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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 99–NM–84–AD; Amendment 39–11654; AD 2000–06–13]

RIN 2120–AA64

Airworthiness Directives; Boeing Model 737–200, –200C, –300, and –400 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes an existing airworthiness directive (AD), applicable to certain Boeing Model 737–200, –200C, –300, and –400 series airplanes, that currently requires repetitive visual inspections to detect cracking of the corners of the door frame and the cross beams of the aft cargo door, and corrective actions, if necessary. That AD also provides an optional terminating action for certain repetitive inspections. This amendment requires repetitive high frequency eddy current (HFEC) inspections, and corrective actions, if necessary. This amendment also mandates accomplishment of the previously optional terminating action. The actions specified by this AD are intended to prevent fatigue cracking of the corners of the door frame and the cross beams of the aft cargo door, which could result in rapid depressurization of the airplane.

DATES: Effective May 9, 2000.

The incorporation by reference of Boeing Alert Service Bulletin 737–52A1079, Revision 6, dated November 18, 1999, as listed in the regulations, is approved by the Director of the Federal Register as of April 19, 2000.

The incorporation by reference of Boeing Service Bulletin 737–52–1079, Revision 5, dated May 16, 1996, as listed in the regulations, was approved previously by the Director of the Federal Register as of December 24, 1998 (63 FR 67769, December 9, 1998).

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 FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington. 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: Nenita Odesa, Aerospace Engineer, Airframe Branch, ANM–120S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055–4056; telephone (425) 227–2557; fax (425) 227–1181.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by superseding AD 98–25–06, amendment 39–10931 (63 FR 67769, December 9, 1998), which is applicable to certain Boeing Model 737–200, –200C, –300, and –400 series airplanes, was published in the Federal Register on August 12, 1999 (64 FR 43950). The action proposed to require continuing the current repetitive visual inspections to detect cracking of the corners of the door frame and the cross beams of the aft cargo door, and corrective actions, if necessary. The action also proposed to require repetitive high frequency eddy current (HFEC) inspections, and corrective actions, if necessary. Additionally, the action proposed to mandate accomplishment of the previously optional terminating action.

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

Concurrence with the Proposal

One commenter concurs with the proposal.

Request to Reference New Service Information

One commenter, the manufacturer, states that the proposal should reference the latest Alert Service Bulletin, 737–52A1079, Revision 6, dated November 18, 1999. That revision adds procedures describing a High frequency eddy current (HFEC) inspection for cracks in the frames of doors that do not have steel modification angles, inspection for cracks in the upper and lower beam outer chord, repair instructions for the lower beam outer chord, and other various changes.

The FAA concurs that Revision 6 of Boeing Alert Service Bulletin 737–52A1079 may be specified in the final rule as an alternative method of compliance with the requirements of this AD. The final rule has been changed to specify that addition.

Request to Revise the Compliance Time of Paragraph (d) of the Proposal

One commenter, the manufacturer, requests that the compliance time for the high frequency eddy current inspections specified in paragraph (d) of the proposal be revised from ''within 4,500 flight cycles or one year after the effective date of the AD,'' to within 12,000 flight cycles after installation of the door. The commenter states that if an operator has an accurate accounting of the history of the cargo door, a threshold of 12,000 flight cycles would provide no adverse effect on safety.

The FAA does not concur with the commenter's request to revise the compliance time. Because cargo doors are rotable parts, i.e., they may be moved from one airplane to another, an airplane's maintenance records may not accurately reflect the total number of flight cycles accumulated on the door. However, under the provisions of paragraph (f) of the final rule, the FAA may approve requests for adjustments to the compliance time if data are submitted to substantiate that such an adjustment would provide an acceptable level of safety.

Request to Extend the Compliance Time of Paragraph (e) of the Proposal

One commenter, the manufacturer, requests that the compliance time for the accomplishment of the required modification be revised to be in consonance with the compliance threshold required by AD 90–06–02,

amendment 39–6489 (55 FR 8372, March 7, 1990). The new compliance time would then read, ''prior to the accumulation of 75,000 total flight cycles.'' The commenter points out that compliance times should be based on flight cycles rather than calendar time. Fatigue crack growth rates are a function of pressurization cycles, not elapsed time, and a cycle-based compliance threshold would be more appropriate for the proposed rule.

The FAA does not concur that the compliance time should be changed to specify a compliance time of 75,000 total flight cycles. Based on a recent depressurization event that occurred much earlier than 75,000 flight cycles, the FAA has determined that a threshold of 75,000 total flight cycles does not provide for an adequate level of safety. However, the FAA acknowledges that fatigue cracking is a function of pressurization cycles and concurs that a compliance time based on flight cycles may be added. Based on recent information, the FAA has determined that a compliance time of 12,000 total flight cycles is an appropriate compliance time and has added this to the compliance time specified in paragraph (e) of the final rule.

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 1,636 Model 737 series airplanes of the affected design in the worldwide fleet. The FAA estimates that 707 airplanes of U.S. registry will be affected by this AD.

The detailed visual inspections that currently are required by AD 98–25–06, and retained in this AD, take approximately 2 work hours per airplane to accomplish, at an average labor rate of $60 per work hour. Based on these figures, the cost impact of the currently required inspections on U.S. operators is estimated to be $84,840, or $120 per airplane, per inspection cycle.

The new high frequency eddy current inspections that are required by this AD will take approximately 4 work hours per airplane to accomplish, at an average labor rate of $60 per work hour. Based on these figures, the cost impact of the new inspections required by this AD on U.S. operators is estimated to be $169,680, or $240 per airplane, per inspection cycle.

The modification that is required by this AD action will take approximately 144 work hours per airplane to accomplish, at an average labor rate of $60 per work hour. Required parts will cost approximately $4,530 per airplane. Based on these figures, the cost impact of the modification required by this AD on U.S. operators is estimated to be $9,311,190, or $13,170 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.

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 removing amendment 39–10931 (63 FR 67769, December 9, 1998), and by adding a new airworthiness directive (AD), Amendment 39–11654, to read as follows:

2000–06–13 Boeing: Amendment 39–11654. Docket 99–NM–84–AD. Supersedes AD 98–25–06, Amendment 39–10931.

Applicability: The following airplane models, certificated in any category:

- Model 737–200 and –200C series airplanes, line numbers 6 through 873 inclusive;
- Model 737–200, –200C, –300, and –400 series airplanes; line numbers 874 through 1642 inclusive; equipped with an aft cargo door having Boeing part number (P/N) 65–47952–1 or P/N 65–47952–524; excluding:

1. Those airplanes on which that door has been modified in accordance with Boeing Service Bulletin 737–52–1079; or

2. Those airplanes on which the door assembly having P/N 65–47952–524 includes four straps (P/N's 65–47952–139, 65–47952–140, 65–47952–141, and 65–47952–142) and a thicker lower cross beam web (P/N 65–47952–157).

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been otherwise 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)(1) 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 fatigue cracking of the corners of the door frame and the cross beams of the aft cargo door, which could result in rapid depressurization of the airplane, accomplish the following:

Restatement of the Requirements of AD 98–25–06:

Inspections and Corrective Actions

(a) Within 90 days or 700 flight cycles after December 24, 1998 (the effective date of AD 98–25–06, amendment 39–10931), whichever occurs later, perform an internal detailed visual inspection to detect cracking of the corners of the door frame and the cross beams of the aft cargo door, in accordance with Boeing Service Bulletin 737–52–1079, Revision 5, dated May 16, 1996, or Boeing Alert Service Bulletin 737–52A1079, Revision 6, dated November 18, 1999.

(1) If no cracking is detected, accomplish the requirements of either paragraph (a)(1)(i) or (a)(1)(ii) of this AD.

(i) Repeat the internal visual inspection thereafter at intervals not to exceed 4,500 flight cycles. Or

(ii) Prior to further flight, modify the corners of the door frame and the cross beams of the aft cargo door in accordance with the service bulletin. Accomplishment of such modification constitutes terminating action for the repetitive inspection requirements of paragraph (a)(1)(i) of this AD.

(2) If any cracking is detected in the upper or lower cross beams, prior to further flight, modify the cracked beam in accordance with paragraph III.C. of Part I of the Accomplishment Instructions of the service bulletin. Accomplishment of such modification constitutes terminating action for the repetitive inspection requirements of paragraph (a)(1)(i) of this AD for the repaired beam.

(3) If any cracking is detected in the forward or aft upper door frame, prior to further flight, repair the frame and modify the corners of the door frame of the aft cargo door, in accordance with paragraph III.E. of Part I of the Accomplishment Instructions of the service bulletin, except as provided by paragraph (b) of this AD. Accomplishment of such modification constitutes terminating action for the repetitive inspection requirements of paragraph (a)(1)(i) of this AD for the upper door frame.

Note 2: Cracks of the forward or aft upper door frame, regardless of length, must be repaired prior to further flight in accordance with paragraph III.E. of Part I of the Accomplishment Instructions of the service bulletin.

(4) If any cracking is detected in the forward or aft lower door frame, prior to further flight, replace the damaged frame with a new frame, and modify the corners of the door frame of the aft cargo door, in accordance with paragraph III.F. of Part I of the Accomplishment Instructions of the service bulletin. Accomplishment of such modification constitutes terminating action for the repetitive inspection requirements of paragraph (a)(1)(i) of this AD for the lower door frame.

(b) Where Boeing Service Bulletin 737–52–1079, Revision 5, dated May 16, 1996, or Boeing Alert Service Bulletin, 737–52A1079, Revision 6, dated November 18, 1999, specifies that certain repairs are to be accomplished in accordance with instructions received from Boeing, this AD requires that, prior to further flight, such repairs be accomplished in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate.

New Requirements of This AD

Inspections and Corrective Actions

(c) If any cracking of the outer chord of the upper or lower cross beams of the aft cargo door is detected as a result of any inspection required by paragraph (a) of this AD, prior to further flight, repair in accordance with a method approved by the Manager, Seattle ACO; Boeing Alert Service Bulletin, 737–52A1079, Revision 6, dated November 18, 1999; or in accordance with data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative who has been authorized by the FAA to make such findings.

(d) Within 4,500 flight cycles or one year after the effective date of this AD, whichever occurs later: Perform a high frequency eddy current inspection (HFEC) to detect cracking of the four corners of the door frame of the aft cargo door, in accordance with the procedures specified in Boeing 737 Nondestructive Test Manual, Part 6, Chapter 51–00–00 (Figure 4 or Figure 23), or Boeing Alert Service Bulletin, 737–52A1079, Revision 6, dated November 18, 1999;

(1) If no cracking of the corners of the door frame of the aft cargo door is detected, repeat the HFEC inspections thereafter at intervals not to exceed 4,500 flight cycles until accomplishment of the modification specified in paragraph (e) of this AD.

(2) If any cracking of the corners of the door frame of the aft cargo door is detected, prior to further flight, replace the damaged frame with a new frame, and modify the four corners of the door frame, in accordance with Parts II and III of the Accomplishment Instructions of Boeing Service Bulletin 737–52–1079, Revision 5, dated May 16, 1996, or Boeing Alert Service Bulletin 737–52A1079, Revision 6, dated November 18, 1999. Accomplishment of such modification constitutes terminating action for the repetitive inspection requirements of paragraph (d)(1) of this AD for that door frame.

Terminating Action

(e) Prior to the accumulation of 12,000 total flight cycles, or within 4 years after the effective date of this AD, whichever occurs later: Modify the four corners of the door frame and the cross beams of the aft cargo door, in accordance with Part II of the Accomplishment Instructions of Boeing Service Bulletin 737–52–1079, Revision 5, dated May 16, 1996, or Boeing Alert Service Bulletin 737–52A1079, Revision 6, dated November 18, 1999. Accomplishment of such modification constitutes terminating action for the repetitive inspection requirements of this AD.

Note 3: Accomplishment of the modification required by paragraph (a) of AD 90–06–02, amendment 39–6489, is considered acceptable for compliance with paragraph (e) of this AD.

Note 4: Modification of the corners of the door frame and the cross beams of the aft cargo door accomplished prior to the effective date of this AD in accordance with Boeing Service Bulletin 737–52–1079, dated December 16, 1983; Revision 1, dated December 15, 1988; Revision 2, dated July 20, 1989; Revision 3, dated May 17, 1990; Revision 4, dated February 21, 1991; is considered acceptable for compliance with paragraph (e) of this AD.

Alternative Methods of Compliance

(f)(1) 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 ACO. 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.

(2) Alternative methods of compliance, approved previously in accordance with AD 98–25–06, amendment 39–10931, are approved as alternative methods of compliance with this AD.

Note 5: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(g) Special flight permits may be issued in accordance with 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 in paragraphs (b), (c), (d), and (d)(1) of this AD, the actions shall be done in accordance with Boeing Service Bulletin 737–52–1079, Revision 5, dated May 16, 1996, or Boeing Alert Service Bulletin 737–52A1079, Revision 6, dated November 18, 1999.

(1) The incorporation by reference of Boeing Alert Service Bulletin 737–52A1079, Revision 6, dated November 18, 1999, is approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

(2) The incorporation by reference of Boeing Service 737–52–1079, Revision 5, dated May 16, 1996, was approved previously by the Director of the Federal Register as of December 24, 1998 (63 FR 67769, December 9, 1998).

(3) Copies may be obtained from Boeing Commercial Airplane Group, 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 Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(i) This amendment becomes effective on May 9, 2000.

Issued in Renton, Washington, on March 24, 2000.

Donald L. Riggin,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 00–7877 Filed 4–3–00; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 99–NM–203–AD; Amendment 39–11655; AD 2000–07–01]

RIN 2120–AA64

Airworthiness Directives; Empresa Brasileira de Aeronautica, S.A. (EMBRAER), Model EMB–145 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes an existing airworthiness directive (AD), applicable to all Empresa Brasileira de Aeronautica, S.A. (EMBRAER), Model EMB–145 series airplanes, that currently requires repetitive emergency extension (free-fall) functional tests of the nose landing gear (NLG), and lubrication of all NLG hinge points, to ensure that the NLG extends and locks down properly; and corrective action, if necessary. This amendment also requires a terminating modification that includes replacement of the NLG door solenoid valve with an improved valve; replacement of the landing gear (LG) safety pins holder with an improved holder; and replacement of the NLG maneuvering actuator with an improved actuator. This amendment also limits the applicability of the existing AD. This amendment is prompted by issuance of mandatory continuing airworthiness information by a foreign civil airworthiness authority. The actions specified by this AD are intended to prevent failure of the NLG to extend and lock down properly, which could result in damage to the airplane structure, and consequent reduced controllability of the airplane upon landing.

DATES: Effective May 9, 2000.

The incorporation by reference of EMBRAER Service Bulletin 145–32–0036, dated February 1, 1999; and EMBRAER Service Bulletin 145–32–0037, dated February 12, 1999, as listed in the regulations, is approved by the Director of the Federal Register as of May 9, 2000.

The incorporation by reference of EMBRAER Alert Service Bulletin 145–32–A029, dated April 15, 1998, as listed in the regulations, was approved previously by the Director of the Federal Register as of July 9, 1998 (63 FR 34274, June 24, 1998).

ADDRESSES: The service information referenced in this AD may be obtained from Empresa Brasileira de Aeronautica S.A. (EMBRAER), P.O. Box 343—CEP 12.225, Sao Jose dos Campos—SP, Brazil. 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 FAA, Small Airplane Directorate, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia; or at the Office of the Federal Register 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Rob Capezzuto, Aerospace Engineer, Systems and Flight Test Branch, ACE–116A, FAA, Small Airplane Directorate, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, suite 450, Atlanta, Georgia 30349; telephone (770) 703–6071; fax (770) 703–6097.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by superseding AD 98–13–34, amendment 39–10625 (63 FR 34274, June 24, 1998), which is applicable to all Empresa Brasileira de Aeronautica, S.A. (EMBRAER), Model EMB–145 series airplanes, was published in the **Federal Register** on February 2, 2000 (65 FR 4897). The action proposed to continue to require repetitive emergency extension (free-fall) functional tests of the nose landing gear (NLG), and lubrication of all NLG hinge points, to ensure that the NLG extends and locks down properly; and corrective action, if necessary. The action also proposed to require a terminating modification that includes replacement of the NLG door solenoid valve with an improved valve; replacement of the landing gear (LG) safety pins holder with an improved holder; and replacement of the NLG maneuvering actuator with an improved actuator. Additionally, the action proposed to limit the applicability of the existing AD.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were submitted in response to the proposal or the FAA's determination of the cost to the public.

Conclusion

The FAA has determined that air safety and the public interest require the adoption of the rule as proposed.

Cost Impact

There are approximately 66 airplanes of U.S. registry that will be affected by this AD.

The actions that are currently required by AD 98–13–34, and continue to be required by this AD, will take approximately 4 work hours per airplane to accomplish, at an average labor rate of $60 per work hour. Based on these figures, the cost impact of the currently required actions on U.S. operators is estimated to be $15,840, or $240 per airplane, per inspection cycle.

The new replacements that are required in this AD action will take approximately 6 work hours (3 work hours per airplane for the solenoid/holder replacement) and 3 work hours per airplane for the actuator replacement, at an average labor rate of $60 per work hour. EMBRAER and Libherr Aerospace Linberg have previously committed to supplying the necessary parts free of charge. Based on these figures, the cost impact of the replacements required by this AD on U.S. operators is estimated to be $23,760, or $360 per airplane.

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the current or new requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted.

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