

29, 2001, as the source for determining flyable limits.

#### **Condition 2, Option 1: Temporary Repair and Repetitive Inspections**

(1) Condition 2, Option 1: Do paragraphs (c)(1)(i), (c)(1)(ii), (c)(1)(iii), and (c)(1)(iv) of this AD, at the times specified in those paragraphs.

(i) Before further flight, do the temporary repair (including installation of doublers) per Condition 2, Option 1, of the Accomplishment Instructions of the service bulletin.

(ii) Within 2,000 landings after doing the temporary repair, do a general visual inspection to detect cracks of the skins and external doublers. If no crack is found that is outside the flyable limits specified in Condition 2 of the Accomplishment Instructions of the service bulletin, repeat the inspection every 2,000 landings until paragraph (c)(2)(i) of this AD is done.

(iii) Within 3,500 landings after doing the temporary repair, do borescope and HFEC inspections to detect cracks of the internal structure. If no crack is found that is outside the flyable limits specified in Condition 2 of the Accomplishment Instructions of the service bulletin, repeat the inspection every 3,500 landings until paragraph (c)(2)(i) of this AD is done.

**Note 7:** If any crack is found during any inspection per paragraph (c)(1)(ii) or (c)(1)(iii) of this AD, refer to paragraph (f) of this AD.

(iv) Except as provided by paragraph (f) of this AD, within 8,000 landings after doing the temporary repair, do the permanent repair specified in paragraph (c)(2) of this AD.

#### **Condition 2, Option 2: Permanent Repair**

(2) Condition 2, Option 2: Do paragraphs (c)(2)(i) and (c)(2)(ii) of this AD at the times specified in those paragraphs.

(i) Before further flight, do all actions associated with the permanent repair (including detailed and eddy current inspections of various parts; and repair, replacement, or rework of those parts, as applicable) per Condition 2, Option 2, of the Accomplishment Instructions of the service bulletin. This terminates the repetitive inspections required by paragraphs (c)(1)(ii) and (c)(1)(iii) of this AD.

(ii) Within 40,000 landings after doing the permanent repair required by paragraph (c)(2)(i) of this AD, repeat the inspections specified in paragraph (a)(2) of this AD to detect any crack of the completed repair, per the Accomplishment Instructions of the service bulletin. If no crack and no crack progression is found, repeat the inspections specified in paragraph (a)(2) of this AD every 5,000 landings. If any crack or crack progression is found, do paragraph (g) of this AD.

#### **Condition 3 (Existing Temporary Repairs Per Certain Service Information)**

(d) If any temporary repair is found during any inspection required by paragraph (a)(1) of this AD and that repair was accomplished per the service information identified in Condition 3 of the Accomplishment

Instructions of Boeing Service Bulletin DC9–53–290, Revision 02, dated January 30, 2003: Do the actions specified in paragraph (d)(1) or (d)(2) of this AD. Also, if the Station Y=83.550 frames have been repaired before the effective date of this AD per DC–9/MD–80 Structural Repair Manual, Section 53–03, Figure 34, or Boeing Service Rework Drawing S509530127, do a one-time inspection of the frames for crack growth emanating beyond the repair angles. If any crack progression is found, before further flight, replace the frames with new frames per the Accomplishment Instructions of the service bulletin.

#### **Condition 3, Option 1: Repetitive Inspections**

(1) Condition 3, Option 1: Do paragraphs (d)(1)(i), (d)(1)(ii), and (d)(1)(iii) of this AD at the times specified in those paragraphs.

(i) Within 2,000 landings after doing the temporary repair, or before further flight after accomplishment of the initial inspections in paragraph (a) of this AD, whichever is later, do a general visual inspection to detect cracks of the skins and external doublers. If no crack is found that is outside the flyable limits specified in Condition 2 of the Accomplishment Instructions of the service bulletin, repeat the inspection every 2,000 landings until paragraph (d)(2)(i) of this AD is done.

**Note 8:** If any crack outside the flyable limits is found during any inspection per paragraph (d)(1)(i) or (d)(1)(ii) of this AD, refer to paragraph (f) of this AD.

(ii) Within 3,500 landings after doing the temporary repair, or before further flight after accomplishment of the initial inspections in paragraph (a) of this AD, whichever is later, do borescope and HFEC inspections to detect cracks of the internal structure. If no crack is found that is outside the flyable limits specified in Condition 2 of the Accomplishment Instructions of the service bulletin, repeat the inspection every 3,500 landings until paragraph (d)(2)(i) of this AD is done.

(iii) Except as provided by paragraph (f) of this AD, within 8,000 landings after doing the temporary repair, or before further flight if more than 8,000 landings have been accumulated since the temporary repair, do the permanent repair specified in paragraph (d)(2)(i) of this AD.

#### **Condition 3, Option 2: Permanent Repair**

(2) Condition 3, Option 2: Do paragraphs (d)(2)(i) and (d)(2)(ii) of this AD at the times specified in those paragraphs.

(i) Before further flight, do all actions associated with the permanent repair (including detailed and eddy current inspections of various parts; and repair, replacement, or rework of those parts, as applicable) per Condition 3, Option 2, of the Accomplishment Instructions of the service bulletin. This terminates the repetitive inspections required by paragraphs (d)(1)(i) and (d)(1)(ii) of this AD.

(ii) Within 40,000 landings after doing the permanent repair required by paragraph (d)(2)(i) of this AD, repeat the inspections specified in paragraph (a)(2) of this AD to detect any crack of the completed repair, per the Accomplishment Instructions of the

service bulletin. If no crack and no crack progression is found: Repeat the inspections specified in paragraph (a)(2) of this AD every 5,000 landings. If any crack or crack progression is found, do paragraph (g) of this AD.

#### **Condition 4 (Existing Repairs Per Other Service Information)**

(e) If any repair is found during any inspection required by paragraph (a)(1) of this AD, and the repair was not accomplished per the service information identified in Condition 4 of the Accomplishment Instructions of Boeing Service Bulletin DC9–53–290, Revision 02, dated January 30, 2003: Before further flight, repair per a method approved by the Manager, Los Angeles Aircraft Certification Office (ACO), FAA.

#### **Condition 5 (Crack Outside Flyable Limits for Temporary Repair)**

(f) If any crack is found during any inspection required by paragraph (a)(2), (b)(1), (c)(1)(ii), (c)(1)(iii), (d)(1)(i), or (d)(1)(ii) of this AD; and that crack is outside the limits specified in Condition 2 of the Accomplishment Instructions of Boeing Service Bulletin DC9–53–290, Revision 02, dated January 30, 2003; and a permanent repair was not previously accomplished per this AD: Do paragraphs (f)(1) and (f)(2) of this AD at the times specified in those paragraphs.

(1) Before further flight, do all actions associated with the permanent repair (including detailed and eddy current inspections of various parts; and repair, replacement, or rework of those parts, as applicable) per Condition 5 of the Accomplishment Instructions of the service bulletin.

(2) Within 40,000 landings after doing the permanent repair required by paragraph (f)(1) of this AD, repeat the inspections specified in paragraph (a)(2) of this AD to detect any crack of the completed repair, per the Accomplishment Instructions of the service bulletin. If no crack and no crack progression is found, repeat the inspections specified in paragraph (a)(2) of this AD every 5,000 landings. If any crack or crack progression is found, do paragraph (g) of this AD.

#### **Corrective Actions: Cracking Following Permanent Repair**

(g) If any crack or crack progression is found during any inspection required by paragraph (b)(2)(ii), (c)(2)(ii), (d)(2)(ii), or (f)(2) of this AD: Before further flight, repair per a method approved by the Manager, Los Angeles ACO.

#### **Corrective Action for Cracked Zee**

(h) If any cracked Zee is found during any inspection performed per paragraph (a)(2) of this AD: Before further flight, replace the cracked Zee with a new part per the Accomplishment Instructions of Boeing Service Bulletin DC9–53–290, Revision 02, dated January 30, 2003.

#### **Credit for Accomplishment of Related AD 2002–21–09, Amendment 39–12915**

(i) Accomplishment of the actions specified in AD 2002–21–09 is acceptable for compliance with the requirements of this AD.