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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. NM193; Special Conditions No. 25-183-SC]

Special Conditions: Boeing Model 737-7BC Airplane; Certification of Cooktops

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final special conditions; request for comments.

SUMMARY: These special conditions are issued for the Boeing Model 737-700 airplane modified by Piedmont Hawthorne-Associated Air Center. This modified airplane 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 an electrically heated surface, called a cooktop. The applicable airworthiness regulations do not contain adequate or appropriate safety standards for addressing the potential hazards that may be introduced by cooktops. 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 July 19, 2001. Comments must be received on or before September 10, 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. NM193, 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. NM193*. 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: Alan Sinclair, FAA, Airframe/Cabin Safety Branch, ANM-115, Transport Airplane Directorate, Aircraft Certification Service, 1601 Lind Avenue SW., Renton, Washington 98055-4056; telephone (425) 227-2195; facsimile (425) 227-1149.

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. In addition, the substance of these special conditions has previously been subject to the public comment process 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 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 described in this document 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 these special conditions must include with those comments a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. NM193." The postcard will be date stamped and returned to the commenter.

Background Information

On January 11, 2001, Piedmont Hawthorne—Associated Air Center, P.O. Box 540728, (8321 Lemmon Ave, Love Field), Dallas, Texas 75234, applied for a Supplemental Type Certificate (STC) to modify the Boeing Model 737-7BC airplane. The Model 737-7BC is one of the Boeing Business Jet (BBJ) variants of Model 737 airplanes. It is a large transport category airplane powered by two CFM 56 engines, with a maximum takeoff weight of 171,000 pounds. The modified 737-7BC airplane operates with a 2-pilot crew, up to 3 flight attendants, and can hold up to 18 passengers.

The modification incorporates the installation of an electrically heated surface, called a cooktop. Cooktops introduce high heat, smoke, and the possibility of fire into the passenger cabin environment. These potential hazards to the airplane and its occupants must be satisfactorily addressed. Since existing airworthiness regulations do not contain safety standards addressing cooktops, special conditions are therefore needed.

Type Certification Basis

Under the provisions of 14 CFR 21.101, Piedmont Hawthorne—Associated Air Center must show that the Boeing Model 737-7BC airplane, as changed, continues to meet the applicable provisions of the regulations incorporated by reference in Type Certificate Data Sheet No. A16WE, 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 Data Sheet No. A16WE are part 25, as amended by Amendments 25-1 through 25-77, with reversion to earlier amendments, voluntary compliance with later amendments, special conditions, equivalent safety findings, and exemptions listed in the Type Certificate Data Sheet.

If the Administrator finds that the applicable airworthiness regulations (that is, part 25 as amended) do not contain adequate or appropriate safety standards for the Boeing Model 737-7BC airplane modified by Piedmont Hawthorne—Associated Air Center 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, this Boeing Model 737-7BC airplane must comply with the fuel vent and exhaust emission requirements of part 34 and the noise certification requirements of part 36.

Special conditions, as defined in § 11.19, are issued in accordance with § 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 Piedmont Hawthorne-Associated Air Center apply at a later date 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, these special conditions would also apply to the other model under the provisions of § 21.101(a)(1).

Novel or Unusual Design Features

As noted earlier, the modification of the Boeing Model 737-7BC airplane will include installation of a cooktop in the passenger cabin. Cooktops introduce high heat, smoke, and the possibility of fire into the passenger cabin environment. The current airworthiness standards of part 25 do not contain adequate or appropriate safety standards to protect the airplane and its occupants from these potential hazards. Accordingly, this system is considered to be a novel or unusual design feature.

Discussion

Currently, ovens are the prevailing means of heating food on airplanes. Ovens are characterized by an enclosure that contains both the heat source and the food being heated. The hazards represented by ovens are thus inherently limited, and are well understood through years of service experience. Cooktops, on the other hand, are characterized by exposed heat sources and the presence of relatively unrestrained hot cookware and heated food, which may represent unprecedented hazards to both occupants and the airplane. Cooktops could have serious passenger and airplane safety implications if appropriate requirements are not established for their installation and use. These special conditions apply to cooktops with electrically-powered burners equipped with an automatic power shut off feature, which turn off the power to the cooktop whenever the cooktop cover is closed. This automatic shut off feature prevents the cooktop

from being a hazard to the passengers and crew and from becoming a fire hazard when the cover is closed thus increasing the level of safety. Since the design proposed by Associated Air Center currently includes this power shut off feature it was not deemed necessary to include it in the design limitations, but it should be known that the automatic power shut off feature will be required for all future cooktop designs.

The use of an open flame cooktop (for example natural gas) is beyond the scope of these special conditions and would require separate rulemaking action. The requirements identified in these special conditions are in addition to those considerations identified in Advisory Circular (AC) 25-10, Guidance for Installation of Miscellaneous Non-required Electrical Equipment, and those in AC 25-17, Transport Airplane Cabin Interiors Crashworthiness Handbook. The intent of these special conditions is to provide a level of safety that is consistent with that on similar airplanes without cooktops.

Applicability

As discussed above, these special conditions are applicable to the Boeing Model 737-7BC airplane modified by Piedmont Hawthorne-Associated Air Center. Should Piedmont Hawthorne-Associated Air Center apply at a later date 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, 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 Boeing Model 737-7BC airplane modified by Piedmont Hawthorne-Associated Air Center. 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 previously been subjected to the notice and comment period and has been derived without substantive change. 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 opportunity 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 Boeing Model 737-7BC airplane modified by Piedmont Hawthorne-Associated Air Center.

Cooktop Installations With Electrically-Powered Burners

1. Means, such as conspicuous burner-on indicators, physical barriers, or handholds, must be installed to minimize the potential for inadvertent personnel contact with hot surfaces of both the cooktop and cookware. Conditions of turbulence must be considered.

2. Sufficient design means must be included to restrain cookware while in place on the cooktop, as well as representative contents (soups or sauces, for example) from the effects of flight loads and turbulence.

(a) Restraints must be provided to preclude hazardous movement of cookware and contents. These restraints must accommodate any cookware that is identified for use with the cooktop.

(b) Restraints must be designed to be easily utilized and effective in service. The cookware restraint system should also be designed so that it will not be easily disabled, thus rendering it unusable.

(c) Placarding must be installed which prohibits the use of cookware that cannot be accommodated by the restraint system.

3. Placarding must be installed which prohibits the use of cooktops (that is, power on any burner) during taxi, takeoff, and landing (TTL).

4. Means must be provided to address the possibility of a fire occurring on or in the immediate vicinity of the cooktop caused by materials or grease inadvertently coming in contact with the burners.

Note: Two acceptable means of complying with this requirement are as follows:

- Placarding must be installed that prohibits any burner from being powered when the cooktop is unattended (this would prohibit a single person from cooking on the cooktop and intermittently serving food to passengers while any burner is powered). In addition, a fire detector must be installed in the vicinity of the cooktop, which provides an audible warning in the passenger cabin; and a fire extinguisher of appropriate size and extinguishing agent must be installed in the immediate vicinity of the cooktop. A fire on or around the cooktop must not block access to the extinguisher. One of the fire extinguishers required by § 25.851 may be used to satisfy this requirement if the total complement of extinguishers can be evenly distributed throughout the cabin. If this is not possible, then the extinguisher in the galley area would be additional.

OR

- An automatic, thermally-activated fire suppression system must be installed to extinguish a fire at the cooktop and immediately adjacent surfaces. The agent used in the system must be an approved total flooding agent suitable for use in an occupied area. The fire suppression system must have a manual override. The automatic activation of the fire suppression system must also automatically shut off power to the cooktop.

5. The surfaces of the galley surrounding the cooktop, which would be exposed to a fire on the cooktop surface or in cookware on the cooktop, must be constructed of materials that comply with the flammability requirements of part III of appendix F to part 25. This requirement is in addition to the flammability requirements typically required of the materials in these galley surfaces. During the selection of these materials, consideration must also be given to ensure that the flammability characteristics of the materials will not be adversely affected by the use of cleaning agents and utensils used to remove cooking stains.

6. The cooktop must be ventilated with a system independent of the airplane cabin and cargo ventilation system. Procedures and time intervals must be established to inspect and clean or replace the ventilation system to prevent a fire hazard from the accumulation of flammable oils. These procedures and time intervals must be included in the Instructions for Continued Airworthiness (ICA). The ventilation system ducting must be protected by a flame arrestor.

Note: The applicant may find additional useful information in Society of Automotive Engineers, Aerospace Recommended Practice 85, Rev. E, entitled "Air Conditioning Systems for Subsonic Airplanes," dated August 1, 1991.

7. Means must be provided to contain spilled foods or fluids in a manner that will prevent the creation of a slipping

hazard to occupants and will not lead to the loss of structural strength due to airplane corrosion.

8. Cooktop installations must provide adequate space for the user to immediately escape a hazardous cooktop condition.

9. A means to shut off power to the cooktop must be provided at the galley containing the cooktop and in the cockpit. If additional switches are introduced in the cockpit, revisions to smoke or fire emergency procedures of the AFM will be required.

Issued in Renton, Washington, on July 20, 2001.

Dorenda D. Baker,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 01-18803 Filed 7-26-01; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 97

[Docket No. 30259; Amdt. No. 2061]

Standard Instrument Approach Procedures; Miscellaneous Amendments

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This amendment establishes, amends, suspends, or revokes Standard Instrument Approach Procedures (SIAPs) for operations at certain airports. These regulatory actions are needed because of the adoption of new or revised criteria, or because of changes occurring in the National Airspace System, such as the commissioning of new navigational facilities, addition of new obstacles, or changes in air traffic requirements. These changes are designed to provide safe and efficient use of the navigable airspace and to promote safe flight operations under instrument flight rules at the affected airports.

DATES: An effective date for each SIAP is specified in the amendatory provisions.

Incorporation by reference approved by the Director of the Federal Register on December 31, 1980, and reapproved as of January 1, 1982.

ADDRESSES: Availability of matters incorporated by reference in the amendment is as follows:

For Examination—

1. FAA Rules Docket, FAA Headquarters Building, 800

Independence Avenue, SW., Washington, DC 20591;

2. The FAA Regional Office of the region in which the affected airport is located; or

3. The Flight Inspection Area Office which originated the SIAP.

*For Purchase—*Individual SIAP copies may be obtained from:

1. FAA Public Inquiry Center (APA-200), FAA Headquarters Building, 800 Independence Avenue, SW., Washington, DC 20591; or

2. The FAA Regional Office of the region in which the affected airport is located.

*By Subscription—*Copies of all SIAPs, mailed once every 2 weeks, are for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

FOR FURTHER INFORMATION CONTACT:

Donald P. Pate, Flight Procedure Standards Branch (AMCAFS-420), Flight Technologies and Programs Division, Flight Standards Service, Federal Aviation Administration, Mike Monroney Aeronautical Center, 6500 South MacArthur Blvd., Oklahoma City, OK 73169 (Mail Address: P.O. Box 25082, Oklahoma City, OK 73125) telephone: (405) 954-4164.

SUPPLEMENTARY INFORMATION: This amendment to part 97 of the Federal Aviation Regulations (14 CFR part 97) establishes, amends, suspends, or revokes Standard Instrument Approach Procedures (SIAPs). The complete regulatory description of each SIAP is contained in official FAA form documents which are incorporated by reference in this amendment under 5 U.S.C. 552(a), 1 CFR part 51, and § 97.20 of the Federal Aviation Regulations (FAR). The applicable FAA Forms are identified as FAA Forms 8260-3, 8260-4, and 8260-5. Materials incorporated by reference are available for examination or purchase as stated above.

The large number of SIAPs, their complex nature, and the need for a special format make their verbatim publication in the **Federal Register** expensive and impractical. Further, airmen do not use the regulatory text of the SIAPs, but refer to their graphic depiction on charges printed by publishers of aeronautical materials. Thus, the advantages of incorporation by reference are realized and publication of the complete description of each SIAP contained in FAA form documents is unnecessary. The provisions of this amendment state the affected CFR (and FAR) sections, with the types and effective dates of the SIAPs. This amendment also identifies