Rules and Regulations

Federal Register
Vol. 88, No. 227
Tuesday, November 28, 2023

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 21

[Docket No. FAA–2022–1378]

Airworthiness Criteria: Primary Category Airworthiness Design Criteria for the ICON Aircraft Inc., Model A5–8 Airplane

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Issuance of final airworthiness criteria.

SUMMARY: The FAA announces the primary category airworthiness design criteria for type certification of the ICON Aircraft Inc., (ICON) Model A5–8 airplane.

DATES: These airworthiness criteria are effective December 28, 2023.

FOR FURTHER INFORMATION CONTACT: Mr. Raymond N. Johnston, Avionics Navigation & Flight Deck Unit (AIR–626B), Avionics & Electrical Systems Section, Technical Policy Branch, Policy & Standards Division, Aircraft Certification Service, Federal Aviation Administration, 901 Locust Street, Room 301, Kansas City, MO 64106; phone (816) 329–4159, fax (816) 329–4090, email *raymond.johnston@faa.gov.*

SUPPLEMENTARY INFORMATION:

Background

ICON applied to the FAA on August 3, 2020, for a primary category type certificate (TC) under 14 CFR 21.17(f) for the Model A5–B airplanes.

The ICON Model A5–B airplane consists of a Rotax 912 iS Sport piston engine certified by European Union Aviation Safety Agency (EASA TC E.121) with additional FAA validation requirements to account for differences between EASA CS–E requirements and FAA 14 CFR part 33 requirements. The ICON A5–B will utilize a Sensenich 3-blade composite propeller that conforms with the ASTM consensus standard for propellers identified in Tables 1 and 3 of these airworthiness design criteria. The FAA does not plan to issue TCs for the engine or the propeller.

For continued operational safety (COS) requirements, the applicant would need to utilize the processes outlined in ASTM F3198–18 identified in Tables 1 and 7 of these airworthiness design criteria to develop a COS program. Some differences exist between FAA processes for COS for primary category aircraft and those outlined for LSA in ASTM F3198–18. The operational safety risk assessment information in the appendix of ASTM F3198–18 would need to be utilized by the TC holder, except notification to the FAA is required for reportable events identified in § 21.3. The FAA will then utilize a risk assessment process in determining if mandatory action is required.

Under § 21.17(c), an application for type certification is effective for three years, unless the FAA approves a longer period. Section 21.17(d) provides that, where a TC has not been issued within the time limit established under § 21.17(c), the applicant may file for an extension and update the designated applicable regulations in the type certification basis. The effective date of the applicable airworthiness requirements for the updated type certification basis must not be earlier than 3 years before the date of issue of the type certificate. Since the project was not certificated within 3 years after the application date above, the FAA approved the applicant's request to extend the application for type certification. As a result, the extended date of application for type certification is September 26, 2022.

The FAA issued a notice of proposed airworthiness criteria for the ICON Model A5–B airplane, which published in the **Federal Register** on August 31, 2023 (88 FR 60153).

Discussion of Comments

The FAA received no comments.

Applicability

These airworthiness criteria, established under the provisions of § 21.17(f), are applicable to the ICON Model A5–B airplane. Should ICON apply at a later date for a change to the type certificate to include another model, these airworthiness criteria would apply to that model as well, provided the FAA finds them appropriate in accordance with the requirements of subpart D to part 21.

Conclusion

This action affects only the airworthiness criteria for one model. It is not a standard of general applicability.

Authority Citation

The authority citation for these airworthiness criteria is as follows:

Authority: 49 U.S.C. 106(f), 106(g), 40113, 44701, 44702, and 44704.

Airworthiness Criteria

Pursuant to the authority delegated to me by the Administrator, the following airworthiness criteria are issued as part of the type certification basis for the ICON Model A5–B airplane. The FAA finds that compliance with the following would mitigate the risks associated with the proposed design and would provide an equivalent level of safety to existing rules.

The airworthiness criteria for the issuance of a TC for the ICON Aircraft, Inc., Model A5–B airplane, a primary category airplane, and its powerplant installation is listed in Tables 1 through 8 below.

The following certification basis, established under the provisions of § 21.17(f), is appropriate for the ICON Model A5–B airplane:

TABLE 1—AIRPLANE CERTIFICATION BASIS

Subject	Consensus standard or regulation	Title and description
Primary Type Certification	Sections 21.17(f) and 21.24, both at amendment 21–100.	''Designation of applicable regulations'', and ''Issuance of type certificate: primary category aircraft.''

TABLE 1—AIRPLANE CERTIFICATION BASIS—Continued

Subject	Consensus standard or regulation	Title and description
Aircraft Design and Performance	ASTM F2245–20	''Standard Specification for Design and ''Performance of a Light Sport Airplane'' as modified by Table 2 of these airworthiness design criteria.
Engine	14 CFR part 33, Amendment 33–34.	The FAA will accept an engine certified by EASA to CS–E at amendment 6 that meets the additional criteria in Table 8 of these airworthiness design criteria.
Propeller	ASTM F2506–13	''Standard Specification for Design and Testing of Light Sport Aircraft Propellers'' as modified by Table 3 of these airworthiness design criteria.
Noise	14 CFR part 36, Amendment 36–31.	''Noise Standards: Aircraft Type and Airworthiness Certification.''
Airframe Emergency Parachute	ASTM F2316–12	''Standard Specification for Airframe Emergency Parachutes'' as modified by Table 4 of these airworthiness design criteria.
Airplane Flight Manual or Pilot's Operating Handbook.	ASTM F2746–14 ..... Or GAMA Specification No. 1, rev October 18, 1996.	''Standard Specification for Pilot's Operating Handbook (POH) for Light Sport Aircraft'' as modified by Table 5 of these airworthiness design criteria.
Maintenance Manual	ASTM F2483–18	''Standard Practice for Maintenance and the Development of Maintenance Manuals for Light Sport Aircraft'' as modified by Table 6 of these airworthiness design criteria.
Continued Operational Safety (COS).	ASTM F3198–18	''Standard Specification for Light Sport Aircraft Manufacturer's Continued Operational Safety (COS) Program'' as modified by Table 7 of these airworthiness design criteria.

TABLE 2—MODIFICATIONS APPLICABLE TO ASTM F2245–20 ''STANDARD SPECIFICATIONS FOR DESIGN AND PERFORMANCE OF LIGHT SPORT AIRCRAFT''

Requirements
Include all sections of ASTM F2245–20 except section 9.1.4. Change section 1.1 to: ''This specification covers basic airworthiness requirements for the design of a fixed-wing airplane.'' Change section 1.2 to: ''This specification is applicable to the design of a primary category airplane limited to two seats.''

TABLE 3—MODIFICATIONS APPLICABLE TO ASTM F2506–13 ''STANDARD SPECIFICATION FOR DESIGN AND TESTING OF LIGHT SPORT AIRCRAFT PROPELLERS''

Requirements
Include all sections of ASTM F2506–13 except section 10.

TABLE 4—MODIFICATIONS APPLICABLE TO ASTM F2316–12 ''STANDARD SPECIFICATION FOR AIRFRAME EMERGENCY PARACHUTES''

Requirements
Include all sections of ASTM F2316–12 except section 12.

TABLE 5—MODIFICATIONS APPLICABLE TO ASTM F2746–14 ''STANDARD SPECIFICATION FOR PILOT'S OPERATING HANDBOOK (POH) FOR LIGHT SPORT AIRCRAFT''

Requirements
The airplane flight manual (AFM) must comply with all sections of ASTM F2746–14, as modified by this table, except sections 1.3, 4.6, and 7, or alternatively, the airplane flight manual must comply with GAMA Specification No. 1[1] issued February 15, 1975, and revised October 18, 1996, in which case the following modifications do not apply. In addition to ASTM F2746–14, each part of the AFM indicated below must be approved, segregated, identified, and clearly distinguished from unapproved parts: • Chapter 2 Limitations; • Chapter 3 Emergency Procedures; • Chapter 5 Performance; • Chapter 6: ○ Weight and Balance Chart (see section 6.10.1 of ASTM F2746–14); ○ Operating Weights and Loading (see section 6.10.2 of ASTM F2746–14); ○ Center of Gravity (CG) Range and Determination (see section 6.10.3 of ASTM F2746–14); • Chapter 8: ○ Approved Fuel Grades and Specifications (see section 6.12.5.1 of ASTM F2746–14); ○ Approved Oil Grades and Specifications (see section 6.12.5.2 of ASTM F2746–14). In addition to ASTM F2746–14, non-approved information in the AFM must be presented in a manner acceptable to the FAA.

TABLE 5—MODIFICATIONS APPLICABLE TO ASTM F2746–14 ''STANDARD SPECIFICATION FOR PILOT'S OPERATING HANDBOOK (POH) FOR LIGHT SPORT AIRCRAFT''—Continued

Requirements
Change section 6.4.1 of ASTM 2746–14 to: ''A list of the standards used for the design, construction, continued airworthiness, and reference compliance with this standard.''

TABLE 6—MODIFICATIONS APPLICABLE TO ASTM F2483–18 ''STANDARD PRACTICE FOR MAINTENANCE AND THE DEVELOPMENT OF MAINTENANCE MANUALS FOR LIGHT SPORT AIRCRAFT''

Requirements
Include all sections of ASTM F2483–18 *except:* • Section 3.1.7 • Section 3.1.7.1 • Section 3.1.8 • Section 4 • Note 1 in section 5 • Section 5.3.2 • Section 5.3.3 • Section 5.3.6 • Section 6.1 • Note 5 in section 6.1 • Section 8 and all subsections and notes • Section 9 and all subsections • Section 10 and all subsections • Section 11 and all subsections and notes • Section 12 and all subsections • Annex A1
In addition to ASTM F2483–18, a maintenance manual containing the information that the applicant considers essential for proper maintenance must be provided as indicated in § 21.24(a)(2)(iii).
In addition to ASTM F2483–18, the part of the manual containing service life limitations, the replacement or overhaul of parts, components, and accessories subject to such limitations must be approved, identified, and clearly distinguished from each other unapproved part of the maintenance manual.
Change section 3.1.9 to: ''*maintenance manual(s)*—manual provided by the type design holder that specifies maintenance, repairs, or alterations authorized by the manufacturer.''
Change section 3.1.11 to: ''*manufacturer*—any entity engaged in the production of, or component used on, a type certified primary category airplane.
Change section 5.3 to: ''*Level of Certification*—When listing the qualification level needed to perform a task, the type certificate holder must use the appropriate qualifications from the regulations for aircraft maintenance indicated in 14 CFR part 43, appendix A.''
Change Note 4 in section 5.3.1 to: ''Primary category aircraft owners may perform maintenance as outlined in part 43, appendix A.''
Change section 6.2 to: ''Typical tasks considered as line maintenance include:''

TABLE 7—MODIFICATIONS APPLICABLE TO ASTM F3198–18 ''STANDARD SPECIFICATION FOR LIGHT SPORT AIRCRAFT MANUFACTURER'S CONTINUED OPERATIONAL SAFETY (COS) PROGRAM''

Requirement
Include all sections of ASTM F3198–18 *except:* • Section 1 and all subsections • Section 5.2 and all subsections • Section 5.3 and all subsections • Section 6.1.1.3 • Section 6.1.1.4 • Section 7.7 and all subsections • Section 8.1.2.1 • Section 8.2 and all subsections • Section 10
Change section 4.1 to: ''The purpose of this specification is to establish, by the manufacturer, a method by which unsafe conditions and service difficulty issues are reported, evaluated, and corrected. The type certificate holder is responsible to report failures, malfunctions or defects to the FAA as outlined in § 21.3.''
Replace ''manufacturer'' with ''type certificate holder'' throughout section 7.

[1] GAMA Specification No. 1.

In addition to the EASA CS–E, amendment 6 requirements,[2] the following requirements from 14 CFR part 33, amendment 33–34 also apply.

TABLE 8—FAA VALIDATION OF EASA STATE OF DESIGN RECIPROCATING AIRCRAFT ENGINES

Subject	14 CFR Part 33
Instructions for Continued Airworthiness (ICA).	Section 33.4, appendices A33.1(b), A33.2, A33.3(b) and (c), and A33.4(a)(2).
Engine ratings and operating limitations including reciprocating engine limits.	Sections 33.7(b)(6) and (b)(8).
Durability (Propeller blade pitch control systems).	Section 33.19(b).
Turbine, compressor, fan, and turbosupercharger rotor overspeed.	Section 33.27.
Turbocharger rotors ..	Section 33.34.
Lubrication system	Sections 33.39(a) and (c).
Vibration test	Sections 33.43(a) and (c).
Endurance test	Section 33.49(d).

Issued in Kansas City, Missouri, on November 20, 2023.

Patrick R. Mullen,

Manager, Technical Policy Branch, Policy and Standards Division, Aircraft Certification Service.

[FR Doc. 2023–26027 Filed 11–27–23; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 43 and 91

[Docket No. FAA–2023–1836; Amdt. Nos. 43–53A and 91–371A]

RIN 2120–AL70

Inclusion of Additional Automatic Dependent Surveillance-Broadcast (ADS–B) Out Technical Standard Orders; Incorporation by Reference; Confirmation of Effective Date

AGENCY: Federal Aviation Administration (FAA), U.S. Department of Transportation (DOT).

ACTION: Direct final rule; confirmation of effective date.

SUMMARY: This action confirms the December 18, 2023, effective date of the ''Inclusion of Additional Automatic Dependent Surveillance-Broadcast (ADS–B) Out Technical Standard Orders; Incorporation by Reference'' direct final rule published on October 17, 2023. The direct final rule amends the Automatic Dependent Surveillance-Broadcast (ADS–B) Out requirements to allow aircraft meeting the performance requirements in Technical Standard Order (TSO)–C166c (Extended Squitter Automatic Dependent Surveillance—Broadcast (ADS–B) and Traffic Information Service—Broadcast (TIS–B) Equipment Operating on the Radio Frequency of 1090 Megahertz (MHz)), or TSO–C154d, (Universal Access Transceiver (UAT) ADS–B Equipment Operating on the Radio Frequency of 978 Megahertz (MHz)) to meet the regulations. Aircraft equipped with ADS–B Out that meets the performance requirements of either TSO–C166c or TSO–C154d will provide additional information to pilots and air traffic control, including weather information, spectrum monitoring, and airspeed. They will also enable new wake turbulence applications, enhance weather forecasting, and enable or enhance ADS–B In applications such as Flight Interval Management.

DATES: The effective date of December 18, 2023, for the direct final rule published October 17, 2023 (88 FR 71468) is confirmed.

Incorporation by reference: The incorporation by reference of certain publications listed in this rule is approved by the Director of the Office of the Federal Register as of December 18, 2023. The incorporation by reference of certain other publications listed in this rule was approved by the Director of the Office of the Federal Register as of August 11, 2010.

ADDRESSES: For information on where to obtain copies of rulemaking documents and other information related to this action, see ''How To Obtain Additional Information'' in the **SUPPLEMENTARY INFORMATION** section of this document.

FOR FURTHER INFORMATION CONTACT: Juan Sebastian Yanguas, Airspace Rules & Regulations, AJV–P21, Federal Aviation Administration, 800 Independence Avenue SW, Washington, DC 20591; telephone (202) 267–8783; email *Juan.S.Yanguas@faa.gov.*

SUPPLEMENTARY INFORMATION:

I. Background

This action confirms the effective date of the ''Inclusion of Additional Automatic Dependent Surveillance-Broadcast (ADS–B) Out Technical Standard Orders; Incorporation by Reference'' direct final rule.[1] As of January 1, 2020, Federal Aviation Administration (FAA) regulations, codified in title 14 Code of Federal Regulations (14 CFR), §§ 91.225 and 91.227, require aircraft to equip with Automatic Dependent Surveillance-Broadcast (ADS–B) Out to operate in expressly identified airspace areas. ADS–B Out equipment must meet the performance requirements in § 91.227 along with those in Technical Standard Orders (TSO)–C166b or TSO–C154c. This rule revised §§ 91.225 and 91.227 to allow aircraft with equipment that meets the performance requirements in the new TSOs, TSO–C166c and TSO–C154d, to also operate in compliance with the regulations. Specifically, to allow use of these new TSOs, the direct final rule incorporates by reference TSO–C166c, TSO–C154d, section 2 of RTCA DO–260C, RTCA DO–260C Change 1, and section 2 of RTCA DO–282C into 14 CFR 91.225 and 91.227. These new performance requirements enable new wake turbulence applications, incorporate functionality for high-altitude and high-velocity vehicles, and enhance weather forecasting. The addition of TSO–C166c and TSO–C154d to the list of permitted TSOs will not negatively affect current users because TSO–C166b and TSO–C154c will remain as acceptable performance requirements.

This rule also made minor changes to other regulatory sections of part 91. It revised § 91.215 to remove the requirement that transponders reply to intermode interrogations, as International Civil Aviation Organization (ICAO) prohibited those replies in ICAO Annex 10 Volume IV Standards and Recommended Practices and new transponder certifications do not include the capability to reply to intermode interrogations. This rule also removed the requirement in part 43, appendix F, to verify response to an intermode interrogation.

II. Discussion of Comments

The FAA received one comment related to this direct final rule. AIRBUS Commercial Aircraft commented that they believed Advisory Circulars 20–165, Airworthiness Approval of Automatic Dependent Surveillance—Broadcast OUT Systems, and Advisory Circular 20–172, Airworthiness Approval for ADS–B In Systems and Applications, covering the installation of ADS–B Out and ADS–B In,

[2] CS–E, Amendment 6—Aircraft cybersecurity.

[1] *Inclusion of Additional Automatic Dependent Surveillance-Broadcast (ADS–B) Technical Standard Orders; Incorporation by Reference* direct final rule, 88 FR 71468 (Oct. 17, 2023).