

2010-06-13 Learjet Inc.: Amendment 39-16238. Docket No. FAA-2010- 0226; Directorate Identifier 2010-NM-034-AD.

Effective Date

(a) This airworthiness directive (AD) is effective April 1, 2010.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Learjet Inc. Model 45 airplanes, certificated in any category, serial numbers 45-005 through 45-380 inclusive and 45-2001 through 45-2111 inclusive.

Subject

(d) Air Transport Association (ATA) of America Code 27: Flight Controls.

Unsafe Condition

(e) This AD results from reports of cracked and missing ballscrew assembly sleeves of the flap actuators. The Federal Aviation Administration is issuing this AD to detect and correct cracked and missing sleeves, which could cause loss of the load- carrying ball bearings on both actuators on one flap, resulting in flap asymmetry and loss of control of the airplane.

Compliance

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

General Visual Inspection

(g) Within 15 days after the effective date of this AD, do a general visual inspection for cracked or missing ballscrew assembly sleeves of the flap actuator, in accordance with the Accomplishment Instructions of Bombardier (Learjet) Alert Service Bulletin A45-27- 40 (for Model 45 airplanes, serial numbers 45-005 through 45-380); or Bombardier (Learjet) Alert Service Bulletin A40-27-24 (for Model 45 airplanes, serial numbers 45-2001 through 45-2111); both dated January 11, 2010. Thereafter, do the actions in paragraph (h) or (i), as applicable, of this AD.

Note 1: For the purposes of this AD, a general visual inspection is: "A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made from within touching distance unless otherwise specified. A mirror may be necessary to ensure visual access to all surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or droplight and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked."

Non-Destructive Liquid Penetrant Inspection (Sleeve Is Present and Not Cracked Along Its Entire Length)

(h) During the general visual inspection required by paragraph (g) of this AD, if the sleeve is present and not cracked along its entire length, before further flight after accomplishing the general visual inspection, do a non-destructive liquid penetrant inspection to detect cracking of the flap actuators, in accordance with Accomplishment Instructions of Bombardier (Learjet) Alert Service Bulletin A45-27-40, or Bombardier (Learjet) Alert Service Bulletin A40-27-24, both dated January 11, 2010.

(1) If no crack is found during the non-destructive liquid penetrant inspection, repeat the inspection thereafter at intervals not to exceed 6 months.

(2) If any crack is found during the non-destructive liquid penetrant inspection, before further flight, modify the flap actuator, in accordance with the Accomplishment Instructions of Bombardier (Learjet) Optional Service Bulletin 45-27-41 (for Model 45 airplanes, serial numbers 45-005 through 45-380); or Bombardier (Learjet) Optional Service Bulletin 40-27-25 (for Model 45 airplanes, serial numbers 45-2001 through 45-2111); both dated January 11, 2010. Repeat the non-destructive liquid penetrant inspection of the half (modified) sleeve thereafter at intervals not to exceed 6 months. If any crack is found in any half (modified) sleeve, before further flight, replace the sleeve with a new half sleeve, in accordance with the Accomplishment Instructions of Bombardier (Learjet) Optional Service Bulletin 45-27-41, or Bombardier (Learjet) Optional Service Bulletin 40-27-25, both dated January 11, 2010, and repeat the non-destructive liquid penetrant inspection of the half sleeve thereafter at intervals not to exceed 6 months.

Replacement (Sleeve Is Missing or Cracked Along Its Entire Length)

(i) During the general visual inspection required by paragraph (g) of this AD, if the sleeve is missing or cracked along its entire length, before further flight after accomplishing the general visual inspection, replace the actuator with a new or serviceable actuator, in accordance with the Accomplishment Instructions of Bombardier (Learjet) Alert Service Bulletin A45-27-40, or Bombardier (Learjet) Alert Service Bulletin A40-27-24, both dated January 11, 2010. Within 6 months after any actuator replacement required by paragraph (i) of this AD: Do a non-destructive liquid penetrant inspection to detect cracking of the actuator, in accordance with Accomplishment Instructions of Bombardier (Learjet) Alert Service Bulletin A45-27-40, or Bombardier (Learjet) Alert Service Bulletin A40-27-24, both dated January 11, 2010.

(1) If no crack is found during the non-destructive liquid penetrant inspection, repeat the inspection thereafter at intervals not to exceed 6 months.

(2) If any crack is found during the non-destructive liquid penetrant inspection, but the sleeve is not cracked along its entire length, before further flight, modify the flap actuator, in accordance with the Accomplishment Instructions of Bombardier (Learjet) Optional Service Bulletin 45-27-41, or Bombardier (Learjet) Optional Service Bulletin 40-27-25, both dated January 11, 2010. Repeat the non-destructive liquid penetrant inspection of the half (modified) sleeves thereafter at intervals not to exceed 6 months. If any crack is found in any half (modified) sleeve, before further flight, replace the sleeve with a new half sleeve, in accordance with the Accomplishment Instructions of Bombardier (Learjet) Optional Service Bulletin 45-27-41, or Bombardier (Learjet) Optional Service Bulletin 40-27-25, both dated January 11, 2010. Repeat the non-destructive liquid penetrant inspection of the half sleeve thereafter at intervals not to exceed 6 months.

(3) If the sleeve is cracked along its entire length, before further flight, replace the actuator with a new or serviceable actuator, in accordance with the Accomplishment Instructions of Bombardier (Learjet) Optional Service Bulletin 45-27-41, or Bombardier (Learjet) Optional Service Bulletin 40-27-25, both dated January 11, 2010, and repeat the non-destructive liquid penetrant inspection of the sleeve thereafter at intervals not to exceed 6 months.

Note 2: Guidance on modification of the flap actuator can be found in Microtecnica Service Bulletin 27-0018, dated November 24, 2009.

Parts Installation

(j) As of the effective date of this AD, no person may install, on any airplane, a ballscrew assembly sleeve of the flap actuator, unless the actuator has been modified according to Bombardier (Learjet) Optional Service Bulletin 45-27-41, or Bombardier (Learjet) Optional Service Bulletin 40-27-25, both dated January 11, 2010.

Reporting Requirement

(k) Submit a one-time report of the findings of the general visual inspection and the initial non-destructive liquid penetrant inspection required by this AD to Chris Broadrick, Bombardier Aerospace, Project Coordinator--Fielding Specialist, Customer Support Engineering, One Learjet Way, P.O. Box 7707, Wichita, Kansas 67209; telephone 316-946-2315; fax 316-946-8908; e-mail chris.broadrick@aero.bombardier.com; at the applicable time specified in paragraph (k)(1) or (k)(2) of this AD. The report must include airplane serial number, flap actuator part number, flap actuator serial number, and flap actuator time in service (in hours). Under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.), the Office of Management and Budget (OMB) has approved the information collection requirements contained in this AD and has assigned OMB Control Number 2120-0056.

(1) If the inspection was done on or after the effective date of this AD: Submit the report within 10 days after the inspection.

(2) If the inspection was done before the effective date of this AD: Submit the report within 10 days after the effective date of this AD.

Special Flight Permits

(l) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the airplane can be modified, unless cracks are discovered in both an inboard and outboard actuator sleeve for any flap.

Alternative Methods of Compliance (AMOCs)

(m)(1) The Manager, Wichita Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: William Griffith, Aerospace Engineer, Airframe Branch, ACE- 118W, FAA, Wichita ACO, 1801 Airport Road, Room 100, Mid-Continent Airport, Wichita, Kansas 67209; telephone (316) 946-4116; fax (316) 946-4107.

(2) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards District Office. The AMOC approval letter must specifically reference this AD.

Material Incorporated by Reference

(n) You must use the service information included in Table 1 of this AD, as applicable, to do the actions required by this AD, unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Learjet, Inc., One Learjet Way, Wichita, Kansas 67209-2942; telephone 316-946-2000; fax 316-946-2220; e-mail ac.ict@aero.bombardier.com; Internet <http://www.bombardier.com>.

(3) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

(4) You may also review copies of the service information that is incorporated by reference 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.

Table 1--Material Incorporated by Reference

Document	Date
Bombardier (Learjet) Alert Service Bulletin A40-27-24	January 11, 2010
Bombardier (Learjet) Alert Service Bulletin A45-27-40	January 11, 2010
Bombardier (Learjet) Optional Service Bulletin 40-27-25	January 11, 2010
Bombardier (Learjet) Optional Service Bulletin 45-27-41	January 11, 2010