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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2010-0127; Directorate Identifier 2009-NM-242-AD; Amendment 39-16547; AD 2010-26-08]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Model 767 Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for the products listed above. This AD requires a detailed inspection of the entryway door movable ceiling panel for pin migration at either end of the hinge assembly and damage to the pin; a detailed inspection for correct crimp at both ends and damage to hinge stock; a detailed inspection of the ceiling area for any visible cosmetic and/or tie-rod chafing that could be caused by a migrated hinge pin; a detailed inspection for wire damage and/or breakage; and other specified and corrective actions if necessary. This AD results from reports of fault messages caused by improperly crimped hinge pins coming into contact with wires and causing damage. We are issuing this AD to detect and correct improperly crimped hinge pins, which could damage tie rods and wire bundles, causing shorts in many systems, including the spar fuel shut-off valve, oxygen mask deployment, and burned wires, which could be an ignition source in a hidden area of the airplane.

DATES: This AD is effective February 1, 2011.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of February 1, 2011.

ADDRESSES: For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; e-mail me.boecom@boeing.com; Internet <https://www.myboeingfleet.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Stephen Styskal, Cabin Safety and Environmental Systems Branch, ANM-150S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6439; fax (425) 917-6590.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an airworthiness directive (AD) that would apply to the specified products. That NPRM was published in the Federal Register on February 22, 2010 (75 FR 7557). That NPRM proposed to require a detailed inspection of the entryway door movable ceiling panel for pin migration at either end of the hinge assembly and damage to the pin; a detailed inspection for correct crimp at both ends and damage to hinge stock; a detailed inspection of the ceiling area for any visible cosmetic and/or tie-rod chafing that could be caused by a migrated hinge pin; a detailed inspection for wire damage and/or breakage; and other specified and corrective actions if necessary.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal and the FAA's response to each comment.

Support for the NPRM

Air Line Pilots Association, International (ALPA) and UPS support the intent of the NPRM.

Request To Clarify the Compliance Requirements in Paragraph (g) of the NPRM

Boeing requested that we clarify the compliance requirements and associated compliance times in paragraph (g) of the NPRM. Boeing stated that the phrase "all applicable other specified and corrective actions" is stated twice, and as a result, the requirements are interpretive and misleading. Boeing pointed out that the proposed requirement to do these actions before further flight is misleading.

We agree to clarify. Other specified actions include re-partmarking the moveable panel ceiling and the hinge assemblies, if necessary. Corrective actions include crimping the hinge assembly, repairing tie-rod chafing, repairing wire damage, and replacing the hinge assembly. The phrase is stated twice, and each phrase has a different purpose. The first purpose is to state that the actions must be done in accordance with Boeing Service Bulletin 767-25-0477, dated August 27, 2009. The second purpose is to state that the other specified and corrective actions must be done before further flight if any pin migration, improper crimping, tie-rod damage or wire damage was found. We have revised paragraph (g) of this AD to clarify the intent.

Request To Revise the Unsafe Condition

Boeing asked that we revise the second sentence of paragraph (e) to state that "The FAA is issuing this AD to detect and correct improperly crimped hinge pins, which could damage tie rods and wire bundles, causing shorts in many systems." Boeing stated that it has determined the probability of an airplane-level hazard to be extremely remote, and disagrees with the references to the spar shut-off valve, oxygen masks, and flammability-related concerns.

We disagree with the request to revise the unsafe condition because the unsafe condition description as written accurately reflects valid safety concerns.

Regarding the spar fuel shut-off valve, although the wiring is redundant, a short to ground will cause the valve circuit breaker to trip, resulting in the valve remaining in the last commanded position. If the valve fails in the open position, it may not be possible to isolate fuel flow from the tanks to the engine during an engine fire. This would be a latent failure of a required system function. While the engine fuel valve may still be available to the flight crew to stop fuel flow to the engine in an emergency, unavailability of the spar fuel shut-off valve eliminates the required isolation capability of the fuel system upstream of the engine.

In regard to the airplane's oxygen system, while failure of the oxygen mask deployment system does not pose a significant airplane-level hazard, unavailability of the oxygen system could consequently result in exposing the passengers and cabin attendants to hypoxia following a depressurization event.

In regard to the flammability-related concerns, while self-extinguishing and fire-resistant materials are used throughout the airplane, burned wires have resulted from migrated hinge pins and are a potential ignition source in a hidden area.

We have not changed the AD in regard to these issues.

Request To Clarify Requirements for Alternative Method of Compliance (AMOC)

Continental Airlines (CAL) stated that it has addressed the safety issue in accordance with Boeing Service Request 1-132547518, dated October 18, 2005, and requested clarification on the possibility of receiving approval of an alternative method of compliance (AMOC) based on its findings and corrective actions.

We agree to clarify the requirements to receive approval of an AMOC. Under the provisions of paragraph (h) of this AD, we will consider approving any alternative method of compliance if the proposal provides an acceptable level of safety. However, additional substantiation may be required for an AMOC approval based on existing service information and as such, applicants will need to request an AMOC approval in accordance with paragraph (h) of this AD. We have not changed the AD in regard to this issue.

Request To Clarify Inspection Requirements for Wire Bundles

UPS requested that Boeing Service Bulletin 767-25-0477, dated August 27, 2009, be revised to clarify and provide better detail regarding which wire bundles to inspect for damage. UPS stated that this service bulletin does not provide enough detail to properly identify the wire bundles that need to be inspected if a hinge pin is found to have migrated. UPS stated that the "approximate location of damage wire bundles" as stated in Boeing Service Bulletin 767-25-0477, dated August 27, 2009, could allow maintenance personnel to miss damaged wire bundles since it does not specify the location or the wire bundle numbers.

In response to the request from UPS to provide additional detail about wire bundle locations, Boeing Service Bulletin 767-25-0477, dated August 27, 2009, indicates that damaged wire bundles should be located in the vicinity of the migrated pin. The detailed inspections required by this AD cover multiple areas, and we cannot predict which wire bundles may be damaged. Boeing Service Bulletin 767-25-0477, dated August 27, 2009, provides an adequate level of detail to perform the

required inspections. Boeing might revise Boeing Service Bulletin 767-25-0477, dated August 27, 2009, in the future, and we might consider additional rulemaking at that time. We have not changed the AD in regard to this issue.

Request To Remove Model 767-300F Airplanes From the Applicability of the NPRM

UPS requested that we remove Model 767-300F airplanes from the applicability of the NPRM. UPS stated that the wire bundles that are subject to the inspections specified in Boeing Service Bulletin 767-25-0477, dated August 27, 2009, for Model 767-300F airplanes only consist of wiring for the crew entry door dome light, and does not consist of wiring for the other systems that are called out by the NPRM. UPS stated that it believed that Boeing supports this statement. UPS stated that it has not experienced any dome light system shorts or burned wires in this area.

We disagree with the request. While the wire bundle that is in close proximity to the ceiling panel hinge pin may indeed contain wiring for the crew entry door dome light, it is possible that additional wiring for other systems is also susceptible to damage from a migrating hinge pin. The wiring that could be affected by a migrating ceiling panel hinge pin on the Model 767-300F includes wiring for the same systems that could be affected by a migrating hinge pin on Model 767-200, -300, and -400ER airplanes. In addition, although UPS has not encountered wire chafing due to a migrating hinge pin, hinge pins have migrated on other airplanes, and wiring damage has resulted. We have not changed the AD in regard to this issue.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting the AD with the change described previously.

Costs of Compliance

We estimate that this AD affects 273 airplanes of U.S. registry.
 We estimate the following costs to comply with this AD:

Estimated costs				
Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspections	6 work-hours X \$85 per hour = \$510	\$770	\$1,280	\$349,440

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

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),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) 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.

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 FAA amends § 39.13 by adding the following new airworthiness directive (AD):



2010-26-08 The Boeing Company: Amendment 39-16547; Docket No. FAA-2010-0127; Directorate Identifier 2009-NM-242-AD.

Effective Date

- (a) This AD is effective February 1, 2011.

Affected ADs

- (b) None.

Applicability

(c) This AD applies to The Boeing Company Model 767-200, -300, -300F, and -400ER series airplanes, certificated in any category; as identified in Boeing Service Bulletin 767-25-0477, dated August 27, 2009.

Subject

- (d) Air Transport Association (ATA) of America Code 25: Equipment/Furnishings.

Unsafe Condition

(e) This AD results from reports of fault messages caused by an improperly crimped hinge pins on the movable ceiling panel of the entryway door on the forward left side coming into contact with wires and causing damage. The Federal Aviation Administration is issuing this AD to detect and correct improperly crimped hinge pins, which could damage tie rods and wire bundles, causing shorts in many systems, including the spar fuel shut-off valve, oxygen mask deployment, and burned wires, which could be an ignition source in a hidden area of the airplane.

Compliance

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

Inspections and Corrective Actions

(g) Within 72 months after the effective date of this AD: Accomplish the inspections required by paragraphs (g)(1), (g)(2), (g)(3), and (g)(4) of this AD, and do all applicable corrective actions and part marking, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 767-25-0477, dated August 27, 2009. If, during the following inspections, any pin migration, improper crimping, tie-rod damage, or wire damage is found, do all applicable corrective actions, in accordance with Boeing Service Bulletin 767-25-0477, dated August 27, 2009, before further flight.

(1) A detailed inspection for pin migration at either end of the hinge assembly and to detect damage to the pin.

- (2) A detailed inspection for correct crimp at both ends and to detect damage to hinge stock.
- (3) A detailed inspection of the ceiling area for any visible cosmetic and tie-rod chafing that could be caused by a migrated hinge pin.
- (4) A detailed inspection for wire damage and breakage.

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 using the procedures found in 14 CFR 39.19. Send information to ATTN: Stephen Styskal, Aerospace Engineer, Cabin Safety and Environmental Systems Branch, ANM-150S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6439; fax (425) 917-6590. Or, e-mail information to 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(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 principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards District Office. The AMOC approval letter must specifically reference this AD.

Related Information

(i) For more information about this AD, contact Stephen Styskal, Aerospace Engineer, Cabin Safety and Environmental Systems Branch, ANM-150S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6439; fax (425) 917-6590.

Material Incorporated by Reference

(j) You must use Boeing Service Bulletin 767-25-0477, dated August 27, 2009, to do the actions required by this AD, unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; e-mail me.boecom@boeing.com; Internet <https://www.myboeingfleet.com>.

(3) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

(4) You may also review copies of the service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at an NARA facility, 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 December 13, 2010.

Ali Bahrami,
Manager, Transport Airplane Directorate,
Aircraft Certification Service.