

2.802(c). The petitioner has specified the regulations that it would like revoked. Additionally, the petitioner has stated its grounds for and interest in this action. Lastly, the petition sets forth the specific issues involved, provides views and arguments in favor of the petitioner's position, and provides relevant data to support the request to rescind 10 CFR 51.71(d) and 10 CFR part 51 subpart A, appendix B. Because the petitioner has satisfied the acceptance criteria in 10 CFR 2.802(c), the NRC has accepted, and will review the petition for rulemaking. The NRC is not requesting public comment on this petition at this time.

Dated at Rockville, Maryland, this 13th day of December 2012.

For the Nuclear Regulatory Commission.
Annette L. Vietti-Cook,
Secretary of the Commission.

[FR Doc. 2012-30528 Filed 12-18-12; 8:45 am]

BILLING CODE 7590-01-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. FAA-2012-1207; Notice No. 25-12-09-SC]

Special Conditions: Airbus, A350-900 Series Airplane; Flight Envelope Protection (Icing and Non-Icing Conditions); High Incidence Protection and Alpha-Floor Systems

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed special conditions.

SUMMARY: This action proposes special conditions for Airbus A350-900 series airplanes. These airplanes will have novel or unusual design features associated with flight envelope protection in icing and non-icing conditions that use low speed incidence protection and an alpha-floor function that automatically advances throttles whenever the airplane angle of attack reaches a predetermined value. 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 establish a level of safety equivalent to that established by the existing airworthiness standards.

DATES: Send your comments on or before February 4, 2013.

ADDRESSES: Send comments identified by docket number FAA-2012-1207 using any of the following methods:

- **Federal eRegulations Portal:** Go to <http://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 8 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 <http://regulations.gov>, including any personal information the commenter provides. Using the search function of the docket Web site, 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 <http://DocketsInfo.dot.gov>.

Docket: Background documents or comments received may be read at <http://www.regulations.gov> at any time. Follow the online instructions for accessing the docket or go to the 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: Joe Jacobsen, FAA, Airframe and Flightcrew Interface, ANM-111, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue SW., Renton, Washington 98057-3356; telephone (425) 227-2011; facsimile (425) 227-1320.

SUPPLEMENTARY INFORMATION:

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 will consider all comments we receive on or before 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.

Background

On August 25, 2008, Airbus applied for a type certificate for their new A350-900 series airplane. Later, Airbus requested and the FAA approved an extension to the application for FAA type certification to June 28, 2009. The A350-900 series airplane has a conventional layout with twin wing-mounted Rolls-Royce Trent engines. It features a twin aisle 9-abreast economy class layout, and accommodates side-by-side placement of LD-3 containers in the cargo compartment. The basic A350-900 series airplane configuration accommodates 315 passengers in a standard two-class arrangement. The design cruise speed is Mach 0.85 with a Maximum Take-Off Weight of 602,000 lbs. Airbus proposes the A350-900 series airplane to be certified for extended operations (ETOPS) beyond 180 minutes at entry into service.

Type Certification Basis

Under title 14, Code of Federal Regulations (14 CFR) 21.17, Airbus must show that the A350-900 series airplane meets the applicable provisions of 14 CFR part 25, as amended by Amendments 25-1 through 25-128.

If the Administrator finds that the applicable airworthiness regulations (i.e., part 25) do not contain adequate or appropriate safety standards for the A350-900 series airplanes because of a novel or unusual design feature, special conditions are prescribed under the provisions of § 21.16.

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.

In addition to the applicable airworthiness regulations and special conditions, A350-900 series airplanes 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."

The FAA issues special conditions, as defined in 14 CFR 11.19, in accordance with § 11.38, and they become part of

the type-certification basis under § 21.17(a)(2).

The current airworthiness standards do not contain adequate safety standards for the unique features of the high incidence protection system and the alpha-floor system proposed for the Airbus A350–900 series airplanes. Part I of the following proposed special conditions are in lieu of §§ 25.103, 25.145(a), 25.145(b)(6), 25.201, 25.203, 25.207, and 25.1323(d). Part II is in lieu of §§ 25.21(g), 25.105, 25.107, 25.121, 25.123, 25.125, and 25.143.

Novel or Unusual Design Features

The Airbus A350–900 series airplanes will incorporate the following novel or unusual design features: Low speed high incidence protection and alpha-floor systems.

The A350–900 series airplanes will have a novel or unusual feature to accommodate the unique features of the high incidence protection and the alpha-floor systems. The high incidence protection system replaces the stall warning system during normal operating conditions by prohibiting the airplane from stalling. The high incidence protection system limits the angle of attack at which the airplane can be flown during normal low speed operation, impacts the longitudinal airplane handling characteristics, and cannot be over-ridden by the crew. The existing regulations do not provide adequate criteria to address this system.

The function of the alpha-floor system is to increase automatically the thrust on the operating engines under unusual circumstances where the airplane pitches to a predetermined high angle of attack or bank angle. The regulations do not provide adequate criteria to address this system.

Discussion

The current airworthiness standards do not contain adequate safety standards for the unique features of the high incidence protection system and the alpha-floor system proposed for Airbus A350–900 series airplanes. Special conditions are needed to account for these features. The high incidence protection system prevents the airplane from stalling and therefore, the stall warning system is not needed during normal flight conditions. However, during failure conditions (which are not shown to be extremely improbable), the requirements of Title 14 Code of Federal Regulations (14 CFR) §§ 25.203 and 25.207 apply, although slightly modified (i.e. the flight characteristics at the angle of attack for C_{LMAX} must be suitable in the traditional sense, and stall warning

must be provided in a conventional manner).

The alpha-floor function automatically advances the throttles on the operating engines under flight circumstances of low speed if the airplane reaches a predetermined high angle of attack. This function is intended to provide increased climb capability.

These proposed special conditions are harmonized with the EASA Certification Review Items.

Applicability

As discussed above, these special conditions are applicable to Airbus A350–900 series airplanes. Should Airbus 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 the Airbus A350–900 series airplane. 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 Proposed Special Conditions

Accordingly, the Federal Aviation Administration (FAA) proposes the following special conditions as part of the type certification basis for Airbus A350–900 series airplanes.

The current airworthiness standards do not contain adequate safety standards for the unique features of the high incidence protection system and the alpha-floor system proposed for the Airbus A350. Part I of the following proposed special conditions are in lieu of §§ 25.103, 25.145(a), 25.145(b)(6), 25.201, 25.203, 25.207, and 25.1323(d). Part II are in lieu of §§ 25.21(g), 25.105, 25.107, 25.121, 25.123, 25.125, and 25.143.

Special Conditions Part I—Stall Protection and Scheduled Operating Speeds—**Note:** In the following paragraphs, “In icing conditions” means with the ice accretions (relative to the relevant flight phase) as defined in 14 CFR part 25, amendment 121 appendix C.

Special Conditions Part I—Stall Protection and Scheduled Operating Speeds

Foreword

In the following paragraphs, “In icing conditions” means with the ice accretions (relative to the relevant flight phase) as defined in 14 CFR part 25, amendment 121 appendix C.

1. Definitions

These Special Conditions addresses novel features of the A350–900 series airplane and uses terminology that does not appear in 14 CFR part 25.

These terms for the novel features addressed by these special conditions are the following:

- High incidence protection system: A system that operates directly and automatically on the airplane’s flying controls to limit the maximum angle of attack that can be attained to a value below that at which an aerodynamic stall would occur.
- Alpha-floor system: A system that automatically increases thrust on the operating engines when angle of attack increases through a particular value.
- Alpha-limit: The maximum angle of attack at which the airplane stabilizes with the high incidence protection system operating and the longitudinal control held on its aft stop.
- V_{min} : The minimum steady flight speed in the airplane configuration under consideration with the high incidence protection system operating. See paragraph 3 of these Special Conditions.
- V_{min1g} : V_{min} corrected to 1g conditions. See paragraph 3 of these Special Conditions. It is the minimum calibrated airspeed at which the airplane can develop a lift force normal to the flight path and equal to its weight when at an angle of attack not greater than that determined for V_{min} .

2. Capability and Reliability of the High Incidence Protection System

Those paragraphs of 14 CFR part 25 quoted in reference may be amended in accordance with these Special Conditions provided that acceptable capability and reliability of the high incidence protection system can be established by flight test, simulation, and analysis as appropriate. The capability and reliability required are as follows:

- 1—It shall not be possible during pilot induced maneuvers to encounter a stall and handling characteristics shall be acceptable, as required by section 5 of these Special Conditions.

2—The airplane shall be protected against stalling due to the effects of wind-shears and gusts at low speeds as required by section 6 of these Special Conditions.

3—The ability of the high incidence protection system to accommodate any reduction in stalling incidence must be verified in icing conditions.

4—The high incidence protection system must be provided in each abnormal configuration of the high lift devices that is likely to be used in flight following system failures.

5—The reliability of the system and the effects of failures must be acceptable in accordance with § 25.1309.

3. Minimum Steady Flight Speed and Reference Stall Speed

In lieu of § 25.103, Minimum steady flight speed and Reference stall speed, we propose the following requirements:

(a) The minimum steady flight speed, V_{\min} , is the final stabilized calibrated airspeed obtained when the airplane is decelerated until the longitudinal control is on its stop in such a way that the entry rate does not exceed 1 knot per second.

(b) The minimum steady flight speed, V_{\min} , must be determined in icing and non-icing conditions with:

(1) The high incidence protection system operating normally.

(2) Idle thrust and alpha-floor system inhibited;

(3) All combinations of flaps setting and, landing gear position for which V_{\min} is required to be determined;

(4) The weight used when V_{SR} is being used as a factor to determine compliance with a required performance standard;

(5) The most unfavorable center of gravity allowable; and

(6) The airplane trimmed for straight flight at a speed achievable by the automatic trim system.

(c) The one-g minimum steady flight speed, $V_{\min 1g}$, is the minimum calibrated airspeed at which the airplane can develop a lift force (normal to the flight path) equal to its weight, while at an angle of attack not greater than that at which the minimum steady flight speed of sub-paragraph (a) was determined. It must be determined in icing and non icing conditions.

(d) The reference stall speed, V_{SR} , is a calibrated airspeed defined by the applicant. V_{SR} may not be less than a 1-g stall speed. V_{SR} must be determined in non icing conditions and expressed as:

$$V_{SR} \geq \frac{V_{CL_{MAX}}}{\sqrt{n_{zw}}}$$

where:

$V_{CL_{MAX}}$ = Calibrated airspeed obtained when the load factor-corrected lift coefficient ($\frac{n_{zw}W}{qS}$) is first a maximum during the maneuver prescribed in sub-paragraph (e)(8) of this paragraph.

n_{zw} = Load factor normal to the flight path at $V_{CL_{MAX}}$

W = Airplane gross weight;

S = Aerodynamic reference wing area; and

q = Dynamic pressure.

(e) $V_{CL_{MAX}}$ is determined in non icing conditions with:

(1) Engines idling, or, if that resultant thrust causes an appreciable decrease in stall speed, not more than zero thrust at the stall speed;

(2) The airplane in other respects (such as flaps and landing gear) in the condition existing in the test or performance standard in which V_{SR} is being used;

(3) The weight used when V_{SR} is being used as a factor to determine compliance with a required performance standard;

(4) The center of gravity position that results in the highest value of reference stall speed;

(5) The airplane trimmed for straight flight at a speed achievable by the automatic trim system, but not less than $1.13 V_{SR}$ and not greater than $1.3 V_{SR}$;

(6) Alpha-floor system inhibited; and

(7) The High Incidence Protection System adjusted, at the option of the applicant, to allow higher incidence than is possible with the normal production system.

(8) Starting from the stabilized trim condition, apply the longitudinal control to decelerate the airplane so that the speed reduction does not exceed one knot per second.

4. Stall Warning

In lieu of § 25.207 we propose the following requirements:

4.1 Normal Operation

If the capabilities of the high incidence protection system are met, then the conditions of paragraph 2 are

satisfied. These conditions are equivalent safety to the intent of § 25.207, Stall Warning, so the provision of an additional, unique warning device is not required.

4.2 High Incidence Protection System Failure

Following failures of the high incidence protection system, not shown to be extremely improbable, such that the capability of the system no longer satisfies items 1, 2 and 3 of paragraph 2, stall warning must be provided and must protect against encountering unacceptable characteristics and against encountering stall.

(a) Stall warning with the flaps and landing gear in any normal position must be clear and distinctive to the pilot and meet the requirements specified in paragraphs (d) and (e) below.

(b) Stall warning must also be provided in each abnormal configuration of the high lift devices that is likely to be used in flight following system failures.

(c) The warning may be furnished either through the inherent aerodynamic qualities of the airplane or by a device that will give clearly distinguishable indications under expected conditions of flight. However a visual stall warning device that requires the attention of the crew within the cockpit is not acceptable by itself. If a warning device is used, it must provide a warning in each of the airplane configurations prescribed in paragraph (a) above and for the conditions prescribed below in paragraphs (d) and (e) below.

(d) In non icing conditions stall warning must meet the following requirements: Stall warning must provide sufficient margin to prevent encountering unacceptable characteristics and encountering stall in the following conditions:

(1) In power off straight deceleration not exceeding one knot per second to a speed 5 knots or 5 per cent CAS, whichever is greater, below the warning onset.

(2) In turning flight stall deceleration at entry rates up to 3 knots per second when recovery is initiated not less than one second after the warning onset.

(e) In icing conditions stall warning must provide sufficient margin to prevent encountering unacceptable characteristics and encountering stall, in power off straight and turning flight decelerations not exceeding one knot per second, when the pilot starts a recovery maneuver not less than three seconds after the onset of stall warning.

(f) An airplane is considered stalled when the behavior of the airplane gives the pilot a clear and distinctive

indication of an acceptable nature that the airplane is stalled. Acceptable indications of a stall, occurring either individually or in combination are:

(1) A nose-down pitch that cannot be readily arrested

(2) Buffeting, of a magnitude and severity that is strong and effective deterrent to further speed reduction; or

(3) The pitch control reaches the aft stop and no further increase in pitch attitude occurs when the control is held full aft for a short time before recovery is initiated

(g) An aircraft exhibits unacceptable characteristics during straight or turning flight decelerations if it is not always possible to produce and to correct roll and yaw by unreversed use of aileron and rudder controls, or abnormal nose-up pitching occurs.

5. Handling Characteristics at High Incidence

In lieu of both § 25.201 and § 25.203 we propose the following requirements:

5.1 High Incidence Handling Demonstrations

In lieu of § 25.201: High incidence handling demonstration in icing and non icing conditions.

(a) Maneuvers to the limit of the longitudinal control, in the nose up sense, must be demonstrated in straight flight and in 30° banked turns with:

(1) The high incidence protection system operating normally.

(2) Initial power conditions of:

I: Power off.

II: The power necessary to maintain level flight at 1.5 V_{SR1} , where V_{SR1} is the reference stall speed with flaps in approach position, the landing gear retracted and maximum landing weight.

(3) Alpha-floor system operating normally unless more severe conditions are achieved with inhibited alpha floor.

(4) Flaps, landing gear and deceleration devices in any likely combination of positions.

(5) Representative weights within the range for which certification is requested; and

(6) The airplane trimmed for straight flight at a speed achievable by the automatic trim system.

(b) The following procedures must be used to show compliance in non-icing and icing conditions:

(1) Starting at a speed sufficiently above the minimum steady flight speed to ensure that a steady rate of speed reduction can be established, apply the longitudinal control so that the speed reduction does not exceed one knot per second until the control reaches the stop;

(2) The longitudinal control must be maintained at the stop until the airplane

has reached a stabilized flight condition and must then be recovered by normal recovery techniques;

(3) Maneuvers with increased deceleration rates;

(i) In non icing conditions, the requirements must also be met with increased rates of entry to the incidence limit, up to the maximum rate achievable.

(ii) In icing conditions, with the anti-ice system working normally, the requirements must also be met with increased rates of entry to the incidence limit, up to 3kt/s.

(4) Maneuver with ice accretion prior to operation of the normal anti-ice system

With the ice accretion prior to operation of the normal anti-ice system, the requirement must also be met in deceleration at 1kt/s up to FBS (with and without alpha floor).

5.2 Characteristics in High Incidence Maneuvers

In lieu of § 25.203: Characteristics in High Incidence.

In icing and non icing conditions:

(a) Throughout maneuvers with a rate of deceleration of not more than 1 knot per second, both in straight flight and in 30° banked turns, the airplane's characteristics shall be as follows:

(1) There shall not be any abnormal nose-up pitching.

(2) There shall not be any uncommanded nose-down pitching, which would be indicative of stall. However reasonable attitude changes associated with stabilizing the incidence at Alpha limit as the longitudinal control reaches the stop would be acceptable.

(3) There shall not be any uncommanded lateral or directional motion and the pilot must retain good lateral and directional control, by conventional use of the controls, throughout the maneuver.

(4) The airplane must not exhibit buffeting of a magnitude and severity that would act as a deterrent from completing the maneuver specified in 5.1.(a).

(b) In maneuvers with increased rates of deceleration some degradation of characteristics is acceptable, associated with a transient excursion beyond the stabilized Alpha-limit. However the airplane must not exhibit dangerous characteristics or characteristics that would deter the pilot from holding the longitudinal control on the stop for a period of time appropriate to the maneuver.

(c) It must always be possible to reduce incidence by conventional use of the controls.

(d) The rate at which the airplane can be maneuvered from trim speeds associated with scheduled operating speeds such as V_2 and V_{REF} up to Alpha-limit shall not be unduly damped or be significantly slower than can be achieved on conventionally controlled transport airplanes.

5.3 Characteristics up to Maximum Lift Angle of Attack

(a) In non-icing conditions:
Maneuvers with a rate of deceleration of not more than 1 knot per second up to the angle of attack at which

$$V_{C_{L_{MAX}}}$$

was obtained as defined in paragraph 3 must be demonstrated in straight flight and in 30° banked turns with:

(1) The high incidence protection deactivated or adjusted, at the option of the applicant, to allow higher incidence than is possible with the normal production system.

(2) Automatic thrust increase system inhibited

(3) Engines idling

(4) Flaps and landing gear in any likely combination of positions

(5) The airplane trimmed for straight flight at a speed achievable by the automatic trim system.

(b) In icing conditions:

Maneuvers with a rate of deceleration of not more than 1 knot per second up to the maximum angle of attack reached during maneuvers from 5.1(b)(3)(ii) must be demonstrated in straight flight with:

(1) The high incidence protection deactivated or adjusted, at the option of the applicant, to allow higher incidence than is possible with the normal production system.

(2) Automatic thrust increase system inhibited.

(3) Engines idling.

(4) Flaps and landing gear in any likely combination of positions.

(5) The airplane trimmed for straight flight at a speed achievable by the automatic trim system.

(c) During the maneuvers used to show compliance with paragraphs (a) (b) above, the airplane must not exhibit dangerous characteristics and it must always be possible to reduce angle of attack by conventional use of the controls. The pilot must retain good lateral and directional control, by conventional use of the controls, throughout the maneuver.

6. Atmospheric Disturbances

Operation of the high incidence protection system must not adversely affect aircraft control during expected

levels of atmospheric disturbances, nor impede the application of recovery procedures in case of wind-shear. This shall be demonstrated in non icing and icing conditions.

7. Alpha Floor

In icing and non icing conditions, the Alpha-floor setting must be such that the airplane can be flown at the speeds and bank angles specified in § 25.143(h). It also must be shown that the alpha floor setting does not interfere with normal maneuvering of the airplane. In addition there must be no alpha-floor triggering unless appropriate when the aircraft is flown in usual operational maneuvers and in turbulence.

8. Proof of Compliance

We propose that the following requirement be made in addition to those in § 25.21(b):

(b) The flying qualities will be evaluated at the most unfavorable CG position.

9. For These Regulations, §§ 25.145(a), 25.145(b)(6) and 25.1323(d), We Propose the Following Requirements

§ 25.145(a) V_{min} in lieu of “stall identification”

§ 25.145(b)(6) V_{min} in lieu of V_{SW}
§ 25.1323(d) “From 1.23 V_{SR} to V_{min} ” in lieu of “1.23 V_{SR} to stall warning speed” and “speeds below V_{min} ” in lieu of “speeds below stall warning”

Special Conditions Part II—Credit for Robust Envelope Protection in Icing Conditions

1. Define the stall speed as provided in SC Part I in lieu of § 25.103.

2. We propose the following requirements in lieu of § 25.105(a)(2)(i):
In lieu of § 25.105(a)(2)(i) Take-off.

(i) The V_2 speed scheduled in non icing conditions does not provide the maneuvering capability specified in § 25.143(h) for the takeoff configuration, or

3. In lieu of § 25.107(c) (g) we propose the following requirements, with additional sections (c') and (g'):

In lieu of § 25.107(c) and (g) Take-off speeds.

(c) In non icing conditions V_2 , in terms of calibrated airspeed, must be selected by the applicant to provide at least the gradient of climb required by § 25.121(b) but may not be less than—

(1) V_{2MIN} ;

(2) V_R plus the speed increment attained (in accordance with § 25.111(c)(2)) before reaching a height of 35 feet above the takeoff surface; and

(3) A speed that provides the maneuvering capability specified in § 25.143(h).

(c) In icing conditions with the “take-off ice” accretion defined in Appendix C, V_2 may not be less than—

(1) The V_2 speed determined in non icing conditions

(2) A speed that provides the maneuvering capability specified in § 25.143(h).

(g) In non icing conditions, V_{FTO} , in terms of calibrated airspeed, must be selected by the applicant to provide at least the gradient of climb required by § 25.121(c), but may not be less than—

(1) 1.18 V_{SR} ; and

(2) A speed that provides the maneuvering capability specified in § 25.143(h).

(g) In icing conditions with the “Final take-off ice” accretion defined in Appendix C, V_{FTO} , may not be less than—

(1) The V_{FTO} speed determined in non icing conditions.

(2) A speed that provides the maneuvering capability specified in § 25.143(h).

4. In lieu of § 25.121(b)(2)(ii)(A), § 25.121(c)(2)(ii)(A), § 25.121(d)(2)(ii), we propose the following requirements:

In lieu of § 25.121(b)(2)(ii)(A) Climb:
One-engine inoperative:

(A) The V_2 speed scheduled in non icing conditions does not provide the maneuvering capability specified in § 25.143(h) for the take-off configuration; or

In lieu of § 25.121(c)(2)(ii)(A) Climb:
One-engine inoperative:

(A) The V_{FTO} speed scheduled in non icing conditions does not provide the maneuvering capability specified in § 25.143(h) for the en-route configuration; or

In lieu of § 25.121(d)(2)(ii) Climb:

One-engine inoperative:

(d)(2) The requirements of subparagraph (d)(1) of this paragraph must be met:

(ii) In icing conditions with the approach Ice accretion defined in Appendix C, in a configuration corresponding to the normal all-engines-operating procedure in which V_{min1g} for this configuration does not exceed 110% of the V_{min1g} for the related all-engines-operating landing configuration in icing, with a climb speed established with normal landing procedures, but not more than 1.4 V_{SR} (V_{SR} determined in non icing conditions).

5. In lieu of § 25.123(b)(2)(i) we propose the following requirements:

In lieu of § 25.123(b)(2)(i) En-route flight paths:

(i) The minimum en-route speed scheduled in non icing conditions does not provide the maneuvering capability specified in § 25.143(h) for the en-route configuration, or

6. In lieu of § 25.125(b)(2)(ii)(B), we propose paragraph § 25.125(b)(2)(ii)(C) be removed and replaced by the following requirements:

In lieu of § 25.125(b)(2)(ii)(B) and § 25.125(b)(2)(ii)(C) Landing.

(B) A speed that provides the maneuvering capability specified in § 25.143(h) with the landing ice accretion defined in appendix C.

7. In lieu of, § 25.143(j)(2)(i) we propose the following requirements for controllability and maneuverability:

In lieu of § 25.143(j)(2)(i) General.

(i) The airplane is controllable in a pull-up maneuver up to 1.5 g load factor or lower if limited by AOA protection; and

8. In lieu of § 25.207, Stall warning, to read as the requirements defined in SC Part I., Section 4.

Ali Bahrami,

*Manager, Transport Airplane Directorate,
Aircraft Certification Service.*

[FR Doc. 2012-30441 Filed 12-18-12; 8:45 am]

BILLING CODE 4910-13-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. FAA-2012-1292; Notice No. 25-12-17-SC]

Special Conditions: Embraer S.A., Model EMB-550 Airplanes; Electrical/ Electronic Equipment Bay Fire Detection and Smoke Penetration

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed special conditions.

SUMMARY: This action proposes special conditions for the Embraer S.A. Model EMB-550 airplane. This airplane will have novel or unusual design features, specifically distributed electrical and electronic equipment bays in pressurized areas of the airplane. Older transport category airplane electrical/electronic equipment bay installations are located in the lower lobe where the flightcrew could determine the origin of smoke or fire by a straightforward airplane flight manual procedure. In distributed electrical/electronic bay installations it is not as straightforward. The FAA has no requirement for smoke and/or fire detection in the electrical/electronic equipment bays. To ensure effective mitigation of fires, the FAA proposes these special conditions. 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 establish a level of safety equivalent to that established by the existing airworthiness standards.

DATES: Send your comments on or before February 4, 2013.

ADDRESSES: Send comments identified by docket number FAA-2012-XXXX using any of the following methods:

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Privacy: The FAA will post all comments it receives, without change, to <http://www.regulations.gov>, including any personal information the commenter provides. Using the search function of the docket Web site, 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 <http://DocketsInfo.dot.gov/>.

Docket: Docket documents or comments received may be read at <http://www.regulations.gov> at any time. Follow the online instructions for accessing the docket or go to the 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:

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SUPPLEMENTARY INFORMATION:

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 will consider all comments we receive on or before the closing date for comments. We may change these special conditions based on the comments we receive.

Background

On May 14, 2009, Embraer S.A. applied for a type certificate for their new Model EMB-550 airplane. The Model EMB-550 airplane is the first of a new family of jet airplanes designed for corporate flight, fractional, charter, and private owner operations. The aircraft has a conventional configuration with a low wing and T-tail empennage. The primary structure is metal with composite empennage and control surfaces. The Model EMB-550 airplane is designed for 8 passengers, with a maximum of 12 passengers. It is equipped with two Honeywell HTF7500-E medium bypass ratio turbofan engines mounted on aft fuselage pylons. Each engine produces approximately 6,540 pounds of thrust for normal takeoff. The primary flight controls consist of hydraulically powered fly-by-wire elevators, aileron and rudder, controlled by the pilot or copilot sidestick.

The Model EMB-550 airplane has electrical/electronic equipment bays distributed throughout the airplane; three of them are in the pressurized area. The current airworthiness requirements do not contain adequate or appropriate safety standards regarding smoke/fire detection and protection against penetration of hazardous quantities of smoke from equipment bays into occupied areas of the airplane for this type of airplane configuration.

Type Certification Basis

Under the provisions of Title 14, Code of Federal Regulations (14 CFR) 21.17, Embraer S.A. must show that the Model EMB-550 airplane meets the applicable provisions of part 25, as amended by Amendments 25-1 through 25-127 thereto.

If the Administrator finds that the applicable airworthiness regulations (i.e., 14 CFR part 25) do not contain adequate or appropriate safety standards for the Model EMB-550 airplane because of a novel or unusual design feature, special conditions are