



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 21

[Docket No.: FAA-2022-1378]

Proposed Primary Category Design Criteria; ICON Aircraft, Inc.,

Model A5-B Airplane

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of availability; request for comments.

SUMMARY: This document announces the existence of and requests comments on the proposed airworthiness design criteria for acceptance for the type certification of the ICON Aircraft, Inc., Model A5-B airplane under the regulations for primary category aircraft.

DATES: The FAA must receive comments by [INSERT DATE 30 DAYS AFTER PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: Send comments identified by Docket No. FAA-2022-1378 using any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov> and follow the online instructions for sending your comments electronically.
- Mail: Send comments to Docket Operations, M-30; U.S. Department of Transportation (DOT), 1200 New Jersey Avenue, SE, Room W12-140, West Building Ground Floor, Washington, DC 20590-0001.
- Hand Delivery of Courier: Take comments to Docket Operations in Room W12-140 of the West Building Ground Floor at 1200 New Jersey Avenue, SE, Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

- Fax: Fax comments to Docket Operations at 202-493-2251.

Privacy: The FAA will post all comments it receives, without change, to <https://www.regulations.gov>, including any personal information the commenter provides. Using the search function of the docket website, anyone can find and read the electronic form of all comments received into any FAA docket, including the name of the individual sending the comment (or signing the comment for an association, business, labor union, etc.). DOT's complete Privacy Act Statement can be found in the Federal Register published on April 11, 2000 (65 FR 19477-19478), as well as at <https://www.dot.gov/privacy>.

Docket: Background documents or comments received may be read at <https://www.regulations.gov> at any time. Follow the online instructions for accessing the docket or go to Docket Operations in Room W12-140 of the West Building Ground Floor at 1200 New Jersey Avenue, SE, Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

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:

Comments Invited

The FAA invites interested people to take part in this rulemaking by sending written comments, data, or views. Please identify Docket No. FAA-2022-1378 on all submitted correspondence. The most helpful comments reference a specific portion of the airworthiness design criteria, explain the reason for any recommended change, and include supporting data.

Except for Confidential Business Information as described in the following paragraph, and other information as described in title 14, Code of Federal Regulations (14 CFR) 11.35, the FAA will file in the docket all comments received, as well as a report summarizing each substantive public contact with FAA personnel concerning these proposed airworthiness design criteria. Before acting on this proposal, the FAA will consider all comments received on or before the closing date for comments. The FAA will consider comments filed late if it is possible to do so without incurring delay. The FAA may change these airworthiness design criteria based on received comments.

Confidential Business Information

Confidential Business Information (CBI) is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this document contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this document, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this document. Submissions containing CBI should be sent to the individual listed under “For Further Information Contact.” Any

commentary that the FAA receives that is not specifically designated as CBI will be placed in the public docket for this document.

Background

The primary category for aircraft was created specifically for simple, low performance personal aircraft. 14 CFR 21.17(f) provides a means for applicants to propose airworthiness criteria for their particular primary category aircraft. The FAA procedure establishing appropriate airworthiness criteria includes reviewing and possibly revising the applicant's proposal, publication of the submittal in the Federal Register for public review and comment and addressing the comments. After all necessary revisions, the criteria are published as approved FAA airworthiness criteria. When the FAA finds that a primary category aircraft design meets these airworthiness criteria, and no features or characteristics exist that make the aircraft unsafe for its intended use, the applicant is entitled to a type certificate (TC) for the design in accordance with § 21.24. Airplanes that are manufactured under a production certificate and conform to the approved type design may then be eligible for a special airworthiness certification issued in accordance with § 21.184(a).

Both domestic and imported light-sport aircraft (LSA) that comply with an FAA-accepted consensus standard and meet the other eligibility requirements in § 21.190 may operate in US airspace with a special airworthiness certificate. The FAA periodically issues a notice of availability (NOA) for new and revised LSA airworthiness criteria, including ASTM International, formerly known as American Society for Testing and Materials, Committee F37, consensus standards.¹ Primary category airplanes also operate with a special airworthiness certificate and are subject to similar operational limitations

¹ FAA Accepted LSA Standards, FAA NOA Information, https://www.faa.gov/aircraft/gen_av/light_sport. The LSA NOA information maintained on the FAA website includes historical information about the NOA issued February 23, 2022, for ASTM consensus standards that the FAA accepted for certification under the provisions of the Certification of Aircraft and Airmen for the Operation of Light-Sport Aircraft rule.

and privileges. ICON Aircraft, Inc., applied for a TC for the Model A-5B on August 3, 2020. 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. Because the project was not certificated within three years after the application date above, the FAA approved the applicant's request to extend the application for type certification. As a result, the date of the updated type certification basis is August 7, 2023. ICON Aircraft, Inc., proposed to maintain a common type design between the LSA and primary category aircraft. Accordingly, these proposed airworthiness design criteria would apply the same ASTM LSA consensus standards as the applicable airworthiness criteria for a primary category TC for the ICON Aircraft, Inc., Model A-5B airplane because that airplane design meets the other requirements and limitations for LSA. The FAA allows use of criteria in GAMA Specification No. 1 for an LSA pilot's operating handbook as an alternative to the ASTM standard for a pilot's operating handbook, as detailed in Tables 1 and 5 below. In certifying the ICON Aircraft, Inc., Model A-5B as a primary category airplane design utilizing the ASTM LSA consensus standards, the design would meet the limitations for both LSA and primary category airplanes as stated in 14 CFR 1.1 and § 21.24, respectively.

The ICON Model A5-B airplane will utilize 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 airplane 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 proposed 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 proposed 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.

Authority Citation

The authority citation for these proposed airworthiness design criteria is as follows:

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

Proposed Airworthiness Criteria for Acceptance Under the Primary Category

This document prescribes 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. The FAA proposes the airplane certification basis as listed in Tables 1 through 8 below.

Table 1: Airplane Certification Basis

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

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.”
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 ² 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: <ul style="list-style-type: none">• Chapter 2 Limitations;• Chapter 3 Emergency Procedures;• Chapter 5 Performance;• Chapter 6:<ul style="list-style-type: none">○ 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:<ul style="list-style-type: none">○ 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.
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.”

² GAMA Specification No. 1.

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 <u>except</u> : <ul style="list-style-type: none">• 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: “ <i>maintenance manual(s)</i> – manual provided by the type design holder that specifies maintenance, repairs, or alterations authorized by the manufacturer.”
Change section 3.1.11 to: “ <i>manufacturer</i> – any entity engaged in the production of, or component used on, a type certified primary category airplane.
Change section 5.3 to: “ <i>Level of Certification</i> - 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 <u>except</u> : <ul style="list-style-type: none">• 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.

Table 8: FAA Validation of EASA State of Design Reciprocating Aircraft Engines

In addition to the EASA CS-E, amendment 6 requirements,³ the following requirements from 14 CFR part 33, amendment 33-34 also apply.

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)

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³ CS-E, Amendment 6 – Aircraft cybersecurity.