

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2003-16646; Directorate Docket No. 2003-NM-177-AD; Amendment 39-13678; AD 2004-12-17]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 757-200 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain Boeing Model 757-200 series airplanes, that requires repetitive inspections of the intercostals that back up the door stops and hinges at door 2 left and door 2 right for cracks, and corrective action, if necessary. This amendment also provides for an optional terminating action for the repetitive inspections. This action is necessary to prevent fatigue cracks from propagating in the intercostals, which could lead to the loss of a door in flight and subsequent rapid decompression. This action is intended to address the identified unsafe condition.

DATES: Effective July 27, 2004.

The incorporation by reference of a certain publication listed in the regulations is approved by the Director of the Federal Register as of July 27, 2004.

ADDRESSES: The service information referenced in this AD may be obtained from Boeing Commercial Airplanes, 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 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/code_of_federal_regulations/ibr_locations.html.

FOR FURTHER INFORMATION CONTACT: Dennis Stremick, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 917-6450, fax (425) 917-6590.

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 757-200 series airplanes was published in the Federal Register on December 11, 2003 (68 FR 69053). That action proposed to require repetitive inspections of the intercostals that back up the door stops and hinges at door 2 left and door 2 right for cracks, and corrective action, if necessary. That action also proposed to provide for an optional terminating action for the repetitive inspections.

Comments

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

Request To Increase Repetitive Inspection Interval

One commenter requests that the repetitive inspection interval specified in paragraph (c) of the proposed AD be increased from 3,000 flight cycles to 9,000 flight cycles. The commenter states that its in-service experiences demonstrate that a 9,000 flight cycle inspection interval is adequate to ensure that cracks are detected in a timely manner prior to becoming critical. The commenter justifies its recommendation based on its initial visual inspections conducted on 14 airplanes having around 15,000 total flight cycles, during which no cracking was found. Subsequent repeat inspections conducted on those airplanes at about 8,000 flight cycles later (at about 23,000 total flight cycles) found cracking. On average, the commenter found cracks on two out of six intercostals per side, per airplane, and the cracks were generally less than 1.5 inches. The commenter also states that the worst-case safety concern is the loss of cabin pressure, which is a lesser concern than loss of airplane. The commenter notes that access is more difficult than stated in the proposed AD because a lavatory and coat closet must be removed to gain access to the subject area.

The FAA does not agree to increase the repetitive inspection interval required by paragraph (c) of the final rule from 3,000 flight cycles to 9,000 flight cycles. The commenter did not provide enough data to support an inspection interval of 9,000 flight cycles. The commenter's statement that it found multiple cracks occurring within an 8,000 flight cycle inspection interval indicates that an appropriate inspection interval would be less than 8,000 flight cycles. In addition, based on the commenter's findings that an average of two out of six intercostals were cracked per door, it is more than likely that half of the intercostals would be cracked on some airplanes within the commenter's proposed 9,000 flight cycle interval. While a loss of cabin pressure may occur prior to losing a door, the detection of multiple cracked intercostals within the commenter's proposed inspection interval increases the possibility of losing a door. We have determined that the inspection interval of 3,000 flight cycles required by paragraph (c) of the final rule will ensure an acceptable level of safety. In developing an appropriate inspection interval for this AD, we considered the safety issues resulting from the loss of a door in flight and possible subsequent rapid decompression, as well as the recommendations of the manufacturer and the effectiveness of the inspection procedure. Also, the final rule provides optional terminating actions, as stated in paragraphs (g) and (h) of the final rule, for the repetitive inspections required by paragraph (c) of the final rule. No change is made to the final rule in this regard. However, according to the provisions of paragraph (i) of the final rule, we may approve requests to adjust the inspection interval if the request includes data that prove that the new inspection interval would provide an acceptable level of safety.

Conclusion

After careful review of the available data, including the comment noted above, the FAA has determined that air safety and the public interest require the adoption of the rule as proposed.

Cost Impact

There are approximately 95 airplanes of the affected design in the worldwide fleet. The FAA estimates that 55 airplanes of U.S. registry will be affected by this AD.

We estimate that it will take approximately 8 work hours per airplane to accomplish the required inspection, and that the average labor rate is \$65 per work hour. Based on these figures, the cost impact of the required inspection on U.S. operators is estimated to be \$28,600, or \$520 per airplane, per inspection cycle.

The cost impact figure discussed above is 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.

The optional preventative modification terminating action, if done, will take approximately 50 work hours per airplane at an average labor rate of \$65 per work hour. Based on these figures, we estimate the cost of this optional terminating action to be \$3,250 per airplane.

Parts for the optional replacement terminating action will cost approximately \$692 for each Top Kit-Door Stop 1 Intercostal (L/H or R/H) and \$4,581 for each Top Kit-Intercostal Replacement (L/H or R/H).

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 "www.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).

2004-12-17 Boeing: Amendment 39-13678. Docket FAA-2003-16646. Directorate Docket No. 2003-NM-177-AD.

Applicability: Model 757-200 series airplanes, line numbers 1 through 95 inclusive; certificated in any category.

Compliance: Required as indicated, unless accomplished previously.

To prevent fatigue cracks from propagating in the intercostals, which could lead to the loss of a door in flight and subsequent rapid decompression, accomplish the following:

Service Bulletin References

(a) The term "service bulletin," as used in this AD, means the Accomplishment Instructions of Boeing Special Attention Service Bulletin 757-53-0086, dated March 14, 2002.

Initial Inspection

(b) Prior to the accumulation of 12,000 total flight cycles, or within 3,000 flight cycles after the effective date of this AD, whichever occurs later: Perform a detailed inspection for cracks of the intercostals that back up the door stops and hinges at door 2 left and door 2 right, per Part I of the service bulletin.

No Crack Findings: Repetitive Inspections

(c) If no crack is found during the inspection required by paragraph (b) of this AD, before further flight, do a dye penetrant or eddy current inspection for cracks of the intercostals that back up the door stops and hinges at door 2 left and door 2 right, per Part I of the service bulletin. Repeat thereafter at intervals not to exceed 3,000 flight cycles, until the preventative modification specified in paragraph (g) of this AD or the replacement specified in paragraph (h) of this AD has been accomplished.

Crack Findings: Modification/Replacement

(d) If, during the inspections required by paragraph (b) and/or (c) of this AD, any intercostal for door stop 1, 4, 5, 6, upper hinge, or lower hinge has cracks, but not beyond the aft edge of the bend relief radius: Before further flight, do the preventative modification specified in paragraph (g) of this AD or the replacement specified in paragraph (h) of this AD.

(e) If, during the inspections required by paragraph (b) and/or (c) of this AD, any intercostal for door stop 2 or 3 has cracks: Before further flight, do the replacement specified in paragraph (h) of this AD.

(f) If, during the inspections required by paragraph (b) and/or (c) of this AD, any intercostal has cracks that extend beyond the aft edge of the bend relief radius: Before further flight, do the replacement specified in paragraph (h) of this AD.

Terminating Actions

(g) Do the preventative modification on the intercostal per Part II of the service bulletin. Accomplishment of the preventative modification on an intercostal per Part II of the service bulletin constitutes terminating action for the repetitive inspection requirements of this AD for the modified intercostal only.

(h) Replace the intercostal with a new improved intercostal per Part III of the service bulletin. Accomplishment of the replacement of an intercostal with a new, improved intercostal per Part III of the service bulletin constitutes terminating action for the repetitive inspection requirements of this AD for the replaced intercostal only.

Alternative Methods of Compliance

(i) In accordance with 14 CFR 39.19, the Manager, Seattle Aircraft Certification Office, FAA, is authorized to approve alternative methods of compliance for this AD.

Incorporation by Reference

(j) The actions shall be done in accordance with Boeing Special Attention Service Bulletin 757-53-0086, dated March 14, 2002. 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 Airplanes, 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 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/code_of_federal_regulations/ibr_locations.html.

Effective Date

(k) This amendment becomes effective on July 27, 2004.

Issued in Renton, Washington, on June 9, 2004.
Kalene C. Yanamura,
Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.
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