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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2002-NM-214-AD; Amendment 39-12929; AD 2002-22-05]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 737-100, -200, -200C, -300, -400, and -500 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that is applicable to all Boeing Model 737-100, -200, -200C, -300, -400, and -500 series airplanes. This action requires repetitive inspections to find cracks, fractures, or corrosion of each carriage spindle of the left and right outboard mid-flaps; and corrective action, if necessary. This action also provides for an optional action of overhaul or replacement of the carriage spindles, which would extend the repetitive inspection interval. This action is necessary to prevent severe flap asymmetry due to fractures of the carriage spindles on an outboard mid-flap, which could result in reduced control or loss of controllability of the airplane. This action is intended to address the identified unsafe condition.

DATES: Effective November 15, 2002.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of November 15, 2002.

Comments for inclusion in the Rules Docket must be received on or before December 30, 2002.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 2002-NM-214-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056. Comments may be inspected at this location between 9 a.m. and 3 p.m., Monday through Friday, except Federal holidays. Comments may be submitted via fax to (425) 227-1232. Comments may also be sent via the Internet using the following address: 9-anm-iarcomment@faa.gov. Comments sent via fax or the Internet must contain "Docket No. 2002-NM-214-AD" in the subject line and need not be submitted in triplicate. Comments sent via the Internet as attached electronic files must be formatted in Microsoft Word 97 for Windows or ASCII text.

The service information referenced in this AD may be obtained from Boeing Commercial Airplane Group, PO Box 3707, Seattle, Washington 98124-2207. This information may be examined 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.

FOR FURTHER INFORMATION CONTACT: Technical Information: Sue Lucier, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2186; fax (425) 227-1181.

Other Information: Sandi Carli, Airworthiness Directive Technical Editor/Writer; telephone (425) 687-4243, fax (425) 227-1232. Questions or comments may also be sent via the Internet using the following address: sandi.carli@faa.gov. Questions or comments sent via the Internet as attached electronic files must be formatted in Microsoft Word 97 for Windows or ASCII text.

SUPPLEMENTARY INFORMATION: The FAA has received reports indicating fractures of the carriage spindles of the outboard mid-flaps on certain Boeing Model 737 series airplanes. The fractures resulted from stress-corrosion cracking. The most critical section for a fracture is at the forward end of the spindle; two of the thirteen reported fractures occurred in this area on airplanes that had accumulated between 4,198 and 43,919 total flight cycles. In a recent incident, dual failure of the carriage spindles occurred and one of the spindles failed at a location critical for continued flap functionality. If one carriage spindle fractures on a flap, it will affect control of flight of the airplane. If both the inboard and outboard spindles fracture in the critical section on an outboard flap, it could result in loss of controllability of the airplane.

Related Rulemaking

This AD is related to AD 90-17-19, amendment 39-6705 (55 FR 33280, August 15, 1990). That AD is applicable to all Boeing Model 747 series airplanes, except Model 747SP, and requires periodic inspections of both inboard and outboard trailing edge flap carriage spindles for cracks and corrosion, and overhaul or replacement, if necessary. That AD also requires periodic inspections to detect cracks or corrosion of all exposed surfaces of the carriage spindles, including inner bore, and aft links; and overhaul or replacement, if necessary. That AD also shortens certain compliance intervals to ensure continued airworthiness.

This AD requires similar actions for all Boeing Model 737-100, -200, -200C, -300, -400, and -500 series airplanes, because the carriage spindles on the outboard mid-flaps are very similar to the carriage spindles on Model 747 series airplanes.

Explanation of Relevant Service Information

We have reviewed and approved Boeing Alert Service Bulletin 737-57A1277, dated July 25, 2002, which describes procedures for repetitive nondestructive test (NDT) inspections to find cracks, fractures, or corrosion of each carriage spindle of the left and right outboard mid-flaps; and corrective action, if necessary. The corrective action includes overhaul or replacement of the carriage spindle if any cracks, fractures, or corrosion are found. The service bulletin also recommends that a report be sent to the manufacturer if a crack or fracture of any carriage spindle is found. Accomplishment of the actions specified in the service bulletin is intended to adequately address the identified unsafe condition

Explanation of the Requirements of the Rule

Since an unsafe condition has been identified that is likely to exist or develop on other airplanes of the same type design, the actions in this AD are required to be accomplished in accordance with the service bulletin described previously, except as discussed below.

Differences Between AD and Service Information

The service bulletin explicitly specifies doing a NDT inspection for cracks or fractures of each carriage spindle, and indicates that operators should look for cracking or corrosion of the exposed portion of the spindle. We infer that this description is that of a general visual inspection; therefore, this AD adds a general visual inspection for cracks, fractures, or corrosion of the spindle. We have added a note to this AD to define such an inspection.

Although the service bulletin recommends that operators report inspection findings of any crack or fracture in the carriage spindle to the manufacturer, this AD does not contain such a reporting requirement.

Interim Action

This is considered to be interim action. We are currently considering mandating overhaul or replacement of the carriage spindles, which will extend the interval for the repetitive inspections required by this AD action. This action is similar to that required by AD 90-17-19, discussed above. However, the planned compliance time for the overhaul or replacement action is sufficiently long so that notice and opportunity for prior public comment will be practicable.

Determination of Rule's Effective Date

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications shall identify the Rules Docket number and be submitted in triplicate to the address specified under the caption ADDRESSES. All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Submit comments using the following format:

- Organize comments issue-by-issue. For example, discuss a request to change the compliance time and a request to change the service bulletin reference as two separate issues.
- For each issue, state what specific change to the AD is being requested.
- Include justification (e.g., reasons or data) for each request.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this rule must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2002-NM-214-AD." The postcard will be date stamped and returned to the commenter.

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.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and that it is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, 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.airweb.faa.gov/rgl"

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).

2002-22-05 Boeing: Amendment 39-12929. Docket 2002-NM-214-AD.

Applicability: All Model 737-100, -200, -200C, -300, -400, and -500 series airplanes; certificated in any category.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been 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 (d) 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 severe flap asymmetry due to fractures of the carriage spindles on an outboard mid-flap, which could result in reduced control or loss of controllability of the airplane, accomplish the following:

Repetitive Inspections

(a) Do general visual and nondestructive test (NDT) inspections of each carriage spindle (two on each flap) of the left and right outboard mid-flaps to find cracks, fractures, or corrosion at the later of the times specified in paragraphs (a)(1) and (a)(2) of this AD, as applicable, per the Work Instructions of Boeing Alert Service Bulletin 737-57A1277, dated July 25, 2002. Repeat the inspection at least every 180 days until paragraph (c) of this AD is done.

(1) Before the accumulation of 12,000 total flight cycles or 8 years in-service on new or overhauled carriage spindles, whichever is first.

(2) Within 90 days after the effective date of this AD.

Note 2: For the purposes of this AD, a general visual inspection is defined as: "A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made from within touching distance unless otherwise specified. A mirror may be necessary to enhance visual access to all exposed surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or droplight and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked."

Corrective Action

(b) If any crack, fracture, or corrosion is found during any inspection required by paragraph (a) of this AD: Before further flight, do the applicable actions for that spindle as specified in paragraph (b)(1) or (b)(2) of this AD, per the Work Instructions of Boeing Alert Service Bulletin 737-57A1277, dated July 25, 2002. Then repeat the inspections required by paragraph (a) of this AD every 12,000 flight cycles or 8 years, whichever is first; on the overhauled or replaced spindle only.

(1) If any corrosion is found in the carriage spindle, overhaul the spindle.

(2) If any crack or fracture is found in the carriage spindle, replace with a new or overhauled carriage spindle.

Note 3: Although the service bulletin recommends that operators report inspection findings of any crack or fracture in the carriage spindle to the manufacturer, this AD does not contain such a reporting requirement.

Optional Overhaul or Replacement

(c) Overhaul or replacement, as applicable, of all four carriage spindles, per the Work Instructions of Boeing Alert Service Bulletin 737-57A1277, dated July 25, 2002, extends the repetitive inspection interval specified in paragraph (a) of this AD to every 12,000 flight cycles or 8 years, whichever is first.

Alternative Methods of Compliance

(d) 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 Aircraft Certification Office (ACO), FAA. 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.

Note 4: 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

(e) 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

(f) The actions shall be done in accordance with Boeing Alert Service Bulletin 737-57A1277, dated July 25, 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 Airplane Group, PO 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.

Effective Date

(g) This amendment becomes effective on November 15, 2002.

Issued in Renton, Washington, on October 22, 2002.
Vi L. Lipski,
Manager, Transport Airplane Directorate, Aircraft Certification Service.
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