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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2006-24952; Directorate Identifier 2006-NM-107-AD; Amendment 39-15157; AD 2007-16-18]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 767 Airplanes

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

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all Boeing Model 767 airplanes. This AD requires repetitive detailed inspections of the wire bundles, power drive unit (PDU) wiring, and wire attaching hardware, supports, and sleeving located in the forward and aft lower lobe cargo compartments, and corrective actions as necessary. This AD results from a fire in the forward lower lobe cargo compartment found shortly after airplane arrival. We are issuing this AD to detect and correct damage to wires in the forward and aft lower lobe cargo compartments, which could result in a potential short circuit and consequent fire in the forward and aft lower lobe cargo compartments.

DATES: This AD becomes effective September 25, 2007.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of September 25, 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: Elias Natsiopoulos, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 917-6478; 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 all Boeing Model 767 airplanes. That NPRM was published in the Federal Register on June 6, 2006 (71 FR 32489). That NPRM proposed to require repetitive detailed inspections of the wire bundles, power drive unit (PDU) wiring, and wire attaching hardware, supports, and sleeving located in the forward and aft lower lobe cargo compartments, and corrective actions as necessary.

Actions Since NPRM Was Issued

Since we issued the NPRM, Boeing has published Service Bulletin 767-25-0376, Revision 1, dated February 9, 2007, for Model 767-200, -300, and -300F series airplanes; and Service Bulletin 767-25-0377, Revision 1, dated February 9, 2007, for Model 767-400ER series airplanes. In the NPRM, we referred to the original issue of Boeing Service Bulletin 767-25-0376 and Boeing Service Bulletin 767-25-0377, both dated November 17, 2005, as appropriate sources of service information for accomplishing the repetitive inspections and corrective actions. The procedures in Revision 1 of the service bulletins are essentially the same as the procedures in the original issue of the service bulletins, except that the revised service bulletins replace all references to Task 25-52-00, "Cargo Compartment-Cleaning/Painting," of the Boeing 767 Airplane Maintenance Manual (AMM) with references to Task 20-60-02, "Cleaning to Remove Combustible Material Around Wiring." Therefore, we have revised paragraph (f) of this AD to refer to Revision 1 of the service bulletins as appropriate sources of service information for accomplishing the actions required by this AD. We have also added a new paragraph (g) to this AD allowing credit for actions accomplished before the effective date of this AD in accordance with the original issue of the service bulletins.

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

Air Transport Association (ATA), American Airlines, and United Airlines agree with the intent of the NPRM.

Request To Clarify the Cleaning Procedure

ATA, on behalf of its member United Airlines, states that Boeing Service Bulletin 767-25-0376, dated November 17, 2005, specifies cleaning the cargo compartments using Task 25-52-00-701 of the

Boeing 767 AMM. United Airlines further states that Task 25-52-00-701 specifies cleaning the entire compartment using solvents while removing insulation. United Airlines, therefore, requests the AMM task be clarified, since it believes that this task does not address the intent of the NPRM.

We agree, since the intent of the NPRM was to propose cleaning only wiring, wiring components, and the small area contacting the wiring in order to detect and correct damage that could be concealed by debris. As we mentioned previously, Boeing has issued Revision 1 to Service Bulletin 767-25-0376, which refers instead to Task 20-60-02, "Cleaning to Remove Combustible Material Around Wiring," of the Boeing 767 AMM. Paragraph (f) of this AD refers to Revision 1 of the service bulletin as the appropriate source of service information for Model 767-200, -300, and -300F series airplanes. No additional change to this AD is necessary in this regard.

Request To Revise Summary

Boeing requests that we revise the Summary section of the NPRM to specify that PDU stands for "power drive unit." Boeing states that PDU was incorrectly defined as "power display unit" in the NPRM. We agree and have revised this AD as requested.

Request To Increase the Estimated Work Hours

Boeing requests that we increase the estimated work hours from 6 hours to 20 hours for an airplane with a partial cargo compartment floor and to 22 hours for an airplane with a full cargo compartment floor. Boeing states that these numbers were provided in Boeing Service Bulletins 767-25-0376 and 767-25-0377, both dated November 17, 2005.

Although we agree with revising the estimated work hours found in the Costs of Compliance section of this AD, we disagree with using the estimate provided by the commenter. 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. The original issue and Revision 1 of Boeing Service Bulletins 767-25-0376 and 767-25-0377 state that the examination of the forward lower lobe cargo compartment takes 3 hours and the examination of the aft lower lobe cargo compartment takes 3 hours. The service bulletins also state that cleaning the forward and aft lobe cargo compartments takes 2 hours each. However, the NPRM did not include time to accomplish the cleaning. Therefore, we have updated the estimated work hours to 10 hours per airplane in this AD and have updated the estimated costs accordingly.

Request To Clarify the Unsafe Condition

Boeing requests we revise the Discussion section of the NPRM to clarify that crushed and chafed PDU power supply cables "along with other wire and wire support damage," if not corrected, could result in a potential short circuit and consequent fire in the forward and aft lower lobe cargo compartments. Boeing states that the statements in the Discussion section of the NPRM could lead a reader to believe that the fire occurred at the location of the crushed and chafed PDU power supply cables. Boeing further states that the fire occurred in the bilge approximately two feet below the PDUs, at a location where the airplane wiring is installed in close proximity to the insulation blankets.

We agree that the statement as written in the NPRM could lead a reader to believe that inspection and corrective actions should only be limited to the PDU power supply cables. The intent of the NPRM was to propose inspecting all wiring in the forward and aft lower lobe cargo compartment, not just the wiring associated with the PDU. Any wire or wiring components found to be damaged must be repaired to adequately address the unsafe condition of this AD. However, we have not revised this AD since the Discussion section of the NPRM is not carried over into a final rule.

Request To Reduce Compliance Time and Add Terminating Action

ATA, on behalf of its member United Airlines, requests that the FAA and Boeing pursue a more conclusive method of resolving the damage to wires in the cargo compartments. United Airlines states that the actions proposed in the NPRM are of limited value and do not address the root cause of the problem; the service bulletins provide procedures for cleaning and routinely inspecting the subject wire bundles, but do not provide any preventive or terminating action. United Airlines further states that even though it implemented the requirements of this AD into its maintenance program two years ago, it has found three additional occurrences on airplanes that have been cleaned and inspected. United Airlines states that the industry would benefit if the airplane manufacturer could lead a collaborative effort to (1) implement a way to prevent cargo debris from falling onto and into the high-voltage wiring runs and (2) address failures that have occurred under the clamps where debris was not the issue, including those failures that have occurred soon after cleaning and inspection. United Airlines, therefore, requests that we revise the NPRM to reduce the inspection and cleaning interval to 18 months, and that Boeing develop a terminating action.

We appreciate the commenter's concern to have the inspection and cleaning done more frequently. In developing an appropriate compliance time for this action, we considered the urgency associated with the subject unsafe condition, the practical aspect of accomplishing the required inspections within a period of time that corresponds to the normal scheduled maintenance for most affected operators, and the recommendations of the manufacturer. In light of these items, we have determined that the compliance time proposed in the NPRM is appropriate. Operators are always permitted to accomplish the requirements of an AD earlier than the specified compliance time. We have not changed this AD in this regard.

We agree with United Airline's suggestion for a collaborative effort to investigate the feasibility and implementation of preventive actions because preventive actions will more effectively address the root cause of the wiring damage. The FAA and Boeing have considered the following actions, and their feasibility, in preventing debris from falling onto wiring:

- Installing the full complement of floor panels.
- Installing conduit or sleeving over wire bundles.
- Rerouting the wire bundles to locations that are less exposed to debris.
- Performing good maintenance practices.

The full complement of floor panels is currently available as an option to operators, if they choose to have them installed. However, even if the full complement of floor panels is installed, the wiring is still susceptible to damage when the panels are removed for maintenance or other actions.

Conduit or sleeving over wire bundles is not a viable option, since the conduit/sleeving would be exposed to step-ons and dropped tools, which may crush the conduit/sleeving and damage the wires inside. Further, the conduit/sleeving would conceal any damage, making it less likely for the maintenance crew to detect the damage.

Rerouting the wire bundles to locations that are less exposed to debris is not feasible or recommended because it would be a major change. The modification would require structural changes to provide bundle supports, as well as require lengthening the wire bundles.

Good maintenance practices would substantially reduce the exposure of wiring to falling debris and minimize the occurrence of wire damage.

At this time, we have determined that repetitive inspections and cleaning will adequately address the unsafe condition. To delay this action would be inappropriate, since we have determined that an unsafe condition exists and that inspections must be conducted to ensure continued safety. We might consider additional rulemaking, however, if a preventive modification is developed by the airplane manufacturer. Operators may also request, under the provisions of paragraph (h) of this AD, an alternative method of compliance (AMOC) if sufficient data are submitted to substantiate that such a design change would provide an acceptable level of safety. Therefore, we have not revised this AD in this regard.

We also agree that the cable clamps should be inspected, since history has shown that the wires under the cable clamps can be damaged not only by falling debris but also by other conditions. The commenter's statement regarding clamp failures implies that the NPRM and service bulletins only address wiring damage caused by falling debris. However, the procedures in the service bulletins, which are mandated by this AD, specify to inspect all wiring components to detect and correct damage caused by any environmental condition, not just falling debris. The inspection applies to all wire cable clamps, regardless of location. Further, experience has shown that wiring damage is often caused by poor maintenance practices. The corrective actions for the cable clamps are part of routine maintenance per the Boeing 767 Standard Wiring Practices Manual, which is referenced in the applicable service bulletin. We have not revised this AD in this regard.

Request To Revise Discussion

Boeing requests that we revise the Discussion section of the NPRM to state that the source of the fire was near the bottom of the bilge below the 13L and 14L PDUs. As justification, Boeing states that this is the location where the airplane wiring for the suspect PDUs is installed. Boeing also requests that we revise the Discussion section of the NPRM to state that investigation revealed that the flammable debris had accumulated "(in the bilge)" below the 13L and 14L PDUs.

Although we agree that a portion of the suspect PDU wiring is routed near the bottom of the bilge, none of the reports specified the exact point of initiation of the fires. Further, the Boeing service bulletins state that: "It was found that flammable debris collected below the 13L and 14L PDUs; but the source of ignition was not positively identified." The NPRM correctly identified the location of the accumulated debris as being in the area below the 13L and 14L PDUs, which includes the bilge. Therefore, no change to this AD is necessary in this regard.

Request To Revise the Applicability

ABX Air states that the PDUs and associated wiring have been removed on 24 of its airplanes in accordance with a supplemental type certificate. ABX Air asserts these airplanes are not susceptible to the unsafe condition identified in the NPRM. Therefore, ABX Air requests that we revise the applicability to as follows:

This AD applies to all Boeing Model 767-200, -300, -300F, and -400ER series airplanes equipped with a powered cargo handling system in the forward or aft lower lobe compartment, certificated in any category.

We disagree with limiting the applicability of the AD as proposed by the commenter. To adequately address the unsafe condition, this AD requires an inspection of all wires and wiring components in the forward and aft lower cargo compartments, not just the PDU and associated wiring. If the PDU, associated wiring, and all other wires and wiring components have also been removed on the commenter's airplanes, then no further action is required by this AD. However, the operator must still apply for an AMOC for relief from the requirements of this AD. Under the provisions of paragraph (h) of this AD, we may consider requests for approval of an AMOC if sufficient data are submitted to substantiate that such a design change would provide an acceptable level of safety. We have not changed this AD in this regard.

Request To Extend Compliance Time

ATA, on behalf of its member American Airlines, requests that we extend the compliance time for the repetitive inspection to 74 months or 30,000 flight hours, whichever occurs first. In the

NPRM, we proposed a repetitive interval of 72 months or 24,000 flight hours, whichever occurs first. American Airlines states that it schedules main base visits (MBVs) every 18 months for Model 767 airplanes. It also uses flex scheduling, which allows for scheduling an extra 10 percent calendar time depending on the history of the airplane. American Airlines states the NPRM proposes the repetitive inspection every fourth MBV, and that it accomplishes the fourth MBV at a maximum of 4 times 18 plus 10 percent, which is equal to 73.8 months. American Airlines further states that it can fly an airplane almost 27,800 flight hours between fourth MBVs, which includes the extra 10 percent due to flex scheduling. American Airlines asserts that the compliance time it proposes will keep airplanes safe for the flying public. American Airlines states that the FAA can avoid the cost of processing a request for an AMOC if the compliance time is extended as it proposes.

We disagree with extending the compliance time. In developing an appropriate compliance time for this action, we considered the urgency associated with the subject unsafe condition, the practical aspect of accomplishing the required inspections within a period of time that corresponds to the normal scheduled maintenance for most affected operators, and the recommendations of the manufacturer. In light of these items, we have determined that the compliance time proposed in the NPRM is appropriate. However, according to the provisions of paragraph (h) of this AD, we might approve requests to adjust the compliance time if the request includes data that prove that the new compliance time would provide an acceptable level of safety. We have not changed this AD in this regard.

Request To Revise Costs of Compliance

American Airlines estimates that the cost of complying with the NPRM will require approximately 6 work hours per airplane at a cost of \$563, every six years. We infer the commenter would like us to revise the estimated costs in this AD.

We disagree with revising the estimated costs for this AD. In determining those costs we used the estimated work hours provided in the Boeing service bulletins. As stated previously, we have updated the estimated work hours in this AD to reflect a higher cost for accomplishing the cleaning and inspections required by this AD. Therefore, we have not changed this AD in this regard.

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. 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 857 airplanes of the affected design in the worldwide fleet. This AD affects about 374 airplanes of U.S. registry. The required inspections take about 10 work hours per airplane, at an average labor rate of \$80 per work hour. Based on these figures, the estimated cost of the AD for U.S. operators is \$299,200, or \$800 per airplane, 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):



2007-16-18 Boeing: Amendment 39-15157. Docket No. FAA-2006-24952; Directorate Identifier 2006-NM-107-AD.

Effective Date

- (a) This AD becomes effective September 25, 2007.

Affected ADs

- (b) None.

Applicability

- (c) This AD applies to all Model 767-200, -300, -300F, and -400ER series airplanes, certificated in any category.

Unsafe Condition

- (d) This AD results from a fire in the forward lower lobe cargo compartment found shortly after airplane arrival. We are issuing this AD to detect and correct damage to wires in the forward and aft lower lobe cargo compartments, which could result in a potential short circuit and consequent fire in the forward and aft lower lobe cargo compartments.

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.

Repetitive Inspections and Corrective Actions if Applicable

- (f) Within 36 months after the effective date of this AD, do detailed inspections for damage to the wire bundles, power drive unit wiring, and wire attaching hardware, supports, and sleeving located in the forward and aft lower lobe cargo compartments; and do all applicable corrective actions before further flight after the inspections; by accomplishing all of the actions specified in the Accomplishment Instructions of Boeing Service Bulletin 767-25-0376, Revision 1, dated February 9, 2007 (for Model 767-200, -300, and -300F series airplanes); or Boeing Service Bulletin 767-25-0377, Revision 1, dated February 9, 2007 (for Model 767-400ER series airplanes); as applicable. Repeat the inspections thereafter at intervals not to exceed 24,000 flight hours or 72 months, whichever occurs first.

Credit for Actions Accomplished According to Previous Issues of Service Bulletins

- (g) Actions accomplished before the effective date of this AD in accordance with Boeing Service Bulletin 767-25-0376, dated November 17, 2005 (for Model 767-200, -300, and -300F series

airplanes); or Boeing Service Bulletin 767-25-0377, dated November 17, 2005 (for Model 767-400ER series airplanes); are considered acceptable for compliance with the corresponding actions specified in paragraph (f) of this AD.

Alternative Methods of Compliance (AMOCs)

(h)(1) The Manager, Seattle Aircraft Certification Office, 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.

Material Incorporated by Reference

(i) You must use Boeing Service Bulletin 767-25-0376, Revision 1, dated February 9, 2007; or Boeing Service Bulletin 767-25-0377, Revision 1, dated February 9, 2007; as applicable; 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 these documents 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 August 2, 2007.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. E7-16106 Filed 8-20-07; 8:45 am]