conditions are issued as part of the type certification basis for Adam Aircraft, Model A700 airplanes.

Aft fuselage mounted engines need to protect the airplane from fires that were not envisioned in the development of part 23. Therefore, special conditions for a fire extinguishing system are required for airplanes with this engine configuration.

Regulations requiring and defining engine compartment fire extinguishing systems already exist for part 23 commuter category airplanes. These regulations will provide an adequate level of safety for the normal category Model A700 aircraft with its aft pylon mounted engines.

As the extinguishing agent is subject to change during the service life of the airplane, the certification basis needs to include 14 CFR part 23, § 23.1197 in its entirety.

Each fire zone should be ventilated to prevent the accumulation of flammable vapors. It must also be designed such that it will not allow entry of flammable fluids, vapors, or flames from other fire zones. It must be designed such that it does not create an additional fire hazard from the discharge of vapors or fluids.

1. SC 23.1195—Add the requirements of § 23.1195 while deleting ''For commuter category airplanes.''

23.1195, Fire Extinguishing Systems

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

(1) 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;

(2) The fire extinguishing system, the quantity of extinguishing agent, the rate of discharge, and the discharge distribution must be adequate to extinguish fires. An individual ''one-shot'' system may be used except for embedded engines where a ''two-shot'' system is required.

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

(b) If an auxiliary power unit is installed in any airplane certificated to this part, that auxiliary power unit compartment must be served by a fire extinguishing system meeting the requirements of paragraph (a)(2) of this section.

2. SC 23.1197—Add the requirements of § 23.1197 while deleting ''For commuter category airplanes.''

23.1197, Fire Extinguishing Agents

The following applies:

(a) Fire extinguishing agents must—

(1) Be capable of extinguishing flames emanating from any burning 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 crewmember on flight deck duty.

3. SC 23.1199—Add the requirements of § 23.1199 while deleting ''For commuter category airplanes.''

23.1199, Extinguishing Agent Containers

The following applies:

(a) Each extinguishing agent container must have a pressure relief 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 fire extinguishing agent, each container must be installed so that temperature conditions will not cause hazardous deterioration of the pyrotechnic capsule.

4. SC 23.1201—Add the requirements of § 23.1201 while deleting ''For commuter category airplanes.''

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 August 6, 2007.

Kim Smith,

Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. E7–15973 Filed 8–14–07; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. NM373; Special Conditions No. 25–360–SC]

Special Conditions: Boeing Model 787–8 Airplane; Composite Fuselage In-Flight Fire/Flammability Resistance

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final special conditions.

SUMMARY: These special conditions are issued for the Boeing Model 787–8 airplane. This airplane will have novel or unusual design features when compared to the state of technology envisioned in the airworthiness standards for transport category airplanes. The fuselage of the Boeing Model 787–8 series airplane will be made of composite materials rather than conventional aluminum. While the regulations include flame propagation standards for some materials commonly found in inaccessible areas of the airplane, they do not yet incorporate standards for materials used to construct the fuselage. Therefore, special conditions are needed to address 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 standards. Additional special conditions will be issued for other novel or unusual design features of the Boeing Model 787–8 airplanes.

DATES: *Effective Date:* September 14, 2007.

FOR FURTHER INFORMATION CONTACT: Jeff Gardlin, FAA, Airframe/Cabin Safety, ANM–115, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue, SW., Renton, Washington 98057–3356; telephone (425) 227–2136; facsimile (425) 227–1320.

SUPPLEMENTARY INFORMATION:

Background

On March 28, 2003, Boeing applied for an FAA type certificate for its new Boeing Model 787–8 passenger airplane. The Boeing Model 787–8 airplane will be an all-new, two-engine jet transport airplane with a two-aisle cabin. The maximum takeoff weight will be 476,000 pounds, with a maximum passenger count of 381 passengers.

Type Certification Basis

Under provisions of 14 Code of Federal Regulations (CFR) 21.17, Boeing must show that Boeing Model 787–8 airplanes (hereafter referred to as ''the 787'') meet the applicable provisions of 14 CFR part 25, as amended by Amendments 25–1 through 25–117, except §§ 25.809(a) and 25.812, which will remain at Amendment 25–115. If the Administrator finds that the applicable airworthiness regulations do not contain adequate or appropriate safety standards for the 787 because of a novel or unusual design feature, special conditions are prescribed under provisions of 14 CFR 21.16.

In addition to the applicable airworthiness regulations and special conditions, the 787 must comply with the fuel vent and exhaust emission requirements of 14 CFR part 34 and the noise certification requirements of part 36. The FAA must also issue a finding of regulatory adequacy pursuant to section 611 of Public Law 92–574, the ''Noise Control Act of 1972.''

The FAA issues special conditions, as defined in § 11.19, under § 11.38, and they become part of the type certification basis under § 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 or similar novel or unusual design feature, the special conditions would also apply to the other model under § 21.101.

Novel or Unusual Design Features

In-flight fires have originated in inaccessible areas of aircraft where thermal/acoustic insulation located adjacent to the aluminum aircraft skin has been the path for flame propagation and fire growth. Although these insulation materials were required to comply with the basic ''Bunsen burner'' requirements of 14 CFR 25.853(a) and 25.855(d), these incidents revealed unexpected flame spread along the insulation film covering material of the thermal/acoustic insulation. In all cases, the ignition source was relatively modest and, in most cases, was electrical in origin (for example an electrical short circuit, arcing caused by chafed wiring, or a ruptured ballast case).

In September 2003, in an effort to limit use of materials that sustain or propagate a fire in inaccessible areas, the FAA promulgated 14 CFR 25.856(a), which requires that thermal/acoustic insulation material installed in the fuselage meet newly developed flame propagation test requirements. That rule was Amendment 25–111. These requirements were developed to address a realistic fire threat. We consider that threat generally applicable to the 787.

Conventional aluminum fuselage material does not contribute to in-flight fire propagation. As a result, there are no standards that address in-flight fire safety of the fuselage structure itself. The 787 will make extensive use of composite materials in the fabrication of the majority of the

- Wing,
- Fuselage skin,
- Stringers,
- Spars, and
- Most other structural elements of all major sub-assemblies of the airplane.

As a result of this extensive use of a new construction material, the fuselage cannot be assumed to have the fire resistance previously afforded by aluminum during the in-flight fire scenario mentioned above. These special conditions require that the 787 provide the same level of in-flight survivability as a conventional aluminum fuselage airplane. This includes its thermal/acoustic insulation meeting the requirements of § 25.856(a). Resistance to flame propagation must be shown, and all products of combustion that may result must be evaluated for toxicity and found acceptable.

Discussion of Comments

Notice of Proposed Special Conditions No. 25–07–09–SC for the 787 was published in the **Federal Register** on April 26, 2007 (72 FR 20774). Two commenters, the Air Line Pilots Association (ALPA) and an individual member of the public, responded to the notice. Both commenters concur with the proposed special conditions but have additional concerns about composite structures that they feel should be addressed.

Comment 1. A member of the public commented that a post-crash, fuel fed fire is a significant hazard that is not addressed in these special conditions. This commenter cites research conducted on behalf of the Australian Government that documents potential fire hazards associated with composite materials—in particular toxicity and smoke. The commenter noted that the fire penetration resistance of a composite material alone is not sufficient to determine its overall contribution to fire safety.

FAA Response: We agree with the commenter that consideration of post-crash fire safety must include all the factors that influence survivability, and not just focus on one characteristic. These special conditions focus on in-flight fire safety, so any issues related to post-crash fire safety go beyond the scope of these special conditions. Nonetheless, the FAA is equally concerned with post-crash survivability and is addressing this issue through separate criteria. In this case, because there are requirements related to post-crash fire safety in § 25.856(b), the approach will be via an equivalent level of safety finding in accordance with § 21.21(b)(1). A summary of this finding will be available in the FAA Regulatory and Guidance Library at *http://rgl.faa.gov/.*

Comment 2. ALPA commented that the effects of moisture ingress must be addressed for all aspects of composite material integrity.

FAA Response: From the standpoint of flammability, moisture ingress is not an issue, because moisture will tend to reduce the flammability of the material. Since these special conditions only concern flammability resulting from an in-flight fire, the remainder of the issues go beyond the scope of these special conditions. Moisture is known to influence properties of composite materials and this concern is a well documented environmental condition that Boeing will have to address. In fact, the use of composite materials in aviation is not new and there is a significant amount of experience with the behavior of composites over time in service. Advisory Circular 20–107A, Composite Aircraft Structure, also discusses factors that need to be addressed when using composite structure.

Comment 3. ALPA also commented that aluminum structure can dissipate heat using the airflow over the skin, but this may not be the case for a composite structure because of its different thermal

conductivity. ALPA believes that this difference must be taken into account with any in-flight fire safety assessment.

FAA Response: We agree that the heat transfer characteristics of aluminum influence its response to an in-flight fire, and that a composite structure will doubtless behave differently. The goal of these special conditions is to enable continued safe flight and landing in the event of an in-flight fire that directly impinges on the fuselage structure. Since these special conditions require Boeing to show that the composite structure is resistant to flame propagation resulting from in-flight fire, all the relevant material properties and performance characteristics of the composite structure will need to be addressed. This requirement is not a comparison with aluminum structure. It is a new requirement for composite structure. Since this is so, the special conditions as written cover the ALPA concern, and these special conditions are adopted as proposed.

Applicability

As discussed above, these special conditions are applicable to the 787. Should Boeing apply at a later date for a change to the type certificate to include another model on the same type certificate incorporating the same novel or unusual design features, these special conditions would apply to that model as well.

Conclusion

This action affects only certain novel or unusual design features of the 787. It is not a rule of general applicability.

List of Subjects in 14 CFR Part 25

Aircraft, Aviation safety, Reporting and recordkeeping requirements.

The authority citation for these special conditions is as follows:

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

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 the Boeing Model 787–8 airplane.

■ In addition to the requirements of 14 CFR 25.853(a) governing material flammability, the following special conditions apply:

The 787–8 composite fuselage structure must be shown to be resistant to flame propagation under the fire threat used to develop 14 CFR 25.856(a). If products of combustion are observed beyond the test heat source, they must be evaluated and found acceptable.

Issued in Renton, Washington, on August 6, 2007.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. E7–16020 Filed 8–14–07; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2007–28669; Airspace Docket No. 07–ASO–18]

Removal of Class E Airspace; Columbus, GA

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This action removes the Class E4 Airspace at Columbus Lawson Army Air Field (AAF), Columbus, Ga. This Class E4 airspace was associated with a Nondirectional Radio Beacon (NDB) Runway (RWY) 03 Standard Instrument Approach Procedure (SIAP), which has been cancelled, as RWY 03–21 has been permanently closed.

DATES: *Effective Date:* 0901 UTC, October 25, 2007. The Director of the Federal Register approves this incorporation by reference action under title 1, Code of Federal Regulations, part 51, subject to the annual revision of FAA Order 7400.9 and publication of conforming amendments.

FOR FURTHER INFORMATION CONTACT: Mark D. Ward, Manager, System Support Group, Eastern Service Center, Federal Aviation Administration, P.O. Box 20636, Atlanta, Georgia 30320; telephone (404) 305–5581.

SUPPLEMENTARY INFORMATION:

History

The NDB RWY 03 SIAP was cancelled due to the permanent closure of RWY 03–21. The cancellation and runway closure, therefore, requires the removal of Class E4 airspace. This rule becomes effective on the date specified in the ''Effective Date'' section. Since this action will eliminate the impact of controlled airspace on aircraft in the vicinity of Columbus Lawson AAF, GA, notice and public procedure under 5 U.S.C. 553(b) are not necessary. Designations for Class E airspace areas extending upward from the surface of the earth are published in Paragraph 6004 of FAA Order 7400.9P, dated September 01, 2006, and effective September 15, 2006, which is incorporated by reference in 14 CFR 71.1. The Class E airspace designations listed in this document will be published subsequently in the Order.

The Rule

This amendment to Title 14 Code of Federal Regulations (14 CFR) part 71 removes Class E4 airspace at Lawson AAF, Columbus, Ga.

The FAA has determined that this regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. It, therefore, (1) is not a ''significant regulatory action'' under Executive Order 12866; (2) is not a ''significant rule'' under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this rule will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 71

Airspace, Incorporation by reference, Navigation (air).

Adoption of the Amendment

■ In consideration of the foregoing, the Federal Aviation Administration amends 14 CFR part 71 as follows:

PART 71—[AMENDED]

■ 1. The authority citation for 14 CFR part 71 continues to read as follows:

Authority: 49 U.S.C. 106(g); 40103, 40113, 40120; EO 10854, 24 FR 9565, 3 CFR, 1959–1963 Comp., p. 389; 14 CFR 11.69.

§ 71.1 [Amended]

■ 2. The incorporation by reference in 14 CFR 71.1 of Federal Aviation Administration Order 7400.9P, Airspace Designations and Reporting Points, dated September 1, 2006, and effective September 15, 2006, is amended as follows:

Paragraph 6004 Class E Airspace Areas Designated as an Extension to a Class D Surface Area.

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ASO GA E4 Columbia Lawson AAF, GA [REMOVED]

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