

[Federal Register: October 25, 2006 (Volume 71, Number 206)]
[Rules and Regulations]
[Page 62380-62384]
From the Federal Register Online via GPO Access [wais.access.gpo.gov]
[DOCID:fr25oc06-2]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2005-21779; Directorate Identifier 2002-NM-349-AD; Amendment 39-14790; AD 2006-21-06]

RIN 2120-AA64

Airworthiness Directives; McDonnell Douglas Model DC-9-10 Series Airplanes; DC-9-20 Series Airplanes; DC-9-30 Series Airplanes; DC-9-40 Series Airplanes; and DC-9-50 Series Airplanes

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

ACTION: Final rule.

SUMMARY: The FAA is superseding an existing airworthiness directive (AD), which applies to certain McDonnell Douglas transport category airplanes. That AD currently requires, among other things, revision of an existing program of structural inspections. This new AD requires implementation of a program of structural inspections of baseline structure to detect and correct fatigue cracking in order to ensure the continued airworthiness of these airplanes as they approach the manufacturer's original fatigue design life goal. This AD results from a significant number of these airplanes approaching or exceeding the design service goal on which the initial type certification approval was predicated. We are issuing this AD to detect and correct fatigue cracking that could compromise the structural integrity of these airplanes.

DATES: This AD becomes effective November 29, 2006.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of November 29, 2006.

The incorporation of a certain other publication, as listed in the regulations, was approved previously by the Director of the Federal Register as of July 24, 1996 (61 FR 31009, June 19, 1996).

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

FOR FURTHER INFORMATION CONTACT: Wahib Mina, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5324; 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 supplemental notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that supersedes AD 96-13-03, amendment 39-9671 (61 FR 31009, June 19, 1996). The existing AD applies to all McDonnell Douglas Model DC-9-10, -20, -30, -40, -50, and C-9 (military) series airplanes. (Since the issuance of that AD, the FAA has revised the applicability of the existing AD to identify model designations as published in the most recent type certificate data sheet for the affected models.) That supplemental NPRM was published in the Federal Register on March 7, 2006 (71 FR 11328). That supplemental NPRM proposed to require implementation of a program of structural inspections of baseline structure to detect and correct fatigue cracking in order to ensure the continued airworthiness of these airplanes as they approach the manufacturer's original fatigue design life goal.

Comments

We provided the public the opportunity to participate in the development of this AD. No comments have been received on the supplemental NPRM or on the determination of the cost to the public.

Conclusion

We have carefully reviewed the available data and determined that air safety and the public interest require adopting the AD as proposed.

Costs of Compliance

There are about 710 McDonnell Douglas transport category airplanes worldwide of the affected design. This AD will affect about 477 airplanes of U.S. registry, or 26 U.S. airline operators.

The recurring inspection costs, as required by AD 96-13-03, take 362 work hours per airplane, at an average labor rate of \$65 per work hour. Based on these figures, the estimated cost of the currently required actions is \$11,223,810, or \$23,530 per airplane, per inspection cycle.

The incorporation of the revised procedures in this AD action will require approximately 20 additional work hours per operator to accomplish, at an average labor rate of \$65 per work hour. Based on these figures, the cost to the 26 affected U.S. operators to incorporate these revised procedures into the SID program is estimated to be \$33,800, or \$1,300 per operator.

Additionally, the number of required work hours for each inspection (and the Supplemental Inspection Document (SID) program), as indicated above, is presented as if the accomplishment of

those actions were to be conducted as "stand alone" actions. However, in actual practice, these actions for the most part will be accomplished coincidentally or in combination with normally scheduled airplane inspections and other maintenance program tasks. Further, any costs associated with special airplane scheduling are expected to be minimal.

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, Incorporation by reference, 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 removing amendment 39-9671 (61 FR 31009, June 19, 1996) and by adding the following new airworthiness directive (AD):

AIRWORTHINESS DIRECTIVE

www.faa.gov/aircraft/safety/alerts/
www.gpoaccess.gov/fr/advanced.html

U.S. Department
of Transportation
**Federal Aviation
Administration**



2006-21-06 McDonnell Douglas: Amendment 39-14790. Docket No. FAA-2005-21779; Directorate Identifier 2002-NM-349-AD.

Effective Date

(a) This AD becomes effective November 29, 2006.

Affected ADs

(b) This AD supersedes AD 96-13-03.

Applicability

(c) This AD applies to all McDonnell Douglas Model DC-9-11, DC-9-12, DC-9-13, DC-9-14, DC-9-15, and DC-9-15F airplanes; DC-9-21 airplanes; DC-9-31, DC-9-32, DC-9-32 (VC-9C), DC-9-32F, DC-9-33F, DC-9-34, DC-9-34F, and DC-9-32F (C-9A, C-9B) airplanes; DC-9-41 airplanes; and DC-9-51 airplanes; certificated in any category.

Unsafe Condition

(d) This AD was prompted by a significant number of these airplanes approaching or exceeding the design service goal on which the initial type certification approval was predicated. We are issuing this AD to detect and correct fatigue cracking that could compromise the structural integrity of these airplanes.

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.

Requirements of AD 96-13-03

Revision of the FAA-Approved Maintenance Inspection Program

(f) Within 6 months after July 24, 1996 (the effective date of AD 96-13-03), replace the FAA-approved maintenance inspection program with a revision that provides for inspection(s) of the principal structural elements (PSEs) defined in McDonnell Douglas Report No. L26-008, "DC-9 Supplemental Inspection Document (SID)," Section 2 of Volume I of McDonnell Douglas Report No. L26-008, "DC-9 Supplemental Inspection Document (SID)," Revision 4, dated July 1993, in accordance with Section 2 of Volume III-95, dated September 1995, of the SID.

Note 1: Operators should note that certain visual inspections of fleet leader operator sampling PSE's that were previously specified in earlier revisions of Volume III of the SID are no longer specified in Volume III-95 of the SID.

(1) Prior to reaching the threshold (N_{th}), but no earlier than one-half of the threshold ($\frac{1}{2}N_{th}$), specified for all PSE's listed in Volume III-95, dated September 1995, of the SID, inspect each PSE sample in accordance with the non-destructive inspection (NDI) procedures set forth in Section 2 of Volume II, Revision 4, dated July 1993. Thereafter, repeat the inspection for that PSE at intervals not to exceed $\Delta NDI/2$ of the NDI procedure that is specified in Volume III-95, dated September 1995, of the SID, until the requirements of paragraph (i) of this AD are accomplished.

(2) The NDI techniques set forth in Section 2 of Volume II, Revision 4, dated July 1993, of the SID provide acceptable methods for accomplishing the inspections required by this paragraph.

(3) All inspection results (negative or positive) must be reported to Boeing, in accordance with the instructions contained in Section 2 of Volume III-95, dated September 1995, of the SID. Information collection requirements contained in this regulation have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.) and have been assigned OMB Control Number 2120-0056.

Note 2: Volume II of the SID, dated July 1993, is comprised of the following:

Table 1

Volume Designation	Revision Level Shown on Volume
Volume II-10/20	4
Volume II-20/30	5
Volume II-40	4
Volume II-50	4

Note 3: NDI inspections accomplished in accordance with the following Volume II of the SID provide acceptable methods for accomplishing the inspections required by this paragraph:

Table 2

Volume Designation	Revision Level	Date of Revision
Volume II-10/20	4	July 1993
Volume II-10-20	3	April 1991
Volume II-10/20	2	April 1990
Volume II-10/20	1	June 1989
Volume II-20	Original	November 1987
Volume II-20/30	5	July 1993
Volume II-20/30	4	April 1991
Volume II-20/30	3	April 1990

Volume II-20/30	2	June 1989
Volume II-20/30	1	November 1987
Volume II-40	4	July 1993
Volume II-40	3	April 1991
Volume II-40	2	April 1990
Volume II-40	1	June 1989
Volume II-40	Original	November 1987
Volume II-50	4	July 1993
Volume II-50	3	April 1991
Volume II-50	2	April 1990
Volume II-50	1	June 1989
Volume II-50	Original	November 1987

(g) Any cracked structure detected during the inspections required by paragraph (f) of this AD must be repaired before further flight, in accordance with a method approved by the Manager, Los Angeles Aircraft Certification Office (ACO), Transport Airplane Directorate, FAA.

Note 4: Requests for approval of any PSE repair that would affect the FAA-approved maintenance inspection program that is required by this AD should include a damage tolerance assessment for that PSE.

New Requirements of This AD

Revision of the Maintenance Inspection Program

(h) Within 12 months after the effective date of this AD, incorporate a revision into the FAA-approved maintenance inspection program that provides for inspection(s) of the PSEs, in accordance with Boeing Report L26-008, "DC-9 All Series, Supplemental Inspection Document (SID)," Volume I, Revision 6, dated November 2002. Unless otherwise specified, all further references in this AD to the "SID" are to Revision 6, dated November 2002.

Non-Destructive Inspections (NDIs)

(i) For all PSEs listed in Section 2 of Volume I of the SID, perform an NDI for fatigue cracking of each PSE in accordance with the NDI procedures specified in Section 2 of Volume II, Revision 6, dated November 2004, of the SID, at the times specified in paragraph (i)(1), (i)(2), or (i)(3) of this AD, as applicable.

(1) For airplanes that have less than three-quarters of the fatigue life threshold ($\frac{3}{4}N_{th}$) as of the effective date of the AD: Perform an NDI for fatigue cracking no earlier than one-half of the threshold ($\frac{1}{2}N_{th}$) but prior to reaching three-quarters of the threshold ($\frac{3}{4}N_{th}$), or within 60 months after the effective date of this AD, whichever occurs later. Inspect again prior to reaching the threshold (N_{th}) or $\Delta NDI/2$, whichever occurs later, but no earlier than ($\frac{3}{4}N_{th}$). Thereafter, after passing the threshold (N_{th}), repeat the inspection for that PSE at intervals not to exceed $\Delta NDI/2$.

(2) For airplanes that have reached or exceeded three-quarters of the fatigue life threshold ($\frac{3}{4}N_{th}$), but less than the threshold (N_{th}), as of the effective date of the AD: Perform an NDI prior to

reaching the threshold (N_{th}), or within 18 months after the effective date of this AD, whichever occurs later. Thereafter, after passing the threshold (N_{th}), repeat the inspection for that PSE at intervals not to exceed $\Delta NDI/2$.

(3) For airplanes that have reached or exceeded the fatigue life threshold (N_{th}) as of the effective date of the AD: Perform an NDI within 18 months after the effective date of this AD. Thereafter, repeat the inspection for that PSE at intervals not to exceed $\Delta NDI/2$.

Note 5: Volume II of the SID, dated November 2004, comprises the following:

Table 3

Volume Designation	Revision Level Shown on Volume
Volume II-10/20	6
Volume II-20/30	7
Volume II-40	6
Volume II-50	6

Discrepant Findings

(j) If any discrepancy (e.g., a PSE cannot be inspected as specified in Volume II of the SID or does not match rework, repair, or modification description in Volume I of the SID) is detected during any inspection required by paragraph (i) of this AD, accomplish the action specified in paragraph (j)(1) or (j)(2) of this AD, as applicable.

(1) If a discrepancy is detected during any inspection performed prior to $\frac{3}{4}N_{th}$ or N_{th} : The area of the PSE affected by the discrepancy must be inspected prior to N_{th} or within 18 months of the discovery of the discrepancy, whichever is later, in accordance with a method approved by the Manager, Los Angeles ACO, FAA.

(2) If a discrepancy is detected during any inspection performed after N_{th} : The area of the PSE affected by the discrepancy must be inspected prior to the accumulation of an additional $\Delta NDI/2$, measured from the last non-discrepant inspection finding, or within 18 months of the discovery of the discrepancy, whichever occurs later, in accordance with a method approved by the Manager of the Los Angeles ACO.

Reporting Requirements

(k) All negative, positive, or discrepant (discrepant finding examples are described in paragraph (j) of this AD) findings of the inspections accomplished under paragraph (i) of this AD must be reported to Boeing, at the times specified in, and in accordance with the instructions contained in, Section 4 of Volume I, Revision 6, of the SID. Information collection requirements contained in this regulation have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.) and have been assigned OMB Control Number 2120-0056.

Corrective Actions

(l) Any cracked structure of a PSE detected during any inspection required by paragraph (i) of this AD must be repaired before further flight in accordance with a method approved by the Manager, Los Angeles ACO, or by using a method approved in accordance with procedures specified in

paragraph (p) of this AD. Accomplish follow-on actions described in paragraphs (l)(1), (l)(2), and (l)(3) of this AD, at the times specified.

(1) Within 18 months after repair, perform a damage tolerance assessment (DTA) that defines the threshold for inspection of the repair and submit the assessment for approval.

(2) Before reaching 75% of the repair threshold as determined in paragraph (l)(1) of this AD, submit the inspection methods and repetitive inspection intervals for the repair for approval.

(3) Before the repair threshold, as determined in paragraph (l)(1) of this AD, incorporate the inspection method and repetitive inspection intervals into the FAA-approved structural maintenance or inspection program for the airplane.

Note 6: For the purposes of this AD, we anticipate that submissions of the DTA of the repair, if acceptable, should be approved within six months after submission.

Note 7: Advisory Circular AC 25.1529-1, "Instructions for Continued Airworthiness of Structural Repairs on Transport Airplanes," dated August 1, 1991, is considered to be additional guidance concerning the approval of repairs to PSEs.

Inspection for Transferred Airplanes

(m) Before any airplane that has exceeded the fatigue life threshold (N_{th}) can be added to an air carrier's operations specifications, a program for the accomplishment of the inspections required by this AD must be established per paragraph (m)(1) or (m)(2) of this AD, as applicable.

(1) For airplanes that have been inspected in accordance with this AD, the inspection of each PSE must be accomplished by the new operator in accordance with the previous operator's schedule and inspection method, or the new operator's schedule and inspection method, at whichever time would result in the earlier accomplishment date for that PSE inspection. The compliance time for accomplishment of this inspection must be measured from the last inspection accomplished by the previous operator. After each inspection has been performed once, each subsequent inspection must be performed in accordance with the new operator's schedule and inspection method.

(2) For airplanes that have not been inspected in accordance with this AD, the inspection of each PSE required by this AD must be accomplished either prior to adding the airplane to the air carrier's operations specification, or in accordance with a schedule and an inspection method approved by the Manager, Los Angeles ACO. After each inspection has been performed once, each subsequent inspection must be performed per the new operator's schedule.

Inspections Accomplished Before the Effective Date of This AD

(n) Inspections accomplished prior to the effective date of this AD in accordance with Boeing Report No. L26-008, "DC-9 All Series Supplemental Inspection Document (SID)," Volume I, Revision 6, dated November 2002, are acceptable for compliance with the requirements of paragraph (i) of this AD.

Acceptable for Compliance

(o) Boeing Report MDC 91K0263, "DC-9/MD-80 Aging Aircraft Repair Assessment Program Document," Revision 1, dated October 2000, provides inspection/replacement programs for certain repairs to the fuselage pressure shell. These repairs and inspection/replacement programs are considered acceptable for compliance with the requirements of paragraphs (i), (l), and (m) of this AD for repairs subject to that document.

Alternative Methods of Compliance (AMOCs)

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

(3) 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 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 14 CFR 25.571, Amendment 45, and the approval must specifically refer to this AD.

(4) AMOCs approved previously for alternative inspection procedures per AD 87-14-07 R1, amendment 39-6019; AD 94-03-01, amendment 39-8807; and AD 96-13-03; are acceptable for compliance with the actions required by paragraph (f) of this AD for inspections performed before the requirements of paragraph (i) are accomplished.

(5) AMOCs approved previously for repairs per AD 87-14-07 R1, AD 94-03-01, and AD 96-13-03; are acceptable for compliance with the requirements of paragraph (l) of this AD.

Material Incorporated by Reference

(q) You must use McDonnell Douglas Report No. L26-008, "DC-9 Supplemental Inspection Document (SID)," Volume III-95, dated September 1995; and the volumes of Boeing Report L26-008, "DC-9 All Series, Supplemental Inspection Document (SID)," specified in Table 4 of this AD; as applicable, to perform the actions that are required by this AD, unless the AD specifies otherwise.

Table 4 – Supplemental Inspection Document Volumes

Volume	Effective Pages	Revision Level	Date
Volume I – All Series	List of Effective Pages Pages A-C	4	July 1993
Volume I – All Series	List of Effective Pages Pages A-D	6	November 2002
Volume II – 10/20	List of Effective Pages Pages A-K	4	July 1993
Volume II – 10/20	List of Effective Pages Pages A-M	6	November 2004
Volume II – 20/30	List of Effective Pages Pages A-T	5	July 1993
Volume II – 20/30	List of Effective Pages Pages A-X	7	November 2004
Volume II – 40	List of Effective Pages Pages A-M	4	July 1993
Volume II – 40	List of Effective Pages Pages A-O	6	November 2004
Volume II – 50	List of Effective Pages Pages A-M	4	July 1993
Volume II – 50	List of Effective Pages Pages A-O	6	November 2004

(Where there are differences between the revision dates listed in the List of Effective Pages and the revision dates shown on the actual pages of these documents, the revision dates on the actual pages are correct, except for the following: Volume I-All Series, dated July 1993: The revision dates in the List of Effective Pages are correct for the Record of Revisions, page 13 of the Introduction, and page B of Section 2.)

(1) The incorporation by reference of the volumes of Boeing Report L26-008, "DC-9 All Series, Supplemental Inspection Document (SID)," specified in Table 4 of this AD, is approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and CFR part 51.

(2) The incorporation by reference of McDonnell Douglas Report No. L26-008, "DC-9 Supplemental Inspection Document (SID)," Volume III-95, dated September 1995, was approved previously by the Director of the Federal Register on July 24, 1996 (61 FR 31009, June 19, 1996).

(3) Contact Boeing Commercial Airplanes, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Data and Service Management, Dept. C1-L5A (D800-0024), for a copy of this service information. You may review copies at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Room PL-401, Nassif Building, Washington, DC; on the Internet at <http://dms.dot.gov>; or at 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.

Issued in Renton, Washington, on October 6, 2006.

Kalene C. Yanamura,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 06-8731 Filed 10-24-06; 8:45 am]