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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2012-0490; Directorate Identifier 2012-NM-066-AD; Amendment 39-17159; AD 2012-16-12]**

**RIN 2120-AA64**

#### **Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for all The Boeing Company Model 707 airplanes, and Model 720 and 720B series airplanes. This AD was prompted by reports of cracking of the midspar fittings, and of the engine and nacelle strut separating from the airplane. This AD requires performing a detailed inspection of the midspar fittings of the nacelle strut to confirm that the correct part number is installed, and installing the correct part number if necessary; performing repetitive high frequency eddy current (HFEC) inspections of the midspar fittings of the nacelle strut for cracks, and repair if necessary; and performing repetitive general visual inspections of the nacelle struts to verify that the nacelle strut has not drooped below its normal position, applying the droop stripe to the nacelle strut and sailboat fairing if necessary, and performing repair if necessary. We are issuing this AD to detect and correct cracking of the midspar fitting, which could result in separation of the nacelle strut and engine from the airplane while in flight, and consequent loss of controllability of the airplane.

**DATES:** This AD is effective September 21, 2012.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of September 21, 2012.

**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; 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:** Berhane Alazar, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: (425) 917-6577; fax: (425) 917-6590; email: Berhane.Alazar@faa.gov.

## SUPPLEMENTARY INFORMATION:

### Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM published in the Federal Register on May 30, 2012 (77 FR 31762). That NPRM proposed to require performing a detailed inspection of the midspar fittings of the nacelle strut to confirm that the correct part number is installed, and installing the correct part number if necessary; performing repetitive HFEC inspections of the midspar fittings of the nacelle strut for cracks, and repair if necessary; and performing repetitive general visual inspections of the nacelle struts to verify that the nacelle strut has not drooped below its normal position, applying the droop stripe to the nacelle strut and sailboat fairing if necessary, and performing repair if necessary.

### Comments

We gave the public the opportunity to participate in developing this AD. We have considered the comments received. Boeing and the National Transportation Safety Board support the NPRM.

### Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting the AD as proposed.

### Costs of Compliance

We estimate that this AD affects 11 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
Detailed inspection, repetitive HFEC inspections, and repetitive general visual inspections of the midspar fittings of the nacelle strut.	23 work-hours × \$85 per hour = \$1,955, per inspection.	\$0	\$1,955, per inspection.	\$21,505, per inspection.

We estimate the following costs to do any necessary repairs that would be required based on the results of the inspections. We have no way of determining the number of aircraft that might need these repairs:

**On-Condition Costs**

<b>Action</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Cost per product</b>
Install the correct part number.	130 work-hours × \$85 per hour = \$11,050	\$7,867 × 4 = \$31,468	\$42,518

**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):



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**2012-16-12 The Boeing Company:** Amendment 39-17159; Docket No. FAA-2012-0490; Directorate Identifier 2012-NM-066-AD.

**(a) Effective Date**

This AD is effective September 21, 2012.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all The Boeing Company Model 707-100 long body, -200, -100B long body, and -100B short body series airplanes; Model 707-300, -300B, -300C, and -400 series airplanes; and Model 720 and 720B series airplanes; certificated in any category.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 54, Nacelles/Pylons.

**(e) Unsafe Condition**

This AD was prompted by reports of cracking of the midspar fittings and of the engine and nacelle strut separating from the airplane. We are issuing this AD to detect and correct cracking of the midspar fitting, which could result in separation of the nacelle strut and engine from the airplane while in flight, and consequent loss of controllability of the airplane.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Detailed Inspection**

Within 120 days after the effective date of this AD: Do a detailed inspection of the midspar fittings of engine numbers 2 and 3 nacelle struts to confirm that the correct part number is installed, in accordance with the Accomplishment Instructions of Boeing 707 Alert Service Bulletin A3537, dated January 30, 2012 (which is not incorporated by reference in this AD). If any incorrect part number is found: Before further flight, install the correct part number, in accordance with the Accomplishment Instructions of Boeing 707 Alert Service Bulletin A3537, dated January 30, 2012.

Note 1 to paragraph (g) of this AD: Boeing 707 Alert Service Bulletin A3537, dated January 30, 2012, refers to Boeing 707/720 Service Bulletin 3183, Revision 5, dated September 16, 1993 (which is not incorporated by reference in this AD), as an additional source of guidance for high frequency

eddy current (HFEC) inspections of the midspar fittings of engine numbers 2 and 3 nacelle struts for cracks.

#### **(h) HFEC Inspection**

At the applicable times specified in paragraph 1.E., "Compliance," of Boeing 707 Alert Service Bulletin A3537, dated January 30, 2012, except as provided in paragraph (j) of this AD: Do an HFEC inspection of the midspar fittings of engine numbers 2 and 3 nacelle struts for cracks, in accordance with the Accomplishment Instructions of Boeing 707 Alert Service Bulletin A3537, dated January 30, 2012, except as provided by paragraph (k) of this AD. If any crack is found, before further flight, repair using a method approved in accordance with the procedures specified in paragraph (m) of this AD. Thereafter, repeat the inspection at the applicable intervals specified in paragraph 1.E., "Compliance," of Boeing 707 Alert Service Bulletin A3537, dated January 30, 2012.

#### **(i) General Visual Inspection of the Nacelle Struts of Engine Numbers 1, 2, 3, and 4**

At the applicable times specified in paragraph 1.E., "Compliance," of Boeing 707 Alert Service Bulletin A3537, dated January 30, 2012, except as provided in paragraph (j) of this AD: Do a general visual inspection of the nacelle struts of engine numbers 1, 2, 3, and 4 to verify that the nacelle strut has not drooped below its normal position, in accordance with the Accomplishment Instructions of Boeing 707 Alert Service Bulletin A3537, dated January 30, 2012. Thereafter, repeat the inspection at the applicable intervals specified in paragraph 1.E., "Compliance," of Boeing 707 Alert Service Bulletin A3537, dated January 30, 2012.

(1) If any nacelle strut has drooped below its normal position: Before further flight, repair using a method approved in accordance with the procedures specified in paragraph (m) of this AD.

(2) If any nacelle strut has not drooped below its normal position, and no droop stripe specified in Boeing 707/720 Service Bulletin 3377, dated November 21, 1979 (which is not incorporated by reference in this AD) has been applied: At the applicable times in paragraph 1.E., "Compliance," of Boeing 707 Alert Service Bulletin A3537, dated January 30, 2012, except as provided in paragraph (j) of this AD: Apply the droop stripe to the nacelle strut and sailboat fairing, on each side of engine numbers 1, 2, 3, and 4 nacelle struts, in accordance with the Accomplishment Instructions of Boeing 707 Alert Service Bulletin A3537, dated January 30, 2012.

#### **(j) Exception to the Compliance Times**

Where Boeing 707 Alert Service Bulletin A3537, dated January 30, 2012, specifies a compliance time based on "the original issue date of this service bulletin," this AD requires compliance within the specified compliance time after the effective date of this AD.

#### **(k) Exception to the Service Information**

Where Boeing 707 Alert Service Bulletin A3537, dated January 30, 2012, refers to "Manual 707, 720 NDT Part 6, 51-00-00 Figure 24 as an accepted procedure" for the HFEC inspection, this AD requires that the inspection be done in accordance with Figure 24, Steel Part Surface Inspection (Impedance Plane Display), Subject 51-00-00, Structural-General, of Part 6, Eddy Current, of the Boeing 707/720 Nondestructive Test Manual, Document D6-48023, Revision 120, dated March 15, 2012.

#### **(l) Credit for Previous Actions**

This paragraph provides credit for the installation of the engine droop lines required by paragraph (i) of this AD, if those actions were performed before the effective date of this AD using

Boeing 707/720 Service Bulletin 3377, dated November 21, 1979 (which is not incorporated by reference in this AD).

**(m) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

**(n) Related Information**

(1) For more information about this AD, contact Berhane Alazar, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: (425) 917-6577; fax: (425) 917-6590; email: Berhane.Alazar@faa.gov.

(2) For service information identified in this AD, that is not incorporated by reference 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; 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.

**(o) Material Incorporated by Reference**

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

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing 707 Alert Service Bulletin A3537, dated January 30, 2012.

(ii) Figure 24, Steel Part Surface Inspection (Impedance Plane Display), Subject 51-00-00, Structural-General, of Part 6, Eddy Current, of the Boeing 707/720 Nondestructive Test Manual, Document D6-48023, Revision 120, dated March 15, 2012. The revision level of this document is identified on only the manual revision Transmittal Sheet.

(3) For The Boeing Company 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; Internet <https://www.myboeingfleet.com>.

(4) You may view this service information at FAA, 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.

(5) You may view this service information that is incorporated by reference 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/index.html>.

Issued in Renton, Washington, on August 3, 2012.  
Ali Bahrami,  
Manager, Transport Airplane Directorate,  
Aircraft Certification Service.