182H | Metal | **Cessna/Reims-Cessna**  **182/F182 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 182J | Metal | **Cessna/Reims-Cessna 182/F182 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 182K | Metal | **Cessna/Reims-Cessna**  **182/F182 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 182L | Metal | **Cessna/Reims-Cessna 182/F182 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 182M | Metal | **Cessna/Reims-Cessna 182/F182 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 182N | Metal | **Cessna/Reims-Cessna**  **182/F182 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 182P | Metal | **Cessna/Reims-Cessna 182/F182 Series (Continental)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 182Q | Metal | **Cessna/Reims-Cessna**  **182/F182 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 182R | Metal | **Cessna/Reims-Cessna 182/F182 Series (Continental)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | R182 | Metal | **Cessna/Reims-Cessna 182/F182 Series (Lycoming)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | T182T | Metal | **Cessna/Reims-Cessna**  **182/F182 Series (Lycoming)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 182S | Metal | **Cessna/Reims-Cessna 182/F182 Series (Lycoming)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | 182T | Metal | **Cessna/Reims-Cessna**  **182/F182 Series (Lycoming)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | T337H-SP | Metal | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 337 | Metal | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** | ELA2 | X |  |

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| **TEXTRON AVIATION Inc.** | 337A | Metal | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 337B | Metal | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 337C | Metal | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 337D | Metal | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | 337E | Metal | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 337F | Metal | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 337G | Metal | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** |  |  | X |
| **TEXTRON AVIATION Inc.** | 337H | Metal | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** |  |  | X |
| **TEXTRON AVIATION Inc.** | M337B | Metal | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | T337B | Metal | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** | ELA2 | X |  |
| **TEXTRON AVIATION Inc.** | T337C | Metal | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** |  |  | X |
| **TEXTRON AVIATION Inc.** | T337D | Metal | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** |  |  | X |
| **TEXTRON AVIATION Inc.** | T337E | Metal | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** |  |  | X |
| **TEXTRON AVIATION Inc.** | T337F | Metal | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** |  |  | X |
| **TEXTRON AVIATION Inc.** | T337G | Metal | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** |  |  | X |
| **TEXTRON AVIATION Inc.** | T337H | Metal | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** |  |  | X |
| **TEXTRON AVIATION Inc.** | P337H | Metal + Pressurised | **Cessna/Reims-Cessna 337 Series (Continental)**  **(not pressurised)** |  |  | X |

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| **TEXTRON AVIATION Inc.** | T182 | Metal | **Cessna/Reims-Cessna T182 Series (Lycoming)** | ELA2 | X |  |
| **TEXTRON**  **AVIATION Inc.** | TR182 | Metal | **Cessna/Reims-Cessna T182**  **Series (Lycoming)** | ELA2 | X |  |
| **THRUSH AIRCRAFT** | S2R | Metal | **Thrush S2R Series (PW R1340)** | The Model S2R also designated as S-2R or S2-R. |  | X |
| **THRUSH**  **AIRCRAFT** | S2R-R3S | Metal | **Thrush S2R (Wsk PZL-3S)** |  |  | X |
| **THRUSH**  **AIRCRAFT** | S2R-R1340 | Metal | **Thrush S2R Series**  **(PW R1340)** |  |  | X |
| **THRUSH AIRCRAFT** | S2R-R1820 | Metal | **Thrush S2R Series (Wright R-1820)** |  |  | X |
| **TOMARK, s.r.o.** | Viper SD-4 RTC | Metal | **Tomark Viper SD-4 (Rotax)** | ELA1 | X |  |
| **TOMARK, s.r.o.** | Viper SD-4 Night-VFR | Metal | **Tomark Viper SD-4 (Rotax)** | ELA1.  Restricted TC. | X |  |
| **TRUE FLIGHT**  **Holdings** | AA-1 | Metal | **Grumman/American AA-1**  **Series (Lycoming)** | ELA1 | X |  |
| **TRUE FLIGHT**  **Holdings** | AA-1A | Metal | **Grumman/American AA-1 Series (Lycoming)** | ELA1 | X |  |
| **TRUE FLIGHT**  **Holdings** | AA-1B | Metal | **Grumman/American AA-1**  **Series (Lycoming)** | ELA1 | X |  |
| **TRUE FLIGHT**  **Holdings** | AA-1C | Metal | **Grumman/American AA-1 Series (Lycoming)** | ELA1 | X |  |
| **TRUE FLIGHT**  **Holdings** | AA-5 | Metal | **Grumman/American AA-5 Series (Lycoming)** | ELA1 | X |  |
| **TRUE FLIGHT**  **Holdings** | AA-5A | Metal | **Grumman/American AA-5**  **Series (Lycoming)** | ELA1 | X |  |
| **TRUE FLIGHT**  **Holdings** | AA-5B | Metal | **Grumman/American AA-5**  **Series (Lycoming)** | ELA1 | X |  |
| **TRUE FLIGHT**  **Holdings** | AG-5B | Metal | **Grumman/American AA-5**  **Series (Lycoming)** | ELA1 | X |  |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 500A | Metal | **Twin Commander 500 Series (Continental)** |  |  | X |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 500 | Metal | **Twin Commander 500 Series (Lycoming)** |  |  | X |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 520 | Metal | **Twin Commander 500 Series (Lycoming)** |  |  | X |
| **TWIN COMMANDER** | 560 | Metal | **Twin Commander 500 Series (Lycoming)** |  |  | X |

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| **AIRCRAFT**  **Corporation** |  |  |  |  |  |  |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 500B | Metal | **Twin Commander 500 Series (Lycoming)** |  |  | X |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 500S | Metal | **Twin Commander 500 Series (Lycoming)** |  |  | X |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 500U | Metal | **Twin Commander 500 Series (Lycoming)** |  |  | X |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 560A | Metal | **Twin Commander 500 Series (Lycoming)** |  |  | X |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 560E | Metal | **Twin Commander 500 Series (Lycoming)** |  |  | X |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 685 | Metal + Pressurised | **Twin Commander 600 Series (Continental)** |  |  | X |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 680 | Metal | **Twin Commander 600 Series (Lycoming)** |  |  | X |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 560F | Metal | **Twin Commander 600 Series (Lycoming)** |  |  | X |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 680E | Metal | **Twin Commander 600 Series (Lycoming)** |  |  | X |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 680F | Metal | **Twin Commander 600 Series (Lycoming)** |  |  | X |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 680FL | Metal | **Twin Commander 600 Series (Lycoming)** |  |  | X |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 720 | Metal + Pressurised | **Twin Commander 600 Series (Lycoming)** |  |  | X |

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| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 680FL(P) | Metal + Pressurised | **Twin Commander 600 Series (Lycoming)** |  |  | X |
| **TWIN COMMANDER AIRCRAFT**  **Corporation** | 700 | Metal + Pressurised | **Twin Commander 700 Series (Lycoming)** |  |  | X |
| **VULCANAIR** | P.68  ‘Observer 2’ | Metal | **Vulcanair P.68 Series (Lycoming)** |  |  | X |
| **VULCANAIR** | P.68  ‘Observer’ | Metal | **Vulcanair P.68 Series (Lycoming)** | ELA2 | X |  |
| **VULCANAIR** | P.68 ‘Victor’ | Metal | **Vulcanair P.68 Series**  **(Lycoming)** | ELA2 | X |  |
| **VULCANAIR** | P.68B  ‘Victor’ | Metal | **Vulcanair P.68 Series (Lycoming)** | ELA2 | X |  |
| **VULCANAIR** | P.68C | Metal | **Vulcanair P.68 Series**  **(Lycoming)** | ELA2 | X |  |
| **VULCANAIR** | P.68C-TC | Metal | **Vulcanair P.68 Series (Lycoming)** | ELA2 | X |  |
| **VULCANAIR** | P.68R  ‘Victor’ | Metal | **Vulcanair P.68 Series**  **(Lycoming)** | ELA2 | X |  |
| **VULCANAIR** | P.68TC  ‘Observer’ | Metal | **Vulcanair P.68 Series (Lycoming)** | ELA2 | X |  |
| **VULCANAIR** | P.64 ‘Oscar’ | Metal | **Vulcanair P.64**  **series/V1.0/V1.1 (Lycoming)** | ELA1 | X |  |
| **VULCANAIR** | P.64B ‘Oscar  200’ | Metal | **Vulcanair P.64**  **series/V1.0/V1.1 (Lycoming)** | ELA1 | X |  |
| **VULCANAIR** | P.64B ‘Oscar B 1155’ | Metal | **Vulcanair P.64 series/V1.0/V1.1 (Lycoming)** | ELA1 | X |  |
| **VULCANAIR** | P.64B ‘Oscar B’ | Metal | **Vulcanair P.64 series/V1.0/V1.1 (Lycoming)** | ELA1 | X |  |
| **VULCANAIR** | VULCANAIR V1.0  (formerly P.64B ‘OSCAR B  1155’) | Metal | **Vulcanair P.64 series/V1.0/V1.1 (Lycoming)** | ELA1 |  |  |
| **VULCANAIR** | VULCANAIR V1.1  (formerly  P.64B ‘Oscar  200’ | Metal | **Vulcanair P.64 series/V1.0/V1.1 (Lycoming)** | ELA1 |  |  |
| **VULCANAIR** | P.66B ‘Oscar 100’ | Metal | Vulcanair P.66 series/ V1.100L/V1.150L/V1.CL  (Lycoming) | ELA1 | X |  |
| **VULCANAIR** | P.66B ‘Oscar 150’ | Metal | Vulcanair P.66 series/V1.100L/V1.150L/V1.CL  (Lycoming) | ELA1 | X |  |
| **VULCANAIR** | P.66C  ‘CHARLIE’ | Metal | Vulcanair P.66 series/ | ELA1 | X |  |

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|  |  |  | V1.100L/V1.150L/V1.CL  (Lycoming) |  |  |  |
| **VULCANAIR** | VULCANAIR V1.100L  (formerly  P.66B ‘Oscar 100’) | Metal | **Vulcanair P.66 series/ V1.100L/V1.150L/V1.CL**  **(Lycoming)** | ELA1 |  |  |
| **VULCANAIR** | VULCANAIR V1.150L  (formerly  P.66B ‘Oscar  150’) | Metal | **Vulcanair P.66 series/ V1.100L/V1.150L/V1.CL**  **(Lycoming)** | ELA1 |  |  |
| **VULCANAIR** | VULCANAIR V1.CL  (formerly P.66C  ‘Charlie’) | Metal | **Vulcanair P.66 series/ V1.100L/V1.150L/V1.CL**  **(Lycoming)** | ELA1 |  |  |
| **WACO Aircraft Company** | YMF F5 | Wood + Metal tubing  Fabric | **Waco YMF (Jacobs)** | ELA2 | X |  |
| **WACO Aircraft Company** | YMF F5C | Wood + Metal tubing  Fabric | **Waco YMF (Jacobs)** | ELA2 | X |  |
| **WACO Classic Aircraft Corp** | 2T-1A-1 | Wood + Metal tubing  Fabric | **Waco 2T Series (Lycoming)** | ELA1 | X |  |
| **WACO Classic Aircraft Corp** | 2T-1A-2 | Wood + Metal tubing  Fabric | **Waco 2T Series (Lycoming)** | ELA1 | X |  |
| **WASSMER**  **(Aircraft with**  **SAS)** | CE 43 | Metal | **CERVA CE43 (Lycoming)** | ELA2 | X |  |
| **WASSMER**  **(Aircraft with SAS)** | WA 4/21 | Wood +  Metal tubing Fabric | **WA4/21 Series (Lycoming)** | ELA2 | X |  |
| **WASSMER**  **(Aircraft with SAS)** | WA 4/21/250  ‘Super 4/21’ | Wood + Metal tubing Fabric | **WA4/21 Series (Lycoming)** | ELA2 | X |  |
| **WASSMER**  **(Aircraft with SAS)** | WA 40 A | Wood + Metal tubing Fabric | **WA40 Series (Lycoming)** | ELA1 | X |  |
| **WASSMER**  **(Aircraft with SAS)** | WA 40  ‘SUPER IV’ | Wood + Metal tubing Fabric | **WA40 Series (Lycoming)** | ELA1 | X |  |
| **WASSMER**  **(Aircraft with SAS)** | WA 40 B  ‘Super IV Sancy’ | Wood +  Metal tubing Fabric | **WA40 Series (Lycoming)** | ELA1 | X |  |
| **WASSMER**  **(Aircraft with SAS)** | WA 41  ‘Baladou’ | Wood + Metal tubing Fabric | **WA41 (Lycoming)** | ELA1 | X |  |

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| **WITHOUT TC HOLDER - ORPHANED (ex**  **Fournier, René)** | RF 3 | Wood | RF 3 (Rectimo) | ELA1 | X |  |
| **WITHOUT TC HOLDER - ORPHANED (ex**  **Fournier, René)** | RF 4 | Wood | **RF 4 (VW)** | ELA1 | X |  |
| **WITHOUT TC HOLDER - ORPHANED (ex**  **Fournier, René)** | RF 47 | Wood | **RF 47 (Limbach)** | ELA1 | X |  |
| **WITHOUT TC HOLDER - ORPHANED (ex**  **Fournier, René)** | RF.6.B. 100 | Wood | **RF 6B (Continental)** | ELA1 | X |  |
| **WITHOUT TC HOLDER - ORPHANED (ex**  **Fournier, René)** | RF.6.B. 120 | Wood | **RF 6B (Lycoming)** | ELA1 | X |  |
| **WITHOUT TC HOLDER - ORPHANED (ex**  **Fournier, René)** | RF.6.B. 90 | Wood | **RF 6B (Lycoming)** | ELA1 | X |  |
| **XtremeAir GmbH** | XA41 | Composite | **XtremeAir XA42 (Lycoming)** | ELA1 | X |  |
| **XtremeAir GmbH** | XA42 | Composite | **XtremeAir XA42 (Lycoming)** | ELA1 | X |  |
| **YAKOVLEV**  **(Aircraft with SAS)** | YAK-18T | Metal | **Yakovlev YAK-18T (Vedeneyev)** | ELA2 | X |  |
| **ZAKŁADY LOTNICZE** | EM-11C ORKA | Composite | **EM-11 (Lycoming)** | ELA2 | X |  |
| **ZENAIR LTD** | CH 2000 | Metal | **Zenair CH2000 (Lycoming)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN**  **AVIATION)** | Z 143 L | Metal | **Zlin Z-143 L (Lycoming)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN**  **AVIATION)** | Z 143 Lsi | Metal | **Zlin Z-143 L (Lycoming)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN**  **AVIATION)** | Z 242 L | Metal | **Zlin Z-242 L (Lycoming)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN**  **AVIATION)** | Z 126 | Metal | **Zlin Z-26 Series (Walter Minor/AVIA)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN**  **AVIATION)** | Z 126 T | Metal | **Zlin Z-26 Series (Walter Minor/AVIA)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN**  **AVIATION)** | Z 226 A | Metal | **Zlin Z-26 Series (Walter Minor/AVIA)** | ELA1 | X |  |

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| **ZLIN AIRCRAFT (MORAVAN AVIATION)** | Z 226 B | Metal | **Zlin Z-26 Series (Walter Minor/AVIA)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN AVIATION)** | Z 226 M | Metal | **Zlin Z-26 Series (Walter Minor/AVIA)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN AVIATION)** | Z 226 MS | Metal | **Zlin Z-26 Series (Walter Minor/AVIA)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN AVIATION)** | Z 226 T | Metal | **Zlin Z-26 Series (Walter Minor/AVIA)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN AVIATION)** | Z 326 | Metal | **Zlin Z-26 Series (Walter Minor/AVIA)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN AVIATION)** | Z 326 A | Metal | **Zlin Z-26 Series (Walter Minor/AVIA)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN**  **AVIATION)** | Z 326 M | Metal | **Zlin Z-26 Series (Walter Minor/AVIA)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN**  **AVIATION)** | Z 526 | Metal + Metal tubing  & fabric | **Zlin Z-26 Series (Walter Minor/AVIA)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN**  **AVIATION)** | Z 526 A | Metal + Metal tubing  & fabric | **Zlin Z-26 Series (Walter Minor/AVIA)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN**  **AVIATION)** | Z 526 AFS | Metal + Metal tubing  & fabric | **Zlin Z-26 Series (Walter Minor/AVIA)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN**  **AVIATION)** | Z 526 AFS-V | Metal + Metal tubing  & fabric | **Zlin Z-26 Series (Walter Minor/AVIA)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN**  **AVIATION)** | Z 526 F | Metal + Metal tubing  & fabric | **Zlin Z-26 Series (Walter Minor/AVIA)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN**  **AVIATION)** | Z 526 M | Metal + Metal tubing  & fabric | **Zlin Z-26 Series (Walter Minor/AVIA)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN**  **AVIATION)** | Z 726 | Metal + Metal tubing  & fabric | **Zlin Z-26 Series (Walter Minor/AVIA)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN AVIATION)** | Z 726 K | Metal + Metal tubing & fabric | **Zlin Z-26 Series (Walter Minor/AVIA)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN AVIATION)** | Z 142 | Metal | **Zlin Z-42 Series (LOM)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN AVIATION)** | Z 142 C | Metal | **Zlin Z-42 Series (LOM)** | ELA1 | X |  |

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| **ZLIN AIRCRAFT (MORAVAN AVIATION)** | Z 42 M | Metal | **Zlin Z-42 Series (LOM)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN AVIATION)** | Z 42 MU | Metal | **Zlin Z-42 Series (LOM)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN AVIATION)** | Z 43 | Metal | **Zlin Z-43 Series (LOM)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN AVIATION)** | Z 50 M | Metal | **Zlin Z-50 Series (LOM)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN AVIATION)** | Z 50 L | Metal | **Zlin Z-50L Series (Lycoming)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN AVIATION)** | Z 50 LA | Metal | **Zlin Z-50L Series (Lycoming)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN**  **AVIATION)** | Z 50 LS | Metal | **Zlin Z-50L Series (Lycoming)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN**  **AVIATION)** | Z 50 LX | Metal | **Zlin Z-50L Series (Lycoming)** | ELA1 | X |  |
| **ZLIN AIRCRAFT (MORAVAN**  **AVIATION)** | Z 526 L | Metal | **Zlin Z-526 L (Lycoming)** | ELA1 | X |  |

STCs in GROUP 3 AEROPLANES

*ED Decision 2019/024/R*

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| **GROUP 3: PISTON-ENGINE AEROPLANES (other than those in Group 1) (STC)** | | | | | | |
| **STC holder** | **Model** | **Type of structure** | **Part-66**  **type rating endorsement** | **Note** | **MTOM** | |
| **≤2T** | **>2T** |
| **BARBARA AND ROBERT WILLIAMS**  **(STC)** | 150 | Metal | **Cessna 150 Series (Lycoming)** | ELA1. STC No  10015952 | X |  |
| **BARBARA AND ROBERT WILLIAMS**  **(STC)** | 150A | Metal | **Cessna 150 Series (Lycoming)** | ELA1. STC No  10015952 | X |  |
| **BARBARA AND ROBERT WILLIAMS**  **(STC)** | 150B | Metal | **Cessna 150 Series (Lycoming)** | ELA1. STC No  10015952 | X |  |
| **BARBARA AND ROBERT WILLIAMS**  **(STC)** | 150C | Metal | **Cessna 150 Series (Lycoming)** | ELA1. STC No  10015952 | X |  |
| **BARBARA AND ROBERT WILLIAMS**  **(STC)** | 150D | Metal | **Cessna 150 Series (Lycoming)** | ELA1. STC No  10015952 | X |  |

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| **GROUP 3: PISTON-ENGINE AEROPLANES (other than those in Group 1) (STC)** | | | | | | |
| **STC holder** | **Model** | **Type of structure** | **Part-66**  **type rating endorsement** | **Note** | **MTOM** | |
| **≤2T** | **>2T** |
| **BARBARA AND ROBERT WILLIAMS**  **(STC)** | 150E | Metal | **Cessna 150 Series (Lycoming)** | ELA1. STC No  10015952 | X |  |
| **BARBARA AND ROBERT WILLIAMS**  **(STC)** | 150F | Metal | **Cessna 150 Series (Lycoming)** | ELA1. STC No  10015952 | X |  |
| **BARBARA AND ROBERT WILLIAMS**  **(STC)** | 150G | Metal | **Cessna 150 Series (Lycoming)** | ELA1. STC No  10015952 | X |  |
| **BARBARA AND ROBERT WILLIAMS**  **(STC)** | 150H | Metal | **Cessna 150 Series (Lycoming)** | ELA1. STC No  10015952 | X |  |
| **BARBARA AND ROBERT WILLIAMS**  **(STC)** | 150J | Metal | **Cessna 150 Series (Lycoming)** | ELA1. STC No  10015952 | X |  |
| **BARBARA AND ROBERT WILLIAMS**  **(STC)** | 150K | Metal | **Cessna 150 Series (Lycoming)** | ELA1. STC No  10015952 | X |  |
| **BARBARA AND ROBERT WILLIAMS (STC)** | 150L | Metal | **Cessna 150 Series (Lycoming)** | ELA1. STC No  10015952 | X |  |
| **BARBARA AND ROBERT WILLIAMS (STC)** | 150M | Metal | **Cessna 150 Series (Lycoming)** | ELA1. STC No  10015952 | X |  |
| **BARBARA AND ROBERT WILLIAMS (STC)** | A150K | Metal | **Cessna 150 Series (Lycoming)** | ELA1. STC No  10015952 | X |  |
| **BARBARA AND ROBERT WILLIAMS (STC)** | A150L | Metal | **Cessna 150 Series (Lycoming)** | ELA1. STC No  10015952 | X |  |
| **CEAPR (STC)** | DR 400/120 D | *Wood* | **Robin DR 400 (Thielert)** | ELA1. STC No  10014219 | X |  |
| **CEAPR (STC)** | DR 400/140 B | *Wood* | **Robin DR 400 (Thielert)** | ELA1. STC No  10014219 | X |  |
| **CEAPR (STC)** | DR 400/180 R | *Wood* | **Robin DR 400 (Thielert)** | ELA1. STC No  10014219 | X |  |
| **CEAPR (STC)** | DR 400/200 R | *Wood* | **Robin DR 400 (Thielert)** | ELA1. STC No  10014219 | X |  |
| **CEAPR (STC)** | DR 400/RP | *Wood* | **Robin DR 400 (Thielert)** | ELA1. STC No  10014219 | X |  |
| **HOFFMANN GmbH & Co. KG (STC)** | 150 | *Metal* | **Cessna 150/A150/F150/FA150 (Rotax)** | ELA1. STC | X |  |

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| **GROUP 3: PISTON-ENGINE AEROPLANES (other than those in Group 1) (STC)** | | | | | | |
| **STC holder** | **Model** | **Type of structure** | **Part-66**  **type rating endorsement** | **Note** | **MTOM** | |
| **≤2T** | **>2T** |
| **HOFFMANN GmbH & Co. KG (STC)** | A150 | *Metal* | **Cessna 150/A150/F150/FA150 (Rotax)** | ELA1. STC | X |  |
| **HOFFMANN GmbH & Co. KG (STC)** | F150 | *Metal* | **Cessna 150/A150/F150/FA150 (Rotax)** | ELA1. STC | X |  |
| **HOFFMANN GmbH**  **& Co. KG (STC)** | FA150 | *Metal* | **Cessna 150/A150/F150/FA150**  **(Rotax)** | ELA1. STC | X |  |
| **LTB SAMMET GmbH (STC)** | 150D | *Metal* | **Cessna 150 (Rotax)** | ELA1. STC No  10015134 | X |  |
| **LTB SAMMET GmbH (STC)** | 150E | *Metal* | **Cessna 150 (Rotax)** | ELA1. STC No  10015134 | X |  |
| **LTB SAMMET GmbH (STC)** | 150F | *Metal* | **Cessna 150 (Rotax)** | ELA1. STC No  10015134 | X |  |
| **LTB SAMMET GmbH (STC)** | 150G | *Metal* | **Cessna 150 (Rotax)** | ELA1. STC No  10015134 | X |  |
| **LTB SAMMET GmbH (STC)** | 150H | *Metal* | **Cessna 150 (Rotax)** | ELA1. STC No  10015134 | X |  |
| **LTB SAMMET GmbH (STC)** | 150J | *Metal* | **Cessna 150 (Rotax)** | ELA1. STC No  10015134 | X |  |
| **LTB SAMMET GmbH (STC)** | 150K | *Metal* | **Cessna 150 (Rotax)** | ELA1. STC No  10015134 | X |  |
| **LTB SAMMET GmbH (STC)** | 150L | *Metal* | **Cessna 150 (Rotax)** | ELA1. STC No  10015134 | X |  |
| **LTB SAMMET GmbH (STC)** | 150M | *Metal* | **Cessna 150 (Rotax)** | ELA1. STC No  10015134 | X |  |
| **LTB SAMMET GmbH (STC)** | A150L | *Metal* | **Cessna 150 (Rotax)** | ELA1. STC No  10015134 | X |  |
| **LTB SAMMET GmbH (STC)** | F150G | *Metal* | **Cessna 150 (Rotax)** | ELA1. STC No  10015134 | X |  |
| **LTB SAMMET GmbH (STC)** | F150H | *Metal* | **Cessna 150 (Rotax)** | ELA1. STC No  10015134 | X |  |
| **LTB SAMMET GmbH (STC)** | F150J | *Metal* | **Cessna 150 (Rotax)** | ELA1. STC No  10015134 | X |  |

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| **GROUP 3: PISTON-ENGINE AEROPLANES (other than those in Group 1) (STC)** | | | | | | |
| **STC holder** | **Model** | **Type of structure** | **Part-66**  **type rating endorsement** | **Note** | **MTOM** | |
| **≤2T** | **>2T** |
| **LTB SAMMET GmbH (STC)** | F150K | *Metal* | **Cessna 150 (Rotax)** | ELA1. STC No  10015134 | X |  |
| **LTB SAMMET GmbH (STC)** | F150L | *Metal* | **Cessna 150 (Rotax)** | ELA1. STC No  10015134 | X |  |
| **LTB SAMMET GmbH (STC)** | F150M | *Metal* | **Cessna 150 (Rotax)** | ELA1. STC No  10015134 | X |  |
| **LTB SAMMET GmbH (STC)** | FA150K | *Metal* | **Cessna 150 (Rotax)** | ELA1. STC No  10015134 | X |  |
| **PORSCHE AG (STC)** | 182Q | *Metal* | **Cessna 182Q/F182Q (Porsche)** | ELA2. STC | X |  |
| **PORSCHE AG (STC)** | F182Q | *Metal* | **Cessna 182Q/F182Q (Porsche)** | ELA2. STC | X |  |
| **SAFRAN ENGINES SAS (STC)** | 182M | *Metal* | **Cessna 182/F182 Series (SMA)** | ELA2. STC No  10013975 |  |  |
| **SAFRAN ENGINES SAS (STC)** | 182N | *Metal* | **Cessna 182/F182 Series (SMA)** | ELA2. STC No  10013975 |  |  |
| **SAFRAN ENGINES SAS (STC)** | 182P | *Metal* | **Cessna 182/F182 Series (SMA)** | ELA2. STC No  10013975 |  |  |
| **SAFRAN ENGINES SAS (STC)** | 182Q | *Metal* | **Cessna 182/F182 Series (SMA)** | ELA2. STC No  10013975 |  |  |
| **SAFRAN ENGINES SAS (STC)** | 182R | *Metal* | **Cessna 182/F182 Series (SMA)** | ELA2. STC No  10013975 |  |  |
| **SAFRAN ENGINES SAS (STC)** | F182P | *Metal* | **Cessna 182/F182 Series (SMA)** | ELA2. STC No  10013975 |  |  |
| **SAFRAN ENGINES SAS (STC)** | F182Q | *Metal* | **Cessna 182/F182 Series (SMA)** | ELA2. STC No  10013975 |  |  |
| **SMA ENGINES INC. (STC)** | 182Q | *Metal* | **Cessna 182/F182 Series (SMA)** | ELA2. STC No  10016495 | X |  |
| **SMA ENGINES INC. (STC)** | 182R | *Metal* | **Cessna 182/F182 Series (SMA)** | ELA2. STC No  10016495 | X |  |
| **SPERL TECHNIK & ENTWICKLUNGEN**  **(STC)** | 150 | *Metal* | **Cessna 150/A150/F150/FA150 (Rotax)** | ELA1. STC | X |  |
| **SPERL TECHNIK & ENTWICKLUNGEN**  **(STC)** | A150 | *Metal* | **Cessna 150/A150/F150/FA150 (Rotax)** | ELA1. STC | X |  |

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| **GROUP 3: PISTON-ENGINE AEROPLANES (other than those in Group 1) (STC)** | | | | | | |
| **STC holder** | **Model** | **Type of structure** | **Part-66**  **type rating endorsement** | **Note** | **MTOM** | |
| **≤2T** | **>2T** |
| **SPERL TECHNIK & ENTWICKLUNGEN**  **(STC)** | F150 | *Metal* | **Cessna 150/A150/F150/FA150 (Rotax)** | ELA1. STC | X |  |
| **SPERL TECHNIK & ENTWICKLUNGEN**  **(STC)** | FA150 | *Metal* | **Cessna 150/A150/F150/FA150 (Rotax)** | ELA1. STC | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | 172F | *Metal* | **Cessna 172/F172 (Technify)** | ELA1. STC No  10014287 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | 172G | *Metal* | **Cessna 172/F172 (Technify)** | ELA1. STC No  10014287 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | 172H | *Metal* | **Cessna 172/F172 (Technify)** | ELA1. STC No  10014287 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | 172I | *Metal* | **Cessna 172/F172 (Technify)** | ELA1. STC No  10014287 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | 172K | *Metal* | **Cessna 172/F172 (Technify)** | ELA1. STC No  10014287 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | 172L | *Metal* | **Cessna 172/F172 (Technify)** | ELA1. STC No  10014287 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | 172M | *Metal* | **Cessna 172/F172 (Technify)** | ELA1. STC No  10014287 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | 172N | *Metal* | **Cessna 172/F172 (Technify)** | ELA1. STC No  10014287 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | 172P | *Metal* | **Cessna 172/F172 (Technify)** | ELA1. STC No  10014287 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | 172R | *Metal* | **Cessna 172/F172 (Technify)** | ELA1. STC No  10014287 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | 172S | *Metal* | **Cessna 172/F172 (Technify)** | ELA1. STC No  10014287 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | F172F | *Metal* | **Cessna 172/F172 (Technify)** | ELA1. STC No  10014287 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | F172G | *Metal* | **Cessna 172/F172 (Technify)** | ELA1. STC No  10014287 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | F172H | *Metal* | **Cessna 172/F172 (Technify)** | ELA1. STC No  10014287 | X |  |

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| **GROUP 3: PISTON-ENGINE AEROPLANES (other than those in Group 1) (STC)** | | | | | | |
| **STC holder** | **Model** | **Type of structure** | **Part-66**  **type rating endorsement** | **Note** | **MTOM** | |
| **≤2T** | **>2T** |
| **TECHNIFY MOTORS GmbH (STC)** | F172K | *Metal* | **Cessna 172/F172 (Technify)** | ELA1. STC No  10014287 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | F172L | *Metal* | **Cessna 172/F172 (Technify)** | ELA1. STC No  10014287 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | F172M | *Metal* | **Cessna 172/F172 (Technify)** | ELA1. STC No  10014287 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | F172N | *Metal* | **Cessna 172/F172 (Technify)** | ELA1. STC No  10014287 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | F172P | *Metal* | **Cessna 172/F172 (Technify)** | ELA1. STC No  10014287 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | T206H | *Metal* | **Cessna 206 (Technify)** | ELA2. STC No  10014500 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | TU206F | *Metal* | **Cessna 206 (Technify)** | ELA2. STC No  10014500 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | TU206G | *Metal* | **Cessna 206 (Technify)** | ELA2. STC No  10014500 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | U206F | *Metal* | **Cessna 206 (Technify)** | ELA2. STC No  10014500 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | U206G | *Metal* | **Cessna 206 (Technify)** | ELA2. STC No  10014500 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | U206H | *Metal* | **Cessna 206 (Technify)** | ELA2. STC No  10014500 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | SR22 | *Composite* | **Cirrus SR22 (Technify)** | ELA2. STC | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | PA-28-140 | *Metal* | **Piper PA-28-140/150/151/160/**  **161/180/181 (Technify)** | ELA1. STC No  10014364 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | PA-28-150 | *Metal* | **Piper PA-28-140/150/151/160/**  **161/180/181 (Technify)** | ELA1. STC No  10014364 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | PA-28-151 | *Metal* | **Piper PA-28-140/150/151/160/**  **161/180/181 (Technify)** | ELA1. STC No  10014364 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | PA-28-160 | *Metal* | **Piper PA-28-140/150/151/160/**  **161/180/181 (Technify)** | ELA1. STC No  10014364 | X |  |

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| **GROUP 3: PISTON-ENGINE AEROPLANES (other than those in Group 1) (STC)** | | | | | | |
| **STC holder** | **Model** | **Type of structure** | **Part-66**  **type rating endorsement** | **Note** | **MTOM** | |
| **≤2T** | **>2T** |
| **TECHNIFY MOTORS GmbH (STC)** | PA-28-161 | *Metal* | **Piper PA-28-140/150/151/160/**  **161/180/181 (Technify)** | ELA1. STC No  10014364 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | PA-28-180 | *Metal* | **Piper PA-28-140/150/151/160/**  **161/180/181 (Technify)** | ELA1. STC No  10014364 | X |  |
| **TECHNIFY MOTORS GmbH (STC)** | PA-28-181 | *Metal* | **Piper PA-28-140/150/151/160/**  **161/180/181 (Technify)** | ELA1. STC No  10014364 | X |  |

###### GROUP 4 SAILPLANES

*ED Decision 2023/019/R*

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| **GROUP 4 SAILPLANES** | | | |
| **TC Holder** | **Model** | **Type of structure** | **Note** |
| **AEROCLUBUL ROMANIEI** | IS-28B2 | *metal* |  |
| **AEROCLUBUL ROMANIEI** | IS-29D | *metal* |  |
| **AEROCLUBUL ROMANIEI** | IS-29D2 | *metal* |  |
| **AEROCLUBUL ROMANIEI** | IS-30 | *metal* |  |
| **AEROCLUBUL ROMANIEI** | IS-32A | *metal* |  |
| **AIRBUS DEFENCE AND SPACE GmbH** | FS 24 "Phoenix T" | *composite* |  |
| **AIRBUS DEFENCE AND SPACE GmbH** | FS 24 "Phoenix T0" | *composite* |  |
| **AIRBUS DEFENCE AND SPACE GmbH** | FS 24 "Phoenix" | *composite* |  |
| **AIRBUS DEFENCE AND SPACE GmbH** | Phoebus A0 | *composite* |  |
| **AIRBUS DEFENCE AND SPACE GmbH** | Phoebus A1 | *composite* |  |
| **AIRBUS DEFENCE AND SPACE GmbH** | Phoebus B1 | *composite* |  |
| **AIRBUS DEFENCE AND SPACE GmbH** | Phoebus C | *composite* |  |
| **ALEXANDER SCHLEICHER** | AS 12 | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASG 32 | *composite* | The model has also powered variants. |
| **ALEXANDER SCHLEICHER** | ASG 32 MI | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASH 25 | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASH 26 | *composite* |  |
| **ALEXANDER SCHLEICHER** | AS-K 13 | *metal-tube, wood* |  |
| **ALEXANDER SCHLEICHER** | ASK 18 | *metal-tube, wood* |  |
| **ALEXANDER SCHLEICHER** | ASK 18 B | *metal-tube, wood* |  |
| **ALEXANDER SCHLEICHER** | ASK 21 | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASK 21 B | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASK 23 | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASK 23 B | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 12 | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 12 BV | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 15 | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 15 B | *composite* |  |

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| **GROUP 4 SAILPLANES** | | | |
| **TC Holder** | **Model** | **Type of structure** | **Note** |
| **ALEXANDER SCHLEICHER** | ASW 17 | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 19 | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 19 B | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 20 | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 20 B | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 20 BL | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 20 C | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 20 CL | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 20 L | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 22 | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 22 B | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 22 BE | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 22 BL | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 24 | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 24 B | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 27 | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 27-18 | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 28 | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 28-18 | *composite* |  |
| **ALEXANDER SCHLEICHER** | K 10 A | *wood* |  |
| **ALEXANDER SCHLEICHER** | K 7 | *metal-tube, wood* |  |
| **ALEXANDER SCHLEICHER** | K 8 | *metal-tube, wood* |  |
| **ALEXANDER SCHLEICHER** | K 8 B | *metal-tube, wood* |  |
| **ALEXANDER SCHLEICHER** | K 8 C | *metal-tube, wood* |  |
| **ALEXANDER SCHLEICHER** | Ka 6 BR | *wood* |  |
| **ALEXANDER SCHLEICHER** | Ka 6 BR-Pe | *wood* |  |
| **ALEXANDER SCHLEICHER** | Ka 6 C | *wood* |  |
| **ALEXANDER SCHLEICHER** | Ka 6 CR | *wood* |  |
| **ALEXANDER SCHLEICHER** | Ka 6 CR-PE | *wood* |  |
| **ALEXANDER SCHLEICHER** | Ka 6 E | *wood* |  |
| **ALEXANDER SCHLEICHER** | Ka 6/0 | *wood* |  |
| **ALLSTAR PZL GLIDER SP. Z.O.O.** | SZD-48-3 Jantar Standard 3 | *composite* |  |
| **ALLSTAR PZL GLIDER SP. Z.O.O.** | SZD-50-3 "Puchacz" | *composite* |  |
| **ALLSTAR PZL GLIDER SP. Z.O.O.** | SZD-51-1 "Junior" | *composite* |  |
| **ALLSTAR PZL GLIDER SP. Z.O.O.** | SZD-55-1 | *composite* |  |
| **ALLSTAR PZL GLIDER SP. Z.O.O.** | SZD-59 "Acro" | *composite* |  |
| **AVIACOM.PL SP. ZO.O.** | B1-PW-5 | *composite* |  |
| **AVIACOM.PL SP. ZO.O.** | B1-PW-5D | *composite* |  |
| **AVIONIC SPOLKA JAWNA** | SZD-56-1 "Diana" | *composite* |  |
| **AVIONIC SPOLKA JAWNA** | SZD-56-2 "Diana 2" | *composite* |  |
| **BARRY AVIATION, LLC** | KR-03A | *metal* |  |
| **BLANIK AIRCRAFT CZ s.r.o.** | L - 33 SÓLO | *metal* |  |
| **BLANIK AIRCRAFT CZ s.r.o.** | L 13 A Blanik | *metal* |  |

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| **GROUP 4 SAILPLANES** | | | |
| **TC Holder** | **Model** | **Type of structure** | **Note** |
| **BLANIK AIRCRAFT CZ s.r.o.** | L 23 SUPER-BLANÍK | *metal* |  |
| **BLANIK AIRCRAFT CZ s.r.o.** | L-13 "BLANÍK" | *metal* |  |
| **BLANIK AIRCRAFT CZ s.r.o.** | L-13 AC BLANÍK | *metal* |  |
| **DG AVIATION GmbH** | DG-100 | *composite* |  |
| **DG AVIATION GmbH** | DG-100 ELAN | *composite* |  |
| **DG AVIATION GmbH** | DG-100 G | *composite* |  |
| **DG AVIATION GmbH** | DG-100 G ELAN | *composite* |  |
| **DG AVIATION GmbH** | DG-1000S | *composite* |  |
| **DG AVIATION GmbH** | DG-200 | *composite* |  |
| **DG AVIATION GmbH** | DG-200/17 | *composite* |  |
| **DG AVIATION GmbH** | DG-200/17 C | *composite* |  |
| **DG AVIATION GmbH** | DG-300 | *composite* |  |
| **DG AVIATION GmbH** | DG-300 CLUB ELAN | *composite* |  |
| **DG AVIATION GmbH** | DG-300 CLUB ELAN ACRO | *composite* |  |
| **DG AVIATION GmbH** | DG-300 ELAN | *composite* |  |
| **DG AVIATION GmbH** | DG-300 ELAN ACRO | *composite* |  |
| **DG AVIATION GmbH** | DG-500 ELAN ORION | *composite* |  |
| **DG AVIATION GmbH** | DG-500 ELAN TRAINER | *composite* |  |
| **DG AVIATION GmbH** | DG-500/20 ELAN | *composite* |  |
| **DG AVIATION GmbH** | DG-500/22 ELAN | *composite* |  |
| **DG AVIATION GmbH** | DG-600 | *composite* |  |
| **DG AVIATION GmbH** | DG-600/18 | *composite* |  |
| **DG AVIATION GmbH** | DG-800 S | *composite* |  |
| **DG AVIATION GmbH** | DG-808 S | *composite* |  |
| **DG AVIATION GmbH** | LS 1-0 | *composite* |  |
| **DG AVIATION GmbH** | LS 10-a | *composite* |  |
| **DG AVIATION GmbH** | LS 1-a | *composite* |  |
| **DG AVIATION GmbH** | LS 1-b | *composite* |  |
| **DG AVIATION GmbH** | LS 1-c | *composite* |  |
| **DG AVIATION GmbH** | LS 1-d | *composite* |  |
| **DG AVIATION GmbH** | LS 1-e | *composite* |  |
| **DG AVIATION GmbH** | LS 1-f | *composite* |  |
| **DG AVIATION GmbH** | LS 1-f (45) | *composite* |  |
| **DG AVIATION GmbH** | LS 3 | *composite* |  |
| **DG AVIATION GmbH** | LS 3-17 | *composite* |  |
| **DG AVIATION GmbH** | LS 3-a | *composite* |  |
| **DG AVIATION GmbH** | LS 4 | *composite* |  |
| **DG AVIATION GmbH** | LS 4-a | *composite* |  |
| **DG AVIATION GmbH** | LS 4-b | *composite* |  |
| **DG AVIATION GmbH** | LS 6 | *composite* |  |
| **DG AVIATION GmbH** | LS 6-18w | *composite* |  |
| **DG AVIATION GmbH** | LS 6-a | *composite* |  |
| **DG AVIATION GmbH** | LS 6-b | *composite* |  |

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| **GROUP 4 SAILPLANES** | | | |
| **TC Holder** | **Model** | **Type of structure** | **Note** |
| **DG AVIATION GmbH** | LS 6-c | *composite* |  |
| **DG AVIATION GmbH** | LS 6-c18 | *composite* |  |
| **DG AVIATION GmbH** | LS 7 | *composite* |  |
| **DG AVIATION GmbH** | LS 7-WL | *composite* |  |
| **DG AVIATION GmbH** | LS10-s | *composite* |  |
| **DG AVIATION GmbH** | LS8 | *composite* |  |
| **DG AVIATION GmbH** | LS8-18 | *composite* |  |
| **DG AVIATION GmbH** | LS8-a | *composite* |  |
| **DG AVIATION GmbH** | LS8-b | *composite* |  |
| **DG AVIATION GmbH** | LS8-s | *composite* |  |
| **DG AVIATION GmbH** | LS8-sb | *composite* |  |
| **ECOFLY GMBH** | FK 3 | *metal* |  |
| **EICHELSDOERFER GMBH** | mistral-c | *composite* |  |
| **EICHELSDOERFER GMBH** | SB 5 B | *wood* |  |
| **EICHELSDOERFER GMBH** | SB 5 E | *wood* |  |
| **FIBERGLAS TECHNIK R. LINDNER** | ASTIR CS | *composite* |  |
| **FIBERGLAS TECHNIK R. LINDNER** | ASTIR CS 77 | *composite* |  |
| **FIBERGLAS TECHNIK R. LINDNER** | ASTIR CS Jeans | *composite* |  |
| **FIBERGLAS TECHNIK R. LINDNER** | CLUB ASTIR II | *composite* |  |
| **FIBERGLAS TECHNIK R. LINDNER** | GROB G 103 "TWIN II" | *composite* |  |
| **FIBERGLAS TECHNIK R. LINDNER** | GROB G 103 A "TWIN II  ACRO" | *composite* |  |
| **FIBERGLAS TECHNIK R. LINDNER** | GROB G 103 C "TWIN III  ACRO" | *composite* |  |
| **FIBERGLAS TECHNIK R. LINDNER** | GROB G 103 C "TWIN III" | *composite* |  |
| **FIBERGLAS TECHNIK R. LINDNER** | GROB G102 "CLUB ASTIR III b" | *composite* |  |
| **FIBERGLAS TECHNIK R. LINDNER** | GROB G102 "CLUB ASTIR  III" | *composite* |  |
| **FIBERGLAS TECHNIK R. LINDNER** | GROB G102 "STANDARD ASTIR III" | *composite* |  |
| **FIBERGLAS TECHNIK R. LINDNER** | SPEED ASTIR II | *composite* |  |
| **FIBERGLAS TECHNIK R. LINDNER** | SPEED ASTIR II B | *composite* |  |
| **FIBERGLAS TECHNIK R. LINDNER** | STANDARD ASTIR II | *composite* |  |
| **FIBERGLAS TECHNIK R. LINDNER** | TWIN ASTIR | *composite* |  |
| **FIBERGLAS TECHNIK R. LINDNER** | TWIN ASTIR TRAINER | *composite* |  |
| **GLASFASER-FLUGZEUG-SERVICE** | BS 1 | *composite* |  |
| **GLASFASER-FLUGZEUG-SERVICE** | Club Libelle 205 | *composite* |  |
| **GLASFASER-FLUGZEUG-SERVICE** | Glasflügel 304 | *composite* |  |
| **GLASFASER-FLUGZEUG-SERVICE** | Glasflügel 604 | *composite* |  |
| **GLASFASER-FLUGZEUG-SERVICE** | H 301 "Libelle" | *composite* |  |
| **GLASFASER-FLUGZEUG-SERVICE** | H 301 B | *composite* |  |
| **GLASFASER-FLUGZEUG-SERVICE** | H 301 serial No. 1 | *composite* |  |
| **GLASFASER-FLUGZEUG-SERVICE** | Hornet | *composite* |  |

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| **GROUP 4 SAILPLANES** | | | |
| **TC Holder** | **Model** | **Type of structure** | **Note** |
| **GLASFASER-FLUGZEUG-SERVICE** | Hornet C | *composite* |  |
| **GLASFASER-FLUGZEUG-SERVICE** | Kestrel | *composite* |  |
| **GLASFASER-FLUGZEUG-SERVICE** | Mosquito | *composite* |  |
| **GLASFASER-FLUGZEUG-SERVICE** | Mosquito B | *composite* |  |
| **GLASFASER-FLUGZEUG-SERVICE** | Standard Libelle | *composite* |  |
| **GLASFASER-FLUGZEUG-SERVICE** | Standard Libelle 201 B | *composite* |  |
| **GLASFASER-FLUGZEUG-SERVICE** | Standard Libelle 203 | *composite* |  |
| **HPH SPOL SRO** | Glasflügel 304 C | *composite* |  |
| **HPH SPOL SRO** | Glasflügel 304 CZ | *composite* |  |
| **HPH SPOL SRO** | Glasflügel 304 CZ-17 | *composite* |  |
| **HPH SPOL SRO** | Glasflügel 304 S | *composite* |  |
| **M & D FLUGZEUGBAU GMBH** | JS-MD 1C | *composite* | The model has also  powered variants. |
| **M&D Flugzeugbau GmbH & Co. KG** | JS-MD 3 | *Composite* | The model has also powered variants. |
| **M&D Flugzeugbau GmbH & Co. KG** | JS-MD 3 RES | *Composite* |  |
| **PILATUS AIRCRAFT LTD.** | B4-PC11 | *metal* |  |
| **PILATUS AIRCRAFT LTD.** | B4-PC11A | *metal* |  |
| **PILATUS AIRCRAFT LTD.** | B4-PC11AF | *metal* |  |
| **SCHEIBE AIRCRAFT GMBH** | Bergfalke II | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | Bergfalke II-55 | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | Bergfalke III | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | Bergfalke IV | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | L-Spatz | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | L-Spatz 55 | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | L-Spatz III | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | Mü 13 E "Bergfalke" | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | SF 26 A "Standard" | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | SF 27 A | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | SF 27 B | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | SF 30 A “Club-Spatz” | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | SF 34 | *composite* |  |
| **SCHEIBE AIRCRAFT GMBH** | SF 34 B | *composite* |  |
| **SCHEIBE AIRCRAFT GMBH** | Spatz 55 | *composite* |  |
| **SCHEIBE AIRCRAFT GMBH** | Spatz A | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | Spatz B | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | Specht | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | Sperber | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | Zugvogel I | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | Zugvogel II | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | Zugvogel III | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | Zugvogel III A | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | Zugvogel III B | *metal-tube, wood* |  |

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| **GROUP 4 SAILPLANES** | | | |
| **TC Holder** | **Model** | **Type of structure** | **Note** |
| **SCHEIBE AIRCRAFT GMBH** | Zugvogel IV | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | Zugvogel IV A | *metal-tube, wood* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Arcus | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Cirrus | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Cirrus-VTC | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Discus a | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Discus b | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Discus CS | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Discus-2a | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Discus-2b | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Discus-2c | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Duo Discus | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Duo Discus C | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Janus | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Janus B | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Janus C | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Janus Ce | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Mini Nimbus B | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Mini Nimbus C | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Mini Nimbus HS 7 | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Nimbus-2 | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Nimbus-2B | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Nimbus-2C | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Nimbus-3 | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Nimbus-3/24,5 | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Nimbus-3D | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Nimbus-4 | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Nimbus-4D | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | S | *wood* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | SH | *wood* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | SH 1 | *wood* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | SHK 1 | *wood* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Standard Cirrus | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Standard Cirrus B | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Standard Cirrus CS 11-75L | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Standard Cirrus G | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Ventus a | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Ventus a/16.6 | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Ventus b | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Ventus b/16.6 | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Ventus c | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Ventus-2a | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Ventus-2b | *composite* |  |

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| **GROUP 4 SAILPLANES** | | | |
| **TC Holder** | **Model** | **Type of structure** | **Note** |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Ventus-2c | *composite* |  |
| **SCHEMPP HIRTH VÝROBA LETADEL** | VSO 10 | *composite* |  |
| **SCHEMPP HIRTH VÝROBA LETADEL** | VSO 10 C | *composite* |  |
| **SN CENTRAIR** | 101 | *composite* |  |
| **SN CENTRAIR** | 101 A | *composite* |  |
| **SN CENTRAIR** | 101 AP | *composite* |  |
| **SN CENTRAIR** | 101 B | *composite* |  |
| **SN CENTRAIR** | 101 BC | *composite* |  |
| **SN CENTRAIR** | 101 D | *composite* |  |
| **SN CENTRAIR** | 101 P | *composite* |  |
| **SN CENTRAIR** | 201 A | *composite* |  |
| **SN CENTRAIR** | 201 B | *composite* |  |
| **SN CENTRAIR** | 201 B1 | *composite* |  |
| **SN CENTRAIR** | ASW 20 F | *composite* |  |
| **SN CENTRAIR** | ASW 20 FL | *composite* |  |
| **SN CENTRAIR** | SNC 34C | *composite* |  |
| **SPORTINE AVIACIJA IR KO** | LAK-12 | *composite* |  |
| **SPORTINE AVIACIJA IR KO** | LAK-17A | *composite* |  |
| **SPORTINE AVIACIJA IR KO** | LAK-17A mini | *composite* |  |
| **SPORTINE AVIACIJA IR KO** | LAK-19 | *composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | 905 A | *wood* |  |
| **WITHOUT TC HOLDER - ORPHANED** | 905 S | *wood* |  |
| **WITHOUT TC HOLDER - ORPHANED** | 905 SA | *wood* |  |
| **WITHOUT TC HOLDER - ORPHANED** | Avia Strotel AC-4c | *composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | Carman-Morelli M200 | *wood* |  |
| **WITHOUT TC HOLDER - ORPHANED** | Diamant 16.5 | *composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | Diamant 18 | *composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | Elfe S3 | *metal, wood, composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | Elfe S4 | *metal, wood, composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | Elfe S4A | *metal, wood, composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | Glasflügel 304 B | *composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | H 101 "Salto" | *composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | HBV-Diamant | *composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | JP 15-36 A | *composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | JP 15-36 AR | *composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | Kenilworth Me7 | *composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | PIK 20 | *composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | PIK 20B | *composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | PIK-20D | *composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | Siren "Edelweiss" C30S | *wood* |  |
| **WITHOUT TC HOLDER - ORPHANED** | Slingsby T51 Dart 15 | *wood* |  |

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| **GROUP 4 SAILPLANES** | | | |
| **TC Holder** | **Model** | **Type of structure** | **Note** |
| **WITHOUT TC HOLDER - ORPHANED** | Slingsby T51 Dart 17 | *wood* |  |
| **WITHOUT TC HOLDER - ORPHANED** | Slingsby T51 Dart 17R | *wood* |  |
| **WITHOUT TC HOLDER - ORPHANED** | Slingsby T53B | *composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | Slingsby T59D | *composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | Standard Cirrus 75 VTC | *composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | Standard Cirrus G/81 | *composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | T.65 "Vega" | *composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | WA 26 CM | *wood, composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | WA 26 P | *wood, composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | WA 28 | *composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | WA 28 E | *composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | WA 28 EF | *composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | WA 28 F | *composite* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | PW-5 "Smyk" | *composite* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | PW-6U | *composite* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | SZD-22B "Mucha-  Standard" | *wood* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | SZD-22C "Mucha-  Standard" | *wood* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | SZD-24 C "Foka" | *wood* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | SZD-24-4A | *wood* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | SZD-25A Lis | *metal-tube, wood* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | SZD-30 "Pirat" | *wood* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | SZD-30C "Pirat" | *wood* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | SZD-32A "Foka 5" | *wood* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | SZD-36A "Cobra 15" | *wood, composite* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | SZD-38A "Jantar 1" | *composite* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | SZD-41A "Jantar Standard" | *composite* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | SZD-42 "Jantar 2" | *composite* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | SZD-42-1 "Jantar 2" | *composite* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | SZD-42-2 "Jantar 2B" | *composite* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | SZD-48 "Jantar Standard 2" | *composite* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | SZD-48-1 "Jantar Standard  2" | *composite* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | SZD-48-1M "Jantar Standard 2M" | *composite* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | SZD-48-3M "Brawo" | *composite* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | SZD-48-3M1 "Brawo" | *composite* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | SZD-48M "Jantar Standard 2M" | *composite* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | SZD-52-3 “Krokus S” | *composite* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | SZD-52-4 “Krokus C” | *composite* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | SZD-9 bis 1 D "Bocian" | *wood* |  |

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| **GROUP 4 SAILPLANES** | | | |
| **TC Holder** | **Model** | **Type of structure** | **Note** |
| **ZAKLAD SZYBOWCOWY JEZOW** | SZD-9 bis 1 E "Bocian" | *wood* |  |
| **ZAKLADY LOTNICZE** | MDM-1 “Fox” | *composite* |  |
| **ZAKLADY LOTNICZE** | MDM-1P “Fox-P” | *composite* |  |
| **ZAKLADY LOTNICZE** | Swift S-1 | *composite* |  |

###### GROUP 4 POWERED SAILPLANES

*ED Decision 2023/019/R*

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| **GROUP 4 POWERED SAILPLANES** | | | |
| **TC Holder** | **Model** | **Type of structure** | **Note** |
| **AEROCLUBUL ROMANIEI** | IS-28M2 | *metal* |  |
| **AEROCLUBUL ROMANIEI** | IS-28M2/80HP | *metal* |  |
| **AEROCLUBUL ROMANIEI** | IS-28M2/G | *metal* |  |
| **AEROCLUBUL ROMANIEI** | IS-28M2/GR | *metal* |  |
| **AEROMOT - INDUSTRIA MECANICO** | AMT-100 | *composite* |  |
| **AEROMOT - INDUSTRIA MECANICO** | AMT-200 | *composite* |  |
| **AEROMOT - INDUSTRIA MECANICO** | AMT-200S | *composite* |  |
| **ALEXANDER SCHLEICHER** | AS 33 Es | *composite* |  |
| **ALEXANDER SCHLEICHER** | AS 33 Me | *composite* | (electrical) |
| **ALEXANDER SCHLEICHER** | AS 34 Me | *composite* | (electrical) |
| **ALEXANDER SCHLEICHER** | ASG 32 El | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASH 25 E | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASH 25 M | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASH 26 E | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASH 26 E | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASH 30 Mi | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASH 31 Mi | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASK 14 | *metal-tube, wood* |  |
| **ALEXANDER SCHLEICHER** | ASK 16 | *metal-tube, wood* |  |
| **ALEXANDER SCHLEICHER** | ASK 16 B | *metal-tube, wood* |  |
| **ALEXANDER SCHLEICHER** | ASK 21 Mi | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 22 BLE | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 22 BLE 50R | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 22 M | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 24 E | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 27-18 E | *composite* |  |
| **ALEXANDER SCHLEICHER** | ASW 28-18 E | *composite* |  |
| **AMS-FLIGHT D.O.O.** | CARAT A | *composite* |  |
| **BINDER MOTORENBAU GMBH** | ASH 25 EB | *composite* |  |
| **BINDER MOTORENBAU GMBH** | ASH 25 EB 28 | *composite* |  |
| **BINDER MOTORENBAU GMBH** | EB 28 | *composite* |  |
| **BINDER MOTORENBAU GMBH** | EB 28 Edition | *composite* |  |
| **BINDER MOTORENBAU GMBH** | EB 29 | *composite* |  |
| **BINDER MOTORENBAU GMBH** | EB 29D | *composite* |  |

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| **GROUP 4 POWERED SAILPLANES** | | | |
| **TC Holder** | **Model** | **Type of structure** | **Note** |
| **BINDER MOTORENBAU GMBH** | EB29DR | *composite* |  |
| **BINDER MOTORENBAU GMBH** | EB29R | *composite* |  |
| **DG AVIATION GMBH** | DG-1000M | *composite* |  |
| **DG AVIATION GMBH** | DG-1000T | *composite* |  |
| **DG AVIATION GmbH** | DG-1001E | *composite* | (electrical) |
| **DG AVIATION GMBH** | DG-400 | *composite* |  |
| **DG AVIATION GMBH** | DG-500 M | *composite* |  |
| **DG AVIATION GMBH** | DG-500 MB | *composite* |  |
| **DG AVIATION GMBH** | DG-600/18 M | *composite* |  |
| **DG AVIATION GMBH** | DG-600M | *composite* |  |
| **DG AVIATION GMBH** | DG-800 A | *composite* |  |
| **DG AVIATION GMBH** | DG-800 B | *composite* |  |
| **DG AVIATION GMBH** | DG-800 LA | *composite* |  |
| **DG AVIATION GMBH** | DG-808 C | *composite* |  |
| **DG AVIATION GMBH** | LS10-st | *composite* |  |
| **DG AVIATION GMBH** | LS8-e | *composite* |  |
| **DG AVIATION GMBH** | LS8-t | *composite* |  |
| **DG AVIATION GMBH** | LS9 | *composite* |  |
| **DIAMOND AIRCRAFT INDUSTRIES** | H 36 "Dimona" | *composite* |  |
| **DIAMOND AIRCRAFT INDUSTRIES** | HK 36 "Super Dimona" | *composite* |  |
| **DIAMOND AIRCRAFT INDUSTRIES** | HK 36 R "Super Dimona" | *composite* |  |
| **DIAMOND AIRCRAFT INDUSTRIES** | HK 36 TC | *composite* |  |
| **DIAMOND AIRCRAFT INDUSTRIES** | HK 36 TS | *composite* |  |
| **DIAMOND AIRCRAFT INDUSTRIES** | HK 36 TTC | *composite* |  |
| **DIAMOND AIRCRAFT INDUSTRIES** | HK 36 TTC-ECO | *composite* |  |
| **DIAMOND AIRCRAFT INDUSTRIES** | HK 36-TTS | *composite* |  |
| **E.I.S. HOLDING GmbH** | Fournier RF 3 | *wood* |  |
| **E.I.S. HOLDING GmbH** | Fournier RF 4 | *wood* |  |
| **E.I.S. HOLDING GmbH** | Fournier RF 4 D | *wood* |  |
| **E.I.S. HOLDING GmbH** | Fournier RF 5 | *wood* |  |
| **E.I.S. HOLDING GmbH** | Fournier RF 5 B "Sperber" | *wood* |  |
| **E.I.S. HOLDING GmbH** | SFS 31 "Milan" | *wood* |  |
| **EICHELSDOERFER GMBH** | KIWI | *composite* |  |
| **EVEKTOR, SPOL. S R.O.** | L 13 SDL Vivat | *metal* |  |
| **EVEKTOR, SPOL. S R.O.** | L 13 SDM Vivat | *metal* |  |
| **EVEKTOR, SPOL. S R.O.** | L 13 SE Vivat | *metal* |  |
| **EVEKTOR, SPOL. S R.O.** | L 13 SEH Vivat | *metal* |  |
| **EVEKTOR, SPOL. S R.O.** | L 13 SL Vivat | *metal* |  |
| **EVEKTOR, SPOL. S R.O.** | L 13 SW Vivat | *metal* |  |
| **FIBERGLAS TECHNIK R. LINDNER** | G 103 C TWIN III SL | *composite* |  |
| **FISCHER UND ENTWICKLUNGEN** | ASTIR CS 77 TOP | *composite* |  |
| **FISCHER UND ENTWICKLUNGEN** | ASTIR CS Jeans TOP | *composite* |  |
| **FISCHER UND ENTWICKLUNGEN** | ASTIR CS TOP | *composite* |  |

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| **GROUP 4 POWERED SAILPLANES** | | | |
| **TC Holder** | **Model** | **Type of structure** | **Note** |
| **FISCHER UND ENTWICKLUNGEN** | ASW 20 TOP | *composite* |  |
| **FISCHER UND ENTWICKLUNGEN** | ASW 20B TOP | *composite* |  |
| **FISCHER UND ENTWICKLUNGEN** | ASW 20BL TOP | *composite* |  |
| **FISCHER UND ENTWICKLUNGEN** | ASW 20C TOP | *composite* |  |
| **FISCHER UND ENTWICKLUNGEN** | ASW 20CL TOP | *composite* |  |
| **FISCHER UND ENTWICKLUNGEN** | ASW 20L TOP | *composite* |  |
| **FISCHER UND ENTWICKLUNGEN** | ASW 24 TOP | *composite* |  |
| **FISCHER UND ENTWICKLUNGEN** | Standard Cirrus B TOP | *composite* |  |
| **FISCHER UND ENTWICKLUNGEN** | Standard Cirrus TOP | *composite* |  |
| **FOURNIER, RENE** | RF 9 | *wood* |  |
| **GANTENBRINK, BRUNO** | Eta | *composite* |  |
| **GANTENBRINK, BRUNO** | EtaN4 | *composite* |  |
| **GROB AIRCRAFT AG** | G109 | *composite* |  |
| **GROB AIRCRAFT AG** | G109 B | *composite* |  |
| **HB-FLUGTECHNIK GMBH** | HB 21 | *metal-tube, wood* |  |
| **HB-FLUGTECHNIK GMBH** | HB 21 V1 | *metal-tube, wood* |  |
| **HB-FLUGTECHNIK GMBH** | HB 21 V2 | *metal-tube, wood* |  |
| **HB-FLUGTECHNIK GMBH** | HB 21/2400 | *metal-tube, wood* |  |
| **HB-FLUGTECHNIK GMBH** | HB 21/2400 B | *metal-tube, wood* |  |
| **HB-FLUGTECHNIK GMBH** | HB 23/2400 | *metal-tube, wood* |  |
| **HB-FLUGTECHNIK GMBH** | HB 23/2400 Scanliner | *metal-tube, wood* |  |
| **HB-FLUGTECHNIK GMBH** | HB 23/2400 SP | *metal-tube, wood* |  |
| **HB-FLUGTECHNIK GMBH** | HB 23/2400 V2 | *metal-tube, wood* |  |
| **HPH SPOL SRO** | Glasflügel 304 eS | *composite* |  |
| **HPH SPOL SRO** | Glasflügel 304 MS | *composite* |  |
| **HPH SPOL SRO** | Glasflügel 304 S Jet | *composite* |  |
| **KORFF LUFTFAHRT** | Taifun 17 E | *composite* |  |
| **KORFF LUFTFAHRT** | Taifun 17 E II | *composite* |  |
| **LANGE AVIATION GMBH** | E1 Antares | *composite* |  |
| **LANGE AVIATION GMBH** | Antares 18T | *composite* |  |
| **M & D FLUGZEUGBAU GMBH** | AVO 68 - R "Samburo" | *metal-tube, wood* |  |
| **M & D FLUGZEUGBAU GMBH** | AVO 68 - R 100 "Samburo" | *metal-tube, wood* |  |
| **M & D FLUGZEUGBAU GMBH** | AVO 68 - R 115 "Samburo" | *metal-tube, wood* |  |
| **M & D FLUGZEUGBAU GMBH** | AVO 68 - s "Samburo" | *metal-tube, wood* |  |
| **M & D FLUGZEUGBAU GMBH** | AVO 68 - v "Samburo" | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | SF 25 A | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | SF 25 B | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | SF 25 C | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | SF 25 D | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | SF 25 E | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | SF 25 K | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | SF 28 A “Tandem-Falke” | *metal-tube, wood* |  |
| **SCHEIBE AIRCRAFT GMBH** | SF 36 A | *composite* |  |
| **SCHEIBE AIRCRAFT GMBH** | SF 36 R | *composite* |  |

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| **GROUP 4 POWERED SAILPLANES** | | | |
| **TC Holder** | **Model** | **Type of structure** | **Note** |
| **SCHEMPP HIRTH FLUGZEUGBAU** | ARCUS M | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Arcus T | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Discus bM | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Discus bT | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Discus-2cFES | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Discus-2cT | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Discus-2T | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Duo Discus T | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Janus CM | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Janus CT | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Nimbus-2M | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Nimbus-3DM | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Nimbus-3DT | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Nimbus-3T | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Nimbus-4DM | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Nimbus-4DT | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Nimbus-4M | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Nimbus-4T | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Ventus bT | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Ventus cM | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Ventus cT | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Ventus-2cM | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Ventus-2cT | *composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Ventus-3M | *Composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Ventus-3F | *Composite* |  |
| **SCHEMPP HIRTH FLUGZEUGBAU** | Ventus-3T | *composite* |  |
| **SPORTINE AVIACIJA IR KO** | LAK-17AT | *composite* |  |
| **SPORTINE AVIACIJA IR KO** | LAK-17B FES | *composite* |  |
| **SPORTINE AVIACIJA IR KO** | LAK-17B FES mini | *Composite* |  |
| **SPORTINE AVIACIJA IR KO** | LAK-19T | *composite* |  |
| **STEMME AG** | S6 | *composite* |  |
| **STEMME AG** | S6-RT | *composite* |  |
| **STEMME AG** | Stemme S10 | *composite* |  |
| **STEMME AG** | Stemme S10-V | *composite* |  |
| **STEMME AG** | Stemme S10-VT | *composite* |  |
| **STEMME AG** | Stemme S12 | *composite* |  |
| **TECHNOFLUG LEICHTFLUGZEUGBAU** | CARAT | *composite* |  |
| **TECHNOFLUG LEICHTFLUGZEUGBAU** | Piccolo | *composite* |  |
| **TECHNOFLUG LEICHTFLUGZEUGBAU** | Piccolo B | *composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | PIK 20 E II F | *composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | PIK 30 | *composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | PIK-20 E | *composite* |  |
| **WITHOUT TC HOLDER - ORPHANED** | PIK-20 E II | *composite* |  |

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| **GROUP 4 POWERED SAILPLANES** | | | |
| **TC Holder** | **Model** | **Type of structure** | **Note** |
| **WITHOUT TC HOLDER - ORPHANED** | RF-5 AJ-1 Serrania | *wood* |  |
| **ZAKLAD SZYBOWCOWY JEZOW** | SZD-45A "Ogar" | *composite* |  |

###### GROUP 4 GAS BALLOONS

*ED Decision 2023/019/R*

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| **GROUP 4 GAS BALLOONS** | | |
| **TC Holder** | **Model** | **Note** |
| **BALLONBAU WÖRNER GMBH** | K-STU/1000 | ELA1 |
| **BALLONBAU WÖRNER GMBH** | K-STU/1260 | ELA2 |
| **BALLONBAU WÖRNER GMBH** | K-STU/1680 | ELA2 |
| **BALLONBAU WÖRNER GMBH** | K-STU/300 | ELA1 |
| **BALLONBAU WÖRNER GMBH** | K-STU/630 | ELA1 |
| **BALLONBAU WÖRNER GMBH** | K-STU/780 | ELA1 |
| **BALLONBAU WÖRNER GMBH** | K-STU/945 | ELA1 |
| **BALLONBAU WÖRNER GMBH** | NL-STU/1000 | ELA1 |
| **BALLONBAU WÖRNER GMBH** | NL-STU/280 | ELA1 |
| **BALLONBAU WÖRNER GMBH** | NL-STU/380 | ELA1 |
| **BALLONBAU WÖRNER GMBH** | NL-STU/510 | ELA1 |
| **BALLONBAU WÖRNER GMBH** | NL-STU/640 | ELA1 |
| **BALLONBAU WÖRNER GMBH** | NL-STU/840 | ELA1 |
| **CAMERON BALLOONS LIMITED** | GB 1000 | ELA1 |
| **CAMERON BALLOONS LIMITED** | TGB-1150 | Tethered gas balloon |
| **LINDSTRAND TECHNOLOGIES LTD.** | 105G | ELA1 |
| **LINDSTRAND TECHNOLOGIES LTD.** | 14M | ELA1 |
| **LINDSTRAND TECHNOLOGIES LTD.** | 203M | ELA2 |
| **LINDSTRAND TECHNOLOGIES LTD.** | 77M | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | K-1050/3-Ri | ELA1 |
| **WITHOUT TC HOLDER — ORPHANED** | K-1260/3-Ri | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | K-1680/4-Ri | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | K-630/1-Ri | ELA1 |
| **WITHOUT TC HOLDER — ORPHANED** | K-780/2-Ri | ELA1 |
| **WITHOUT TC HOLDER — ORPHANED** | K-945/2-Ri | ELA1 |
| **AERONAUTICAL CENTER AUGUR** | AL-30 | ELA2 (Tethered gas balloon) |
| **AEROPHILE SAS** | AEROPHILE 5500 | ELA2 (Tethered gas balloon) |
| **BALLONBAU WÖRNER GMBH** | FK-5500/STU | ELA2 (Tethered gas balloon) |
| **BALLONBAU WÖRNER GMBH** | FKP-STU/280 | ELA1 (Tethered gas balloon) |
| **BALLONBAU WÖRNER GMBH** | FKP-STU/380 | ELA2 (Tethered gas balloon) |
| **BALLONBAU WÖRNER GMBH** | FKP-STU/510 | ELA2 (Tethered gas balloon) |
| **BALLONBAU WÖRNER GMBH** | FK-STU/280 | ELA1 (Tethered gas balloon) |
| **LINDSTRAND TECHNOLOGIES LTD** | 197-T (PTB) | Tethered gas balloon |
| **LINDSTRAND TECHNOLOGIES LTD.** | 203T | ELA2 (Tethered gas balloon) |
| **LINDSTRAND TECHNOLOGIES LTD.** | 9T | ELA1 (Tethered gas balloon) |
| **LINDSTRAND TECHNOLOGIES LTD.** | LBL 203P | ELA2 (Tethered gas balloon) |

###### GROUP 4 HOT-AIR BALLOONS

*ED Decision 2023/019/R*

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| **GROUP 4 HOT-AIR BALLOONS** | | |
| **TC Holder** | **Model** | **Note** |
| **AEROSTAR INTERNATIONAL** | CELL | ELA2 |
| **AEROSTAR INTERNATIONAL** | RX-6 | ELA2 |
| **AEROSTAR INTERNATIONAL** | RX-7 | ELA2 |
| **AEROSTAR INTERNATIONAL** | RX-8 | ELA2 |
| **AEROSTAR INTERNATIONAL** | RX-9 | ELA2 |
| **AEROSTAR INTERNATIONAL** | RXS-8 | ELA2 |
| **AEROSTAR INTERNATIONAL** | S-49A | ELA2 |
| **AEROSTAR INTERNATIONAL** | S-52A | ELA2 |
| **AEROSTAR INTERNATIONAL** | S-53A | ELA2 |
| **AEROSTAR INTERNATIONAL** | S-55A | ELA2 |
| **AEROSTAR INTERNATIONAL** | S-57A | ELA2 |
| **AEROSTAR INTERNATIONAL** | S-57S | ELA2 |
| **AEROSTAR INTERNATIONAL** | S-60A | ELA2 |
| **AEROSTAR INTERNATIONAL** | S-66A | ELA2 |
| **AEROSTAR INTERNATIONAL** | S-71A | ELA2 |
| **AEROSTAR INTERNATIONAL** | S-77A | ELA2 |
| **AEROSTAR INTERNATIONAL** | W100LB | ELA2 |
| **BALLONS CHAIZE** | CS 1600 F12 | ELA1 |
| **BALLONS CHAIZE** | CS 1600 F24 | ELA1 |
| **BALLONS CHAIZE** | CS 1800 F12 | ELA1 |
| **BALLONS CHAIZE** | CS 1800 F24 | ELA1 |
| **BALLONS CHAIZE** | CS 2000 F12 | ELA1 |
| **BALLONS CHAIZE** | CS 2000 F24 | ELA1 |
| **BALLONS CHAIZE** | CS 2200 F12 | ELA1 |
| **BALLONS CHAIZE** | CS 2200 F16 | ELA1 |
| **BALLONS CHAIZE** | CS 2200 F24 | ELA1 |
| **BALLONS CHAIZE** | CS 2200 F32 | ELA1 |
| **BALLONS CHAIZE** | CS 3000 F16 | ELA1 |
| **BALLONS CHAIZE** | CS 3000 F32 | ELA1 |
| **BALLONS CHAIZE** | CS 4000 F16 | ELA2 |
| **BALLONS CHAIZE** | CS 4000 F32 | ELA2 |
| **BALLONS CHAIZE** | DC 1800 F16 | ELA1 |
| **BALLONS CHAIZE** | DC 2000 F16 | ELA1 |
| **BALLONS CHAIZE** | DC 2200 F16 | ELA1 |
| **BALLONS CHAIZE** | DC-Type | ELA1 |
| **BALLONS CHAIZE** | JZ 18 F12 | ELA1 |
| **BALLONS CHAIZE** | JZ 18 F24 | ELA1 |
| **BALLONS CHAIZE** | JZ 20 F12 | ELA1 |
| **BALLONS CHAIZE** | JZ 20 F24 | ELA1 |
| **BALLONS CHAIZE** | JZ 22 F12 | ELA1 |

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| **GROUP 4 HOT-AIR BALLOONS** | | |
| **TC Holder** | **Model** | **Note** |
| **BALLONS CHAIZE** | JZ 22 F24 | ELA1 |
| **BALLONS CHAIZE** | JZ 25 F12 | ELA1 |
| **BALLONS CHAIZE** | JZ 25 F16 | ELA1 |
| **BALLONS CHAIZE** | JZ 25 F24 | ELA1 |
| **BALLONS CHAIZE** | JZ 25 F32 | ELA1 |
| **BALLONS CHAIZE** | JZ 30 F16 | ELA1 |
| **BALLONS CHAIZE** | JZ 30 F32 | ELA1 |
| **BALLONS CHAIZE** | JZ 35 F16 | ELA2 |
| **BALLONS CHAIZE** | JZ 35 F32 | ELA2 |
| **BALLONS CHAIZE** | JZ 40 F16 | ELA2 |
| **BALLONS CHAIZE** | JZ 40 F32 | ELA2 |
| **BALLONS CHAIZE** | JZX 18 F12 | ELA1 |
| **BALLONS CHAIZE** | JZX 18 F24 | ELA1 |
| **BALLONS CHAIZE** | JZX 20 F12 | ELA1 |
| **BALLONS CHAIZE** | JZX 20 F24 | ELA1 |
| **BALLONS CHAIZE** | JZX 22 F12 | ELA1 |
| **BALLONS CHAIZE** | JZX 22 F24 | ELA1 |
| **BALLONS CHAIZE** | JZX 25 F12 | ELA1 |
| **BALLONS CHAIZE** | JZX 25 F16 | ELA1 |
| **BALLONS CHAIZE** | JZX 25 F24 | ELA1 |
| **BALLONS CHAIZE** | JZX 25 F32 | ELA1 |
| **BALLONS CHAIZE** | JZX 30 F16 | ELA1 |
| **BALLONS CHAIZE** | JZX 30 F32 | ELA1 |
| **BALLONS CHAIZE** | JZX 35 F16 | ELA2 |
| **BALLONS CHAIZE** | JZX 35 F32 | ELA2 |
| **BALLONS CHAIZE** | JZX 40 F16 | ELA2 |
| **BALLONS CHAIZE** | JZX 40 F32 | ELA2 |
| **BALLONS CHAIZE** | SSHAB-Model | ELA1 |
| **BALLONS CHAIZE** | SW-Model |  |
| **BALLONS LIBERT S.P.R.L.** | L12-2600 | ELA1 |
| **BALLONS LIBERT S.P.R.L.** | L12-3000 | ELA1 |
| **BALLONS LIBERT S.P.R.L.** | L1800 | ELA1 |
| **BALLONS LIBERT S.P.R.L.** | L2200 | ELA1 |
| **BALLONS LIBERT S.P.R.L.** | L2600 | ELA1 |
| **BALLONS LIBERT S.P.R.L.** | L3000 | ELA1 |
| **BALLONS LIBERT S.P.R.L.** | L3000+ | ELA1 |
| **BALLONS LIBERT S.P.R.L.** | L3400 | ELA1 |
| **BALLONS LIBERT S.P.R.L.** | L4000+ | ELA2 |
| **BALLONS LIBERT S.P.R.L.** | L4500 | ELA2 |
| **BALLONS LIBERT S.P.R.L.** | L5000 | ELA2 |
| **BALLONS LIBERT S.P.R.L.** | LC Replica | ELA1 |
| **BALLONS LIBERT S.P.R.L.** | LC2000 | ELA1 |
| **BALLONSERVICE UND TECHNIK** | Schön-Mars | ELA2 |

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| **GROUP 4 HOT-AIR BALLOONS** | | |
| **TC Holder** | **Model** | **Note** |
| **BALLONSERVICE UND TECHNIK** | Schön-Neptun | ELA2 |
| **BALLONSERVICE UND TECHNIK** | Schön-Saturn | ELA2 |
| **BALLONSERVICE UND TECHNIK** | Schön-Venus | ELA2 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | AB 2 | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | AB 2a | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | AB 8 | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | AB 8 N30 | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | AB N22 | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | AB N30 | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | AB O22 | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BALL | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB D-Type | ELA2 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB ED-Type | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB E-Type | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB GP-Type | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB N-Type | ELA2 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB O-Type | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB P-Type | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB Series | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB XR-Type | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB Z-Type | ELA2 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB100Z | ELA2 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB12 | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB120P | ELA2 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB142P | ELA2 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB16 | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB17GP | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB17XR | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB20 | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB20E | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB20GP | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB20XR | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB22 | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB22E | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB22N | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB22XR | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB22Z | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB26 | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB26E | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB26N | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB26XR | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB26Z | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB30N | ELA1 |

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| **GROUP 4 HOT-AIR BALLOONS** | | |
| **TC Holder** | **Model** | **Note** |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB30XR | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB30Z | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB34Z | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB37N | ELA2 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB37Z | ELA2 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB40Z | ELA2 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB42Z | ELA2 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB45N | ELA2 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB45Z | ELA2 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB51Z | ELA2 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB60N | ELA2 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB60Z | ELA2 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB70Z | ELA2 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB85Z | ELA2 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BB9 | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BEAR | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BEMB | ELA2 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | BURGER KING | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | CUBE | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | DHL | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | FISH | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | FORKLIFT | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | GNOME | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | HEART | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | ICE | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | JAG | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | JAGER | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | JAGER 28 | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | JUPOL | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | KATZENKOPF | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | KRIGL | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | MONTGOLFIERE | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | PHARE | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | RABBIT | ELA2 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | REPLIKA | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | SANTA | ELA2 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | SHIP | ELA2 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | SILO | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | SKYBALLS | ELA1 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | VOSTOK | ELA2 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | WERA | ELA2 |
| **BALÓNY KUBÍČEK SPOL. S.R.O.** | WURST | ELA2 |
| **CAMERON BALLOONS LIMITED** | 105-24 | ELA1 |

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| **GROUP 4 HOT-AIR BALLOONS** | | |
| **TC Holder** | **Model** | **Note** |
| **CAMERON BALLOONS LIMITED** | 105A | ELA1 |
| **CAMERON BALLOONS LIMITED** | 120-24 | ELA1 |
| **CAMERON BALLOONS LIMITED** | 120A | ELA1 |
| **CAMERON BALLOONS LIMITED** | 140-24 | ELA2 |
| **CAMERON BALLOONS LIMITED** | 140A | ELA2 |
| **CAMERON BALLOONS LIMITED** | 150A | ELA2 |
| **CAMERON BALLOONS LIMITED** | 160-24 | ELA2 |
| **CAMERON BALLOONS LIMITED** | 160A | ELA2 |
| **CAMERON BALLOONS LIMITED** | 17A | ELA1 |
| **CAMERON BALLOONS LIMITED** | 180-24 | ELA2 |
| **CAMERON BALLOONS LIMITED** | 180A | ELA2 |
| **CAMERON BALLOONS LIMITED** | 200-24 | ELA2 |
| **CAMERON BALLOONS LIMITED** | 210A | ELA2 |
| **CAMERON BALLOONS LIMITED** | 21A | ELA1 |
| **CAMERON BALLOONS LIMITED** | 220-24 | ELA2 |
| **CAMERON BALLOONS LIMITED** | 240-24 | ELA2 |
| **CAMERON BALLOONS LIMITED** | 240A | ELA2 |
| **CAMERON BALLOONS LIMITED** | 25A | ELA1 |
| **CAMERON BALLOONS LIMITED** | 260-24 | ELA2 |
| **CAMERON BALLOONS LIMITED** | 260A | ELA2 |
| **CAMERON BALLOONS LIMITED** | 26-16 | ELA1 |
| **CAMERON BALLOONS LIMITED** | 300A | ELA2 |
| **CAMERON BALLOONS LIMITED** | 31-24 | ELA1 |
| **CAMERON BALLOONS LIMITED** | 315A | ELA2 |
| **CAMERON BALLOONS LIMITED** | 317-24 | ELA2 |
| **CAMERON BALLOONS LIMITED** | 31A | ELA1 |
| **CAMERON BALLOONS LIMITED** | 4 Pack-90 (Four Pack-1) | ELA1 |
| **CAMERON BALLOONS LIMITED** | 400-28 | ELA2 |
| **CAMERON BALLOONS LIMITED** | 400A | ELA2 |
| **CAMERON BALLOONS LIMITED** | 42A | ELA1 |
| **CAMERON BALLOONS LIMITED** | 500-28 | ELA2 |
| **CAMERON BALLOONS LIMITED** | 56-24 | ELA1 |
| **CAMERON BALLOONS LIMITED** | 56A | ELA1 |
| **CAMERON BALLOONS LIMITED** | 56B | ELA1 |
| **CAMERON BALLOONS LIMITED** | 65-24 | ELA1 |
| **CAMERON BALLOONS LIMITED** | 69A | ELA1 |
| **CAMERON BALLOONS LIMITED** | 70-16 | ELA1 |
| **CAMERON BALLOONS LIMITED** | 77-24 | ELA1 |
| **CAMERON BALLOONS LIMITED** | 77A | ELA1 |
| **CAMERON BALLOONS LIMITED** | 77B | ELA1 |
| **CAMERON BALLOONS LIMITED** | 80-16 | ELA1 |
| **CAMERON BALLOONS LIMITED** | 90-24 | ELA1 |
| **CAMERON BALLOONS LIMITED** | 90A | ELA1 |

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| **GROUP 4 HOT-AIR BALLOONS** | | |
| **TC Holder** | **Model** | **Note** |
| **CAMERON BALLOONS LIMITED** | 90B | ELA1 |
| **CAMERON BALLOONS LIMITED** | A Type Cloudhopper Series | Ref.: Models LBL 21A to LBL 35A |
| **CAMERON BALLOONS LIMITED** | A Type Series | Ref.: Models LBL 42A to LBL 500A |
| **CAMERON BALLOONS LIMITED** | A-105 | ELA1 |
| **CAMERON BALLOONS LIMITED** | A-120 | ELA1 |
| **CAMERON BALLOONS LIMITED** | A-140 | ELA2 |
| **CAMERON BALLOONS LIMITED** | A-160 | ELA2 |
| **CAMERON BALLOONS LIMITED** | A-180 | ELA2 |
| **CAMERON BALLOONS LIMITED** | A-200 | ELA2 |
| **CAMERON BALLOONS LIMITED** | A-210 | ELA2 |
| **CAMERON BALLOONS LIMITED** | A-250 | ELA2 |
| **CAMERON BALLOONS LIMITED** | A-275 | ELA2 |
| **CAMERON BALLOONS LIMITED** | A-300 | ELA2 |
| **CAMERON BALLOONS LIMITED** | A-315 | ELA2 |
| **CAMERON BALLOONS LIMITED** | A-340 | ELA2 |
| **CAMERON BALLOONS LIMITED** | A-340HL | ELA2 |
| **CAMERON BALLOONS LIMITED** | A-375 | ELA2 |
| **CAMERON BALLOONS LIMITED** | A-400 | ELA2 |
| **CAMERON BALLOONS LIMITED** | A-415 | ELA2 |
| **CAMERON BALLOONS LIMITED** | A-425LW | ELA2 |
| **CAMERON BALLOONS LIMITED** | A-450LW | ELA2 |
| **CAMERON BALLOONS LIMITED** | A-500LW | ELA2 |
| **CAMERON BALLOONS LIMITED** | A-530 | ELA2 |
| **CAMERON BALLOONS LIMITED** | A-530LW | ELA2 |
| **CAMERON BALLOONS LIMITED** | AML-105 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Andrelon Bottle (Bottle-8) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Apple-120 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Apple-90 | ELA1 |
| **CAMERON BALLOONS LIMITED** | AX10-150 S2 | ELA2 |
| **CAMERON BALLOONS LIMITED** | AX10-160 S1 | ELA2 |
| **CAMERON BALLOONS LIMITED** | AX10-160 S2 | ELA2 |
| **CAMERON BALLOONS LIMITED** | AX10-160Z | ELA2 |
| **CAMERON BALLOONS LIMITED** | AX10-180 S1 | ELA2 |
| **CAMERON BALLOONS LIMITED** | AX10-180 S2 | ELA2 |
| **CAMERON BALLOONS LIMITED** | AX10-210 S2 | ELA2 |
| **CAMERON BALLOONS LIMITED** | AX11-225 S2 | ELA2 |
| **CAMERON BALLOONS LIMITED** | AX11-250 S2 | ELA2 |
| **CAMERON BALLOONS LIMITED** | AX4-31Z | ELA1 |
| **CAMERON BALLOONS LIMITED** | AX5-42 S1 | ELA1 |
| **CAMERON BALLOONS LIMITED** | AX5-42Bolt | ELA1 |
| **CAMERON BALLOONS LIMITED** | AX56-Series 1/SP1 | ELA1 |
| **CAMERON BALLOONS LIMITED** | AX6-56 S1 | ELA1 |

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| **GROUP 4 HOT-AIR BALLOONS** | | |
| **TC Holder** | **Model** | **Note** |
| **CAMERON BALLOONS LIMITED** | AX6-56A | ELA1 |
| **CAMERON BALLOONS LIMITED** | AX6-56Bolt | ELA1 |
| **CAMERON BALLOONS LIMITED** | AX6-56Z | ELA1 |
| **CAMERON BALLOONS LIMITED** | AX7-65 S1 | ELA1 |
| **CAMERON BALLOONS LIMITED** | AX7-65Bolt | ELA1 |
| **CAMERON BALLOONS LIMITED** | AX7-65Z | ELA1 |
| **CAMERON BALLOONS LIMITED** | AX7-77 S1 | ELA1 |
| **CAMERON BALLOONS LIMITED** | AX7-77A | ELA1 |
| **CAMERON BALLOONS LIMITED** | AX7-77Bolt | ELA1 |
| **CAMERON BALLOONS LIMITED** | AX7-77Z | ELA1 |
| **CAMERON BALLOONS LIMITED** | AX8-105 S1 | ELA1 |
| **CAMERON BALLOONS LIMITED** | AX8-105 S2 | ELA1 |
| **CAMERON BALLOONS LIMITED** | AX8-105Z | ELA1 |
| **CAMERON BALLOONS LIMITED** | AX8-84 S1 | ELA1 |
| **CAMERON BALLOONS LIMITED** | AX8-90 S1 | ELA1 |
| **CAMERON BALLOONS LIMITED** | AX8-90 S2 | ELA1 |
| **CAMERON BALLOONS LIMITED** | AX9-120 S1 | ELA1 |
| **CAMERON BALLOONS LIMITED** | AX9-120 S2 | ELA1 |
| **CAMERON BALLOONS LIMITED** | AX9-140 S2 | ELA2 |
| **CAMERON BALLOONS LIMITED** | B Type Series | Ref.: Models LBL 56B to LBL 105B |
| **CAMERON BALLOONS LIMITED** | Ball-70 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Ball-77 (Ball-4) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Baltika-77 (Cylinder-14) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Battery LR2 (Cylinder-6) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Bear-72 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Bearskin | ELA1 |
| **CAMERON BALLOONS LIMITED** | Beer Crate-120 (Box-20) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Bertie Bassett-90 (St. Fig.10) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Bibendum -110 (St. Fig.-12) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Bic Chic-90 (Figure-6) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Bottle-100 (Bottle-2) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Bottle-77 (Bottle-6) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Bowler-90 (Hat-1) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Bradford/Bingley-90 (Box-9) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Brandenburger Tor (Box-3) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Britannia Pig-90 (Quadruped-8) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Buddy-90 (Figure-7) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Bulb-65 Light (Bulb-1) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Bull-110 (Quadruped-12) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Bunch-100 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Bunny-90 (Standing Figure-7) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Burger King (Burger-1) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Bus-90 | ELA1 |

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| **GROUP 4 HOT-AIR BALLOONS** | | |
| **TC Holder** | **Model** | **Note** |
| **CAMERON BALLOONS LIMITED** | C Type Series | Ref.: Models LBL 400C to 600C |
| **CAMERON BALLOONS LIMITED** | C-100 | ELA1 |
| **CAMERON BALLOONS LIMITED** | C-60 | ELA1 |
| **CAMERON BALLOONS LIMITED** | C-70 | ELA1 |
| **CAMERON BALLOONS LIMITED** | C-80 | ELA1 |
| **CAMERON BALLOONS LIMITED** | C-90 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Cabin | ELA1 |
| **CAMERON BALLOONS LIMITED** | Calling Card-110 (Box-10) | ELA1 |
| **CAMERON BALLOONS LIMITED** | CameronBox 105 (Telef.häuschen) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Can-120 (Cylinder-16) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Can-60 (Barrel-60) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Can-77 (Cylinder-10) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Carrots-80 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Cart (Box-6) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Chateau-84 (House-1) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Cheese-82 (Horizontal Cylinder) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Chicken-105 (Bird-2) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Cider Bottle-120 (Cylinder- 9) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Clown Standing (Figure-6) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Club-90 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Cockerel-130 (Bird-7) | ELA2 (Volume 3 681 m3) |
| **CAMERON BALLOONS LIMITED** | Coffee Jug-90 (Jug-1) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Cola Can-90 (Cylinder-12) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt ‘Bullet‘ Type | Ref.: Models 56B to 77B |
| **CAMERON BALLOONS LIMITED** | Colt 56 Satzenbrau Bottle | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt A Type | Ref.: Models 17A to 400A |
| **CAMERON BALLOONS LIMITED** | Colt Ariel Bottle (Bottle-1) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Beer Glass | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Beetle-105 (Car-3) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Bottle-10 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Bottle-11 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Bottle-12 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Bottle-13 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Bottle-14 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Bottle-90 (Bottle-5) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Can-110 (Cylinder -15) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Clown (Standing Figure-2) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Cylinder One | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Film Can (Cylinder-5) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Flying Book (Box-2) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Flying Head | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Flying Hut | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Flying Jeans | ELA1 |

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| **GROUP 4 HOT-AIR BALLOONS** | | |
| **TC Holder** | **Model** | **Note** |
| **CAMERON BALLOONS LIMITED** | Colt Flying Kiwi | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Flying Lager (Bottle 2) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Flying Mitt | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Flying Open Book (Box-5) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Flying Pig (Quadruped-6) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Flying Shuttlecock (Cone- | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Flying Whiskey (Bottle 3) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Flying Yacht | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Golf Ball-90 (Ball-2) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Jumbo-2 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Mickey Mouse (Wimi-3) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Pils Bottle (Bottle-12) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt Santa Claus (St. Fig.-4) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Colt World-90 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Condom-105 (Cylinder-18) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Cooling Tower-80 (Cylinder-2) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Cork-105 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Cork-116 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Cork-82 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Cow-105 (Quadruped-2) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Cow-110 (Quadruped-5) | ELA2 (Volume 5 947 m3) |
| **CAMERON BALLOONS LIMITED** | Cube-105 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Cup-110 (Urn-1) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Cup-90 (F.A.) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Dinosaur-80 (Quadruped-1) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Dodo-105 (Bird 8) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Doll-105 Standing (Figure-8) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Doll-90 (Cylinder-3) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Donald-97 (Head-10) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Double Cow -110 (Quadruped-10) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Douglas-110 (Figure-5) | ELA2 (Volume 3 541 m3) |
| **CAMERON BALLOONS LIMITED** | Dragon (Quadruped-4) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Drop-180 | ELA2 (Volume 5 098 m3) |
| **CAMERON BALLOONS LIMITED** | Drop-95 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Dude-90 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Eagle -110 (Bird-5) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Eagle-95 (Bird-4) | ELA1 |
| **CAMERON BALLOONS LIMITED** | EB-90 (Glass-3) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Egg-120 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Egg-65 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Egg-89 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Elephant-77 | ELA1 |
| **CAMERON BALLOONS LIMITED** | F.R. Ball | ELA1 |

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| **GROUP 4 HOT-AIR BALLOONS** | | |
| **TC Holder** | **Model** | **Note** |
| **CAMERON BALLOONS LIMITED** | Film Can-90 (Cylinder-7) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Fire Truck-100 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Fire-90 (Cylinder-11) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Flame-95 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Flying Beer Glass (Cylinder-4) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Flying Castle | ELA1 |
| **CAMERON BALLOONS LIMITED** | Flying Coffee Jar (Cylinder-8) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Flying Cow-110 (Quadruped-11) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Flying Ice Cream Cone (Cone-2) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Flying Lager Bottle (Bottle-4) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Flying Piggy Bank (House-2) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Flying Windmill | ELA1 |
| **CAMERON BALLOONS LIMITED** | Football-120 (Sphere-120) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Fork Lift-105 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Freddo-105 (Standing Figure-13) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Frog-90 (Quadruped-7) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Furness 56 Building | ELA1 |
| **CAMERON BALLOONS LIMITED** | Golf Ball-76 (Ball-1) | ELA1 |
| **CAMERON BALLOONS LIMITED** | GosserMug90/Bierkrug90 | ELA1 |
| **CAMERON BALLOONS LIMITED** | GP-65 | ELA1 |
| **CAMERON BALLOONS LIMITED** | GP-70 | ELA1 |
| **CAMERON BALLOONS LIMITED** | G-Rail-90 (Standing Figure 16) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Grand Illusion (Figure-3) | ELA2 (Volume 3 535 m3) |
| **CAMERON BALLOONS LIMITED** | Graz Box-110 (Box-19) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Grolsch-105 (Bottle-7) | ELA1 |
| **CAMERON BALLOONS LIMITED** | H-20 | ELA1 |
| **CAMERON BALLOONS LIMITED** | H-24 | ELA1 |
| **CAMERON BALLOONS LIMITED** | H-34 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Hard Hat-90 (Hat-2) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Harley-78 (Motor Bike-1) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Head 2-120 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Head One-105 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Head-90 (Head-15) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Heart-100 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Heart-120 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Helmet-120 (Head-16) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Hex Glass-84 (Glass-2) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Home Special-105 (House-3) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Horse-90 (Quadruped-3) | ELA1 |
| **CAMERON BALLOONS LIMITED** | House-60 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Ikea-120 (Heart/Box-120) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Inverted Balloon-105 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Inverted Balloon-78 | ELA1 |

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| **GROUP 4 HOT-AIR BALLOONS** | | |
| **TC Holder** | **Model** | **Note** |
| **CAMERON BALLOONS LIMITED** | Katalog-82 (Box-4) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Kindernet Dog-100 (St. Fig.-14) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Kookaburra-120 (Bird-6) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Krush Bottle-106 (Bottle-7) | ELA1 |
| **CAMERON BALLOONS LIMITED** | L Type Series | Refers to Model LBL 48L |
| **CAMERON BALLOONS LIMITED** | LBL 105A | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL 105B | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL 120A | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL 140A | ELA2 |
| **CAMERON BALLOONS LIMITED** | LBL 150A | ELA2 |
| **CAMERON BALLOONS LIMITED** | LBL 160A | ELA2 |
| **CAMERON BALLOONS LIMITED** | LBL 180A | ELA2 |
| **CAMERON BALLOONS LIMITED** | LBL 210A | ELA2 |
| **CAMERON BALLOONS LIMITED** | LBL 210S | ELA2 |
| **CAMERON BALLOONS LIMITED** | LBL 21A | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL 240A | ELA2 |
| **CAMERON BALLOONS LIMITED** | LBL 25A | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL 260A | ELA2 |
| **CAMERON BALLOONS LIMITED** | LBL 260S | ELA2 |
| **CAMERON BALLOONS LIMITED** | LBL 310A | ELA2 |
| **CAMERON BALLOONS LIMITED** | LBL 317A | ELA2 |
| **CAMERON BALLOONS LIMITED** | LBL 317S | ELA2 |
| **CAMERON BALLOONS LIMITED** | LBL 31A | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL 330A | ELA2 |
| **CAMERON BALLOONS LIMITED** | LBL 35A | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL 360A | ELA2 |
| **CAMERON BALLOONS LIMITED** | LBL 400A | ELA2 |
| **CAMERON BALLOONS LIMITED** | LBL 400C | ELA2 |
| **CAMERON BALLOONS LIMITED** | LBL 425A | ELA2 |
| **CAMERON BALLOONS LIMITED** | LBL 42A | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL 450A | ELA2 |
| **CAMERON BALLOONS LIMITED** | LBL 48L | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL 500A | ELA2 |
| **CAMERON BALLOONS LIMITED** | LBL 500C | ELA2 |
| **CAMERON BALLOONS LIMITED** | LBL 56A | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL 56B | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL 600C | ELA2 |
| **CAMERON BALLOONS LIMITED** | LBL 60A | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL 60X | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL 69A | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL 69B | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL 69X | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL 77A | ELA1 |

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| **GROUP 4 HOT-AIR BALLOONS** | | |
| **TC Holder** | **Model** | **Note** |
| **CAMERON BALLOONS LIMITED** | LBL 77B | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL 77X | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL 90A | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL 90B | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Armchair | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Baby Bel | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Bananas | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Battery | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Bear | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Box | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Bulb | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Cake | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Cornetto | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Dog | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Dreher Bottle | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Drinks Can | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Flowers | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Flying M | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Flying Pig | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Four | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Fruit Bottle | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL House | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Ice Cream Cone | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL J and B Bottle | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Lion | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Lozenge | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Man | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Motorbike | ELA2 (Volume 4 816 m3) |
| **CAMERON BALLOONS LIMITED** | LBL Newspaper | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Octopus | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Oriental Duck | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Pharmacist | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Pink Panther | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Pop Can | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Racing Car | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL RR21 | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Salami | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Saloon Car | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Stove | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Sun | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Syrup Bottle | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Telewest Sphere | ELA1 |
| **CAMERON BALLOONS LIMITED** | LBL Triangle | ELA1 |

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| **GROUP 4 HOT-AIR BALLOONS** | | |
| **TC Holder** | **Model** | **Note** |
| **CAMERON BALLOONS LIMITED** | LBL Tulips | ELA1 |
| **CAMERON BALLOONS LIMITED** | Light Bulb-110 (Light Bulb-2) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Lindstrand X Type | Ref.: Models LBL 60X to LBL 77X |
| **CAMERON BALLOONS LIMITED** | Lips-90 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Loco-105 (Locomotive-1) | ELA1 |
| **CAMERON BALLOONS LIMITED** | LTSB-90 (Box-14) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Macaw-90 (Bird-1) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Maple Leaf-95 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Mickey-90 (Wimi-1) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Mikey-90 (Head-13) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Minion-105 (Cylinder 19) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Modified Sugar Box-90 (Box-21) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Monster -110 (Head-12) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Monster Truck-105 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Mountie-120 (Quadruped-9) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Mug-90 (Cylinder-13) | ELA1 |
| **CAMERON BALLOONS LIMITED** | N-100 | ELA1 |
| **CAMERON BALLOONS LIMITED** | N-105 | ELA1 |
| **CAMERON BALLOONS LIMITED** | N-120 | ELA1 |
| **CAMERON BALLOONS LIMITED** | N-120 Fox | ELA1 |
| **CAMERON BALLOONS LIMITED** | N120MW | ELA1 |
| **CAMERON BALLOONS LIMITED** | N-120SP (Robijn) | ELA1 |
| **CAMERON BALLOONS LIMITED** | N-133 | ELA2 |
| **CAMERON BALLOONS LIMITED** | N-145 | ELA2 |
| **CAMERON BALLOONS LIMITED** | N-160 | ELA2 |
| **CAMERON BALLOONS LIMITED** | N-180 | ELA2 |
| **CAMERON BALLOONS LIMITED** | N-210 | ELA2 |
| **CAMERON BALLOONS LIMITED** | N-31 | ELA1 |
| **CAMERON BALLOONS LIMITED** | N-42 | ELA1 |
| **CAMERON BALLOONS LIMITED** | N-56 | ELA1 |
| **CAMERON BALLOONS LIMITED** | N-65 | ELA1 |
| **CAMERON BALLOONS LIMITED** | N-70 | ELA1 |
| **CAMERON BALLOONS LIMITED** | N-77 | ELA1 |
| **CAMERON BALLOONS LIMITED** | N-90 | ELA1 |
| **CAMERON BALLOONS LIMITED** | N-90 Nail | ELA1 |
| **CAMERON BALLOONS LIMITED** | N-90 Nivea | ELA1 |
| **CAMERON BALLOONS LIMITED** | Newspaper-90 (Cone-3) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Nissan Micra (Car-1) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Nudie-90 (Standing Figure-15) | ELA1 |
| **CAMERON BALLOONS LIMITED** | O-105 | ELA1 |
| **CAMERON BALLOONS LIMITED** | O-120 | ELA1 |
| **CAMERON BALLOONS LIMITED** | O-140 | ELA2 |
| **CAMERON BALLOONS LIMITED** | O-160 | ELA2 |

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| **GROUP 4 HOT-AIR BALLOONS** | | |
| **TC Holder** | **Model** | **Note** |
| **CAMERON BALLOONS LIMITED** | O-26 | ELA1 |
| **CAMERON BALLOONS LIMITED** | O-31 | ELA1 |
| **CAMERON BALLOONS LIMITED** | O-42 | ELA1 |
| **CAMERON BALLOONS LIMITED** | O-56 | ELA1 |
| **CAMERON BALLOONS LIMITED** | O-65 | ELA1 |
| **CAMERON BALLOONS LIMITED** | O-77 | ELA1 |
| **CAMERON BALLOONS LIMITED** | O-84 | ELA1 |
| **CAMERON BALLOONS LIMITED** | O-90 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Obelix-90 (Figure-8) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Onion-105 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Orange Box-115 (Box-17) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Orange-120 | ELA2 (Volume 3 436 m3) |
| **CAMERON BALLOONS LIMITED** | Otti-34 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Pack-130 (Box-18) | ELA2 (Volume 3 681 m3) |
| **CAMERON BALLOONS LIMITED** | Paint Can-115 (Cylinder-17) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Parachutist-110 (Figure-4) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Peacock-90 (Bird-3) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Pipe-105 (Standing Figure-9) | ELA1 |
| **CAMERON BALLOONS LIMITED** | PM-80 (Bottle-9) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Pot-180 (Cylinder-20) | ELA2 (Volume 5 098 m3) |
| **CAMERON BALLOONS LIMITED** | Pot-90 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Printer-105 (Box-15) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Pylon-80 (Figure-2) | ELA1 |
| **CAMERON BALLOONS LIMITED** | R-200 | ELA2 (Mixed Gas / Hot-Air Balloons) |
| **CAMERON BALLOONS LIMITED** | R-210 | ELA2 (Mixed Gas / Hot-Air Balloons) |
| **CAMERON BALLOONS LIMITED** | R-270 | ELA2 (Mixed Gas / Hot-Air  Balloons) |
| **CAMERON BALLOONS LIMITED** | R-450 | ELA2 (Mixed Gas / Hot-Air  Balloons) |
| **CAMERON BALLOONS LIMITED** | R-550 | ELA2 (Mixed Gas / Hot-Air  Balloons) |
| **CAMERON BALLOONS LIMITED** | R-77 | ELA2 (Mixed Gas / Hot-Air Balloons) |
| **CAMERON BALLOONS LIMITED** | R-90 | ELA2 (Mixed Gas / Hot-Air Balloons) |
| **CAMERON BALLOONS LIMITED** | Racing Car-110 (Car-4) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Raindrop-77 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Robijn N-133 | ELA2 (Volume 3 767 m3) |
| **CAMERON BALLOONS LIMITED** | Ronald-105 (Standing Figure-11) | ELA1 |
| **CAMERON BALLOONS LIMITED** | RTW-120 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Rugby-90 (Ball-3) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Rupert Bear-90 (Standing Figure-5) | ELA1 |
| **CAMERON BALLOONS LIMITED** | RX-100 | ELA1 |

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| **GROUP 4 HOT-AIR BALLOONS** | | |
| **TC Holder** | **Model** | **Note** |
| **CAMERON BALLOONS LIMITED** | RX-105 | ELA1 |
| **CAMERON BALLOONS LIMITED** | RX-120 Replica | ELA1 |
| **CAMERON BALLOONS LIMITED** | S Can-100 | ELA1 |
| **CAMERON BALLOONS LIMITED** | S Type Series | Ref.: LBL 210S to 317S |
| **CAMERON BALLOONS LIMITED** | Sarotti-105 (Standing Figure-3) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Saturn-110 (Sphere-110) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Saucer-80 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Ship-90 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Shoe-90 (Shoe-1) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Shopping Bag-120 (Box-7) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Sign-90 (Box-11) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Sim Card-120 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Sky-16 Series | Ref.: Sky Models 25-16 to  80-16 |
| **CAMERON BALLOONS LIMITED** | Sky-24 Series | Ref.: Sky Models 31-24 to 317-24 |
| **CAMERON BALLOONS LIMITED** | Sky-28 Series | Ref.: Sky Models 400-28 to  500-28 |
| **CAMERON BALLOONS LIMITED** | Skywhale-110 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Smurf-2 (Head-11) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Snacpac-90 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Sonic-90 (Figure 1) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Spaceship-110 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Sparkasse Box-90 (Box-12) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Special Shape Hot Air Balloons | Ref.: Cameron special shape models - 4 Pack-90 (Four Pack-1), etc. |
| **CAMERON BALLOONS LIMITED** | Special Shape Hot Air Balloons LBL | Ref.: LBL Special shape  models - Armchair, etc. |
| **CAMERON BALLOONS LIMITED** | Sphere-105 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Sport-50 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Sport-60 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Sport-70 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Sport-80 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Sport-90 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Sports Car-110 (Car-2) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Standing Bear-105 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Startac-105 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Sugar Box-90 (Box-16) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Sultan-80 (Standing Figure-1) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Super FMG-100 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Thomas-110 (Locomotive-2) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Thunder ‘Bolt’ Type | Ref.: Models AX5-42Bolt to AX7-77Bolt |

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| **GROUP 4 HOT-AIR BALLOONS** | | |
| **TC Holder** | **Model** | **Note** |
| **CAMERON BALLOONS LIMITED** | Thunder A Type | Ref.: Models AX6-56A and AX7-77A |
| **CAMERON BALLOONS LIMITED** | Thunder AX-Series S1 | Ref.: Models AX5-42S1 to  AX10-180S1 |
| **CAMERON BALLOONS LIMITED** | Thunder AX-Series S2 | Ref.: Models AX8-90S2 to AX11-250S2 |
| **CAMERON BALLOONS LIMITED** | Thunder Forklift-90 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Thunder Z Type | Ref.: Model AX4-31Z to AX10-160Z |
| **CAMERON BALLOONS LIMITED** | Tiger-90 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Tissue Pack-100 (Four Pack-2) | ELA1 |
| **CAMERON BALLOONS LIMITED** | TR-60 | ELA1 |
| **CAMERON BALLOONS LIMITED** | TR-65 | ELA1 |
| **CAMERON BALLOONS LIMITED** | TR-70 | ELA1 |
| **CAMERON BALLOONS LIMITED** | TR-77 | ELA1 |
| **CAMERON BALLOONS LIMITED** | TR-84 | ELA1 |
| **CAMERON BALLOONS LIMITED** | TR-84S1 | ELA1 |
| **CAMERON BALLOONS LIMITED** | TR-84S2 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Trivial Pursuit (Box-1) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Truck-56 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Truck-72 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Tub-80 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Turtle-120 (Quadruped-13) | ELA1 |
| **CAMERON BALLOONS LIMITED** | TV-80 (Box-8) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Tyre-100 (Horizontal Cylinder-2) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Unox -110 (Hat-3) | ELA1 |
| **CAMERON BALLOONS LIMITED** | V-31 | ELA1 |
| **CAMERON BALLOONS LIMITED** | V-42 | ELA1 |
| **CAMERON BALLOONS LIMITED** | V-56 | ELA1 |
| **CAMERON BALLOONS LIMITED** | V-65 | ELA1 |
| **CAMERON BALLOONS LIMITED** | V-77 | ELA1 |
| **CAMERON BALLOONS LIMITED** | V-90 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Van Gogh-110 Head-14 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Van-110 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Wallaby-42 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Watch-75 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Waving Flag-105 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Waving Flag-90 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Whisky Bottle-90 (Bottle-6) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Wimi Airbus-90 (Wimi-2) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Wine Box-90 (Box-13) | ELA1 |
| **CAMERON BALLOONS LIMITED** | Z-105 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Z-120 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Z-133 | ELA2 |

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| **GROUP 4 HOT-AIR BALLOONS** | | |
| **TC Holder** | **Model** | **Note** |
| **CAMERON BALLOONS LIMITED** | Z-140 | ELA2 |
| **CAMERON BALLOONS LIMITED** | Z-145 | ELA2 |
| **CAMERON BALLOONS LIMITED** | Z-150 | ELA2 |
| **CAMERON BALLOONS LIMITED** | Z-160 | ELA2 |
| **CAMERON BALLOONS LIMITED** | Z-180 | ELA2 |
| **CAMERON BALLOONS LIMITED** | Z-210 | ELA2 |
| **CAMERON BALLOONS LIMITED** | Z-225 | ELA2 |
| **CAMERON BALLOONS LIMITED** | Z-250 | ELA2 |
| **CAMERON BALLOONS LIMITED** | Z-275 | ELA2 |
| **CAMERON BALLOONS LIMITED** | Z-31 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Z-315 | ELA2 |
| **CAMERON BALLOONS LIMITED** | Z-350 | ELA2 |
| **CAMERON BALLOONS LIMITED** | Z-375 | ELA2 |
| **CAMERON BALLOONS LIMITED** | Z-400 | ELA2 |
| **CAMERON BALLOONS LIMITED** | Z-42 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Z-425LW | ELA2 |
| **CAMERON BALLOONS LIMITED** | Z-450 | ELA2 |
| **CAMERON BALLOONS LIMITED** | Z-450Z | ELA2 |
| **CAMERON BALLOONS LIMITED** | Z-56 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Z-600 | ELA2 |
| **CAMERON BALLOONS LIMITED** | Z-65 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Z-69 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Z-750 | ELA2 |
| **CAMERON BALLOONS LIMITED** | Z-77 | ELA1 |
| **CAMERON BALLOONS LIMITED** | Z-90 | ELA1 |
| **HEAD BALLOONS** | AX7-77 | ELA2 |
| **HEAD BALLOONS** | AX7-77b | ELA2 |
| **HEAD BALLOONS** | AX8-105 | ELA2 |
| **HEAD BALLOONS** | AX8-88 | ELA2 |
| **HEAD BALLOONS** | AX8-88b | ELA2 |
| **HEAD BALLOONS** | AX9-118 | ELA2 |
| **JR AEROSPORTS LTD** | Firefly 10 | ELA2 |
| **JR AEROSPORTS LTD** | Firefly 11 | ELA2 |
| **JR AEROSPORTS LTD** | Firefly 11B | ELA2 |
| **JR AEROSPORTS LTD** | Firefly 5 | ELA2 |
| **JR AEROSPORTS LTD** | Firefly 6 | ELA2 |
| **JR AEROSPORTS LTD** | Firefly 6B | ELA2 |
| **JR AEROSPORTS LTD** | Firefly 6B-15 | ELA2 |
| **JR AEROSPORTS LTD** | Firefly 7 | ELA2 |
| **JR AEROSPORTS LTD** | Firefly 7-15 | ELA2 |
| **JR AEROSPORTS LTD** | Firefly 7B | ELA2 |
| **JR AEROSPORTS LTD** | Firefly 7B-15 | ELA2 |
| **JR AEROSPORTS LTD** | Firefly 8 | ELA2 |

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| **GROUP 4 HOT-AIR BALLOONS** | | |
| **TC Holder** | **Model** | **Note** |
| **JR AEROSPORTS LTD** | Firefly 8-24 | ELA2 |
| **JR AEROSPORTS LTD** | Firefly 8B | ELA2 |
| **JR AEROSPORTS LTD** | Firefly 8B-15 | ELA2 |
| **JR AEROSPORTS LTD** | Firefly 9 | ELA2 |
| **JR AEROSPORTS LTD** | Firefly 9B-15 | ELA2 |
| **JR AEROSPORTS LTD** | Firefly B7 | ELA2 |
| **JR AEROSPORTS LTD** | Firefly Bottle | ELA2 |
| **JR AEROSPORTS LTD** | Firefly C7 | ELA2 |
| **JR AEROSPORTS LTD** | Firefly C7B | ELA2 |
| **JR AEROSPORTS LTD** | Firefly C8 | ELA2 |
| **JR AEROSPORTS LTD** | Galaxy-7 | ELA2 |
| **JR AEROSPORTS LTD** | Galaxy-8 | ELA2 |
| **JR AEROSPORTS LTD** | Galaxy-9 | ELA2 |
| **KAVANAGH INVESTMENT TRUST** | B-105 | ELA1 |
| **KAVANAGH INVESTMENT TRUST** | B-350 | ELA2 |
| **KAVANAGH INVESTMENT TRUST** | B-400 | ELA2 |
| **KAVANAGH INVESTMENT TRUST** | B-77 | ELA1 |
| **KAVANAGH INVESTMENT TRUST** | C-56 | ELA1 |
| **KAVANAGH INVESTMENT TRUST** | C-65 | ELA1 |
| **KAVANAGH INVESTMENT TRUST** | C-77 | ELA1 |
| **KAVANAGH INVESTMENT TRUST** | D-105 | ELA1 |
| **KAVANAGH INVESTMENT TRUST** | D-77 | ELA1 |
| **KAVANAGH INVESTMENT TRUST** | D-84 | ELA1 |
| **KAVANAGH INVESTMENT TRUST** | D-90 | ELA1 |
| **KAVANAGH INVESTMENT TRUST** | E-120 | ELA1 |
| **KAVANAGH INVESTMENT TRUST** | E-140 | ELA2 |
| **KAVANAGH INVESTMENT TRUST** | E-160 | ELA2 |
| **KAVANAGH INVESTMENT TRUST** | E-180 | ELA2 |
| **KAVANAGH INVESTMENT TRUST** | E-210 | ELA2 |
| **KAVANAGH INVESTMENT TRUST** | E-240 | ELA2 |
| **KAVANAGH INVESTMENT TRUST** | E-260 | ELA2 |
| **KAVANAGH INVESTMENT TRUST** | E-300 | ELA2 |
| **KAVANAGH INVESTMENT TRUST** | EX-65 | ELA1 |
| **KAVANAGH INVESTMENT TRUST** | G-450 | ELA2 |
| **LINDSTRAND TECHNOLOGIES LTD.** | 70 | ELA1 |
| **LINDSTRAND TECHNOLOGIES LTD.** | 80 | ELA1 |
| **LINDSTRAND TECHNOLOGIES LTD.** | 90 | ELA1 |
| **LINDSTRAND TECHNOLOGIES LTD.** | 105 | ELA1 |
| **LINDSTRAND TECHNOLOGIES LTD.** | 120 | ELA1 |
| **LINDSTRAND TECHNOLOGIES LTD.** | 150 | ELA2 |
| **LINDSTRAND TECHNOLOGIES LTD.** | 180 | ELA2 |
| **LINDSTRAND TECHNOLOGIES LTD.** | Lindstrand Racer Series | ELA1 |

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| **GROUP 4 HOT-AIR BALLOONS** | | |
| **TC Holder** | **Model** | **Note** |
| **LINDSTRAND TECHNOLOGIES LTD.** | Lindstrand Series 1 | ELA2 |
| **LINDSTRAND TECHNOLOGIES LTD.** | LTL Series Special | ELA2 |
| **LINDSTRAND TECHNOLOGIES LTD.** | SR-56 | ELA1 |
| **LINDSTRAND TECHNOLOGIES LTD.** | SR-65 | ELA1 |
| **NOTHEISZ BALLOONS HUNGARY Kft.** | AX-10 | ELA2 |
| **NOTHEISZ BALLOONS HUNGARY Kft.** | AX-6 | ELA1 |
| **NOTHEISZ BALLOONS HUNGARY Kft.** | AX-7 | ELA1 |
| **NOTHEISZ BALLOONS HUNGARY Kft.** | AX-8 | ELA1 |
| **NOTHEISZ BALLOONS HUNGARY Kft.** | AX-9 | ELA2 |
| **NOUVELLE MANUFACT. D’AEROSTATS** | MA 18 | ELA1 |
| **NOUVELLE MANUFACT. D’AEROSTATS** | MA 22 | ELA1 |
| **NOUVELLE MANUFACT. D’AEROSTATS** | MA 26 | ELA1 |
| **NOUVELLE MANUFACT. D’AEROSTATS** | MA 30 | ELA1 |
| **NOUVELLE MANUFACT. D’AEROSTATS** | MA 35 | ELA1 |
| **NOUVELLE MANUFACT. D’AEROSTATS** | MA 40 | ELA2 |
| **SUP-AIR BALLON EGYESŰLET** | B-AX 8 | ELA1 |
| **SUP-AIR BALLON EGYESŰLET** | C-AX 9 | ELA2 |
| **SUP-AIR BALLON EGYESŰLET** | D-AX 5 | ELA1 |
| **SUP-AIR BALLON EGYESŰLET** | E-AX-10 | ELA2 |
| **SUP-AIR BALLON EGYESŰLET** | F-AX 7 | ELA1 |
| **THEO SCHROEDER FIRE BALLOONS** | Auto | ELA2 |
| **THEO SCHROEDER FIRE BALLOONS** | Bierglas | ELA1 |
| **THEO SCHROEDER FIRE BALLOONS** | Cat | ELA1 |
| **THEO SCHROEDER FIRE BALLOONS** | Clown-Kopf | ELA1 |
| **THEO SCHROEDER FIRE BALLOONS** | Erdbeere | ELA1 |
| **THEO SCHROEDER FIRE BALLOONS** | Fire Balloons G | ELA2 |
| **THEO SCHROEDER FIRE BALLOONS** | Gasbehälter | ELA1 |
| **THEO SCHROEDER FIRE BALLOONS** | Gasflasche | ELA1 |
| **THEO SCHROEDER FIRE BALLOONS** | Gutfried | ELA1 |
| **THEO SCHROEDER FIRE BALLOONS** | Kasper | ELA2 |
| **THEO SCHROEDER FIRE BALLOONS** | Kater | ELA1 |
| **THEO SCHROEDER FIRE BALLOONS** | Katze | ELA1 |
| **THEO SCHROEDER FIRE BALLOONS** | Kopf | ELA1 |
| **THEO SCHROEDER FIRE BALLOONS** | Kopfhörer | ELA2 |
| **THEO SCHROEDER FIRE BALLOONS** | Lefax | ELA2 |
| **THEO SCHROEDER FIRE BALLOONS** | Maus | ELA1 |
| **THEO SCHROEDER FIRE BALLOONS** | Ottifant | ELA1 |
| **THEO SCHROEDER FIRE BALLOONS** | Pig 30 | ELA1 |
| **THEO SCHROEDER FIRE BALLOONS** | Pig 36 | ELA2 |
| **THEO SCHROEDER FIRE BALLOONS** | Pinguin | ELA2 |
| **THEO SCHROEDER FIRE BALLOONS** | Schwartau | ELA2 |
| **THEO SCHROEDER FIRE BALLOONS** | Sky Heart | ELA2 |
| **THEO SCHROEDER FIRE BALLOONS** | Sunflower 36 | ELA2 |

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| **GROUP 4 HOT-AIR BALLOONS** | | |
| **TC Holder** | **Model** | **Note** |
| **THEO SCHROEDER FIRE BALLOONS** | Teefix | ELA1 |
| **THEO SCHROEDER FIRE BALLOONS** | Teekanne | ELA1 |
| **THEO SCHROEDER FIRE BALLOONS** | Vase | ELA1 |
| **ULTRAMAGIC, S.A.** | B-Series | ELA1 |
| **ULTRAMAGIC, S.A.** | B-Series B-70 | ELA1 |
| **ULTRAMAGIC, S.A.** | F-10 TXORI | ELA1 |
| **ULTRAMAGIC, S.A.** | F-11 MONTGOLFIERE | ELA1 |
| **ULTRAMAGIC, S.A.** | F-12 PAQUETE | ELA1 |
| **ULTRAMAGIC, S.A.** | F-13 FAIRY | ELA2 |
| **ULTRAMAGIC, S.A.** | F-14 JARRA DE CERVEZA | ELA1 |
| **ULTRAMAGIC, S.A.** | F-15 BOTE-HUCHA | ELA1 |
| **ULTRAMAGIC, S.A.** | F-16 CAJA 2 | ELA1 |
| **ULTRAMAGIC, S.A.** | F-17 OVNI | ELA1 |
| **ULTRAMAGIC, S.A.** | F-18 PIZZA | ELA2 |
| **ULTRAMAGIC, S.A.** | F-19 CAVA | ELA1 |
| **ULTRAMAGIC, S.A.** | F-20 BEETLE | ELA1 |
| **ULTRAMAGIC, S.A.** | F-21 CEPSA | ELA1 |
| **ULTRAMAGIC, S.A.** | F-22 TORRE | ELA1 |
| **ULTRAMAGIC, S.A.** | F-24 FLYINGMAN | ELA2 |
| **ULTRAMAGIC, S.A.** | F-25 FUTBOL | ELA1 |
| **ULTRAMAGIC, S.A.** | F-26 HEART | ELA1 |
| **ULTRAMAGIC, S.A.** | F-29 MOVISTAR | ELA2 |
| **ULTRAMAGIC, S.A.** | F-30 EGG | ELA1 |
| **ULTRAMAGIC, S.A.** | F-31 MAZORCA DEKALB | ELA2 |
| **ULTRAMAGIC, S.A.** | F-32 BEIRAO BOTTLE | ELA1 |
| **ULTRAMAGIC, S.A.** | F-33 PHAROX LAMP | ELA2 |
| **ULTRAMAGIC, S.A.** | F-34 METTEN | ELA2 |
| **ULTRAMAGIC, S.A.** | F-35 R4TS | ELA2 |
| **ULTRAMAGIC, S.A.** | F-4 TXORI | ELA1 |
| **ULTRAMAGIC, S.A.** | F-6 JAMBON | ELA1 |
| **ULTRAMAGIC, S.A.** | F-7 BOTE | ELA1 |
| **ULTRAMAGIC, S.A.** | F-8 LA CARTUJA | ELA2 |
| **ULTRAMAGIC, S.A.** | F-9 BOTELLA DE AGUA | ELA1 |
| **ULTRAMAGIC, S.A.** | F-Series | ELA1 |
| **ULTRAMAGIC, S.A.** | G-Series | ELA1 |
| **ULTRAMAGIC, S.A.** | H-Series | ELA1 |
| **ULTRAMAGIC, S.A.** | H-Series H-31 | ELA1 |
| **ULTRAMAGIC, S.A.** | H-Series H-42 | ELA1 |
| **ULTRAMAGIC, S.A.** | H-Series H-56 | ELA1 |
| **ULTRAMAGIC, S.A.** | H-Series H-65 | ELA1 |
| **ULTRAMAGIC, S.A.** | H-Series H-77 | ELA1 |
| **ULTRAMAGIC, S.A.** | M-Series M-105 | ELA1 |
| **ULTRAMAGIC, S.A.** | M-Series M-120 | ELA1 |

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| **GROUP 4 HOT-AIR BALLOONS** | | |
| **TC Holder** | **Model** | **Note** |
| **ULTRAMAGIC, S.A.** | M-Series M-130 | ELA2 |
| **ULTRAMAGIC, S.A.** | M-Series M-145 | ELA2 |
| **ULTRAMAGIC, S.A.** | M-Series M-160 | ELA2 |
| **ULTRAMAGIC, S.A.** | M-Series M-42 | ELA1 |
| **ULTRAMAGIC, S.A.** | M-Series M-56 | ELA1 |
| **ULTRAMAGIC, S.A.** | M-Series M-56C | ELA1 |
| **ULTRAMAGIC, S.A.** | M-Series M-65 | ELA1 |
| **ULTRAMAGIC, S.A.** | M-Series M-65C | ELA1 |
| **ULTRAMAGIC, S.A.** | M-Series M-77 | ELA1 |
| **ULTRAMAGIC, S.A.** | M-Series M-77C | ELA1 |
| **ULTRAMAGIC, S.A.** | M-Series M-90 | ELA1 |
| **ULTRAMAGIC, S.A.** | N-Series | ELA2 |
| **ULTRAMAGIC, S.A.** | N-Series N-180 | ELA2 |
| **ULTRAMAGIC, S.A.** | N-Series N-210 | ELA2 |
| **ULTRAMAGIC, S.A.** | N-Series N-250 | ELA2 |
| **ULTRAMAGIC, S.A.** | N-Series N-300 | ELA2 |
| **ULTRAMAGIC, S.A.** | N-Series N-355 | ELA2 |
| **ULTRAMAGIC, S.A.** | N-Series N-425 | ELA2 |
| **ULTRAMAGIC, S.A.** | N-Series N-500 | ELA2 |
| **ULTRAMAGIC, S.A.** | S-Series S-105 | ELA1 |
| **ULTRAMAGIC, S.A.** | S-Series S-130 | ELA2 |
| **ULTRAMAGIC, S.A.** | S-Series S-160 | ELA2 |
| **ULTRAMAGIC, S.A.** | S-Series S-50 | ELA1 |
| **ULTRAMAGIC, S.A.** | S-Series S-70 | ELA1 |
| **ULTRAMAGIC, S.A.** | S-Series S-90 | ELA1 |
| **ULTRAMAGIC, S.A.** | T-Series | ELA2 |
| **ULTRAMAGIC, S.A.** | T-Series T-150 | ELA2 |
| **ULTRAMAGIC, S.A.** | T-Series T-180 | ELA2 |
| **ULTRAMAGIC, S.A.** | T-Series T-210 | ELA2 |
| **ULTRAMAGIC, S.A.** | V-Series | ELA1 |
| **ULTRAMAGIC, S.A.** | V-Series V-105 | ELA1 |
| **ULTRAMAGIC, S.A.** | V-Series V-25 | ELA1 |
| **ULTRAMAGIC, S.A.** | V-Series V-56 | ELA1 |
| **ULTRAMAGIC, S.A.** | V-Series V-65 | ELA1 |
| **ULTRAMAGIC, S.A.** | V-Series V-77 | ELA1 |
| **ULTRAMAGIC, S.A.** | V-Series V-90 | ELA1 |
| **ULTRAMAGIC, S.A.** | Z Series | ELA1 |
| **ULTRAMAGIC, S.A.** | Z-Series Z-90 | ELA1 |
| **WITHOUT TC HOLDER — ORPHANED** | 105 A | ELA1 |
| **WITHOUT TC HOLDER — ORPHANED** | 120 A | ELA1 |
| **WITHOUT TC HOLDER — ORPHANED** | 160 A | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | 180 A | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | 210 A | ELA2 |

|  |  |  |
| --- | --- | --- |
| **GROUP 4 HOT-AIR BALLOONS** | | |
| **TC Holder** | **Model** | **Note** |
| **WITHOUT TC HOLDER — ORPHANED** | 240 A | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | 56 A | ELA1 |
| **WITHOUT TC HOLDER — ORPHANED** | 69 A | ELA1 |
| **WITHOUT TC HOLDER — ORPHANED** | 77 A | ELA1 |
| **WITHOUT TC HOLDER — ORPHANED** | 90 A | ELA1 |
| **WITHOUT TC HOLDER — ORPHANED** | FRX 65 | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | FS 57 A | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | FS 83 A | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | RX 6 | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | RX 7 | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | RX 8 | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | RX 9 | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | RXS 8 | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | S 40 A | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | S 49 A | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | S 50 A | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | S 52 A | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | S 52 A | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | S 60 A | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | S 66 A | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | S 71 A | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | S 77 A | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | SCB AX-6 | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | SCB AX-7 | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | SCB AX-8 | ELA2 |
| **WITHOUT TC HOLDER — ORPHANED** | SCB AX-9 | ELA2 |

GROUP 4 GAS AIRSHIPS (other than those in Group 1)

*ED Decision 2019/024/R*

|  |  |  |
| --- | --- | --- |
| **GROUP 4 GAS AIRSHIPS** | | |
| **TC Holder** | **Model** | **Note** |
| **AMERICAN BLIMP CORPORATION** | A-1-50 | ELA2 |
| **AMERICAN BLIMP CORPORATION** | A-1-70 | ELA2 |
| **AMERICAN BLIMP CORPORATION** | A-60 | ELA2 |
| **AMERICAN BLIMP CORPORATION** | A-60+ | ELA2 |
| **CAMERON BALLOONS LIMITED** | DG-14 | ELA2 |
| **WDL LUFTSCHIFFGESELLSCHAFT MBH** | P 4360 A | ELA2 |
| **WDL LUFTSCHIFFGESELLSCHAFT MBH** | WDL I | ELA2 |
| **WDL LUFTSCHIFFGESELLSCHAFT MBH** | WDL I B | ELA2 |

###### GROUP 4 HOT-AIR AIRSHIPS

*ED Decision 2019/024/R*

|  |  |  |
| --- | --- | --- |
| **GROUP 4 HOT-AIR AIRSHIPS** | | |
| **TC Holder** | **Model** | **Note** |
| **CAMERON BALLOONS LIMITED** | AS 105 GD/4 | ELA1 |
| **CAMERON BALLOONS LIMITED** | AS 105 GD/6 | ELA2 |
| **CAMERON BALLOONS LIMITED** | AS 105 MkII | ELA1 |
| **CAMERON BALLOONS LIMITED** | AS 120 MkII | ELA1 |
| **CAMERON BALLOONS LIMITED** | AS 80 GD | ELA1 |
| **CAMERON BALLOONS LIMITED** | AS 80 MkII | ELA1 |
| **CAMERON BALLOONS LIMITED** | D-38 | ELA1 |
| **CAMERON BALLOONS LIMITED** | D-50 | ELA1 |
| **CAMERON BALLOONS LIMITED** | D-77 | ELA1 |
| **CAMERON BALLOONS LIMITED** | D-96 | ELA1 |
| **CAMERON BALLOONS LIMITED** | DP-50 | ELA1 |
| **CAMERON BALLOONS LIMITED** | DP-60 | ELA1 |
| **CAMERON BALLOONS LIMITED** | DP-70 | ELA1 |
| **CAMERON BALLOONS LIMITED** | DP-80 | ELA1 |
| **CAMERON BALLOONS LIMITED** | DP-90 | ELA1 |
| **LINDSTRAND HOT AIR BALLOONS** | HS-110 | ELA1 |

**Appendix II to AMC to Annex III — Aircraft Type Practical Experience and On-the-Job Training - List of Tasks**

1. Aircraft type practical experience

*ED Decision 2023/019/R*

The tasks are divided in categories of aircraft:

1. aeroplanes and helicopters
2. sailplanes and powered sailplanes
3. balloons and airships

#### SPECIFIC TASKS FOR AEROPLANES AND HELICOPTERS

**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.

Assist in:

Jack aircraft nose or tail wheel. Jack complete aircraft.

Sling or trestle major component.

Level aircraft. Weigh aircraft.

Prepare weight and balance amendment. Check aircraft against equipment list.

Prepare for aircraft towing. Tow aircraft.

Be part of aircraft towing team.

**Lifting and Shoring**

**Levelling/Weighing**

**Towing and Taxiing**

Tie down aircraft.

Park, secure and cover aircraft. Position aircraft in dock.

Secure rotor blades.

Check aircraft for correct placards. Check aircraft for correct markings.

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.

**Parking and mooring**

**Placards and Markings**

**Servicing**

Charge pneumatic system. Grease aircraft.

Connect ground power. Service toilet/water system Perform pre-flight/daily check.

**Vibration and Noise Analysis**

Analyse helicopter vibration problem. Analyse noise spectrum.

Analyse engine vibration.

**Air Conditioning**

Replace combustion heater. Replace flow control valve. Replace outflow valve.

Replace safety valve.

Replace vapour cycle unit.

Replace air cycle unit.

Replace cabin blower.

Replace heat exchanger.

Replace pressurisation controller. Clean outflow valves.

Deactivate/reactivate cargo isolation valve. Deactivate/reactivate avionics ventilation components. Check operation of air conditioning/heating system.

Check operation of pressurisation system. Troubleshoot faulty system.

**Auto flight**

Install servos.

Rig bridle cables Replace controller. Replace amplifier.

Replacement of the auto flight system LRUs in case of fly-by-wire aircraft. Check operation of auto-pilot.

Check operation of auto-throttle/auto-thrust. Check operation of yaw damper.

Check and adjust servo clutch. Perform autopilot gain adjustments. Perform mach trim functional check. Troubleshoot faulty system.

Check autoland system.

Check flight management systems. Check stability augmentation system.

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.

**Communications**

Perform operational check of passenger address system. Functionally check audio integrating system.

Repair coaxial cable. Troubleshoot faulty system. Check SATCOM.

**Electrical Power**

Charge lead/acid battery. Charge Ni-Cad battery.

Check battery capacity. Deep-cycle Ni-Cad battery.

Replace integrated drive/generator/alternator. Replace switches.

Replace circuit breakers. Adjust voltage regulator. Change voltage regulator.

Amend electrical load analysis report. Repair/replace electrical feeder cable. Troubleshoot faulty system.

Perform functional check of integrated drive/generator/alternator.

Perform functional check of voltage regulator.

Perform functional check of emergency generation system.

**Equipment/Furnishings**

Replace carpets Replace crew seats.

Replace passenger seats.

Check inertia reels.

Check seats/belts for security. Check emergency equipment.

Check ELT for compliance with regulations. Repair toilet waste container.

Remove and install ceiling and sidewall panels. Repair upholstery.

Change cabin configuration.

Replace cargo loading system actuator. Test cargo loading system.

Replace escape slides/ropes.

**Fire protection**

Check fire bottle contents.

Check/test operation of fire/smoke detection and warning system. Check cabin fire extinguisher contents.

Check lavatory smoke detector system. Check cargo panel sealing.

Install new fire bottle. Replace fire bottle squib. Troubleshoot faulty system.

Inspect engine fire wire detection systems.

**Flight Controls**

Inspect primary flight controls and related components i.a.w. AMM. Extending/retracting flaps & slats.

Replace horizontal stabiliser. Replace spoiler/lift damper. Replace elevator.

Deactivation/reactivation of aileron servo control.

Replace aileron. Replace rudder. Replace trim tabs.

Install control cable and fittings. Replace slats.

Replace flaps.

Replace powered flying control unit. Replace flat actuator.

Rig primary flight controls. Adjust trim tab.

Adjust control cable tension.

Check control range and direction of movement. Check for correct assembly and locking.

Troubleshoot faulty system.

Functional test of primary flight controls. Functional test of flap system.

Operational test of the side stick assembly. Operational test of the THS.

THS system wear check.

**Fuel**

Water drain system (operation). Replace booster pump.

Replace fuel selector.

Replace fuel tank cells.

Replace/test fuel control valves. Replace magnetic fuel level indicators. Replace water drain valve.

Check/calculate fuel contents manually. Check filters.

Flow check system.

Check calibration of fuel quantity gauges. Check operation feed/selectors.

Check operation of fuel dump/jettison system. Fuel transfer between tanks.

Pressure defuel.

Pressure refuel (manual control).

Deactivation/reactivation of the fuel valves (transfer defuel, X-feed, refuel). Troubleshoot faulty system.

**Hydraulics**

Replace engine driven pump. Check/replace case drain filter. Replace standby pump.

Replace hydraulic motor pump/generator. Replace accumulator.

Check operation of shut off valve. Check filters/clog indicators.

Check indicating systems. Perform functional checks.

Pressurisation/depressurisation of the hydraulic system. Power Transfer Unit (PTU) operation.

Replacement of PTU. Troubleshoot faulty system.

**Ice and rain protection**

Replace pump. Replace timer.

Inspect repair propeller deice boot. Test propeller de-icing system.

Inspect/test wing leading edge de-icer boot. Replace anti-ice/deice valve.

Install wiper motor.

Check operation of systems.

Operational test of the pitot-probe ice protection. Operational test of the TAT ice protection.

Operational test of the wing ice protection system.

Assistance to the operational test of the engine air-intake ice protection (with engines operating). Troubleshoot faulty system.

**Indicating/recording systems**

Replace flight data recorder.

Replace cockpit voice recorder. Replace clock.

Replace master caution unit. Replace FDR.

Perform FDR data retrieval. Troubleshoot faulty system. Implement ESDS procedures. Inspect for HIRF requirements. Start/stop EIS procedure.

Bite test of the CFDIU.

Ground scanning of the central warning system.

**Landing Gear**

Build up wheel.

Replace main wheel.

Replace nose wheel.

Replace steering actuator. Replace truck tilt actuator. Replace gear retraction actuator.

Replace uplock/downlock assembly. Replace shimmy damper.

Rig nose wheel steering.

Functional test of the nose wheel steering system. Replace shock strut seals.

Replace brake unit.

Replace brake control valve. Bleed brakes.

Replace brake fan.

Test anti-skid unit.

Test gear retraction.

Change bungees.

Adjust micro switches/sensors. Charge struts with oil and air. Troubleshoot faulty system.

Test auto-brake system.

Replace rotorcraft skids. Replace rotorcraft skid shoes. Pack and check floats.

Flotation equipment.

Check/test emergency blowdown (emergency landing gear extension). Operational test of the landing gear doors.

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

Troubleshoot faulty system.

Calibrate magnetic direction indicator. Replace airspeed indicator.

Replace altimeter.

Replace air-data computer. Replace ADI.

Replace HSI.

Check pitot static system for leaks. Check operation of directional gyro.

Check calibration of pitot static instruments. Compass replacement direct/indirect.

Functional check flight director system.

Troubleshoot faulty system. Functional check weather radar. Functional check doppler.

Functional check TCAS.

**Lights**

**Instruments**

**Surveillance**

Functional check ATC transponder.

Check calibration of pressure altitude reporting system.

**Navigation**

Functional check inertial navigation system. Complete quadrantal error correction of ADF system. Check GPS.

Test AVM.

Check marker systems.

Functional check DME.

**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.

Replace filter.

Replace air shut off valve.

Replace pressure regulating valve. Replace compressor.

Recharge dessicator. Adjust regulator.

Check for leaks. Troubleshoot faulty system.

Inspect the vacuum system i.a.w. AMM. Replace vacuum pump.

Check/replace filters. Adjust regulator.

Troubleshoot faulty system.

Replace water pump. Replace tap.

**Pneumatic systems**

**Vacuum systems**

**Water/Waste**

Replace toilet pump.

Perform water heater functional check. Troubleshoot faulty system.

Inspect waste bin flap closure.

Retrieve data from CMU. Replace CMU.

Perform Bite check. Troubleshoot faulty system.

Install APU.

Inspect hot section. Troubleshoot faulty system.

Assessment of damage. Sheet metal repair.

Fibre glass repair. Wooden repair. Fabric repair.

Recover fabric control surface. Treat corrosion.

Apply protective treatment.

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.

**Central Maintenance System**

**Airborne Auxiliary power**

**Structures**

**Doors**

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.

Skin repair.

Recover fabric wing. Replace tip.

Replace rib.

Replace integral fuel tank panel. Check incidence/rig.

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.

Install rotor assembly. Replace blades.

Replace damper assembly. Check track.

Check static balance. Check dynamic balance. Troubleshoot.

Replace mast.

Replace drive coupling. Replace clutch/freewheel unit Replace drive belt.

**Wings**

**Propeller**

**Main Rotors**

**Rotor Drive**

Install main gearbox. Overhaul main gearbox. Check gearbox chip detectors.

Install rotor assembly. Replace blades.

Troubleshoot.

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.

**Tail Rotors**

**Tail Rotor Drive**

Install swash plate. Install mixing box. Adjust pitch links.

Rig collective system. Rig cyclic system.

Rig anti-torque system.

**Rotorcraft flight controls**

Check controls for assembly and locking. Check controls for operation and sense. Troubleshoot faulty system.

Build up ECU. Replace engine.

Repair cooling baffles. Repair cowling.

Adjust cowl flaps. Repair faulty wiring.

**Power Plant**

Troubleshoot.

Assist in dry motoring check. Assist in wet motoring check.

Assist in engine start (manual mode).

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.

Replace module. Replace fan blade.

Hot section inspection/boroscope check. Carry out engine/compressor wash.

Carry out engine dry cycle. Engine ground run.

Establish reference power.

Trend monitoring/gas path analysis. Troubleshoot.

**Piston Engines**

**Turbine Engines**

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, piston**

**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.

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, piston**

**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.

Replace engine instruments(s). Replace oil temperature bulb. Replace thermocouples.

Check calibration. Troubleshoot faulty system.

Replace exhaust gasket. Inspect welded repair.

Pressure check cabin heater muff. Troubleshoot faulty system.

Change jet pipe.

Change shroud assembly. Install trimmers.

Inspect/replace thrust reverser. Replace thrust reverser component. Deactivate/reactivate thrust reverser.

**Engine Indicating**

**Exhaust, piston**

**Exhaust, turbine**

Operational test of the thrust reverser system.

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.

Replace starter. Replace start relay.

**Oil**

**Starting**

Replace start control valve. Check cranking speed.

Troubleshoot faulty system.

Replace PRT.

Replace turbo-blower. Replace heat shields. Replace waste gate.

Adjust density controller.

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

Troubleshoot faulty system

Replace gearbox. Replace drive shaft.

Inspect magnetic chip detector.

Removal/installation of the APU.

**Turbines, piston engines**

**Engine water injection**

**Accessory gear boxes**

**APU**

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

#### SPECIFIC TASKS FOR SAILPLANES AND POWERED SAILPLANES

|  |  |
| --- | --- |
| **Structures** | **Wooden/metal tube and fabric/composite/metallic** |
| **General activities** | |
| Placards check or replace | x |
| Weighing, weight & balance sheet | x |
| Documentation of annual inspection, repair | x |
| Review records for compliance with airworthiness directives | x |
| Five annual inspections | x |
| Inspection after an occurrence | x |
| Dismantling/reinstallation of wings and empennages | x |

|  |  |
| --- | --- |
| **Leveling and weighing** | |
| Level the sailplane | x |
| Weighing, weight & balance sheet | x |
| Prepare a weight and balance amendment | x |
| Check the list of equipment | x |
| **Flight controls and flight control systems** | |
| Aileron, flaps: Removal — Balancing — Reinstallation | x |
| Elevator: Removal — Balancing — Reinstallation | x |
| Rudder: Removal — Balancing — Reinstallation | x |
| Rudder cable: Fabrication and installation | x |
| Elevator pushrod: Installation | x |
| Safeguarding of pins, screws, castellated nuts | x |
| Sealing of gaps | x |
| **Electrical systems** | |
| Electrical components, wiring: Removal — Installation | x |
| Batteries — Servicing | x |
| **Avionics systems** | |
| COM: Removal — Installation | x |
| NAV: Removal — Installation | x |
| XPDR: Removal — Installation | x |
| Antenna/antenna cable: Removal — Installation | x |
| **Cabin equipment/systems** | |
| Belts/safety harnesses: Removal — Installation | x |
| Oxygen system removal installation — Test | x |
| Canopy replacement or repair | x |
| Pitot/static system: Removal — Installation — Test | x |
| Flight instruments: Removal — Installation | x |
| Installation of approved equipment | x |
| Compass: Installation — Compensation | x |
| Tow release: Removal — Installation | x |
| Water ballast system: Removal — Installation — Test | x |
| Undercarriage: Removal — Installation | x |
| Brake system: Replacement of components | x |
| **Fuel — Engine — Propeller — Engine — Instruments**  Refer to the tasks related to propeller, piston engine, fuel and control, ignition, engine indications and exhaust, which are contained in Table A ‘Specific tasks  for aeroplanes’ | x |
| Verification and adjustment of folding system of powered sailplanes | x |
| **Wooden structures/Metal tubes and fabric** | |
| Inspection/testing for damages | x |
| Rib structure repair | x |
| Plywood skin repair | x |
| Recover or repair structure with fabric | x |
| Protective coating and finishing | x |
| Install patch on fabric material | x |
| Repair of fairings | x |

|  |  |
| --- | --- |
| **Composite structures** | |
| Laminate repair | x |
| Sandwich structure repair | x |
| Partial gel coat repair | x |
| Complete gel coating | x |
| Repair of fairings | x |
| **Metal structures** | |
| Crack testing | x |
| Repair of covering | x |
| Drilling cracks | x |
| Riveting jobs | x |
| Bonding of structures | x |
| Anti-corrosion treatment | x |
| Repair of fairings | x |

#### SPECIFIC TASKS FOR BALLOONS AND AIRSHIPS

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tasks** | **Balloon** | | **Airship** | |
| **Hot-air** | **Gas (free/tethered)** | **Hot-air** | **Gas** |
| **General activities:** | | | | |
| Functionality test of aircraft (\*) | x | x | x | x |
| Placards check or replacement | x | x | x | x |
| Documentation annual inspection, repair,  ADs, equipment (\*) | x | x | x | x |
| Classification repair (\*) | x | x | x | x |
| **Weighing:** | | | | |
| Weighing and weighing report (\*) | x | x | x | x |
| **Servicing:** | | | | |
| Lubrication of controls when applicable |  | x | x | x |
| Cleaning of envelope, basket, burner | x | x | x | x |
| **Inspections:** | | | | |
| Eight annual inspections (covering at least three different types) (\*) | x |  |  |  |
| Five annual inspections (covering at least two  different types) (\*) |  | x (free) |  |  |
| Three annual inspections (covering at least  two different types) (\*) |  | x (tethered) | x |  |
| Two annual inspections (\*) |  |  |  | x |
| Strength test of envelope fabric (\*) | x | x | x | x |
| **Flight control systems: Removal — Inspection — Reinstallation** | | | | |
| Control surface cable |  |  |  | x |
| Trim system |  |  |  | x |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Safeguarding of pins, screws, castellated nuts (\*) |  | x (tethered) | x | x |
| Stick and pedals |  |  |  | x |
| Hydromechanical control systems |  | x (tethered) |  | x |
| Ballonet control systems (\*) |  | x (tethered) | x | x |
| Electrical control systems |  | x (tethered) |  | x |
| Valves (gas valve, turning vent, parachute or  rip panel) (\*) | x | x | x | x |
| Control and shroud lines and pulleys | x | x | x | x |
| Elevator — stabiliser (including balancing if applicable) |  |  |  | x |
| Rudder (including balancing if applicable) |  |  |  | x |
| Drag rope |  | x (free) |  |  |
| **Electrical system:** | | | | |
| Removal — installation of electrical wires |  | x (tethered) | x | x |
| Removal — installation of electrical components |  | x (tethered) | x | x |
| Servicing of batteries | x | x | x | x |
| **Communication system — transponder:** | | | | |
| Removal — installation of COM | x | x | x | x |
| Removal — installation of NAV |  |  |  | x |
| Removal — installation of XPDR | x | x | x | x |
| Installation of antenna | x | x | x | x |
| Replacement of antenna cable | x | x | x | x |
| **Cabin — equipment:** | | | | |
| Pitot-static systems — tubes removal — installation — replacement |  |  |  | x |
| Flight instruments: removal — installation —  replacement | x | x | x | x |
| Installation of an approved system | x | x | x | x |
| Magnetic compass installation — compensation |  |  |  | x |
| Fire extinguisher | x |  | x | x |
| **Ballast — replacement of:** | | | | |
| Water ballast (when applicable) |  |  |  | x |
| Sand/shot ballast (when applicable) |  | x |  | x |
| Valves — inspection and rigging of valves |  |  |  | x |
| **Envelope:** | | | | |
| Inspection and repair of envelope panels/gores/seams | x | x | x | x |
| Inspection and repair of load tapes and  attachment points | x | x | x | x |
| Inspection and repair of deflation system | x | x | x |  |
| Inspection and repair of net |  | x |  |  |
| Inspection and repair of mooring system |  | x (tethered) |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Electrostatic conductivity test (if type is approved for hydrogen) (\*) |  | x |  | x |
| Ballonet inspection and repair |  | x |  | x |
| Inspection and fabrication of a suspension cable or rope | x | x | x | x |
| Inspection and fabrication of a catena |  |  | x | x |
| **Load ring/frame:** | | | | |
| Crack detection (welded and machined parts) (\*) | x | x | x |  |
| **Heater system:** | | | | |
| Removal, inspection and reinstallation | x |  | x |  |
| Inspection and cleaning of vaporiser and filter (\*) | x |  | x |  |
| Inspection and replacement of hoses (\*) | x |  | x |  |
| Inspection and replacement of pilot flame ignition unit (\*) | x |  | x |  |
| Sealing of fittings (\*) | x |  | x |  |
| Pressure and leak test (\*) | x |  | x |  |
| Disassembly and assembly of fuel cell (\*) | x |  | x |  |
| 10-year inspection of fuel cell | x |  | x |  |
| **Basket/gondola:** | | | | |
| Removal, inspection and reinstallation (as  applicable) | x | x | x | x |
| Inspection and fabrication of a suspension cable or rope (\*) | x | x |  |  |
| Removal — installation of padding | x | x |  |  |
| Removal — installation of belts — safety  harness |  |  | x | x |
| Removal — installation of essential elements of the cabin | x | x | x | x |
| Inspection and fabrication of a basket wire | x | x |  |  |
| Inspection of operational equipment and its fixation points | x | x | x | x |
| Crack detection and repair (welded parts and  frames) | x | x | x | x |
| **Landing gear:** | | | | |
| Removal, inspection and reinstallation of wheels |  | x (tethered) | x | x |
| Removal, inspection and reinstallation of  brakes |  |  |  | x |
| Removal, inspection and reinstallation of  shock absorbers |  |  |  | x |
| **Fuel — Engine — Propeller — Engine instrument systems:** | | | | |
| Refer to tasks in blocks for aeroplanes |  |  | x | x |
| **Wood structure:** | | | | |
| Structure repair | x | x |  |  |
| Protective coating |  |  |  |  |
| **Composite structure:** | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Laminate repair |  | x (tethered) |  | x |
| Sandwich structure repair |  | x (tethered) |  | x |
| **Metallic structures:** | | | | |
| Crack detection (welded and machined parts) | x | x | x | x |
| Riveting jobs |  |  | x | x |
| Bonding of structures |  | x | x | x |
| Anticorrosion treatment |  | x (tethered) | x | x |
| Repair of fairings |  | x (tethered) |  | x |
| **Engine:** | | | | |
| Tasks for aeroplanes of comparable  certification level |  |  | x | x |
| **Exhaust system:** | | | | |
| Tasks for aeroplanes of comparable certification level |  |  | x | x |
| **Propeller:** | | | | |
| Tasks for aeroplanes of comparable certification level |  |  | x | x |
| **Fuel system:** | | | | |
| Tasks for aeroplanes of comparable certification level |  |  | x | x |
| **Hydraulic system:** | | | | |
| Tasks for aeroplanes of comparable certification level |  |  | x | x |
| **Pneumatic system:** | | | | |
| Tasks for aeroplanes of comparable certification level |  |  | x | x |
| **Winch system:** | | | | |
| Witness winch inspection |  | x (tethered) |  |  |

1. List of tasks for OJT

The minimum list of tasks should be selected from the table below according to the following procedures and criteria:

* 1. Filter the ATA chapters (or sub-chapters, when required) applicable to the specific aircraft type (add others if they are missing).
  2. Identify relevant and significant tasks for each required category of INS, FOT, SGH, R/I, MEL and TS.
  3. Retain the required percentage for each task category, and throughout ATA chapters, as much as relevant to the particular aircraft type.

The selection of tasks should give precedence to tasks which are critical and complex in terms of:

* difficulty to execute;
* interpretation of the maintenance procedures / work instructions;
* specific tools and equipment;
* coordination among maintenance staff (teamwork);
* human factors (accessibility, human–machine interface (HMI), etc.);
* safety impact on the aircraft and the crew.

Removal and installation tasks include the final confirmation test, if required.

Credit may be given for similar tasks between ATA systems (e.g. pneumatic valves in ATA 21, 30 and 36), but this should be kept to a minimum.

Some tasks may be performed on another aircraft type as long as both the system and the task are similar.

The following table provides an acceptable method of selection of OJT tasks for B1 and B2 AML categories, per ATA chapter or sub-chapters, as required by point 6.2(e) of Appendix III to Annex III.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OJT TASK SELECTION** | | | | | | | | | | | | |  |
| **ATA Chapters** | **B1** | | | | | | **B2** | | | | | |  |
| **INS** | **FOT** | **SG H** | **R/I** | **ME L** | **TS** | **INS** | **FO T** | **SG H** | **R/I** | **MEL** | **TS** |  |
| **Requirements: % of task categories** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** |  |
| **Introduction subjects:** | | | | | | | | | | | | | |
| 05 Time limits / maintenance checks (see *Note*  below) | X | — | — | — | — | — | X | — | — | — | — | — |  |
| 06 Dimensions/ areas | X | — | — | — | — | — | X | — | — | — | — | — |  |
| 07 Lifting and  shoring | X | — | — | — | — | — | X | — | — | — | — | — |  |
| 08 Levelling and weighing | — | — | X | — | — | — | X | — | X | — | — | — |  |
| 09 Towing and  taxiing | — | — | X | — | — | — | — | — | X | — | — | — |  |
| 10  Parking/mooring, storing and return to service | — | — | X | — | — | — | — | — | X | — | — | — |  |
| 11 Placards and  markings | X | — | — | — | — | — | X | — | — | — | — | — |  |
| 12 Servicing | — | — | X | — | — | — | — | — | X | — | — | — |  |
| 20 Standard practices — only type particular  (ATA 50 or 60) | X | — | X | — | — | — | X | — | X | — | — | — |  |
| **Rotorcraft (only):** | | | | | | | | | | | | | |
| 18 Vibration and noise analysis (blade tracking) | — | — | — | — | — | X | — | — | — | — | — | — |  |
| 62 Rotors | | | | | | | | | | | | | |
| 62-10 Rotor blades | X | — | — | X | — | — | — | — | — | — | — | — |  |
| 62-20 Rotor  head(s) | X | — | — | X | — | — | — | — | — | — | — | — |  |
| 62-30 Rotor shaft(s) / swashplate assy(s) | X | — | — | X | — | — | — | — | — | — | — | — |  |

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| **OJT TASK SELECTION** | | | | | | | | | | | | |  |
| **ATA Chapters** | **B1** | | | | | | **B2** | | | | | |  |
| **INS** | **FOT** | **SG H** | **R/I** | **ME L** | **TS** | **INS** | **FO T** | **SG H** | **R/I** | **MEL** | **TS** |  |
| **Requirements: % of task categories** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** |  |
| 62-40 Indicating | — | X | X | — | X | X | — | — | — | — | — | X |  |
| 63 Rotor drives | | | | | | | | | | | | | |
| 63-10  Engine/gearbox  couplings | X | — | X | X | — | — | — | — | — | — | — | — |  |
| 63-20 Gearbox(es) | X | — | X | X | — | — | — | — | — | — | — | — |  |
| 63-30 Mounts, attachments | X | — | X | — | — | — | — | — | — | — | — | — |  |
| 63-40 Indicating | — | X | — | — | X | X | — | — | — | — | — | X |  |
| 63-50 Rotor brake | X | — | — | X | — | — | — | — | — | — | — | — |  |
| 63-60 Drain lines | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 64 Tail rotor | | | | | | | | | | | | | |
| 64-10 Rotor  blades | X | — | X | X | — | — | — | — | — | — | — | — |  |
| 64-20 Rotor head | X | — | — | X | — | — | — | — | — | — | — | — |  |
| 64-40 Indicating | — | X | — | X | X | X | — | — | — | — | — | X |  |
| 65 Tail-rotor drive | | | | | | | | | | | | | |
| 65-10 Shafts | X | — | X | X | — | — | — | — | — | — | — | — |  |
| 65-20 Gearboxes | X | — | X | X | — | — | — | — | — | — | — | — |  |
| 65-40 Indicating | — | X | — | — | X | X | — | — | — | — | — | X |  |
| 66 Folding blades / pylon | | | | | | | | | | | | | |
| 66-10 Rotor blades | X | — | — | X | — | — | — | — | — | — | — | — |  |
| 66-20 Tail pylon | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 66-30 Controls and indicating | — | X | — | — | — | X | — | — | — | — | — | X |  |
| 67 Rotors flight control | | | | | | | | | | | | | |
| 67-10 Rotor | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 67-20 Antitorque rotor control (yaw control) | X | — | — | — | — | X | — | — | — | — | — | — |  |

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| **OJT TASK SELECTION** | | | | | | | | | | | | |  |
| **ATA Chapters** | **B1** | | | | | | **B2** | | | | | |  |
| **INS** | **FOT** | **SG H** | **R/I** | **ME L** | **TS** | **INS** | **FO T** | **SG H** | **R/I** | **MEL** | **TS** |  |
| **Requirements: % of task categories** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** |  |
| 67-30  Servocontrol system | X | — | — | — | — | X | — | — | — | — | — | — |  |
| **Airframe systems:**  21 Air conditioning | | | | | | | | | | | | | |
| 21-10  Compression | — | — | X | X | — | X | — | — | — | — | — | — |  |
| 21-20 Distribution | — | X | — | X | — | — | — | — | — | — | — | — |  |
| 21-30  Pressurisation  control | — | X | — | X | — | X | — | — | — | — | — | — |  |
| 21-40 Heating | — | — | — | X | — | — | — | — | — | — | — | — |  |
| 21-50 Cooling | — | — | — | X | — | — | — | — | — | — | — | — |  |
| 21-60  Temperature control | — | X | — | X | — | X | — | — | — | — | — | — |  |
| 22 Autoflight | | | | | | | | | | | | | |
| 22-10 Autopilot | — | — | — | — | — | — | — | X | X | X | X | X |  |
| 22-20 Speed  attitude correction | — | — | — | — | — | — | — | X | — | — | — | X |  |
| 22-30 Autothrottle | — | X | — | — | — | — | X | X | — | X | — | X |  |
| 22-40 System monitor | — | — | — | — | — | — | — | X | — | — | — | X |  |
| 22-50  Aerodynamic load alleviating | — | — | — | — | — | — | — | X | — | — | — | X |  |
| 23  Communications | | | | | | | | | | | | | |
| 23-10 Speech  communications | — | X | — | — | — | — | — | X | — | X | — | X |  |
| 23-15 SATCOM | — | X | — | — | — | — | X | X | — | X | — | X |  |
| 23-20 Data transmission and  automatic calling | — | X | — | — | — | — | — | X | — | X | — | X |  |

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| **OJT TASK SELECTION** | | | | | | | | | | | | |  |
| **ATA Chapters** | **B1** | | | | | | **B2** | | | | | |  |
| **INS** | **FOT** | **SG H** | **R/I** | **ME L** | **TS** | **INS** | **FO T** | **SG H** | **R/I** | **MEL** | **TS** |  |
| **Requirements: % of task categories** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** |  |
| 23-30 Passenger address, entertainment and comfort | — | X | — | — | — | — | X | — | — | X | — | X |  |
| 23-40 Interphone | — | X | — | — | — | — | X | — | — | X | — | X |  |
| 23-50 Audio integrating | — | X | — | — | — | — | — | X | — | X | — | X |  |
| 23-60 Static  discharging | X | — | — | — | X | — | X | — | — | X | X | X |  |
| 23-70 Audio and  video monitoring | — | X | — | — | — | — | X | X | — | X | — | X |  |
| 23-80 Integrated automatic tuning | — | — | — | — | — | — | — | X | — | X | — | X |  |
| 24 Electrical power | | | | | | | | | | | | | |
| 24-10 Generator drive | X | X | X | X | X | X | X | X | — | — | X | X |  |
| 24-20 AC  Generation | — | X | — | — | — | X | X | X | — | — | X | X |  |
| 24-30 DC  generation | — | X | — | X | — | X | X | X | — | X | X | X |  |
| 24-40 External  power | X | — | X | — | — | — | X | X | X | — | X | X |  |
| 24-50 AC electrical load distribution | — | X | — | — | — | X | X | X | — | — | — | X |  |
| 24-60 DC Electrical load distribution | — | X | — | — | — | X | X | X | — | — | — | X |  |
| 25 Equipment and furnishings | | | | | | | | | | | | | |
| 25-10 Flight compartment | X | X | X | X | X | — | X | X | — | — | — | — |  |
| 25-20 Passenger  compartment | X | — | — | X | — | — | — | — | — | — | — | — |  |
| 25-30 Galley | X | X | — | X | — | — | X | X | — | — | — | — |  |
| 25-40 Lavatories | X | X | — | — | — | — | X | — | — | — | — | — |  |
| 25-50 Additional  compartments | X | X | — | — | — | — | — | — | — | — | — | — |  |

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| **OJT TASK SELECTION** | | | | | | | | | | | | |  |
| **ATA Chapters** | **B1** | | | | | | **B2** | | | | | |  |
| **INS** | **FOT** | **SG H** | **R/I** | **ME L** | **TS** | **INS** | **FO T** | **SG H** | **R/I** | **MEL** | **TS** |  |
| **Requirements: % of task categories** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** |  |
| 50-00 Cargo accessory compartment | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 50-10 Cargo  compartments | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 50-20 Cargo loading systems | X | X | — | — | — | X | — | X | — | — | — | X |  |
| 50-30 Cargo-  related systems | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 50-50 Accessory | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 50-60 Insulation | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 25-60 Emergency | X | X | X | X | — | — | X | X | — | — | — | — |  |
| 26 Fire protection | | | | | | | | | | | | | |
| 26-10 Detection | — | X | - | X | — | X | — | X | — | — | — | X |  |
| 26-20  Extinguishing | — | X | X | X | — | — | — | — | — | — | — | — |  |
| 26-30 Explosion  suppression | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 27 Flight controls | | | | | | | | | | | | | |
| 27-10 Aileron and tab | X | X | — | X | — | X | — | X | — | — | — | — |  |
| 27-20 Rudder and  tab | X | X | — | X | — | X | — | X | — | — | — | — |  |
| 27-30 Elevator and tab | X | X | — | X | — | X | — | X | — | — | — | — |  |
| 27-40 Horizontal  stabiliser | X | X | — | X | — | X | — | X | — | — | — | — |  |
| 27-50 Flaps | X | X | — | X | — | X | — | X | — | — | — | — |  |
| 27-60 Spoiler, drag devices and variable aerodynamic  fairings | X | X | — | X | — | X | — | X | — | — | — | — |  |
| 27-70 Gust lock and dampener | X | X | X | X | — | X | — | X | — | — | — | — |  |

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| **OJT TASK SELECTION** | | | | | | | | | | | | |  |
| **ATA Chapters** | **B1** | | | | | | **B2** | | | | | |  |
| **INS** | **FOT** | **SG H** | **R/I** | **ME L** | **TS** | **INS** | **FO T** | **SG H** | **R/I** | **MEL** | **TS** |  |
| **Requirements: % of task categories** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** |  |
| 27-80 Lift augmenting | — | X | X | X | — | X | — | X | — | — | — | — |  |
| 28 Fuel systems | | | | | | | | | | | | | |
| 28-10 Storage | X | — | X | X | X | — | — | — | X | — | — | — |  |
| 28-20 Distribution | — | — | — | X | — | — | — | X | — | — | — | — |  |
| 28-30 Dump | X | — | — | — | — | — | — | - |  | — | — | — |  |
| 28-40 Indicating | — | X | — | — | — | X | X | X | — | — | — | X |  |
| 47-00 Nitrogen generation system | X | X | X | X | X | X | — | X | — | — | — | — |  |
| 29 Hydraulic power | | | | | | | | | | | | | |
| 29-10 Main | X | X | X | X | — | — | — | X | — | — | — | — |  |
| 29-20 Auxiliary | — | X | X | X | — | — | — | X | — | — | — | — |  |
| 29-30 Indicating | — | X | — | X | — | X | — | X | — | — | — | X |  |
| 30 Ice and rain protection | | | | | | | | | | | | | |
| 30-10 Aerofoil | X | X | — | X | — | — | — | — | — | — | — | — |  |
| 30-20 Air intakes | X | X | — | — | — | — | — | — | — | — | — | — |  |
| 30-30 Pitot and static | X | — | — | X | — | — | X | X | — | — | — | X |  |
| 30-40 Windows, windshields and  doors | — | X | — | X | — | — | — | X | — | — | — | X |  |
| 30-50 Antennas and radomes | X | — | — | X | — | — | X | X | — | — | — | X |  |
| 30-60  Propellers/rotors | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 30-70 Water lines | X | — | — | — | — | — | X | — | — | — | — | — |  |
| 30-80 Detection | — | X | — | X | — | X | — | X | — | — | — | X |  |
| 31  Indicating/recordi ng systems | | | | | | | | | | | | | |
| 31-10 Instrument | — X — X — | | | | | — | — | X | — | X | X | X |  |
| and control panels |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OJT TASK SELECTION** | | | | | | | | | | | | |  |
| **ATA Chapters** | **B1** | | | | | | **B2** | | | | | |  |
| **INS** | **FOT** | **SG H** | **R/I** | **ME L** | **TS** | **INS** | **FO T** | **SG H** | **R/I** | **MEL** | **TS** |  |
| **Requirements: % of task categories** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** |  |
| 31-20  Independent instruments | — | X | — | — | — | — | — | X | — | X | — | X |  |
| 31-30 Recorders | — | X | — | — | — | — | — | X | X | X | — | — |  |
| 31-40 Central  computers | — | — | — | — | — | — | — | X | — | X | — | X |  |
| 31-50 Central warning systems | — | X | — | — | — | — | — | X | — | X | X | X |  |
| 31-60 Central  display systems | — | X | — | — | — | — | — | X | — | X | — | X |  |
| 31-70 Automatic  data reporting systems | — | — | — | — | — | — | — | X | X | X | — | X |  |
| 32 Landing gear | | | | | | | | | | | | | |
| 32-10 Main gear and doors | X | X | X | X | — | — | — | — | — | — | — | — |  |
| 32-20 Nose gear  and doors | X | X | X | X | — | — | — | — | — | — | — | — |  |
| 32-30 Extension  and retraction | X | X | — | X | — | X | — | — | — | — | — | — |  |
| 32-40 Wheels and brakes | X | — | X | X | — | — | — | — | — | — | — | — |  |
| 32-50 Steering | X | X | X | X | — | X | — | — | — | — | — | — |  |
| 32-60 Position indication and warning | — | X | — | X | — | X | X | X | — | X | — | X |  |
| 32-70  Supplementary gear | X | X | X | X | — | — | — | — | — | — | — | — |  |
| 33 Lights | | | | | | | | | | | | | |
| 33-10 Flight compartment | X | X | — | X | — | — | X | X | — | X | — | X |  |
| 33-20 Passenger  compartment | X | X | — | X | — | — | X | X | — | X | — | X |  |
| 33-30 Cargo and service compartments | X | X | — | — | — | — | X | X | — | — | — | X |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OJT TASK SELECTION** | | | | | | | | | | | | |  |
| **ATA Chapters** | **B1** | | | | | | **B2** | | | | | |  |
| **INS** | **FOT** | **SG H** | **R/I** | **ME L** | **TS** | **INS** | **FO T** | **SG H** | **R/I** | **MEL** | **TS** |  |
| **Requirements: % of task categories** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** |  |
| 33-40 Exterior | X | X | — | X | — | — | X | X | — | — | — | X |  |
| 33-50 Emergency lighting | X | — | — | X | — | — | X | X | — | X | — | X |  |
| 34 Navigation | | | | | | | | | | | | | |
| 34-10 Flight environment data | — | X | — | — | — | — | — | X | — | — | — | X |  |
| 34-20 Attitude and  direction | — | X | — | — | — | — | — | X | — | X | X | X |  |
| 34-30 Landing and  taxiing aids | — | — | — | — | — | — | — | X | — | X | X | X |  |
| 34-40  Independent position  determining | — | X | — | — | — | — | — | X | — | X | X | X |  |
| 34-50 Dependent position determining | — | — | — | — | — | — | — | X | — | X | X | X |  |
| 34-60 Flight management  computing | — | X | — | — | — | — | — | X | X | X | X | X |  |
| 35 Oxygen | | | | | | | | | | | | | |
| 35-10 Crew | X | X | X | X | — | X | — | — | — | — | — | — |  |
| 35-20 Passengers | X | X | — | X | — | — | — | — | — | — | — | — |  |
| 35-30 Portable | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 36 Pneumatic | | | | | | | | | | | | | |
| 36-10 Distribution | X | X | — | X | — | X | — | X | — | — | — | — |  |
| 36-20 Indicating | — | X | — | X | — | X | X | X | — | — | — | X |  |
| 37 Vacuum | | | | | | | | | | | | | |
| 37-10 Distribution | — | X | — | X | — | X | — | — | — | — | — | — |  |
| 37-20 Indicating | — | X | — | X | — | X | — | X | — | — | — | X |  |
| 38 Water/waste | | | | | | | | | | | | | |
| 38-10 Potable | — | X | X | X | — | — | — | X | — | — | — | — |  |
| 38-20 Wash | — | — | — | — | — | — | — | — | — | — | — | — |  |
| 38-30 Waste disposal | — | X | X | X | — | — | — | X | — | — | — | — |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OJT TASK SELECTION** | | | | | | | | | | | | |  |
| **ATA Chapters** | **B1** | | | | | | **B2** | | | | | |  |
| **INS** | **FOT** | **SG H** | **R/I** | **ME L** | **TS** | **INS** | **FO T** | **SG H** | **R/I** | **MEL** | **TS** |  |
| **Requirements: % of task categories** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** |  |
| 38-40 Air supply | X | X | — | — | — | — | — | — | — | — | — | — |  |
| 41 Water ballast | | | | | | | | | | | | | |
| 41-10 Storage | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 41-20 Dump | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 41-30 Indication | X  — | — | —  — | —  — | —  — | —  — | — | — | — | — | — | X |  |
| 42 Integrated modular avionics | X | X | X | X | X | X | X |  |
| 44 Cabin systems | | | | | | | | | | | | | |
| 44-20 In-flight entertainment  system | — | X | — | — | — | — | — | X | — | X | X | X |  |
| 44-30 External communication  system | — | X | — | — | — | — | — | X | — | X | X | X |  |
| 44-40 Cabin mass memory system | — | — | — | — | — | — | — | X | — | X | X | X |  |
| 44-50 Cabin  monitoring system | — | — | — | — | — | — | — | X | — | X | X | X |  |
| 44-60  Miscellaneous cabin system | — | — | — | — | — | — | — | X | — | X | X | X |  |
| 45 Onboard maintenance system | — | X | — | — | — | — | — | X | — | X | X | X |  |
| 46 Information Systems | | | | | | | | | | | | | |
| 46-10 Aeroplane general information  systems | — | — | — | — | — | — | — | X | — | X | X | X |  |
| 46-20 Flight deck  information systems | — | X | — | — | — | — | — | X | — | X | X | X |  |
| 46-30  Maintenance information systems | — | X | — | — | — | — | — | X | — | X | X | X |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OJT TASK SELECTION** | | | | | | | | | | | | |  |
| **ATA Chapters** | **B1** | | | | | | **B2** | | | | | |  |
| **INS** | **FOT** | **SG H** | **R/I** | **ME L** | **TS** | **INS** | **FO T** | **SG H** | **R/I** | **MEL** | **TS** |  |
| **Requirements: % of task categories** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** |  |
| 46-40 Passenger cabin information systems | — | X | — | — | — | — | — | X | — | X | X | X |  |
| 46-50  Miscellaneous information systems | — | — | — | — | — | — | — | X | — | X | X | X |  |
| **Airframe structures:** 52 Doors | | | | | | | | | | | | | |
| 52-10  Passenger/crew | X | — | X | X | X | — | — | — | — | — | — | — |  |
| 52-20 Emergency exits | X | — | X | X | X | — | — | — | — | — | — | — |  |
| 52-30 Cargo | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 52-40 Service and  miscellaneous | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 52-50 Fixed interior | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 52-60 Entrance  stairs | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 52-70 Monitoring and operation | — | X | — | — | — | — | X | X | — | — | — | X |  |
| 52-80 Landing  gear | X | — | X | — | — | — | — | — | — | — | — | — |  |
| 53 Fuselage | X | — | — | — | — | X | — | — | — | — | — | — |  |
| 54 Nacelles/pylons | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 55 Stabilisers | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 56 Windows | X | — | — | — | — | X | — | — | — | — | — | — |  |
| 57 Wings | X | — | — | — | — | — | — | — | — | — | — | — |  |
| **Auxiliary power units (APUs):**  49 Auxiliar power  unit | | | | | | | | | | | | | |
| 49-10 Power plant | X | X | — | X | X | X | — | X | — | — | — | — |  |
| 49-20 Engine | X | X | — | X | — | — | — | — | — | — | — | — |  |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **OJT TASK SELECTION** | | | | | | | | | | | | |  |
| **ATA Chapters** | **B1** | | | | | | **B2** | | | | | |  |
| **INS** | **FOT** | **SG H** | **R/I** | **ME L** | **TS** | **INS** | **FO T** | **SG H** | **R/I** | **MEL** | **TS** |  |
| **Requirements: % of task categories** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** |  |
| 49-30 Engine fuel and control | — | X | — | X | — | — | — | — | — | — | — | — |  |
| 49-40  Ignition/starting | — | X | — | — | — | — | X | — | — | — | — | X |  |
| 49-50 Air | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 49-60 Engine controls | — | — | — | X | — | — | — | — | — | — | — | — |  |
| 49-70 Indicating | — | X | — | — | — | — | — | — | — | — | — | — |  |
| 49-80 Exhaust | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 49-90 Oil | — | — | X | — | — | — | — | — | — | — | — | — |  |
| **Turbine engines:** | | | | | | | | | | | | | |
| 70 Standard practices and engine  performance | X | — | — | — | — | X | — | — | — | — | — | — |  |
| 71 Power plant | X | — | X | — | — | — | — | — | — | — | — | — |  |
| 71-10 Cowling | X | — | X | X |  |  | — | — | — | — | — | — |  |
| 71-20 Mounts | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 71-30 Fire seals | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 71-40 Attach fittings | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 71-50 Electrical  harness | X | X | — | X | — | — | X | — | — | — | — | X |  |
| 71-60 Air intakes | X | — | — |  | — | — | — | — | — | — | — | — |  |
| 72T Engine turbine / turboprop / ducted fan / unducted fan | X | — | X | X | — | — | — | — | — | — | — | — |  |
| 73 Engine fuel and control | | | | | | | | | | | | | |
| 73-10 Distribution | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 73-20 Controlling (FADEC) | X | X | — | X | X | X | — | X | — | — | — | X |  |
| 73-30 Indicating | X | X | — | — | X | — | — | X | — | — | — | X |  |

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| **OJT TASK SELECTION** | | | | | | | | | | | | |  |
| **ATA Chapters** | **B1** | | | | | | **B2** | | | | | |  |
| **INS** | **FOT** | **SG H** | **R/I** | **ME L** | **TS** | **INS** | **FO T** | **SG H** | **R/I** | **MEL** | **TS** |  |
| **Requirements: % of task categories** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** |  |
| 74 Ignition |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 74-10 Electrical power | X | X | — | X | — | — | X | X | — | — | — | X |  |
| 74-20 Distribution | X | X | — | — | — | — | X | X | — | — | — | X |  |
| 74-30 Switching | X | X | — | X | — | — | X | X | — | — | — | X |  |
| 75 Air | | | | | | | | | | | | | |
| 75-10 Engine anti-  icing | X | X | — | X | X | X | — | — | — | — | — | — |  |
| 75-20 Cooling | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 75-30 Compressor control | — | X | — | — | — | — | — | — | — | — | — | — |  |
| 75-40 Indicating | — | X | — | — | — | — | — | X | — | — | — | X |  |
| 76 Engine controls | | | | | | | | | | | | | |
| 76-10 Power control (FADEC) | — | X | — | — | X | — | — | X | — | — | — | X |  |
| 76-20 Emergency  shutdown | — | — | — | — | X | — | — | — | — | — | — | — |  |
| 77 Engine indicating | — | X | — | — | X | X | X | X | — | — | X | X |  |
| 78 Exhaust | | | | | | | | | | | | | |
| 78-30 Thrust  reverser | X | — | — | X | X | X | — | X | — | — | — | X |  |
| 79 Oil | X | — | X | X | — | — | — | — | — | — | — | — |  |
| 80 Starting | X | X | — | X | X | X | — | — | — | — | — | — |  |
| 83 Accessory  gearboxes | X | — | X | X | — | — | — | — | — | — | — | — |  |
| **Piston engines:** | | | | | | | | | | | | | |
| 70 Standard practices and engine  performance | X | — | — | — | — | X | — | — | — | — | — | — |  |
| 71 Power plant | X | — | X | — | — | — | — | — | — | — | — | — |  |
| 71-10 Cowling | X | — | X | X | — | — | — | — | — | — | — | — |  |
| 71-20 Mounts | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 71-30 Fire seals | X | — | — | — | — | — | — | — | — | — | — | — |  |

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| **OJT TASK SELECTION** | | | | | | | | | | | | |  |
| **ATA Chapters** | **B1** | | | | | | **B2** | | | | | |  |
| **INS** | **FOT** | **SG H** | **R/I** | **ME L** | **TS** | **INS** | **FO T** | **SG H** | **R/I** | **MEL** | **TS** |  |
| **Requirements: % of task categories** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** |  |
| 71-40 Attach fittings | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 71-50 Electrical  harness | X | X | — | X | — | — | X | — | — | — | — | X |  |
| 71-60 Air intakes | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 72R Engine — reciprocating | X | — | X | X | — | — | — | — | — | — | — | — |  |
| 73 Engine fuel and  control | X | X | — | X | X | X | — | — | — | — | — | — |  |
| 73-10 Distribution | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 73-20 Controlling (FADEC) | X | X | — | X | X | X | — | X | — | — | — | X |  |
| 73-30 Indicating | X | X | — | — | X | — | X | X | — | — | — | X |  |
| 74 Ignition | | | | | | | | | | | | | |
| 74-10 Electrical power | X | X | — | X | — | X | X | X | — | — | — | X |  |
| 74-20 Distribution | X | X | — | — | — | — | X | X | — | — | — | X |  |
| 74-30 Switching | X | X | — | X | — | — | X | X | — | — | — | X |  |
| 76 Engine controls | X | X | — | X | — | X | - | X | — | — | — | X |  |
| 77 Engine  indicating | — | X | — | — | X | X | X | X | — | — | X | X |  |
| 78 Exhaust | X | — | — | — | — | — | — | — | — | — | — | — |  |
| 79 Oil | X | — | X | X | — | — | — | — | — | — | — | — |  |
| 80 Starting | X | X | — | X | X | X | — | — | — | — | — | — |  |
| 81 Turbines (reciprocating  engine) | X | X | X | X | — | — | — | — | — | — | — | — |  |
| 83 Accessory gearboxes | X | — | X | X | — | — | — | — | — | — | — | — |  |
| **Propellers:** 61 Propellers/ propulsion | | | | | | | | | | | | | |
| 61-10 Propeller assembly | X | — | X | X | — | — | — | — | — | — | — | — |  |
| 61-20 Controlling | — | — | — | X | X | — | — | — | — | — | — | — |  |

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| **OJT TASK SELECTION** | | | | | | | | | | | | |
| **ATA Chapters** | **B1** | | | | | | **B2** | | | | | |
| **INS** | **FOT** | **SG H** | **R/I** | **ME L** | **TS** | **INS** | **FO T** | **SG H** | **R/I** | **MEL** | **TS** |
| **Requirements: % of task categories** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** | **75 %** | **50 %** | **50 %** | **50 %** | **25 %** | **25**  **%** |
| 61-30 Braking | X | — | — | — | — | — | — | — | — | — | — | — |
| 61-40 Indicating | — | X | — | — | X | X | — | X | — | — | — | X |
| 61-50 Propulsor  duct | X | — | — | — | — | — | — | — | — | — | — | — |
| 61B Propeller pitch control | — | X | — | X | X | X | — | — | — | — | — | — |
| 61C Propeller  synchronising | — | X | — | — | — | X | — | X | — | — | — | X |
| 61D Propeller  electronic control | — | X | X | X | X | X | — | X | — | — | — | X |
| 61E Propeller ice protection | X | X | — | — | X | X | — | — | — | — | — | — |

*Note*: For ATA Chapter 5, select at least one task from category (a), two tasks from category (b), and three tasks from category (c):

* + 1. Perform and/or assist in performing a scheduled maintenance check:
       - accomplishment of 100-hour check (general aviation (GA) aircraft);
       - accomplishment of a ‘daily’ or ‘weekly’, ‘service’, ‘transit’ or equivalent check;
       - active participation in a scheduled check, e.g.: ‘A-Check’, ‘B-Check’, ‘C-Check’ or the equivalent of a base maintenance check.
    2. Review the aircraft maintenance log for correct completion:
       - closure of MEL/CDL items;
       - dent and buckle chart review, including inspections on fuselage and skin damages assessment in accordance with the SRM;
       - fuel or oil leakage tests.
    3. Perform unscheduled inspection following:
       - hard landing;
       - overweight taxiing;
       - bird/hail strike;
       - aborted take-off;
       - high-energy stop;
       - wheel-bearing failure;
       - exceedance of max NLG steering angle;
       - landing gear shimmy/vibrations;
       - lightning strike / HIRF;
       - tail strike;
       - winglet strike;
       - severe turbulence / extreme high winds;
       - airframe vibrations;
       - ice/snow conditions;
       - flight control overspeed down;
       - hot-air duct rupture;
       - relief pressure panels open;
       - mercury spillage;
       - galley spill;
       - hydraulic fluid reaction with titanium;
       - cabin overpressure;
       - exceedance of fuel imbalance;
       - smoke/fumes in the cabin;
       - abnormal doors operations;
       - ferry flight maintenance;
       - others.

**GM1 Appendix II to AMC to Annex III — Aircraft Type Practical Experience and On-the-Job Training — List of Tasks**

*ED Decision 2023/019/R*

The following list represents an example of OJT tasks for B1.1 and B2 (Aeroplanes Turbine) AML categories. The list is not exhaustive, nor tailored to a specific aircraft type, and should be reviewed and adjusted as necessary.

**Task No**

**ATA chapter**

**Task description**

**B1.1**

**B2**

1

3

05 Time limits /

maintenance checks 05 Time limits / maintenance checks

05 Time limits / maintenance checks 05 Time limits /

maintenance checks

Perform (assist) in A-Check

X

X

2

Close MEL/CDL item

X

X

Review Dent & Buckle chart

X

—

4

Perform bird strike inspection

X

—

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Task No** | **ATA chapter** | **Task description** | **B1.1** | **B2** |
| 5 | 05 Time limits /  maintenance checks | Perform lightning strike inspection | X | X |
| 6 | 05 Time limits /  maintenance checks | Perform tail strike inspection | X | — |
| 7 | 05 Time limits / maintenance checks | Review AD compliance | X | X |
| 8 | 06 Dimensions/areas | Locate component by station number | X | X |
| 9 | 07 Lifting and shoring | Jack aircraft wheel | X | — |
| 10 | 07 Lifting and shoring | Jack the aircraft | X | — |
| 11 | 08 Levelling and weighing | Level the aircraft | X | — |
| 12 | 08 Levelling and weighing | Weigh the aircraft (including W&B amendment) | X | — |
| 13 | 08 Levelling and weighing | Check the aircraft against equipment list | X | X |
| 14 | 09 Towing and taxiing | Tow the aircraft (including preparation) | X | — |
| 15 | 10 Parking/mooring, storing and return to service | Park aircraft (including applying applicable protections to parking duration) | X | — |
| 16 | 10 Parking/mooring, storing  and return to service | Position aircraft in dock | X | — |
| 17 | 11 Placards and markings | Perform placards and markings inspection | X | X |
| 18 | 12 Servicing | Perform aircraft refuelling (automatic and manual) | X | — |
| 19 | 12 Servicing | Check and adjust tyre pressure | X | — |
| 20 | 12 Servicing | Check and replenish hydraulic fluid | X | — |
| 21 | 12 Servicing | Check and adjust accumulator pressure | X | — |
| 22 | 12 Servicing | Check and replenish engine oil | X | — |
| 23 | 12 Servicing | Perform landing gear servicing | X | — |
| 24 | 12 Servicing | Perform waste / potable water servicing | X | — |
| 25 | 12 Servicing | Connect ground power | X | X |
| 26 | 12 Servicing | Lubricate flight control elements | X | — |
| 27 | 20 Standard practices | Perform aircraft grounding | X | X |
| 28 | 20 Standard practices | Perform ESDS device inspection | X | X |
|  | 21 Air conditioning |  | … | … |
| 29 | 21-20 Distribution | Replace recirculation filter | X | — |
| 30 | 21-40 Heating | Replace combustion heater | X | — |
| 31 | 21-20 Distribution | Clean outflow valve | X | — |
| 32 | 21-20 Distribution | Replace outflow valve | X | — |
| 33 | 21-50 Cooling | Replace ACM / Air cycle unit | X | — |
| 34 | 21-50 Cooling | Replace heat exchanger | X | — |
| 35 | 21-30 Pressurisation control | Replace pressurisation controller | X | X |
| 36 | 21-30 Pressurisation control | Perform pressurisation system functional test | X | X |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Task No** | **ATA chapter** | **Task description** | **B1.1** | **B2** |
| 37 | 21-20 Distribution | Perform equipment cooling system functional  test | X | X |
| 38 | 21-20 Distribution | Check configuration of AVX compartment  ventilation system | X | X |
| 39 | 21-30 Pressurisation control | Perform air-conditioning system functional test | X | X |
| 40 | 21-60 Temperature control | Perform temperature control system  functional test | X | X |
| 41 | 21 Air conditioning | Troubleshoot faulty system | X | X |
| 42 | 22 Autoflight | Replacement of autothrottle servomechanisms components | X | — |
| 43 | 22 Autoflight | Replace actuator | X | — |
| 44 | 22 Autoflight | Replace controller | X | X |
| 45 | 22 Autoflight | Replace amplifier | X | X |
| 46 | 22 Autoflight | Replace autoflight system LRU | X | X |
| 47 | 22 Autoflight | Perform yam damper operational test | X | X |
| 48 | 22 Autoflight | Perform autopilot functional test | X | X |
| 49 | 22 Autoflight | Perform autopilot gain adjustment | — | X |
| 50 | 22 Autoflight | Check augmentation system | X | X |
| 51 | 22 Autoflight | Check operation of autothrottle | X | X |
| 52 | 22 Autoflight | Perform autoland functional test | X | X |
| 53 | 22 Autoflight | Check flight management systems | X | X |
| 54 | 22 Autoflight | Perform Mach trim functional test | — | X |
| 55 | 22 Autoflight | Upload FM data | X | X |
| 56 | 22 Autoflight | Troubleshoot faulty system | — | X |
| 57 | 23 Communications | Perform interphone system operational test | X | X |
| 58 | 23 Communications | Service interphone components | X | X |
| 59 | 23 Communications | Replace HF unit | X | X |
| 60 | 23 Communications | Replace VHF unit | X | X |
| 61 | 23 Communications | Replace antenna | X | X |
| 62 | 23 Communications | Perform voice recorder operational test | X | X |
| 63 | 23 Communications | Replace voice recorder | X | X |
| 64 | 23 Communications | Perform static discharge components inspection | X | X |
| 65 | 23 Communications | Perform radio functional test | — | X |
| 66 | 23 Communications | Perform SELCAL operational test | X | X |
| 67 | 23 Communications | Perform co-axial cable repair | — | X |
| 68 | 23 Communications | Perform ELT operational test | X | X |
| 69 | 23 Communications | Troubleshoot faulty system | — | X |

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| **Task No** | **ATA chapter** | **Task description** | **B1.1** | **B2** |
| 70 | 24 Electrical power | Supply/remove APU power | X | X |
| 71 | 24 Electrical power | Remove/install battery | X | X |
| 72 | 24 Electrical power | Charge battery | X | X |
| 73 | 24 Electrical power | Perform battery charger operational test | X | X |
| 74 | 24 Electrical power | Perform standby power system functional  test | X | X |
| 75 | 24 Electrical power | Replace IDG oil filter | X | X |
| 76 | 24 Electrical power | Remove/install IDG | X | X |
| 77 | 24 Electrical power | Perform IDG functional test | X | X |
| 78 | 24 Electrical power | Replace switch | X | X |
| 79 | 24 Electrical power | Replace CB | X | X |
| 80 | 24 Electrical power | Replace voltage regulator | — | X |
| 81 | 24 Electrical power | Perform voltage regulator functional test | X | X |
| 82 | 24 Electrical power | Perform electrical feeder cable repair | — | X |
| 83 | 25 Equipment and  furnishings | Perform emergency equipment inspection | X | X |
| 84 | 25 Equipment and furnishings | Replace carpets | X | — |
| 85 | 25 Equipment and furnishings | Perform crew seats operational test | X | — |
| 86 | 25 Equipment and  furnishings | Replace crew seats | X | — |
| 87 | 25 Equipment and  furnishings | Replace passenger seats | X | — |
| 88 | 25 Equipment and  furnishings | Perform seats and seat belts inspection | X | — |
| 89 | 25 Equipment and furnishings | Check ELT for compliance with applicable regulations | X | X |
| 90 | 25 Equipment and furnishings | Perform escape slide inspection | X | — |
| 91 | 25 Equipment and  furnishings | Remove/install escape slide | X | — |
| 92 | 25 Equipment and  furnishings | Perform upholstery repair | X | — |
| 93 | 25 Equipment and  furnishings | Remove/install interior panels | X | — |
| 94 | 25 Equipment and furnishings | Remove/install cargo compartment panels | X | — |
| 95 | 25 Equipment and furnishings | Perform cargo loading system inspection | X | — |
| 96 | 25 Equipment and furnishings | Perform cargo loading system functional test | X | X |
| 97 | 25 Equipment and  furnishings | Replace cargo loading system actuator | X | — |

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| **Task No** | **ATA chapter** | **Task description** | **B1.1** | **B2** |
| 98 | 26 Fire protection | Check fire bottle content | X | — |
| 99 | 26 Fire protection | Remove/install fire bottle | X | — |
| 100 | 26 Fire protection | Replace fire bottle squib | X | — |
| 101 | 26 Fire protection | Check portable fire-extinguisher content | X | — |
| 102 | 26 Fire protection | Perform smoke detection system functional  test | X | X |
| 103 | 26 Fire protection | Perform smoke detectors inspection | X | X |
| 104 | 26 Fire protection | Remove/install smoke detectors | X | X |
| 105 | 26 Fire protection | Perform fire protection system inspection | X | X |
| 106 | 26 Fire protection | Perform fire protection system functional test | X | X |
| 107 | 26 Fire protection | Perform engine fire detection system  inspection | X | X |
| 108 | 26 Fire protection | Troubleshoot faulty system | X | X |
| 109 | 27 Flight controls | Perform horizontal stabiliser components  inspection | X | — |
| 110 | 27 Flight controls | Perform horizontal stabiliser operational test | X | X |
| 111 | 27 Flight controls | Remove/install horizontal stabiliser | X | — |
| 112 | 27 Flight controls | Perform elevator components inspection | X | — |
| 113 | 27 Flight controls | Perform elevator operational test | X | X |
| 114 | 27 Flight controls | Remove/install elevator | X | — |
| 115 | 27 Flight controls | Perform aileron components inspection | X | — |
| 116 | 27 Flight controls | Perform aileron operational test | X | X |
| 117 | 27 Flight controls | Remove/install aileron | X | — |
| 118 | 27 Flight controls | Perform rudder components inspection | X | — |
| 119 | 27 Flight controls | Perform rudder operational test | X | X |
| 120 | 27 Flight controls | Remove/install rudder | X | — |
| 121 | 27 Flight controls | Remove/install trim tab | X | — |
| 122 | 27 Flight controls | Perform LE flap components inspection | X | — |
| 123 | 27 Flight controls | Perform LE flap operational test | X | X |
| 124 | 27 Flight controls | Perform LE devices alternate operation | X | X |
| 125 | 27 Flight controls | Remove/install LE flap | X | — |
| 126 | 27 Flight controls | Perform TE flap components inspection | X | — |
| 127 | 27 Flight controls | Perform TE flap operational test | X | X |
| 128 | 27 Flight controls | Perform TE devices alternate operation | X | X |
| 129 | 27 Flight controls | Remove/install TE flap | X | — |
| 130 | 27 Flight controls | Perform spoiler components inspection | X | — |
| 131 | 27 Flight controls | Perform spoiler operational test | X | X |
| 132 | 27 Flight controls | Remove/install spoiler | X | — |

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| **Task No** | **ATA chapter** | **Task description** | **B1.1** | **B2** |
| 133 | 27 Flight controls | Perform slat component inspection | X | — |
| 134 | 27 Flight controls | Perform slat operational test | X | X |
| 135 | 27 Flight controls | Remove/install slat | X | — |
| 136 | 27 Flight controls | Replace control cable and fittings | X | — |
| 137 | 27 Flight controls | Perform control cable tension adjustment | X | — |
| 138 | 27 Flight controls | Remove/install actuator | X | — |
| 139 | 27 Flight controls | Remove/install powered control unit | X | — |
| 140 | 27 Flight controls | Perform flight controls functional test | X | X |
| 141 | 27 Flight controls | Perform stall warning system functional test | X | X |
| 142 | 27 Flight controls | Perform control column operational test | X | X |
| 143 | 27 Flight controls | Deactivate/reactivate servo control | X | - |
| 144 | 27 Flight controls | Check / adjust gearbox oil level | X | - |
| 145 | 27 Flight controls | Troubleshoot faulty system | X | X |
| 146 | 28 Fuel systems | Perform fuel/defuel system components inspection | X | — |
| 147 | 28 Fuel systems | Fuel quantity indicating system functional test | X | X |
| 148 | 28 Fuel systems | Perform fuel transfer between tanks | X | — |
| 149 | 28 Fuel systems | Perform booster pump inspection | X | — |
| 150 | 28 Fuel systems | Remove/install booster pump | X | — |
| 151 | 28 Fuel systems | Remove/install fuel selector | X | — |
| 152 | 28 Fuel systems | Perform fuel tank inspection | X | — |
| 153 | 28 Fuel systems | Remove/install fuel control valve | X | — |
| 154 | 28 Fuel systems | Remove/install fuel level indicator | X | — |
| 155 | 28 Fuel systems | Remove/install fuel line | X | — |
| 156 | 28 Fuel systems | Remove/install flame arrestor | X | — |
| 157 | 28 Fuel systems | Remove/install water drain valve | X | — |
| 158 | 28 Fuel systems | Perform fuel content calculation | X | — |
| 159 | 28 Fuel systems | Check fuel quantity gauge calibration | X | — |
| 160 | 28 Fuel systems | Perform fuel feed/selectors functional test | X | X |
| 161 | 28 Fuel systems | Perform fuel dump system functional test | X | X |
| 162 | 28 Fuel systems | Troubleshoot faulty system | X | X |
| 163 | 29 Hydraulic power | Perform hydraulic system components  inspection | X | — |
| 164 | 29 Hydraulic power | Check hydraulic system indication | X | x |
| 165 | 29 Hydraulic power | Perform hydraulic system functional test | X | X |
| 166 | 29 Hydraulic power | Check auxiliary system indication | X | x |
| 167 | 29 Hydraulic power | Perform auxiliary system functional test | X | X |

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| **Task No** | **ATA chapter** | **Task description** | **B1.1** | **B2** |
| 168 | 29 Hydraulic power | Depressurise/pressurise hydraulic reservoirs | X | — |
| 169 | 29 Hydraulic power | Perform pressurisation module leak check | X | — |
| 170 | 29 Hydraulic power | Perform shut-off valve operational test | X | X |
| 171 | 29 Hydraulic power | Replace hydraulic filter | X | — |
| 172 | 29 Hydraulic power | Replace engine-driven pump | X | — |
| 173 | 29 Hydraulic power | Replace hydraulic system valve | X | — |
| 174 | 29 Hydraulic power | Replace hydraulic system line | X | — |
| 175 | 29 Hydraulic power | Perform power transfer unit operational test | X | X |
| 176 | 29 Hydraulic power | Remove/install power transfer unit | X | — |
| 177 | 29 Hydraulic power | Troubleshoot faulty system | X | X |
| 178 | 30 Ice and rain protection | Perform windshield wiper system components inspection | X | — |
| 179 | 30 Ice and rain protection | Replace windshield wiper | X | — |
| 180 | 30 Ice and rain protection | Replace windshield wiper motor | X | — |
| 181 | 30 Ice and rain protection | Adjust windshield wiper tension | X | — |
| 182 | 30 Ice and rain protection | Perform ice detection components inspection | X | — |
| 183 | 30 Ice and rain protection | Check ice detection indication | X | X |
| 184 | 30 Ice and rain protection | Perform de-icing/anti-icing system components inspection | X | — |
| 185 | 30 Ice and rain protection | Perform de-icing/anti-icing system functional  test | X | X |
| 186 | 30 Ice and rain protection | Replace de-icing/anti-icing valve | X | — |
| 187 | 30 Ice and rain protection | Replace solenoid valve | X | X |
| 188 | 30 Ice and rain protection | Perform probe heating system components inspection | X | — |
| 189 | 30 Ice and rain protection | Perform probe heating system functional test | X | X |
| 190 | 30 Ice and rain protection | Perform window heating system component inspection | X | — |
| 191 | 30 Ice and rain protection | Perform window heating system functional test | X | X |
| 192 | 30 Ice and rain protection | Troubleshoot faulty system | X | X |
| 193 | 31 Indicating/recording systems | Perform flight data recorder system components inspection | X | X |
| 194 | 31 Indicating/recording  systems | Perform flight data recorder system  operational test | X | X |
| 195 | 31 Indicating/recording  systems | Remove/install flight data recorder | X | X |
| 196 | 31 Indicating/recording  systems | Remove/install clock | X | X |
| 197 | 31 Indicating/recording systems | Remove/install master caution unit | X | X |

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| **Task No** | **ATA chapter** | **Task description** | **B1.1** | **B2** |
| 198 | 31 Indicating/recording  systems | Perform flight data recorder data retrieval | X | X |
| 199 | 31 Indicating/recording  systems | Perform data acquisition unit functional test | X | X |
| 200 | 31 Indicating/recording systems | Remove/install data acquisition unit | X | X |
| 201 | 31 Indicating/recording  systems | Perform warning system functional test | X | X |
| 202 | 31 Indicating/recording systems | Perform EIS operational test | X | X |
| 203 | 31 Indicating/recording  systems | Troubleshoot faulty system | — | X |
| 204 | 32 Landing gear | Perform tyres and brakes inspection | X | — |
| 205 | 32 Landing gear | Replace brake unit | X | — |
| 206 | 32 Landing gear | Perform wheels assembly | X | — |
| 207 | 32 Landing gear | Perform wheels inspection | X | — |
| 208 | 32 Landing gear | Replace wheels | X | — |
| 209 | 32 Landing gear | Replace steering actuator | X | — |
| 210 | 32 Landing gear | Perform NLG steering rigging | X | — |
| 211 | 32 Landing gear | Perform autobrake system components inspection | X | — |
| 212 | 32 Landing gear | Perform autobrake system functional test | X | X |
| 213 | 32 Landing gear | Perform landing gear alternate brake control components inspection | X | — |
| 214 | 32 Landing gear | Perform landing gear alternate brake control functional test | X | X |
| 215 | 32 Landing gear | Perform parking brake components  inspection | X | — |
| 216 | 32 Landing gear | Perform parking brake functional test | X | X |
| 217 | 32 Landing gear | Perform antiskid operational test | X | X |
| 218 | 32 Landing gear | Perform landing gear extension/retraction system components inspection | X | — |
| 219 | 32 Landing gear | Replace landing gear retraction actuator | X | — |
| 220 | 32 Landing gear | Perform landing gear extension/retraction system functional test | X | X |
| 221 | 32 Landing gear | Replace uplock/downlock assembly | X | — |
| 222 | 32 Landing gear | Perform sensor adjustment | X | X |
| 223 | 32 Landing gear | Perform landing gear operational test | X | X |
| 224 | 32 Landing gear | Perform landing gear abnormal operational test | X | X |
| 225 | 32 Landing gear | Replace landing gear door | X | — |
| 226 | 32 Landing gear | Replace landing gear control cable | X | — |

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| **Task No** | **ATA chapter** | **Task description** | **B1.1** | **B2** |
| 227 | 32 Landing gear | Replace landing gear safety sensor | X | — |
| 228 | 32 Landing gear | Replace landing gear shock strut | X | — |
| 229 | 32 Landing gear | Replace shimmy damper | X | — |
| 230 | 32 Landing gear | Perform air–ground system functional test | X | X |
| 231 | 32 Landing gear | Troubleshoot faulty system | X | X |
| 232 | 33 Lights | Perform interior lights inspection | X | X |
| 233 | 33 Lights | Perform interior lights operational test | X | X |
| 234 | 33 Lights | Replace interior lights | X | X |
| 235 | 33 Lights | Replace push-button switch | X | X |
| 236 | 33 Lights | Perform cargo lights | X | X |
| 237 | 33 Lights | Perform cargo lights operational test | X | X |
| 238 | 33 Lights | Replace cargo lights | X | X |
| 239 | 33 Lights | Perform exterior lights inspection | X | X |
| 240 | 33 Lights | Perform exterior lights operational test | X | X |
| 241 | 33 Lights | Replace exterior lights | X | X |
| 242 | 33 Lights | Perform emergency lights inspection | X | X |
| 243 | 33 Lights | Perform emergency lights operational test | X | X |
| 244 | 33 Lights | Replace emergency lights | X | X |
| 245 | 33 Lights | Perform landing lights inspection | X | X |
| 246 | 33 Lights | Perform landing lights operational test | X | X |
| 247 | 33 Lights | Replace landing lights | X | X |
| 248 | 33 Lights | Perform navigation lights inspection | X | X |
| 249 | 33 Lights | Perform navigation lights operational test | X | X |
| 250 | 33 Lights | Replace navigation lights | X | X |
| 251 | 33 Lights | Perform logo lights inspection | X | X |
| 252 | 33 Lights | Perform logo lights operational test | X | X |
| 253 | 33 Lights | Replace logo lights | X | X |
| 254 | 33 Lights | Troubleshoot faulty system | X | X |
| 255 | 34 Navigation | Perform Pitot-static system components  inspection | X | X |
| 256 | 34 Navigation | Replace Pitot-static probe | — | X |
| 257 | 34 Navigation | Perform static and total air pressure drain  fitting | — | X |
| 258 | 34 Navigation | Perform static pressure port inspection | — | X |
| 259 | 34 Navigation | Replace static pressure port | — | X |
| 260 | 34 Navigation | Replace VOR/ILS | — | X |
| 261 | 34 Navigation | Perform VOR/ILS functional test | — | X |

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| **Task No** | **ATA chapter** | **Task description** | **B1.1** | **B2** |
| 262 | 34 Navigation | Replace DME | — | X |
| 263 | 34 Navigation | Perform DME functional test | — | X |
| 264 | 34 Navigation | Perform inertial reference system functional test | — | X |
| 265 | 34 Navigation | Replace inertial reference unit | — | X |
| 266 | 34 Navigation | Perform altimeter functional test | — | X |
| 267 | 34 Navigation | Replace altimeter | — | X |
| 268 | 34 Navigation | Perform air data computer functional test | — | X |
| 269 | 34 Navigation | Replace air data computer | — | X |
| 270 | 34 Navigation | Perform air speed indicator functional test | — | X |
| 271 | 34 Navigation | Replace air speed indicator | — | X |
| 272 | 34 Navigation | Perform weather radar functional test | — | X |
| 273 | 34 Navigation | Replace weather radar | — | X |
| 274 | 34 Navigation | Perform TCAS functional test | — | X |
| 275 | 34 Navigation | Replace TCAS | — | X |
| 276 | 34 Navigation | Perform ATC transponder functional test | — | X |
| 277 | 34 Navigation | Replace ATC transponder | — | X |
| 278 | 34 Navigation | Perform EGPWS functional test | — | X |
| 279 | 34 Navigation | Replace EGPWS | — | X |
| 280 | 34 Navigation | Perform ADF functional test | — | X |
| 281 | 34 Navigation | Replace ADF | — | X |
| 282 | 34 Navigation | Perform satellite communications system functional test | — | X |
| 283 | 34 Navigation | Update FM system database | — | X |
| 284 | 34 Navigation | Perform magnetic compass calibration | X | X |
| 285 | 34 Navigation | Troubleshoot faulty system | — | X |
| 286 | 35 Oxygen | Perform crew oxygen system components inspection | X | — |
| 287 | 35 Oxygen | Service crew oxygen system | X | — |
| 288 | 35 Oxygen | Perform crew oxygen system functional test | X | X |
| 289 | 35 Oxygen | Perform passenger oxygen system inspection | X | — |
| 290 | 35 Oxygen | Service passenger oxygen system | X | — |
| 291 | 35 Oxygen | Perform passenger oxygen system functional  test | X | X |
| 292 | 35 Oxygen | Replace regulator | X | — |
| 293 | 35 Oxygen | Replace valve | X | — |
| 294 | 35 Oxygen | Replace oxygen generator | X | — |
| 295 | 35 Oxygen | Replace discharge disk | X | — |

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| **Task No** | **ATA chapter** | **Task description** | **B1.1** | **B2** |
| 296 | 35 Oxygen | Replace protective breathing equipment | X | — |
| 297 | 35 Oxygen | Perform auto-deployment test | X | X |
| 298 | 35 Oxygen | Troubleshoot faulty system | X | X |
| 299 | 36 Pneumatic | Perform pneumatic system components inspection | X | — |
| 300 | 36 Pneumatic | Perform pneumatic system functional test | X | X |
| 301 | 36 Pneumatic | Perform pneumatic system leakage test | X | — |
| 302 | 36 Pneumatic | Replace filter | X | — |
| 303 | 36 Pneumatic | Replace duct | X | — |
| 304 | 36 Pneumatic | Remove/install shut-off valve | X | — |
| 305 | 36 Pneumatic | Remove/install regulating valve | X | — |
| 306 | 36 Pneumatic | Remove/install regulator | X | — |
| 307 | 36 Pneumatic | Troubleshoot faulty system | X | X |
| 308 | 37 Vacuum | Perform vacuum system components inspection | X | — |
| 309 | 37 Vacuum | Perform vacuum system functional test | X | X |
| 310 | 37 Vacuum | Replace vacuum pump | X | — |
| 311 | 37 Vacuum | Remove/install regulator | X | — |
| 312 | 37 Vacuum | Replace filter | X | — |
| 313 | 37 Vacuum | Troubleshoot faulty system | X | X |
| 314 | 38 Water/waste | Perform water system components inspection | X | — |
| 315 | 38 Water/waste | Perform water system functional test | X | X |
| 316 | 38 Water/waste | Depressurise/pressurise water tank | X | — |
| 317 | 38 Water/waste | Replace water pump | X | — |
| 318 | 38 Water/waste | Replace water faucet | X | — |
| 319 | 38 Water/waste | Perform water heater operational check | X | — |
| 320 | 38 Water/waste | Perform waste system components inspection | X | — |
| 321 | 38 Water/waste | Perform waste system functional test | X | X |
| 322 | 38 Water/waste | Replace waste pump | X | — |
| 323 | 38 Water/waste | Replace valve | X | — |
| 324 | 38 Water/waste | Replace tank | X | — |
| 325 | 38 Water/waste | Perform lavatory drain valve operational test | X | — |
| 326 | 38 Water/waste | Troubleshoot faulty system | X | X |
| 327 | 45 Onboard maintenance  system | Perform communications management unit  functional test | X | X |
| 328 | 45 Onboard maintenance system | Replace communications management unit | X | X |

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| **Task No** | **ATA chapter** | **Task description** | **B1.1** | **B2** |
| 329 | 45 Onboard maintenance  system | Perform communications management unit  data retrieval | X | X |
| 330 | 45 Onboard maintenance  system | Troubleshoot faulty system | — | X |
| 331 | 49 Auxiliary Power Unit | Perform APU components inspection | X | — |
| 332 | 49 Auxiliary Power Unit | Perform APU functional test | X | X |
| 333 | 49 Auxiliary Power Unit | Record APU data | X | — |
| 334 | 49 Auxiliary Power Unit | Perform APU start/shutdown | X | X |
| 335 | 49 Auxiliary Power Unit | Replace APU air inlet door actuator | X | — |
| 336 | 49 Auxiliary Power Unit | Replace APU air inlet switch | X | — |
| 337 | 49 Auxiliary Power Unit | Replace APU fuel nozzle | X | — |
| 338 | 49 Auxiliary Power Unit | Replace APU igniter plug | X | — |
| 339 | 49 Auxiliary Power Unit | Perform chip detector inspection | X | — |
| 340 | 49 Auxiliary Power Unit | Perform APU emergency shutdown system  functional test | X | X |
| 341 | 49 Auxiliary Power Unit | Troubleshoot faulty system | X | X |
| 342 | 51 Structures | Apply protective treatment | X | — |
| 343 | 52 Doors | Perform entry door components inspection | X | — |
| 344 | 52 Doors | Perform entry door operational test | X | — |
| 345 | 52 Doors | Remove/install entry door | X | — |
| 346 | 52 Doors | Perform crew door components inspection | X | — |
| 347 | 52 Doors | Perform crew door operational test | X | — |
| 348 | 52 Doors | Perform emergency exit door components inspection | X | — |
| 349 | 52 Doors | Perform emergency exit door operational test | X | — |
| 350 | 52 Doors | Remove/install emergency exit door | X | — |
| 351 | 52 Doors | Perform cargo door components inspection | X | — |
| 352 | 52 Doors | Perform cargo door operational test | X | — |
| 353 | 52 Doors | Perform compartments doors components inspection | X | — |
| 354 | 52 Doors | Perform compartments doors operational  test | X | — |
| 355 | 52 Doors | Perform snubber replacement | X | — |
| 356 | 52 Doors | Perform locking mechanism  rigging/adjustment | X | — |
| 357 | 52 Doors | Perform air stair functional test | X | X |
| 358 | 52 Doors | Perform door warning system functional test | X | X |
| 359 | 52 Doors | Troubleshoot faulty system | X | X |
| 360 | 53 Fuselage | Perform radome inspection | X | — |
| 361 | 53 Fuselage | Perform damage assessment | X | — |

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| **Task No** | **ATA chapter** | **Task description** | **B1.1** | **B2** |
| 362 | 53 Fuselage | Perform structural repair | X | — |
| 363 | 54 Nacelles/pylons | Perform nacelle/pylon components inspection | X | — |
| 364 | 54 Nacelles/pylons | Remove/install nacelle strut | X | — |
| 365 | 55 Stabilisers | Perform vertical stabiliser inspection | X | — |
| 366 | 55 Stabilisers | Perform horizontal stabiliser inspection | X | — |
| 367 | 55 Stabilisers | Perform horizontal stabiliser conductive strip repair | X | — |
| 368 | 56 Windows | Perform passenger cabin windows inspection | X | — |
| 369 | 56 Windows | Remove/install passenger window | X | — |
| 370 | 56 Windows | Perform flight compartment windows inspection | X | — |
| 371 | 56 Windows | Remove/install flight compartment window | X | — |
| 372 | 56 Windows | Perform flight compartment windows operational test | X | — |
| 373 | 57 Wings | Perform wing structure inspection | X | — |
| 374 | 57 Wings | Replace wing tip | X | — |
| 375 | 57 Wings | Replace wing rib | X | — |
| 376 | 57 Wings | Perform wing structural repair | X | — |
| 377 | 70 Standard practices and  engine performance | Perform fluorescent penetrant inspection | X | — |
| 378 | 70 Standard practices and engine performance | Perform engine wiring harness repair | X | X |
| 379 | 71 Power plant | Perform power plant components inspection | X | — |
| 380 | 71 Power plant | Perform powerplant removal/installation | X | — |
| 381 | 71 Power plant | Replace engine mounts | X | — |
| 382 | 71 Power plant | Perform FOD inspection | X | — |
| 383 | 71 Power plant | Remove/install engine harness | X | — |
| 384 | 71 Power plant | Perform power plant adjustment/test | X | — |
| 385 | 71 Power plant | Perform (assist) in engine dry motoring | X | — |
| 386 | 71 Power plant | Perform (assist) in engine run | X | — |
| 387 | 71 Power plant | Troubleshoot faulty system | X | X |
| 388 | 72 Engine | Perform fan assembly inspection | X | — |
| 389 | 72 Engine | Remove/install fan blade | X | — |
| 390 | 72 Engine | Replace acoustical panel | X | — |
| 391 | 72 Engine | Perform engine compressor inspection | X | — |
| 392 | 72 Engine | Perform engine combustion case inspection | X | — |
| 393 | 72 Engine | Perform engine turbine inspection | X | — |
| 394 | 72 Engine | Perform gearbox assembly inspection | X | — |

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| **Task No** | **ATA chapter** | **Task description** | **B1.1** | **B2** |
| 395 | 72 Engine | Perform compressor wash | X | — |
| 396 | 72 Engine | Perform HPC borescope inspection | X | — |
| 397 | 72 Engine | Perform hot section borescope inspection | X | — |
| 398 | 72 Engine | Perform HPT borescope inspection | X | — |
| 399 | 72 Engine | Remove/install igniter | X | — |
| 400 | 72 Engine | Remove/install fuel nozzle | X | — |
| 401 | 72 Engine | Troubleshoot faulty system | X | X |
| 402 | 73 Engine fuel and control | Perform engine fuel system components inspection | X | — |
| 403 | 73 Engine fuel and control | Replace engine fuel filters | X | — |
| 404 | 73 Engine fuel and control | Replace engine-driven pump | X | — |
| 405 | 73 Engine fuel and control | Perform FADEC functional test | X | — |
| 406 | 73 Engine fuel and control | Remove/install engine electronic control module/unit | X | — |
| 407 | 73 Engine fuel and control | Troubleshoot faulty system | X | X |
| 408 | 74 Ignition | Perform ignition system components visual inspection | X | — |
| 409 | 74 Ignition | Perform ignition system functional test | X | X |
| 410 | 74 Ignition | Remove/install igniter plug | X | — |
| 411 | 74 Ignition | Remove/install ignition exciter | X | — |
| 412 | 74 Ignition | Troubleshoot faulty system | X | X |
| 413 | 75 Air | Perform engine air system components inspection | X | — |
| 414 | 75 Air | Remove/install VSV actuator | X | — |
| 415 | 75 Air | Remove/install VBV actuator | X | — |
| 416 | 75 Air | Perform engine air system functional test | X | X |
| 417 | 76 Engine controls | Perform engine controls components inspection | X | — |
| 418 | 76 Engine controls | Perform engine controls | X | — |
| 419 | 76 Engine controls | Perform engine controls functional test | X | X |
| 420 | 76 Engine controls | Perform thrust lever rigging | X | — |
| 421 | 76 Engine controls | Remove/install thrust lever | X | — |
| 422 | 76 Engine controls | Troubleshoot faulty system | X | X |
| 423 | 77 Engine indicating | Perform engine indicating components inspection | X | — |
| 424 | 77 Engine indicating | Perform engine indicating functional test | X | X |
| 425 | 77 Engine indicating | Replace engine instrument | X | X |
| 426 | 77 Engine indicating | Replace engine thermocouples | X | X |
| 427 | 77 Engine indicating | Replace oil temperature bulb | X | X |

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| --- | --- | --- | --- | --- |
| **Task No** | **ATA chapter** | **Task description** | **B1.1** | **B2** |
| 428 | 77 Engine indicating | Troubleshoot faulty system | X | X |
| 429 | 78 Exhaust | Perform exhaust components inspection | X | — |
| 430 | 78 Exhaust | Perform thrust reverser operational test | X | X |
| 431 | 78 Exhaust | Deactivate/reactivate thrust reverser for maintenance | X | — |
| 432 | 78 Exhaust | Remove/install thrust reverser | X | — |
| 433 | 78 Exhaust | Remove/install blocker door | X | — |
| 434 | 78 Exhaust | Replace shroud assembly | X | — |
| 435 | 79 Oil | Perform oil system components inspection | X | — |
| 436 | 79 Oil | Perform oil system functional test | X | X |
| 437 | 79 Oil | Replace oil filter | X | — |
| 438 | 79 Oil | Replace oil pump | X | — |
| 439 | 79 Oil | Replace oil cooler | X | — |
| 440 | 79 Oil | Remove/install oil pressure sensor | X | X |
| 441 | 79 Oil | Remove/install oil tank | X | — |
| 442 | 79 Oil | Troubleshoot faulty system | X | X |
| 443 | 80 Starting | Perform engine starting system components inspection | X | — |
| 444 | 80 Starting | Perform engine starting system functional  test | X | X |
| 445 | 80 Starting | Replace engine start valve | X | — |
| 446 | 80 Starting | Remove/install engine starter | X | — |
| 447 | 80 Starting | Remove/install starter relay | X | X |
| 448 | 80 Starting | Troubleshoot faulty system | X | X |

**Appendix III — Evaluation of the competence: assessment and assessors**

*ED Decision 2015/029/R*

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

##### 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 to have 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 such as, but not limited to:

* + Environment 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,](#_bookmark104) 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).

##### 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 in order 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 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 (re-orientate 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, 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.

##### 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.