

MODIFICATION RECOMMENDED –  
CORRECTS MANUFACTURING OR DESIGN DEFECTS

**6684A-07**

# S E R V I C E N O T E

Supersedes:  
NONE

## 6684A DC POWER SUPPLY

Serial Numbers: US0000000/US36410988 & MY41000101/MY41000202

The Current Shunt (Circuit Reference “R900”) may have intermittent sense wires, which may cause Instability of Current Regulation, Current read back and current programming may become unstable.

To Be Performed By: Agilent-Qualified Personnel or Customer

**Parts Required:**

P/N	Description	Qty.
NONE		

## ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:			
<b>MODIFICATION RECOMMENDED</b>			
ACTION CATEGORY:	<input type="checkbox"/> IMMEDIATELY X ON SPECIFIED FAILURE <input type="checkbox"/> AGREEABLE TIME	STANDARDS:	LABOR: 3.5 Hours
LOCATION CATEGORY:	X <input type="checkbox"/> CUSTOMER INSTALLABLE x ON-SITE X <input type="checkbox"/> SERVICE CENTER	SERVICE INVENTORY:	<input type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT <input type="checkbox"/> SEE TEXT
TEXT		USED PARTS:	<input type="checkbox"/> RETURN X <input type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT <input type="checkbox"/> SEE TEXT
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	AGILENT RESPONSIBLE UNTIL: 2/30/2007	
AUTHOR: CP	PRODUCT LINE: 33		
ADDITIONAL INFORMATION:			

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**Situation:**

When the push-on connectors become intermittent the output current will become unstable. Loose push-on connectors can cause the output current to change dramatically. The current can change from any set current, and may go to the maximum rated output current of the instrument.

**Solution/Action:**

The Shunt “R900” is located on the “A9” Down Programming/Slow Sense Assembly for Models (668XA, 669XA)

The first picture below shows how the Shunt “R900” is connected using the term-crimp connectors. The Shunt “R900” is connected to (-ISEN J912 Black wire) & (+ISEN J911 Red wire).

The second and the third pictures show how the Shunt “R900” is connected when soldered.

Cut the terminal-crimp connectors off of both wires and discard the connectors. Make this cut as close to the terminal-crimp connector as possible. Carefully strip the wires to approximately 8mm and solder the wires, and avoid burning the wire insulation and the printed circuit board.

This strip length will be used to solder to the connectors to (-ISEN J912 Black wire) & (+ISEN J911 Red wire). The length of these wires is critical. If the strip length of the wires is too long, the wires may cause a short to adjacent components. If the length of the wires is too short the solder connections may be poor. If replacement of the Red or the Black wire is required the same type and color wire should be used (22 AWG, 300V 105C).

The wires should be connected as shown below. The holes in the male connectors should be used to solder the Red and Black wires to the printed circuit assembly marked (-ISEN J912) & (+ISEN J911). Do not mix the Red & Black wires when making this modification. See picture below for details. The pictures shown below show the required modification.

When the upgrade has been completed, Perform Performance verification tests as per the Service manual. Calibration is only required if the instrument does not meet it's published Performance Specifications.

It is recommended as best practice, if an instrument is repaired or upgraded Performance verification testing be done.

**SPECIAL ASSEMBLY NOTE**

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When the upgrade has been completed check the following:

1. Inspect the solder connections to determine the solder joints are acceptable.
2. Inspect the printed circuit board to insure the solder joints are acceptable around (-ISEN J912) & (+ISEN J911) connectors.
3. The wires that are now soldered to (-ISEN J912 Black wire) & (+ISEN J911 Red wire) MUST be twisted.

See picture diagrams below for additional details.

**NOTE**

After the Agilent Responsible time has ended as described above. If there is an instrument that has this defect and the instrument has a serial number described above the instrument should be upgraded as per this service note.

Duplicate Service Notes (For Reference ONLY)

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6680A-08, 6681A-08, 6682A-07, 6683A-07, 6684A-07, 6690A-02, 6691A-02, 6692A-02



