

(b) The Secretary may from time to time audit any or all items of costs included as Project Costs in statements or certificates submitted to the Secretary or the servicer or otherwise, and may exclude or reduce the amount of any item which the Secretary determines to be unnecessary or excessive, or otherwise not to be an item of Project Costs. The Borrower will make available to the Secretary all books and records and other data available to the Borrower in order to permit the Secretary to carry out such audits. The Borrower will represent that it has within its rights access to all financial and operational records and data relating to Project Costs, and agrees that it will, upon request by the Secretary, exercise such rights in order to make such financial and operational records and data available to the Secretary. In exercising its rights hereunder, the Secretary may utilize employees of other Federal agencies, independent accountants, or other persons.

§ 609.18 Deviations.

To the extent that such requirements are not specified by the Act or other applicable statutes, DOE may authorize deviations on an individual request basis from the requirements of this part upon a finding that such deviation is essential to program objectives and the special circumstances stated in the request make such deviation clearly in the best interest of the Government. DOE will consult with OMB and the Secretary of the Treasury before DOE grants any deviation that would constitute a substantial change in the financial terms of the Loan Guarantee Agreement and related documents. Any deviation, however, that was not captured in the Credit Subsidy Cost will require either additional fees or discretionary appropriations. A recommendation for any deviation shall be submitted in writing to DOE. Such recommendation must include a supporting statement, which indicates briefly the nature of the deviation requested and the reasons in support thereof.

[FR Doc. E9-28883 Filed 12-3-09; 8:45 am]

BILLING CODE 6450-01-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 23

[Docket No. CE302; Special Conditions No. 23-242-SC]

Special Conditions: Embraer S.A. Model EMB-505; Flight Performance, Flight Characteristics, High Speed Conditions, and Operating Limitations

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final special conditions; request for comments.

SUMMARY: These special conditions are issued for the Embraer S.A. Model EMB-505 airplane. The EMB 505 is an all-new, high-performance, sweep wing, twin turbofan powered aircraft. This airplane will have a novel or unusual design feature(s) which include turbofan engines, aft engine location, new avionics, a trimmable horizontal tail, and performance characteristics inherent in this type of airplane that were not envisioned by the existing regulations. In addition, this airplane is a jet airplane being certificated in the commuter category by exemption. 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 November 25, 2009.

We must receive your comments by January 4, 2010.

ADDRESSES: Mail two copies of your comments to: Federal Aviation Administration, Regional Counsel, ACE-7, Attn: Rules Docket No. CE302, 901 Locust, Kansas City, Missouri 64106. You may deliver two copies to the Regional Counsel at the above address. Mark your comments: Docket No. CE302. 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:

J. Lowell Foster, Federal Aviation Administration, Aircraft Certification Service, Small Airplane Directorate, ACE-111, 901 Locust, Room 301, Kansas City, Missouri 64106; 816-329-4125, 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

We invite interested people to take part in this rulemaking by sending written comments, data, or views. The most helpful comments reference a specific portion of the special conditions, explain the reason for any recommended change, and include supporting data. We ask that you send us two copies of written comments.

We will file in the docket all comments we receive, as well as a report summarizing each substantive public contact with FAA personnel about these special conditions. You may inspect the docket before and after the comment closing date. If you wish to review the docket in person, go to the address in the **ADDRESSES** section of this preamble between 7:30 a.m. and 4 p.m., Monday through Friday, except Federal holidays.

We will consider all comments we receive by the closing date for comments. We will consider comments filed late if it is possible to do so without incurring expense or delay. We may change these special conditions based on the comments we receive.

If you want us to let you know we received your comments on these special conditions, send us a pre-addressed, stamped postcard on which the docket number appears. We will stamp the date on the postcard and mail it back to you.

Background

On October 9, 2006, Embraer S.A. applied for a type certificate for their new Model EMB-505. The Model EMB-505 is a commuter category, low-winged monoplane with "T" tailed vertical and horizontal stabilizers, retractable tricycle type landing gear and twin turbofan engines mounted on the aircraft fuselage. Its design characteristics include a predominance of metallic construction. The maximum takeoff weight is 17,967 pounds, the V_{MO}/M_{MO} is 320 KCAS/M 0.78 and maximum altitude is 45,000 feet.

For the past decade, the Federal Aviation Administration (FAA) has applied special conditions to jets. The

special conditions have varied based on the jet's performance, but in general jets weighing more than 6,000 lbs. have had the commuter category performance requirements applied. Since this is a commuter category airplane, most of the existing jet special conditions are contained in part 23 and already apply. Existing part 23 flying qualities requirements tend to provide a higher level of safety than part 25 (to address a lower pilot skill base), so there is little change needed for jets except for the allowance of turbojet related terms such as V_{FC}/M_{FC} and V_{DF}/M_{DF} . Special conditions for flying qualities, stability, and control also reflect speed ranges appropriate for this class of jet. High speed conditions including flutter, vibration, and high speed characteristics have been applied to jets depending on their speed range and configuration. Since the Embraer Model 505 will have a trimmable horizontal tail, operate above 25,000 ft., and have a M_D greater than $M_{0.6}$, it will have all of the high speed special conditions applied to it. These special conditions come directly from part 25.

Several 14 CFR part 23 paragraphs have been replaced by or supplemented with special conditions. These special conditions have been numbered to match the 14 CFR part 23 paragraph they replace or supplement. Additionally many of the other applicable part 23 paragraphs cross-reference paragraphs that are replaced by or supplemented with special conditions. For example, § 23.141 states, "The airplane must meet the requirements of § 23.143 through § 23.253 * * *" Within this range of paragraphs, there are special conditions associated with § 23.177, § 23.203, § 23.252, and § 23.253. The special conditions associated with these paragraphs supersede the original paragraphs and must be applied. This principle applies to all part 23 paragraphs that cross-reference paragraphs associated with special conditions.

Type Certification Basis

Under the provisions of 14 CFR part 23 § 23.141, Embraer S.A. must show that the Model EMB-505 meets the applicable provisions of 14 CFR part 23, as amended by §§ 23.143 through 23.253, 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-505 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 EMB-505 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 § 611 of Public Law 92-574, the "Noise Control Act of 1972."

The FAA issues special conditions, as appropriate, 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 novel or unusual design feature, the special conditions would also apply to the other model.

Novel or Unusual Design Features

The Embraer S.A. Model EMB-505 will incorporate the following novel or unusual design features:

Flight Performance, Flight Characteristics, High Speed Conditions, and Operating Limitations.

Applicability

As discussed above, these special conditions are applicable to the Model EMB-505. Should Embraer S. A. 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.

Conclusion

This action affects only certain novel or unusual design features on one model, Model EMB-505, 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.

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 Embraer S. A. Model EMB-505 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 the Embraer S. A. Model EMB-505 airplanes.

The following special conditions will apply:

1. SC 23.177 Static directional and lateral stability.

Instead of compliance with § 23.177, the following apply:

(a) The static directional stability, as shown by the tendency to recover from a wings level sideslip with the rudder free, must be positive for any landing gear and flap position appropriate to the takeoff, climb, cruise, approach, and landing configurations. This must be shown with symmetrical power up to maximum continuous power, and at speeds from $1.2 V_{S1}$ up to V_{FE} , V_{LE} , or V_{FC}/M_{FC} (as appropriate). The angle of sideslip for these tests must be appropriate to the type of airplane. At larger angles of sideslip, up to that at which full rudder is used or a control force limit in § 23.143 is reached, whichever occurs first, and at speeds from $1.2 V_{S1}$ to V_O , the rudder pedal force must not reverse.

(b) The static lateral stability, as shown by the tendency to raise the low wing in a sideslip, must be positive for all landing gear and flap positions. This must be shown with symmetrical power up to 75 percent of maximum continuous power at speeds above $1.2 V_{S1}$ in the takeoff configuration(s) and at speeds above $1.3 V_{S1}$ in other configurations, up to V_{FE} , V_{LE} , V_{NO} , or V_{FC}/M_{FC} (as appropriate) for the configuration being investigated, in the takeoff, climb, cruise, and approach configurations. For the landing configuration, the power must be that necessary to maintain a 3 degree angle of descent in coordinated flight. The static lateral stability must not be negative at $1.2 V_{S1}$ in the takeoff configuration, or at $1.3 V_{S1}$ in other configurations. The angle of sideslip for these tests must be appropriate to the type of airplane, but in no case may the constant heading sideslip angle be less than that obtainable with a 10 degree bank, or if less, the maximum bank angle obtainable with full rudder deflection or 150 pound rudder force.

(c) In straight, steady slips at $1.2 V_{S1}$ for any landing gear and flap positions, and for any symmetrical power conditions up to 50 percent of maximum continuous power, the

aileron and rudder control movements and forces must increase steadily, but not necessarily in constant proportion, as the angle of sideslip is increased up to the maximum appropriate to the type of airplane. At larger slip angles, up to the angle at which the full rudder or aileron control is used or a control force limit contained in § 23.143 is reached, the aileron and rudder control movements and forces must not reverse as the angle of sideslip is increased. Rapid entry into, and recovery from, a maximum sideslip considered appropriate for the airplane must not result in uncontrollable flight characteristics.

2. SC 23.181 Dynamic stability.

Instead of compliance with

§ 23.181(d), the following apply:

(d) During the conditions as specified in § 23.175, when the longitudinal control force required to maintain speeds differing from the trim speed by at least plus and minus 15 percent or 15 kts, whichever is less, is released, the response of the airplane must not exhibit any dangerous characteristics nor be excessive in relation to the magnitude of the control force released. Any long-period oscillation of flight path, phugoid oscillation, that results must not be so unstable as to increase the pilot's workload or otherwise endanger the airplane.

3. SC 23.201(e) Wings level stall.

Instead of compliance with § 23.201(e), the following apply:

(e) Compliance with the requirements of this section must be shown under the following conditions:

(1) The flaps, landing gear, and speedbrakes in any likely combination of positions and altitudes appropriate for the various positions.

(2) Thrust—

(i) Idle; and

(ii) The thrust necessary to maintain level flight at $1.6V_{S1}$ (where V_{S1} corresponds to the stalling speed with flaps in the approach position, the landing gear retracted, and maximum landing weight).

(3) Trim at $1.4V_{S1}$ or the minimum trim speed, whichever is higher.

4. SC 23.203(c) Turning flight and accelerated turning stalls.

Instead of compliance with § 23.203(c), the following apply:

(c) Compliance with the requirements of this section must be shown under the following conditions:

(1) The flaps, landing gear, and speedbrakes in any likely combination of positions and altitudes appropriate for the various positions.

(2) Thrust—

(i) Idle; and

(ii) The thrust necessary to maintain level flight at $1.6V_{S1}$ (where V_{S1}

corresponds to the stalling speed with flaps in the approach position, the landing gear retracted, and maximum landing weight).

(3) Trim at $1.4V_{S1}$ or the minimum trim speed, whichever is higher.

5. SC 23.251 Vibration and buffeting.

Instead of compliance with § 23.251, the following apply:

(a) The airplane must be demonstrated in flight to be free from any vibration and buffeting that would prevent continued safe flight in any likely operating condition.

(b) Each part of the airplane must be shown in flight to be free from excessive vibration under any appropriate speed and thrust conditions up to V_{DF}/M_{DF} . The maximum speeds shown must be used in establishing the operating limitations of the airplane in accordance with special condition § SC 23.1505.

(c) Except as provided in paragraph (d) of this special condition, there may be no buffeting condition, in normal flight, including configuration changes during cruise, severe enough to interfere with the control of the airplane, to cause excessive fatigue to the crew, or to cause structural damage. Stall warning buffeting within these limits is allowable.

(d) There may be no perceptible buffeting condition in the cruise configuration in straight flight at any speed up to V_{MO}/M_{MO} , except that stall warning buffeting is allowable.

(e) With the airplane in the cruise configuration, the positive maneuvering load factors at which the onset of perceptible buffeting occurs must be determined for the ranges of airspeed or Mach number, weight, and altitude for which the airplane is to be certified. The envelopes of load factor, speed, altitude, and weight must provide a sufficient range of speeds and load factors for normal operations. Probable inadvertent excursions beyond the boundaries of the buffet onset envelopes may not result in unsafe conditions.

6. SC 23.253 High speed characteristics.

Instead of compliance with § 23.253, the following apply:

(a) Speed increase and recovery characteristics. The following speed increase and recovery characteristics must be met:

(1) Operating conditions and characteristics likely to cause inadvertent speed increases (including upsets in pitch and roll) must be simulated with the airplane trimmed at any likely cruise speed up to V_{MO}/M_{MO} . These conditions and characteristics include gust upsets, inadvertent control movements, low stick force gradient in

relation to control friction, passenger movement, leveling off from climb, and descent from Mach to airspeed limit altitudes.

(2) Allowing for pilot reaction time after effective inherent or artificial speed warning occurs, it must be shown that the airplane can be recovered to a normal attitude and its speed reduced to V_{MO}/M_{MO} , without:

(i) Exceptional piloting strength or skill;

(ii) Exceeding V_D/M_D , V_{DF}/M_{DF} , or the structural limitations; and

(iii) Buffeting that would impair the pilot's ability to read the instruments or control the airplane for recovery.

(3) There may be no control reversal about any axis at any speed up to V_{DF}/M_{DF} . Any reversal of elevator control force or tendency of the airplane to pitch, roll, or yaw must be mild and readily controllable, using normal piloting techniques.

(b) *Maximum speed for stability characteristics*, V_{FC}/M_{FC} . V_{FC}/M_{FC} is the maximum speed at which the requirements of § 23.175(b)(1), special condition § SC 23.177, and § 23.181 must be met with flaps and landing gear retracted. It may not be less than a speed midway between V_{MO}/M_{MO} and V_{DF}/M_{DF} except that, for altitudes where Mach number is the limiting factor, M_{FC} need not exceed the Mach number at which effective speed warning occurs.

7. SC 23.255 Out-of-trim characteristics.

In the absence of specific requirements for out-of-trim characteristics, apply the following:

(a) From an initial condition with the airplane trimmed at cruise speeds up to V_{MO}/M_{MO} , the airplane must have satisfactory maneuvering stability and controllability with the degree of out-of-trim in both the airplane nose-up and nose-down directions, which results from the greater of the following:

(1) A three-second movement of the longitudinal trim system at its normal rate for the particular flight condition with no aerodynamic load (or an equivalent degree of trim for airplanes that do not have a power-operated trim system), except as limited by stops in the trim system, including those required by § 23.655(b) for adjustable stabilizers; or

(2) The maximum mis-trim that can be sustained by the autopilot while maintaining level flight in the high speed cruising condition.

(b) In the out-of-trim condition specified in paragraph (a) of this special condition, when the normal acceleration is varied from +1 g to the positive and negative values specified in paragraph

(c) of this special condition, the following apply:

(1) The stick force versus g curve must have a positive slope at any speed up to and including V_{FC}/M_{FC} ; and

(2) At speeds between V_{FC}/M_{FC} and V_{DF}/M_{DF} , the direction of the primary longitudinal control force may not reverse.

(c) Except as provided in paragraph (d) and (e) of this special condition, compliance with the provisions of paragraph (a) of this special condition must be demonstrated in flight over the acceleration range as follows:

(1) -1 g to $+2.5$ g; or

(2) 0 g to 2.0 g, and extrapolating by an acceptable method to -1 g and $+2.5$ g.

(d) If the procedure set forth in paragraph (c)(2) of this special condition is used to demonstrate compliance and marginal conditions exist during flight test with regard to reversal of primary longitudinal control force, flight tests must be accomplished from the normal acceleration at which a marginal condition is found to exist to the applicable limit specified in paragraph (b)(1) of this special condition.

(e) During flight tests required by paragraph (a) of this special condition, the limit maneuvering load factors, prescribed in §§ 23.333(b) and 23.337, need not be exceeded. Also, the maneuvering load factors associated with probable inadvertent excursions beyond the boundaries of the buffet onset envelopes determined under special condition SC 23.251(e), need not be exceeded. In addition, the entry speeds for flight test demonstrations at normal acceleration values less than 1 g must be limited to the extent necessary to accomplish a recovery without exceeding V_{DF}/M_{DF} .

(f) In the out-of-trim condition specified in paragraph (a) of this special condition, it must be possible from an over speed condition at V_{DF}/M_{DF} to produce at least 1.5 g for recovery by applying not more than 125 pounds of longitudinal control force using either the primary longitudinal control alone or the primary longitudinal control and the longitudinal trim system. If the longitudinal trim is used to assist in producing the required load factor, it must be shown at V_{DF}/M_{DF} that the longitudinal trim can be actuated in the airplane nose-up direction with the primary surface loaded to correspond to the least of the following airplane nose-up control forces:

(1) The maximum control forces expected in service, as specified in §§ 23.301 and 23.397.

(2) The control force required to produce 1.5 g.

(3) The control force corresponding to buffeting or other phenomena of such intensity that is a strong deterrent to further application of primary longitudinal control force.

8. SC 23.1323 Airspeed indicating system.

Instead of compliance with § 23.1323(e), the following apply:

(e) In addition, the airspeed indicating system must be calibrated to determine the system error during the accelerate-takeoff ground run. The ground run calibration must be determined between 0.8 of the minimum value of V_1 to the maximum value of V_2 , considering the approved ranges of altitude and weight. The ground run calibration must be determined assuming an engine failure at the minimum value of V_1 .

9. SC 23.1505 Airspeed limitations.

Instead of compliance with § 23.1505, the following apply:

(a) The maximum operating limit speed (V_{MO}/M_{MO} -airspeed or Mach number, whichever is critical at a particular altitude) is a speed that may not be deliberately exceeded in any regime of flight (climb, cruise, or descent), unless a higher speed is authorized for flight test or pilot training operations. V_{MO}/M_{MO} must be established so that it is not greater than the design cruising speed V_C/M_C and so that it is sufficiently below V_D/M_D or V_{DF}/M_{DF} , to make it highly improbable that the latter speeds will be inadvertently exceeded in operations. The speed margin between V_{MO}/M_{MO} and V_D/M_D or V_{DF}/M_{DF} may not be less than that determined under § 23.335(b) or found necessary in the flight test conducted under special condition § SC 23.253.

Issued in Kansas City, Missouri, on November 25, 2009.

Margaret Kline,

Acting Manager, Small Airplane Directorate,
Aircraft Certification Service.

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2009-1130; Directorate Identifier 2009-SW-40-AD; Amendment 39-16130; AD 2009-25-10]

RIN 2120-AA64

Airworthiness Directives; Sikorsky Aircraft Corporation (Sikorsky) Model S-92A Helicopters

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD) for the Sikorsky Model S-92A helicopters. This action requires a one-time visual inspection of the main gearbox (MGB) lube system filter assembly for oil filter damage. This action also requires if either the primary or secondary oil filter is damaged, replacing both filters, all packings, and the studs before further flight. This AD also requires replacing the oil filter bowl within 30 days after replacing a damaged filter and a daily leak inspection for an oil leak (no oil leaks allowed) during that 30-day interim period. This amendment is prompted by three reports of damaged oil filters or packings resulting from installing the filter assembly with an oversized packing possibly because of incorrect part numbers in the maintenance manual. Based on a previous accident investigation, failure of the oil filter bowl or mounting studs can result in sudden and complete loss of oil from the MGB. The actions specified in this AD are intended to prevent complete loss of oil from the MGB, failure of the MGB, and subsequent loss of control of the helicopter.

DATES: Effective December 21, 2009.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of December 21, 2009.

Comments for inclusion in the Rules Docket must be received on or before February 2, 2010.

ADDRESSES: Use one of the following addresses to submit comments on this AD:

- *Federal eRulemaking Portal:* Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- *Fax:* 202-493-2251.
- *Mail:* U.S. Department of Transportation, Docket Operations, M-