Executive Orders 13563 and 12866, Regulatory Review

This rule has been reviewed by the Office of Management and Budget in accordance with Executive Orders 13563 and 12866.

Federalism

We have examined this rule in accordance with Executive Order 13132, ''Federalism,'' and have determined that this rule will not have any negative impact on the rights, roles and responsibilities of State, local, or tribal governments.

List of Subjects in 5 CFR Part 890

Administrative practice and procedure, Government employees, Health facilities, Health insurance, Health professions, Hostages, Iraq, Kuwait, Lebanon, Military personnel, Reporting and recordkeeping requirements, Retirement.

U.S. Office of Personnel Management.

Beth F. Cobert,

Acting Director.

Accordingly, OPM is amending 5 CFR part 890 as follows:

PART 890—FEDERAL EMPLOYEES HEALTH BENEFITS PROGRAM

■ 1. The authority citation for part 890 continues to read as follows:

Authority: 5 U.S.C. 8913; Sec. 890.301 also issued under sec. 311 of Pub. L. 111–03, 123 Stat. 64; Sec. 890.111 also issued under section 1622(b) of Pub. L. 104–106, 110 Stat. 521; Sec. 890.112 also issued under section 1 of Pub. L. 110–279, 122 Stat. 2604; 5 U.S.C. 8913; Sec. 890.803 also issued under 50 U.S.C. 403p, 22 U.S.C. 4069c and 4069c–1; subpart L also issued under sec. 599C of Pub. L. 101–513, 104 Stat. 2064, as amended; Sec. 890.102 also issued under sections 11202(f), 11232(e), 11246 (b) and (c) of Pub. L. 105–33, 111 Stat. 251; and section 721 of Pub. L. 105–261, 112 Stat. 2061.

■ 2. Section 890.102 is amended by revising paragraphs (h) and (i) to read as follows:

§ 890.102 Coverage.

* * * * *

(h) Notwithstanding paragraphs (c)(1) and (2) of this section, an employee who is in a position identified by OPM that provides emergency response services for wildland fire protection is eligible to be enrolled in a health benefits plan under this part.

(i) Notwithstanding paragraphs (c)(1) through (3) of this section, upon request by the employing agency, OPM may grant eligibility to employees performing similar types of emergency response services to enroll in a health benefits plan under this part. In granting eligibility requests, OPM may limit the coverage of intermittent employees under a health benefits plan to the periods of time during which they are in a pay status.

* * * * *

[FR Doc. 2016–27901 Filed 11–18–16; 8:45 am]

BILLING CODE 6325–63–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 23

[Docket No. FAA–2016–9001; Special Conditions No. 23–278–SC]

Special Conditions: Pilatus Aircraft, Ltd., Model PC–12, PC–12/45, and PC–12/47 Airplanes, Lithium Batteries

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final special conditions.

SUMMARY: These special conditions are issued for the Pilatus Aircraft, Ltd., Model PC–12, PC–12/45, and PC–12/47 airplanes. This airplane as modified by Finnoff Aviation will have a novel or unusual design feature associated with the installation of a rechargeable lithium battery. 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: These special conditions are effective November 21, 2016 and are applicable on November 10, 2016.

FOR FURTHER INFORMATION CONTACT: Ruth Hirt, Federal Aviation Administration, Programs and Procedures, ACE–114, Small Airplane Directorate, Aircraft Certification Service, 901 Locust; Kansas City, Missouri 64106; telephone (816) 329–4108; facsimile (816) 329–4090.

SUPPLEMENTARY INFORMATION:

Background

On September 28, 2015, Finnoff Aviation applied for a supplemental type certificate for installation of a rechargeable lithium battery in the Model PC–12, PC–12/45, and PC–12/47 airplanes. The Model PC–12, PC–12/45, and PC–12/47 airplanes are single-engine turboprop-powered business aircraft that can accommodate up to nine passengers with a take-off weight up to 10,450 pounds.

The current regulatory requirements for part 23 airplanes do not contain adequate requirements for the application of rechargeable lithium batteries in airborne applications. This type of battery possesses certain failure and operational characteristics with maintenance requirements that differ significantly from that of the nickel-cadmium (Ni-Cd) and lead-acid rechargeable batteries currently approved in other normal, utility, acrobatic, and commuter category airplanes. Therefore, the FAA is issuing this special condition to address (1) all characteristics of the rechargeable lithium batteries and their installation that could affect safe operation of the modified Model PC–12, PC–12/45, and PC–12/47 airplanes, and (2) appropriate Instructions for Continued Airworthiness (ICAW) that include maintenance requirements to ensure the availability of electrical power from the batteries when needed.

Type Certification Basis

Under the provisions of § 21.101, Finnoff Aviation must show that the Model PC–12, PC–12/45, and PC–12/47 airplanes, as changed, continue to meet the applicable provisions of the regulations incorporated by reference in Type Certificate No. A78EU [1] or the applicable regulations in effect on the date of application for the change.

If the Administrator finds that the applicable airworthiness regulations (*i.e.,* 14 CFR part 23) do not contain adequate or appropriate safety standards for the Model PC–12, PC–12/45, and PC–12/47 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 Model PC–12, PC–12/45, and PC–12/47 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.

The FAA issues special conditions, as defined in 14 CFR 11.19, in accordance with § 11.38, and they become part of the type-certification basis under § 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 included on the same type certificate to incorporate the same or similar novel or unusual design feature, the special conditions would

[1] *http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgMakeModel.nsf/0/6BCB00B1F3CA4EF886257FED0069EF2D?OpenDocument.*

also apply to the other model under § 21.101.

Novel or Unusual Design Features

The Model PC–12, PC–12/45, and PC–12/47 airplanes will incorporate the following novel or unusual design features: Installation of a rechargeable lithium battery as the main or engine start aircraft battery.

Discussion

Presently, there is limited experience with use of rechargeable lithium batteries and rechargeable lithium battery systems in applications involving commercial aviation. However, other users of this technology, ranging from personal computers, wireless telephone manufacturers to the electric vehicle industry, have noted safety problems with rechargeable lithium batteries. These problems include overcharging, over-discharging, flammability of cell components, cell internal defects, and during exposure to extreme temperatures that are described in the following paragraphs.

1. Overcharging: In general, rechargeable lithium batteries are significantly more susceptible than their Ni-Cd or lead-acid counterparts to thermal runway, which is an internal failure that can result in self-sustaining increases in temperature and pressure. This is especially true for overcharging which causes heating and destabilization of the components of the cell, leading to the formation (by plating) of highly unstable metallic lithium. The metallic lithium can ignite, resulting in a self-sustaining fire or explosion. Finally, the severity of thermal runaway due to overcharging increases with increasing battery capacity due to the higher amount of electrolyte in large batteries.

2. Over-discharging: Discharge of some types of lithium battery cells beyond a certain voltage (typically 2.4 volts) can cause corrosion of the electrodes of the cell, resulting in loss of battery capacity that cannot be reversed by recharging. This loss of capacity may not be detected by the simple voltage measurements commonly available to flight crews as a means of checking battery status, which is a problem shared with Ni-Cd batteries. In addition, over-discharging has the potential to lead to an unsafe condition (creation of dendrites that could result in internal short circuit during the recharging cycle).

3. Flammability of Cell Components: Unlike Ni-Cd and lead-acid batteries, some types of lithium batteries use liquid electrolytes that are flammable. The electrolyte may serve as a source of fuel for an external fire, if there is a breach of the battery container.

4. Cell Internal Defects: The rechargeable lithium batteries and rechargeable battery systems have a history of undetected cell internal defects. These defects may or may not be detected during normal operational evaluation, test, and validation. This may lead to unsafe conditions when operating in service.

5. Extreme Temperatures: Exposure to an extreme temperature environment has the potential to create major hazards. Care must be taken to ensure that the lithium battery remains within the manufacturer's recommended specification.

These problems experienced by users of lithium batteries raise concern about the use of these batteries in commercial aviation. The intent of the special condition is to establish appropriate airworthiness standards for lithium battery installations in the Model PC–12, PC–12/45, and PC–12/47 airplanes and to ensure, as required by §§ 23.1309 and 23.601, that these battery installations are neither hazardous nor unreliable.

In summary, the lithium battery installation will consider the following items:

(a) The flammable fluid fire protection requirement is § 23.863. In the past, this rule was not applied to batteries of normal, utility, acrobatic, and commuter category airplanes since the electrolytes utilized in Ni-Cd and lead-acid batteries are not flammable.

(b) New Instructions for Continuous Airworthiness that include maintenance requirements to ensure that batteries used as spares have been maintained in an appropriate state of charge and installed lithium batteries have been sufficiently charged at appropriate intervals. These instructions must also describe proper repairs, if allowed, and battery part number configuration control.

(c) The applicant must conduct a system safety assessment for the failure condition classification of a failure of the battery charging and monitoring functionality (per Advisory Circular AC 23.1309–1E),[2] and develop mitigation to preclude any adverse safety effects. Mitigation may include software, Airborne Electronic Hardware (AEH) or a combination of software and hardware, which should be developed to the appropriate Design Assurance Level(s) (DALs), respectively (per Advisory Circular AC 20–115C[3] and Advisory Circular AC 20–152).[4]

(d) New requirements, in the special conditions section, address the hazards of overcharging and over-discharging that are unique to lithium batteries, which should be applied to all rechargeable lithium battery and battery installations on the Model PC–12, PC–12/45, and PC–12/47 airplanes in lieu of the requirements of § 23.1353(a)(b)(c)(d)(e), amendment 23–49.

These special conditions are not intended to replace § 23.1353(a)(b)(c)(d)(e) at amendment 23–49 in the certification basis of Model PC–12, PC–12/45, and PC–12/47 airplanes. These special conditions apply only to rechargeable lithium batteries and lithium battery systems and their installations. The requirements of § 25.1353 at amendment 23–49 remains in effect for batteries and battery installations on Model PC–12, PC–12/45, and PC–12/47 airplanes that do not use rechargeable lithium batteries.

Discussion of Comments

Notice of proposed special conditions No. 23–16–02–SC for the Pilatus Aircraft, Ltd., Model PC–12, PC–12/45, and PC–12/47 Airplanes, Lithium Batteries was published in the **Federal Register** on August 24, 2016 (81 FR 57810). No comments were received, and the special conditions are adopted as proposed.

Applicability

The special conditions are applicable to the Model PC–12, PC–12/45, and PC–12/47 airplanes. Should Finnoff Aviation apply at a later date for a supplemental type certificate to modify any other model included on Type Certificate No. A78EU[5] to incorporate the same novel or unusual design feature, the special conditions would apply to that model as well.

Under standard practice, the effective date of final special conditions would be 30 days after the date of publication in the **Federal Register**; however, as the certification date for the Pilatus Aircraft, Ltd., Model PC–12, PC–12/45, and PC–12/47 airplanes is imminent, the FAA finds that good cause exists to make

[2] *http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgAdvisoryCircular.nsf/0/719e41e1d26099108625795d005d5302/$FILE/23.1309-1E.pdf.*

[3] *http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgAdvisoryCircular.nsf/0/e35fbc0060e2159186257bbe00719fb3/$FILE/AC20-115C.pdf.*

[4] *http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgAdvisoryCircular.nsf/0/6d4ae0bf1bde3579862570360055d119/$FILE/AC%2020-152.pdf.*

[5] *http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgMakeModel.nsf/0/6BCB00B1F3CA4EF886257FED0069EF2D?OpenDocument.*

these special conditions effective upon issuance.

Conclusion

This action affects only certain novel or unusual design features on one model series of airplanes. 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

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 Pilatus Aircraft, Ltd., Model PC–12, PC–12/45, and PC–12/47 airplanes modified by Finnoff Aviation.

1. Installation of Lithium Batteries must show compliance to the following requirements:

(1) Safe cell temperatures and pressures must be maintained during—

i. Normal operations;

ii. Any probable failure conditions of charging or discharging or battery monitoring system;

iii. Any failure of the charging or battery monitoring system not shown to be extremely remote.

(2) The rechargeable lithium battery installation must be designed to preclude explosion or fire in the event of (1)(ii) and (1)(iii) failures.

(3) Design of the rechargeable lithium batteries must preclude the occurrence of self-sustaining, uncontrolled increases in temperature or pressure.

(4) No explosive or toxic gasses emitted by any rechargeable lithium battery in normal operation or as the result of any failure of the battery charging system, monitoring system, or battery installation which is not shown to be extremely remote, may accumulate in hazardous quantities within the airplane.

(5) Installations of rechargeable lithium batteries must meet the requirements of § 23.863(a) through (d) at amendment 23–34.

(6) No corrosive fluids or gases that may escape from any rechargeable lithium battery may damage surrounding structure or any adjacent systems, equipment, electrical wiring, or the airplane in such a way as to cause a major or more severe failure condition, in accordance with § 23.1309(c) at amendment 23–62 and applicable regulatory guidance.

(7) Each rechargeable lithium battery installation must have provisions to prevent any hazardous effect on structure or essential systems that may be caused by the maximum amount of heat the battery can generate during a short circuit of the battery or of its individual cells.

(8) Rechargeable lithium battery installations must have—

i. A system to automatically control the charging rate of the battery to prevent battery overheating and overcharging, or;

ii. A battery temperature sensing and over-temperature warning system with a means for automatically disconnecting the battery from its charging source in the event of an over-temperature condition, or;

iii. A battery failure sensing and warning system with a means for automatically disconnecting the battery from its charging source in the event of battery failure.

(9) Any rechargeable lithium battery installation functionally required for safe operation of the airplane must incorporate a monitoring and warning feature that will provide an indication to the appropriate flight crewmembers whenever the State of Charge (SOC) of the batteries has fallen below levels considered acceptable for dispatch of the airplane.

(10) The Instructions for Continued Airworthiness required by § 23.1529 at amendment 23–26 must contain maintenance requirements to assure that the battery has been sufficiently charged at appropriate intervals specified by the battery manufacturer and the equipment manufacturer that contain the rechargeable lithium battery or rechargeable lithium battery system. This is required to ensure that lithium rechargeable batteries and lithium rechargeable battery systems will not degrade below specified ampere-hour levels sufficient to power the aircraft system. The Instructions for Continued Airworthiness must also contain procedures for the maintenance of replacement batteries in spares storage to prevent the installation of batteries that have degraded charge retention ability or other damage due to prolonged storage at a low state of charge. Replacement batteries must be of the same manufacturer and part number as approved by the FAA.

Note: The term ''sufficiently charged'' means that the battery will retain enough of a charge, expressed in ampere-hours, to ensure that the battery cells will not be damaged. A battery cell may be damaged by lowering the charge below a point where there is a reduction in the ability to charge and retain a full charge. This reduction would be greater than the reduction that may result from normal operational degradation.

(11) In showing compliance with the proposed special conditions herein, paragraphs (1) through (8), and the RTCA document, Minimum Operational Performance Standards for Rechargeable Lithium Battery Systems, DO–311, may be used. The list of planned DO–311 tests should be documented in the certification or compliance plan and agreed to by the geographic ACO. Alternate methods of compliance other than DO–311 tests must be coordinated with the directorate and geographic ACO.

Issued in Kansas City, Missouri, on November 10, 2016.

Mel Johnson,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2016–28013 Filed 11–18–16; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF COMMERCE

Bureau of Industry and Security

15 CFR Parts 770 and 774

[Docket No. 151030999–6552–02]

RIN 0694–AG76

Clarifications and Revisions to Military Aircraft, Gas Turbine Engines and Related Items License Requirements

AGENCY: Bureau of Industry and Security, Department of Commerce.

ACTION: Final rule.

SUMMARY: This rule modifies the Commerce Control List (CCL) entries for two types of items: Military aircraft and related items, and military gas turbine engines and related items. The rule adds clarifying text to the descriptions of the types of military aircraft controlled on the CCL. The lists of items that are subject only to the anti-terrorism reason for control are clarified and expanded. This rule, which is being published simultaneously with a rule by the Department of State, is based on a review of Categories VIII and XIX of the United States Munitions List (USML). This rule and the related Department of State rule are part of a plan to review rules published as part of the Export Control Reform Initiative (ECRI). This rule also furthers the retrospective regulatory review directed by the President in Executive Order 13563.