[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [66 FR 8085 1/29/2001]

[Docket No. 99-NM-365-AD; Amendment 39-12091; AD 2001-02-07]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 767 Series Airplanes Powered by Pratt & Whitney Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain Boeing Model 767 series airplanes powered by Pratt & Whitney engines, that requires modification of the nacelle strut and wing structure. The actions specified by this AD are intended to prevent fatigue cracking in primary strut structure and consequent reduced structural integrity of the strut.
DATES: Effective March 5, 2001.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of March 5, 2001.

ADDRESSES: The service information referenced in this AD may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: James Rehrl, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2783; fax (425) 227-1181.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to certain Boeing Model 767 series airplanes powered by Pratt & Whitney engines was published in the **Federal Register** on July 10, 2000 (65 FR 42306). That action proposed to require modification of the nacelle strut and wing structure.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

Change the Word "Damage" Used in Paragraph (c)

One commenter requests that the word "damage" specified in paragraph (c) of the proposed rule be changed to "cracking or corrosion," to avoid unnecessary work and delays. The commenter states that, during accomplishment of the repair specified in paragraph (c) of the proposal, it encountered several conditions when approval was required for using oversized fasteners, tooling damage, tolerance changes, and minor trimming of parts.

The FAA concurs with the commenter's request. The definition of "damage," as described in this AD, is cracking or corrosion. But, with respect to the deviations specified, only the deviations that exceed currently published limits (Structural Repair Manual, process specifications defined in the service bulletin) would need an alternative method of compliance (AMOC). Paragraph (c) of this AD has been revised to add the words "cracking or corrosion" in parenthesis after the word "damage".

Approval of Repairs by Designated Engineering Representative (DER)

One commenter requests that the proposal include a provision for approval of AMOC's by a Boeing DER, instead of by the Manager of the Seattle Aircraft Certification Office (ACO). The commenter states that this provision will result in a more efficient and timely repair approval process. The FAA partially concurs with the commenter's request. Accomplishment of the repair in accordance with a method approved by the Manager is still acceptable, but paragraph (c) of this AD has been revised to add the DER approval as an option for accomplishment of the repair.

Clarify Certain Wording in Paragraph (a)

One commenter notes that certain wording in paragraph (a) of the proposal which states, in part, ". . . the conditions described in paragraphs 1 and 2 (interim inspection requirements) of page 67 have been met." The commenter recommends that the additional interim inspection requirements referred to in this paragraph be more apparent in the proposed AD. The FAA infers that the commenter is questioning what is meant by the term "conditions" as specified in paragraph (a) of the final rule. For that reason, paragraph (a) of this AD has been revised to define the word "conditions" as, ". . . the corrosion prevention and control program inspections as described in paragraphs 1 and 2 of Figure 1 have been met."

Revise Paragraph (a) to Reference Figure 1

One commenter requests paragraph (a) of the proposal be revised to reference Figure 1 of Boeing Service Bulletin 767-54-0080, dated October 7, 1999, instead of page 67. The commenter states that this change would prevent confusion if the service bulletin is revised in the future. The FAA concurs, because Figure 1 is on page 67 and includes the flight cycle threshold formula, paragraph (a) of the final rule has been revised to specify Figure 1.

Revise Service Information References

One commenter indicates the following:

1) There is a typographical error in one of the service bulletin numbers shown in the cost impact section and in paragraph (b) of the proposal. The proposal refers to Boeing Service Bulletin 767-53-0069; however, the number should be 767-54-0069;

2) Boeing Service Bulletin 767-54-0069, Revision 2, dated August 31, 2000, is the latest revision of the service bulletin specified in paragraph (b) of the proposal and should be referenced in the final rule;

3) Information notice (IN) 02, dated November 22, 1999, should be included for Boeing Service Bulletin 767-57-0053, Revision 2, specified in paragraph (b) of the proposal;

4) Boeing Service Bulletin 767-57A0070, dated March 2, 2000, should be added to the list of prior or concurrent service bulletins referenced in paragraph (b) of the proposal. The commenter notes that this service bulletin corrects a potential fatigue problem on certain early-production airplanes by removing and replacing the wing front spar outboard pitch load fitting with an improved design.

The FAA partially concurs with the commenter as follows:

1) The FAA has verified that there is a typographical error in the service bulletin number referenced in the proposal, as noted by the commenter, and the number has been corrected in the final rule.

2) Boeing Service Bulletin 767-54-0069, Revision 2, dated August 31, 2000, has been added to the final rule as an additional source of service information for accomplishment of the applicable actions as specified in the final rule. The actions described in Revision 2 are essentially the same as those in Revision 1, which was referenced in the proposal as the appropriate source of service information for accomplishment of certain prior or concurrent actions.

3) The FAA does not have a copy of IN 02, dated November 22, 1999, to Boeing Service Bulletin 767-57-0053, Revision 2. The commenter can provide this notice to the FAA with a request for an approval of an alternative method of compliance per paragraph (d) of this final rule.

4) The FAA has reviewed Boeing Alert Service Bulletin 767-57A0070, dated March 2, 2000, and has determined that, although that service bulletin specifies replacing the outboard pitch load fitting of the wing front spar with an improved design, it is not directly related to this final rule and will be addressed at a later time by a separate rulemaking action.

Request to Extend Compliance Time

One commenter requests that the compliance time required by paragraph (a) of the proposed AD be revised to allow for compliance at the later of the times specified. The commenter states that there is a concern with the threshold based on 20 years since the date of manufacture or "as defined by the flight cycle threshold formula" in paragraph (a) of the proposal, because the compliance time is "whichever occurs first." The commenter adds that it has met the requirements originally agreed upon and has planned accomplishment of the Strut Improvement Program (SIP) based on the optional flight cycle formula at the next (20C) maintenance check.

The FAA does not concur. In developing an appropriate compliance time for the modification specified in paragraph (a) of this AD, the FAA considered not only the degree of urgency associated with addressing the subject unsafe condition, but accomplishment of the required modification within an interval of time (the earlier of the times specified) that parallels normal scheduled maintenance for the majority of affected operators. However, under the provisions of paragraph (d) of the final rule, the FAA may approve requests for adjustments to the compliance time if data are submitted to substantiate that such an adjustment would provide an acceptable level of safety. No change to the final rule is necessary in this regard.

Recommendation to Add a Note

One commenter requests that the initial time of accomplishment for the additional interim inspection service bulletins referred to in paragraph (b) of the proposed rule be clarified. The commenter states that, at the all-operators' SIP meeting, held in November 1999, the manufacturer stated that the interim inspection service bulletins were only required prior to 20 years of age in-service, or within the individual service bulletin limits, whichever occurs later, if the flight cycle formula was used to exceed the 20-year calendar limit. The commenter further states that this is acceptable since these inspections would not be required on airplanes being modified at 20 years of age, and accomplishment of these inspections after 20 years of age would ensure continued safety. The commenter recommends a note be added after paragraph (a) of the proposed rule, as follows: "Note: If the flight cycle formula is used to defer modification accomplishment of service bulletin 767-54-0080 beyond 20 years of age, initial accomplishment of the inspections per the service bulletins listed in paragraph 2 of service bulletin 767-54-0080, Figure 1, must begin prior to 20 years of age, or within the individual service bulletin limits, whichever occurs later."

The FAA does not concur with the commenter's recommendation. Operators that want to use the flight cycle threshold formula must accomplish the referenced service bulletins prior to reaching 20 years since date of manufacture of the airplane. This means that by 20 years, the operator must have done either the terminating action in the service bulletin, or it must have performed at least the first recommended service bulletin inspection and the follow-on actions described in the service bulletin. No change to the final rule is necessary in this regard.

Request to Revise Cost Impact Information

Two commenters request the cost impact information in the proposal be revised. One commenter states that the prior and concurrent service bulletin requirements referenced in the proposal do not match the hours specified in the cost impact section. The commenter adds that the cost impact is significantly more than the cost estimate in the proposal or the work hours in the service bulletins, which will be allocated for warranty reimbursement given by the manufacturer. The commenter gave cost estimate comparisons of the additional work hours for access and close-up as specified in the service bulletins, and the costs it incurred accomplishing the actions.

A second commenter states that the actual labor for accomplishment of the actions specified in the proposal is significantly higher than the estimate in the service bulletins. The commenter notes that it will require a minimum of 2,978 work hours for its accomplishment of the actions, and the estimate does not include non-routine labor.

The FAA does not concur with the commenters' request. The economic analysis of the AD is limited only to the cost of actions actually required by the rule. It does not consider the costs of "on condition" actions, such as repairing damage to the airplane structure detected during a required inspection ("repair, if necessary"). Such "on-condition" repair actions would be required to be accomplished -- regardless of AD direction -- in order to correct an unsafe condition identified in an airplane and to ensure operation of that airplane in an airworthy condition, as required by the Federal Aviation Regulations. In addition, the FAA recognizes that, in accomplishing the requirements of any AD, operators may incur "incidental" costs in addition to the "direct" costs. The cost analysis in AD rulemaking actions, however, typically does not include incidental costs, such as the time required to gain access and close up; planning time; or time necessitated by other administrative actions. Because incidental costs may vary significantly from operator to operator, they are almost impossible to calculate. No change to the final rule is necessary in this regard.

Conclusion

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the changes previously described. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Cost Impact

There are approximately 233 airplanes of the affected design in the worldwide fleet. The FAA estimates that 76 airplanes of U.S. registry will be affected by this AD.

It will take approximately 708 work hours per airplane to accomplish the modification of the nacelle strut and wing structure described in Boeing Service Bulletin 767-54-0080, at an average labor rate of $60 per work hour. Required parts will be provided at no cost by the airplane manufacturer. Based on these figures, the cost impact of the modification required by this AD on U.S. operators is estimated to be $3,228,480, or $42,480 per airplane.

It will take approximately 106 work hours per airplane to accomplish the actions described in Boeing Service Bulletin 767-54-0069, Revision 1 or Revision 2, at an average labor rate of $60 per work hour. Required parts will be provided at no cost by the airplane manufacturer. Based on these figures, the cost impact of these required actions on U.S. operators is estimated to be $483,360, or $6,360 per airplane.

It will take approximately 1 work hour per airplane to accomplish the actions described in Boeing Service Bulletin 767-54-0083, at an average labor rate of $60 per work hour. Required parts will be provided at no cost by the airplane manufacturer. Based on these figures, the cost impact of these required actions on U.S. operators is estimated to be $4,560, or $60 per airplane.

It will take approximately 2 work hours per airplane to accomplish the actions described in Boeing Service Bulletin 767-54-0088, Revision 1, at an average labor rate of $60 per work hour. Required parts will be provided at no cost by the airplane manufacturer. Based on these figures, the cost impact of these required actions on U.S. operators is estimated to be $9,120, or $120 per airplane.

It will take approximately 20 work hours per airplane to accomplish the actions described in Boeing Service Bulletin 767-54A0094, Revision 1, at an average labor rate of $60 per work hour. Required parts will be provided at no cost by the airplane manufacturer. Based on these figures, the cost impact of these required actions on U.S. operators is estimated to be $91,200, or $1,200 per airplane.

It will take approximately 5 work hours per airplane to accomplish the actions described in Boeing Service Bulletin 767-57-0053, Revision 2, at an average labor rate of $60 per work hour. Based on these figures, the cost impact of these required actions on U.S. operators is estimated to be $22,800, or $300 per airplane.

It will take approximately 16 work hours per airplane to accomplish the actions described in Boeing Service Bulletin 767-29-0057, at an average labor rate of $60 per work hour. Required parts will be provided at no cost by the airplane manufacturer. Based on these figures, the cost impact of these required actions on U.S. operators is estimated to be $72,960, or $960 per airplane.

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

Regulatory Impact

The regulations adopted herein 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. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (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. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES."

List of Subjects in 14 CFR Part 39

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

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (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. Section 39.13 is amended by adding the following new airworthiness directive:

AIRWORTHINESS DIRECTIVE

Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
Federal Aviation
Administration

We post ADs on the internet at "av-info.faa.gov"

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).

2001-02-07 BOEING: Amendment 39-12091. Docket 99-NM-365-AD.

Applicability: Model 767 series airplanes powered by Pratt & Whitney engines, line numbers 1 through 663 inclusive, certificated in any category.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent fatigue cracking in primary strut structure and consequent reduced structural integrity of the strut, accomplish the following:

Modifications

(a) When the airplane has reached the flight cycle threshold as defined by the flight cycle threshold formula described in Figure 1 of Boeing Service Bulletin 767-54-0080, dated October 7, 1999, or within 20 years since the date of manufacture, whichever occurs first: Modify the nacelle strut and wing structure on both the left and right sides of the airplane, in accordance with the service bulletin. Use of the flight cycle threshold formula described in Figure 1 of the service bulletin is an acceptable alternative to the 20-year threshold, provided the corrosion prevention and control program inspections, as described in paragraphs 1 and 2 of Figure 1, have been met.

(b) Prior to or concurrently with the accomplishment of the modification of the nacelle strut and wing structure required by paragraph (a) of this AD; as specified in paragraph 1.D., Table 2, on page 8 of Boeing Service Bulletin 767-54-0080, dated October 7, 1999; accomplish the actions specified in Boeing Service Bulletins 767-54-0069, Revision 1, dated January 29, 1998, or Revision 2, dated August 31, 2000; 767-54-0083, dated September 17, 1998; 767-54-0088, Revision 1, dated July 29, 1999; 767-54A0094, Revision 1, dated September 16, 1999; 767-57-0053, Revision 2, dated September 23, 1999; and 767-29-0057, dated December 16, 1993, including Notice of Status Change NSC 1, dated November 23, 1994; as applicable; in accordance with those service bulletins. Accomplishment of this paragraph constitutes terminating action for the repetitive inspections required by AD 94-11-02, amendment 39-8918, and AD 99-07-06, amendment 39-11091.

Note 2: Paragraph (b) of this AD specifies prior or concurrent accomplishment of Boeing Service Bulletin 767-57-0053, Revision 2, dated September 23, 1999; however, Table 2, on page 8 of Boeing Service Bulletin 767-54-0080, dated October 7, 1999, specifies prior or concurrent accomplishment of the original issue of the service bulletin. Therefore, accomplishment of the applicable actions specified in Boeing Service Bulletin 767-57-0053, dated June 27, 1996, or Revision 1, dated October 31, 1996, prior to the effective date of this AD, is considered acceptable for compliance with the actions required by paragraph (b) of this AD.

Repair

(c) If any damage (corrosion or cracking) to airplane structure is found during the accomplishment of the modification required by paragraph (a) of this AD; and the service bulletin specifies to contact Boeing for appropriate action: Prior to further flight, repair in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA; or in accordance with data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative who has been authorized by the FAA to make such findings. For a repair method to be approved by the Manager, Seattle ACO, as required by this paragraph, the Manager's approval letter must specifically reference this AD.

Alternative Methods of Compliance

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle ACO. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

Note 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(f) Except as provided by paragraph (c) of this AD, the actions shall be done in accordance with the following Boeing service bulletins, as applicable:

Service Bulletin Number	Revision Level	Date
767-54-0080	Original	October 7, 1999
767-54-0069	1	January 29, 1998
767-54-0069	2	August 31, 2000
767-54-0083	Original	September 17, 1998
767-54-0088	1	July 29, 1999
767-54A0094	1	September 16, 1999
767-57-0053	2	September 23, 1999
767-29-0057	Original	December 16, 1993
767-29-0057 NSC 1	Original	November 23, 1994

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date

(g) This amendment becomes effective on March 5, 2001.

FOR FURTHER INFORMATION CONTACT: James Rehrl, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2783; fax (425) 227-1181.

Issued in Renton, Washington, on January 17, 2001.
Donald L. Riggin, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.