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[Page 59532-59535]
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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2001-NM-184-AD; Amendment 39-13336; AD 2003-21-02]

RIN 2120-AA64

Airworthiness Directives; McDonnell Douglas Model DC-8-11, DC-8-12, DC-8-21, DC-8-31, DC-8-32, DC-8-33, DC-8-41, DC-8-42, and DC-8-43 Airplanes; Model DC-8-50 Series Airplanes; Model DC-8F-54 and DC-8F-55 Airplanes; Model DC-8-60 Series Airplanes; Model DC-8-70 Series Airplanes; and Model DC-8-70F Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain McDonnell Douglas transport category airplanes, that requires an inspection to determine the material composition of the lower inboard auxiliary spar cap of the left and right wings. For certain airplanes, this AD also requires repetitive detailed and dye penetrant inspections for cracking of the spar cap, and corrective actions if necessary. This action is necessary to detect and correct stress corrosion cracking of the auxiliary spar cap, which could cause excessive loads to the structure attaching the support fitting of the main landing gear (MLG) to the wing, and result in loss of the MLG. This action is intended to address the identified unsafe condition.

DATES: Effective November 20, 2003.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of November 20, 2003.

ADDRESSES: The service information referenced in this AD may be obtained from Boeing Commercial Aircraft Group, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Data and Service Management, Dept. C1-L5A (D800-0024). 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 Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Jon Mowery, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5322; fax (562) 627-5210.

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 McDonnell Douglas airplanes was published in the Federal Register on April 16, 2003 (68 FR 18567). That action proposed to require an inspection to determine the material composition of the auxiliary spar cap of the lower inboard of the left and right wings. For certain airplanes, that action also proposed to require repetitive detailed and dye penetrant inspections for cracking of the spar cap, and corrective actions if necessary.

Changes to the Notice of Proposed Rulemaking (NPRM)

The FAA has reviewed the descriptive phrase, "auxiliary spar cap of the lower inboard of the left and right wings," as specified in the NPRM, and has determined that the phrase, "the lower inboard auxiliary spar cap of the left and right wing," is more consistent with the wording of McDonnell Douglas DC-8 Service Bulletin 57-85, Revision 1, dated July 5, 1991 (the service bulletin specified in the NPRM). Therefore, we have revised that phrase where it appears in this final rule.

We also have revised paragraph (b) of this final rule to more accurately reflect the intent of the referenced service bulletin by specifying that the detailed inspection and a dye penetrant inspection for cracking be performed on both the lower inboard auxiliary spar caps.

Additionally, we have revised paragraph (b) of the final rule, added new paragraphs (c) and (d) of the final rule, and renumbered subsequent paragraphs accordingly to clarify the follow-on actions required for any cracking that is found.

Comments

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

Request To Clarify Compliance Time

One commenter requests that the FAA clarify the compliance time in paragraph (b) of the Notice of Proposed Rulemaking (NPRM). The commenter suggests that adding the words, "whichever occurs later" would clarify the intention of "Within 2 years or 2,000 flight cycles."

The FAA agrees that clarification is needed. We inadvertently omitted the qualifying phrase after the words, "Within 2 years or 2,000 flight cycles." However, our intention was not to permit the operator to choose whichever compliance time occurred later. We have determined that a compliance time of within 2 years or 2,000 flight cycles, whichever occurs first, is sufficient and adequate time to perform the detailed inspection and dye penetrant inspections required by paragraph (b) of the AD. We point out that the inspections required by paragraph (b) of the AD are required within 2 years or 2,000 flight cycles, whichever occurs first, after accomplishing the inspection required by paragraph (a) of the AD. Paragraph (a) of the AD has a compliance time of within 24 months or 2,000 flight cycles after the effective date of the AD, whichever occurs later. Considering the ample lead time to plan for these inspections, we have determined that a compliance time of 2 years or 2,000 flight cycles, whichever occurs first, after accomplishing the compliance time of paragraph (a) of the AD, is reasonable and provides an adequate level of safety of the affected fleet. We have revised paragraph (b) of the AD to clarify that the qualifying phrase for the compliance time is, "Within 2 years or 2,000 flight cycles, whichever occurs first, after accomplishing the compliance time of paragraph (a)."

However, under the provisions of paragraph (e) of the AD, we may approve requests for adjustments to the compliance time if data are submitted to substantiate that such adjustments would provide an acceptable level of safety.

Request To Extend the Repetitive Inspections Intervals

The same commenter also requests that the repetitive inspection interval specified in paragraph (b)(2) of the NPRM be increased from 1,600 flight cycles to 1,800 flight cycles. The commenter explains that such an extension of the repetitive inspection interval would coincide with the "C" check interval for its fleet. In addition, the commenter points out that the FAA has an obligation to consider many factors, such as other AD requirements and compliance times, when developing an appropriate compliance time. The commenter considers that the proposed repetitive inspection interval also would require scheduling special times to accomplish the inspections—at considerable additional expense.

We do not concur that the repetitive inspection interval should be extended. In developing an appropriate inspection interval for this AD, we considered the manufacturer's recommendation, the degree of urgency associated with the subject unsafe condition, the average utilization of the affected fleet, and the time necessary to perform the inspections. In light of all of these factors, we find that a repetitive inspection interval of 1,600 flight cycles represents an appropriate interval of time for affected airplanes to continue to operate without compromising safety. No change is necessary to the final rule in this regard. However, under the provisions of paragraph (e) of the AD, we may approve requests for adjustments to the repetitive inspection interval if data are submitted to substantiate that such an adjustment would provide an acceptable level of safety.

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 this change will neither increase the economic burden on any operator nor increase the scope of the AD.

Changes to 14 CFR part 39/Effect on the AD

On July 10, 2002, the FAA issued a new version of 14 CFR part 39 (67 FR 47997, July 22, 2002), which governs the FAA's airworthiness directives system. The regulation now includes material that relates to altered products, special flight permits, and alternative methods of compliance. However, for clarity and consistency in this final rule, we have retained the language of the NPRM regarding that material.

Change to Labor Rate Estimate

We have reviewed the figures we have used over the past several years to calculate AD costs to operators. To account for various inflationary costs in the airline industry, we find it necessary to increase the labor rate used in these calculations from \$60 per work hour to \$65 per work hour. The cost impact information, below, reflects this increase in the specified hourly labor rate.

Cost Impact

There are approximately 264 airplanes of the affected design in the worldwide fleet. The FAA estimates that 244 airplanes of U.S. registry will be affected by this AD, that it will take approximately 2 work hours per airplane to accomplish the required actions, and that the average labor rate is \$65 per work hour. Based on these figures, the cost impact of the AD on U.S. operators is estimated to be \$31,720, or \$130 per airplane.

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.

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).

2003-21-02 McDonnell Douglas: Amendment 39-13336. Docket 2001-NM-184-AD.

Applicability: Model DC-8-11, DC-8-12, DC-8-21, DC-8-31, DC-8-32, DC-8-33, DC-8-41, DC-8-42, and DC-8-43 airplanes; Model DC-8-51, DC-8-52, DC-8-53, and DC-8-55 airplanes; Model DC-8F-54 and DC-8F-55 airplanes; Model DC-8-61, DC-8-62, and DC-8-63 airplanes; Model DC-8-61F, DC-8-62F, and DC-8-63F airplanes; Model DC-8-71, DC-8-72, and DC-8-73 airplanes; as listed in McDonnell Douglas DC-8 Service Bulletin 57-85, Revision 1, dated July 5, 1991; 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 (e) 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 detect and correct cracking of the lower inboard auxiliary spar cap, which could cause excessive loads to the structure attaching the support fitting of the main landing gear (MLG) to the wing, and result in loss of the MLG; accomplish the following:

Inspection To Determine the Material of the Auxiliary Spar Cap

(a) Within 24 months or 2,000 flight cycles after the effective date of this AD, whichever occurs later, inspect to determine the material composition of the lower inboard auxiliary spar cap (part numbers 5615058-1 through -506 inclusive) of the left and right wings, in accordance with a method approved by the Manager, Los Angeles Aircraft Certification Office (ACO), FAA; or by performing an eddy current test of the auxiliary spar cap per the Non-Destructive Testing Standard Practice Manual MDC-93K0393 (NDTSPM) 06-10-01.006. If the material of the spar cap is 7075-T73 aluminum, no further action is required by this paragraph.

Inspections for Cracking and Follow-on Corrective Actions

(b) If the material of the lower inboard auxiliary spar cap found during the inspection required by paragraph (a) of this AD is 7075-T6 aluminum: Within 2 years or 2,000 flight cycles, whichever occurs first, after accomplishing the inspection required by paragraph (a) of this AD, perform a detailed inspection and a dye penetrant inspection for cracking of both of the lower inboard auxiliary

spar caps; per McDonnell Douglas DC-8 Service Bulletin 57-85, Revision 1, dated July 5, 1991. If no cracking is detected, repeat the inspection at intervals not to exceed 6,400 flight hours, until both auxiliary spar caps are replaced with spar caps made with 7075-T73 aluminum, in accordance with the service bulletin.

Note 2: For the purposes of this AD, a detailed inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

Follow-on Corrective Actions for Certain Cracking

(c) For any cracking detected that is described in Conditions II through IV of the Accomplishment Instructions of McDonnell Douglas DC-8 Service Bulletin 57-85, Revision 1, dated July 5, 1991: Before further flight, accomplish the applicable corrective actions (rework, repair, apply corrosion inhibiting compound, or replace fittings) per the service bulletin. For Conditions II through IV, repeat the inspection for cracking at intervals specified in paragraph 1.D of the service bulletin not to exceed 1,600 flight cycles. Replacement of both spar caps with 7075-T73 aluminum is terminating action for the requirements of this AD.

Follow-on Corrective Actions for Certain Other Cracking

(d) If any cracking is detected that is described in Condition V or VI of the Accomplishment Instructions of McDonnell Douglas DC-8 Service Bulletin 57-85, Revision 1, dated July 5, 1991: Before further flight, replace the auxiliary spar cap with a cap composed of 7075-T73 aluminum, in accordance with the service bulletin, or repair by a method approved by the Manager, Los Angeles ACO. For a repair method to be approved by the Manager, Los Angeles ACO, as required by this paragraph, the Manager's approval letter must specifically reference this AD.

Alternative Methods of Compliance

(e) 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, Los Angeles ACO. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Los Angeles ACO.

Note 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Los Angeles ACO.

Special Flight Permits

(f) 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

(g) Unless otherwise specified in this AD, the actions shall be done in accordance with McDonnell Douglas DC-8 Service Bulletin 57-85, Revision 1, dated July 5, 1991. 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 Aircraft Group, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Data and Service Management, Dept. C1-L5A (D800-0024). Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date

(h) This amendment becomes effective on November 20, 2003.

Issued in Renton, Washington, on October 7, 2003.

Ali Bahrami,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

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