
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 39.1 (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/LJ45/7 **Main Landing Gear Trunnion Shear Pins** **11/2003**
DM

Applicability: Model 45 aircraft, serial numbers 45-005 through 45-208, 45-210 through 45-222, 45-224, 45-225, 45-227, and 45-229 through 45-231.

Requirement: 1. Revise the airworthiness limitations (AWL) section of the Instructions for Continued Airworthiness by inserting the instructions for Inspection Reference Numbers (IRN) J3220041, J3220042, and J3220043 (shear pins); as specified on page 2 of Chapter 4-11-00, Revision 32, dated 13 June 2003, of the Learjet 45 Maintenance Manual; into the AWL section. Thereafter, unless FAA approved, no alternative replacement interval may be approved for the shear pins in the trunnion assemblies of the main landing gears.

 2. Replace the shear pins, having part number 4532103015-001V1088, 4532103015-003, 4532103025-001V1088, or 4532103026-001V1088, located in the trunnion assemblies of the main landing gears with new, improved shear pins (including re-identifying the trunnion assemblies); in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 45-57-6, dated 9 June 2003.

Note: FAA AD 2003-16-09 Amdt 39-13262 refers.

Compliance: 1. Within 14 days after 3 September 2003.

 2. Before the accumulation of 1,800 total landings on the shear pins, or within 100 landings after 3 September 2003, whichever occurs later.

This Airworthiness Directive becomes effective on 3 September 2003.

Learjet 45 Series Aeroplanes

AD/LJ45/7 (continued)

Background: Results of fatigue testing conducted by the manufacturer on the main landing gears of Learjet 45 aircraft indicate that certain shear pins on the trunnion assemblies of the main landing gears do not meet the expected life limit. The results of fatigue testing also indicated that the shear pin bushings in the trunnion fitting housings had migrated outward from the fitting, which further weakened the shear pins and contributed to premature failure. This condition, if not corrected, could result in collapse of a main landing gear, and consequent reduced controllability of the aircraft during takeoff and landing.



David Villiers
Delegate of the Civil Aviation Safety Authority

28 August 2003