Engine model	Sea level maximum inlet fuel temperature
TFE731–20	135 F (57 C).

CAR part 3, as amended to May 15, 1956, defined the maximum anticipated summer air temperatures in § 3.583; ''The maximum anticipated summer air temperature shall be considered to be 100 °F at sea level and to decrease from this value at the rate of 3.6 °F per thousand feet above sea level.'' Concurrently, § 3.438 required that ''* * * fuel system features conducive to vapor formation shall be demonstrated to be free from vapor lock when using fuel at a temperature of 110 °F under critical operating conditions.'' Building from CAR part 3, 14 CFR part 23 envisioned maximum fuel temperatures at or near 110 °F as set forth in 14 CFR part 23, § 23.961. The turbine fuel temperature requirement for hot weather operation is 110 −0, +5 °F, or the maximum outside air temperature for which approval is requested, whichever is more critical. Engine heat rejection such that the airplane fuel temperature is characterized by engine heat rejection rather than ambient air temperature is a new and novel design that was not envisioned by 14 CFR part 23.

14 CFR part 23 certification experience to date has shown that hot weather certification testing with 110 °F fuel temperatures is adequate for fuel system operations for fuel tank fuel temperatures characterized by ambient air temperatures including cooling as a result of the atmospheric temperature lapse rate. Heating that increases the airplane fuel system operational temperatures introduces several fuel system concerns. Each must be shown to be acceptable. Compliance by design (i.e. lack of ability to shutoff the engine motive flow) may be utilized although associated type certificate data sheet information may also be necessary to assure future system changes are compliant.

A special condition for the higher fuel system temperatures of the Embraer EMB 500 airplane is proposed. The special condition would require the compliance to 14 CFR part 23, § 23.961, fuel system hot weather operation test temperature to be commensurate with the highest fuel temperature expected at the maximum outside air temperature for which approval is requested.

Type Certification Basis

Under 14 CFR part 21, § 21.17, Embraer S.A. must show that the Model EMB–500 meets the applicable provisions of 14 CFR part 23, as amended by Amendments 23–1 through 23–55, thereto.

If the Administrator finds that the applicable airworthiness regulations (i.e., 14 CFR part 23) do not contain adequate or appropriate safety standards for the Model EMB–500 because of a novel or unusual design feature, special conditions are prescribed under § 21.16.

In addition to the applicable airworthiness regulations and special conditions, the Model EMB–500 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, and the FAA must issue a finding of regulatory adequacy under section 611 of Public Law 92–574, the ''Noise Control Act of 1972.''

Special conditions, as appropriate, as defined in § 11.19, are issued under § 11.38, and 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 novel or unusual design feature, the special conditions would also apply to the other model under § 21.101(a)(1).

Novel or Unusual Design Features

The Model EMB–500 will incorporate the following novel or unusual design features: High Fuel Temperatures.

Applicability

As discussed above, these special conditions are applicable to the Model EMB–500. Should Embraer S.A. apply later 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 under § 21.101(a)(1).

Conclusion

This action affects only certain novel or unusual design features on one model, Model EMB–500, of 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.

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 Proposed Special Conditions

Accordingly, the Federal Aviation Administration (FAA) proposes the following special conditions as part of the type certification basis for the Embraer S.A. Model EMB–500 airplanes.

1. SC § 23.961:

Instead of compliance with § 23.961, the following apply:

Each fuel system must be free from vapor lock when using fuel at its critical temperature, with respect to vapor formation, when operating the airplane in all critical operating and environmental conditions for which approval is requested. For turbine fuel, the initial temperature must be the highest fuel temperature expected at the maximum outside air temperature for which approval is requested.

Issued in Kansas City, Missouri, on January 7, 2008.

John Colomy,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. E8–1075 Filed 1–22–08; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 23

[Docket No. CE284; Notice No. 23–08–02–SC]

Special Conditions: Embraer S.A.; Model EMB–500; Static Pressure System

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed special conditions.

SUMMARY: This notice proposes special conditions for the Embraer S.A.; Model EMB–500 airplane. This airplane has a novel or unusual design feature associated with the static pressure system. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for this design feature. These proposed special conditions contain the additional safety standards that the Administrator considers necessary to harmonize with Brazil's Agencia Nacional de Aviacao Civil (ANAC) and to maintain the same level of safety between the ANAC Type Certificate and the U.S. Type Certificate.

DATES: Comments must be received on or before February 22, 2008.

ADDRESSES: Mail comments on this proposal in duplicate to: Federal Aviation Administration, Regional

Counsel, ACE–7, Attention: Rules Docket, Docket No. CE284, 901 Locust, Room 506, Kansas City, Missouri 64106, or delivered in duplicate to the Regional Counsel at the above address. Comments must be marked: CE284. Comments may be inspected in the Rules Docket weekdays, except Federal holidays, between 7:30 a.m. and 4 p.m.

FOR FURTHER INFORMATION CONTACT: Leslie B. Taylor, Federal Aviation Administration, Aircraft Certification Service, Small Airplane Directorate, ACE–111, 901 Locust, Room 301, Kansas City, Missouri, 816–329–4134, fax 816–329–4090, e-mail at *leslie.b.taylor@faa.gov*.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in the making of these proposed special conditions by submitting such written data, views, or arguments as they may desire. Identify the regulatory docket or notice number and submit them 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 proposals described in this notice 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. If you wish the FAA to acknowledge receipt of the comments submitted in response to this notice, include with those comments a self-addressed, stamped postcard on which the following statement is made: ''Comments to Docket No. CE284.'' The postcard will be date stamped and returned to the commenter.

Background

On October 5, 2005, Embraer S.A. applied for a type certificate for their new Model EMB–500. The EMB–500 is a twin engine jet of a type popularly referred to as a very light jet. The airplane is proposed to be type certificated in the normal category of 14 CFR part 23 (and comparable Brazilian requirements RBHA 23). The EMB–500 is predominantly of metallic construction and is a conventionally configured low-wing monoplane with a T-tail and tricycle landing gear. The two Pratt and Whitney of Canada 1,600 pound thrust P&WC 617F/1 turbofan engines are aft fuselage mounted in typical business jet fashion. The engines are full authority digital engine control (FADEC) equipped.

The airplane's maximum takeoff weight is 9,965 pounds. The V_{MO}/M_{MO} is 275 KIAS/M .70, with a maximum operating altitude of 41,000 feet. Requested operations are day/night VFR/IFR, and icing operations approval is requested.

The advance of electronic technology in altimetry systems has permitted a better precision of altitude measurements, including the improvements to Altimetry System Error (ASE) (difference between the pressure altitude displayed to the flightcrew when referenced to the International Standard Atmosphere (ISA) standard ground pressure setting and free stream pressure), Static Source Error (difference between the pressure sensed by the static system at the static port and the undisturbed ambient pressure) and Static Source Error Correction (SSEC) (correction for static source error). These parameters are essential, for example, in operation in Reduced Vertical Minimum Separation (RVSM) airspace. This special condition for the Embraer EMB–500 airplane for the Static Pressure System, including new avionics and certain performance characteristics inherent in this type of airplane, was partially envisioned in existing regulations. This special condition contains the additional airworthiness standards that the FAA considers necessary to harmonize with ANAC and to maintain the same level of safety between the ANAC Type Certificate and the U.S. Type Certificate.

Type Certification Basis

Under the provisions of 14 CFR part 21, § 21.17, Embraer S.A. must show that the EMB–500 meets the applicable provisions of 14 CFR part 23, as amended by Amendment 23–1 through Amendment 23–55 thereto.

If the Administrator finds that the applicable airworthiness regulations (i.e., 14 CFR part 23) do not contain adequate or appropriate safety standards for the EMB–500 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 EMB–500 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; and the FAA must issue a finding of regulatory adequacy pursuant to section 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.

Novel or Unusual Design Features

The EMB–500 will incorporate the following novel or unusual design features:

The avionics system provides corrections to the altimeter indication, which introduces failure conditions not in other Static Pressure Systems.

Applicability

As discussed above, these special conditions are applicable to the EMB–500. If Embraer S.A. applies 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 under § 21.101.

Conclusion

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

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 Proposed Special Conditions

Accordingly, the Federal Aviation Administration proposes the following special conditions as part of the type certification basis for the Embraer S.A.; Model EMB–500 airplanes.

Static Pressure System

If an altimeter system is fitted with a device that provides corrections to the altimeter indication, the device must be designed and installed in such a manner that it can be bypassed when it malfunctions, unless an alternate altimeter system is provided. Each correction device must be fitted with a

means for indicating occurrence of reasonably probable malfunctions, including power failure, to the flightcrew.

Issued in Kansas City, Missouri, on January 15, 2008.

James E. Jackson,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. E8–1076 Filed 1–22–08; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 23

[Docket No. CE283; Notice No. 23–08–01–SC]

Special Conditions: Embraer S.A.; Model EMB–500; Brakes—Designation of Applicable Regulations

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed special conditions.

SUMMARY: This notice proposes special conditions for the Embraer S.A.; Model EMB–500 airplane. This airplane has a novel or unusual design feature associated with the braking system. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for this design feature. These proposed special conditions contain the additional safety standards that the Administrator considers necessary to harmonize with Brazil's Agencia Nacional de Aviacao Civil (ANAC) and to maintain the same level of safety between the ANAC Type Certificate and the U.S. Type Certificate.

DATES: Comments must be received on or before February 22, 2008.

ADDRESSES: Mail comments on this proposal in duplicate to: Federal Aviation Administration, Regional Counsel, ACE–7, Attention: Rules Docket, Docket No. CE283, 901 Locust, Room 506, Kansas City, Missouri 64106, or delivered in duplicate to the Regional Counsel at the above address. Comments must be marked: CE283. Comments may be inspected in the Rules Docket weekdays, except Federal holidays, between 7:30 a.m. and 4 p.m.

FOR FURTHER INFORMATION CONTACT: Leslie B. Taylor, Federal Aviation Administration, Aircraft Certification Service, Small Airplane Directorate, ACE–111, 901 Locust, Room 301, Kansas City, Missouri, 816–329–4134, fax 816–329–4090, e-mail at *leslie.b.taylor@faa.gov.*

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in the making of these proposed special conditions by submitting such written data, views, or arguments as they may desire. Identify the regulatory docket or notice number and submit them 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 proposals described in this notice 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. If you wish the FAA to acknowledge receipt of the comments submitted in response to this notice, include with those comments a self-addressed, stamped postcard on which the following statement is made: ''Comments to Docket No. CE283.'' The postcard will be date stamped and returned to the commenter.

Background

On October 5, 2005, Embraer S.A. applied for a type certificate for their new Model EMB–500. The EMB–500 is a twin engine jet of a type popularly referred to as a very light jet. The airplane is proposed to be type certificated in the normal category of 14 CFR part 23 (and comparable Brazilian requirements RBHA 23). The EMB–500 is predominantly of metallic construction and is a conventionally configured low-wing monoplane with a T-tail and tricycle landing gear. The two Pratt and Whitney of Canada 1,600 pound thrust P&WC 617F/1 turbofan engines are aft fuselage mounted in typical business jet fashion. The engines are full authority digital engine control (FADEC) equipped.

The airplane's maximum takeoff weight is 9,965 pounds. The VMO/MMO is 275 KIAS/M .70, with a maximum operating altitude of 41,000 feet. Requested operations are day/night VFR/IFR, and icing operations approval is requested.

The FAA considers it necessary to add an additional airworthiness standard to adopt the commuter category requirement in 14 CFR 23.735(e), which the Administrator considers necessary to harmonize with ANAC and to maintain the same level of safety between the ANAC Type Certificate and the U.S. Type Certificate.

Type Certification Basis

Under the provisions of 14 CFR part 21, § 21.17, Embraer S.A. must show that the EMB–500 meets the applicable provisions of 14 CFR part 23, as amended by Amendment 23–1 through Amendment 23–55 thereto.

If the Administrator finds that the applicable airworthiness regulations (i.e., 14 CFR part 23) do not contain adequate or appropriate safety standards for the EMB–500 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 EMB–500 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; and the FAA must issue a finding of regulatory adequacy under section 611 of Public Law 92–574, the ''Noise Control Act of 1972.''

Special conditions, as appropriate, as defined in § 11.19, are issued under § 11.38 and 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 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 EMB–500 will incorporate the following novel or unusual design features: The takeoff speed and takeoff distance for this jet airplane make it necessary to adopt rejected takeoff requirements.

Applicability

As discussed above, these special conditions are applicable to the EMB–500. If Embraer S.A. applies 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 under § 21.101(a)(1).

Conclusion

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