

[Federal Register: March 28, 2007 (Volume 72, Number 59)]
[Rules and Regulations]
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[DOCID:fr28mr07-1]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2006-25850; Directorate Identifier 2006-NM-128-AD; Amendment 39-15004; AD 2007-07-04]

RIN 2120-AA64

Airworthiness Directives; McDonnell Douglas Model MD-11 and -11F Airplanes

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

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for all McDonnell Douglas Model MD-11 and -11F airplanes. This AD requires revising the maintenance inspection program that provides for inspection of principal structural elements (PSEs) and replacement of safe-life parts, to incorporate a new revision to the MD-11 Airworthiness Limitations Instructions. The revision reduces inspection intervals for fatigue cracking of certain PSEs, and expands the inspection area for a certain other PSE. This AD results from a revised damage tolerance analysis. We are issuing this AD to detect and correct fatigue cracking of certain PSEs, which could adversely affect the structural integrity of the airplane.

DATES: This AD becomes effective May 2, 2007.

ADDRESSES: You may examine the AD docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC.

Contact Boeing Commercial Aircraft Group, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Data and Service Management, Dept. C1-L5A (D800-0024), for the service information identified in this AD.

FOR FURTHER INFORMATION CONTACT: Maureen Moreland, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5238; fax (562) 627-5210.

SUPPLEMENTARY INFORMATION:
Examining the Docket

You may examine the airworthiness directive (AD) docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility office between 9 a.m. and 5 p.m., Monday through

Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647-5227) is located on the plaza level of the Nassif Building at the street address stated in the ADDRESSES section.

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to all McDonnell Douglas Model MD-11 and -11F airplanes. That NPRM was published in the Federal Register on September 20, 2006 (71 FR 54941). That NPRM proposed to require revising the maintenance inspection program that provides for inspection of principal structural elements (PSEs) and replacement of safe-life parts, to incorporate a new revision to the MD-11 Airworthiness Limitations Instructions (ALI). The revision would reduce inspection intervals for fatigue cracking of certain PSEs, and expand the inspection area for a certain other PSE.

Comments

We provided the public the opportunity to participate in the development of this AD. We have considered the comment received.

Request To Extend Certain Initial Inspection Thresholds

Boeing has requested that we provide an extension of the initial inspection threshold for certain airplanes. Boeing states that the ALI specified in the NPRM would require reducing the initial inspection threshold for PSE 54.52.01.1 from 19,000 total flight cycles to 10,200 total flight cycles. Boeing adds that for PSEs 54.21.01.1 (54.52.01.1), 57.21.02.1, and 57.23.01.1, a minimum of 24 months is required to accomplish the initial inspection after paragraph (f) of the NPRM is done; the initial inspection times for these PSEs were reduced. Boeing also states that, as of July 2006, there are approximately 50 airplanes exceeding 10,000 total flight cycles. Boeing points out that the ALI would reduce the initial inspection threshold for PSEs 57.21.02.1 and 57.23.01.1 from 19,900 total flight cycles to 15,750 and 15,250 total flight cycles respectively. Boeing notes that, as of July 2006, there are six airplanes with more than 12,000 total flight cycles. Additionally, Boeing points out that the ALI would reduce the repetitive inspection interval for PSE 57.21.05.1 from 10,000 flight cycles to 3,200 flight cycles. Approximately 50 airplanes would have already accomplished the inspection, but would be planning for a 10,000-flight-cycle repetitive interval instead of a 3,200-flight-cycle repetitive interval. Boeing asserts that a substantial increase in the compliance time requirements for those PSE inspections is necessary to prevent an immediate hardship on the operators of these airplanes.

For the reasons cited by Boeing, we agree with its request to extend certain inspection compliance times. We have determined that PSE number 54.21.01.1, as cited in Boeing's comment, is a typographical error and we have used the correct PSE number, 54.52.01.1, in this AD. We have added a new paragraph (h) to this AD to specify those certain PSE inspection compliance times, and re-identified the remaining paragraphs accordingly.

Conclusion

We have carefully reviewed the available data, including the comment received, and determined that air safety and the public interest require adopting the AD with the change described previously. These changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Costs of Compliance

There are about 102 airplanes of the affected design in the worldwide fleet. This AD affects about 93 airplanes of U.S. registry. The maintenance and inspection program revision takes about 1 work hour per airplane, at an average labor rate of \$80 per work hour. Based on these figures, the estimated cost of the AD for U.S. operators is \$7,440, or \$80 per airplane, per inspection cycle.

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 Findings

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD 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.

For the reasons discussed above, I certify that this AD:

- (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.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket. See the ADDRESSES section for a location to examine the regulatory evaluation.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 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. The Federal Aviation Administration (FAA) amends § 39.13 by adding the following new airworthiness directive (AD):



2007-07-04 McDonnell Douglas: Amendment 39-15004. Docket No. FAA-2006-25850; Directorate Identifier 2006-NM-128-AD.

Effective Date

(a) This AD becomes effective May 2, 2007.

Affected ADs

(b) None.

Applicability

(c) This AD applies to all McDonnell Douglas Model MD-11 and -11F airplanes, certificated in any category.

Note 1: This AD requires revisions to certain operator maintenance documents to incorporate new inspections for fatigue cracking of principal structural elements (PSEs). Compliance with these inspections is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by these inspections, the operator may not be able to incorporate the inspections described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance according to paragraph (i) of this AD. The request should include a description of changes to the required inspections that will ensure the continued damage tolerance of the affected structure. The FAA has provided guidance for this determination in Advisory Circular (AC) 25-1529-1.

Unsafe Condition

(d) This AD results from a revised damage tolerance analysis. We are issuing this AD to detect and correct fatigue cracking of certain principal structural elements (PSEs), which could adversely affect the structural integrity of the airplane.

Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Revision of Airworthiness Limitations Section

(f) Except as provided by paragraph (h) of this AD: Within 18 months after the effective date of this AD, revise the Airworthiness Limitations section of the Instructions for Continued Airworthiness, Airworthiness Limitations Instructions (ALI), according to a method approved by the Manager, Los Angeles Aircraft Certification Office (ACO), FAA. Boeing MD-11 ALI, Report Number MDC-K5225, Revision 11, dated March 2006, is one approved method.

(g) Except as provided by paragraph (i) of this AD: After the actions specified in paragraph (f) of this AD have been done, no alternative inspection intervals or replacement times may be approved for the PSEs and safe-life limited parts specified in Boeing MD-11 ALI Report Number MDC-K5225, Revision 11, dated March 2006.

Compliance Times for Inspections

(h) Accomplish the initial threshold and repetitive inspection intervals specified in the ALI, as applicable, at the times specified in paragraphs (h)(1) and (h)(2) of this AD.

(1) For PSEs 54.52.01.1, 57.21.02.1, and 57.23.01.1: Accomplish the initial inspection within 24 months after accomplishment of the requirements in paragraph (f) of this AD, or within the initial inspection interval specified in the ALI, whichever occurs later.

(2) For airplanes on which the initial inspection of PSE 57.21.05.1 has been accomplished as of the effective date of this AD: Repeat the inspection within 24 months after accomplishment of the requirements in paragraph (f) of this AD, or within 3,200 flight cycles after accomplishment of the initial inspection, whichever occurs later. Repeat the inspection thereafter at intervals not to exceed 3,200 flight cycles.

Alternative Methods of Compliance (AMOCs)

(i)(1) The Manager, Los Angeles ACO, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

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

(3) Before using any AMOC approved in accordance with § 39.19 on any airplane to which the AMOC applies, notify the appropriate principal inspector in the FAA Flight Standards Certificate Holding District Office.

Material Incorporated by Reference

(j) None.

Issued in Renton, Washington, on March 19, 2007.

Ali Bahrami,
Manager, Transport Airplane Directorate, Aircraft Certification Service.
[FR Doc. E7-5554 Filed 3-27-07; 8:45 am]