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, or should any other model already included on the same type certificate be modified 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).

Novel or Unusual Design Features

The Model Hawker 800 airplanes with TFE731–5BR–1H engines incorporate a revised engine electronic control system and an electronic controlled mach trim system. These systems perform critical to safety of flight functions and may be vulnerable to high-intensity radiated fields 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 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 proposed for the model Hawker 800 with TFE731–5BR–1H engines and a mach trim system. These special conditions require that electrical and electronic components that perform critical functions and are embodied in the mach trim system or TFE731–5BR–1H engine electronic control system be designed and installed to ensure that operation and operational capabilities of these systems to perform critical functions are not adversely affected when the airplane is exposed to 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 electronic 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 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–2000 KHz	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–1000 MHz	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, the proposed special conditions would be applicable initially to certain components on Hawker 800 airplanes with TFE731–5BR engines and a mach trim system. Should Raytheon Corporate Jets, Inc. apply at a later date for a change to the type certificate to add or revise electrical or electronic equipment that performs critical functions or to include another model incorporating the same novel or unusual design feature, these special conditions would apply to that model as well under the provisions of § 21.101(a)(1).

Conclusion

This action affects only certain design features on the Hawker 800 airplane. It is not a rule of general applicability and affects only the manufacturer who applied to the FAA for approval of these features on the airplane.

List of Subjects in 14 CFR Part 25

Aircraft, Aviation safety, Federal Aviation Administration, Reporting and recordkeeping requirements.

The authority citation for these proposed 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 Proposed Special Conditions

Accordingly, the Federal Aviation Administration (FAA) proposes the following special conditions as part of the type certification basis for Raytheon Hawker 800 series airplanes equipped with Garrett TFE731–5BR–1H turbo fan engines and electronically controlled mach trim system. These special conditions would apply only to electrical and electronic components that perform critical functions and are embodied in the mach trim system or TFE731–5BR–1H engine electronic control system.

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, Wash., on January 31, 1995.

Darrell M. Pederson,

Assistant Manager, Transport Airplane Directorate, Aircraft Certification Service, ANM–101.

[FR Doc. 95–3123 Filed 2–7–95; 8:45 am]

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14 CFR Part 39

[Docket No. 94–NM–240–AD]

Airworthiness Directives; Lockheed Model 382 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This document proposes the supersedure of an existing airworthiness directive (AD), applicable to certain Lockheed Model 382 series airplanes, that currently requires a revision to the Airplane Flight Manual to require takeoff operation in accordance with revised performance data. This action would require installation of certain valve housings for the propeller