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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2004-18670; Directorate Identifier 2002-NM-83-AD; Amendment 39-14187; AD 2005-14-10]

RIN 2120-AA64

Airworthiness Directives; McDonnell Douglas Model DC-10-10 and DC-10-10F Airplanes; Model DC-10-15 Airplanes; Model DC-10-30 and DC-10-30F (KC-10A and KDC-10) Airplanes; and Model DC-10-40 and DC-10-40F 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 implementation of a program of structural inspections 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 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 is 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.

DATES: This AD becomes effective August 18, 2005.

The incorporation by reference of Boeing Report No. L26-012, "DC-10 Supplemental Inspection Document (SID)," Volume I, Revision 6, dated February 2002; and McDonnell Douglas Report No. L26-012, "DC-10 Supplemental Inspection Document (SID)," Volume II Revision 8, dated November 2003; as listed in the AD, is approved by the Director of the Federal Register as of August 18, 2005.

On January 2, 1996, (60 FR 61649, December 1, 1995), the Director of the Federal Register approved the incorporation by reference of certain publications, as listed in the regulations.

On November 24, 1993 (58 FR 54949, October 25, 1993), the Director of the Federal Register approved the incorporation of a certain other publication, as listed in the regulations.

ADDRESSES: For service information identified in this AD, contact Boeing Commercial Airplanes, Long Beach Division, 3855 Lakewood Boulevard, Long Beach, California 90846, Attention: Data and Service Management, Dept. C1-L5A (D800-0024). You can examine this information at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to:

http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.

Docket: The AD docket contains the proposed AD, comments, and any final disposition. You can examine the 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 U.S. Department of Transportation, 400 Seventh Street SW., room PL-401, Washington, DC. This docket number is FAA-2004-18670; the directorate identifier for this docket is 2002-NM-83-AD.

FOR FURTHER INFORMATION CONTACT: Ron Atmur, Aerospace Engineer, Airframe Branch, ANM-120L, FAA, Los Angeles Aircraft Certification Office, 3960 Paramount Boulevard, Lakewood, California 90712-4137; telephone (562) 627-5224; fax (562) 627-5210.

SUPPLEMENTARY INFORMATION: The FAA proposed to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) with an AD to supersede AD 95-23-09, amendment 39-9429 (60 FR 61649, December 1, 1995). The existing AD applies to certain McDonnell Douglas transport category airplanes. The proposed AD was published in the Federal Register on August 3, 2004 (69 FR 46456), 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. We have considered the comments that have been submitted on the proposed AD.

One Commenter Has No Objection to the Proposed AD

One commenter, an operator, advises that it has no objection to the proposed AD.

Requests To Revise Compliance Times for Certain Airplanes

One commenter, an operator, requests that, for airplanes approaching $\frac{3}{4}$ of the fatigue life threshold (N_{th}), the grace period for the compliance time required by paragraph (j)(1) of the proposed AD be extended from "within 18 months of the effective date of the AD" to "within 60 months of the effective date of the AD." The commenter states that some of the inspections would require significant efforts and cost to access the inspection area. The commenter notes that while the proposed AD would require inspection within 18 months from the effective date of the AD for airplanes approaching $\frac{3}{4} N_{th}$, the proposed AD would not require the same inspections for airplanes just beyond $\frac{3}{4} N_{th}$ at the effective date of the AD until the airplane reached N_{th} , which is several years later in most cases. Another commenter requests that the inspections required by paragraph (j)(1) of the proposed AD be revised to "prior to N_{th} or $\Delta NDI/2$, whichever comes later." The commenter points out that the revision would more accurately reflect the intent of the DC-10 Supplemental Inspection Document (SID) program.

We agree that the grace period specified in paragraph (j)(1) of the AD may be extended to "within 60 months after the effective date of the AD," and have revised paragraph (j)(1) of the final rule accordingly. We consider that extension of the grace period will not adversely affect the safety of the fleet. Additionally, we agree to revise the final rule to specify the compliance time for certain airplanes specified in paragraph (j)(1) of the AD by requiring "before reaching the threshold (N_{th}) or $\Delta NDI/2$, whichever occurs later."

Request To Clarify Compliance "Procedure"

One commenter states that the proposed AD introduces a more complicated compliance "procedure" than that in the existing AD. The commenter also states that the "new procedure" leaves questions of interpretation.

The FAA agrees that some clarification is needed. The concept of the SID inspections has resulted in some confusion since the beginning of the DC-10 SID program more than 15 years ago. The original intent of the SID program was that operators would perform the principal structural element (PSE) inspections at or near the threshold (N_{th}). In that case, inspecting every $\Delta NDI/2$ after that inspection met the intent of the program. However, some operators have inspected certain PSEs well before the threshold (N_{th}). In that case, inspecting every $\Delta NDI/2$ after that inspection may have caused the operator to inspect many more times than was intended by the program. Therefore, we have revised paragraph (j)(1) of this final rule to clarify the compliance times and have also specified that, "After reaching the threshold (N_{th}), repeat the inspection for that PSE at intervals not to exceed $\Delta NDI/2$."

Request To Clarify the Requirements of Paragraph (k) of the Proposed AD

One commenter notes that, if a discrepancy is found, the compliance time in paragraph (k) of the proposed AD could ground an airplane while approval of a repair from the Manager, Los Angeles Aircraft Certification Office (ACO), is obtained. Another commenter, the manufacturer, points out that, in some instances, a repair is installed after the approved inspection is accomplished and is not discovered until the next required inspection is attempted, which would effectively ground the airplane. The manufacturer suggests that we continue to require inspection after detection of a discrepancy before (N_{th}), but that we add a "grace period" of 18 months after the discovery of the discrepancy, whichever occurs later.

We agree that a "grace period" may be added to paragraph (k) of the AD. We have determined that allowing an 18-month grace period for repairs that have met the static strength requirement provides an acceptable level of safety. We have revised paragraph (k) of the final rule accordingly.

Request To Remove Certain Airplanes From the Applicability of the Proposed AD

One commenter, the manufacturer, requests that Model MD-10 airplanes be removed from the applicability of the proposed AD. The commenter notes that Model MD-10 airplanes have an Airworthiness Limitations Instructions (ALI) document that references the Model DC-10 SID. The commenter believes that confusion may result if the Model MD-10 airplanes are included in the applicability of the proposed AD.

We agree that Model MD-10 airplanes may be removed from the applicability of this AD. The Model MD-10 airplanes have an ALI document that is based on a previous Model DC-10 SID, which was a 100% inspection program at the threshold. However, since rulemaking is necessary to ensure that the Model MD-10 ALI is revised with the latest revision, we may engage in separate rulemaking for those airplanes. We have removed reference to the MD-10 airplanes in the applicability of this AD.

Request To Revise the Definition of "Discrepant PSE"

One commenter, the manufacturer, requests that the FAA reference the SID definition of "discrepant PSE" or specify the SID definition verbatim. The commenter advises that making the definition of "discrepant PSE" the same as the SID may prevent any possible confusion.

We agree that clarification is necessary. We have revised paragraph (k) of the final rule to more clearly correlate the definition of "discrepancy" with the definition provided in the SID.

Request To Limit Previous Alternative Methods of Compliance (AMOCs)

One commenter, the manufacturer, requests that paragraph (r) of the proposed AD be revised to limit the acceptable AMOCs to repairs and inspections accomplished using previous alternative inspection procedures. (Paragraph (r) of the proposed AD addresses AMOCs approved previously in accordance with AD 95-23-09.) The commenter explains that this will help clarify the change to the SID program that occurred with Boeing Report No. L26-012, Volume I, Revision 6, dated February 2002.

We agree with the commenter and have revised paragraph (r)(2) of the final rule accordingly.

Request To Revise the "Costs of Compliance" Section

Several commenters disagree with the statement in the "Costs of Compliance" section of the proposed AD that "there is no additional economic burden on affected operators to perform any additional recurrent inspections." The commenters state that the inspection schedule used in AD 95-23-09 is based on fleet sampling, and the new SID program and the proposed AD would change this requirement to a 100% sampling program. The commenters state that the change in the requirement would result in a significant increase in the average labor hours per aircraft in operators' fleets. One commenter also notes that, in the same section of the proposed AD, in the phrase "* * * takes about 1,290 work hours per airplane," the correct reference should be "per operator" rather than "per airplane." Additionally, the commenter points out that no costs were stated in the proposed AD for the hours necessary for access to perform the inspections.

We do agree that the correct reference in the phrase "* * * takes about 1,290 work hours per airplane" should be "per operator," and we have revised the final rule accordingly. We do not agree with the commenter that AD 95-23-09 is based on fleet sampling. As specified in paragraph (g)(1) of the AD, which is part of the "Restatement of Certain Requirements of AD 95-23-09," all PSEs are required to be inspected before the fatigue life threshold (N_{th}). No change is necessary to this final rule in that regard. We do not agree that hours and estimated costs should be provided for time necessary to access the inspection area. The cost information provided in the AD describes only the direct costs of the specific actions required by this AD. Based on the best data available, the manufacturer provided the number of work hours necessary to do the required actions. This number represents the time necessary to perform only the actions actually required by this AD. We recognize that, in doing the actions required by an AD, operators may incur incidental costs in addition to the direct costs. The cost analysis in AD rulemaking actions, however, typically does not include incidental costs such as the time required to gain access and close up, time necessary for planning, or time necessitated by other administrative actions. Those incidental costs, which may vary significantly among operators, are almost impossible to calculate. Additionally, with the extension of the grace period in paragraph (j)(1) of this AD, there is sufficient time to plan inspections when the airplanes are in a major maintenance visit. No change is necessary to this final rule in that regard.

Request To Reference Previous ADs Instead of Previous SID Revisions

One commenter, the manufacturer, requests that paragraph (o) of the proposed AD be revised to reference previous ADs rather than previous service information. The commenter states that all

inspections accomplished per any previous revision of the DC-10 SID should be satisfactory to meet the requirements of paragraph (j) of the proposed AD.

We do not agree with the commenter. Paragraph (o) of the AD simply specifies certain revisions of the DC-10 SID that are acceptable for compliance with the inspection requirements of paragraph (j) of this AD. That information may be helpful for operators who may have performed certain inspections previously in accordance with the specified revisions. No change to the final rule is necessary in this regard.

Request To Explain Why Certain Requirements of AD 95-23-09 Are Restated

One commenter, the manufacturer, requests that the AD explain why certain requirements of AD 95-23-09 are included in the proposed AD.

Including a restatement in an AD of certain requirements of a superseded AD is a standard and common method of ensuring that certain actions are continued until the compliance times of "new" requirements are effective. Otherwise, there would be a gap between the two ADs when operators would be subject to the requirements of neither. In the preamble of the proposed AD, under the heading "Change to Existing AD," we identified the specific requirements of AD 95-23-09 that would be retained with the requirements of this AD. In this case, those "certain requirements" continue to be required until the new requirements of paragraph (i) of this AD are accomplished. No change to the final rule is necessary in this regard.

Request To Clarify Thresholds

One commenter requests that we clarify paragraphs (m)(2) and (m)(3) to ensure that the thresholds specified in those paragraphs refer to the repair threshold, not the PSE threshold.

We agree that clarification is necessary, and we have revised those paragraphs in this final rule accordingly.

Request To Clarify Paragraph (p) of the Proposed AD

One commenter, the manufacturer, requests that paragraph (p) of the proposed AD also reference paragraph (j) of the proposed AD. (Paragraph (p) of the proposed AD specifies that McDonnell Douglas Report No. MDC 91K0264, "DC-10/KC-10 Aging Aircraft Repair Assessment Program Document," Revision 1, dated October 2000, provides inspection/replacement programs for certain repairs to the fuselage pressure shell.) The commenter states that the document should also be considered as an acceptable method of compliance with the requirements of paragraph (j) of the proposed AD.

We do not agree. Paragraph (j) of the AD requires NDI inspections for fatigue cracking of each PSE at certain specified times, and does not specify repair requirements. Paragraph (p) of the AD specifies that certain repairs and inspection/replacement programs are acceptable for compliance with certain requirements of paragraphs (h) and (m) of the AD for repairs that are subject to that document. No change to the final rule is necessary in this regard.

Requests To Make Editorial Changes for Certain Paragraph References

Several commenters note that the references in paragraphs (m)(2) and (m)(3) of the proposed AD should refer to paragraph (m)(1) instead of (j)(1) of the proposed AD.

We agree that the correct reference is paragraph (m)(1) and have revised the final rule accordingly.

One commenter requests a definition of the word "you" in paragraph (e) of the proposed AD. We have recently revised the paragraph with the heading, "Compliance," in our ADs. We use the word "you" as part of our "plain language" effort to make ADs easier to understand. In this case, "you"

means whoever is responsible for the certificated operation of an aircraft, e.g., the owner of the airplane, the operator of the airplane, etc.

Changes to Delegation Authority

Boeing has received a Delegation Option Authorization (DOA). We have revised this final rule add a delegation of authority to approve an alternative method of compliance for any repair required by this AD to the Authorized Representative for the Boeing DOA Organization.

Editorial Changes

We noticed that in paragraph (l) of the proposed AD, there is reference to "paragraph (o)" of the proposed AD. The correct reference should be to paragraph (j) or (o) of the AD, and we have revised paragraph (l) of the final rule accordingly. Additionally, we note that, in paragraph (g) of the proposed AD, we inadvertently specified December 1, 1995, as the effective date of AD 95-23-09. The effective date of AD 95-23-09 is January 2, 1996, and we have revised the final rule accordingly.

Conclusion

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

Interim Action

This is considered to be interim action. We are currently considering requiring damage tolerance-based inspections and procedures that include all major structural repairs, alterations, and modifications (RAMs), which may result in additional rulemaking. That rulemaking may include appropriate recommendations from the previously mentioned FAA team and a public meeting on how to address RAMs.

Costs of Compliance

There are about 419 McDonnell Douglas transport category airplanes worldwide of the affected design. This AD will affect about 249 airplanes of U.S. registry and 13 U.S. operators.

The incorporation of the SID program into an operator's maintenance program, as required by AD 95-23-09, and retained in this AD takes about 1,290 work hours per operator, at an average labor rate of \$65 per work hour. Based on these figures, the cost to the 13 affected U.S. operators to incorporate the SID program is estimated to be \$1,090,050.

The recurring inspection costs, as required by AD 95-23-09, are estimated to be 365 work hours per airplane, per year, at an average labor rate of \$65 per work hour. Based on these figures, the recurring inspection costs required by AD 95-23-09 are estimated to be \$23,725 per airplane, per year, or \$5,907,525 for the affected U.S. fleet per year.

Since no new recurring inspection procedures have been added to the program by this new AD, there is no additional economic burden on affected operators to perform any additional recurrent inspections.

Additionally, the number of required work hours for each inspection (and the SID program), as indicated above, is presented as if the accomplishment of those actions are 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. 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 FAA amends § 39.13 by removing amendment 39-9429 (60 FR 61649, December 1, 1995), and by adding the following new airworthiness directive (AD):

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).

2005-14-10 McDonnell Douglas: Amendment 39-14187. Docket No. FAA-2004-18670; Directorate Identifier 2002-NM-83-AD.

Effective Date

- (a) This AD becomes effective August 18, 2005.

Affected ADs

- (b) This AD supersedes AD 95-23-09, amendment 39-9429.

Applicability

(c) This AD applies to all McDonnell Douglas Model DC-10-10 and DC-10-10F airplanes; Model DC-10-15 airplanes; Model DC-10-30 and DC-10-30F (KC-10A and KDC-10) airplanes; and Model DC-10-40 and DC-10-40F 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.

Restatement of Certain Requirements of AD 95-23-09

(f) Within 6 months after November 24, 1993 (the effective date of AD 93-17-09, amendment 39-8680), incorporate a revision into the FAA-approved maintenance inspection program which provides for inspection(s) of the Principal Structural Elements (PSEs) defined in Section 2 of Volume I of McDonnell Douglas Report No. L26-012, "DC-10 Supplemental Inspection Document (SID)," Revision 3, dated December 1992, in accordance with Section 2 of Volume III-92, dated October 1992, of the SID. The non-destructive inspection (NDI) techniques set forth in Section 2 and Section 4 of Volume II, Revision 3, dated December 1992, of the SID provide acceptable methods for accomplishing the inspections required by this paragraph. All inspection results (negative or positive)

must be reported to McDonnell Douglas, in accordance with the instructions contained in Section 2 of Volume III-92, dated October 1992, 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.

(1) For those Fleet Leader Operator Sampling (FLOS) PSEs that do not have a Normal Maintenance Visual Inspection specified in Section 4 of Volume II, Revision 3, dated December 1992, of the SID, the procedure for general visual inspection is as follows: Perform an inspection of the general PSE area for cleanliness, presence of foreign objects, security of parts, cracks, corrosion, and damage.

(2) For PSEs 53.10.031E/.032E, 53.10.047E/.048E, and 57.10.029E/.030E: The ENDDATE for these PSEs is October 1993. (For these PSEs, disregard the June 1993 ENDDATE specified in Section 2 of Volume III-92, dated October 1992, of the SID.)

(g) Within 6 months after January 2, 1996 (the effective date of AD 95-23-09, amendment 39-9429), replace the revision of the FAA-approved maintenance inspection program required by paragraph (f) of this AD with a revision that provides for inspection(s) of the PSEs defined in Section 2 of Volume I of McDonnell Douglas Report No. L26-012, "DC-10 Supplemental Inspection Document (SID)," Revision 5, dated October 1994, in accordance with Section 2 of Volume III-94, dated November 1994, of the SID. The NDI techniques set forth in Section 2 of Volume II, Revision 5, dated October 1994, of the SID provide acceptable methods for accomplishing the inspections required by this paragraph.

(1) Prior to reaching the threshold (N_{th}), but no earlier than one-half of the threshold ($N_{th}/2$), specified for all PSEs listed in Volume III-94, dated November 1994, of the SID, inspect each PSE sample in accordance with the NDI procedures set forth in Section 2 of Volume II, Revision 5, dated October 1994. Thereafter, repeat the inspection for that PSE at intervals not to exceed $DNDI/2$ of the NDI procedure that is specified in Volume III-94, dated November 1994, of the SID.

(2) This AD does not require visual inspections of FLOS PSEs on airplanes listed in Volume III-94, dated November 1994, of the SID planning data at least once during the specified inspection interval, in accordance with Section 2 of Volume III-94, dated November 1994, of the SID.

(3) For PSEs 53.10.055/.056E, 55.10.013/.014B, 53.10.005/.006E, 53.10.031/.032E, 53.10.047/.048E, 57.10.029/.030E: The EDATE for these PSEs is June 1998. (For these PSEs, disregard the June 1996 EDATE specified in Section 2, of Volume III-94, dated November 1994, of the SID.)

(4) All inspection results (negative or positive) must be reported to McDonnell Douglas in accordance with the instructions contained in Section 2 of Volume III-94, dated November 1994, 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.

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

Note 1: Requests for approval of any PSE repair that would affect the FAA-approved maintenance inspection program required by this AD should include a damage tolerance assessment for that PSE repair.

New Requirements of This AD

Revision of the Maintenance Inspection Program

(i) 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 No. L26-012, "DC-10 Supplemental Inspection Document (SID)," Volume I, Revision 6, dated February 2002." Unless otherwise specified, all further references in this AD to the "SID" are to Revision 6, dated February 2002.

Non-Destructive Inspections (NDIs)

(j) 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 8, dated November 2003, of the SID, at the times specified in paragraph (j)(1), (j)(2), or (j)(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 the NDI for fatigue cracking at the times specified in paragraphs (j)(1)(i) and (j)(1)(ii) of this AD. After reaching the threshold (N_{th}), repeat the inspection for that PSE at intervals not to exceed $\Delta NDI/2$.

(i) Perform an initial NDI no earlier than one-half of the threshold ($\frac{1}{2}N_{th}$), but before 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.

(ii) Repeat the NDI no earlier than ($\frac{3}{4}N_{th}$), but before reaching the threshold (N_{th}), or within 18 months after the inspection required by paragraph (j)(1)(i) of this AD, whichever occurs later.

Note 2: The SID and this AD refer to the repetitive inspection interval as $\Delta NDI/2$. However, the headings of the tables in Section 4 of Volume I of the SID refer to the repetitive inspection interval of NDI/2. The values listed under NDI/2 in the tables in Section 4 of Volume I of the SID are the repetitive inspection intervals, $\Delta NDI/2$.

(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 $\Delta NDI/2$.

Discrepant Findings

(k) If any discrepancy (e.g., differences on the airplane from the NDI reference standard, such as PSEs that cannot be inspected as specified in Volume II of the SID or do not match rework, repair, or modification descriptions in Volume I of the SID) is detected during any inspection required by paragraph (j) of this AD, accomplish the action specified in paragraph (k)(1) or (k)(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 after the discovery of the discrepancy, whichever occurs later, in accordance with a method approved by the Manager, Los Angeles ACO.

(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 $\Delta NDI/2$ or within 18 months after the discovery of the discrepancy, whichever occurs later, in accordance with a method approved by the Manager, Los Angeles ACO.

Reporting Requirements

(l) All negative, positive, or discrepant findings (examples of discrepant findings are described in paragraph (k) of this AD) of the inspections accomplished under paragraphs (j) or (o) 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 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.

Corrective Actions

(m) Any cracked structure of a PSE detected during any inspection required by paragraph (j) of this AD must be repaired before further flight in accordance with a method approved by the Manager, Los Angeles ACO or in accordance with data meeting the certification basis of the airplane approved by an Authorized Representative for the Boeing Delegation Option Authorization Organization who has been authorized by the Manager, Los Angeles Aircraft Certification Office (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. Accomplish the follow-on actions described in paragraphs (m)(1), (m)(2), and (m)(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 (m)(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 (m)(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 3: 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 4: 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

(n) 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 as specified in paragraph (n)(1) or (n)(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 in accordance with the new operator's schedule.

Inspections Accomplished Before the Effective Date of This AD

(o) Inspections accomplished before the effective date of this AD in accordance with McDonnell Douglas Report No. L26-012, "DC-10 Supplemental Inspection Document (SID)," Volume I, Revision 4, dated June 1993, or Revision 5, dated October 1994; Volume II, Revision 6, dated October 1997, or Boeing Report No. L26-012, "DC-10 Supplemental Inspection Document (SID)," Revision 7, dated August 2002; and McDonnell Douglas Report No. L26-012, "DC-10 Supplemental Inspection Document (SID)," Volume III-94, dated November 1994; are acceptable for compliance with the requirements of paragraph (j) of this AD.

Acceptable for Compliance

(p) McDonnell Douglas Report No. MDC 91K0264, "DC-10/KC-10 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 (h) and (m) of this AD for repairs subject to that document.

Alternative Methods of Compliance (AMOCs)

(q) 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.

(r)(1) Inspection procedures accomplished and approved previously as AMOCs prior to the effective date of this AD as alternative inspection procedures in accordance with AD 95-23-09, amendment 39-9429; AD 93-17-09, amendment 39-8680; AD 92-02-08, amendment 39-8144; or AD 89-22-10, amendment 39-6330; are approved as AMOCs with the actions required by paragraph (j) of this AD.

(2) Repairs accomplished and approved previously as AMOCs in accordance with AD 95-23-09, amendment 39-9429; AD 93-17-09, amendment 39-8680; AD 92-02-08, amendment 39-8144; or AD 89-22-10, amendment 39-6330; are approved as AMOCs with the actions required by paragraph (h) or (m) of this AD.

Material Incorporated by Reference

(s) You must use the service information that is specified in Table 1 of this AD to perform the actions that are required by this AD, unless the AD specifies otherwise.

TABLE 1.—MATERIAL INCORPORATED BY REFERENCE

Service information	Volume	Revision	Date
Boeing Report No. L26–012, "DC–10 Supplemental Inspection Document (SID),"including Appendices A and B.	Volume I	Revision 6	February 2002.
McDonnell Douglas Report No. L26–012, "DC–10 Supplemental Inspection Document (SID)".	Volume II	Revision 8	November 2003.

McDonnell Douglas Report No. L26-012, "DC-10 Supplemental Inspection Document (SID)".	Volume II	Revision 5	October 1994.
McDonnell Douglas Report No. L26-012, "DC-10 Supplemental Inspection Document (SID)".	Volume III-92	Original	October 1992.
McDonnell Douglas Report No. L26-012, "DC-10 Supplemental Inspection Document (SID)".	Volume III-94	Original	November 1994.

(1) The incorporation by reference of Boeing Report No. L26-012, "DC-10 Supplemental Inspection Document (SID)," Volume I, including Appendices A and B, Revision 6, dated February 2002; and McDonnell Douglas Report No. L26-012, "DC-10 Supplemental Inspection Document (SID)" Volume II, Revision 8, dated November 2003; is approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. (Only the title, Record of Revision, and List of Effective pages identify Boeing Report No. L26-012, Volume I, as Revision 6. Only page 3.1 of Section 3 and pages B-1 through B-4 of Appendix B of Volume I, Revision 6, contain the Boeing Report No., L26-012. Only the title, Record of Revision, and Table of Contents pages identify McDonnell Douglas Report No. L26-012, Volume II, as Revision 8. Only the title page of Volume II, Revision 8, contains the McDonnell Douglas Report No., L26-012.)

(2) The incorporation by reference of McDonnell Douglas Report No. L26-012, "DC-10 Supplemental Inspection Document (SID)," Volume II, Revision 5, dated October 1994; and McDonnell Douglas Report No. L26-012, Volume III-94, dated November 1994; was approved previously by the Director of the Federal Register as of January 2, 1996 (60 FR 61649, December 1, 1995).

(3) The incorporation by reference of McDonnell Douglas Report No. L26-012, "DC-10 Supplemental Inspection Document (SID)," Volume III-92, dated October 1992, was approved previously by the Director of the Federal Register as of November 24, 1993 (58 FR 54949, October 25, 1993).

(4) To get copies of the 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 view the AD docket, go to the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street SW., room PL-401, Nassif Building, Washington, DC. To review copies of this service information, go 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.

Issued in Renton, Washington, on June 28, 2005.

Kevin M. Mullin,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

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