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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2001-NM-343-AD; Amendment 39-14203; AD 2005-15-14]

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, DC-8-43, DC-8F-54, and DC-8F-55 Airplanes; and DC-8-50, DC-8-60, DC-8-60F, DC-8-70, and DC-8-70F Series Airplanes

AGENCY: Federal Aviation Administration, Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain McDonnell Douglas airplane models. This AD requires a one-time test to determine the material of the upper inboard spar cap of the wing, and corrective actions if necessary. This action is necessary to prevent stress corrosion cracking in the forward tang of the upper inboard spar cap of the wing, which could result in structural damage to adjacent components of the wing and consequent reduced structural integrity of the airplane. This action is intended to address the identified unsafe condition.

DATES: Effective September 1, 2005.

The incorporation by reference of a certain publication listed in the regulations is approved by the Director of the Federal Register as of September 1, 2005.

ADDRESSES: The service information referenced in this AD may be obtained from Boeing Commercial Airplanes, 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 FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California.

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 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, DC-8-43, DC-8F-54, and DC-8F-55 airplanes; and DC-8-50, DC-8-60, DC-8-60F, DC-8-70, and DC-8-70F series airplanes; was published in the Federal Register on August 14, 2003 (68 FR 48576). For certain airplanes, that action proposed to require a one-time test to determine the material of the upper inboard spar cap of the wing, or a one-time inspection to determine if the slant panel cap has been repaired previously. For most airplanes, this action also proposed to require a one-time inspection for corrosion of the slant panel cap of the wing leading edge assembly, and follow-on actions.

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 from a single commenter, who is the airplane manufacturer.

Request To Add Conductivity Test for Group 2 Airplanes

The commenter requests that we revise paragraph (a) of the proposed AD to add Group 2 airplanes, as identified in McDonnell Douglas Service Bulletin DC8-57-072 R03, Revision 03, dated October 2, 1995. (Paragraph (a) of the proposed AD specifies that the actions in that paragraph apply to airplanes in Group 1 of that service bulletin.) The commenter points out that Group 1 airplanes are those that do not have a previous repair on the upper inboard spar cap. Group 2 airplanes are those airplanes modified previously under Condition 2 of the referenced service bulletin, or certain Service Rework Drawings. The commenter states that Group 2 airplanes should be added to paragraph (a) to ensure that all subject airplanes are inspected.

We agree. The proposed AD separated requirements for Group 1 and Group 2 airplanes into paragraphs (a) (for airplanes in Group 1) and (b) (for airplanes in Group 2). The difference between the two paragraphs is that no conductivity test was specified for airplanes in Group 2. However, not providing the option to perform the conductivity test on Group 2 airplanes could result in airplanes being subject to unnecessary requirements if the upper inboard spar cap is made from 7075-T73 material. Thus, we have revised paragraph (a) of this final rule to specify the conductivity test for all affected airplanes. We have also included a new paragraph (b) to state that, for airplanes in Group 2, accomplishing the modification in paragraph (a)(2) of this AD without accomplishing the one-time eddy current conductivity test to determine the material of the upper inboard spar cap of the wing is acceptable for compliance with this AD.

Request To Defer Requirements for Group 3 Airplanes

The commenter states that no action is necessary for Group 3 airplanes, as identified in McDonnell Douglas Service Bulletin DC8-57-072 R03, Revision 03, until McDonnell Douglas DC-8 Service Bulletin 57-30 has been accomplished. The commenter points out that replacing the slant panel cap of the wing leading edge is not necessary to address the unsafe condition (an issue which is discussed fully later on in this final rule), and McDonnell Douglas Service Bulletin DC8-57-072 R03, Revision 03, provides for deferral of the other action specified for Group 3 airplanes in the following statement:

"Modification of the front spar stiffeners is to provide compatibility with rework of the lower spar cap rework per DC-8 Service Bulletin 57-30, Revision 4[,] and may be deferred until accomplishing DC-8 Service Bulletin 57-30."

However, in the section "Differences Between Proposed AD and Service Information" of the proposed AD, the FAA states that the proposed AD would not allow this deferral. The commenter states that if McDonnell Douglas DC-8 Service Bulletin 57-30 is done, McDonnell Douglas Service Bulletin DC8-57-072 will be necessary for compatibility.

We infer that the commenter is requesting that we reinstate the deferral of action for airplanes in Group 3 until DC-8 Service Bulletin 57-30 is accomplished. We agree for the reasons stated by the commenter. Therefore, we have revised paragraph (c) of this final rule to state that, for Group 3 airplanes as identified in McDonnell Douglas Service Bulletin DC8-57-072 R03, Revision 03, the actions specified by paragraph (a) of this AD are not required until the actions specified in McDonnell Douglas DC-8 Service Bulletin 57-30 are accomplished, or within 48 months after the effective date of this AD, whichever is later. If the actions specified in McDonnell Douglas DC-8 Service Bulletin 57-30 have been accomplished before the effective date of the AD, the actions required by paragraph (a) of this AD must be accomplished within 48 months after the effective date of this AD.

Request To Remove Requirements for Slant Panel Cap

The commenter requests changes throughout the proposed AD to remove requirements that would apply to the slant panel cap of the wing leading edge. The commenter notes that the unsafe condition is stress corrosion cracking of upper inboard spar caps made of 7079-T6 material. The commenter states that the only time that an inspection of the slant panel cap is needed is during the modification of the upper inboard spar cap. The commenter points out that, in paragraph (a)(1) of the proposed AD, if the test reveals that the upper inboard spar cap is made from 7075-T73 material, then the proposed AD should specify that no further action is needed. The commenter also notes that paragraphs (a)(2) and (b) of the proposed AD should be revised to note that the inspection of the slant panel cap for corrosion and previous repairs is needed to determine what modification configuration applies. The steps of repairing corrosion and repairing or replacing the slant panel cap, as applicable, are not relevant and should not be included. The commenter points out that the slant panel cap can be repaired separately from the service bulletin without affecting the actions required by this proposed AD for the upper inboard spar cap.

We agree with the commenter's request to remove actions that would have applied to the slant panel cap. Including these actions in this AD would place an unnecessary burden on affected operators, and would not benefit safety as it relates to the unsafe condition addressed by this AD. Accordingly, we have revised paragraph (a)(1) of this final rule to state that, if the upper inboard spar cap is made from 7075-T73 material, no further action is needed. We have also revised paragraph (a)(2) to remove the instructions to inspect for corrosion or previous repairs, and repair or replace the slant panel cap. (Inspecting for corrosion or previous repairs to determine the condition that applies is incidental to accomplishing the required actions.) Paragraph (a)(2) now explains that the procedures in the service bulletin include trimming the forward tang of the upper inboard spar cap, installing a spar cap angle doubler and stiffener clips, installing a wing upper surface doubler, and trimming the front spar stiffeners, as applicable. (As explained previously, the information in paragraphs (b) and (c) of the proposed AD does not appear in this final rule, so we have not changed paragraphs (b) and (c) of this final rule in this regard.) We have also revised the Summary section to state that this AD requires a one-time test to determine the material of the upper inboard spar cap of the wing; and corrective actions if necessary. We have also revised the Cost Impact estimate in this AD accordingly.

Request To Allow Conductivity Test Without Removing Leading Edge

The commenter requests that we revise the proposed AD to allow the conductivity test to determine the material of the upper inboard spar cap to be performed without removing the wing leading edge. The commenter notes that the Accomplishment Instructions of the service bulletin

specify that the leading edge must be removed. However, the manufacturer has received requests from operators to allow the test to be done without removing the leading edge. The commenter states that it is possible to access the upper inboard spar cap through the leading edge access doors (on certain airplane models), through the center wing fuel tank, or through the fuselage, without removing the wing leading edge.

We agree with the commenter's request. We have revised paragraph (a) of this final rule to allow the conductivity test to be performed without removing the wing leading edge.

Request To Revise Applicability

The commenter notes that the Discussion paragraph of the proposed AD states that, "The FAA has received reports indicating that cracking has been found in the forward tang of the upper inboard spar cap of the wing on certain McDonnell Douglas Model DC-8-70 series airplanes." The commenter states that this statement must be revised because all Model DC-8 airplanes need to be inspected because the engineering order that changed the material of the upper inboard spar cap (from 7079-T6 material to 7075-T73 material) allowed installing upper inboard spar caps made from 7079-T6 material until spares were exhausted. Thus, upper inboard spar caps were installed randomly through the fleet. The commenter states that the effectivity listing of the referenced service bulletin correctly identifies affected airplanes.

We acknowledge the commenter's concerns. The section of the proposed AD referenced by the commenter states that cracking was found on the upper inboard spar cap of the wing on certain McDonnell Douglas Model DC-8-70 series airplanes. This is not intended to imply that only Model DC-8-70 series airplanes are subject to the proposed AD. Indeed, the applicability section of this AD, as proposed, identifies "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, DC-8-43, DC-8-51, DC-8-52, DC-8-53, DC-8-55, DC-8F-54, DC-8F-55, DC-8-61, DC-8-62, DC-8-63, DC-8-61F, DC-8-62F, DC-8-63F, DC-8-71, DC-8-72, DC-8-73, DC-8-71F, DC-8-72F, and DC-8-73F airplanes; certificated in any category; as identified in McDonnell Douglas Service Bulletin DC8-57-072 R03, Revision 03, dated October 2, 1995." We find that this applicability statement includes all airplanes that should be subject to this AD. In addition, we note that the Discussion section is not restated in the final rule. We have not changed this AD in this regard.

Explanation of Additional Changes Made to This AD

We have revised paragraph (a) of this AD to refer specifically to McDonnell Douglas Service Bulletin DC8-57-072 R03, Revision 03, dated October 2, 1995, instead of referring to "the service bulletin."

Also, Boeing has received a Delegation Option Authorization (DOA). We have revised paragraph (e)(2) of this AD to delegate the authority to approve an alternative method of compliance for any repair required by this AD to the Authorized Representative for the Boeing DOA Organization rather than the Designated Engineering Representative (DER).

We have revised compliance times in this AD to be stated in months (48 months after the effective date of this AD) instead of in years (4 years after the effective date of this AD).

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 303 airplanes of the affected design in the worldwide fleet. The FAA estimates that 229 airplanes of U.S. registry will be affected by this AD.

The electrical conductivity test will take approximately 1 work hour per airplane, at the average labor rate of $65 per work hour. Based on these figures, the cost impact of this inspection on U.S. operators is estimated to be $14,885, or $65 per airplane.

For airplanes subject to corrective action, the modification will take between 110 and 416 work hours per airplane, at the average labor rate of $65 per work hour. Required parts will cost between $4,554 and $19,687. Based on these figures, the cost impact of these actions is estimated to be between $11,704 and $46,727 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. 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.

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 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"

2005-15-14 McDonnell Douglas: Amendment 39-14203. Docket 2001-NM-343-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, DC-8-43, DC-8-51, DC-8-52, DC-8-53, DC-8-55, DC-8F-54, DC-8F-55, DC-8-61, DC-8-62, DC-8-63, DC-8-61F, DC-8-62F, DC-8-63F, DC-8-71, DC-8-72, DC-8-73, DC-8-71F, DC-8-72F, and DC-8-73F airplanes; certificated in any category; as identified in McDonnell Douglas Service Bulletin DC8-57-072 R03, Revision 03, dated October 2, 1995.

Compliance

Required as indicated, unless accomplished previously.

To prevent stress corrosion cracking in the forward tang of the upper inboard spar cap of the wing, which could result in structural damage to adjacent components of the wing and consequent reduced structural integrity of the airplane, accomplish the following:

Inspection and Investigative and Other Specified Actions

(a) Within 48 months after the effective date of this AD, except as provided by paragraphs (b) and (c) of this AD, perform a one-time eddy current conductivity test of the upper inboard spar cap of the wing to determine the type of material, in accordance with the Accomplishment Instructions of McDonnell Douglas Service Bulletin DC8-57-072 R03, Revision 03, dated October 2, 1995. Although the Accomplishment Instructions of the service bulletin specify that it is necessary to remove the wing leading edge to perform this test, this AD does not require removing the wing leading edge to access the upper inboard spar cap. The conductivity test can be accomplished through the access panels on the lower surface of the wing leading edge, through the main fuel tank, or through the fuselage at station 680, as applicable.

(1) If the test reveals that the upper inboard spar cap is made from 7075-T73 material (as defined in the service bulletin): No further action is required by this paragraph.

(2) If the test reveals that the upper inboard spar cap is made from 7079-T6 material: Within 48 months after the effective date of this AD, except as provided by paragraph (c) of this AD, accomplish the modification specified in the service bulletin, in accordance with the Accomplishment Instructions of the service bulletin. The procedures specified in the service bulletin include determining the condition that applies, trimming the forward tang of the upper inboard spar cap, installing a spar cap angle doubler and stiffener clips, installing wing upper surface doublers, and trimming the front spar stiffeners, as applicable.

Group 2 Airplanes: Waiver of Conductivity Test

(b) For airplanes in Group 2 as defined by McDonnell Douglas Service Bulletin DC8-57-072 R03, Revision 03, dated October 2, 1995: In lieu of accomplishing the one-time eddy current conductivity test to determine the material of the upper inboard spar cap of the wing required by paragraph (a) of this AD, accomplishing the modification in paragraph (a)(2) of this AD within the compliance time specified in that paragraph is acceptable for compliance with this AD.

Group 3 Airplanes: Inspection and Modification

(c) For airplanes in Group 3 as defined by McDonnell Douglas Service Bulletin DC8-57-072 R03, Revision 03, dated October 2, 1995: The actions specified by paragraph (a) of this AD are not required until the actions specified in McDonnell Douglas DC-8 Service Bulletin 57-30 are accomplished. If the actions specified in McDonnell Douglas DC-8 Service Bulletin 57-30 have not been accomplished before the effective date of the AD, the actions required by paragraph (a) of this AD must be accomplished concurrent with McDonnell Douglas DC-8 Service Bulletin 57-30 (if McDonnell Douglas DC-8 Service Bulletin 57-30 is accomplished), or within 48 months after the effective date of this AD, whichever is later. If the actions specified in McDonnell Douglas DC-8 Service Bulletin 57-30 have been accomplished before the effective date of the AD, the actions required by paragraph (a) of this AD must be accomplished within 48 months after the effective date of this AD.

Accomplishing Certain Actions Constitutes Compliance With AD 90-16-05

(d) Accomplishment of the action(s) required by this AD constitutes compliance with the inspections required by paragraph A. of AD 90-16-05, amendment 39-6614, as it pertains to McDonnell Douglas DC-8 Service Bulletin 57-72, Revision 2, dated July 16, 1971; and McDonnell Douglas DC-8 Service Bulletin 57-34, Revision 3, dated December 29, 1970. Accomplishment of the actions required by this AD does not terminate the remaining requirements of AD 90-16-05 as it applies to other service bulletins; operators are required to continue to inspect and/or modify in accordance with the other service bulletins listed in that AD.

Alternative Methods of Compliance

(e)(1) In accordance with 14 CFR 39.19, the Manager, Los Angeles Aircraft Certification Office (ACO), FAA, is authorized to approve alternative methods of compliance (AMOC) for this AD.

(2) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD, if it is approved by an
Authorized Representative for the Boeing Delegation Option Authorization Organization who has been authorized by the Manager, Los Angeles ACO, to make such 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.

Incorporation by Reference

(f) Unless otherwise specified in this AD, the actions must be done in accordance with McDonnell Douglas Service Bulletin DC8-57-072 R03, Revision 03, dated October 2, 1995. 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. To get copies of this service information, contact Boeing Commercial Airplanes, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Data and Service Management, Dept. C1-L5A (D800-0024). To inspect copies of

this service information, go to the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or to the FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California; or to the National Archives and Records Administration (NARA). For information on the availability of this material at the NARA, call (202) 741-6030, or go to *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html*.

Effective Date

(g) This amendment becomes effective on September 1, 2005.

Issued in Renton, Washington, on July 20, 2005.
Kevin M. Mullin,
Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.
[FR Doc. 05-14684 Filed 7-27-05; 8:45 am]
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