

FOR B1 & B2 CERTIFICATION

# **AVIATION LEGISLATION**

## Aviation Maintenance Technician Certification Series







72413 U.S. Hwy 40 Tabernash, CO 80478-0270 USA

www.actechbooks.com

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#### AVIATION MAINTENANCE TECHNICIAN CERTIFICATION SERIES

Contributors Mladen Hanževački Layout/Design Michael Amrine

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## WELCOME

The publishers of this Aviation Maintenance Technician Certification Series welcome you to the world of aviation maintenance. As you move towards EASA certification, you are required to gain suitable knowledge and experience in your chosen area. Qualification on basic subjects for each aircraft maintenance license category or subcategory is accomplished in accordance with the following matrix. Where applicable, subjects are indicated by an "X" in the column below the license heading.

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We wish you good luck and success in your studies and in your aviation career!

VERSION	EFFECTIVE DATE	DESCRIPTION OF CHANGE
001	2014 02	Module Creation and Release
002	2017 05	Format Update/Addition of Part-T, Sub-Module 06.
003	2019 08	Updated to current regulations, and reduction of Sub-Module 04 to appropriate level 1 requirements.
004	2020 10	Enhanced or modified content within the following Sub-Modules: Sub-Module 01: Updated to current regulations EU 2018/1139 and 376/2014 Sub-Module 02: Definitions section added Sub-Module 03: Definitions section added Sub-Module 04: Complete rewrite for updated regulations Sub-Module 05: Definitions section added Sub-Module 06: Complete rewrite for updated regulations Sub-Module 07: Definitions section added
005	2021 04	Sub-Module 03: Corrected answer to question 3-2 from 2 to 3.

## **REVISION LOG**



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excluding the pilot seat(s), of nine or fewer and a maximum certificated take-off weight of 5 670 kg (12 500 lb) or less; and

• Propeller-driven twin-engine airplanes in the commuter category that have a seating configuration, excluding the pilot seat(s) of nineteen or fewer and a maximum certificated take-off weight of 8 618 kg (19 000 lb) or less. (*Figure 5-2*)

#### LARGE AIRPLANES (CS 25)

The Airworthiness code is applicable to airplanes powered with turbine engines: (*Figure 5-3*)

- Without contingency thrust ratings, and
- For which it is assumed that thrust is not increased following engine failure during take-off except as specified in sub-paragraph (c).

In the absence of an appropriate investigation of operational implications these requirements do not necessarily cover;

- Automatic landings.
- Approaches and landings with decision heights of less than 60 m (200 ft).
- Operations on unprepared runway surfaces.

If the airplane is equipped with an engine control system that automatically resets the power or thrust on the operating engine(s) when any engine fails during take-off, additional requirements pertaining to airplane performance and limitations and the functioning and reliability of the system, contained in Appendix I, must be complied with.

#### SMALL ROTORCRAFT (CS 27.1)

This Airworthiness Code is applicable to small rotorcraft with maximum weights of 3 175 kg (7 000 lbs) or less and nine or less passenger seats.

Multi-engine rotorcraft may be type certificated as Category A provided the requirements referenced in Appendix C are met. (*Figure 5-4*)

#### LARGE ROTORCRAFT (CS 29.1)

This Airworthiness Code is applicable to large rotorcraft. (*Figure 5-5*) Large rotorcraft must be certificated in accordance with either the Category A or Category B requirements.



Figure 5-1. Sailplanes and powered sailplanes.



Figure 5-2. Normal, utility aerobatic and commuter airplanes.



Figure 5-3. Large aircraft.



Figure 5-4. Small rotorcraft.





Figure 5-5. Large rotorcraft.

A multi-engine rotorcraft may be type certificated as both Category A and Category B with appropriate and different operating limitations for each category.

- Rotorcraft with a maximum weight greater than 9 072 kg (20 000 pounds) and 10 or more passenger seats must be type certificated as Category A rotorcraft.
- Rotorcraft with a maximum weight greater than 9 072 kg (20 000 pounds) and nine or less passenger seats may be type certificated as Category B rotorcraft provided the Category A requirements of Subparts C, D, E, and F are met.
- Rotorcraft with a maximum weight of 9 072 kg (20 000 pounds) or less but with 10 or more passenger seats may be type certificated as Category B rotorcraft provided the Category A requirements of CS 29.67(a)(2), 29.87, 29.1517, and of Subparts C, D, E, and F are met.
- Rotorcraft with a maximum weight of 9072 kg (20 000 pounds) or less and nine or less passenger seats may be type certificated as Category B rotorcraft.

#### **CS-VLA VERY LIGHT AIRPLANES**

This airworthiness code is applicable to airplanes with a single engine (spark or compression ignition) having not more than two seats, with a Maximum Certificated Take-off Weight of not more than 750 kg and a stalling speed in the landing configuration of not more than 83 km/h (45 knots)(CAS), to be approved for day-VFR only. (*Figure 5-6*)



Figure 5-6. CS VLA airplane.

### PRODUCTION ORGANIZATION APPROVAL

#### **APPROVAL REQUIREMENTS (21A.145)**

The production organization shall demonstrate, on the basis of the information submitted in accordance with 21A.143 that:

- a. With regard to general approval requirements, facilities, working conditions, equipment and tools, processes and associated materials, number and competence of staff, and general organization are adequate to discharge obligations under 21A.165.
- b. With regard to all necessary airworthiness, noise, fuel venting and exhaust emissions data:
  - The production organization is in receipt of such data from the Agency, and from the holder of, or applicant for, the type-certificate, restricted type-certificate or design approval, to determine conformity with the applicable design data.
  - The production organization has established a procedure to ensure that airworthiness, noise, fuel venting and exhaust emissions data are correctly incorporated in its production data.
  - Such data are kept up to date and made available to all personnel who need access to such data to perform their duties.
- c. With regard to management and staff:
  - A manager has been nominated by the production organization, and is accountable to the Competent Authority.

His or her responsibility within the organization shall consist of ensuring that all production is performed to the required standards and that the production organization is continuously in compliance with the data and procedures identified in the exposition referred to in 21A.143.



- A person or group of persons have been nominated by the production organization to ensure that the organization is in compliance with the requirements of this Part, and are identified, together with the extent of their authority. Such person(s) shall act under the direct authority of the accountable manager referred to in subparagraph.
- The persons nominated shall be able to show the appropriate knowledge, background and experience to discharge their responsibilities.
- Staff at all levels have been given appropriate authority to be able to discharge their allocated responsibilities and that there is full and effective coordination within the production organization in respect of airworthiness, noise, fuel venting and exhaust emission data matters.
- d. With regard to certifying staff, authorized by the production organization to sign the documents issued under 21A.163 under the scope or terms of approval:
  - The knowledge, background (including other functions in the organization), and experience of the certifying staff are appropriate to discharge their allocated responsibilities.
  - The production organization maintains a record of all certifying staff which shall include details of the scope of their authorization.
  - Certifying staff are provided with evidence of the scope of their authorization.

#### PRIVILEGES (21A.163)

Pursuant to the terms of approval issued under 21A.135, the holder of a production organization approval may:

- a. Perform production activities under this Part.
- b. In the case of complete aircraft and upon presentation of a Statement of Conformity (EASA Form 52) under 21A.174, obtain an aircraft certificate of airworthiness and a noise certificate without further showing. (*Figure 5-7*)
- c. In the case of other products, parts or appliances issue authorized release certificates (EASA Form 1) under 21A.307 without further showing.
- d. Maintain a new aircraft that it has produced and issue a certificate of release to service (EASA Form 53) in respect of that maintenance.

#### **OBLIGATIONS OF THE HOLDER (21A.165)**

The holder of a production organization approval shall:

- a. Ensure that the production organization exposition furnished in accordance with 21A.143 and the documents to which it refers, are used as basic working documents within the organization.
- b. Maintain the production organization in conformity with the data and procedures approved for the production organization approval.
- c. Determine that:
  - Each completed aircraft conforms to the type design and is in condition for safe operation prior to submitting Statements of Conformity to the Competent Authority;
  - Other products, parts or appliances are complete and conform to the approved design data and are in condition for safe operation before issuing EASA Form 1 to certify airworthiness, and additionally in case of engines, determine according to data provided by the engine type-certificate holder that each completed engine is in compliance with the applicable emissions requirements as defined in 21A.18 (b), current at the date of manufacture of the engine, to certify emissions compliance;
  - Other products, parts or appliances conform to the applicable data before issuing EASA Form 1 as a conformity certificate.

# DURATION AND CONTINUED VALIDITY (21A.159)

- a. A production organization approval shall be issued for an unlimited duration. It shall remain valid unless:
  - The production organization fails to demonstrate compliance with the applicable requirements of this Subpart;
  - The Competent Authority is prevented by the holder or any of its partners or subcontractors to perform the investigations in accordance with 21A.157;
  - There is evidence that the production organization cannot maintain satisfactory control of the manufacture of products, parts or appliances under the approval;
  - The production organization no longer meets the requirements of 21A.133;
  - The certificate has been surrendered or revoked under 21B.245.



1 State of 2 Competent authority of European Union or EAS/				f a Member State A	e of the 3	Statement Ref No			
4	Organisation								
5	Aircraft Type			6 Type-certificate Refs:					
7	Aircraft Registration Or Mark			8 Manufacturers Identification No					
9	Engine/Propeller Details*								
10	Modifications and/or Ser	vice Bulletins*							
11	Airworthiness Directives								
12	Concessions								
13	Exemptions, Waivers or Derogations*								
14	Remarks								
15	Certificate of Airworthiness								
16	Additional Requirements								
17	Statement of Conformity It is hereby certified that this aircraft confirms fully to the type-certificated design and to the items above in boxes 9, 10, 11 12 and 13.								
	The aircraft is in a condition of safe operation.								
	The aircraft has been sat	The aircraft has been satisfactorily tested in flight.							
18	Signed	19	Name		20 E	Date (d/m/y)			
21	Production Organisatio	n Approval Refe	rence						

Figure 5-7. A standard Statement of Conformity, in this case issued by the French DGAC.

b. Upon surrender or revocation, the certificate shall be returned to the Competent Authority.

## DESIGN ORGANIZATION APPROVAL

#### PART-21 - SUBPART-J

This Subpart establishes the procedure for the approval of design organizations and rules governing the rights and obligations of applicants for, and holders of, such approvals. (*Figure 5-8*)

#### APPROVAL REQUIREMENTS (21A.245)

The design organization shall demonstrate, on the basis of the information submitted in accordance with 21A.243 that, in addition to complying with 21A.239:

- a. The staff in all technical departments are of sufficient numbers and experience and have been given appropriate authority to be able to discharge their allocated responsibilities and that these, together with the accommodation, facilities and equipment are adequate to enable the staff to achieve the airworthiness, noise, fuel venting and exhaust emissions objectives for the product.
- b. There is full and efficient coordination between





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Figure 5-8. The typical organizational structure of a Design Organization.

departments and within departments in respect of airworthiness and environmental protection matters.

#### PRIVILEGES (21A.263)

- a. The holder of a design organization approval shall be entitled to perform design activities under this Part and within its scope of approval.
- b. Subject to 21A.257(b), compliance documents submitted by the applicant for the purpose of obtaining:
  - A type-certificate or approval of a major change to a type design; or
  - A supplemental type-certificate;
  - An ETSO (European Technical Standard Orders) authorization under 21A.602 (b) (1);
  - A major repair design approval; shall be accepted by the Agency without further verification.
- c. The holder of a design organization approval shall be entitled, within its terms of approval and under the relevant procedures of the design assurance system:
  - To classify changes to type design and repairs as 'major' or 'minor'.
  - To approve minor changes to type design and minor repairs.
  - To issue information or instructions containing

the following statement: 'The technical content of this document is approved under the authority of DOA nr. [EASA]. J. [xyz].

- To approve documentary changes to the aircraft flight manual, and issue such changes containing the following statement: 'Revision nr. xx to AFM ref. yyy, is approved under the authority of DOA nr.[EASA].J.[xyz].
- To approve the design of major repairs to products for which it holds the type-certificate or the supplemental type-certificate.

# DURATION AND CONTINUED VALIDITY (21A.259)

- a. A design organization approval shall be issued for an unlimited duration. It shall remain valid unless:
  - The design organization fails to demonstrate compliance with the applicable requirements of this Subpart;
  - The Agency is prevented by the holder or any of its partners or subcontractors to perform the investigations in accordance with 21A.257;
  - There is evidence that the design assurance system cannot maintain satisfactory control and supervision of the design of products or changes thereof under the approval;
  - The certificate has been surrendered or revoked

