

MODIFICATION RECOMMENDED –
CORRECTS MANUFACTURING OR DESIGN DEFECTS

6672A-08

S E R V I C E N O T E

Supersedes:
NONE

6672A System DC Power Supply

Serial Numbers: 0000A00000 / 9999Z99999 US00000000 / US99999999 MY41000000 / MY41000817

Slow or No Down Programming capability

To Be Performed By: Agilent-Qualified Personnel or Customer

Parts Required:

P/N	Description	Qty.
5010-1756	Down Programmer Repair Kit	1
2110-0713	Fuse 10A 125V	2
0699-1075	Resistor Fixed 0.1 Ohm +-3% 3W	2
5182-9080	FET-BENT Lead	2
0340-1507	Insulator-Xstr B-Nitride White	2
0515-0374	Connector-SGL CONT Socket	6

NOTE The Kit P/N 5010-1756 contains the parts listed. All of these parts are currently active and available from SPO or Agilent Parts. This kit P/N 5010-1756 is recommended to make the required modifications. If the kit is not available at any time the parts shown can be ordered. There is a modification sheet that is part of the kit. For reference the modification sheet that is contained in the kit has been included in this service note. See details below.

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:			
MODIFICATION RECOMMENDED			
ACTION CATEGORY:	<input type="checkbox"/> IMMEDIATELY <input checked="" type="checkbox"/> ON SPECIFIED FAILURE <input type="checkbox"/> AGREEABLE TIME	STANDARDS: LABOR: 2.0 Hours	
LOCATION CATEGORY:	<input checked="" type="checkbox"/> CUSTOMER INSTALLABLE <input checked="" type="checkbox"/> ON-SITE <input checked="" type="checkbox"/> SERVICE CENTER	SERVICE INVENTORY: <input type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT	USED PARTS: <input type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input type="checkbox"/> SEE TEXT
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	AGILENT RESPONSIBLE UNTIL: Always	
AUTHOR: CP	PRODUCT LINE: 33		
ADDITIONAL INFORMATION:			

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Situation:

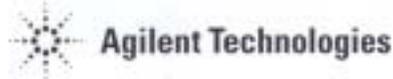
This modification when done to the A6 output filter assembly will prevent early failures of the down programmer FETS. The kit is intended to eliminate premature down programmer circuit failures when the 6572A/6672A is used in certain automated test sequences.

For a test sequence designed to reduce (down program) the output voltage, a step increase in the actual time required to down program the output is indicative of a down programmer failure.

Solution/Action:

The next several pages will describe the Action that should be taken to correct and modify any 6572A/6672A that has symptoms that relate to slow or no down programming. The information is very comprehensive and in depth.

After this modification is implemented the No-Load down programming discharge time shown in the manual will change FROM 250 ms TO 500 ms.



06672-80005

06672-80005 rev A

Instructions for Down Programmer Upgrade Kit Agilent p/n 5010-1756

Contents: This Kit includes the following parts.

<u>Part number</u>	<u>Qty</u>	<u>Description</u>
2110-0713	2	FUSE-SUBMINIATURE 10A 125V NTD AX UL-LST
0699-1075	2	RES-FXD 0.1 OHM +-3% 3W MFS TC=0+-70
5182-9080	2	FET-BENT LEAD
0340-1507	2	INSULATOR-XSTR B-NITRIDE WHITE
0515-0374	2	SCREW-MACHINE ASSEMBLY M3 X 0.5 10MM-LG
1251-4211	6	CONNECTOR-SGL CONT SKT .049-IN-BSC-SZ
		<i>Note: Some boards may NOT require use of this socket.</i>
06672-80005	1	Instruction Sheet for Down Programmer Repair Kit For 6572A/6672A

Purpose: Retrofit A6 output filter PC assembly to prevent early failure of down programmer transistor. This Kit is intended to eliminate premature down programmer circuit failures when the 6572A/6672A is used in certain automated test sequences.

For a test sequence designed to reduce (down program) the output voltage, a step increase in the actual time required to down program output is indicative of a down programmer failure.

Note:

All the components supplied in this kit should be installed to upgrade the down programmer circuit. Proper torque of hardware and proper lead solder technique is required.

Old thermal insulator pad must be removed completely before new parts are attached.

Heat sink must be clean and dry before applying new insulator pad.

Reuse of any components originally installed in the product will compromise the effectiveness of the upgrade.

WARNING: **Shock Hazard:** Hazardous voltage can remain inside power supply even after it has been turned off. Remove AC input power and wait a minimum of 7 minutes before opening unit.

See product service manual for removal of

1. Top cover
2. RFI Shield
3. A5 Control Board
4. A6 Output filter Board

Note: A6 has the down programmer circuit components that require change.



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Rework process on A6 06672-60024, PCA-Output for new resistor 0699-1075 at ref. Designator R911& R912 6672A/6572A model only.

Part value change

For: 06672-60024 A6 Output Assembly

Change: Resistors Reference designator R911 and R912

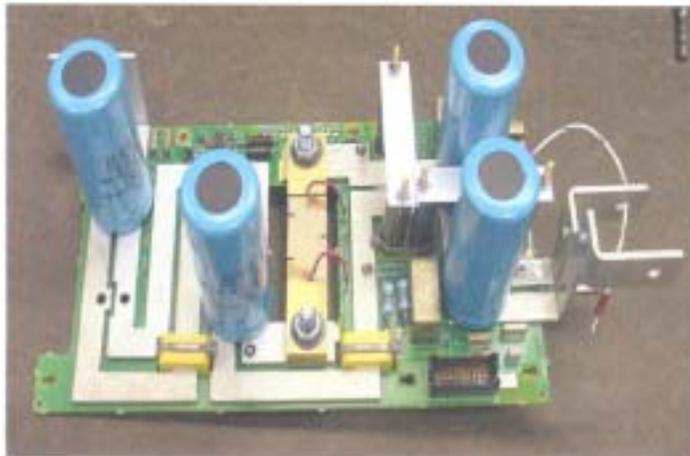
From: Old part number 0699-1060 (0.05ohm +/-1%, 3W)

To: New part number 0699-1075 (0.1ohm +/-3%, 3W.) (See Pic_1)



Pic_1

Pic_2 is a fully dismantled A6 output PCA of 06672-60024.



Pic_2

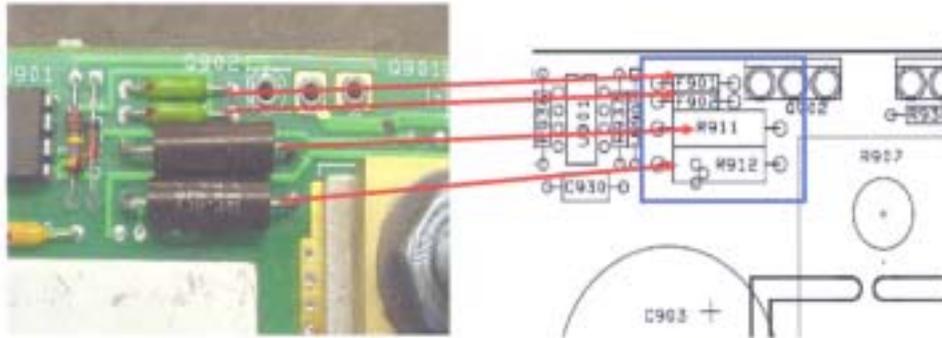


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Rework process on A6 Output PCA 06672-60024

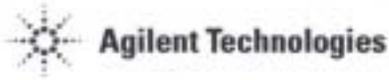
Caution: Observe standard antistatic practices against ESD when working with transistors. Refer to service manual chapter 1 for more information on antistatic procedures.

1. Location of the main rework that needs to be done. As per Pic_3 below in blue blocks.



Pic_3

2. Remove Fuses F901, F902 (2110-0713) and old Resistors R911, R912 (0699-1060) as shown in above Pic_3.
*Note: (MUST DO) both fuses due to parts are in parallel.
Both fuses need to be replaced with new parts to ensure the reliability of the product.*
3. Replace both fuses F901, F902 (2110-0713), 10A 125V NTD
Note: Fuses are heat sensitive. Do not subject fuse to soldering iron heat for long period of time.
4. Install New resistors R911, R912 (0699-1075) FXD 0.1 OHM $\pm 3\%$, 3W

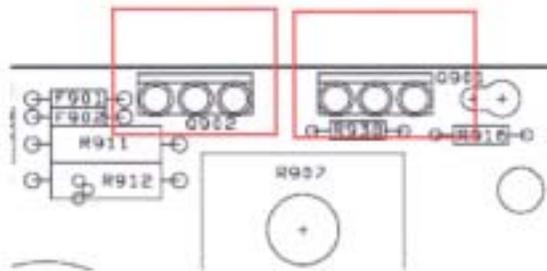


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5. Remove Transistors Q901 & Q902, see Pic_4 for location.

Note: Some PCAs will have transistors installed in sockets. If so, remove sockets and replace with new sockets. Be careful not to get solder inside socket.

Note: Do not install Q901 and Q902 transistors until after PCA is put back into chassis.



Pic_4



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PCA to chassis Assemble process for A6 Output board 06672-60024

1. Place the A6 PCA 06672-60024 into the Chassis output section per reversing instruction in service manual.
Note: The two bolts p/n 2940-0103 require 35 inch Lbs. of torque to secure buss bars to heat sink
2. Install transistors Q901 and Q902 part number 5182-9080 into socket or PCB holes.
Use screw part number 0515-0374 to TEMPORARILY attach transistors to heat sink to properly seat the transistors on the heat sink and properly align the transistors in the board before solder.
NOTE: Do not install insulator pad at this time. Transistor needs to be soldered before insulator pad is installed.
3. Solder ONLY the two outer leads of both transistors.
Note: Use care when applying solder. Excessive solder will cause reduction in space and/or electrical short between chassis and transistor lead.
4. Remove screw holding transistors. (Item number 2 above)
5. With transistor pulled slightly away from heat sink, solder the center lead of both transistors.
Critical: If transistor case is allowed to touch heat sink during soldering of the center lead the solder joint will not heat and flow properly.
Note: Use care when applying solder. Excessive solder will cause reduction in space and/or short between chassis and transistor lead.
6. Once cooled Add insulator PAD part number 0340-1507 and secure transistors to heat sink using screw part number 0515-0374. Use Torque setting 10 inch pounds Refer Pic_5.



PIC_5

7. Re-assemble A5 Control Board, RFI shield, top cover, and handles to unit.
8. Test and re-calibrate as necessary.
Note: This upgrade should not affect calibration.