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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 25

[Docket No. NM–25; Special Conditions No. 25–ANM–16A]

Special Conditions: Boeing Model 747 Series Airplanes; Overhead Crew Rest Area

AGENCY: Federal Aviation Administration, DOT.

ACTION: Amended special conditions.

SUMMARY: These amended special conditions are issued to the Boeing Commercial Airplane Company for the Model 747 series airplanes. This airplane has a novel or unusual design feature associated with the overhead crew rest area. Special Conditions No. 25–ANM–16 were issued on November 13, 1987, addressing this installation. On January 23, 1997, Boeing applied for a type design change which proposes to add an additional feature; the installation of curtains or partitions in the crew rest area. Since the applicable airworthiness regulations, including those contained in Special Conditions No. 25–ANM–16, do not contain adequate or appropriate safety standards for this particular design feature, these amended special conditions contain the additional safety standards which the Administrator finds necessary to establish a level of safety equivalent to that established by the airworthiness standards for transport category airplanes.

EFFECTIVE DATE: October 23, 1997.

FOR FURTHER INFORMATION CONTACT: Greg Dunn, FAA, Transport Standards Staff, Standardization Branch, ANM–113, 1601 Lind Avenue SW., Renton, WA 98055–4056; telephone (425) 227–2799, or facsimile (425) 227–1149.

SUPPLEMENTARY INFORMATION:

Background

On December 17, 1986, the Boeing Commercial Airplane Company applied for a change to Type Certificate No. A20WE to include Model 747 series airplanes with overhead crew rest areas installed. The crew rest area was to be installed above the main passenger cabin in the vicinity of the Number 5 passenger door. This is an area that had not been used for this purpose in any previous transport category airplane. Due to the novel or unusual features associated with the installation of those crew rest areas, Special Conditions No. 25–ANM–16 were issued on November 13, 1987, to provide a level of safety equal to that established by the regulations incorporated by reference in the type certificate. Upon issuance, Special Conditions No. 25–ANM–16 became part of the regulations incorporated by reference in Type Certificate No. A20WE for Boeing 747 series airplanes.

Boeing Commercial Airplane Group now proposes certification of overhead crew rest areas that would be divided into three sections by a hard partition and a curtain. These crew rest areas, which would be in the same location, would be designated for in-flight use only and would include additional novel or unusual design features not incorporated in the previous crew rest areas. Because of these additional features, the regulations incorporated by reference in Type Certificate No. A20WE, including Special Conditions 25–ANM–16, do not contain adequate or appropriate safety standards. Special Conditions 25–ANM–16 would, therefore, be amended to contain the additional safety standards found necessary to establish a level of safety equivalent to that established in the regulations.

Discussion

A hard partition separates the crew rest area into forward and aft sections while a door in the partition provides access between the forward and aft sections. A curtain slides in the forward and aft directions to visually divide the aft section of the crew rest area. Item 3 of Special Conditions No. 25–ANM–16 requires that a stairway be installed between the main deck and the crew rest area. Additionally, there must be an alternate evacuation route for occupants of the crew rest area, located on the opposite side of the crew rest area or sufficiently separated within the compartment from the stairway. The installation of a hard partition creates an area within the crew rest area which does not have a means of egressing directly to the main cabin.

In addition to the partition, a curtain has been added to the crew rest area which further breaks up the crew rest area into sections. This was not considered in Special Conditions No. 25–ANM–16. The curtain and partition installation also reduces the accessibility to the emergency equipment and communication controls, and has the potential to prevent the occupants from being able to easily locate the primary and secondary escape means. This could cause additional confusion during an emergency.

Since the installation of a door in the crew rest area raises concerns about operational reliability during an in-flight emergency and since the related paragraphs of § 25.819 from which the original special conditions were developed require two evacuation routes, design features must be provided to assure that occupants of the forward section will be able to vacate the crew rest area in the event of an in-flight emergency. Additional emergency equipment and two-way communication equipment will also be required in the forward section since the equipment in the aft area will not be readily accessible to the forward section occupants in the event of an in-flight emergency.

A limitation in the Airplane Flight Manual or other suitable means requiring that crewmembers be trained in the use of the evacuation routes would be required.

The additional safety standards are contained in Item 13 of these amended special conditions. Items 1 through 12 are standards already adopted in Special Conditions No. 25–ANM–16.

Type Certification Basis

The Type Certification Basis for the Boeing Model 747 series prior to the 747–400 is Part 25 of the FAR effective February 1, 1965, as amended by Amendments 25–1 through 25–8, plus Amendments 25–15, 25–17, 25–18, 25–20, and 25–39, with certain exceptions and several sets of special conditions, which are identified in Type Certificate Data Sheet No. A20WE. These

exceptions are not pertinent to the subject of overhead crew rest areas.

The regulations incorporated by reference in Type Certificate No. A20WE for the Boeing Model 747–400 series airplanes include Part 25 of the FAR as amended by Amendments 25–1 through 25–59, with certain exceptions not relevant to the installation of an overhead crew rest area.

In addition, the regulations incorporated by reference for all 747 series include the noise certification requirements of Part 36 of the FAR, emission standards, and a number of special conditions, including Special Conditions No. 25–ANM–16.

If the Administrator finds that the applicable airworthiness regulations (i.e., Part 25 as amended) do not contain adequate or appropriate safety standards for the Boeing Model 747 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 of the FAR after public notice, as required by §§ 11.28 and 11.29(b), and become part of the type certification basis in accordance with § 21.101(b)(2).

Discussion of Comments

Notice of Proposed Special Conditions No. SC–97–4–NM for the Boeing Model 747 series airplanes, was published in the **Federal Register** on August 28, 1997 (62 FR 45589). Fourteen comments (from 4 different commenters) were received.

Four comments were submitted by The Boeing Company. One seeks to limit the applicability of the new requirements in Item 13 to new designs and wants clarification that prior certified designs should be exempt from the revisions to the special condition. The FAA is not aware of any previously certified crew rest configurations that are divided into sections by a partition with a door. However, the FAA agrees that the requirements of Item 13 are only applicable to new designs. Existing designs approved by Type Certificate (TC) or by Supplemental Type Certificate (STC) are not required to be modified and can continue to be delivered without any retroactive changes. Any new TC or STC projects that modify an existing crew rest area or install a crew rest area into a previously certificated aircraft will be required to comply with the new requirements contained in Item 13, if the rest area is divided into sections. Since Item 13 contains requirements pertaining only to crew rest areas that are divided into sections, the requirements for crew rest areas not divided into sections are unchanged.

Another comment suggests that Item 13, paragraph a., should be revised to prevent confusion. Paragraph a. states, ''* * * there must be an audible alert concurrent with automatic presentation of supplemental oxygen masks in each section of the crew rest, * * *''. Currently it is unclear whether the alerting method and/or the supplemental oxygen masks are required in each section of the crew rest area. The intent of paragraph a. was to require automatically presented supplemental oxygen in each section of the crew rest area. The presentation of the supplemental oxygen masks must be accompanied by an alert that can be heard in each section of the crew rest area. Paragraph a. has been revised to allow one alerting device to serve more than one section, provided it can clearly be heard in each section. Paragraph a. has also been clarified to identify that the supplemental oxygen masks are required in each section of the crew rest area.

Another comment objects to the requirement in Item 13, paragraph e., that requires doors installed between partitions to be frangible from either direction. It was proposed to change the requirement to state that, ''All doors installed must be designed to preclude anyone from being trapped inside the compartment.'' This proposed revision identifies door performance criteria rather than a specific design solution. The proposed revision is also consistent with the requirement that was applied to the 777–200 Lower Lobe Attendant Rest. For this crew rest area, Boeing proposes alternate means to open the partition door in the event it is jammed or inoperable. The door can be removed from the aft side by disconnecting the hinge pins. From the front side the striker mechanism can be defeated to open the door and access the evacuation routes. The FAA concurs with the comment. These alternative means of opening a jammed or blocked door are acceptable, and that consideration should be given to designs that meet the proposed performance criteria rather than require partition doors to be frangible from both sides. Item 13, paragraph e., of these amended special conditions has been revised accordingly.

Another comment seeks to change the requirements contained in Item 13, paragraph f. This paragraph requires two-way voice communication equipment and additional emergency equipment in each section of a crew rest created by the installation of a hard partition with a door. The proposed revision suggests that the additional equipment should only be required in section(s) that did not provide an escape route to the main deck. The rationale was that the overall area of the crew rest is unchanged, so the only reason the additional equipment would be needed is if the partition door were inoperable (blocked or jammed). If the door were blocked or jammed, the alternate escape route could be used, precluding the necessity for the additional two-way communication equipment and emergency equipment. The FAA disagrees this is the only reason to install the additional equipment. There are several other scenarios that the FAA has considered. There may be a need for the main deck flightcrew to alert the occupants of the crew rest area to an in-flight emergency in the passenger cabin. In this case, a phone in each section needs to be readily accessible. Another situation that may occur is the need for additional emergency equipment to fight a fire just outside a partition door. Accepting this comment could result in circumstances where a flight attendant may be forced to evacuate a crew rest area rather than retrieve the emergency equipment and fight a fire. This would be unacceptable. In this type of an emergency the two-way voice communication equipment is also necessary so that backup personnel can be contacted.

Two comments were received from a company that modifies aircraft interiors by STC projects. One comment was similar to the previously addressed comment regarding the requirements for frangible doors. The commenter thinks the requirement for a two-way frangible door is too restrictive and that other means of preventing entrapment within a compartment should be allowed. The commenter suggests that Item 13, paragraph e., could be applied to a lavatory door installed in the crew rest area. For an application such as a lavatory door, it was suggested that a removable panel in the door could adequately provide a means by which entrapment could be prevented. As discussed previously, the FAA agrees that other means to prevent entrapment should be considered and has revised Item 13, paragraph e., accordingly.

This commenter also suggests that the requirement for additional emergency equipment contained in Item 13, paragraph f., should not be applied to a small section such as a lavatory, since a lavatory is not expected to be occupied for extended periods of time. The FAA agrees with this comment and has revised Item 13, paragraph f., accordingly. In addition, Item 13, paragraph f., has also been revised using

the above rationale to remove the requirement for additional two-way voice communication equipment in areas that are only meant to be temporarily occupied.

A representative from the Association of Flight Attendants (AFA) submitted several comments. A summary of the AFA's position is that a crew rest area that is divided into sections by partitions and doors does not provide the same level of safety as the ''open'' configuration that was initially certified.

One comment from the AFA was that the hard partition and curtain block the lines of sight within the crew rest area. The visual obstructions could then reduce the situational awareness within the individual sections, should an emergency develop. The example given by the commenter is that with the previously approved open area, if a fire were to break out, all occupants would be able to immediately assess conditions throughout the crew rest area. The commenter also expresses concern that the partition and curtains would limit visibility of the primary and secondary evacuation routes. Although the situational awareness from visibility between the sections may be reduced, the FAA's position is that the new requirements for additional smoke detectors, decompression alarms, two-way voice communication equipment, and public address (PA) systems audible in each section adequately compensate for the reduced visibility. These systems will adequately alert the crew rest area occupants to emergencies in the crew rest area and to emergencies on the main deck of the aircraft.

In order to compensate for reduced visibility of the escape routes, exit signs have been required in each section of the crew rest area to assist the occupants in locating the primary exit. It should also be noted that the occupants of this crew rest area are required by Item 12 of these special conditions to receive additional training in the use of both the primary and alternate evacuation routes. After considering the requirement for additional occupant training, the additional signs required by Item 13, paragraphs d. and e., and the small confines of the overhead crew rest area, it has been determined that the installation of the hard partition and curtain are very unlikely to create a situation where the occupants would not be able to locate either of the escape routes. To assure that future installations don't propose what could be envisioned as a maze within the overhead crew rest area, Item 13, paragraph e., prohibits arrangements that would require the occupants to pass through more than one door before reaching the primary exit.

Another comment opposes installation of the partition door because of concerns for entrapment and the potential of the door to become a barrier to evacuation. There is no specific time requirement for evacuating the overhead crew rest area since it is not allowed to be occupied for taxi, takeoff and landing. Boeing has conducted certification testing that has shown that the door in the hard partition can be opened or removed should the door become blocked or jammed. The hinge pins can be removed from the aft side, and the striker mechanism can be defeated from the forward side; these operations can be accomplished in several seconds and are contrary to comments suggesting these features are difficult to operate. Since the door can be opened or removed in several seconds, the door cannot be considered an entrapment hazard or an impediment to egress. It should be noted that similar hinge pin designs and striker defeat mechanisms have been previously approved for other crew rest areas and lavatories.

A comment was also made that the door hinge pins should be relocated to the forward side of the partition door in conjunction with relocating the striker defeat mechanism to the aft side. There was no supportive reasoning provided for this recommendation, although it appears that the commenter believes that in the event the door is blocked or inoperable, it would be easier to evacuate the forward section of the crew rest area by removing the door from it's hinges than by defeating the striker mechanism. As was previously stated, the door design proposed by Boeing has been reviewed by the FAA, and has been found to provide an acceptable means to prevent entrapment.

Another comment suggests that a crash axe should be required in the forward compartment as a backup to the striker defeat mechanism. This suggestion will not be added to these special conditions. The partition door proposed by Boeing has been designed so that it cannot be jammed as a result of aircraft structural failure. Even if the door were jammed, it is possible to defeat the striker mechanism to gain access to the aft section of the crew rest area. If for some reason it were not possible to operate the striker defeat mechanism, the occupants of the forward section of the crew rest area could still use the two-way voice communication equipment required by Item 13, paragraph f., to summon additional help. Since this area is not allowed to be occupied for taxi, takeoff, and landing, there is no immediate need to be able to evacuate to the main deck. For this reason, the two-way voice communication equipment is considered an adequate backup to the striker defeat mechanism.

A comment was also submitted regarding the requirement for one additional protective breathing equipment (PBE) in the forward section of the crew rest. Concern was expressed that one additional PBE installed in the forward section of the crew rest area would not adequately protect all the occupants. The PBE's that are installed in the forward and aft sections are intended to be used for firefighting, not for providing breathable air for each crew rest occupant. There are no other crew rest areas that require one PBE per occupant. In the event of a fire in the crew rest area, it would be expected that one or two flight attendants would don the protective breathing equipment and stay to fight the fire while the others quickly evacuated to the main deck. For this reason, the one additional PBE in the forward section provides the same level of safety for a divided crew rest as has been provided for the previously certified open crew rest in that its installation assures accessibility of the emergency equipment deemed most critical, within each section of the crew rest area.

Another comment suggests that the leg rests on the double seats located directly aft of the partition door should be required to be stowed when not in use. For the Boeing 747–400 that was reviewed by the AFA, instructional placards have been installed that require the legrests be stowed in accordance with the commenter's suggestion. It is the FAA's position that it is not necessary to include this proposal in the revised special conditions, as the legrests do not affect the partition door operation and can be quickly stowed by anyone in the aft section of the crew rest area. As a normal function of certifying new crew rest configurations, this type of a potential egress hindrance would be evaluated and appropriate actions would be taken to ensure the effectiveness of the escape path.

Another comment from the AFA relates a near-fire incident inside a 747–400 crew rest where a blanket started smoldering in a crew rest bunk after having been in contact with a reading light. The commenter requests that fire retardant lights and materials be required in this area. The types of materials allowed in the overhead crew rest area are already addressed as part of the certification basis of the 747–400 which includes § 25.853, Amendment 59. In addition to the materials required

by § 25.853 Amendment 59, the crew rest area is also protected by a smoke detection system required by Item 10; Item 13, paragraph c.; and Item 13, paragraph f., that annunciates in the flight deck, even when the crew rest area is unoccupied. In regard to the specific incident identified by the commenter, Boeing has made design changes to replace the style of reading light involved in the near fire incident with a reading light design that puts out less heat.

One comment was received from the Air Line Pilots Association, who states that the location of the crew rest area would make it unsuitable for cockpit crews, but provided no supportive reasoning for its position.

It is the FAA's position that the additional criteria contained in Item 13 of these special conditions provides an equal level of safety for a divided crew rest as that established by the regulations incorporated by reference in Type Certificate No. A20WE.

Under standard practice, the effective date of final or amended special conditions would be 30 days after the date of publication in the **Federal Register**. However, since delivery of Model 747–400 airplanes with these additional novel or unusual design features is currently scheduled for October 24, 1997, and because a delay would significantly affect the applicant's installation and type certification of the crew rest area, the FAA finds that good cause exists for making these amended 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 affects only the manufacturer who applied to the FAA for approval of these features on the airplane.

List of Subjects in 14 CFR Part 25

Air transportation, Aircraft, Aviation safety, Safety.

The authority citation for these special conditions is as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701, 44702, 44704.

The Amended Special Conditions

Accordingly, pursuant to the authority delegated to me by the Administrator, the following amended special conditions are issued as part of the type certification basis for the Boeing Model 747 series airplanes.

1. Occupancy of the overhead crew rest area is limited to a maximum of 10 crewmembers. Occupancy during taxi, takeoff, or landing is not permitted.

2. There must be a stairway between the main deck and the crew rest area and there must be an alternate evacuation route for occupants of the crew rest area.

The stairway and alternate evacuation route must be located on opposite sides of the crew rest area or have sufficient separation within the compartment. The stairway and the alternate evacuation route must provide for evacuation of an incapacitated person, with assistance, from the crew rest area to the main deck, must not be dependent on any powered device, and must be designed to minimize the possibility of blockage which might result from fire, mechanical or structural failure. The crewmember procedures for carriage of an incapacitated person must be established.

3. An exit sign meeting the requirements of § 25.812(b)(1)(i) must be provided in the crew rest area near the stairway.

4. In the event the airplane's main power system should fail, emergency illumination of the crew rest area must be automatically provided. Unless two independent sources of normal lighting are provided, the emergency illumination of the crew rest area must be automatically provided if the crew rest area normal lighting system should fail. The illumination level must be sufficient for the occupants of the crew rest area to locate, and descend to the main deck by means of the stairway and/or the alternate evacuation route, and to read any required operating instructions.

5. There must be a means for two-way voice communication between crewmembers on the flight deck and occupants of the crew rest area, and between crewmembers and at least one flight attendant seat on the main deck and occupants of the crew rest area.

6. There must also be either public address speaker(s), or other means of alerting the occupants of the crew rest area to an emergency situation, installed in the crew rest area.

7. There must be a means, readily detectable by occupants of the crew rest area, that indicates when seat belts should be fastened and when smoking is prohibited.

8. For each occupant permitted in the crew rest area, there must be an approved seat or berth that must be able to withstand the maximum flight loads when occupied.

9. The following equipment must be provided:

a. At least one approved fire extinguisher appropriate to the kinds of fires likely to occur.

b. One protective breathing device, having TSO–C99 authorization or equivalent, suitable for firefighting.

c. One flashlight.

10. A smoke detection system that annunciates in the flight deck and is audible in the crew rest area must be provided.

11. A supplemental oxygen system equivalent to that provided for main deck passengers must be provided for each seat and berth.

12. There must be a limitation in the Airplane Flight Manual or other suitable means requiring that crewmembers be trained in the use of the evacuation routes.

13. The following requirements apply to crew rest areas that are divided into several sections by the installation of curtains or partitions.

a. To compensate for lack of crowd awareness, there must be an aural alert that can be heard in each section of the crew rest area that accompanies automatic presentation of supplemental oxygen masks in each section of the crew rest area. The supplemental oxygen masks are required in each section whether or not seats or berths are installed in each section. There must also be a means by which the flightcrew can manually deploy the oxygen masks.

b. A placard is required adjacent to each curtain that visually divides or separates the overhead crew rest area into small areas to serve a function of creating privacy. The placard must require that the curtain(s) remain open when the private area it creates is unoccupied. The vestibule area adjacent to the stairway is not considered a private area and, as such, its vacancy does not require a placard.

c. Each crew rest section created by the installation of a curtain must meet the requirements of items 4, 6, 7, and 10 of these special conditions with the curtain open or closed.

d. Overhead crew rest areas, which are visually divided to the extent that evacuation could be affected, must have exit signs meeting the requirements of § 25.812(b)(1)(i) in each separate area of the crew rest area which direct occupants to the primary stairway exit.

e. Sections within an overhead crew rest area that are created by the installation of a rigid partition with a door physically separating the sections must provide a secondary evacuation route from each section of the crew rest area to the main deck, or it must be shown that any door between the sections has been designed to preclude anyone from being trapped inside the compartment. Any door between the sections must be shown to be openable when crowded against. There can be no

more than one door between each section of a crew rest area and the primary stairway exit. Exit signs meeting the requirements of § 25.812(b)(1)(i) that direct occupants to the primary stairway exit must be provided in each section of the crew rest area.

f. Each smaller area, within the main crew rest area, created by the installation of a partition with a door must individually meet the requirements of items 4, 5, 6, 7, 9 and 10 of these special conditions with the door open or closed. The requirements of items 5 and 9 are not applicable to lavatories or other small areas that are not intended to be occupied for extended periods of time.

Issued in Renton, Washington, on October 23, 1997.

Darrell M. Pederson,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service, ANM–100.

[FR Doc. 97–29125 Filed 11–3–97; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 97–NM–268–AD; Amendment 39–10190; AD 97–23–02]

RIN 2120–AA64

Airworthiness Directives; Boeing Model 727–100 Series Airplanes Modified in Accordance With Supplemental Type Certificate (STC) SA8472SW

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that is applicable to certain Boeing Model 727–100 series airplanes. This action requires a revision to the Airplane Flight Manual (AFM) to prohibit stabilized operation between 60 and 75 percent N1 speed during ground operations in reverse or forward thrust. This amendment is prompted by a report that, during preparation for takeoff, a transport category airplane equipped with Rolls-Royce Tay 650–15 engines sustained an engine fan blade failure, followed by an engine fire. The actions specified in this AD are intended to prevent uncontained failure of engine fan blades due to high cycle fatigue cracking, which could result in loss of thrust from the affected engine and secondary damage to the airplane and/or fire.

DATES: Effective November 19, 1997.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of November 19, 1997.

Comments for inclusion in the Rules Docket must be received on or before January 5, 1998.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM–103, Attention: Rules Docket No. 97–NM–268–AD, 1601 Lind Avenue, SW., Renton, Washington 98055–4056.

The Airplane Flight Manual (AFM) Supplement referenced in this AD may be obtained from the Dee Howard Company, P.O. Box 469001, San Antonio, Texas 78246. This information may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Rotorcraft Directorate, 2601 Meacham Boulevard, Fort Worth, Texas; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Ron Filler, Flight Test Pilot, Airplane Certification Office, ASW–150, FAA, Rotorcraft Directorate, 2601 Meacham Boulevard, Fort Worth, Texas, 76137–4298; telephone (817) 222–5132; fax (817) 222–5960.

SUPPLEMENTARY INFORMATION: The Rijksluchtvaartdienst (RLD), which is the airworthiness authority for the Netherlands, recently notified the FAA that it received a report indicating that, during preparation for takeoff, a Fokker Model F28 Mark 0100 series airplane equipped with Rolls-Royce Tay 650–15 engines sustained an engine fan blade failure, followed by an engine fire.

Investigation revealed that five fan blades failed at the root area, three fan blades failed at mid-height, and the remainder were damaged severely. Further investigation revealed that all five fan blades failed due to rapid high cycle fatigue cracking with low cycle fatigue cracking origin. Evidence of rapid high cycle fatigue cracking indicates that an operational effect is causing high vibratory stresses. Rolls-Royce considers that the high cycle fatigue cracking was caused by vibration during previous thrust reverser applications.

Upon further investigation, the FAA has determined that Boeing 727QF airplanes have engine installation and service records that are similar to Fokker Model F28 Mark 0100 series airplanes. Boeing 727QF airplanes are Boeing Model 727–100 airplanes that have been modified in accordance with Supplemental Type Certificate (STC) SA8472SW, which includes the installation of Rolls-Royce Tay 651–54 engines.

The FAA has evaluated these findings and has determined that high-cycle fatigue cracking of the engine fan blades could cause uncontained failure of the engine fan blades. Such fatigue cracking, if not corrected, could result in loss of thrust from the affected engine and secondary damage to the airplane and/or fire.

Explanation of Relevant Service Information

The FAA has reviewed and approved Dee Howard Airplane Flight Manual (AFM) Supplement CR102–F–066, Change 19, dated October 2, 1997 (for Boeing 727QF airplanes), which prohibits stabilized operation between 60 and 75 percent N1 speed during ground operations in reverse or forward thrust. Accomplishment of the actions specified in the service document is intended to adequately address the identified unsafe condition.

Explanation of the Requirements of the Rule

Since an unsafe condition has been identified that is likely to exist or develop on other Boeing Model 727–100 series airplanes of this same type design registered in the United States, this AD is issued to require a revision to the Limitations Section of the FAA-approved AFM to prohibit stabilized operation between 60 and 75 percent N1 speed during ground operations in reverse or forward thrust.

These actions are required to be accomplished in accordance with the document described previously.

Determination of Rule's Effective Date

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire.