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[Page 18207-18210]
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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2004-19140; Directorate Identifier 2004-NM-84-AD; Amendment 39-14548; AD 2006-07-21]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 757 Airplanes Powered by Pratt & Whitney Engines

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 757 airplanes. This AD requires repetitive inspections for corrosion and cracking of the midspar fittings in the nacelle struts, and corrective actions if necessary. This AD also provides an optional terminating action for the repetitive inspections. This AD results from reports of corrosion and cracking on midspar fittings on the nacelle struts of several Boeing Model 757 airplanes. We are issuing this AD to detect and correct cracking in the midspar fittings of the nacelle struts, consequent reduced structural integrity of the struts, and possible separation of an engine and strut from the airplane.

DATES: This AD becomes effective May 16, 2006.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of May 16, 2006.

ADDRESSES: You may examine the AD docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street SW., Nassif Building, room PL-401, 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: Dennis Stremick, Aerospace Engineer, Airframe Branch, ANM-120S, Seattle Aircraft Certification Office, FAA, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 917-6450; fax (425) 914-6590.

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 Management Facility office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647-5227) is located on the plaza level of the Nassif 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 757 series airplanes. That NPRM was published in the Federal Register on September 21, 2004 (69 FR 56375). That NPRM proposed to require repetitive inspections for corrosion and cracking of the midspar fittings in the nacelle struts, and corrective actions if necessary. That NPRM also proposed to provide an optional terminating action for the repetitive inspections.

Explanation of Revised Service Information

Since we issued the NPRM, Boeing revised Special Attention Service Bulletin 757-54-0042, dated May 13, 1999, which was specified in the NPRM as the appropriate source of service information for accomplishing the proposed requirements of this AD. We have reviewed Boeing Service Bulletin 757-54-0042, Revision 1, dated July 7, 2005, which, among other changes, incorporates the information specified in Boeing Information Notices 757-54-0042 IN 01, dated July 22, 1999; 757-54-0042 IN 02, dated January 6, 2000; and 757-54-0042 IN 03, dated November 21, 2000; revises incorrect part number references; and contains a revised Figure 6.

Figure 6 of Service Bulletin 757-54-0042, Revision 1, specifies an optional action to replacing any cracked or corroded midspar fitting. That option involves one-time high-frequency eddy current (HFEC) and borescope inspections to detect corrosion or cracking within the fitting bolt holes. Revision 1 also describes the related repair of any cracked or corroded bolt hole; and repetitive detailed inspections and general visual inspections for recurrent corrosion or cracking of the repaired fitting until the fitting is replaced. We have determined that these new inspections and corrective actions are adequate to maintain airplane operational safety, and we have revised the AD to refer to Service Bulletin 757-54-0042, Revision 1, as the appropriate source of service information for accomplishing the requirements of the AD, except as discussed under "Difference Between Service Information and This AD."

Difference Between Service Information and This AD

Service Bulletin 757-54-0042, Revision 1, specifies to contact the manufacturer for instructions on how to repair certain conditions, but this AD requires repairing those conditions in one of the following ways:

- Using a method that we approve; or
- Using data that meet the certification basis of the airplane, and that have been approved by an Authorized Representative for the Boeing Commercial Airplanes Delegation Option Authorization Organization whom we have authorized to make those findings.

Comments

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

AD Not Applicable

One commenter, American Airlines, states that none of its airplanes are affected by this AD.

Request To Correct Errors in Service Information

Two commenters, ATA and UPS, request that we revise the service information. The commenters state that Boeing has released 3 INs that correct errors in the service bulletins, but that the INs are not FAA-approved. Therefore, the commenters assert that the INs should be incorporated in the service bulletin before the AD is released.

We agree with this request, as Boeing has revised the service bulletin to incorporate the INs as previously discussed. The AD has been changed to specify the revised service bulletin as the appropriate source of service information.

Request for Delayed Replacement of Fittings

One commenter, Boeing, requests that we allow up to 18 months to replace any midspar fitting following the detection of corrosion of that fitting. The commenter states that the additional inspections and actions specified in Service Bulletin 757-54-0042, Revision 1, will allow the airplane to operate safely for up to 18 months without replacing the corroded midspar fitting.

We agree with this request, as we have agreed to update the service information reference as previously discussed. We have revised paragraphs (h) and (i) of the NPRM and added new paragraph (j) to describe the corrective actions. We have added new paragraph (k) to describe optional investigative actions which would allow up to 18 months to replace any midspar fitting discovered with signs of corrosion or cracking; and to clarify the fitting repair, repetitive inspection, and replacement instructions of Service Bulletin 757-54-0042, Revision 1. We added new paragraph (m) to give credit for actions accomplished prior to the effective date of this AD in accordance with Boeing Special Attention Service Bulletin 757-54-0042, dated May 13, 1999. Consequently, we have re-identified existing paragraphs (j), (k), and (l) of the NPRM as paragraphs (l), (n), and (o) in this AD.

Request To Develop Non-Destructive Test for Cracking

One commenter, ATA, requests that a non-destructive testing (NDT) procedure for cracking be developed prior to the release of the final rule. This NDT procedure would apply to holes that display evidence of corrosion. The commenter states that, though such a procedure does not exist for Model 757 airplanes, such procedures do exist and are required for Model 767 airplanes.

We agree with this request. As discussed previously, Service Bulletin 757-54-0042, Revision 1, specifies new NDT procedures for HFEC and borescope inspections of the midspar fitting bolt holes, and we have revised the AD to require these inspections, if corrosion or cracking is found and the fitting is not immediately replaced with a new, improved fitting.

Request To Permit Continued Operation After Staining Discovered

One commenter, UPS, requests that continued operation be permitted after the discovery of staining on the fittings. The commenter states that fittings discovered to have corrosion stains after multiple repetitions of the 300-flight-cycle inspection should be inspected in greater detail to determine the extent of the corrosion. The commenter gives no technical justification for this request.

We do not agree with this request. The commenter asserts the service bulletin states that, after the discovery of staining, no corrective actions need be taken until several repetitions of the 300 flight cycle inspection have been accomplished, at which time further investigative actions would be appropriate. However, staining is evidence of active corrosion and stress corrosion cracking (SCC) is time dependent; the longer a corroded fitting remains in service with no corrective action, the more likely it becomes that a crack will start and propagate, with possible consequent failure of the fitting. We have not changed this AD in this regard.

Request To Reinstate 300-Flight-Cycle Inspection and Lubrication Interval

Two commenters, ATA and United Airlines, request that the 300-flight-cycle interval for inspection and lubrication originally specified by Special Attention Service Bulletin 757-54-0042 be reinstated. One commenter states that a general visual inspection of the midspar fittings revealed no corrosion or cracking. The commenters feel that inspection and lubrication performed every 300 flight cycles should permit airplane operation with adequate safety.

We do not agree with this request. We examined a midspar fitting, which showed major corrosion at the faying surface around one bolt hole with a crack emanating from that bolt hole. Further, another crack emanated from a second bolt hole. Therefore, we do not agree that inspection and lubrication as suggested by the commenters would provide adequate airplane safety. However, as previously discussed, Service Bulletin 757-54-0042, Revision 1, specifies HFEC and borescope inspections of the bolt holes of any cracked or corroded midspar fitting and, provided necessary corrective action is taken after those inspections, permits continued operation of the airplane as long as repetitive detailed inspections of any repaired fitting are performed until the fitting is replaced, and we have revised the AD to reflect this.

Request To Withdraw Proposed AD

One commenter, ATA, requests that we withdraw the proposed AD. The commenter states that the AD is not necessary, since only one midspar fitting has been found with cracking, and asserts operators should be able to wait to inspect, repair, and replace any subject midspar fittings until the Model 757 Strut Improvement Program (SIP) can be accomplished.

We do not agree. While the threshold for the SIP program is at twenty years (240 months) or 37,500 flight cycles, whichever occurs first, the cracked midspar fitting was discovered on an airplane that was about 17 years old and had accumulated less than 30,000 total flight cycles. Further, the damaged fitting showed two cracks that had propagated from SCC, and, as the suspect fittings are made of heat-treated 4330M stock, all mounting holes of such fittings are susceptible to SCC. The actions specified in this AD are necessary to ensure adequate airplane safety prior to accomplishing the SIP; therefore, the AD will not be withdrawn.

Request To Correct Threshold Limits

Two commenters, United Airlines and UPS, state that the threshold limits specified in the "Other Related Rulemaking" paragraph of the NPRM are incorrect. Though the commenters do not make a request or provide data to support this position, it appears the commenters wish us to revise those limits.

We do not agree. Although paragraph (d) of AD 2003-18-05, amendment 39-13296 (68 FR 53496, September 11, 2003), requires replacing the upper link of the strut in accordance with Boeing Service Bulletin 757-54-0036, dated May 14, 1998, prior to the accumulation of 27,000 total flight cycles for Model 757-200 airplanes or 29,000 total flight cycles for Model 757-200PF airplanes, the threshold for the entire SIP remains at 20 years or 37,000 flight cycles, whichever occurs first. Our intent was to give credit to operators who have already accomplished the SIP, but we acknowledge that discussing these threshold limits could have caused confusion. However, as the "Other Related Rulemaking" paragraph of the NPRM is not repeated in the final rule, no change is needed to this AD in this regard.

Explanation of Change to Applicability

We have revised the applicability of the existing AD to identify model designations as published in the most recent type certificate data sheet for the affected models.

Clarification of 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, as well as certain minor editorial changes. 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

This AD will affect about 410 airplanes worldwide. The following table provides the estimated costs for U.S. operators to comply with this AD.

ESTIMATED COSTS						
Action	Work hours	Average labor rate per hour	Parts	Cost per airplane	Number of U.S.-registered airplanes	Fleet cost
Inspection, per inspection cycle	3	\$65	None	\$195, per inspection cycle	338	\$65,910, per inspection cycle

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):

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

www.faa.gov/aircraft/safety/alerts/

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2006-07-21 Boeing: Amendment 39-14548. Docket No. FAA-2004-19140; Directorate Identifier 2004-NM-84-AD.

Effective Date

- (a) This AD becomes effective May 16, 2006.

Affected ADs

- (b) This AD is related to AD 2003-18-05.

Applicability

- (c) This AD applies to Boeing Model 757-200, and -200PF airplanes, certificated in any category; having line numbers 1 through 639 inclusive; powered by Pratt & Whitney engines.

Unsafe Condition

- (d) This AD results from reports of corrosion and cracking on midspar fittings on the nacelle struts of several Boeing Model 757 airplanes. We are issuing this AD to detect and correct cracking in the midspar fittings of the nacelle struts, consequent reduced structural integrity of the struts, and possible separation of an engine and strut from 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 for Group 1 Airplanes

- (f) For airplanes identified as Group 1 in Boeing Service Bulletin 757-54-0042, Revision 1, dated July 7, 2005—which is referred to after this paragraph as "the service bulletin": Within 18 months after the effective date of this AD, do general visual and detailed inspections for evidence of corrosion and/or cracking of the midspar fittings located in the nacelle struts, in accordance with the Accomplishment Instructions of the service bulletin. Repeat the inspections thereafter at intervals not to exceed 18 months until the requirements of paragraph (l) of this AD are accomplished.

Note 1: For the purposes of this AD, a general visual inspection is defined as: "A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made from within touching distance unless otherwise specified. A mirror may be necessary to ensure visual access to all exposed surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or droplight and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked."

Note 2: For the purposes of this AD, a detailed inspection is: "An intensive examination of a specific item, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as mirror, magnifying lenses, etc., may be necessary. Surface cleaning and elaborate procedures may be required."

Inspections for Group 2 Airplanes

(g) For airplanes identified as Group 2 in the service bulletin: Within 18 months after the effective date of this AD, identify the type of material used to make the midspar fittings, in accordance with Figure 4 of the Accomplishment Instructions of the service bulletin.

(1) If all four midspar fittings are made of 15-5PH CRES material, no further action is required by this AD.

(2) If any midspar fitting is made of 4330M material, do the inspections required by paragraph (h) of this AD.

(h) For Group 2 airplanes with any fittings made of 4330M material: After identifying the fitting material as required by paragraph (g) of this AD, but before further flight: Do a general visual inspection and a detailed inspection of the 4330M midspar fittings for evidence of corrosion and/or cracking, in accordance with the Accomplishment Instructions of the service bulletin. Repeat the inspections for corrosion and/or cracking thereafter at intervals not to exceed 18 months until the requirements of paragraph (l) of this AD are accomplished.

Cracking or Corrosion

(i) For Group 1 and Group 2 airplanes: If any evidence of corrosion or cracking is found during any action required by paragraph (f) or (h) of this AD, before further flight, perform the corrective actions of paragraph (j) of this AD or the optional investigative actions of paragraph (k) of this AD.

Corrective Actions

(j) Replace the affected midspar fitting with a new midspar fitting by accomplishing all of the applicable actions in accordance with the Accomplishment Instructions of the service bulletin. Replacement of an affected midspar fitting terminates the repetitive inspections required by paragraphs (f) and (h) of this AD for that fitting only.

Optional Investigative Actions

(k) Perform one-time high-frequency eddy current (HFEC) and borescope inspections of any cracked or corroded bolt hole; and, before further flight, perform the applicable actions of paragraph (k)(1) or (k)(2) of this AD; in accordance with the Accomplishment Instructions of the service bulletin.

(1) Repair corrosion damage or cracking of any bolt hole as specified in Figure 6 of the Accomplishment Instructions of the service bulletin; then accomplish paragraph (k)(1)(i) or (k)(1)(ii) of this AD as applicable.

(i) Perform repetitive detailed inspections of any repaired bolt hole in accordance with Figure 7 of the service bulletin, at intervals not to exceed 300 flight cycles or 75 days, whichever occurs first, until the fitting is replaced as specified in paragraph (l) of this AD. Replace the repaired fitting with a new, improved fitting no later than 18 months after the repair of the bolt hole, or prior to further flight if any further evidence of corrosion or cracking is found in that fitting during any inspection required by this paragraph. Replacement of any fitting terminates the inspections required by paragraphs (f), (h), and (k)(1)(i) of this AD for that fitting only.

(ii) Replace the midspar fitting with a new, improved fitting, in accordance with paragraph (j) of this AD. Replacement of any fitting terminates the inspections required by paragraph (f), (h), and (k)(1)(i) of this AD for that fitting only.

(2) If any corrosion damage or cracking found during any inspection required by this AD cannot be repaired in accordance with paragraph (k)(1) of this AD, and the service bulletin specifies to contact Boeing for appropriate action, before further flight, perform the actions in paragraph (k)(2)(i) or (k)(2)(ii) of this AD, as applicable.

(i) Repair the corrosion damage or cracking using a method approved in accordance with the procedures specified in paragraph (o) of this AD.

(ii) Replace the midspar fitting with a new, improved fitting, in accordance with paragraph (l) of this AD.

Optional Terminating Action

(l) Replacement of all of the midspar fittings with new, improved midspar fittings in accordance with the Accomplishment Instructions of the service bulletin terminates the repetitive inspections required by paragraphs (f), (h), and (k)(1)(i) of this AD.

Actions Accomplished Using Prior Version of Service Information

(m) Replacement of the midspar fitting(s) with new, improved fittings before the effective date of this AD in accordance with Boeing Special Attention Service Bulletin 757-54-0042, dated May 13, 1999, is considered acceptable for compliance with the applicable action specified in this AD. Inspection of any fitting accomplished in accordance with Boeing Special Attention Service Bulletin 757-54-0042, dated May 13, 1999, before the effective date of this AD, with no findings of cracking or corrosion, are considered acceptable for compliance with the inspection required by paragraph (f) or (h) of this AD, as applicable, for that fitting only.

Previous Nacelle Strut and Wing Modification

(n) Accomplishment of the nacelle strut and wing modification required by AD 2003-18-05 is considered acceptable for compliance with the requirements of this AD.

Alternative Methods of Compliance (AMOCs)

(o)(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) Before using any AMOC approved in accordance with 14 CFR 39.19 on any airplane to which the AMOC applies, notify the appropriate principal inspector in the FAA Flight Standards Certificate Holding District Office.

(3) An AMOC that provides an acceptable level of safety may be used for any replacement required by this AD, if it is approved by a Boeing Company Designated Engineering Representative who has been authorized by the Manager, Seattle ACO, to make those findings.

Material Incorporated by Reference

(p) You must use Boeing Service Bulletin 757-54-0042, Revision 1, dated July 7, 2005, 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 Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street SW., room PL-401, Nassif Building, Washington, DC; on the Internet at <http://dms.dot.gov>; or at the National Archives and Records Administration (NARA). For information on the availability of this material at the NARA, call (202) 741-6030, or go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on March 30, 2006.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 06-3381 Filed 4-10-06; 8:45 am]

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