

to locations with an approved danger pay allowance (e.g., via a detail or while in temporary duty travel status), have an official duty station that is located in a locality pay area specified in 5 CFR 531.603, and receive a locality rate of pay under 5 U.S.C. 5304. Using locality rates of pay to compute danger pay allowances and post differentials for employees who must work temporarily in imminently dangerous overseas duty locations will increase the size of these payments and enhance their benefit for affected employees. This, in turn, will help agencies better respond to critical staffing needs in certain overseas duty locations in support of the Global War on Terrorism and other important international activities.

Prior to the effective date of these regulations, a locality rate of pay under 5 U.S.C. 5304 and 5 CFR part 531, subpart F, cannot be considered part of an employee's basic pay for the purpose of computing any overseas allowance or differential, including those paid to employees detailed to or on official travel in a foreign area. Agencies must correct the payment of any danger pay allowance, post differential, or other overseas allowance or differential paid prior to the effective date of these regulations if it was computed using a locality rate of pay authorized under 5 U.S.C. 5304. An overpayment may be recovered under an agency's regulations for collection by offset from an indebted Government employee under 5 U.S.C. 5514 and 5 CFR part 550, subpart K, or through the appropriate provisions governing Federal debt collection if the individual is no longer a Federal employee. However, the head of an agency may waive an overpayment under 5 U.S.C. 5584, as appropriate.

Waiver of Notice of Proposed Rulemaking and Delay in Effective Date

In order to give practical effect to these regulations at the earliest possible moment, I find that good cause exists to waive the general notice of proposed rulemaking pursuant to 5 U.S.C. 553(b)(3)(B). Also, I find that good cause exists for making this rule effective in less than 30 days. The delay in effective date is waived so that affected agencies and employees may benefit from the new provisions as quickly as possible. Increasing the danger pay allowance and post differential benefits for employees temporarily assigned to imminently dangerous overseas work locations will help agencies respond to emergency, mission-critical staffing needs in support of the Global War on Terrorism and other important international activities.

E.O. 12866, Regulatory Review

The Office of Management and Budget has reviewed this rule in accordance with E.O. 12866.

Regulatory Flexibility Act

I certify that these regulations will not have a significant economic impact on a substantial number of small entities because they will apply only to Federal agencies and employees.

List of Subjects in 5 CFR Part 531

Government employees, Law enforcement officers, Wages.

Office of Personnel Management.

Kay Coles James,
Director.

■ Accordingly, OPM is amending 5 CFR part 531 as follows:

PART 531—PAY UNDER THE GENERAL SCHEDULE

■ 1. The authority citation for part 531 continues to read as follows:

Authority: 5 U.S.C. 5115, 5307, and 5338; sec. 4 of Pub. L. 103-89, 107 Stat. 981; and E.O. 12748, 56 FR 4521, 3 CFR, 1991 Comp., p. 316; Subpart B also issued under 5 U.S.C. 5303(g), 5333, 5334(a), and 7701(b)(2); Subpart C also issued under 5 U.S.C. 5304, 5305, and 5553; sections 302 and 404 of Federal Employees Pay Comparability Act of 1990 (FEPCA), Pub. L. 101-509, 104 Stat. 1462 and 1466; and section 3(7) of Pub. L. 102-378, 106 Stat. 1356; Subpart D also issued under 5 U.S.C. 5335(g) and 7701(b)(2); Subpart E also issued under 5 U.S.C. 5336; Subpart F also issued under 5 U.S.C. 5304, 5305(g)(1), and 5553; and E.O. 12883, 58 FR 63281, 3 CFR, 1993 Comp., p. 682 and E.O. 1306, 63 FR 68151, 3 CFR, 1998 Comp., p. 224; Subpart G also issued under 5 U.S.C. 5304, 5305, and 5553; section 302 of the FEPCA, Pub. L. 101-509, 104 Stat. 1462; and E.O. 12786, 56 FR 67453, 3 CFR, 1991 Comp., p. 376.

Subpart F—Locality-Based Comparability Payments

■ 2. In § 531.606, a new paragraph (b)(6) is added to read as follows:

§ 531.606 Administration of locality rates of pay.

* * * * *

(b) * * *

(6) Post differentials under 5 U.S.C. 5925(a) and danger pay allowances under 5 U.S.C. 5928 for an employee temporarily assigned to work in a foreign area for which the Department of State has established a danger pay allowance under 5 U.S.C. 5928, when the employee's official duty station is

located in a locality pay area under § 531.603.

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[FR Doc. 04-17842 Filed 8-4-04; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 23

[Docket No. CE209, Special Condition 23-149-SC]

Special Conditions; Garmin AT, Inc., Piper PA-32; Protection of Electronic Flight Instrument Systems (EFIS) for High Intensity Radiated Fields (HIRF)

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final special conditions; request for comments.

SUMMARY: These special conditions are issued to Garmin AT, Inc., 2345 Turner Road, Salem, OR 97302, for a Supplemental Type Certificate for the Piper PA-32. This airplane, as modified by Garmin AT, Inc., will have novel and unusual design features when compared to the state of technology envisaged in the applicable airworthiness standards. These novel and unusual design features include the installation of an electronic flight instrument system (EFIS) display, Model G-1000, manufactured by Garmin AT, Inc., for which the applicable regulations do not contain adequate or appropriate airworthiness 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 the airworthiness standards applicable to this airplane.

DATES: The effective date of these special conditions is July 26, 2004. Comments must be received on or before September 7, 2004.

ADDRESSES: Comments may be mailed in duplicate to: Federal Aviation Administration, Regional Counsel, ACE-7, Attention: Rules Docket Clerk, Docket No. CE209, Room 506, 901 Locust, Kansas City, Missouri 64106. All comments must be marked: Docket No. CE209. 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: Wes Ryan, Aerospace Engineer, Standards Office (ACE-110), Small Airplane

Directorate, Aircraft Certification Service, Federal Aviation Administration, 901 Locust, Room 301, Kansas City, Missouri 64106; telephone (816) 329-4127.

SUPPLEMENTARY INFORMATION: The FAA has determined that notice and opportunity for prior public comment hereon are impracticable because these procedures would significantly delay issuance of the design approval and thus delivery of the affected aircraft. 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.

Comments Invited

Interested persons are invited to submit such written data, views, or arguments, as they may desire. Communications should identify the regulatory docket or notice 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. 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. Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must include a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. CE209." The postcard will be date stamped and returned to the commenter.

Background

On January 5, 2004, Garmin AT, Inc., 2345 Turner Road, Salem, OR 97302, made an application to the FAA for a new Supplemental Type Certificate for the Piper PA-32. The PA-32 is currently approved under TC No. A3SO. The proposed modification incorporates a novel or unusual design feature, such as digital avionics consisting of an EFIS

that is vulnerable to HIRF external to the airplane.

Type Certification Basis

Under the provisions of 14 CFR part 21, § 21.101, Garmin AT, Inc. must show that the Piper PA-32 aircraft meets the original certification basis for the airplane, as listed on Type Data Sheet A3SO; the additional certification requirements added for the G1000 system, exemptions, if any; and the special conditions adopted by this rulemaking action.

Discussion

If the Administrator finds that the applicable airworthiness standards do not contain adequate or appropriate safety standards because of novel or unusual design features of an airplane, special conditions are prescribed under the provisions of § 21.16.

Special conditions, as appropriate, as defined in § 11.19, are issued in accordance with § 11.38 after public notice 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 the applicant apply for a supplemental type certificate to modify any other model already 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.

Novel or Unusual Design Features

Garmin AT, Inc. plans to incorporate certain novel and unusual design features into the Piper PA-32 airplane for which the airworthiness standards do not contain adequate or appropriate safety standards for protection from the effects of HIRF. These features include EFIS, which are susceptible to the HIRF environment, that were not envisaged by the existing regulations for this type of airplane.

Protection of Systems from High Intensity Radiated Fields (HIRF): Recent advances in technology have given rise to the application in aircraft designs of advanced electrical and electronic systems that perform functions required for continued safe flight and landing. Due to the use of sensitive solid-state advanced components in analog and

digital electronics circuits, these advanced systems are readily responsive to the transient effects of induced electrical current and voltage caused by the HIRF. The HIRF can degrade electronic systems performance by damaging components or upsetting system functions.

Furthermore, the HIRF environment has undergone a transformation that was not foreseen when the current requirements were developed. Higher energy levels are radiated from transmitters that are used for radar, radio, and television. Also, the number of transmitters has increased significantly. There is also uncertainty concerning the effectiveness of airframe shielding for HIRF. Furthermore, coupling to cockpit-installed equipment through the cockpit window apertures is undefined. The combined effect of the technological advances in airplane design and the changing environment has resulted in an increased level of vulnerability of electrical and electronic systems required for the continued safe flight and landing of the airplane. Effective measures against the effects of exposure to HIRF must be provided by the design and installation of these systems. The accepted maximum energy levels in which civilian airplane system installations must be capable of operating safely are based on surveys and analysis of existing radio frequency emitters. These special conditions require that the airplane be evaluated under these energy levels for the protection of the electronic system and its associated wiring harness. These external threat levels, which are lower than previous required values, are believed to represent the worst case to which an airplane would be exposed in the operating environment.

These special conditions require qualification of systems that perform critical functions, as installed in aircraft, to the defined HIRF environment in paragraph 1 or, as an option to a fixed value using laboratory tests, in paragraph 2, as follows: (1) The applicant may demonstrate that the operation and operational capability of the installed electrical and electronic systems that perform critical functions are not adversely affected when the aircraft is exposed to the HIRF environment defined below:

Frequency	Field strength (volts per meter)	
	Peak	Average
10 kHz–100 kHz	50	50
100 kHz–500 kHz	50	50

Frequency	Field strength (volts per meter)	
	Peak	Average
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–2GHz	2000	200
2 GHz–4 GHz	3000	200
4 GHz–6GHz	3000	200
6 GHz–8GHz	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 root-mean-square (rms) values.

or,

(2) The applicant may demonstrate by a system test and analysis that the electrical and electronic systems that perform critical functions can withstand a minimum threat of 100 volts per meter, electrical field strength, from 10 kHz to 18 GHz. When using this test to show compliance with the HIRF requirements, no credit is given for signal attenuation due to installation.

A preliminary hazard analysis must be performed by the applicant for approval by the FAA to identify either electrical or electronic systems that perform critical functions. The term “critical” means those functions whose failure would contribute to, or cause, a failure condition that would prevent the continued safe flight and landing of the airplane. The systems identified by the hazard analysis that perform critical functions are candidates for the application of HIRF requirements. A system may perform both critical and non-critical functions. Primary electronic flight display systems, and their associated components, perform critical functions such as attitude, altitude, and airspeed indication. The HIRF requirements apply only to critical functions.

Compliance with HIRF requirements may be demonstrated by tests, analysis, models, similarity with existing systems, or any combination of these. Service experience alone is not acceptable since normal flight operations may not include an exposure to the HIRF environment. Reliance on a system with similar design features for redundancy as a means of protection against the effects of external HIRF is generally insufficient since all elements of a redundant system are likely to be exposed to the fields concurrently.

Applicability

As discussed above, these special conditions are applicable to the Piper PA–32. Should Garmin AT, Inc. apply at a later date for a supplemental type certificate to modify any other model on the same type certificate 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.

Conclusion

This action affects only certain novel or unusual design features on one model of airplane. 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 period 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 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 23

Aircraft, Aviation safety, Signs and symbols.

Citation

■ The authority citation for these special conditions is as follows:

Authority: 49 U.S.C. 106(g), 40113 and 44701; 14 CFR 21.16 and 21.101; and 14 CFR 11.38 and 11.19.

The Special Conditions

■ Accordingly, pursuant to the authority delegated to me by the Administrator, the following special conditions are issued as part of the type certification basis for the Piper PA–32 airplane modified by Garmin AT, Inc. to add a G1000 EFIS system.

1. *Protection of Electrical and Electronic Systems From High Intensity Radiated Fields (HIRF).* Each system that performs critical functions must be designed and installed to ensure that the operations, and operational capabilities of these systems to perform critical functions, are not adversely affected when the airplane is exposed to high intensity radiated electromagnetic fields external to the airplane.

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 Kansas City, Missouri, on July 26, 2004.

Dorenda D. Baker,

Manager, Small Airplane Directorate, Aircraft Certification Service.

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