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Dated: November 9, 2001.

**John D. Hawke, Jr.,**

*Comptroller of the Currency.*

[FR Doc. 01-28692 Filed 11-15-01; 8:45 am]

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## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 25

[Docket No. NM202; Special Conditions No. 25-191-SC]

#### Special Conditions: Gulfstream G-1159, G-1159A, G-1159B Series 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 Gulfstream G-1159, G-1159A, G-1159B series airplanes modified by Garrett Aviation Services. These modified airplanes will have a novel or unusual design feature when compared to the state of technology envisioned in the airworthiness standards for transport category airplanes. The modification incorporates the installation of a Honeywell Epic Control Display System for Retrofit (CDS-R). The system consists of dual Electronic Primary Flight Display Systems, which replace the existing Primary Flight Display System. The Electronic Primary Flight Display Systems will utilize electrical and electronic systems 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 November 6, 2001. Comments must be received on or before December 17, 2001.

**ADDRESSES:** Comments on these special conditions may be mailed in duplicate to: Federal Aviation Administration, Transport Airplane Directorate, Attention: Rules Docket (ANM-113), Docket No. NM202, 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. NM202. Comments may be inspected in the Rules Docket weekdays, except Federal holidays, between 7:30 a.m. and 4 p.m.

#### FOR FURTHER INFORMATION CONTACT:

Connie Beane, FAA, Standardization Branch, ANM-113, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue SW., Renton, Washington 98055-4056; telephone (425) 227-2976; facsimile (425) 227-1320.

**SUPPLEMENTARY INFORMATION:** The FAA has determined that notice and opportunity for prior public comment hereon are impracticable because these procedures would significantly delay certification of the airplane and thus delivery of the affected aircraft. 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 rules docket number and be submitted in duplicate to the address specified above. The Administrator will consider all communications received on or before the closing date for comments. 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. Persons wishing the FAA to acknowledge receipt of their comments submitted in response to these special conditions must include with those comments a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. NM202." The postcard will be date stamped and returned to the commenter.

#### Background

On January 9, 2001, Garrett Aviation Services, 1200 North Airport Drive, Capital Airport, Springfield, Illinois 62707, applied for a Supplemental Type Certificate (STC) for the Gulfstream G-1159, G-1159A, G-1159B series airplanes. The Gulfstream G-1159, G-1159A, G-1159B series airplanes are small transport category airplanes powered by two turbofan engines with a maximum takeoff weight of 69,700 pounds. The aircraft operate with a two

pilot crew and can carry up to 19 passengers. The modified airplanes incorporate the installation of a Honeywell Epic Control Display System for Retrofit (CDS-R). The system consists of dual Electronic Primary Flight Display systems that replace the existing Primary Flight Display systems. The Honeywell Epic DCS-R has the potential to be vulnerable to high-intensity radiated fields (HIRF) external to the airplane.

#### Type Certification Basis

Under the provisions of 14 CFR 21.101, Garrett Aviation Services must show that the Gulfstream G-1159, G-1159A, G-1159B series airplanes, as changed, continue to meet the applicable provisions of the regulations incorporated by reference in Type Certificate No. A12EA, 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 included in the certification basis for the Gulfstream G-1159, G-1159A, G-1159B series airplanes include 14 CFR part 25, as amended by Amendment 25-1 through Amendment 25-41 except for special conditions and exceptions noted in Type Certificate Data Sheet (TCDS) A12EA.

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 Gulfstream G-1159, G-1159A, G-1159B series 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 Gulfstream G-1159, G-1159A, G-1159B series airplanes must comply with the fuel vent and exhaust emission requirement of 14 CFR part 34 and the noise certification requirement of 14 CFR part 36.

Special conditions, as defined in § 11.19, are issued in accordance with § 11.38 and become part of the airplane's 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 features, these special conditions would also apply to the other model under the provisions of § 21.101(a)(1).

### Novel or Unusual Design Features

The Gulfstream G-1159, G-1159A, G-1159B series airplanes will incorporate dual Electronic Primary Flight Display Systems that will perform critical functions. The existing airworthiness standards (14 CFR part 25) do not contain adequate or appropriate safety standards that address protecting this equipment from the adverse effects of HIRF. These instruments may be vulnerable to HIRF external to the airplane. Accordingly, these instruments are considered to be a novel or unusual design feature

### 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 electronic systems to command and control airplanes have made it necessary to provide adequate protection.

To ensure that a level of safety is achieved that is equivalent to that intended by the regulations incorporated by reference, special conditions are needed for the Gulfstream G-1159, G-1159A, G-1159B series airplanes modified to incorporate dual Electronic Primary Flight Display Systems. These special conditions will require that these instruments, which 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 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 in accordance with either paragraph 1 or 2 below:

1. A minimum threat of 100 volts rms 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 following field strengths 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

**Note.**—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 the Gulfstream G-1159, G-1159A, G-1159B series airplanes modified by Garrett Aviation Services to incorporate dual Electronic Primary Flight Display Systems. Should Garrett Aviation Services apply at a later date for a supplemental type certificate to modify any other model included on Type Certificate No. A12EA to incorporate the same novel or unusual design features, these 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 the

Gulfstream G-1159, G-1159A, G-1159B series airplanes modified by Garrett Aviation Services. 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 airplanes.

The substance of these special conditions has been subjected to the notice and comment period 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 the Gulfstream G-1159, G-1159A, G-1159B series airplanes modified by Garrett Aviation Services.

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 November 6, 2001.

**Jeff Duven,**

*Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.*

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## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 25

[Docket No. NM195; Special Conditions No. 25-192-SC]

#### Special Conditions: Boeing Model 777-200 Series Airplanes; Overhead Crew Rest Compartments

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final special conditions.

**SUMMARY:** These special conditions are issued for Boeing Model 777-200 series airplanes, modified by the Boeing Commercial Airplane Group, Wichita. The proposed modification consists of the installation of an overhead flightcrew rest (OFCR) and an overhead attendant rest (OAR). The applicable airworthiness regulations do not contain adequate or appropriate safety standards for these design features. 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.

**EFFECTIVE DATE:** November 6, 2001.

**FOR FURTHER INFORMATION CONTACT:**

Jayson Claar, FAA, Airframe/Cabin Safety Branch, ANM-115, Transport Standards Staff, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue SW., Renton, Washington, 98055-4056; telephone (425) 227-2194; facsimile (425) 227-1320.

**SUPPLEMENTARY INFORMATION:**

#### Background

On September 18, 2000, the Boeing Commercial Airplane Group (BCAG)—Wichita Division Designated Alteration Station (DAS) applied for a Supplemental Type Certificate (STC) from the Wichita Aircraft Certification Office (ACO). The STC is to install an overhead flightcrew rest (OFCR) and an overhead attendant rest (OAR) on Boeing Model 777-200 series airplanes. The OFCR compartment adjacent to door one will include a maximum of two private berths and two seats. Occupancy of the OFCR will be limited to a maximum of four occupants. The

OAR compartment, adjacent to door three, will include a combination of private berths and seats for a maximum of twelve occupants. Occupancy of the OAR will be limited to a maximum of twelve occupants. Follow-on designs may locate the OAR at either door three, or door four depending on the Model 777-200 airplane and option(s) selected by the customer.

Both crew rests, OFCR and OAR, will be accessed from the main deck by stairs. In addition, an emergency hatch which opens directly into the cabin area will be provided for each compartment. A smoke detection system, an oxygen system, and occupant amenities will also be provided. These compartments will only be occupied in flight, not during taxi, takeoff, or landing.

The Boeing Model 777-200 series airplanes are large twin engine airplanes with various passenger capacities and ranges depending upon airplane configuration, and currently do not incorporate OFCR and OAR compartments in production. While the installation of a crew rest compartment is not a new concept for large transport category airplanes, each crew rest compartment has unique features based on design, location, and use on the airplane. Crew rest compartments have been installed and certified in the main passenger area, above the main passenger area and below the passenger cabin area within the cargo compartment of the Boeing Model 777-200/-300 series airplanes. Also, overhead crew rest compartments have been installed on the Boeing Model 747 series airplanes.

The FAA has previously issued special conditions, which contain the additional safety standards that must be met for the overhead crew rests on Boeing Model 747 series airplanes. The FAA certified the lower lobe attendant rest on the Boeing Model 777-200 series airplanes by equivalent level of safety finding to the requirements of § 25.819. In addition, the FAA issued Special Conditions No. 25-169-SC, dated December 1, 2000, for 777-200 series airplanes for overhead crew rest to support a STC for Flight Structures Inc (FSI) of Arlington, Washington. The Flight Structures, Inc. (FSI) Special Conditions No. 25-169-SC were amended on May 2, 2001.

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. Certification requirements for pilot "sleeping quarters" per the requirements of § 121.485 are not addressed in these

special conditions. The applicant must work directly with the Aircraft Evaluation Group (AEG) with regard to the adequacy of onboard sleeping quarters/facilities for compliance with §§ 121.485(a), 121.523(b) and 135.269(b)(5). The AEG is responsible for making this finding.

#### Type Certification Basis

Under the provisions of § 21.101, Boeing must show that the Model 777-200 series airplanes, as changed, continue to meet the applicable provisions of the regulations incorporated by reference in Type Certificate No. T00001SE 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. T00001SE for the Boeing Model 777-200 series airplanes include 14 CFR part 25, as amended by Amendments 25-1 through 25-82. The U.S. type certification basis for the Boeing Model 777-200 series airplanes is established in accordance with 14 CFR 21.17 and 21.29 and the type certification application date. The type certification basis is listed in Type Certificate Data Sheet No. T00001SE.

If the Administrator finds that the applicable airworthiness regulations (i.e., part 25) do not contain adequate or appropriate safety standards for the Boeing Model 777-200 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 Boeing Model 777-200 series 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 appropriate, are issued in accordance with § 11.19, after public notice, as required by § 11.38, 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).