[Federal Register: July 30, 2007 (Volume 72, Number 145)]
[Rules and Regulations]
[Page 41433-41436]
From the Federal Register Online via GPO Access [wais.access.gpo.gov]
[DOCID:fr30jy07-5]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-27359; Directorate Identifier 2006-NM-042-AD; Amendment 39-15136; AD 2007-15-07]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 747-100, 747-100B, 747-200B, 747-200C, 747-200F, 747-300, 747SR, and 747SP Series Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Boeing Model 747-100, 747-100B, 747-200B, 747-200C, 747-200F, 747-300, 747SR, and 747SP series airplanes. This AD requires repetitive high frequency eddy current inspections for cracks of the fuselage skin at stringer 5 left and right between stations 340 and 350, and corrective actions if necessary. This AD results from reports of fatigue cracks in the fuselage skin near stringer 5 between stations 340 and 350. We are issuing this AD to detect and correct fatigue cracking of the fuselage skin near stringer 5. Cracks in this area could join together and result in in-flight depressurization of the airplane.

DATES: This AD becomes effective September 4, 2007.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of September 4, 2007.

ADDRESSES: You may examine the AD docket on the Internet at http://dms.dot.gov or in person at the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC.

Contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207, for service information identified in this AD.

FOR FURTHER INFORMATION CONTACT: Ivan Li, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6437; fax (425) 917-6590.

SUPPLEMENTARY INFORMATION:

Examining the Docket

You may examine the airworthiness directive (AD) docket on the Internet at http://dms.dot.gov or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Operations office (telephone (800) 647-5527) is located on the ground floor of the West Building at the street address stated in the ADDRESSES section.

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to certain Boeing Model 747-100, 747-100B, 747-200B, 747-200C, 747-200F, 747-300, 747SR, and 747SP series airplanes. That NPRM was published in the Federal Register on March 6, 2007 (72 FR 9877). That NPRM proposed to require repetitive high frequency eddy current inspections for cracks of the fuselage skin at stringer 5 left and right between stations 340 and 350, and corrective actions if necessary.

Comments

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

Support for the NPRM

Boeing concurs with the NPRM.

Request for Alternative Method of Repair

Air Transport Association (ATA) on behalf of its member United Parcel Service (UPS), requests that we allow the use of an alternate method of repair. UPS notes that "Boeing Alert Service Bulletin 747-53A2542 allows operators to install a repair in accordance with the Boeing 747-100/200/300 Structural Repair Manual (SRM) 53-30-03, provided that the repair is removed and replaced with the Boeing Service Bulletin 747-53-2272 modification prior to the threshold of AD 90-06-06." (We referred to Service Bulletin 747-53-2272, Revision 17, dated November 18, 1999; and Revision 18, dated May 16, 2002; as appropriate sources of service information for doing the terminating action specified in paragraph (g) of the NPRM.) UPS believes that this option is beneficial to operators, in that it would allow operators to effect repairs (if necessary) in an expedient manner, and that this is especially important given that the proposed initial inspection compliance time of 250 cycles may not be sufficient to allow accomplishing the initial inspection in a normal C-check environment. UPS believes that the NPRM should be re-formatted to more clearly specify inspection, repair, and terminating action requirements. Therefore, UPS requests that paragraph (f) be modified to include a standard repair per Boeing 747-100/200/300 SRM 53-30-03 as an acceptable alternative for repairing the crack(s), for airplanes which have not reached the incorporation threshold of AD 90-06-06 (20,000 flights is one incorporation threshold described by AD 90-06-06). The SRM repair would then be removed and replaced by the permanent repair per Service Bulletin 747-53-2272, Revision 18 or earlier, prior to reaching 20,000 total aircraft cycles (flights). Further, to clarify the inspection, repair and terminating action requirements, UPS provides a revised paragraph (f) and suggests new paragraphs (g) and (h), which would lead to re-identifying subsequent existing paragraphs.

We agree with UPS that the described SRM repair option is beneficial to operators and should be allowed. However, this option is already allowed. Paragraph (f) of the AD requires doing applicable

corrective actions in accordance with Boeing Alert Service Bulletin 747-53A2542, dated February 16, 2006. The corrective actions described in the alert service bulletin permit operators to choose the option of doing the SRM repair followed by eventual replacement with the permanent repair described in Boeing Service Bulletin 747-53-2272, Revision 18, dated May 16, 2002. Therefore, we have determined that the option described by UPS is already available to the operators, and no change is needed to the AD in this regard.

Change Made to Paragraph (b) of the AD

We have revised this action to clarify the effects of AD 90-06-06, amendment 39-6490 (55 FR 8374, March 7, 1990) on the repetitive inspection requirements of paragraph (f) of this AD. We have moved the reference to AD 90-06-06 from paragraph (b) to new paragraph (g) of this AD, and reidentified existing paragraphs (g) and (h) of this AD accordingly.

Change Made to Paragraph (g) of the AD

We have changed paragraph (g) of the AD to specify that the actions required in that paragraph must be done in accordance with a method approved by the Manager, Seattle Aircraft Certification Office, FAA, and that Boeing Service Bulletin 747-53-2272, Revision 18, dated May 16, 2002, and earlier revisions, are one approved method of compliance for doing the required actions. After the effective date of this AD, no revision of Service Bulletin 747-53-2272 other than Revision 18 is acceptable as an approved method of compliance. Further, as described above, we have re-identified existing paragraph (g) as paragraph (h) of this AD.

Clarification of Alternative Method of Compliance (AMOC) Paragraph

We have revised this action to clarify the appropriate procedure for notifying the principal inspector before using any approved AMOC on any airplane to which the AMOC applies.

Conclusion

We have carefully reviewed the available data, including the comments received, and determined that air safety and the public interest require adopting the AD with the changes described previously. We have determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Costs of Compliance

There are about 281 airplanes of the affected design in the worldwide fleet. This AD will affect about 92 airplanes of U.S. registry. The required inspection will take about 4 work hours per airplane, at an average labor rate of $80 per work hour. Based on these figures, the estimated cost of the inspection for U.S. operators is $29,440, or $320 per airplane, per inspection cycle.

For Group 2 airplanes (about 4 of U.S. registry), the mandatory terminating action for the repetitive inspections will take about 1,240 work hours, at an average labor rate of $80 per work hour. The manufacturer states that it will supply required parts to the operators at no cost. Based on these figures, the estimated cost of the terminating action for U.S. operators is $396,800, or $99,200 per airplane.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a "significant regulatory action" under Executive Order 12866;

(2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket. See the ADDRESSES section for a location to examine the regulatory evaluation.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39–AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

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

§ 39.13 [Amended]

2. The Federal Aviation Administration (FAA) amends § 39.13 by adding the following new airworthiness directive (AD):

2007-15-07 Boeing: Amendment 39-15136. Docket No. FAA-2007-27359; Directorate Identifier 2006-NM-042-AD.

Effective Date

(a) This AD becomes effective September 4, 2007.

Affected ADs

(b) Installing external skin doublers as required only for Group 2 airplanes by paragraph (h) of this AD, ends the repetitive inspections of the fuselage skin required by paragraph (f) of AD 2005-08-01, amendment 39-14053, only for the area near the flight deck windows modified by the external skin doublers.

Applicability

(c) This AD applies to Boeing Model 747-100, 747-100B, 747-200B, 747-200C, 747-200F, 747-300, 747SR, and 747SP series airplanes, certificated in any category; as identified in Boeing Alert Service Bulletin 747-53A2542, dated February 16, 2006.

Unsafe Condition

(d) This AD results from reports of fatigue cracks in the fuselage skin near stringer 5 between body stations 340 and 350. We are issuing this AD to detect and correct fatigue cracking of the fuselage skin near stringer 5. Cracks in this area could join together and result in in-flight depressurization of the airplane.

Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Inspections and Corrective Actions

(f) For any airplane that has not had external skin doublers installed around the left- or right-side Number 3 flight deck window in accordance with Boeing Service Bulletin 747-53-2272, Revision 18, dated May 16, 2002, or an earlier revision: Do the applicable actions described in paragraphs (f)(1) and (f)(2) of this AD. Do all the actions in and in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2542, dated February 16, 2006. Do the actions at the compliance times specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-53A2542, dated February 16, 2006, on the side(s) of the airplane on which the doubler installation has not been done; except where the service bulletin specifies compliance times after the date on the service bulletin, this AD requires compliance times after the effective date of this AD. Installing external skin doublers around the left- or right-side Number 3 flight deck windows in accordance

with Boeing Service Bulletin 747-53-2272, Revision 18, or an earlier revision, ends the repetitive high-frequency eddy current (HFEC) inspections required by this paragraph on the side of the airplane on which the doublers are installed. After the effective date of this AD, only Boeing Service Bulletin 747-53-2272, Revision 18, may be used to install the external skin doublers around the left- and right-side Number 3 flight deck windows.

(1) Do a HFEC inspection for cracks of the fuselage skin at stringer 5, between body stations 340 and 350; and do all applicable corrective actions before further flight.

(2) Repeat the HFEC inspection thereafter at the applicable interval specified in paragraph 1.E. of Boeing Alert Service Bulletin 747-53A2542, dated February 16, 2006.

Credit for Actions of Alternative AD

(g) For Group 1 airplanes only: External skin doublers installed around the left- or right-side Number 3 flight deck windows in accordance with the requirements of AD 90-06-06, amendment 39-6490, end the repetitive HFEC inspections required by paragraph (f) of this AD on the side of the airplane on which the doublers are installed.

Terminating Action

(h) For Group 2 airplanes only: Before accumulating 24,000 total flight cycles, or within 250 flight cycles after the effective date of the AD, whichever occurs later, install external skin doublers around the left- and right-side Number 3 flight deck windows; in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA. Boeing Service Bulletin 747-53-2272, Revision 17, dated November 18, 1999, and Revision 18, dated May 16, 2002, describe one approved method of compliance for doing the required actions. After the effective date of this AD, only Revision 18 is acceptable as an approved method of compliance. Accomplishing this action ends the repetitive inspections required by paragraph (f) of this AD.

Alternative Methods of Compliance (AMOCs)

(i)(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

(2) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Before using any approved AMOC on any airplane to which the AMOC applies, notify your appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD, if it is approved by an Authorized Representative for the Boeing Commercial Airplanes Delegation Option Authorization Organization who has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

Material Incorporated by Reference

(j) You must use Boeing Alert Service Bulletin 747-53A2542, dated February 16, 2006, to perform the actions that are required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference of this document in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207, for a copy of this service information. You may review copies at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington; or at the National

Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: http://www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued in Renton, Washington, on July 15, 2007.
Stephen P. Boyd,
Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.
[FR Doc. E7-14140 Filed 7-27-07; 8:45 am]