

that performs critical functions must be designed and installed to ensure that the operations, and operational capabilities of these systems to perform critical functions, are not adversely affected when the airplane is exposed to high intensity radiated electromagnetic fields external to the airplane.

2. For the purpose of these special conditions, the following definition applies: Critical Functions: Functions whose failure would contribute to, or cause, a failure condition that would prevent the continued safe flight and landing of the airplane.

Issued in Kansas City, Missouri, on November 18, 1999.

Marvin R. Nuss,

Acting Manager, Small Airplane Directorate.

[FR Doc. 99-31040 Filed 11-29-99; 8:45 am]

BILLING CODE 4910-13-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 23

[Docket No. CE145; Special Conditions No. 23-096A-SC]

Special Conditions: Raytheon Model 390 Airplane

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Amended final special conditions; request for comments.

SUMMARY: This document amends special conditions issued to the Raytheon Aircraft Company for the Raytheon Model 390 airplane and requests comments on the revised portion of the amended special conditions. The Small Airplane Directorate issued final special conditions for this airplane on July 9, 1999, and published them on July 23, 1999 (64 FR 39899). The special conditions contained a requirement for operating limitations for weight and loading distribution already covered by an exemption issued to Raytheon Aircraft Company on December 12, 1996 (Exemption No. 6558, Docket No. 132CE). Accordingly, the portion of the special conditions that covers the operating limitations has been amended to remove the additional requirement. Only the revised sections are contained in this document.

Additionally, the special condition for turning flight and accelerated turning stalls has been amended to include a power-at-idle condition. This condition is included to make these special conditions consistent with previously

approved special conditions for a similar airplane.

DATES: The effective date of these special conditions is November 15, 1999. Comments must be received on or before December 30, 1999.

ADDRESSES: Comments on these special conditions may be mailed in duplicate to: Federal Aviation Administration, Regional Counsel, ACE-7, Attention: Rules Docket CE145, 901 Locust, Room 506, Kansas City, Missouri 64106; or delivered in duplicate to the Regional Counsel at the above address. Comments must be marked: CE145. Comments may be inspected in the Rules Docket weekdays, except Federal holidays, between 7:30 a.m. and 4:00 p.m.

FOR FURTHER INFORMATION CONTACT:

Lowell Foster, Aerospace Engineer, Standards Office (ACE-110), Small Airplane Directorate, Aircraft Certification Service, Federal Aviation Administration, Room 301, 901 Locust, Kansas City, Missouri 64106; telephone (816) 329-4125.

SUPPLEMENTARY INFORMATION: The FAA has determined that the substance of these special conditions has been subject to the public comment process and those comments were resolved. The FAA therefore finds that good cause exists for making these special conditions effective upon issuance.

Comments Invited

Interested persons are invited to submit such written data, views, or arguments as they may desire. Communications should identify the regulatory docket or notice number and be submitted in duplicate to the address specified above. All communications received on or before the closing date for comments will be considered by the Administrator. The special conditions may be changed in light of the comments received. All comments received will be available in the Rules Docket for examination by interested persons, both before and after the closing date for comments. A report summarizing each substantive public contact with FAA personnel concerning this rulemaking will be filed in the docket. Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must include a self-addressed, stamped postcard on which the following statement is made: "Comments to CE145." The postcard will be date stamped and returned to the commenter.

Background

On August 1, 1995, Raytheon Aircraft Company (then Beech Aircraft Corporation), 9707 East Central, Wichita, Kansas 67201, applied for a type certificate for their new Raytheon Model 390 Airplane. The Raytheon Model 390 has a composite fuselage, a metal wing with 22.8 degrees of leading-edge sweepback, and a combination composite/metal empennage in a T-tail configuration with trimmable horizontal tail with 27.3 degrees of leading-edge sweepback. The airplane will accommodate six passengers and a crew of two. The Model 390 will have a V_{MO}/M_{MO} of 320 knots/m.83, and has two turbofan engines mounted on the aft fuselage above and behind the wing.

Raytheon plans to incorporate certain novel and unusual design features into the Model 390 airplane for which the airworthiness regulations do not contain adequate or appropriate safety standards. These features include turbofan engines, engine location, swept wings and stabilizer, and certain performance characteristics necessary for this type of airplane.

The final special conditions issued for this airplane on July 9, 1999, which were published on July 23, 1999 (64 FR 39899), contained a requirement covered by an exemption issued to Raytheon Aircraft Company on December 12, 1996 (Exemption No. 6558, Docket No. 132CE). The Small Airplane Directorate has amended SC23.1583 in the special conditions to remove the weight and loading distribution paragraph in the operating limitations portion of the special condition and to add idle thrust stalls to be consistent with past policy. The amended version of the operating limitations and the idle thrust stalls special conditions are published below.

Type Certification Basis

Under the provisions of 14 CFR part 21, § 21.17, Raytheon Aircraft Company must show that the Raytheon Model 390 meets the applicable provisions of 14 CFR part 23, effective February 1, 1965, as amended by Amendments 23-1 through 23-52, effective July 25, 1996; 14 CFR part 36, effective December 1, 1969, through the amendment effective on the date of type certification; 14 CFR part 34; exemptions, if any; and the special conditions adopted by this rulemaking action.

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 Raytheon Model 390 because of a novel or unusual design feature,

special conditions are prescribed under the provisions of § 21.16.

Special conditions, as appropriate, are issued in accordance with § 11.49 after public notice, as required by §§ 11.28 and 11.29(b), and become part of the type certification basis in accordance with § 21.17(a)(2).

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

Novel or Unusual Design Features

The Raytheon Model 390 will incorporate the following novel or unusual design features: These features include turbofan engines, engine location, swept wings and stabilizer, and certain performance characteristics necessary for this type of airplane. These amended special conditions only address the operating limitations and the addition of idle thrust stalls. The remaining features are addressed in the original special conditions published on July 23, 1999 (64 FR 39899)

Discussion of Previous Comments

A notice of proposed special conditions No. 23-98-01-SC for the Raytheon Aircraft Company Model 390 airplanes was published on November 2, 1998 (63 FR 58660). Comments on the notice were discussed in the final version published on July 23, 1999 (64 FR 39899).

Applicability

As discussed above, these amended special conditions are applicable to the Raytheon Model 390 Airplane. Should Raytheon Aircraft Company 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 under the provisions of § 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 it affects only the applicant who applied to the FAA for approval of these features on the airplane.

The substance of these special conditions has been subjected to the notice and comment period and those comments were resolved. It is unlikely that further public comment on the original special conditions would result in a significant change from the substance contained herein. For that reason, and since a delay would significantly affect the certification of the airplane, which is imminent, the FAA has determined that good cause exists for adopting these special conditions upon issuance. However, the FAA is requesting comments to the revisions in the amended special conditions to allow interested persons to submit such written data, views, or arguments as they may desire.

List of Subjects in 14 CFR Part 23

The authority citation for these special conditions is as follows: 49 U.S.C. 106(g); 40113, 44701, 44702, and 44704; 14 CFR 21.16 and 21.17; and 14 CFR 11.28 and 11.49.

The Special Conditions

Accordingly, pursuant to the authority delegated to me by the Administrator, the following amended special conditions are issued as part of the type certification basis for Raytheon Aircraft Company Model 390 airplane.

SC23.203 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 with:

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

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

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

- (4) Representative weights within the range for which certification is requested.

SC23.1583 Operating limitations

Instead of the requirements of § 23.1583, the following apply:

(a) Airspeed limitations. The following airspeed limitations and any other airspeed limitations necessary for safe operation must be furnished:

- (1) The maximum operating limit speed, V_{MO}/M_{MO} , and a statement that this speed limit 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.

- (2) If an airspeed limitation is based upon compressibility effects, a statement to this effect and information as to any symptoms, the probable behavior of the airplane, and the recommended recovery procedures.

- (3) The maneuvering speed, V_O , and a statement that full application of rudder and aileron controls, as well as maneuvers that involve angles of attack near the stall, should be confined to speeds below this value.

- (4) The maximum speed for flap extension, V_{FE} , for the takeoff, approach, and landing positions.

- (5) The landing gear operating speed or speeds, V_{LO} .

- (6) The landing gear extended speed, V_{LE} if greater than V_{LO} , and a statement that this is the maximum speed at which the airplane can be safely flown with the landing gear extended.

(b) Powerplant limitations. The following information must be furnished:

- (1) Limitations required by § 23.1521.

- (2) Explanation of the limitations, when appropriate.

- (3) Information necessary for marking the instruments, required by § 23.1549 through § 23.1553.

(c) Maneuvers. A statement that acrobatic maneuvers, including spins, are not authorized.

(d) Maneuvering flight load factors. The positive maneuvering limit load factors for which the structure is proven, described in terms of accelerations, and a statement that these accelerations limit the angle of bank in turns and limit the severity of pull-up maneuvers must be furnished.

(e) Flightcrew. The number and functions of the minimum flightcrew must be furnished.

(f) Kinds of operation. The kinds of operation (such as VFR, IFR, day, or night) and the meteorological conditions in which the airplane may or may not be used must be furnished. Any installed equipment that affects any operating limitation must be listed and identified as to operational function.

(g) Additional operating limitations must be established as follows:

- (1) The maximum takeoff weights must be established as the weights at which compliance is shown with the applicable provisions of part 23 (including the takeoff climb provisions of special condition SC23.67(a) through (c) for altitudes and ambient temperatures).

- (2) The maximum landing weights must be established as the weights at which compliance is shown with the applicable provisions of part 23 (including the approach climb and balked landing climb provisions of special conditions SC23.67(d) and SC23.77 for altitudes and ambient temperatures).

- (3) The minimum takeoff distances must be established as the distances at

which compliance is shown with the applicable provisions of part 23 (including the provisions of special conditions SC23.55 and SC23.59 for weights, altitudes, temperatures, wind components, and runway gradients).

(4) The extremes for variable factors (such as altitude, temperature, wind, and runway gradients) are those at which compliance with the applicable provision of part 23 and these special conditions is shown.

(h) Maximum operating altitude. The maximum altitude established under § 23.1527 must be furnished.

(i) Maximum passenger seating configuration. The maximum passenger seating configuration must be furnished.

(j) Ambient temperatures. Where appropriate, maximum and minimum ambient air temperatures for operation.

(k) Allowable lateral fuel loading. The maximum allowable lateral fuel loading differential, if less than the maximum possible.

(l) Baggage and cargo loading. The following information for each baggage and cargo compartment or zone.

(1) The maximum allowable load; and

(2) The maximum intensity of loading.

(m) Systems. Any limitation on the use of airplane systems and equipment.

(n) Smoking. Any restriction on smoking in the airplane.

Issued in Kansas City, Missouri, on November 15, 1999.

Marvin R. Nuss,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 99-31041 Filed 11-29-99; 8:45 am]

BILLING CODE 4910-13-P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. NM156, Special Conditions No. 25-151-SC]

Special Conditions: McDonnell Douglas Corporation (MDC) Model MD-17 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final special conditions.

SUMMARY: These special conditions are issued for the McDonnell Douglas Corporation Model MD-17 airplane. This airplane incorporates novel and unusual design features, including the use of power-augmented-lift from externally blown flaps, for which the applicable airworthiness standards for transport category airplanes do not contain adequate or appropriate safety standards. These special conditions contain the additional safety standards that the Administrator considers

necessary to establish a level of safety equivalent to that provided by the existing airworthiness standards.

EFFECTIVE DATE: December 30, 1999.

FOR FURTHER INFORMATION CONTACT:

Gerry Lakin, Project Officer, FAA Transport Airplane Directorate, Standardization Branch, ANM-113, 1601 Lind Avenue SW., Renton, WA 98055-4056; telephone (425) 227-1187; facsimile (425) 227-1149; Email: gerald.lakin@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

On July 7, 1996, McDonnell Douglas Corporation, 2401 E. Wardlow Rd., Long Beach, CA 90807-5309, a wholly owned subsidiary of The Boeing Company, submitted an application for type certification of a commercial version of the Model C-17 military airplane, designated as the MDC Model MD-17. The MD-17 is a long range, transport category airplane powered by four Pratt & Whitney F-117-PW-100 engines, which are a military version of the PW2040 engines used on other civil transport category airplane types. The airplane will be offered in a cargo configuration only and is designed for carriage of oversized cargo into short runways.

The MD-17 airplane will be certified as a part 25 transport category airplane and, as such, pilots and flight instructors who operate it will have a standard airplane multiengine rating.

Type Certification Basis

Under the provisions of § 21.17, McDonnell Douglas must show that the MD-17 complies with the applicable provisions of 14 CFR part 25, as amended by Amendments 25-1 through 25-87. In addition, the certification basis includes part 36, as amended at the time of certification; part 34, as amended at the time of certification; any subsequent amendments to part 25 that are required for operation under part 121; and these special conditions.

If the Administrator finds that the applicable airworthiness regulations (i.e., part 25) do not contain adequate or appropriate safety standards for the MD-17 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 MD-17 must comply with the fuel vent and exhaust emission requirements of part 34 and the noise certification requirements of part 36, and the FAA must issue a finding of

regulatory adequacy pursuant to § 611 of Public Law 92-574, the "Noise Control Act of 1972."

Special conditions, as appropriate, are issued in accordance with § 11.49 after public notice, as required by §§ 11.28 and 11.29(b), and become part of the type certification basis in accordance with § 21.17(a)(2).

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

MD-17 Design Features

The MD-17 has novel and unusual design features to support the operation of a large transport category sized airplane at airports with very short runways. The MD-17 has externally blown flaps (EBF), which are fixed-vane double slotted flaps that deflect directly into the engine exhaust stream. The MD-17 integrated EBF design includes positioning the engines to provide engine exhaust blowing on the flaps, and flap slots sized to provide engine exhaust flow over both the upper and lower flap and vane surfaces. The resulting flap/exhaust stream interaction provides power-augmented-lift relative to conventional transport category airplane designs. The total lift produced by the EBF is made up of three components: (1) conventional aerodynamic lift produced by the wing and flap; (2) lift due to thrust deflection (the vertical component of the thrust force); and (3) the powered circulation lift (the additional aerodynamic lift resulting from the interaction of the engine exhaust stream on the wing flaps).

To distinguish the new and novel power-augmented-lift design feature of the MD-17 from conventional transport category airplanes, the following definition has been established: Power-augmented-lift means a heavier-than-air airplane capable of operation in regimes of short field takeoff and short field landing, and low speed flight. The airplane depends upon the propulsion system for a significant portion of lift and control during these flight regimes, but relies primarily on conventional wing lift when in the en route configuration.

The MD-17 features Direct Lift Control (DLC), which uses spoilers to provide rapid control of the flight path