TO: ALL HOLDERS OF APU FIRE WARNING HORN ASSEMBLY OVERHAUL MANUAL, 26-10-11

REVISION NO. 2, DATED NOV 20/87

HIGHLIGHTS

DESCRIPTION OF CHANGE	TOPICS AFFECTED													
	D&O	D/Assy	Cleaning	Insp/Chk	Repair	Assy	F/C	Test	T/Shooting	S/Tools	Storage	IPL	L/Overhaul
NOTE Added optional part number to parts list												X	

APU FIRE WARNING HORN ASSEMBLY

26-10-11

BOEING P/N 69-29567-1 AND -5

AIRLINE P/N

THE FOLLOWING DIRECTIVES APPLY TO THIS SUBJECT:

BOEING SERVICE BULLETIN	BOEING TEMPORARY REVISION	OTHER DIRECTIVES	DATE DIRECTIVE INCORPORATED INTO TEXT
		PRR 20757	Oct 15/66

LIST OF EFFECTIVE PAGES

* Indicates pages revised, added or deleted in latest revision
F Indicates foldout pages - print one side only

	PAGE	DATE	PAGE	DATE	PAGE	DATE
	26-10-11					
	T-1	Feb 10/70				
	T-2	BLANK				
*	LEP-1	Nov 20/87				
	LEP-2	BLANK				
	T/C-1	Feb 10/70				
	T/C-2	BLANK				
	1	May 10/84				
	2	May 10/84				
	3	Feb 10/70				
	4	Feb 10/70				
	5	May 10/84				
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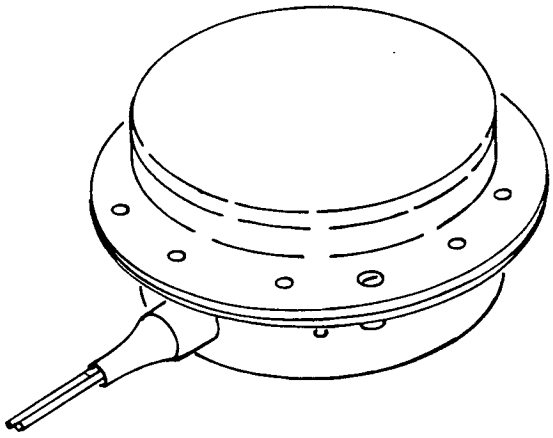
APU FIRE WARNING HORN ASSEMBLY



APU Fire Warning Horn Assembly
Figure 1

1. DESCRIPTION AND OPERATION

A. Description

The APU Fire Warning Horn Assembly is a part of the APU fire detection system and provides a warning sound when an overheat condition occurs in the APU shroud. The horn assembly, along with warning lights and an alarm bell, is activated by a general overheat or a localized fire condition in the APU area.

B. Operation

The APU fire detection system consists of a sensor/responder type element around the APU. The element, in turn, is connected to the operating power unit which actuates the horn assembly, warning lights, and alarm bell. The horn assembly is connected to the system through the landing gear safety relay so that it operates only when the plane is on the ground.

C. Leading Particulars

(1) Weight -- 2.25 pounds

(2) Diameter -- 5 9/32 inches

(3) Thickness -- 3 inches

(4) Test Voltage -- 24 volts dc

2. DISASSEMBLY

A. General

(1) Disassemble only as necessary for cleaning, inspection, repair, and replacement of components.

(2) Unsolder wiring connections and remove connector pins only when replacement of wire or component is required. Tag disconnected wires to facilitate reassembly. Refer to "Repair of Electrical Connectors," Subject 20-11-02, and to "Soldering Electrical Connections," Subject 20-12-01.

B. Disassemble Unit (See figure 3.)

(1) Remove marker (1) if necessary.

(2) Remove nuts (2), screws (3), and rivets (4).

(3) Disassemble sleeve (5) and grommet (6).

(4) Remove horn assembly (7). Any further disassembly of horn assembly (7) must be done per manufacturer's instructions.

(5) If necessary, remove two wires (8) and sleeve (9).

3. CLEANING

CAUTION: USE ONLY CLEANING MATERIAL SPECIFIED HEREIN. USE OF UNAPPROVED MATERIALS MAY DAMAGE THE ASSEMBLY OR CAUSE CIRCUIT FAILURE.

A. Remove dust or foreign matter from assembly using low pressure air suction.

B. Clean interior surfaces and electrical contacts with aliphatic naphtha or isopropyl alcohol. Dry thoroughly with low pressure air.

WARNING: WHEN USING ISOPROPYL ALCOHOL OR ALIPHATIC NAPHTHA, AVOID PROLONGED OR REPEATED BREATHING OF VAPORS. USE ONLY WITH ADEQUATE VENTILATION. AVOID CONTACT WITH SKIN, EYES, AND CLOTHING. KEEP AWAY FROM HEAT, SPARKS, OR OPEN FLAME.

C. For cleaning information related to soldering, refer to "Preparation for Soldering" in "Soldering Electrical Connections," Subject 20-12-01.

D. Clean terminal lugs and other bonding areas per "Repair of Elèctrical Terminations and Electrical Bonding Areas," Subject 20-11-03.

E. Clean horn assembly as follows:

NOTE: The following instructions for cleaning apply only to a new horn assembly, not to one that is being overhauled. See ASSEMBLY, paragraph 6.C.

(1) Remove all fasteners around periphery of horn assembly.

(2) Clean all components of horn assembly thoroughly so that they are free of all foreign material such as shavings and solder splash.

(3) Reassemble horn assembly per ASSEMBLY, paragraph 6.C.

4. INSPECTION/CHECK

A. Check wiring, electrical components, and solder connections with a minimum of 5-power magnification.

(1) Check components for security of mounting.

(2) Check components and wire for damage.

(3) Check wire terminals and connections for proper installation.

(4) Check wire insulation for charring, cracking, and brittleness.

(5) Check connectors for bent, corroded, or cracked pins.

B. Check nameplates, metal labels, and Metal-Cals for proper installation and legibility.

C. Check components for legibility of reference designations and terminal identification.

D. Check finished surfaces for damage.

E. Check chassis assembly for damage.

F. Check insulating sleeving for proper installation and evidence of damage.

5. REPAIR (See figures 2 and 3.)

A. Repair

(1) Repair electrical connectors per "Repair of Electrical Connectors." Subject 20-11-02.

(2) Repair soldered connections per "Soldering Electrical Connections," Subject 20-12-01.

(3) Repair wire terminations and bonding areas per "Repair of Electrical Terminations and Electrical Bonding Areas," Subject 20-11-03.

(4) Where required straighten box assembly components and connector pins and tighten component mounting hardware.

(5) Restore reference designations, terminal numbers, or component identification markings to a legible condition. Refer to "Application of Stencils, Insignia, Silk Screen, Part Numbering, and Identification Markings," Subject 20-50-10.

B. Refinish

NOTE: Refer to Section 20-30-02 for stripping of protective finishes and to Subject 20-41-01 for decoding of F and SRF finish symbols and their Boeing equivalents.

(1) If plated or painted surfaces are worn or chipped, refinish as indicated in the following list:

(a) APU Fire Warning Horn Assembly -- Apply SRF-12.205 primer and SRF-12.63 gray enamel to exterior surface only, before bonding metal-cal (1) to horn assembly (7).

C. Replacement

(1) Replace damaged wires (8) coming out of horn assembly with BMS 13-13B, type 1, class 2, number 18 wire. Optional wire; BMS 13-5D, type 1, class 2, number 18 (Fig. 2).

(2) Apply Metal-Cals per "Application of Metal-Cals," Subject 20-50-05.

(3) Replace damaged heat shrinkable sleeving (9) per "Repair of Electrical Terminations and Electrical Bonding Areas," Subject 20-11-03.

(4) Replace damaged grommets per "Installation of Protective Grommets," Subject 20-50-09.

(5) If rivets require replacement, apply a coat of primer, Specification BMS 10-11, type 1, to faying surfaces and install while primer is wet.

(6) If replacing horn assembly (7) with a new horn assembly, remove two existing wires which protrude from horn assembly and replace with two wires (8) and sleeve (9) specified in par. C.(1) and C.(3) above. See ASSEMBLY, Par. 6.C. and Fig. 2 for procedure.

6. ASSEMBLY

A. General

(1) Complete required REPAIR procedures.

(2) Connect two electrical wires (8) to horn assembly (7) as shown in Fig. 2 if previously removed per Subject 20-12-01.

NOTE: Horn assembly (7) is assembled per manufacturer's instructions. If overhauled horn assembly is being assembled, follow instructions in paragraph 6.B. If new horn assembly is being used, follow instructions in paragraph 6.C.

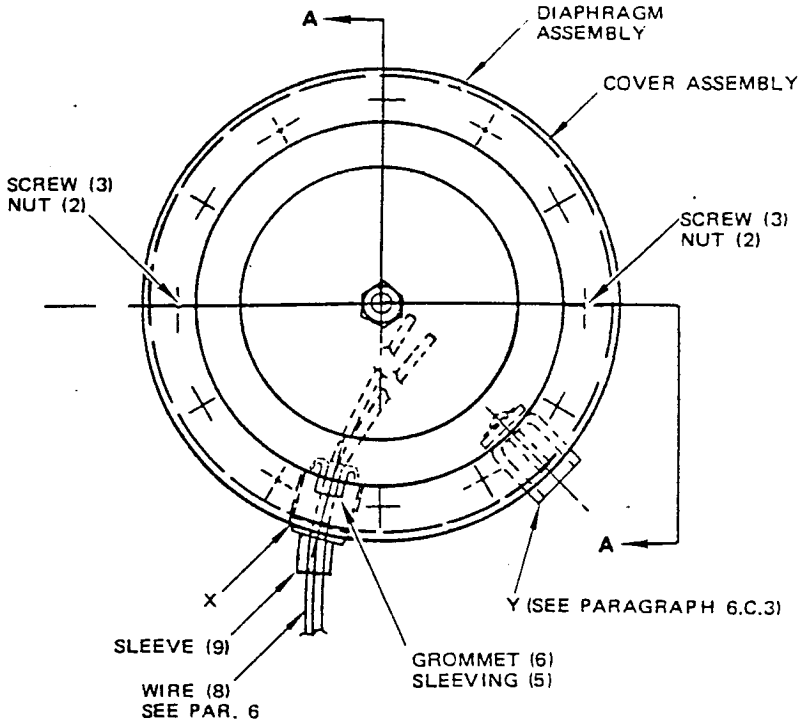
B. Reassembly Instructions for Overhauled Horn Assembly (Fig. 2 and 3).

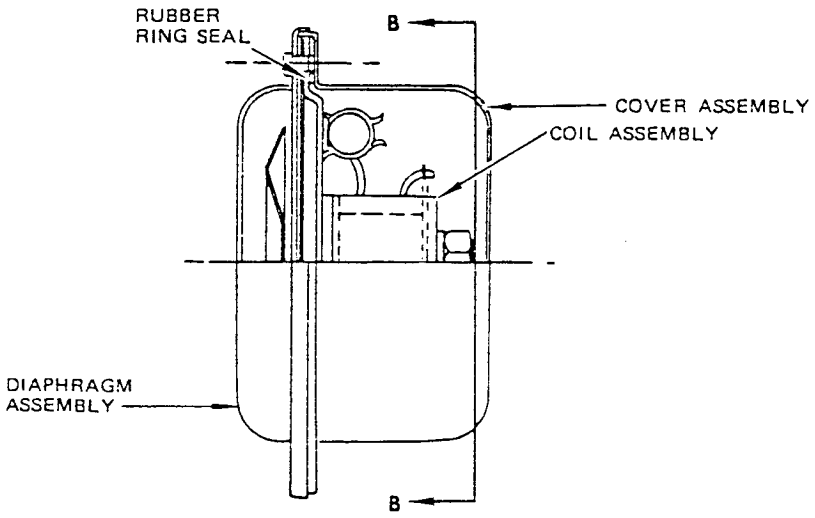
(1) Solder two wires (8) to horn assembly (7) as shown in figure 2, if previously removed.

(2) Assemble and pot sleeving (5), grommet (6), sleeve (9), and wires (8) as follows:

(a) Install grommet (6) in hole from the inside of horn assembly (7). Do not crimp. Cement to cover per 20-50-12, type 38.

(b) Center two wires (8), with sleeve (9), in sleeving (5) and pot with Stycast 2651. BMS 8-40 may be used as an option to Stycast 2651.





SECTION A-A

Front View of APU Fire Warning Horn Assembly
Assembly Procedures
Figure 2 (Sheet 1)

(3) Torque nuts on horn assembly (7) as shown in figure 2, Assembly Procedures.

(4) Reassemble cover assembly and diaphragm with rivets (4), screws (3), and nuts (2).

(5) Fasten marker (1) per Subject 20-50-05 if previously removed.

C. Assembly Instructions for New Horn Assembly

(1) Remove rivets (4), nuts (2), screws (3), cover assembly, and diaphragm assembly as shown in figure 2 and clean interior per paragraph 3, CLEANING.

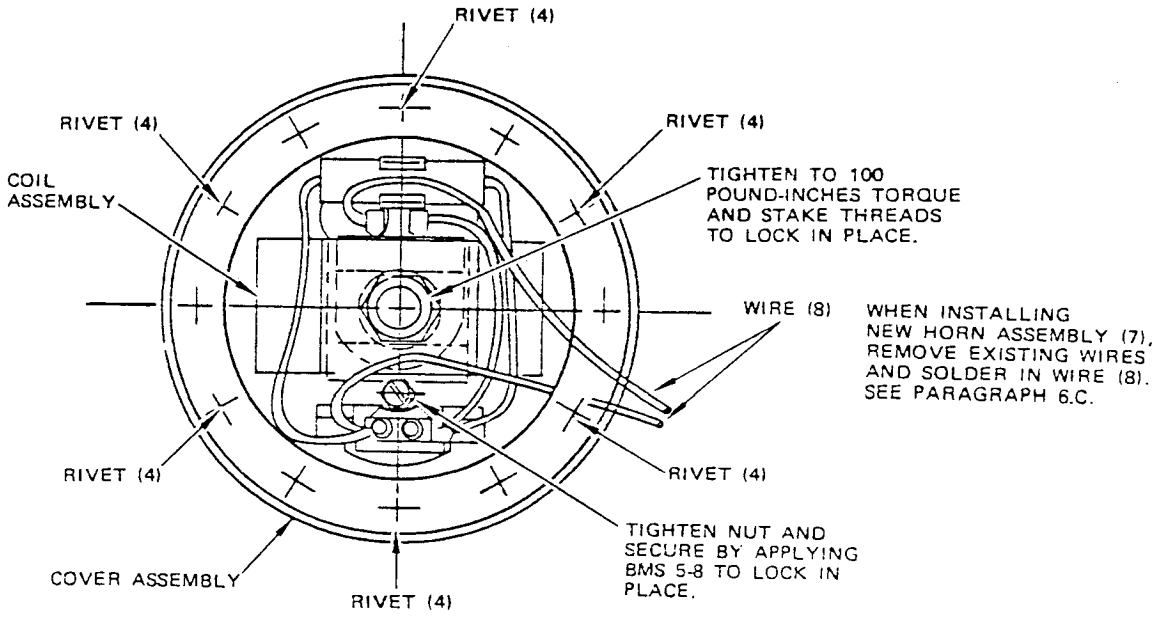
(2) Remove existing wires (X, figure 2) and replace with two wires (8) and sleeve (9) per paragraph 6.B.(1) and (2).

(3) Cut existing wire (Y, figure 2) at terminal. Leave terminal and rubber boot as installed and plug opening in boot by potting with Stycast 2651.

(4) Tighten and lock nuts on horn assembly (7) as shown in figure 2.

(5) Reassemble cover assembly and diaphragm assembly with rivets (4), screws (3), and nuts (2).

(6) Fasten marker (1) per Subject 20-50-05 if previously removed.



SECTION B-B
(WITH COVER ASSEMBLY REMOVED)

7. FITS AND CLEARANCES

None.

8. TESTING

Test horn assembly with 24 volts dc source and adjust to operate at maximum volume. For supplementary test information on horn assembly (7), see manufacturer's instructions.

9. TROUBLE SHOOTING

A. If failure of a test occurs, check for defective connections, incorrect wiring connections, and defective components.

B. If defective components are the cause for failure, replace the horn assembly.

10. STORAGE INSTRUCTIONS

A. Protect assembly from dust, moisture, and rough handling. Place assembly in plastic bag and insert in protective carton, padded sufficiently to ensure against damage during storage and handling. Close, tape, and mark carton with assembly identity and date of overhaul.

B. For further information, refer to "Protection, Storage, and Handling of Airplane Components," Subject 20-70-01.

11. SPECIAL TOOLS, FIXTURES, AND EQUIPMENT

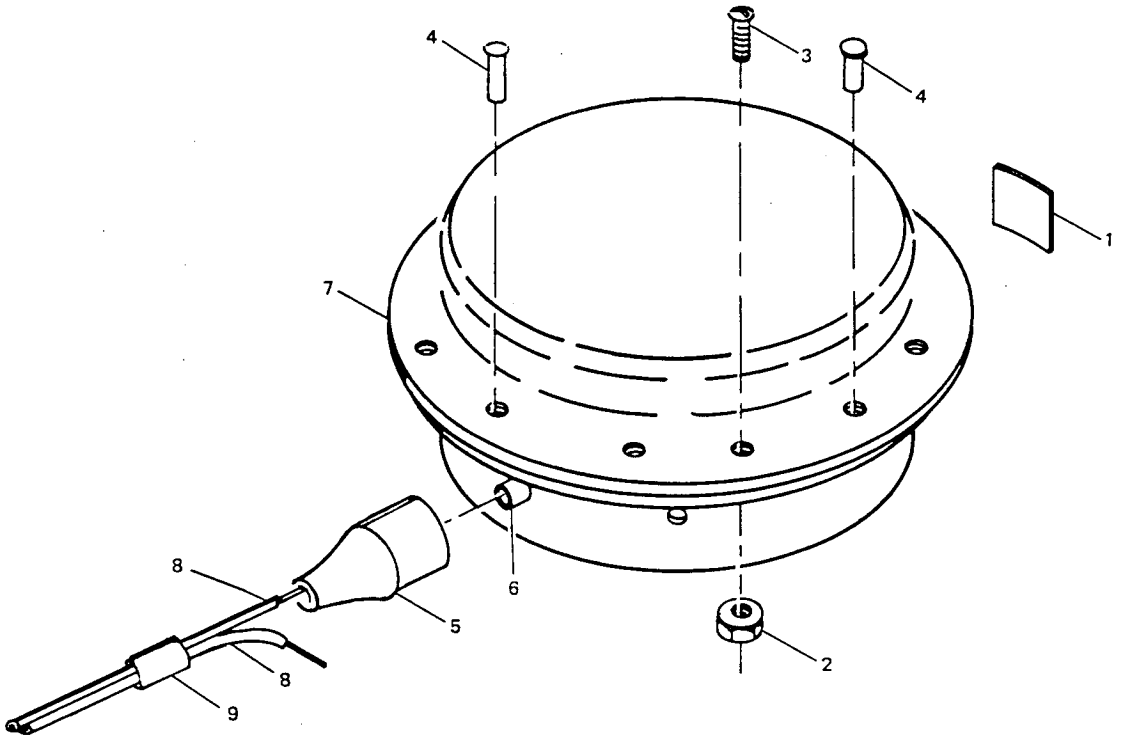
A. Tools used for repair of electrical connectors are listed in "Repair of Electrical Connectors," Subject 20-11-02.

B. Tools used for repair of electrical terminations and for replacement of insulating sleeving are listed in "Repair of Electrical Terminations and Electrical Bonding Areas," Subject 20-11-03.

C. Tools used for soldering electrical connections are listed in "Soldering Electrical Connections," Subject 20-12-01.

NOTE: For additional equipment required for testing, refer to TESTING.

12. ILLUSTRATED PARTS LIST



APU Fire Warning Horn Assembly
Figure 3

FIG. & ITEM NO.	PART NO.	AIRLINE PART NUMBER	NOMENCLATURE 1 2 3 4 5 6 7	USE CODE	QTY PER ASSY
3-	69-29567-1		HORN ASSY, FIRE WARNING, APU	A	
	69-29567-5		HORN ASSY, FIRE WARNING , APU	B	
1	BACM10H1P		. MARKER, AL FOIL	A	1
1	BAC27DCC456		. MARKER, AL FOIL	B	1
2	BACN10JC3		. NUT (REPLACES NAS679A3W)		2
3	NAS603-10		. SCREW		2
4	MS20427M5-6		. RIVET		6
5	BACM27D12		DELETED		
5	69-29567-7		. SLEEVING		1
6	NAS1368N3A		. GROMMET		1
7	9638		. HORN ASSY, V80252 (PREF)		1
7	9643		. HORN ASSY, V80252 (OPT)		1
7	9630		. HORN ASSY, V80252 (OPT)		1
7	23750		DELETED		
8	69-29567-2		. WIRE, BMS 13-13B, TYPE 1, CLASS 2, #18 (PREF)		2
8	69-29567-2		. WIRE, BMS 13-5D, TYPE 1, CLASS 2, #18 (OPT)		2
9	69-29567-4		DELETED		
9	69-29567-6		. SLEEVING		1
-10	BACT12AC49		. TERMINAL		2

-NOT ILLUSTRATED

VENDORS

V80252 FARADAY INC., 805 SOUTH MAUMEE STREET, TECUMSEH, MICHIGAN 49286