
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 CAR 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.

Boeing 727 Series Aeroplanes

AD/B727/181

Wire Bundle Chafing

11/2002

Applicability: Model 727 series aeroplanes.

- Requirement:
1. Carry out a general visual inspection to detect discrepancies (including inadequate clearance between the wire bundles and hydraulic tubing and/or structure, missing clamps, chafing, fire damage to structure or damage to wire bundles) of the wire bundles and hydraulic tubing in the aft stairwell area, in accordance with the Work Instructions of Boeing Alert Service Bulletin (ASB) 727-29A0068, dated 30 May 2002. If discrepancies are not found, further action is not required by this Directive.

Note 1: For the purposes of this Directive, a general visual inspection is defined as: "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 enhance visual access to all exposed surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, torch 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."

2. If any discrepancy is found during the Requirement 1 inspection, rectify the discrepancy (includes repositioning of the wire bundles and clamps to ensure a minimum clearance of 0.25 inch between the wire bundles and hydraulic tubing and/or structure and installing clamps; repairing or replacing any damaged wiring and tubing; if evidence of fire damage, inspecting adjacent structural area for damage, and repairing any damage), per Figure 1 of the ASB.

Note 2: FAA AD 2002-17-05 Amdt 39-12871 refers.

Compliance: For Requirement 1 - Within 120 days after the effective date of this Directive.

For Requirement 2 - Before further flight after the Requirement 1 inspection.

This Airworthiness Directive becomes effective on 31 October 2002.

Boeing 727 Series Aeroplanes

AD/B727/181 (continued)

Background: The United States Federal Aviation Administration (FAA) received a report that, during a check shortly after the landing of a Boeing Model 727-200F series aeroplane, a crew member on board the aeroplane saw smoke in the left aft stairwell area. Evidence of overheating (molten aluminium) and fire damage was found between body stations 1203 and 1223. Additional evidence of overheating was also found on the upper and lower torque boxes outboard and above the standby hydraulic reservoir.

Investigation revealed the fire was caused by an electrical wire bundle chafing and subsequently arcing against a hydraulic system "A" case drain return line tube. The wire bundle provides electrical power to the standby hydraulic pump. A hole was burned in the aft side of the tube and in the back of a bend on a hydraulic reservoir pressurization tube located four feet above the drain return line tube. Such discrepancies of the wire bundle, if not found and fixed, could result in electrical arcing between the wiring and hydraulic tubing, and consequent fire and damage to adjacent structure.

This Directive requires a one-time inspection to detect discrepancies of the wire bundles and hydraulic tubing in the aft stairwell area, together with any necessary corrective action.



James Coyne
Delegate of the Civil Aviation Safety Authority

13 September 2002