published on January 19, 2005 (70 FR 2977). No comments were received.

Applicability

As discussed above, these special conditions are applicable to the Mooney models M20 (K, M, R, and S) equipped with the AMSAFE, Inc., three-point inflatable restraint system. Should AMSAFE, Inc., apply at a later date for a supplemental type certificate to modify any other model on the Type Certificates identified in these special conditions 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.

Conclusion

This action affects only certain novel or unusual design features on the Mooney models M20 (K, M, R, and S). It is not a rule of general applicability, and it affects only the applicant who applied to the FAA for approval of these features on the airplane.

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

■ The FAA has determined that this project will be accomplished on the basis of not lowering the current level of safety for the Mooney models M20 (K, M, R, and S) occupant restraint system. 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 Mooney models M20 (K, M, R, and S), as modified by AMSAFE, Inc.

Inflatable Three-Point Restraint Safety Belt with an Integrated Airbag Device on Mooney Models M20 (K, M, R, and S).

1. It must be shown that the inflatable restraint will deploy and provide protection under crash conditions. Compliance will be demonstrated using the dynamic test condition specified in § 23.562, which may be modified as follows:

a. The peak longitudinal deceleration may be reduced; however, the onset rate of the deceleration must be equal to or greater than the crash pulse identified in § 23.562.

b. The peak longitudinal deceleration must be above the deployment threshold of the crash sensor and equal to or greater than the forward static design longitudinal load factor required by the original certification basis of the airplane.

c. The means of protection must take into consideration a range of stature from a 5th percentile female to a 95th percentile male. The inflatable restraint must provide a consistent approach to energy absorption throughout the range.

2. The inflatable restraint must provide adequate protection for each occupant. In addition, unoccupied seats that have an active restraint must not constitute a hazard to any occupant.

3. The design must prevent the inflatable restraint from either being incorrectly buckled or incorrectly installed, or both, such that the airbag would not properly deploy. Alternatively, it must be shown that such deployment is not hazardous to the occupant and will provide the required protection.

4. It must be shown that the inflatable restraint system is not susceptible to inadvertent deployment as a result of wear and tear or the inertial loads resulting from in-flight or ground maneuvers (including gusts and hard landings) that are likely to be experienced in service.

5. It must be extremely improbable for an inadvertent deployment of the restraint system to occur, or an inadvertent deployment must not impede the pilot's ability to maintain control of the airplane or cause an unsafe condition (or hazard to the airplane). In addition, a deployed inflatable restraint must be at least as strong as a Technical Standard Order (C114) certificated belt and shoulder harness.

6. It must be shown that deployment of the inflatable restraint system is not hazardous to the occupant and will not result in injuries that could impede rapid egress. This assessment should include occupants whose restraint is loosely fastened.

7. It must be shown that an inadvertent deployment that could cause injury to a standing or sitting person is improbable. In addition, the restraint must also provide suitable visual warnings that would alert rescue personnel to the presence of an inflatable restraint system.

8. It must be shown that the inflatable restraint will not impede rapid egress of the occupants 10 seconds after its deployment.

9. For the purposes of complying with HIRF and lightning requirements, the inflatable restraint system is considered a critical system since its deployment could have a hazardous effect on the airplane.

10. It must be shown that the inflatable restraints will not release hazardous quantities of gas or particulate matter into the cabin.

11. The inflatable restraint system installation must be protected from the effects of fire such that no hazard to occupants will result.

12. There must be a means to verify the integrity of the inflatable restraint activation system before each flight or it must be demonstrated to reliably operate between inspection intervals.

13. A life limit must be established for appropriate system components.

14. Qualification testing of the internal firing mechanism must be performed at vibration levels appropriate for a general aviation airplane.

Issued in Kansas City, Missouri on February 25, 2005.

David R. Showers,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 05–4649 Filed 3–9–05; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 23

[Docket No. CE219, Special Condition No. 23–159–SC]

Special Conditions: Cessna Aircraft Company; EFIS on the Cessna 172R and 172S; Protection of Systems 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 for the Cessna Aircraft Company, Model 172R and 172S airplanes. These airplanes, as modified by Cessna Aircraft Company, will have a novel or unusual design feature(s) associated with the installation of a Garmin G1000 electronic flight instrument system (EFIS) and the protection of this system from the effects of high intensity radiated field (HIRF) environments. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for this design feature. 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 March 2, 2005.

Comments must be received on or before April 11, 2005.

ADDRESSES: Comments may be mailed in duplicate to: Federal Aviation Administration, Regional Counsel, ACE–7, Attention: Rules Docket Clerk, Docket No. marked: Docket No. CE219. 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. CE219.'' The postcard will be date stamped and returned to the commenter.

Background

On January 28, 2004, Cessna Aircraft Company; One Cessna Boulevard; Post Office Box 7704; Wichita, KS 67277, made an application to the FAA for an amended type certificate for the Cessna 172R and 172S. The 172R and 172S are currently approved under TC No. 3A12. The proposed modification incorporates a novel or unusual design feature, such as digital avionics consisting of an EFIS that may be vulnerable to HIRF external to the airplane.

Type Certification Basis

Under the provisions of 14 CFR part 21, § 21.101, Cessna Aircraft Company must show that the Cessna Model 172R and 172S meet the following provisions or the applicable provisions in effect on the date of application for type certification of the Cessna 172R and 172S.

For the 172R Series:

14 CFR part 23 of the Federal Aviation Regulations effective February 1, 1965, as amended by 23–1 through 23–6, except as follows: Sec. 23.423; 23.611; 23.619; 23.623; 23.689; 23.775; 23.871; 23.1323; and 23.1563 as amended by Amendment 23–7. Sections 23.807 and 23.1524 as amended by Amendment 23–10. Sections 23.507; 23.771; 23.853(a), (b) and (c); and 23.1365 as amended by Amendment 23–14. Section 23.951 as amended by Amendment 23–15. Sections 23.607; 23.675; 23.685; 23.733; 23.787; 23.1309 and 23.1322 as amended by Amendment 23–17. Section 23.1301 as amended by Amendment 23–20. Section 23.1353; and 23.1559 as amended by Amendment 23–21. Sections 23.603; 23.605; 23.613; 23.1329 and 23.1545 as amended by Amendment 23–23. Sections 23.441 and 23.1549 as amended by Amendment 23–28. Sections 23.779 and 23.781 as amended by Amendment 23–33. Sections 23.1; 23.51 and 23.561 as amended by Amendment 23–34. Sections 23.301; 23.331; 23.351; 23.427; 23.677; 23.701; 23.735; and 23.831 as amended by Amendment 23–42. Sections 23.961; 23.1093; 23.1143(g); 23.1147(b); 23.1303; 23.1357; 23.1361 and 23.1385 as amended by Amendment 23–43. Sections 23.562(a), 23.562(b)2, 23.562(c)1, 23.562(c)2, 23.562(c)3, and 23.562(c)4 as amended by Amendment 23–44. Sections 23.33; 23.53; 23.305; 23.321; 23.485; 23.621; 23.655 and 23.731 as amended by Amendment 23–45. 14 CFR part 36 dated December 1, 1969, as amended by Amendments 36–1 through 36–21, additional certification requirements applied to the G1000 system itself, such as 23.1309 and 23.1311 as amended by Amendment 23–49, 23.1321 as amended by Amendment 23–41, and 23.1322 as amended by Amendment 23–43, exemptions, if any; and the special conditions adopted by this rulemaking action.

For the 172S series:

14 CFR part 23 effective February 1, 1965, as amended by 23–1 through 23–6, except as follows: Sections 23.423; 23.611; 23.619; 23.623; 23.689; 23.775; 23.871; 23.1323; and 23.1563 as amended by Amendment 23–7. Sections 23.807 and 23.1524 as amended by Amendment 23–10. Sections 23.507; 23.771; 23.853(a), (b) and (c); and 23.1365 as amended by Amendment 23–14. Section 23.951 as amended by Amendment 23–15. Sections 23.607; 23.675; 23.685; 23.733; 23.787; 23.1309 and 23.1322 as amended by Amendment 23–17. Section 23.1301 as amended by Amendment 23–20. Sections 23.1353; and 23.1559 as amended by Amendment 23–21. Sections 23.603; 23.605; 23.613; 23.1329 and 23.1545 as amended by Amendment 23–23. Sections 23.441 and 23.1549 as amended by Amendment 23–28. Sections 23.779 and 23.781 as amended by Amendment 23–33. Sections 23.1; 23.51 and 23.561 as amended by Amendment 23–34. Sections 23.301; 23.331; 23.351; 23.427; 23.677; 23.701; 23.735; and 23.831 as amended by Amendment 23–42. Sections 23.961; 23.1093; 23.1143(g); 23.1147(b); 23.1303; 23.1357; 23.1361 and 23.1385 as amended by Amendment 23–43. Sections 23.562(a), 23.562(b)2, 23.562(c)1, 23.562(c)2, 23.562(c)3, and 23.562(c)4 as amended by Amendment 23–44. Sections 23.33; 23.53; 23.305; 23.321; 23.485; 23.621; 23.655 and 23.731 as amended by Amendment 23–45. 14 CFR part 36 dated December 1, 1969, as amended by Amendments 36–1 through 36–21, additional certification requirements applied to the G1000 system itself, such as 23.1309 and 23.1311 as amended by Amendment 23–49, 23.1321 as amended by Amendment 23–41, and 23.1322 as amended by Amendment 23–43, 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 type certificate for that model be amended later to include any other model that incorporates 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

The Cessna Model 172R and Model 172S will incorporate the following novel or unusual design features: A Garmin G1000 electronic flight instrument system (EFIS) including a primary flight display on the pilot side as well as a multifunction display in the center of the instrument panel.

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–100kHz	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 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 Cessna 172R and 172S airplanes. Should the Cessna Aircraft Company apply at a later date 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 21.17; 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 Cessna 172R and 172S airplanes modified by the Cessna Aircraft Company to add the Garmin 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 March 2, 2005.

Nancy C. Lane,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 05–4745 Filed 3–9–05; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2001–NE–27–AD; Amendment 39–14002; AD 2005–05–13]

RIN 2120–AA64

Airworthiness Directives; Pratt & Whitney JT9D–59A, –70A, –7Q, and –7Q3 Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding an existing airworthiness directive (AD) for Pratt & Whitney (PW) JT9D–59A, –70A, –7Q, and –7Q3 turbofan engines. That AD currently requires fluorescent penetrant inspection (FPI) of high pressure turbine (HPT) second stage airseals, part numbers (P/Ns) 5002537–01, 788945, 753187, and 807410, knife-edges for cracks, each time the engine's HPT second stage airseal is accessible. This AD requires replacing each existing HPT second stage airseal with an improved design HPT second stage airseal and modifying the 2nd stage HPT vane cluster assembly and 1st stage retaining blade HPT plate assembly at next piece-part exposure, but no later than five years after the effective date of this AD. These actions are considered terminating action to the repetitive inspections required by AD 2002–10–07. This AD results from the manufacturer introducing an improved design HPT second stage airseal and modifications to increase cooling. We are issuing this AD to prevent failure of the HPT second stage airseal due to cracks in the knife-edges, which if not detected, could result in uncontained engine failure and damage to the airplane.

DATES: This AD becomes effective April 14, 2005. The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of April 14, 2005.

ADDRESSES: You can get the service information identified in this AD from Pratt & Whitney, 400 Main St., East Hartford, CT 06108; telephone (860) 565–8770; fax (860) 565–4503.

You may examine the AD docket and the service information at the FAA, New England Region, Office of the Regional Counsel, 12 New England Executive Park, Burlington, MA.

FOR FURTHER INFORMATION CONTACT: Kevin Donovan, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01887–5299; telephone (781) 238–7743; fax (781) 238–7199.

SUPPLEMENTARY INFORMATION: The FAA proposed to amend 14 CFR Part 39 with a proposed AD. The proposed AD applies to PW JT9D–59A, –70A, –7Q, and –7Q3 turbofan engines. We published the proposed AD in the **Federal Register** on July 7, 2004 (69 FR 40819). That action proposed to require replacing each existing HPT second stage airseal with an improved design HPT second stage airseal and modifying the 2nd stage HPT vane cluster assembly and 1st stage retaining blade HPT plate assembly at next piece-part exposure, but no later than five years after the effective date of the proposed AD. These actions would be considered terminating action to the repetitive inspections required by AD 2002–10–07.

Examining the AD Docket

You may examine the AD Docket (including any comments and service information), by appointment, between 8 a.m. and 4:30 p.m., Monday through Friday, except Federal holidays. See **ADDRESSES** for the location.

Comments

We provided the public the opportunity to participate in the development of this AD. We have considered the comments received.

Request To Keep AD 2002–10–07 as an Alternative Means of Compliance

One commenter requests that the existing AD, which is AD 2002–10–07, be kept as an alternative means of compliance. The commenter states that the compliance of the proposed AD, as per the Accomplishment Instructions of PW Service Bulletin (SB) No. JT9D 6454, Revision 1, not only requires replacement of the HPT second stage turbine airseal, but also requires replacement and modification of many other parts. Since all of the parts of the HPT module are required to be exposed to piece-parts during overhaul, and not at any other time, the compliance statement which states ''At the next piece-part exposure'' should be amended to ''At the next HPT Module overhaul'', as also stated in SB No. JT9D 6454, Revision 1.

We do not agree. AD 2002–10–07 was introduced solely as an interim action, with the intent of the redesign being the final solution. We are issuing this AD to prevent failure of the HPT second stage airseal due to cracks in the knife-edges, which if not detected, could result in uncontained engine failure and damage to the airplane. Therefore we do not feel that the AD 2002–10–07 interim action provides an equivalent level of safety. In addition, there are times such as an unscheduled maintenance event, in which the HPT module hardware will be exposed. It is our intention to incorporate this AD at the next piece-part exposure.

Proposal for an Alternative Management Plan

One commenter proposes an alternative management plan to the compliance section in the proposed AD, subject to the provisions in the proposed AD. The commenter provided the details of the proposed management plan to us in a separate document. The background to the proposed plan is as follows:

HPT second stage airseals, P/Ns 5002537–01, 788945, 753187, and 807410, have very high scrap rates. About 75% of airseals are scrapped after