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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2000-NM-19-AD; Amendment 39-12517; AD 2001-24-01]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 767 Series Airplanes Powered by Pratt & Whitney Model PW4000 Series 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, that requires a one-time detailed visual inspection of certain wire bundles located in the aft section of the strut forward fairing panel of both engine struts to detect chafing damage, and repair or replacement of wiring, if necessary. This amendment also requires replacement of wires repaired by splicing and damaged wires that require splicing, and replacement of the support brackets of the existing wire bundles with new brackets and clamps, which would terminate the existing requirements. The actions specified by this AD are intended to prevent the potential for dual wire faults from grounded, separated, or shorted wires; which could result in inadvertent takeoff thrust overboost, in-flight loss of thrust, or engine shutdown.

DATES: Effective January 4, 2002.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of January 4, 2002.

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: Dennis Kammers, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2956; 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 was published in the Federal Register on June 5, 2001 (66 FR 30112). That action proposed to require a one-time detailed visual inspection of certain wire bundles located in the aft section of the strut forward fairing panel of both engine struts to detect chafing damage, and repair or replacement of wiring, if necessary. That action also proposed to require replacement of wires repaired by splicing and damaged wires that require splicing; and replacement of the support brackets of the existing wire bundles with new brackets and clamps, which would terminate the existing requirements.

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

Request To Allow Credit for Previous Inspections

One commenter, a member airline of the Air Transport Association of America, states that it has already accomplished the proposed inspection of the wire bundles located in the aft section of the strut forward fairing panel of both engine struts per Boeing Standard Wiring Practices Manual D6-54446 (hereinafter called the wiring practices manual), Subjects 20-10-13 and 20-30-12, and no damage was detected. The service instructions in the wiring practices manual include the same instructions as those included in the supplemental NPRM and Boeing Service Bulletin 767-73A0049, Revision 2, dated April 27, 2000. The commenter states that it is concerned about its ability to accomplish the required wire bundle inspection within the proposed compliance time of 180 days. Such a compliance time would require that inspections be accomplished "on the line" or "during overnight visits," which could result in scheduling problems. The FAA infers that the commenter considers that the final rule should allow credit for previous accomplishment of the inspection required by paragraph (a) per Revision 2 of the service bulletin or per certain sections of the wiring practices manual.

The FAA concurs that previous accomplishment of inspections, per Boeing Service Bulletin 767-73A0049, Revision 2, dated April 27, 2000, or per Boeing Standard Wiring Practices Manual D6-73A0049, Subjects 20-10-13 or 20-30-12, is adequate and provides an acceptable level of safety. However, in the original NPRM, paragraphs (a)(1), (a)(2), and (a)(3) specify corrective actions, not the inspection; and paragraph (a)(2) includes a reference to wiring practices manual, Subject 20-10-13, not Subject 20-30-12. The airplane manufacturer maintains that wiring practices manual, Subject 20-30-12, includes a more detailed inspection procedure than does Subject 20-10-13. In light of this information, in the final rule we have added a new Note 2 following paragraph (a) to give credit for the accomplishment of previous inspections per the referenced service bulletin or wiring practices manual. In addition, we have renumbered the succeeding notes in the final rule accordingly.

Request To Clarify the Corrective Action

One commenter requests clarification of the corrective action in paragraph (a)(2) of the supplemental NPRM, which proposes replacement of all spliced wires with new wires. The commenter states that Boeing Service Bulletin 767-73A0049 specifies that spliced wires are allowed in the area of inspection and as a temporary repair. If so, what is the reason for not considering that a correctly done splice is acceptable until the next C-check? If splices between the brackets are not allowed, an airline's workload will be increased significantly. The commenter points out that the wiring practices manual has never included procedures that allow splices under a clamp or support fitting.

The FAA concurs with the commenter's request, and we acknowledge that Boeing Service Bulletin 767-73A0049 specifies that spliced wires are acceptable as a temporary repair. However, we point out that in the supplemental NPRM, paragraph (a)(1) proposes a temporary repair except as provided by paragraph (a)(2), which proposes replacement of all spliced wires concurrently with

accomplishment of the terminating action specified by paragraph (b)(2). Although a temporary repair was specified for certain conditions, we agree that further clarification of the repair action is necessary. As a result, in the final rule we have revised paragraphs (a), (a)(1), and (a)(2) as follows. We moved the conditional action statement in paragraph (a)(1) regarding "if any chafing damage of any wire bundle is detected * * * " to paragraph (a). Paragraph (a)(2) cites paragraph (b) instead of paragraph (b)(2), which clarifies that both the inspection in paragraph (b)(1) and the replacement action in paragraph (b)(2) are required.

Request To Revise the Spares Paragraph

One commenter suggests revising paragraph (d) of the supplemental NPRM. (That paragraph is cited as paragraph (e) in the final rule.) The commenter contends that those requirements should be limited to only those areas specified for Model 767 series airplanes. The part numbers specified in the Boeing service bulletin are installed in other locations on Model 767 series airplanes in addition to those areas specifically addressed by the proposed AD. The commenter also states that the manufacturer intended that the service bulletin address only the specific bracket locations identified in the service bulletin. Further, the manufacturer did not intend to prevent installation of the referenced part number from other locations on Model 767 series airplanes.

The FAA concurs with the commenter's request, and considers that the manufacturer's intention was to limit installation of the support brackets to only certain locations. We have revised paragraph (e) in the final rule to clarify that the spares limitation applies only to the support brackets "located in the aft section of the strut forward fairing panel of both engine struts," as identified in Boeing Service Bulletin 767-73-0051, dated December 20, 2000.

Request To Use Another Type of Tape

One commenter requests approval to use DMS 2186A Type 2 tape (electrical insulation, self-adhering, or high-temperature) instead of TFE-2X Teflon wrap. The commenter states that some of the advantages of DMS 2186A Type 2 tape include: easy application due to elongation, which eases installation; a smooth wrap due to a self-adhering effect, unlike the Teflon tape; good resistance to burns, heat, and abrasion; and good dielectrical breakdown voltage.

The FAA partially concurs. We have determined that any of the Type 2 tapes listed in Subject 20-00-11 of the wiring practices manual are acceptable alternatives to the TFE-2X Teflon wrap specified in Boeing Service Bulletin 767-73A0049. However, the tapes listed in the wiring practices manual do not include DMS 2186A Type 2 tape. The FAA has determined that, if additional tape alternatives are necessary and they are not listed in the wiring practices manual, operators must submit a request for an alternative method of compliance, as provided by paragraph (f) of this AD. To clarify this, we have added a new paragraph (c) in the final rule to specify that any of the Type 2 tapes listed in Subject 20-00-11 of the wiring practices manual is an acceptable alternative to the TFE-2X Teflon wrap specified in the Boeing service bulletin. The succeeding paragraphs in the final rule are renumbered accordingly.

Request To Revise the Compliance Time in the Original NPRM

One commenter requests revising the compliance time for the replacement action in paragraph (a)(2) of the original NPRM. The commenter contends that the replacement action should occur "after the splice installation" rather than "after the effective date of this AD."

The FAA does not concur with the commenter's request. However, in the supplemental NPRM, we considered that it was necessary to clarify the corrective actions specified in the original NPRM. As a result, we made a number of changes in the supplemental NPRM. We revised paragraph (a)(2) and deleted paragraph (a)(3), but made no change to paragraph (a) or (a)(1). We also point out that

paragraph (a)(2) specifies replacement concurrently with the new terminating action specified by paragraph (b)(2). In developing that compliance time, we considered not only the degree of urgency associated with addressing the subject unsafe condition, but the manufacturer's recommendation as to an appropriate compliance time, availability of required parts, and the practical aspect of accomplishing the replacement action. In consideration of these factors, we find that 6,000 flight hours or 18 months "after the effective date of this AD" is appropriate. No change to the final rule is necessary in this regard.

To further clarify the corrective action in the final rule, we point out that the compliance time for the terminating action required by paragraph (b) is "within 6,000 flight hours or 18 months after the effective date of this AD, whichever occurs later," which represents the C-check interval for the majority of the affected fleet. We consider that this compliance time will allow operators that had accomplished the temporary splice repair to replace those repairs with new wire at an interval that coincides with a C-check.

Request To Clarify the Term "Splice"

One commenter requests clarification of the term "splice" in the original NPRM. The commenter states that in certain paragraphs of Boeing Service Bulletin 767-73A0049 and in paragraph 2.A of the wiring practices manual, Subject 20-10-13, the term "splice" is used incorrectly. That term does not apply to insulation or shield repairs, and we consider that the intent of the service bulletin and the original NPRM is to specify removing those wires that have been cut and mechanically reconnected.

The FAA does not concur that the term "splice" was used incorrectly in the original NPRM. However, we agree that the term was used incorrectly in certain paragraphs of the service bulletin and the wiring practices manual. In addition, the airplane manufacturer has informed the FAA that the term "splice," as used in paragraph 2.A.(6) of the wiring practices manual, should have been "damaged area." No change to the final rule is necessary in this regard.

Explanation of Changes Made to the Proposal

The applicability of the supplemental NPRM references Boeing Service Bulletin 767-73-0051, dated December 20, 2000, as the appropriate source of service information for determining the affected Model 767 series airplanes. The service bulletin references Service Bulletin Index Document D624T001, Part 3, for airplane variable number, line number, and serial number data. Because some operators may not readily have access to this secondary source of service information, the FAA has determined that the applicability of the AD should specify the affected airplane line numbers (i.e., line numbers 1 through 821, equipped with Pratt & Whitney PW4000 series engines), which were identified in the Summary of Boeing Service Bulletin 767-73-0051. The applicability of the final rule is changed accordingly.

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 185 Model 767 series airplanes of the affected design in the worldwide fleet. The FAA estimates that 79 airplanes of U.S. registry will be affected by this AD.

It will take approximately 2 work hours per airplane to accomplish the inspection action, and that the average labor rate is \$60 per work hour. Based on these figures, the cost impact of the inspection required by this AD on U.S. operators is estimated to be \$9,480, or \$120 per airplane.

It will take approximately 3 work hours per airplane to accomplish the replacement action, and that the average labor rate is \$60 per work hour. Required parts would cost approximately \$1,570 per airplane. Based on these figures, the cost impact of the replacement required by this AD on U.S. operators is estimated to be \$138,250, or \$1,750 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.

Sec. 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).

2001-24-01 Boeing: Amendment 39-12517. Docket 2000-NM-19-AD.

Applicability: Model 767 series airplanes, line numbers 1 through 821, equipped with Pratt & Whitney PW4000 series engines; 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 (f) 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 the potential for dual wire faults from grounded, separated, or shorted wires, which could result in inadvertent takeoff thrust overboost, in-flight loss of thrust, or engine shutdown, accomplish the following:

Detailed Visual Inspection

(a) Prior to the accumulation of 10,000 hours' time-in-service or within 180 days after the effective date of this AD, whichever occurs later: Do a one-time detailed visual inspection of the wire bundles located in the aft section of the strut forward fairing panel of both engine struts to detect chafing damage, per Boeing Service Bulletin 767-73A0049, Revision 3, dated December 20, 2000, or Revision 4, dated April 5, 2001. If any chafing damage of any wire bundle is found, do the actions required by paragraphs (a)(1) and (a)(2) of this AD at the times specified in those paragraphs.

Note 2: Inspections accomplished prior to the effective date of this AD per Boeing Service Bulletin 767-73A0049, Revision 2, dated April 27, 2000, or per Boeing Standard Wiring Practices Manual D6-73A0049, Subject 20-10-13 or 20-30-12, are considered acceptable for compliance with the applicable action specified in this AD.

Note 3: For the purposes of this AD, a detailed visual inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

Corrective Action

(1) Before further flight, repair the wire bundle per the service bulletin, except as provided by paragraph (a)(2) of this AD.

(2) Replace all spliced wires with new wires per the service bulletin, concurrently with accomplishment of the terminating action required by paragraph (b) of this AD.

Terminating Action

(b) Within 6,000 flight hours or 18 months after the effective date of this AD, whichever occurs later, do the actions specified in paragraphs (b)(1) and (b)(2) of this AD per the Accomplishment Instructions of Boeing Service Bulletin 767-73-0051, dated December 20, 2000.

(1) Do a detailed visual inspection of the wire bundles to detect chafing damage; if any damaged wires are found, replace the wires that require a splice repair with new wires concurrently with accomplishment of the terminating action specified in paragraph (b)(2) of this AD.

(2) Replace the existing support bracket of the wire bundle with a new bridge bracket, support bracket, and wire bundle clamps. Accomplishment of this replacement terminates the requirements of this AD.

(c) Any of the Type 2 tapes listed in Boeing Standard Wiring Practices Manual D6-54446, Subject 20-00-11, dated May 1, 2000, are acceptable alternatives to the TFE-2X Teflon wrap specified in Figure 1 of Boeing Service Bulletin 767-73A0049, Revision 3, dated December 20, 2000, or Revision 4, dated April 5, 2001.

Report Inspection Results

(d) Within 10 days after accomplishing the actions required by paragraph (a) or (b) of this AD: Report inspection results, as described in Boeing Service Bulletin 767-73A0049, Revision 3, dated December 20, 2000, or Revision 4, dated April 5, 2001, to Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Information collection requirements contained in this AD have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.) and have been assigned OMB Control Number 2120-0056.

Spares

(e) As of the effective date of this AD, no person shall install on any airplane any support bracket located in the aft section of the strut forward fairing panel of either engine strut, as identified in the "Existing Part Number" column of Paragraph 2.E. of Boeing Service Bulletin 767-73-0051, dated December 20, 2000.

Alternative Methods of Compliance

(f) 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 Aircraft Certification Office (ACO), FAA. 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 4: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permit

(g) Special flight permits may be issued per 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

(h) Except as provided by paragraph (c) of this AD, the actions shall be done in accordance with Boeing Service Bulletin 767-73A0049, Revision 3, dated December 20, 2000, or Boeing Service Bulletin 767-73A0049, Revision 4, dated April 5, 2001; and Boeing Service Bulletin 767-73-0051, dated December 20, 2000; as applicable. 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 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.

Effective Date

(i) This amendment becomes effective on January 4, 2002.

Issued in Renton, Washington, on November 16, 2001.

Kalene C. Yanamura,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 01-29323 Filed 11-29-01; 8:45 am]

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