

Citation

The authority citation for these special conditions is as follows:

Authority: 49 U.S.C. 106(g), 40113 and 44701; 14 CFR 21.16 and 21.17; and 14 CFR 11.38 and 11.19.

The Special Conditions

Accordingly, pursuant to the authority delegated to me by the Administrator, the following special conditions are issued as part of the type certification basis for Cirrus Design Corporation model SF50 airplanes.

Fire Extinguishing for Upper Aft Fuselage Mounted Engine*SC 23.1195 Fire Extinguishing Systems*

Fire extinguishing systems must be installed and compliance shown with the following:

(a) Except for combustor, turbine, and tailpipe sections of turbine-engine installations that contain lines or components carrying flammable fluids or gases for which a fire originating in these sections is shown to be controllable, a fire extinguisher system must serve each engine compartment.

(b) The fire extinguishing system, the quantity of the extinguishing agent, the rate of discharge, and the discharge distribution must be adequate to extinguish fires. An individual "two shot" system must be used.

(c) The fire extinguishing system for a nacelle must be able to simultaneously protect each compartment of the nacelle for which protection is provided.

SC 23.1197 Fire Extinguishing Agents

The following applies:

(a) Fire extinguishing agents must—

(1) Be capable of extinguishing flames emanating from any burning of fluids or other combustible materials in the area protected by the fire extinguishing system; and

(2) Have thermal stability over the temperature range likely to be experienced in the compartment in which they are stored.

(b) If any toxic extinguishing agent is used, provisions must be made to prevent harmful concentrations of fluid or fluid vapors (from leakage during normal operation of the airplane or as a result of discharging the fire extinguisher on the ground or in flight) from entering any personnel compartment, even though a defect may exist in the extinguishing system. This must be shown by test except for built-in carbon dioxide fuselage compartment fire extinguishing systems for which—

(1) Five pounds or less of carbon dioxide will be discharged, under established fire control procedures, into any fuselage compartment; or

(2) Protective breathing equipment is available for each flight member on flight deck duty.

SC 23.1199 Extinguishing Agent Containers

The following applies:

(a) Each extinguishing agent container must have a pressure relief valve to prevent bursting of the container by excessive internal pressures.

(b) The discharge end of each discharge line from a pressure relief connection must be located so that discharge of the fire extinguishing agent would not damage the airplane. The line must also be located or protected to prevent clogging caused by ice or other foreign matter.

(c) A means must be provided for each fire extinguishing agent container to indicate that the container has discharged or that the charging pressure is below the established minimum necessary for proper functioning.

(d) The temperature of each container must be maintained under intended operating conditions to prevent the pressure in the container from —

(1) Falling below that necessary to provide an adequate rate of discharge; or

(2) Rising high enough to cause premature discharge.

(e) If a pyrotechnic capsule is used to discharge the extinguishing agent, each container must be installed so that temperature conditions will not cause hazardous deterioration of the pyrotechnic capsule.

SC 23.1201 Fire Extinguishing System Materials

The following apply:

(a) No material in any fire extinguishing system may react chemically with any extinguishing agent so as to create a hazard.

(b) Each system component in an engine compartment must be fireproof.

Issued in Kansas City, Missouri on April 12, 2010.

Steve Thompson,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2010-9026 Filed 4-19-10; 8:45 am]

BILLING CODE 4910-13-P

DEPARTMENT OF TRANSPORTATION**Federal Aviation Administration****14 CFR Part 23**

[Docket No. CE306; Special Conditions No. 23-246-SC]

Special Conditions: Cirrus Design Corporation Model SF50 Airplane; Full Authority Digital Engine Control (FADEC) System

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final special conditions; request for comments.

SUMMARY: These special conditions are issued for the Cirrus Design Corporation model SF50 airplane. This airplane will have a novel or unusual design feature(s) associated with the use of an electronic engine control system instead of a traditional mechanical control system. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for this design feature. These special conditions contain the additional safety standards that the Administrator considers necessary to establish a level of safety equivalent to that established by the existing airworthiness standards.

DATES: The effective date of these special conditions is April 12, 2010.

We must receive your comments by May 20, 2010.

ADDRESSES: Mail two copies of your comments to: Federal Aviation Administration, Regional Counsel, ACE-7, Attn: Rules Docket No. CE306, 901 Locust, Kansas City, MO 64106.

You may deliver two copies to the Regional Counsel at the above address. Mark your comments: Docket No. CE306. You may inspect comments in the Rules Docket weekdays, except Federal holidays, between 7:30 a.m. and 4 p.m.

FOR FURTHER INFORMATION CONTACT:

Peter L. Rouse, Federal Aviation Administration, Aircraft Certification Service, Small Airplane Directorate, ACE-111, 901 Locust, Room 301, Kansas City, Missouri 64106; 816-329-4135, fax 816-329-4090.

SUPPLEMENTARY INFORMATION: The FAA has determined that notice and opportunity for prior public comment hereon are impracticable because these procedures would significantly delay issuance of the design approval and thus delivery of the affected aircraft. In addition, the substance of these special conditions has been subject to the public comment process in several prior instances with no substantive comments

received. The FAA therefore finds that good cause exists for making these special conditions effective upon issuance.

Comments Invited

Interested persons are invited to submit such written data, views, or arguments as they may desire. Communications should identify the regulatory docket or special condition number and be submitted in duplicate to the address specified above. All communications received on or before the closing date for comments will be considered by the Administrator. The special conditions may be changed in light of the comments received.

All comments received will be available in the Rules Docket for examination by interested persons, both before and after the closing date for comments. A report summarizing each substantive public contact with FAA personnel concerning this rulemaking will be filed in the docket.

Commenters' wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must include a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. CE306." The postcard will be date stamped and returned to the commenter.

Background

On September 9, 2008, Cirrus Design Corporation applied for a type certificate for their new model SF50. The Cirrus Design Corporation model SF50 is a low-wing, five-plus-two-place (2 children), single-engine turboprop-powered aircraft. It incorporates an Electronic Flight Information System (EFIS), pressurized cabin, retractable gear, and a V-tail. The turboprop engine is mounted on the upper fuselage/tail cone along the aircraft centerline. It is constructed largely of carbon and fiberglass composite materials. Like other Cirrus products, the SF50 includes a ballistically deployed airframe parachute.

The model SF50 has a maximum operating altitude of 28,000 feet, where it cruises at speeds up to 300 KTAS. Its V_{MO} will not exceed 0.62 Mach. The maximum takeoff weight will be at or below 6000 lbs with a range at economy cruise of roughly 1000 nm. Cirrus intends for the model SF50 to be certified for single-pilot operations under 14 CFR part 91 and 14 CFR part 135 operating rules. The following operating conditions will be included:

- Day and Night VFR.
- IFR.
- Flight Into Known Icing.

The Cirrus Design Corporation model SF50 airplane is equipped with a Williams International FJ33-5A turboprop engine using an electronic engine control system (FADEC) instead of a traditional mechanical control system. Even though the engine control system will be certificated as part of the engine, the installation of an engine with an electronic control system requires evaluation due to critical environmental effects and possible effects on or by other airplane systems, for example, indirect effects of lightning, radio interference with other airplane electronic systems, shared engine and airplane data and power sources.

The regulatory requirements in 14 CFR part 23 for evaluating the installation of complex systems, including electronic systems and critical environmental effects, are contained in § 23.1309. However, when § 23.1309 was developed, the use of electronic control systems for engines was not envisioned. Therefore, the § 23.1309 requirements were not applicable to systems certificated as part of the engine (reference § 23.1309(f)(1)). Parts of the system that are not certificated with the engine could be evaluated using the criteria of § 23.1309. However, the integral nature of these systems makes it unfeasible to evaluate the airplane portion of the system without including the engine portion of the system.

In some cases, the airplane that the engine is used in will determine a higher classification than the engine controls are certificated for, requiring the FADEC systems be analyzed at a higher classification. As of November 2005, FADEC special conditions mandated the classification for 23.1309 analysis for loss of FADEC control as catastrophic for any airplane. This is not to imply an engine failure is classified as catastrophic, but that the digital engine control must provide an equivalent reliability to mechanical engine controls.

Type Certification Basis

Under the provisions of 14 CFR part 21, § 21.17, Cirrus Design Corporation must show that the model SF50 meets the applicable provisions of part 23, as amended by Amendments 23-1 through 23-59, thereto.

If the Administrator finds that the applicable airworthiness regulations (*i.e.*, part 23) do not contain adequate or appropriate safety standards for the model SF50 because of a novel or unusual design feature, special conditions are prescribed under the provisions of § 21.16.

In addition to the applicable airworthiness regulations and special conditions, the model SF50 must comply with the fuel vent and exhaust emission requirements of 14 CFR part 34 and the noise certification requirements of 14 CFR part 36. Also, the FAA must issue a finding of regulatory adequacy pursuant to § 611 of Public Law 92-574, the "Noise Control Act of 1972."

Special conditions, as appropriate, as defined in 11.19, are issued in accordance with § 11.38, and become part of the type certification basis in accordance with § 21.17(a)(2).

Special conditions are initially applicable to the model for which they are issued. Should the type certificate for that model be amended later to include any other model that incorporates the same novel or unusual design feature, the special conditions would also apply to the other model under the provisions of § 21.101(a)(1).

Novel or Unusual Design Features

The Cirrus Design Corporation model SF50 will incorporate the following novel or unusual design features:

Electronic engine control system.

Applicability

As discussed above, these special conditions are applicable to the model SF50. Should Cirrus Design Corporation apply at a later date for a change to the type certificate to include another model incorporating the same novel or unusual design feature, the special conditions would apply to that model as well as under the provisions of § 21.101(a)(1).

Conclusion

This action affects only certain novel or unusual design features on the model SF50 airplanes. It is not a rule of general applicability and it affects only the applicant who applied to the FAA for approval of these features on the airplane.

Under standard practice, the effective date of final special conditions would be 30 days after the date of publication in the **Federal Register**; however, as the certification date for the Cirrus Design Corporation model SF50 is imminent, the FAA finds that good cause exists to make these special conditions effective upon issuance.

List of Subjects in 14 CFR Part 23

Aircraft, Aviation safety, Signs and symbols.

Citation

■ The authority citation for these special conditions is as follows:

Authority: 49 U.S.C. 106(g), 40113 and 44701; 14 CFR 21.16 and 21.17; and 14 CFR 11.38 and 11.19.

The Special Conditions

Accordingly, pursuant to the authority delegated to me by the Administrator, the following special conditions are issued as part of the type certification basis for Cirrus Design Corporation model SF50 airplanes.

1. Electronic Engine Control

The installation of the electronic engine control system must comply with the requirements of 14 CFR 23.1309(a) through (e) at Amendment 23-49. The intent of this requirement is not to reevaluate the inherent hardware reliability of the control itself, but rather determine the effects, including environmental effects addressed in 14 CFR 23.1309(e), on the airplane systems and engine control system when installing the control on the airplane. When appropriate, engine certification data may be used when showing compliance with this requirement; however, the effects of the installation on this data must be addressed.

For these evaluations, the loss of FADEC control will be analyzed utilizing the threat levels associated with a catastrophic failure.

Issued in Kansas City, Missouri, on April 12, 2010.

Steve Thompson,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

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DEPARTMENT OF COMMERCE

Bureau of Industry and Security

15 CFR Parts 772 and 774

[Docket No. 0912031426-0047-01]

RIN 0694-AE79

Revisions to the Export Administration Regulations Based on the 2009 Missile Technology Control Regime Plenary Agreements

AGENCY: Bureau of Industry and Security, Commerce.

ACTION: Final rule.

SUMMARY: The Bureau of Industry and Security (BIS) is amending the Export Administration Regulations (EAR) to reflect changes to the Missile Technology Control Regime (MTCR) Annex that were agreed to by MTCR member countries at the November 2009 Plenary in Rio de Janeiro, Brazil. In

addition, this rule corrects an error published in a final rule on December 10, 2009 (74 FR 65662).

DATES: *Effective Date:* This rule is effective: April 20, 2010. Although there is no formal comment period, public comments on this regulation are welcome on a continuing basis.

ADDRESSES: You may submit comments, identified by RIN 0694-AE79, by any of the following methods:

E-mail: publiccomments@bis.doc.gov
Include "RIN 0694-AE79" in the subject line of the message.

Fax: (202) 482-3355. Please alert the Regulatory Policy Division, by calling (202) 482-2440, if you are faxing comments.

Mail or Hand Delivery/Courier: Timothy Mooney, U.S. Department of Commerce, Bureau of Industry and Security, Regulatory Policy Division, 14th St. & Pennsylvania Avenue, NW., Room 2705, Washington, DC 20230, Attn: RIN 0694-AE79.

Send comments regarding the collection of information associated with this rule, including suggestions for reducing the burden, to Jasmeet Seehra, Office of Management and Budget (OMB), by e-mail to Jasmeet.K.Seehra@omb.eop.gov, or by fax to (202) 395-7285; and to the U.S. Department of Commerce, Bureau of Industry and Security, Regulatory Policy Division, 14th St. & Pennsylvania Avenue, NW., Room 2705, Washington, DC 20230. Comments on this collection of information should be submitted separately from comments on the final rule (i.e. RIN 0694-AE79)—all comments on the latter should be submitted by one of the three methods outlined above.

FOR FURTHER INFORMATION CONTACT: Dennis L. Krepp, Nuclear and Missile Technology Controls Division, Bureau of Industry and Security, Telephone: (202) 482-1309.

SUPPLEMENTARY INFORMATION:

Background

The Missile Technology Control Regime (MTCR) is an export control arrangement among 34 nations, including most of the world's advanced suppliers of ballistic missiles and missile-related materials and equipment. The regime establishes a common export control policy based on a list of controlled items (the Annex) and on guidelines (the Guidelines) that member countries implement in accordance with their national export controls. The goal of maintaining the Annex and the Guidelines is to stem the flow into the global marketplace of

missile systems capable of delivering weapons of mass destruction.

While the MTCR was originally created to prevent the spread of missiles capable of carrying a nuclear warhead, it was expanded in January 1992 to also address threats associated with delivery systems for chemical and biological weapons. MTCR members voluntarily pledge to adopt the regime's export Guidelines and to restrict the export of items contained in the regime's Annex. The implementation of the regime's Guidelines is effectuated through the national export control laws and policies of the regime members.

Amendments to the Export Administration Regulations

This final rule revises the Export Administration Regulations (EAR) to reflect changes to the MTCR Annex agreed to at the November 2009 Plenary in Rio de Janeiro, Brazil. Corresponding MTCR Annex references are provided below for the MTCR Annex changes agreed to at the November 2009 Plenary.

MTCR member countries agreed to clarify the meaning of "production facilities", the export of which is prohibited by the MTCR Guidelines for Category I. This clarification is reflected in the changes set forth in section 772.1 (Definitions of Terms as Used in the Export Administration Regulations), which amend the definition of the term "production facilities" to add the word production before the word equipment. The definition will therefore state that "production facilities" means "production equipment" and specially designed "software" therefor integrated into installations for "development" or for one or more phases of "production" (MTCR Annex Change Definitions: "Production Facilities"). This clarification more specifically describes the type of equipment that is included under the definition of "production facilities". BIS expects this change to have no impact on license applications.

In addition, this rule amends the Commerce Control List (CCL) (Supplement No. 1 to Part 774 of the EAR) to reflect changes to the MTCR Annex. Specifically, the following Export Control Classification Numbers (ECCNs) are affected:

ECCN 1C117 is amended by revising the heading and the "items" paragraph in the List of Items Controlled section (MTCR Annex Change Category II: Item 6.C.7). A significant agreement was reached by MTCR member countries on the control of tungsten and molybdenum on the MTCR Annex. New controls were added for copper infiltrated tungsten, silver infiltrated tungsten, and tungsten alloys in solid