

submitted by July 27, 1995. The geographic certification directorates are: Federal Aviation Administration, New England Region, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803, (617) 238-7100

Federal Aviation Administration, Central Region, Small Airplane Directorate, 601 East 12th Street, Kansas City, MO 64106, (816) 426-6937

Federal Aviation Administration, Northwest Mountain Region, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, WA 98055-4056, (206) 227-2159

Federal Aviation Administration, Southwest Region, Rotorcraft Directorate, 2601 Meacham Boulevard, Ft. Worth, TX 76137-4298, (817) 222-5100

5. If the FAA is informed through a source other than an application, as discussed in paragraph 2, that an applicant may be producing parts in violation of § 21.303(a), the FAA will investigate and take action as necessary and appropriate to enforce and ensure future compliance with the rule.

6. Nothing in this policy precludes the FAA from taking action for violations of regulations or laws other than § 21.303(a), or referral to another government agency for appropriate action.

Issued in Washington, DC, on February 17, 1995.

Thomas E. McSweeney,

Director, Aircraft Certification Service.

[FR Doc. 95-4760 Filed 2-23-95; 8:45 am]

BILLING CODE 4910-13-M

14 CFR Part 25

[Docket No. NM-107; Special Conditions No. 25-ANM-95]

Special Conditions; Modified Cessna 550 Series Airplanes; High Intensity Radiated Fields (HIRF)

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final special conditions with request for comments.

SUMMARY: These special conditions are issued for Cessna 550 series airplanes modified by Elliott Aviation Technical Products Development, Inc. of Moline Illinois. These airplanes are equipped with digital head-up display (HUD) systems that perform critical functions. The applicable type certification regulations do not contain adequate or appropriate safety standards for the protection of these systems from the

effects of high intensity radiated fields (HIRF). These special conditions provide the additional safety standards that the Administrator considers necessary to ensure that the critical functions that these systems perform are maintained when the airplane is exposed to HIRF.

DATES: The effective date of these special conditions is February 13, 1995. Comments must be received on or before April 13, 1995.

ADDRESSES: Comments on these special conditions may be mailed in duplicate to: Federal Aviation Administration, Transport Airplane Directorate (ANM-100), Attn: Docket No. NM-107, 1601 Lind Avenue SW., Renton, WA 98055-4056; or delivered in duplicate to the Transport Airplane Directorate at the above address. Comments must be marked: Docket No. NM-107. 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: Michael Zielinski, FAA, Standardization Branch, ANM-113, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue SW., Renton, WA 98055-4056; telephone (206) 227-2279.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA has determined that good cause exists for making these special conditions effective upon issuance; however, interested persons are invited to submit such written data, views, or arguments as they may desire. Communications should identify the regulatory docket or special conditions 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. These special conditions may be changed in light of the comments received. All comments submitted will be available in the 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. Persons wishing the FAA to acknowledge receipt of their comments submitted in response to this request must submit with those comments a self-addressed, stamped postcard on which the following statement is made: "Comments to docket No. NM-107." The postcard will be date stamped and returned to the commenter.

Background

On October 25, 1994, Elliott Aviation Technical Products Development, Inc. of Moline, Illinois, applied for a supplemental type certificate to modify Cessna 550 series airplanes. The Cessna 550 is a business jet with two aft-mounted turbofan engines. The airplane can carry two pilots and up to 11 passengers, depending on the exit and interior configuration, and is capable of operating to an altitude of 43,000 feet. The proposed modification incorporates the installation of digital avionics consisting of a head-up display (HUD) system that is potentially vulnerable to HIRF external to the airplane.

Supplemental Type Certification Basis

Under the provisions of § 21.101 of the FAR, Elliott Aviation Technical Products Development, Inc. must show that the modified Cessna 550 series airplanes continue to meet the applicable provisions of the regulations incorporated by reference in Type Certificate No. A22CE, or the applicable regulations in effect on the date of application for the change. The regulations incorporated by reference in the type certificate are commonly referred to as the "original type certification basis."

The regulations incorporated by reference in Type Certificate No. A22CE include the following: Part 25 of the Federal Aviation Regulations (FAR), dated February 1, 1965, including Amendments 25-1 through 25-17. In addition the following sections of the FAR apply to the HUD installation: §§ 25.1303(b) and 25.1322, as amended through Amendment 25-38; §§ 25.1309, 25.1321 (a), (b), (d), and (e), 25.1333, and 25.1335, as amended by Amendment 25-41. These special conditions will form an additional part of the supplemental type certification basis.

If the Administrator finds that the applicable airworthiness regulations (i.e., part 25, as amended) do not contain adequate or appropriate safety standards for the Cessna 550 series airplanes because of a novel or unusual design feature, special conditions are prescribed under the provisions of § 21.16 to establish a level of safety equivalent to that established in the regulations.

Special conditions, as appropriate, are issued in accordance with § 11.49 of the FAR after public notice, as required by §§ 11.28 and 11.29, and become part of the type certification basis in accordance with § 21.101(b)(2).

Special conditions are initially applicable to the model for which they

are issued. Should the applicant apply for a supplemental type certificate to modify any other model included on the same type certificate to incorporate 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).

Discussion

There is no specific regulation that address protection requirements for electrical and electronic systems from HIRF. Increased power levels from ground based radio transmitters and the growing use of sensitive electrical and electronic systems to command and control airplanes have made it necessary to provide adequate protection.

To ensure that a level of safety is achieved equivalent to that intended by the regulations incorporated by reference, special conditions are needed for the Cessna 550 series airplanes that would require that new technology electrical and electronic systems, such as the HUD, be designed and installed to preclude component damage and interruption of function due to both the direct and indirect effects of HIRF.

High-Intensity Radiated Fields (HIRF)

With the trend toward increased power levels from ground based transmitters, plus the advent of space and satellite communications, coupled with electronic command and control of the airplane, the immunity of critical digital avionics systems, such as the HUD, to HIRF must be established.

It is not possible to precisely define the HIRF to which the airplane will be exposed in service. There is also uncertainty concerning the effectiveness of airframe shielding for HIRF. Furthermore, coupling of electromagnetic energy to cockpit installed equipment through the cockpit window apertures is undefined. Based on surveys and analysis of existing HIRF emitters, an adequate level of protection exists when compliance with the HIRF protection special condition is shown with either paragraphs 1 or 2 below:

1. A minimum threat of 100 volts per meter peak electric field strength from 10 KHz to 18 GHz.
 - a. The threat must be applied to the system elements and their associated wiring harnesses without the benefit of airframe shielding.
 - b. Demonstration of this level of protection is established through system tests and analysis.
2. A threat external to the airframe of the following field strengths for the frequency ranges indicated.

Frequency	Peak (V/M)	Average (V/M)
10 KHz–100 KHz	50	50
100 KHz–500 KHz	60	60
500 KHz– 2 MHz	70	70
2 MHz–30 MHz	200	200
30 MHz–70 MHz	30	30
70 MHz–100 MHz	30	30
100 MHz–200 MHz	150	33
200 MHz–400 MHz	70	70
400 MHz–700 MHz	4,020	935
700 MHz–1 GHz	1,700	170
1 GHz–2 GHz	5,000	990
2 GHz–4 GHz	6,680	840
4 GHz–6 GHz	6,850	310
6 GHz–8 GHz	3,600	670
8 GHz–12 GHz	3,500	1,270
12 GHz–18 GHz	3,500	360
18 GHz–40 GHz	2,100	750

As discussed above, these special conditions are applicable to Cessna 550 series airplanes, modified by Elliott Aviation Technical Products Development, Inc. Should Elliott Aviation Technical Products Development, Inc. apply at a later date for a supplemental type certificate to modify any other model included on Type Certificate No. A22CE to incorporate 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 unusual or novel design features on Cessna 550 series airplanes modified by Elliott Aviation Technical Products Development, Inc. of Moline, Illinois. It is not a rule of general applicability and affects only the applicant who applied to the FAA for approval of these features on modified Cessna 550 series airplanes.

The substance of the special conditions for these airplanes has been subjected to the notice and comment procedure in several prior instances and has been derived without substantive change from those previously issued. It is unlikely that prior public comment would result in a significant change from the substance contained herein. For this reason, and because a delay would significantly affect the certification of the airplane, which is imminent, the FAA has determined that prior public notice and comment are unnecessary and impracticable, and good cause exists for adopting these special conditions immediately. Therefore, these special conditions are being made effective upon issuance. The FAA is requesting comments to allow interested persons to submit views that may have not been submitted in response to the prior opportunities for comment described above.

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. app. 1344, 1348(c), 1352, 1354(a), 1355, 1421 through 1431, 1502, 1651(b)(2), 42 U.S.C. 1857f–10, 4321 et seq.; E.O. 11514; and 49 U.S.C. 106(g).

The Special Conditions

Accordingly, pursuant to the authority delegated to me by the Administrator, the following special condition is issued as part of the supplemental type certification basis for Cessna 550 series airplanes modified by Elliott Aviation Technical Products Development, Inc.

1. *Protection from Unwanted Effects of High-Intensity Radiated Fields (HIRF).* Each electrical and electronic system that performs critical functions must be designed and installed to ensure that the operation and operational capability of these systems to perform critical functions are not adversely affected when the airplane is exposed to high-intensity radiated fields external to the airplane.

2. The following definition applies with respect to this special condition: *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 Renton, Washington, on February 13, 1995.

Darrell M. Pederson,
Assistant Manager, Transport Airplane Directorate, Aircraft Certification Service, ANM-101.

[FR Doc. 95-4772 Filed 2-24-95; 8:45 am]

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14 CFR Part 25

[Docket No. NM-103; Special Conditions No. 25-ANM-94]

Special Conditions: Dassault Aviation Model Falcon 2000 Airplane; Automatic Takeoff Thrust Control System

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final special conditions.

SUMMARY: These special conditions are issued for the Dassault Aviation Model Falcon 2000 airplane. This new airplane will have an unusual design feature associated with an Automatic Takeoff Thrust Control System (ATTCS), for which the applicable airworthiness regulations do not contain appropriate safety standards for approach climb