OPERATION MANUAL

PSDA300-2
FUEL QUANTITY TEST CABLE

MANUAL NUMBER: C6-0781-01 (Hard Copy)
E6-0781-01 (CD)
REVISION: 0
DATE: 02/26/2007

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ELECTROSTATIC DISCHARGE GENERAL WARNINGS FOR ALL EQUIPMENT

CAUTION: THIS EQUIPMENT MAY CONTAIN ELECTROSTATIC DISCHARGE (ESD) SENSITIVE COMPONENTS. TO PREVENT ESD SENSITIVE EQUIPMENT FROM POSSIBLE DAMAGE, OBSERVE THE FOLLOWING PRECAUTIONS WHEN HANDLING ANY ESD SENSITIVE COMPONENTS, OR UNITS CONTAINING ESD SENSITIVE COMPONENTS:

a. Maintenance or service personnel must be grounded though a conductive wrist strap, or a similar grounding device, using a 1 MΩ series resistor for equipment protection against static discharge, and personal protection against electrical shock.

b. All tools must be grounded (including soldering tools) that may come into contact with the equipment. Hand contact will provide sufficient grounding for tools that are not otherwise grounded, provided the operator is grounded through an acceptable grounding device such as a wrist strap.

c. Maintenance or service of the unit must be done at a grounded, ESD workstation.

d. Before maintenance or service of the equipment, disconnect all power sources, signal sources, and loads connected to the unit.

e. If maintenance or service must be performed with power applied, take precautions against accidental disconnection of equipment components. Specifically, do not remove integrated circuits or printed circuit boards from equipment while the equipment has power applied.

f. All ESD sensitive components are shipped in protective tubes or electrically conductive foam. The components should be stored using the original container/package when not being used or tested. If the original storage material is not available, use similar or equivalent protective storage material.

g. When ESD sensitive components are removed from a unit, the components must be placed on a conductive surface, or in an electrically conductive container.

h. When in storage or not being repaired, all printed circuits boards must be kept in electrically conductive bags, or other electrically conductive containers.

i. Do not unnecessarily pick up, hold, or directly carry ESD sensitive devices.

Failure to comply with these precautions may cause permanent damage to ESD sensitive devices. This damage can cause devices to fail immediately, or at a later time without apparent cause.

REVISION HISTORY BY DRAWING NUMBER

MANUAL: PSDA300-2 Fuel Quantity Test Cable

REVISION: 0 – February 26, 2007

DRAWING NO.	REV. LEVEL	DRAWING NO.	REV. LEVEL
Section 1	00		
04-0781-00	04		

SECTION I
GENERAL INFORMATION

1.1 INTRODUCTION

This manual provides operational information for the Aeroflex PSDA300-2 FQI (Fuel Quantity Interface).

The PSDA300-2 Interface is an instrument that permits complete functional checkout of the A300 tail tanks. The PSDA300-2 connects between the PSD60-2R Fuel Quantity Test Set and the tank wall connector of the A300 tail tank.

The PSDA300-2 Interface is shipped with all cables necessary to connect the PSD60-2R Fuel Quantity Test Set to the A300 tail tanks.

1.2 EQUIPMENT DESCRIPTION

Figure 1-1 shows the test set and associated cables. Refer to Table 1-1 for the description and function of each item.

TABLE 1-1

S1	Probe Select	Used to select the probe to be measured, compensator or total tank capacitance.
J5	Chassis Ground Connector	Used to ground the PSDA300-2 to the aircraft or the PSD60-2R.
P1	52QT Interface Cable	Connects to 52QT on the Aircraft
P2	53QT Interface Cable	Connects to 53QT on the Aircraft
	Airframe Ground	Connects to Airframe Ground on the Aircraft
P3	HI-Z Interface Cable	Connects to the HI-Z on PSD60-2R
P4	LO-Z Interface Cable	Connects to the LO-Z on PSD60-2R
	Chassis Ground	Connects to Chassis Ground on the PSD60-2R

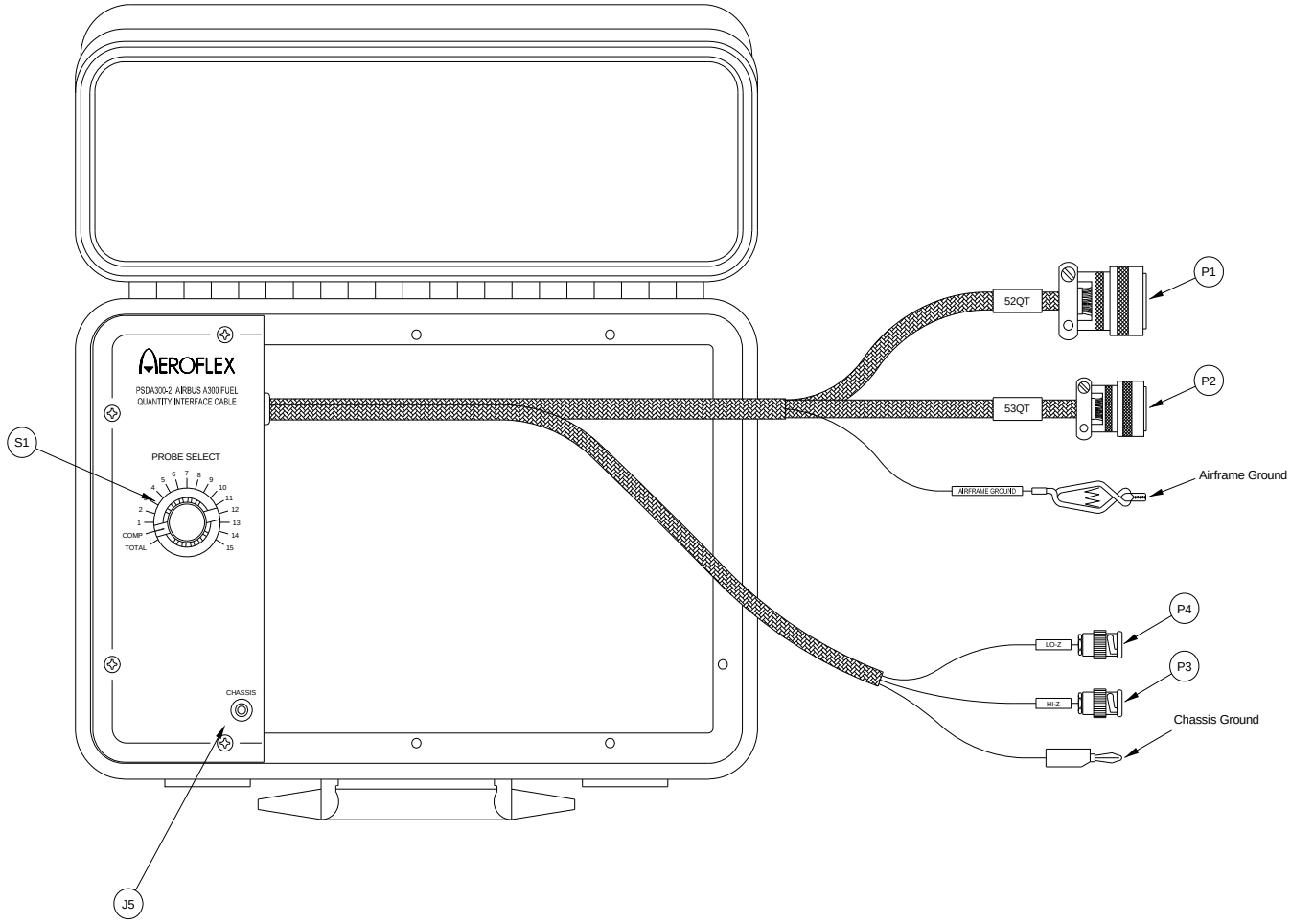

FIGURE 1-1

1.3 UNPACKING AND INSPECTING EQUIPMENT

Exercise extreme care when unpacking the unit. Make a visual inspection of the unit for evidence of damage incurred during shipment. If a claim for damage is to be made, save the shipping container to substantiate the claim. When the equipment has been unpacked, return all the packing material to the container for future use in storing or shipping of the equipment. Remove any protective covers from connectors before using the equipment. Replace any covers on the connectors after using the PSDA300-2 Interface.

1.4 SPECIFICATIONS

Physical Characteristics	
Dimensions:	10.6” X 14” X 6.5” (26.9 cm X 35.6 cm X 16.5 cm)
Weight:	7.7 lbs (3.5 kg)
Operating Temperature:	-40 °C to +55 °C
Storage Temperature:	-51 to +71 °C
Humidity (Non-Condensing):	90% maximum for 0 °C to 28 °C 80% maximum to 31 °C, decreasing linearly to 50% at 40 °C
Operating Altitude:	15000 ft. (4600 m) maximum
Storage Altitude:	15000 ft. (4600 m) maximum

1.5 Recommended Calibration Cycle

1 year

1.6 Related Documents

C6-0781-00	Maintenance Manual for PSDA300-2 (Hard Copy)
E6-0781-00	Maintenance Manual for PSDA300-2 (CD)

For more info, please contact americas.service@aeroflex.com.

PSDA300-2 TEST PROCEDURE / RECORD

S/N _____
BY: _____
DATE: _____

PURPOSE

This specification defines the procedure to be used for the complete testing of the JcAIR PSDA300-2 FUEL QUANTITY ADAPTER. This procedure is to provide an orderly sequence of tests to insure a completely tested system.

EQUIPMENT

VOLTMETER	FLUKE 8050A or equivalent
CAP METER	JcAIR PSD3050-3 or equ. AC CAP w/ 0.01pF RES.
MEGGER	JcAIR PSD3050-3 or equ. MIN 2000M OHMS

PROCEDURE

1.0 Verify less than 2 ohms between the following points:

____ a.	P1-A	P1-B	
____ b.		P1-C	
____ c.		P1-L	
____ d.		P1-M	
____ e.		P1-N	
____ f.		P1-P	
____ g.		P1-R	
____ h.		HI-Z	S1 in TOTAL, 1, 2, 3, 11, 12, 13, 14 & 15 only.
____ i.	P1-D	P1-E	
____ j.		P1-F	
____ k.		P1-G	
____ l.		P1-H	
____ m.		P1-J	
____ n.		P1-K	
____ o.		HI-Z	S1 in TOTAL, 4, 5, 6, 7, 8, 9 & 10 only.
____ p.	P1-S	P1-T	
____ q.		P1-U	
____ r.		P1-V	
____ s.		P1-W	
____ t.		P1-X	
____ u.		P1-Y	
____ v.		P1-Z	

____ w.	P1-S	P1-a	
____ x.		P1-b	
____ y.		HI-Z SHELL	
____ z.	P1-c	HI-Z	S1 in COMP position only.
____ aa.	P2-A	LO-Z	S1 in TOTAL and TANK 1 position only.
____ ab.		CHASSIS	S1 in COMP and TANKS 2-15 only.
____ ac.	P2-B	LO-Z	S1 in TOTAL and TANK 2 position only.
____ ad.	P2-C	LO-Z	S1 in TOTAL and TANK 3 position only.
____ ae.	P2-D	LO-Z	S1 in TOTAL and TANK 4 position only.
____ af.	P2-E	LO-Z	S1 in TOTAL and TANK 5 position only.
____ ag.	P2-F	LO-Z	S1 in TOTAL and TANK 6 position only.
____ ah.	P2-G	LO-Z	S1 in TOTAL and TANK 7 position only.
____ ai.	P2-H	LO-Z	S1 in TOTAL and TANK 8 position only.
____ aj.	P2-J	LO-Z	S1 in COMP position only.
____ ak.	P2-K	LO-Z	S1 in TOTAL and TANK 9 position only.
____ al.	P2-L	LO-Z	S1 in TOTAL and TANK 10 position only.
____ am.	P2-M	LO-Z	S1 in TOTAL and TANK 11 position only.
____ an.	P2-N	LO-Z	S1 in TOTAL and TANK 12 position only.
____ ao.	P2-P	LO-Z	S1 in TOTAL and TANK 13 position only.
____ ap.	P2-R	LO-Z	S1 in TOTAL and TANK 14 position only.
____ aq.	P2-S	LO-Z	S1 in TOTAL and TANK 15 position only.
____ ar.	J5	P1-SHELL	
____ as.		P2-SHELL	
____ at.		LO-Z SHELL	
____ au.		CHASSIS	
____ av.		AIRFRAME GND	
____ aw.		BANANA PLUG	

1.1 Using the MEGGER verify greater than 2000M OHMS resistance between the following points.

____ a. LO-Z & CHASSIS
____ b. HI-Z & HI-Z SHIELD
____ c. HI-Z & LO-Z
____ d. HI-Z-SHIELD & CHASSIS

1.2 Connect the LO-Z and HI-Z cables to the CAP METER set in AC CAP function and verify the stray capacitance is less than the given limits.

	PROBE SELECT	LIMITS
____ a.	TOTAL	0.7pF
____ b.	COMP	0.1pF
____ c.	TANK 1	0.1pF
____ d.	TANK 2	0.1pF

_____	e.	TANK 3	0.1pF
_____	f.	TANK 4	0.1pF
_____	g.	TANK 5	0.1pF
_____	h.	TANK 6	0.1pF
_____	c.	TANK 7	0.1pF
_____	d.	TANK 8	0.1pF
_____	e.	TANK 9	0.1pF
_____	f.	TANK 10	0.1pF
_____	g.	TANK 11	0.1pF
_____	h.	TANK 12	0.1pF
_____	c.	TANK 13	0.1pF
_____	d.	TANK 14	0.1pF
_____	e.	TANK 15	0.1pF