
AIRWORTHINESS DIRECTIVE

For the reasons set out in the background section, the CASA delegate whose signature appears below issues the following Airworthiness Directive (AD) under subregulation 39.001(1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

Learjet 45 Series Aeroplanes

AD/LJ45/9

Fuel System Contamination

**8/2006
TX**

Applicability: Learjet Model 45 aeroplanes, serial numbers 45-005 through 45-295 inclusive, and 45-2001 through 45-2044 inclusive.

Requirement: **1. Review of Aeroplane Maintenance Records**

Review the aeroplane maintenance records to determine whether inspections identified by the inspection reference numbers (IRNs) in requirements 1(a) and 1(b) of this AD have been done.

- (a) IRN O2810001, Inspection/Service Requirement, “Wing Tanks” Perform Visual Inspection. Inspect for corrosion. (Refer to 5-10-00.), of Bombardier Learjet 45 M45 Maintenance Manual.
- (b) IRN O2820000, Inspection/Service Requirement, “Low Pressure Fuel Filter” Remove and inspect for contamination. Clean if necessary. (Refer to 28-20-15.), of Bombardier Learjet 45 M45 Maintenance Manual.

2. General Visual Inspections and Cleaning

- (a) During the records review required by requirement 1 of this AD, if it cannot be positively determined whether both IRNs have been done; Do the following:- Except as provided by requirement 2(b) of this AD, do the actions specified in requirements 2(a)(i) and 2(a)(ii) of this AD in accordance with Chapters 5-10-00 and 28-20-15, as applicable, of the Bombardier Learjet 45 M45 Maintenance Manual.
 - (i) Do a general visual inspection of the inside of the wet wing fuel areas and the fuel pump screens for tape or adhesive tape residue.
 - (ii) Clean the low pressure fuel filter, determining whether tape or adhesive tape residue is present, and do a general visual inspection of the filter for damage before installation.

Learjet 45 Series Aeroplanes

AD/LJ45/9 (continued)

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.”

- (b) If a crew alert system message of “L FUEL FILTER, R FUEL FILTER, LR FUEL FILTER, L FUEL PRESS LOW, R FUEL PRESS LOW, or LR FUEL PRESS LOW” occurs during flight or on the ground, do the actions required by requirements 2(a) of this AD.

3. Corrective Actions

- (a) If any tape or adhesive tape residue is found during the general visual inspection required by requirement 1 or 2 of this AD, do the actions specified in paragraphs 3(a)(i) and 3(a)(ii) of this AD.
 - (i) Clean the wing fuel tank in accordance with Chapter 20-71-00 of the Bombardier Learjet 45 M45 Maintenance Manual.
 - (ii) Service the affected engine fuel filter and return any engine fuel control subjected to contaminated fuel for servicing to Honeywell Engines.
- (b) If any damage is found during the general visual inspection required by paragraph 2(a)(ii) of this AD do the applicable action specified in requirements 3(b)(i) or 3(b)(ii) of this AD in accordance with Chapter 28-20-15 of the Bombardier Learjet 45 M45 Maintenance Manual.
 - (i) For damage that is repairable: Repair damaged filter.
 - (ii) For damage beyond repair: Replace the damaged filter with a new filter.

4. Reporting Requirement

Submit a report of the applicable review and inspection results to CASA via the SDR system. The report must include the following, as applicable:

- (a) The aeroplane serial number;
- (b) The number of flight hours on the aeroplane;

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AD/LJ45/9 (continued)

- (c) The applicable review and inspection results (both positive and negative findings), including a description, pictures, and pertinent information for any tape or adhesive tape residue found in the wing tank(s); and
- (d) Date of inspection of the wing tank(s);
- (e) The number of this AD.

Note 2: FAA AD 2006-10-15 Amdt 39-14599 dated 9 May 2006 refers.

- Compliance:
- 1. Within 50 flight hours or 30 days after the effective date of this AD, whichever occurs first.
 - 2. (a) Within 50 flight hours or 30 days after the effective date of this AD, whichever occurs first
 - 2. (b) Before further flight, after the effective date of this AD unless the actions detailed in requirement 2(a) have already been done.
 - 3. Before further flight, after the effective date of this AD.
 - 4. Within 10 days after accomplishing the review required by requirement 1 of this AD or the general visual inspection required by requirement 2 of this AD if done.

This Airworthiness Directive becomes effective on 5 June 2006.

Background: This AD results from reports of tape found in the wing fuel tanks. The actions detailed in this AD are to prevent blocked fuel passages and fuel pump screens and the inability of the flight crew to transfer fuel from one wing tank to the other tank due to tape in the wing fuel tanks, which could result in a fuel imbalance and consequent failure of an engine; and to prevent contaminated fuel pump screens, engine fuel controls, and fuel nozzles due to tape adhesive dissolving in the fuel, which could result in potential erroneous readings of the fuel quantity indication system.



James Coyne
Delegate of the Civil Aviation Safety Authority

30 May 2006