GRIMES AEROSPACE

SERVICE BULLETIN

PASSENGER SERVICE UNIT
GRIMES PART NUMBER 10-1178-(SERIES)
FOKKER 100 / FOKKER 50

VENDORDO
REGISTRATIE NR.
1-024-313-2
LOCATIE NR. ORIGINEEL
S13DS
ONTVANGST NR.
FOKK IN
OUDE REGISTRATIE NR(S)

I. PLANNING INFORMATION

a. EFFECTIVITY

This service bulletin describes the procedures to modify the 10-1178-(SERIES) Passenger Service Unit (PSU), to prevent moisture from contributing to electrical shorting and or failure of the PSU. These recommended changes will be incorporated into new production PSU with serial number 4000 and subsequent.

b. REASON

Excessive moisture may cause shorting of the connectors **J1** or **J2** and terminals of transformers **T1, T2** or **T3**.

c. DESCRIPTION

Incorporation of this service bulletin and associated kit, will insulate these components from moisture that could result in electrical shorting and failure of the PSU. After incorporation of this Service Bulletin the change will be identified with revision **"AE"**.

d. COMPLIANCE

Incorporation of this service bulletin is recommended, specifically in known locations, where heavy moisture / condensation, has been reported, around or near the PSU.

e. APPROVAL

This service bulletin contains no modification information that revises the approved configuration and therefore does not require government or other regulatory agency approval.

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I. **PLANNING INFORMATION**---(CONTINUED)

f. **MANPOWER**

The estimated manhours required to accomplish the modifications contained in this service bulletin are as follows:

Disassembly	0.05	hours
Modification	0.33	hours
Assembly	0.10	hours
Test	0.10	hours
Total	0.58	hours

g. **MATERIAL, COST AND AVAILABILITY**

Grimes Modification Kit 10-1624-1 may be procured from :

Grimes Aerospace Company
Product Support Group
240 Twain Avenue
Urbana, OH 43078 USA

Telephone: 513-653-5225
Fax: 513-652-2322
SITA: DAYFLCR

The price of Grimes Modification Kit 10-1624-1 is $ 5.45 for all orders shipped on or before 12/31/93. After this date the price is subject to change.

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I. **PLANNING INFORMATION**---(CONTINUED)

g. **MATERIAL, COST AND AVAILABILITY**---(CONTINUED)

The following additional customer furnished materials or **EQUIVALENT** are required to incorporate these changes.

(1) **ADHESIVE / SEALANT, SILICONE RUBBER SEALANT**, NO. 3145 Dow Corning Corp, Midland Michigan.

h. **TOOLING** - Not Applicable

i. **WEIGHT AND BALANCE** - None

j. **ELECTRICAL LOAD DATA** - Not Affected

k. **SOFTWARE ACCOMPLISHMENT SUMMARY** - Not Applicable

l. **REFERENCES**

GRIMES DRAWING 10-1178, REV AE, PASSENGER SERVICE UNIT
GRIMES DRAWING 10-1624, KIT, MODIFICATION
GRIMES DRAWING 11-5341, REV J, CIRCUIT CARD ASSEMBLY
COMPONENT MAINTENANCE MANUAL 33-20-44
SERVICE BULLETIN 10-1178-33-0036
SERVICE BULLETIN 10-1178-33-0039

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I. **PLANNING INFORMATION**---(CONTINUED)

m. **OTHER PUBLICATIONS AFFECTED** - None

n. **FAMILY TREE CHARTS OF MODIFICATION RELATIONSHIPS**

Not Applicable

CAUTION

PLEASE USE ELECTRO-STATIC DEVICE (ESD) PRECAUTIONS

II. **ACCOMPLISHMENT INSTRUCTIONS**---(See Figure 1)

1. **DISASSEMBLY**

NOTE: Place a soft cloth on the bench before proceeding with disassembly. Position the **LENS** side of the PSU face down on the cloth, to protect the lens side of PSU from damage.

A. (Fig. 1) Unplug connector **J2** of lead wire assembly (110) from the mating connector of access cover assembly (60). Loosen four (captive), ¼ turn fasteners, to "partially" free the access cover assembly (circuit card assembly)(CCA), from mounting plate assembly (280).

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II. **ACCOMPLISHMENT INSTRUCTIONS**---(CONTINUED)

CAUTION:

Use care with the handling of access cover assembly as it will still be attached electrically to mounting plate assembly by way of electrical wires to the circuit card connector and mounting plate assembly.

B. (Fig. 1) Disconnect connector **J3** of lead wire assembly (185), from the (Fig. 2) mating connector **J3** on CCA (45A).

C. (Fig. 1) Remove six screw assemblies (55) holding CCA (45A) to access cover assembly (60).

D. Remove CCA (45A) from access cover assembly (60).

2. **MODIFICATION**...(See Figure 2 and 3)

NOTE:

Use extreme care in all handling and modification procedures, to avoid damage to any electrical component.

A. (Fig. 2) Examine the board-mounted mating connectors **J1 and J2** of CCA (45A), for foreign objects and or broken / bent pins inside connector. Clean CCA and replace connector if necessary.

B. (Fig. 3) Remove from the Kit, gaskets (65A) and (70A).

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II **ACCOMPLISHMENT INSTRUCTIONS**---(CONTINUED)

2. **MODIFICATION**...(See Figure 2 and 3)

C. (Fig. 3) Install gasket (65A), inside connector (**J1**), carefully compressing the gasket over the pins, so that both halves of each pin are visible after installation of gasket. Repeat this identical procedure for gasket (70A), installing gasket (70A) inside connector (**J2**).

CAUTION

Area should be well ventilated before applying adhesive / sealant.

D. (Figs. 2 and 3) Using a syringe (or similar application device), apply silicone rubber adhesive / sealant over the **pins** of transformers (115) **T1, T2, and T3**, per Figure 3.

Apply sealant to form a radius, approximately 0.063 inches (1.6 mm), along bottom edges of connectors **J1** and **J2**.

NOTE: This material cures in any position but should not be disturbed for 5 - 10 minutes after application. Allow 24 hours for full cure.

3. **ASSEMBLY**---(See Figure 1)

A. (Fig. 1) Carefully position CCA (45A) in access cover assembly (60) and secure CCA with six screw assemblies (55).

B. Install connector (185) of lead wire assembly to the mating connector **J3** on the **CCA**. Carefully position access cover assembly (60) in place and then secure access cover assembly using the four (captive), ¼ turn fasteners.

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II. **ACCOMPLISHMENT INSTRUCTIONS**---(CONTINUED)

3. **ASSEMBLY**---(CONTINUED)(See Figure 1)

C. Install connector of lead wire assembly (110) to mating connector **J2** of access cover assembly (60).

D. Stamp or mark, with permanent ink, **"REV AE"** and **"MODIFIED PER SB10-1178-33-0040"** on the access cover assembly (60).

4. **TESTING**---(See Figure 4)

NOTE: For the following tests, DC ground should be connected to earth ground for maximum touch switch sensitivity.

A. Apply + 28 volts to pin 1 of connector J1 and ground pin 9.

B. The three lamps in "NO SMOKING" sign shall illuminate.

C. Remove the ground lead from pin 9 and connect it to pin 12.

D. The three lamps in "Fasten Seat Belt" sign shall illuminate.

E. Apply 115 VAC, 400 Hz, between pins 2 and 3 of connector J1 and + 28 VDC to pin 1 and DC ground to pin 4.

F. Sequentially touch the reading light touch plates. The two or three reading lights, as applicable, shall illuminate.

G. Touch the call touch plate. The attendant call light shall illuminate. With an oscilloscope connected to pin 5, a momentary chime signal shall be present.

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II. **ACCOMPLISHMENT INSTRUCTIONS**---(CONTINUED)

4. **TESTING**---(CONTINUED)(See Figure 4)

H. Momentarily apply ground (use DC ground) to J1-pin 7. All reading lights shall illuminate. Repeat this step to turn off lights.

I. Test complete. Disconnect 115 VAC, 400 HZ from pins 2 and 3 of connector J1 and + 28 VDC from pin 1 and DC ground from

III. **MATERIAL INFORMATION**

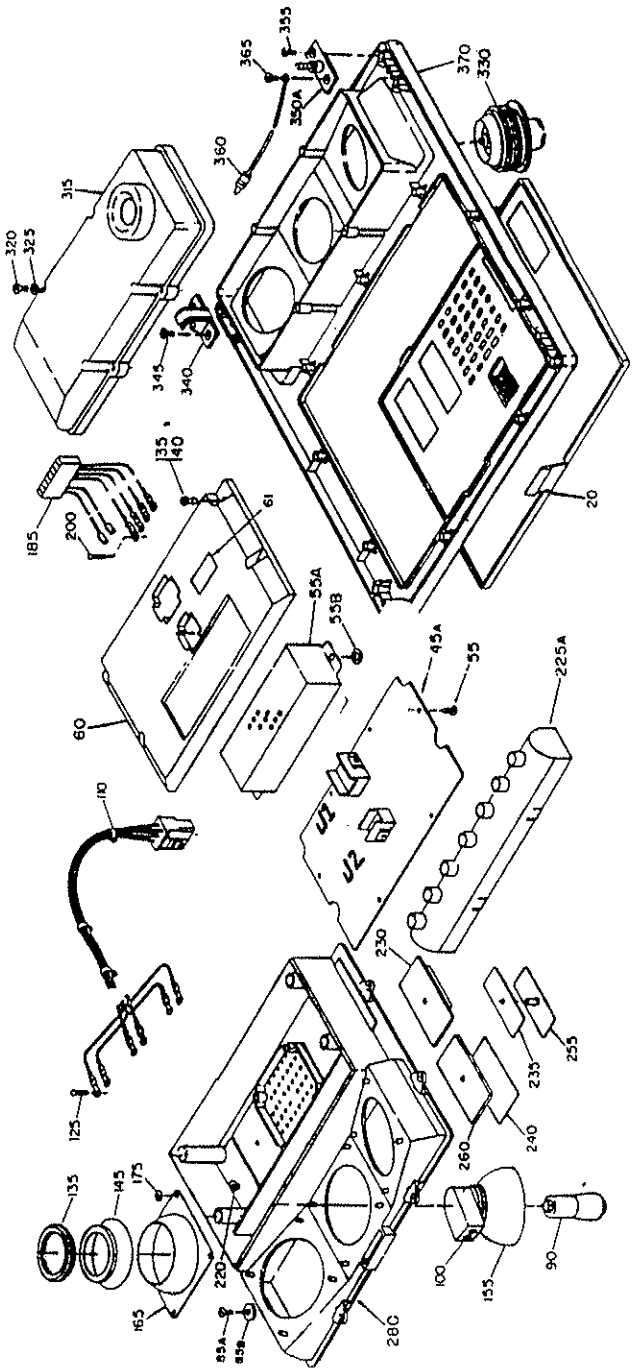
FIG NO.	ITEM NO.	NEW PART NUMBER	QTY	PRICE	KEY WORD	OLD PART NUMBER	INSTRUCTIONS DISPOSITION
1	20	NONE	1	N/A	LENS	25-1301-( )	RETAIN
1, 2	45A	NONE	1	N/A	CIRCUIT CARD ASSY	11-5341-( )	MODIFY
1	55	NONE	6	N/A	SCREW ASSY	NAS1301-4-4	RETAIN
1	60	NONE	1	N/A	ACCESS CVR. ASSY	11-5339-( )	RETAIN
1	185	NONE	1	N/A	LEAD WIRE ASSY	11-5337-( )	RETAIN
1	280	NONE	1	N/A	MTG PLATE ASSY	11-5328-( )	RETAIN
2, 3	65	NONE	1	N/A	CONNECTOR J1	CO-7636	RETAIN
2, 3	65A	60-4940-3	1	***	GASKET (KIT)	NONE	INSTALL
2, 3	70	NONE	1	N/A	CONNECTOR J2	CO-7622	RETAIN
2, 3	70A	60-4940-1	1	***	GASKET (KIT)	NONE	INSTALL
2, 3	115	NONE	3	N/A	XMFR. T1,T2,T3	55-1085-1	RETAIN
REF	N/A	10-1624-1	EA	$5. 45	KIT. MOD	NONE	INSTALL

NOTE: ITEMS WITH THE ***, ARE COMPONENTS OF THE KIT AND ARE NOT SEPARATELY PRICED.

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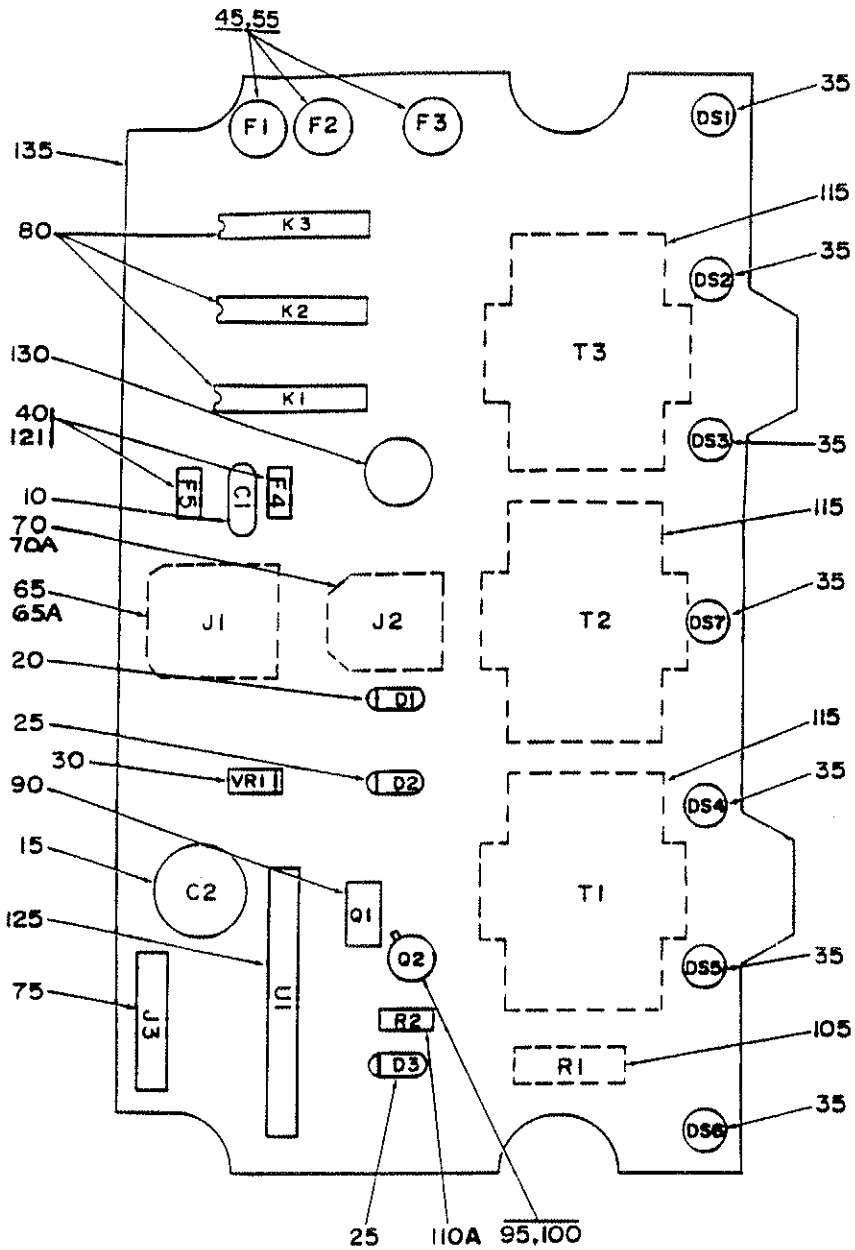
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REV. _____ DATE _____ FIGURE NO. 1

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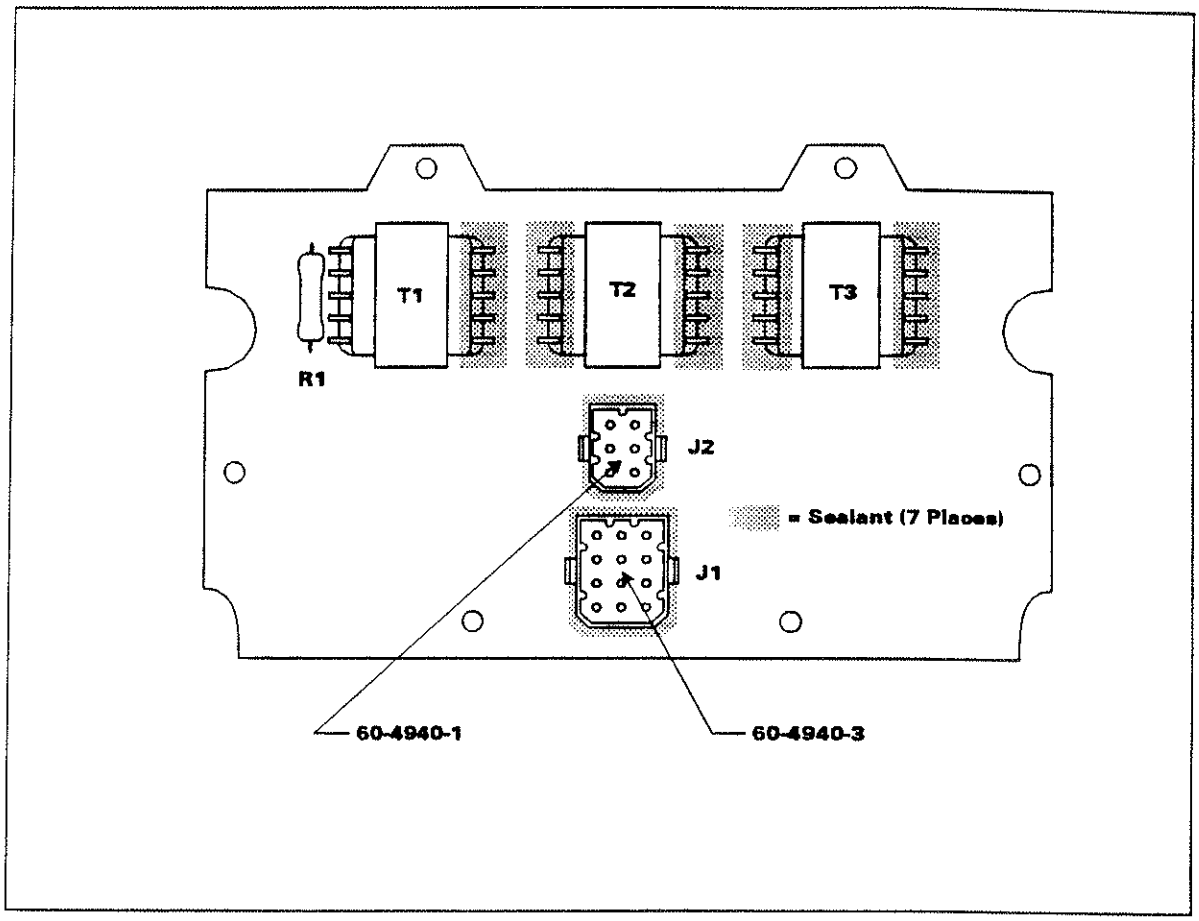
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REV. _____ DATE _____ FIGURE NO. 2

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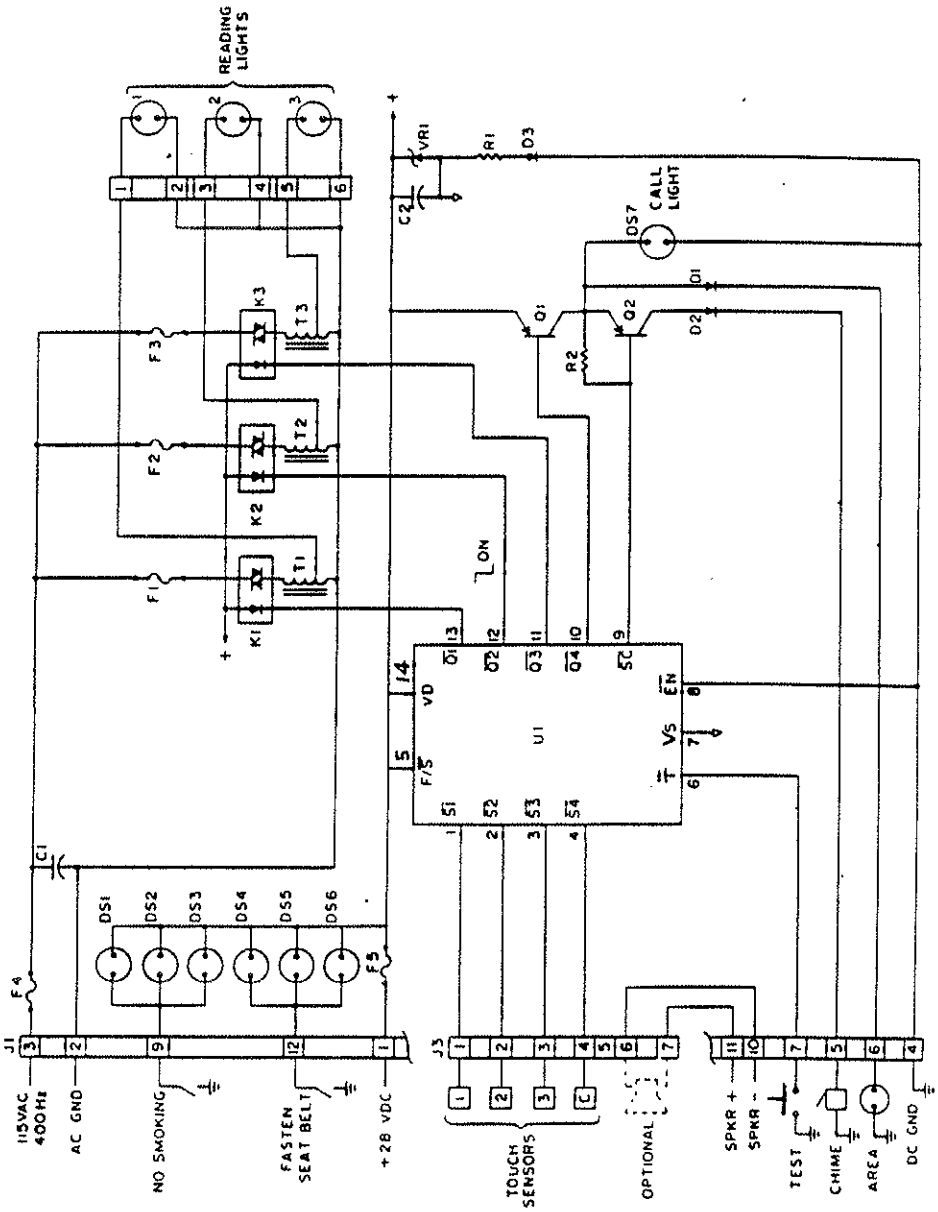
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Electrical Schematic Diagram

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REV. _____ DATE _____ FIGURE NO. 4