
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 747 Series Aeroplanes

AD/B747/265

**Passenger Service Units
Electrical Wire Bundle Chafing**

2/2002

Applicability: Model 747 series aeroplanes, as listed in Boeing Alert Service Bulletin (ASB) 747-35A2035, Revision 1, dated 22 July 1999.

Requirement:

1. Perform a detailed visual inspection for chafing between oxygen hoses and electrical wire bundles at the passenger service units (PSU) in the main deck passenger compartment, upper deck sculpted ceiling, personnel accommodation (crew rest) area, lower lobe forward galley, and aft galley. Inspections are to be performed in accordance with ASB 747-35A2035, Revision 1, as revised by Boeing Service Bulletin Information Notice 747-35A2035 IN 01, dated 23 September 1999.

Note 1: For the purposes of this Directive, a detailed visual inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

2. If, as a result of the Requirement 1 inspection, any discrepancies are detected, complete any necessary repairs as specified in Requirement 2.a. and/or 2.b., as applicable. Additionally, reroute the oxygen hose or install an elbow at the oxygen mask inlet connector to reorient the oxygen hose away from the electrical wiring to ensure a minimum of 2 inches clearance between the oxygen hose and electrical wire bundle, in accordance with ASB 747-35A2035, Revision 1.
 - a. If any chafing of an oxygen hose is found - Replace the chafed oxygen hose with a new oxygen hose, and install protective sleeving over the new oxygen hose, in accordance with ASB 747-35A2035, Revision 1.
 - b. If any chafing of a wire bundle is found - Repair the wire bundle in accordance with ASB 747-35A2035, Revision 1.

Inspections and follow-on actions accomplished prior to the effective date of this Directive in accordance with Boeing SB 747-35-2035, dated 7 January 1983, are acceptable for compliance with corresponding actions of this Directive.

Note 2: FAA AD 2001-24-29 Amdt 39-12546 refers.

Boeing 747 Series Aeroplanes

AD/B747/265 (continued)

Compliance: For Requirement 1 - Before 16 July 2003.

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

This Airworthiness Directive becomes effective on 21 February 2002.

Background: This Directive requires a one-time inspection for chafing between the hose for the passenger oxygen system (hereinafter called the "oxygen hose") and adjacent electrical wire bundles at certain passenger service units and, if necessary, corrective actions. The Directive also requires rerouting or reorienting the oxygen hose to ensure sufficient clearance between the hose and electrical wire bundles.

These actions are necessary to prevent chafing between the oxygen hose and adjacent electrical wire bundles, which could result in arcing of a chafed electrical wire bundle and consequent burn-through of the oxygen hose. If this occurs when the oxygen system is pressurized, such arcing could represent a potential ignition source in an oxygen-enriched environment.



Eugene Paul Holzapfel
Delegate of the Civil Aviation Safety Authority

14 January 2002