



CIVIL AVIATION AUTHORITY  
CZECH REPUBLIC  
Airworthiness Division

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## AIRWORTHINESS DIRECTIVE

**Number: CAA-AD-048/2004**

Date of issue: May 27, 2004

**BOEING**

727-100, -200, 737-100, -200, -200C, -300,  
-400, -500, 747

*This AD has been issued in accordance with Decision No.: 2/2003 of the Executive Director of the EASA (ADs issued by the state of design are automatically adopted in EU member states).*

### AIRCRAFT - HEAT EXCHANGER - INSPECTION

**Applicability:** airplanes listed in Table 1 of this AD, certificated in any category:

**Table 1.--Applicability**

Model	Applicability
727-100 and -200 series airplanes.	As listed in Boeing Alert Service Bulletin 727-29A0067, dated June 7, 2001.
737-100, -200, -200C, -300, -400 and -500 series airplanes.	As listed in Boeing Alert Service Bulletin 737-29A1096, Revision 1, dated July 31, 2003.
747 series airplanes	Line Numbers 1 through 1271 inclusive.

**Effective date:** July 08, 2004

**Compliance:** Required as indicated FAA AD 2004-10-06.

*Remarks: The compliance of this AD must be recorded in Aircraft Logbook, where applicable the requirements of this AD must be integrated into Aircraft Technical Documentation. Address inquiries concerning this AD to: Civil Aviation Authority, Airworthiness Division, Ruzyně Airport, 160 08 Prague 6, Czech Republic, tel.: 420 2 33320922, fax: 420 2 20562270.*

**Ing. Pavel MATOUŠEK**  
**Director**

**2004-10-06 Boeing:** Amendment 39-13636. Docket 2001-NM-297-AD.

*Applicability:* This AD applies to the airplanes listed in Table 1 of this AD, certificated in any category:

**Table 1.--Applicability**

<b>Model</b>	<b>Applicability</b>
727-100 and -200 series airplanes.	As listed in Boeing Alert Service Bulletin 727-29A0067, dated June 7, 2001.
737-100, -200, -200C, -300, -400 and -500 series airplanes.	As listed in Boeing Alert Service Bulletin 737-29A1096, Revision 1, dated July 31, 2003.
747 series airplanes	Line Numbers 1 through 1271 inclusive.

**Note 1:** This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

*Compliance:* Required as indicated, unless accomplished previously.

To ensure adequate electrical bonding between the penetration fittings of the hydraulic heat exchanger and the rear spars of the fuel tanks of the left and right wings, accomplish the following:

**Prepare Electrical Bonding Faying Surfaces/Measure Electrical Bonding**

(a) Within 60 months after the effective date of this AD: Prepare the electrical bonding faying surfaces for the tubing penetrations of the hydraulic heat exchanger on the forward and aft surfaces of the rear spars of the fuel tanks of the left and right wings, and do a one-time measurement of the electrical bonding resistances between the penetration fittings of the hydraulic heat exchanger and the rear spars, and between the heat exchanger tube and the lower wing stringer surfaces, per the Accomplishment Instructions of the applicable Boeing service bulletin listed in Table 2 of this AD, except as provided by paragraph (b) of this AD. The procedures include the following: Depressurize the hydraulic systems; drain the fuel from the fuel tanks; disconnect the inlet and outlet tubes of the heat exchangers and remove the heat exchangers; prepare the faying surface by sanding the surface areas down to bare metal and apply alodine protective coating on the surfaces, and re-install the heat exchangers. If the bonding resistance is incorrect, before further flight, repeat the preparation of the electrical bonding faying surface for the tubing penetrations of the hydraulic heat exchanger on the forward and aft surfaces of the rear spar of the fuel tanks of the left and right wings as necessary to achieve a bonding resistance below the threshold specified in the Accomplishment Instructions of the applicable service bulletin listed in Table 2 of this AD.

**Table 2.--Service Bulletins**

<b>Model</b>	<b>Boeing service bulletin</b>	<b>Revision level</b>	<b>Date</b>
727-100 and -200	727-29A0067	Original	June 7, 2001.
737-100, -200, -200C, -300, -400 and -500.	737-29A1096	Revision 1	July 31, 2003.
747	747-29A2104	Revision 1	March 7, 2002

(b) Operators may use their own FAA-accepted equivalent procedures for draining the fuel tanks and gaining access

to the fuel tanks.

### Follow-On Actions

(c) Before further flight after accomplishment of paragraph (a) of this AD: Apply fillet sealant and protective finishes around the penetration fittings of the hydraulic heat exchanger per the Accomplishment Instructions of the applicable Boeing service bulletin listed in Table 2 of this AD (per Figure 4 of Boeing Alert Service Bulletin 727-29A0067; per Figure 8 of Boeing Alert Service Bulletin 737-29A1096, Revision 1; or per Figure 4 of Boeing Service Bulletin 747-29A2104, Revision 1; as applicable); then service and pressurize the hydraulic systems and examine for signs of hydraulic fluid leakage; and service the fuel tank and examine for signs of fuel leakage per the Accomplishment Instructions of the applicable service bulletin listed in Table 2 of this AD. Repair any leaks found before further flight, per the applicable service bulletin listed in Table 2 of this AD.

### Actions Accomplished Per Previous Issue of Service Bulletin

(d) Actions accomplished before the effective date of this AD per Boeing Alert Service Bulletin 737-29A1096, dated June 7, 2001; and Boeing Alert Service Bulletin 747-29A2104, dated July 19, 2001; as applicable, are considered acceptable for compliance with the corresponding action specified in this AD.

### Alternative Methods of Compliance

(e) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

**Note 2:** Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

### Special Flight Permit

(f) 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 requirements of this AD can be accomplished.

### Incorporation by Reference

(g) Unless otherwise specified in this AD, the actions shall be done in accordance with the applicable service bulletins listed in Table 3 of this AD:

**Table 3.--Applicable Service Bulletins**

Service bulletin	Revision level	Date
Boeing Alert Service Bulletin 727-29A0067	Original	June 7, 2001.
Boeing Alert Service Bulletin 737-29A1096	Revision 1	July 31, 2003.
Boeing Service Bulletin 747-29A2104	Revision 1	March 7, 2002.

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue,

SW., Renton, Washington; or 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](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

**Effective Date**

(h) This amendment becomes effective on June 22, 2004.

**▼ Footer Information**

Issued in Renton, Washington, on May 5, 2004.  
Ali Bahrami,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.  
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