



HYDRO-AIRE
A SUBSIDIARY OF CRANE CO.

SERVICE BULLETIN

BOEING 747

Bulletin No. 60-703-28-33
Revision 2, 2003/02/17
H/A 8-160 & 8-272
ATA 28-31

FUEL – MODIFICATION OF FUEL OVERRIDE JETTISON PUMP HOUSING SUBASSEMBLIES PART NO. 60-703200, 60-70304, 60-70305, 60-72314, 60-703135 (BPN 60B92603-21, -2, -5, -19, -20), TO PART NO. 60-703200-1, 60-70304-1, 60-70305-1, 60-72314-1, 60-703135-1 (BPN 60B92603-25, -102, -105, -119, -120), USED ON 747 / 747-400 AIRCRAFT.

1. PLANNING INFORMATION

A. EFFECTIVITY

All Hydro-Aire Fuel Override/Jettison Pump Housing Subassemblies with part numbers 60-703200 (BPN 60B92603-21), 60-70304 (BPN 60B92603-2), 60-70305 (BPN 60B92603-5), 60-72314 (BPN 60B92603-19), 60-703135 (BPN 60B92603-20).

B. CONCURRENT REQUIREMENTS

See paragraph 1.K.

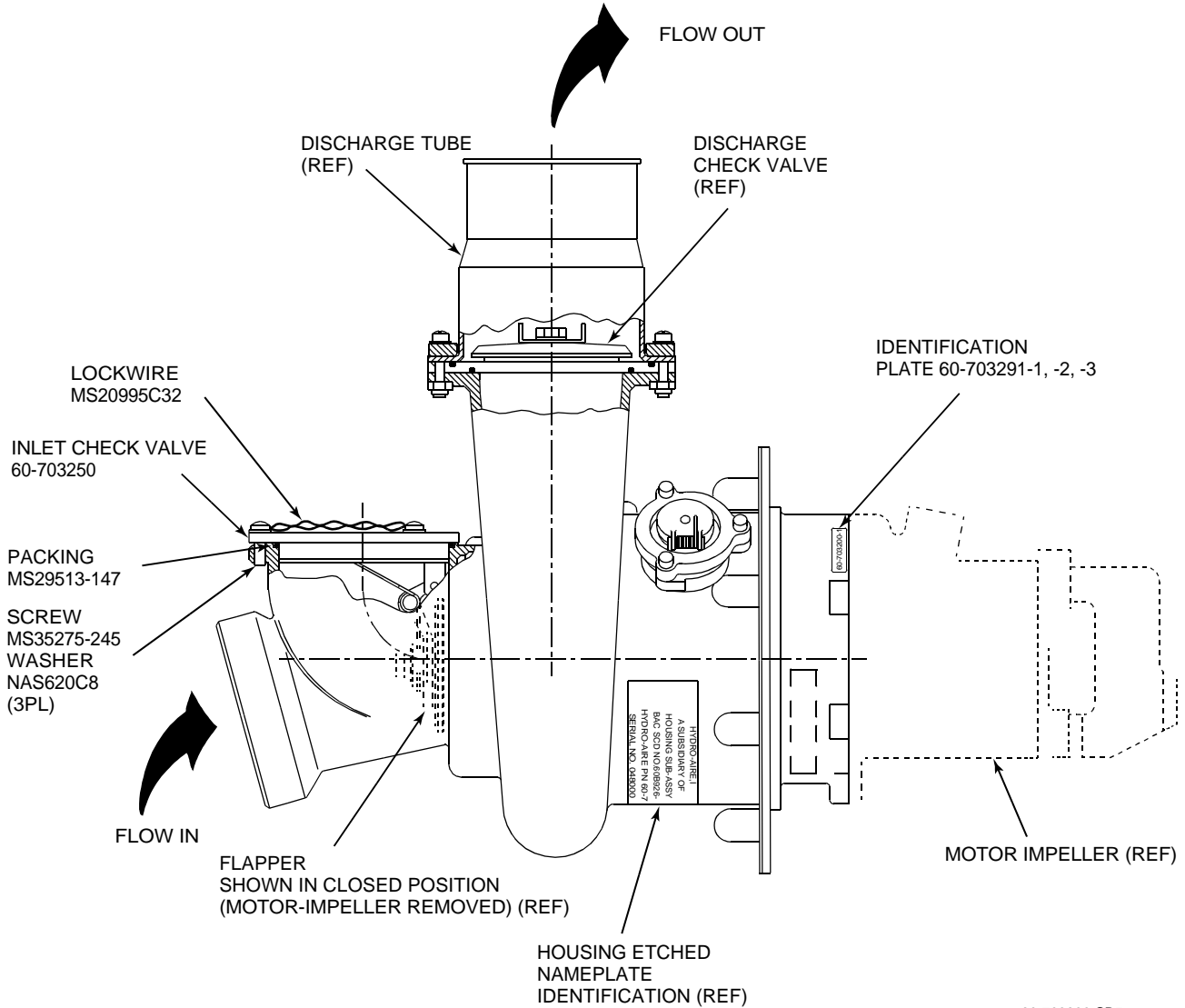
C. REASON

Excessive wear of the inlet check valve against the override/jettison pump inlet adapter has been reported. Vibration of the inlet check valve in the fuel stream can cause flapper deterioration, allowing pieces of the inlet check valve to be ingested into the pump's inducer/impeller. Wear to the motor impeller subassembly inlet adaptor also occurs at the point of contact with the inlet check valve.

D. DESCRIPTION

This service bulletin gives instructions for the modification of Hydro-Aire Fuel Override/Jettison Pump Housing Subassemblies shown in paragraph 1.A. The resulting -1 configurations will include a new inlet check valve, P/N 60-703250, and identification plate, P/N 60-703291-1, -2, or -3 (see Figure 1).

SERVICE BULLETIN



**Typical Pump Housing
Figure 1**

E. COMPLIANCE

It is recommended that this Service Bulletin be accomplished in conjunction with the applicable Boeing service bulletins listed in paragraph J at the earliest opportunity.

NOTE: It is further recommended that Service Bulletin No. 60-703-28-34 (see paragraph J.) also be done, especially in the case of on-aircraft modification.

F. APPROVAL

This Service Bulletin has been reviewed by Boeing and the Federal Aviation Administration (FAA); the repairs and modifications herein comply with the applicable Federal Aviation Regula-

SERVICE BULLETIN

tions (FAR's) part 25; and are on record at the supplier as being FAA-approved for installation on applicable 747 or 747-400 aircraft.

G. MANPOWER REQUIREMENTS

This modification requires approximately 1 labor hour per pump housing.

H. WEIGHT AND BALANCE

Not affected.

I. ELECTRICAL LOAD DATA

Not affected.

J. REFERENCES

- (1) ATA 28-31-01 Overhaul Manual for Fuel Jettison/Override Pump Part No. 60-703 Series, Rev. 4, dated Jul 15/92.
- (2) ATA 28-31-02 Component Maintenance Manual for Boeing 747 Fuel Override/Jettison Pump, Part No. 60-721 / 60-723 Series, Rev. 9, dated Dec 18/98.
- (3) Service Bulletin No. 60-703-28-34, dated 2000/06/22, for discharge check valve assembly modification of housing subassemblies, P/N 60-703200, 60-70304, 60-70305, and 60-72314.
- (4) Service Bulletin No. 60-721-28-5, dated 2000/11/20, for modification of motor-impeller subassemblies, P/N 60-72101, -1, and -2 to 60-72101-3, -3A, and -3B.
- (5) Service Bulletin No. 60-723-28-5, dated 2000/11/20, for modification of motor-impeller subassemblies, P/N 60-72301 to 60-72301-3.
- (6) Service Bulletin No. 60-703-28-35, dated 2000/11/20, for modification of 60-70303, 60-70306, 60-70307, 60-70308, 60-70309, 60-703103, 60-703104, and 60-703113 to 60-70303-3, 60-70306-3, 60-70307-3, 60-70308-3, 60-70309-3, 60-703103-3, 60-703104-3, and 60-703113-3.
- (7) Boeing Service Bulletin 747-28A2212, Rev. 3, dated August 17, 2000, Ref. Center Wing Tank Override/Jettison Pump Housing installations.
- (8) Boeing Service Bulletin 747-28-2222, dated August 17, 2000, Ref. HST and Main Tank Override/Jettison Pump / Pump Housing installations.

K. OTHER PUBLICATIONS AFFECTED

NOTE: Installation of these modified "-1" housings requires concurrent modification of the related motor-impeller subassembly. See applicable Hydro-Aire pump motor-impeller service bulletin referenced in paragraph J.(4), (5), or (6).

SERVICE BULLETIN

2. MATERIAL INFORMATION

A. MATERIAL - PRICE AND AVAILABILITY

Description	Part or Specification Number	Source
Chemical conversion coating	MIL-C-5541, Class 1A, Brush Alodine	Commercially available
Adhesive	BMS5-109, Type II, Class 2	Commercially available

B. INDUSTRY SUPPORT INFORMATION

Not applicable.

C. MATERIAL NECESSARY FOR EACH INSTALLED PUMP HOUSING MODIFICATION

For on-aircraft modification, refer to the applicable Boeing Service Bulletin (paragraph 1.J.).

D. MATERIAL NECESSARY FOR EACH SPARE HOUSING MODIFICATION

The table below shows the contents of kit no. 60-703200-1903 for this modification.

Description	Qty	New Part No.	Old Part No.	Instructions
Modification kit no. 60-703200-1903:				
Inlet check valve assembly	1	60-703250	60-703137 60-70332	Replace
Screw	3	MS35275-245	MS35275-245	Replace
Washer	3	NAS620C8	NAS620C8	Replace
Packing	1	MS29513-147	MS29513-147	Replace
Identification plate	1	60-703291-1	N/A	Install
Identification plate	1	60-703291-2	N/A	Install
Identification plate	1	60-703291-3	N/A	Install

SERVICE BULLETIN

E. HOUSING REIDENTIFICATION

Housings P/N 60-703200, 60-72314, 60-70304, and 60-70305 will be reidentified by installing an identification plate P/N 60-703291-1/-2/-3 matching the housing part number as shown below (see paragraph 3.D.).

Existing Housing P/N	Identification Plate	Reidentified Housing P/N
60-703200	60-703291-1	60-703200-1
60-72314	60-703291-2	60-72314-1
60-70304	60-703291-3 *	60-70304-1
60-70305	60-703291-3 *	60-70305-1
60-703135	60-703291-3 *	60-703135-1
* Requires 1/8-in. metal stamp set to specify P/N reidentification		

F. TOOLING – PRICE AND AVAILABILITY

With the exception of the 1/8-in. steel stamp set, use tools and equipment specified in the applicable Hydro-Aire maintenance manual.

3. ACCOMPLISHMENT INSTRUCTIONS

A. ON-AIRPLANE MODIFICATION

Modification of pump housings is to be accomplished as-installed on aircraft. Fuel tank entry required. Please refer to the applicable Airplane Maintenance Manual/Boeing Service Bulletin for specific information.

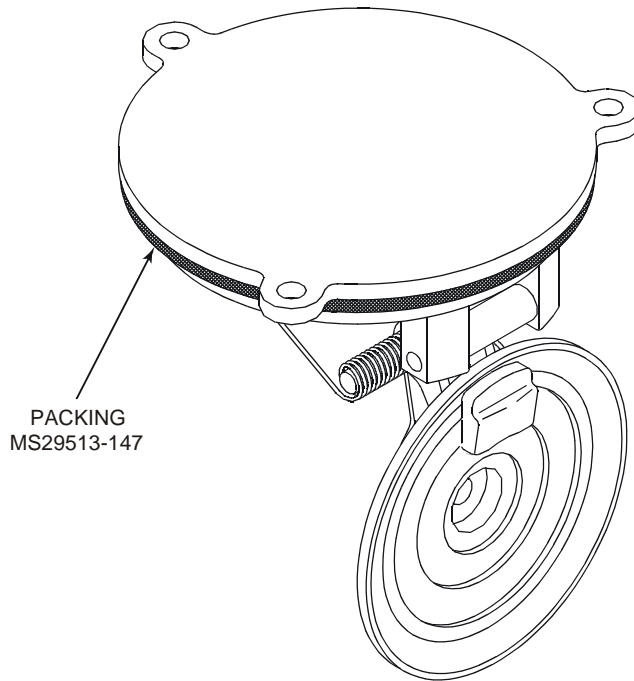
B. SHOP RETROFIT (SPARE HOUSINGS ONLY)

- (1) Refer to the DISASSEMBLY section in the applicable reference shown in paragraph 1.J. and remove the P/N 60-703137 inlet check valve and P/N MS29513-147 packing from the fuel jettison pump assembly housing P/Ns 60-703200, 60-72314, 60-70304, 60-70305, or 60-703135.
- (2) Install new P/N MS29513-147 packing as shown on the new P/N 60-703250 inlet check valve assembly (see Figure 2 below).
- (3) Use three P/N MS35275-245 screws and P/N NAS620C8 washers to attach the new P/N 60-703250 inlet check valve assembly to the P/Ns 60-703200, 60-72314, 60-70304, 60-70305, or 60-703135 pump housing.
- (4) Torque P/N MS35275-245 screws to 11–13 in.-lb (1.24–1.47 Nm) and safety wire screws with P/N MS20995C32 or MS20995C20 lockwire as directed in MS33540 (see Figure 1).

C. REIDENTIFICATION

Reidentify applicable housings to the -1 configurations by installing identification plates P/N 60-703291-1/-2/-3 as follows.

SERVICE BULLETIN



60703200-SB-1

**Inlet Check Valve Assembly
Figure 2**

- (1) See the etched housing part number (Figure 1) and select appropriate P/N 60-703291-x identification plate (aluminum alloy foil) as shown in paragraph 2.E. and Figure 3.
- (2) If using the P/N 60-703291-3 identification plate, do the following:
 - (a) Use the metal stamp set to stamp the plate with the applicable part number as shown in paragraph 2.E. in the location shown on Figure 3.
 - (b) Apply chemical conversion coating over the stamped text as specified in MIL-C-5541, Class 1A, Brush Alodine.
- (3) Clean and prepare the surface of the housing that will receive the identification plate as specified in BAC 5010, Rev. W, paragraph 8.1.3.8 (for aluminum and anodized aluminum surfaces).
- (4) Mix and apply adhesive BMS5-109, Type II, Class 2, to the back of the identification plate as specified in BAC 5010, Rev. W, paragraph 8.2.40 (for BAC 5010, Type 94 adhesive).
- (5) Install the identification plate on the housing in the location shown in Figure 1.
- (6) Clean off excess adhesive and allow adhesive to cure as specified in BAC 5010, Rev. W, paragraph 8.2.40.

SERVICE BULLETIN

60-703200-1

ID PLATE 60-703291-1

60-72314-1

ID PLATE 60-703291-2

STAMP APPROPRIATE
CHARACTERS TO COMPLETE
PART NUMBER

60-703 -1

ID PLATE 60-703291-3

60-703200-SB3

Identification Plates
Figure 3

4. MODIFICATION OPTIONS

A. OPTION 1

The operator may modify each housing subassembly, P/N 60-703200, 60-70304, 60-70305, or 60-703135 (TBC P/N 60B92603-21, -2, -5, -20) following the instructions outlined in this Service Bulletin. Kits are available at prices as outlined in Section 4.C.

B. OPTION 2

The operator may return a spare housing subassembly, P/N 60-703200, 60-70304, 60-70305, or 60-703135 (TBC P/N 60B92603-21, -2, -5, -20) to Hydro-Aire for this service bulletin modification at a charge as outlined in Section 4.C. If the housing requires additional repairs, they will be quoted separately.

C. WARRANTY

NOTE: The extended warranty terms outlined below are valid through December 2006.

(1) For airplanes delivered, or spare housings manufactured, in August 1994 or subsequently:

SERVICE BULLETIN

- (a) Kits will be provided free of charge. Hydro-Aire will reimburse the operator US\$91.20 for the cost of labor (limited to 2.0 hr @ 45.60 per hr) for the modification of each housing on the airplane. This labor cost reimbursement does not apply to spare housings modified by Hydro-Aire.
- (b) The operator may return a spare housing to Hydro-Aire for free-of-charge modification.
- (2) For airplanes delivered, or spare housings manufactured, in August 1994 or prior:
- (a) Kits are available at US\$502.00. Hydro-Aire will reimburse the operator US\$45.60 for the cost of labor (limited to 1.0 hr @ 45.60 per hr) for the modification of each housing. The labor cost reimbursement does not apply to spare housings modified by Hydro-Aire. This amounts to a net charge of US\$456.40.
- (b) The operator may return a spare housing to Hydro-Aire for modification at a charge of US\$45.60 plus the kit price of US\$502.00. This amounts to a net charge of US\$547.60.

Warranty claims must include the following information:

- Operator identification
- Airplane Registration Number (Tail Number)
- Housing part number

To order modification or kits:

Contact: Hydro-Aire Airline Sales
phone: 818-526-2500
FAX: 818-842-6117
e-mail: spares@hydroaire.com

Contact: Hydro-Aire Repair & Overhaul
phone: 818-526-2400
FAX: 818-526-2284
e-mail: repairs@hydroaire.com