Rules and Regulations

Federal Register
Vol. 63, No. 248
Monday, December 28, 1998

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 23

[Docket No. CE150, Special Condition 23–094–SC]

Special Conditions; Raytheon Aircraft Company, Raytheon Model 390 Airplane: Protection of Systems From 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 Raytheon Aircraft Company, 9709 East Central, Wichita, Kansas 67201–0085 for a type certificate on the Raytheon Model 390 airplane. This airplane 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 electronic flight instrument systems (EFIS) displays 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 that provided by the applicable airworthiness standards.

DATES: The effective date of these special conditions is December 28, 1998. Comments must be received on or before January 27, 1999.

ADDRESSES: Comments may be mailed in duplicate to: Federal Aviation Administration, Office of the Assistant Chief Counsel, ACE–7, Attention: Rules Docket Clerk, Docket No. CE150, Room 1558, 601 East 12th Street, Kansas City, Missouri 64106. All comments must be marked: Docket No. CE150. Comments may be inspected in the Rules Docket weekdays, except Federal holidays, between 7:30 a.m. and 4:00 p.m.

FOR FURTHER INFORMATION CONTACT: Ervin Dvorak, Aerospace Engineer, Standards Office (ACE–110), Small Airplane Directorate, Aircraft Certification Service, Federal Aviation Administration, 601 East 12th Street, Kansas City, Missouri 64106; telephone (816) 426–6941.

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 approval design 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 CE150.'' The postcard will be date stamped and returned to the commenter.

Background

On August 1, 1995, Raytheon Aircraft Company (then Beech Aircraft Corporation) made application to the FAA for a type certificate for the Raytheon Model 390 airplane. The proposed configuration 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, § 21.17, Raytheon Aircraft Company must show that the Raytheon Model 390 meets the applicable provisions of the following type certification basis for the Raytheon Model 390 airplane:

Federal Aviation Regulations part 23 effective February 1, 1965, as amended by Amendments 23–1 through 23–52, with Special Conditions to replace much of Subparts B and G; Federal Aviation Regulations part 34 effective September 10, 1990, as amended by the amendment in effect on the date of certification; Federal Aviation Regulations part 36 effective December 1, 1969, as amended by amendment 36–1 through the amendment in effect on the day of certification; The Noise Control Act of 1972; Special Conditions for such items as Protection from High Intensity Radiated Fields (HIRF), Takeoff Out of Trim Warning, and Engine Fire Extinguishing System; and Exemption No. 6558, which was granted December 12, 1996, pertaining to airplane landing gear loads.

Novel or Unusual Design Features

The Raytheon Model 390 will incorporate the following novel or unusual design features: Installation of EFIS for which the airworthiness standards do not contain adequate or appropriate safety standards for protection from the effects of HIRF.

Discussion

If the Administrator finds that the applicable airworthiness regulations, 14 CFR part 23, do not contain adequate or appropriate safety standards for the Raytheon Model 390 because of a novel or unusual design feature, special conditions are prescribed under the provisions of § 21.16.

Special conditions, as appropriate, are issued in accordance with § 11.49, as required by §§ 11.28 and 11.29(b), and become part of the type certification basis in accordance with § 21.17(a)(2).

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(a)(1).

Raytheon Aircraft Company plans to incorporate certain novel and unusual design features into an airplane for which the airworthiness standards do not contain adequate or appropriate safety standards for protection from the effects of HIRF. These features include electronic systems, 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 previously 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 as follows:

FIELD STRENGTH VOLTS/METER

Frequency	Peak	Average
10–100 KHz	50	50
100–500 KHz	60	60
500–2000 KHz	70	70
2–30 MHz	200	200
30–70 MHz	30	30
70–100 MHz	30	30
100–200 MHz	150	33
200–400 MHz	70	70
400–700 MHz	4020	935
700–1000 MHz	1700	170
1–2 GHz	5000	990
2–4 GHz	6680	840
4–6 GHz	6850	310
6–8 GHz	3600	670
8–12 GHz	3500	1270
12–18 GHz	3500	360
18–40 GHz	2100	750

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, peak 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 electrical and/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 Raytheon Model 390. Should Raytheon Aircraft Company apply at a later date for a supplemental type certificate or amended type certificate to modify any other model that may be included on this 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(a)(1).

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 part 21, §§ 21.16 and 21.17; and 14 CFR part 11, §§ 11.28 and 11.49.

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 Raytheon Aircraft Company Model 390 airplane.

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 December 11, 1998.

Michael K. Dahl,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 98–34162 Filed 12–24–98; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF THE TREASURY

Customs Service

19 CFR Part 24

[T.D. 99–1]

RIN 1515–AC39

Exemption of Israeli Products from Certain Customs User Fees

AGENCY: Customs Service, Department of the Treasury.

ACTION: Final rule.

SUMMARY: This document amends the Customs Regulations to reflect that products of Israel are no longer subject to the merchandise processing fees assessed on imported goods under 19 U.S.C. 58c(a)(9) and (10). This amendment results from publication of a determination by the United States Trade Representative under section 112 of the Customs and Trade Act of 1990 that the Government of Israel has provided reciprocal concessions. The exemption applies to Israeli products entered, or withdrawn from warehouse for consumption, on or after September 16, 1998.

EFFECTIVE DATE: December 28, 1998.

FOR FURTHER INFORMATION CONTACT: William G. Rosoff, Office of Regulations and Rulings (202–927–2077).

SUPPLEMENTARY INFORMATION:

Background

Section 13031 of the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended (codified at 19 U.S.C. 58c and hereinafter referred to as the COBRA provision), provides for the collection of various fees for providing Customs services in connection with the arrival of vessels, vehicles, railroad cars, aircraft, passengers and dutiable mail, in connection with the entry or release of merchandise, and in connection with Customs broker permits. The fees pertaining to the entry or release of merchandise are set forth in subsections (a)(9) and (10) of the COBRA provision (19 U.S.C. 58c(a)(9) and (10)) and include an ad valorem fee for each formal entry or release (subject to specific maximum and minimum limits), a surcharge for each manual entry or release, and specific fees for three types of informal entry or release.

Subsection (b)(11) of the COBRA provision (19 U.S.C. 58c(b)(11)) provides that no fee may be charged under subsection (a)(9) or (10) with respect to products of Israel if an exemption with respect to the fee is implemented under section 112 of the Customs and Trade Act of 1990 (the Trade Act, Pub. L. 101–382). Section 112 of the Trade Act provides that, if the United States Trade Representative determines that the Government of Israel has provided reciprocal concessions in exchange for the exemption of products of Israel from the fees imposed under subsections (a)(9) and (10) of the COBRA provision, such fees may not be charged with respect to any product of Israel that is entered, or withdrawn from warehouse for consumption, on or after the 15th day after the date on which the determination is published in the **Federal Register**.

Regulations implementing the COBRA provision regarding merchandise processing fees are contained in § 24.23 of the Customs Regulations (19 CFR 24.23). When § 24.23 was amended in 1991 to, among other things, reflect the changes to the COBRA provision made by the Trade Act (see T.D. 91–33, published in the **Federal Register** at 56 FR 15036 on April 15, 1991, and T.D. 91–95, published in the **Federal Register** at 56 FR 63648 on December 5, 1991), no determination under section 112 of the Trade Act had been published by the United States Trade Representative. Accordingly, the revised text of § 24.23 included, in paragraph (c)(5), a general statement as to the nonapplicability of the merchandise processing fees under the circumstances described in section 112 of the Trade Act, but without any indication of a specific effective date because the conditions set forth in the statute had not yet been met.

On September 1, 1998, the Office of the United States Trade Representative published a notice in the **Federal Register** (63 FR 46496) stating that the United States Trade Representative has determined that the Government of Israel has provided reciprocal concessions for purposes of section 112 of the Trade Act. Accordingly, the notice stated that pursuant to section 112 of the Trade Act and 19 U.S.C. 58c(b)(11), any product of Israel that is entered, or withdrawn from warehouse for consumption, on or after the 15th day after the date of publication of that notice will not be charged the fees imposed under 19 U.S.C. 58c(a)(9) and (10).

Paragraph (c)(5) was drafted and included in § 24.23 in general, self-executing terms in order to allow for the future publication of a determination under section 112 of the Trade Act, and for operational implementation thereof by Customs, without having to amend the regulatory text. Nevertheless, for purposes of clarity and in order to provide the most complete information to the public, Customs believes that it would be preferable to amend the regulatory text to reflect the specific date on which the exemption took effect, that is, September 16, 1998.

Inapplicability of Public Notice and Comment and Delayed Effective Date Requirements

Pursuant to the provisions of 5 U.S.C. 553(b)(B), Customs has determined that prior public notice and comment procedures on this regulation are unnecessary and contrary to the public interest. The regulatory change conforms the Customs Regulations to the terms of a statutory provision that is already in effect. In addition, the regulatory change benefits the public by providing specific information regarding the right to an exemption from the payment of certain import fees. For the same reasons, pursuant to the provisions of 5 U.S.C. 553(d)(1) and (3), Customs finds that there is good cause