Rules and Regulations

Federal Register
Vol. 69, No. 71
Tuesday, April 13, 2004

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. NM276, Special Conditions No. 25–259–SC]

Special Conditions: Learjet Models 24 and 25 Airplanes; High Intensity Radiated Fields (HIRF)

AGENCY: Federal Aviation Administration (FAA) DOT.

ACTION: Final special conditions; request for comments.

SUMMARY: These special conditions are issued for Learjet Models 24 B/D/E/F and 25 B/C/D/F airplanes, modified by Flight Test Associates, Incorporated. These modified airplanes will have novel and unusual design features when compared to the state of technology envisioned in the airworthiness standards for transport category airplanes. The modification incorporates the installation of a dual Innovative Systems and Support Air Data Display Unit system. The applicable airworthiness 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 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.

DATES: The effective date of these special conditions is March 31, 2004. Comments must be received on or before May 13, 2004.

ADDRESSES: Comments on these special conditions may be mailed in duplicate to: Federal Aviation Administration, Transport Airplane Directorate, Attn: Rules Docket (ANM–113), Docket No. NM276, 1601 Lind Avenue SW., Renton, Washington, 98055–4056; or delivered in duplicate to the Transport Airplane Directorate at the above address. All comments must be marked: Docket No. NM276.

FOR FURTHER INFORMATION CONTACT: Mr. Steve Edgar, FAA, Standardization Branch, ANM–113, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue SW., Renton, Washington, 98055–4056; telephone (425) 227–2025; facsimile (425) 227–1149.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA has determined that the notice and opportunity for prior public comment is impracticable because these procedures would significantly delay certification of the airplane and delivery of the affected airplane. 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; however, the FAA invites interested persons to participate in this rulemaking by submitting 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 concerning these special conditions. The docket is available for public inspection 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 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.

If you want the FAA to acknowledge receipt of your comments on these special conditions, include with your comments 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 August 22, 2003, Flight Test Associates, Incorporated, Mojave, California, applied to the FAA, Los Angeles Aircraft Certification Office, for a supplemental type certificate (STC) to modify Learjet Models 24 B/D/E/F and 25 B/C/D/F airplanes. The proposed modification incorporates the installation of a dual Innovative Systems and Solution Air Data Display Unit (ADDU) system as primary altimeters. The information presented is flight critical. The ADDU systems installed in this airplane have the potential to be vulnerable to HIRF.

Type Certification Basis

Under the provisions of 14 CFR 21.101, Flight Test Associates, Incorporated, must show that the airplane, as changed, continues to meet the applicable provisions of the regulations incorporated by reference in Type Certificate No. A10CE, 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. A10CE include 14 Code of Federal Regulations (CFR) part 25, as amended by Amendments 25–2 through 25–18.

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 modified Learjet Models 24 B/D/E/F and 25 B/C/D/F airplanes, 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 Learjet Models 24 B/D/E/F and 25 B/C/D/F 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.

Special conditions, as defined in 14 CFR 11.19, are issued in accordance with § 11.38 and become part of the type certification basis in accordance with § 21.101.

Special conditions are initially applicable to the model for which they are issued. Should Flight Test Associates, Incorporated, apply at a later date 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, these special conditions would also apply to the other model under the provisions of § 21.101.

Novel or Unusual Design Features

The modified Learjet Models 24 B/D/E/F and 25 B/C/D/F will incorporate new dual primary altimeters that will perform critical functions. These systems may be vulnerable to HIRF external to the airplane.

Discussion

There is no specific regulation that addresses protection requirements for electrical and electronic systems from HIRF. Increased power levels from ground-based radio transmitters and the growing use of sensitive avionics/electronics and electrical 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 Learjet Models 24 B/D/E/F and 25 B/C/D/F. These special conditions require that new primary altimeters that perform critical functions 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/electronics and electrical systems 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 paragraph 1 or 2 below:

1. A minimum threat of 100 volts rms (root-mean-square) per meter 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 field strengths indicated in the following table for the frequency ranges indicated. Both peak and average field strength components from the table are to be demonstrated.

Frequency	Field strength (volts per meter)	
	Peak	Average
10 kHz–100 kHz	50	50
100 kHz–500 kHz	50	50
500 kHz–2 MHz	50	50
2 MHz–30 MHz	100	100
30 MHz–70 MHz	50	50
70 MHz–100 MHz	50	50
100 MHz–200 MHz	100	100
200 MHz–400 MHz	100	100
400 MHz–700 MHz	700	50
700 MHz–1 GHz	700	100
1 GHz–2 GHz	2000	200
2 GHz–4 GHz	3000	200
4 GHz–6 GHz	3000	200
6 GHz–8 GHz	1000	200
8 GHz–12 GHz	3000	300
12 GHz–18 GHz	2000	200
18 GHz–40 GHz	600	200

The field strengths are expressed in terms of peak of the root-mean-square (rms) over the complete modulation period.

The threat levels identified above are the result of an FAA review of existing studies on the subject of HIRF, in light of the ongoing work of the Electromagnetic Effects Harmonization Working Group of the Aviation Rulemaking Advisory Committee.

Applicability

As discussed above, these special conditions are applicable to Learjet Models 24 B/D/E/F and 25 B/C/D/F series airplanes. Should Aircraft Systems & manufacturing apply at a later date for a change to the type certificate to include another model incorporating the same novel or unusual design feature, these special conditions would apply to that model as well as under the provisions of 14 CFR 21.101.

Conclusion

This action affects only certain novel or unusual design features on the Learjet Models 24 B/D/E/F and 25 B/C/D/F airplanes modified by Flight Test Associates, Incorporated. 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.

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. 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. The FAA is requesting comments to allow interested persons to submit views that may not have 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. 106(g), 40113, 44701, 44702, 44704.

The Special Conditions

■ Accordingly, pursuant to the authority delegated to me by the Administrator, the following special conditions are issued as part of the supplemental type certification basis for the modified Learjet Models 24 B/D/E/F and 25 B/C/D/F airplanes modified by Flight Test Associates, Incorporated.

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.

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 Renton, Washington, on March 31, 2004.

Kalene C. Yanamura,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 04–8355 Filed 4–12–04; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2002–NM–174–AD; Amendment 39–13483; AD 2004–04–03

RIN 2120–AA64

Airworthiness Directives; Boeing Model 737–300, –400, and –500 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; correction.

SUMMARY: This document corrects a typographical error that appeared in airworthiness directive (AD) 2004–04–03 that was published in the **Federal Register** on February 18, 2004 (69 FR 7565). The typographical error resulted in a reference to an incorrect effective date in the compliance time specified in Table 1 of the AD for Group 1 airplanes. This AD is applicable to certain Boeing Model 737 series airplanes. This AD requires a one-time general visual inspection of the seat locks and seat tracks of the flightcrew seats to ensure that the seats lock in position and to verify that lock nuts and bolts of adequate length are installed on the rear track lock bracket, and corrective action, if necessary.

DATES: Effective March 24, 2004.

FOR FURTHER INFORMATION CONTACT: Shannon Lennon, Aerospace Engineer, Cabin Safety and Environmental Systems Branch, ANM–150S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington; telephone (425) 917–6436; fax (425) 917–6590.

SUPPLEMENTARY INFORMATION: Airworthiness Directive (AD) 2004–04–03, amendment 39–13483, applicable to certain Boeing Model 737 series airplanes, was published in the **Federal Register** on February 18, 2004 (69 FR 7565). That AD requires a one-time general visual inspection of the seat locks and seat tracks of the flightcrew seats to ensure that the seats lock in position and to verify that lock nuts and bolts of adequate length are installed on the rear track lock bracket, and corrective action, if necessary.

As published, that final rule incorrectly specifies ''September 26, 2001'' as the effective date for AD 2000–10–21 in the compliance time specified for Group 1 airplanes in Table 1 of that final rule. The correct effective date of AD 2000–10–21 is ''June 12, 2000.'' It was the FAA's intent that operators use June 12, 2000, to determine the compliance time for Group 1 airplanes as specified in Table 1 of that final rule, as evidenced by the explanatory parenthetical reference ''(the effective date of AD 2000–10–21, amendment 39–11745).''

Since no other part of the regulatory information has been changed, the final rule is not being republished in the **Federal Register**.

The effective date of this AD remains March 24, 2004.

§ 39.13 [Corrected]

On page 7566, the second column of Table 1 of AD 2004–04–03 is corrected to read as follows:

* * * * *

TABLE 1.—COMPLIANCE TIME/SERVICE BULLETIN

Airplanes—	Compliance time—	Service bulletin—
For Group 1 airplanes listed in Boeing Alert Service Bulletin 737–25A1363, Revision 1, dated March 28, 2002.	Within 90 days after June 12, 2000 (the effective date of AD 2000–10–21, amendment 39–11745).	Boeing Alert Service Bulletin 737–25A1363, dated November 5, 1998.
For Group 2 airplanes listed in Boeing Alert Service Bulletin 737–25A1363, Revision 1, dated March 28, 2002.	Within 90 days after the effective date of this AD.	Boeing Alert Service Bulletin 737–25A1363, Revision 1, dated March 28, 2002.

* * * * *

Issued in Renton, Washington, on April 1, 2004.

Kalene C. Yanamura,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 04–8296 Filed 4–12–04; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2004–NM–03–AD; Amendment 39–13514; AD 2004–05–19]

RIN 2120–AA64

Airworthiness Directives; Boeing Model 737–600, –700, –700C, –800, and –900 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; correction.

SUMMARY: This document corrects an error that appeared in airworthiness directive (AD) 2004–05–19 that was published in the **Federal Register** on March 9, 2004 (69 FR 10921). The error resulted in the omission of the phrase ''whichever occurs first'' in a certain grace period for the initial compliance time. This AD is applicable to all Boeing Model 737–600, –700, –700C, –800, and –900 series airplanes. This AD requires an inspection of the rear spar attach pins and front spar attach bolts that attach the horizontal stabilizers to the horizontal stabilizer center section for damage; and follow-on or corrective actions, as applicable.

DATES: Effective March 24, 2004.

FOR FURTHER INFORMATION CONTACT: Nancy Marsh, Aerospace Engineer, Airframe Branch, ANM–120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055–4056; telephone (425) 917–6440; fax (425) 917–6590.

SUPPLEMENTARY INFORMATION: Airworthiness Directive (AD) 2004–05–19, amendment 39–13514, applicable to all Boeing Model 737–600, –700, –700C, –800, and –900 series airplanes, was