

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 table below 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 MHz–2 kHz | 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 Raytheon HS.125 Series 700A/B airplanes modified by Midcoast Aviation, Inc. to include the dual Rockwell Collins Air Data Computers (ADC–87A) and ALI–80A altimeters. Should Midcoast Aviation, Inc. apply at a later date for a supplemental type certificate to modify any other model already included on Type Certificate A3EU to incorporate the same or similar novel or unusual design feature, these special conditions

would apply to that model as well under the provisions of § 21.101(a)(1), Amendment 21–69, effective September 16, 1991.

Conclusion

This action affects only certain novel or unusual design features on Raytheon HS.125 Series 700A/B airplanes modified by Midcoast Aviation, Inc. 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 these special conditions 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 upon issuance. 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 Raytheon HS.125 Series 700A/B airplanes modified by Midcoast Aviation, 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.

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 April 22, 2003.

Ali Bahrami,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. NM252, Special Conditions No. 25–235–SC]

Special Conditions: McDonnell Douglas Model DC–9–81, –82, –83, and –87 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 McDonnell Douglas Model DC–9–81, –82, –83, and –87 airplanes modified by Electronic Cable Specialists. These airplanes will have novel or unusual design features when compared to the state of technology envisioned in the airworthiness standards for transport category airplanes. The modification involves installation of electronic flight displays that perform critical functions. 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 established by the existing airworthiness standards.

DATES: The effective date of these special conditions is April 14, 2003. Comments must be received on or before June 6, 2003.

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. NM252, 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. NM252.

FOR FURTHER INFORMATION CONTACT: Meghan Gordon, FAA, Standardization Branch, ANM–113, Transport Airplane Directorate, Aircraft Certification