66000A-05

S E R V I C E N O T E

Supersedes:
None

66000A DC Power Supply System Mainframe

Serial Numbers: MY40003356 through MY40003826

Non-functioning trigger In/Out capability when using multiple 6610XA modules

To Be Performed By: Agilent-Qualified Personnel or Customer

Parts Required:

P/N	Description	Qty.
1820-3097	IC GATE CMOS/HC AND QUAD 2-INP	1

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION: **MODIFICATION RECOMMENDED**			
ACTION CATEGORY:	X IMMEDIATELY x ON SPECIFIED FAILURE [[]] AGREEABLE TIME	STANDARDS: LABOR: 2.0 Hours	
LOCATION CATEGORY:	x CUSTOMER INSTALLABLE x ON-SITE X SERVICE CENTER	SERVICE INVENTORY: x RETURN [[]] SCRAP X SEE TEXT	USED PARTS: x RETURN [[]] SCRAP X SEE TEXT
AVAILABILITY: Always	PRODUCT'S SUPPORT LIFE	AGILENT RESPONSIBLE UNTIL: Always	
AUTHOR: CP	PRODUCT LINE: SP		
ADDITIONAL INFORMATION:			

Agilent Technologies

March 22, 2007

Situation:
The Trigger Connections are made to the BNC connectors on the rear panel of the 66000A mainframe.
Trigger IN: Allows negative-going external signals to trigger one or more modules in the mainframe.

Trigger OUT: Provides a negative-going wired-output pulse that indicates a trigger has occurred on one or more of the modules in the main frame.

A defective **IC GATE CMOS/HC AND QUAD 2-INP** (circuit reference "U80") p/n 1820-3097 will prevent the **Trigger IN/OUT** functions described above not to function as designed.

A Quick Trigger Test !!
Measure the trigger output BNC connector, it must be 5 volts at all time unless a trigger is sent and then it will go low for 20/30 micro seconds. If this test is done and the 66000A mainframe does not work as described then check the IC (Circuit Reference U80) as described.

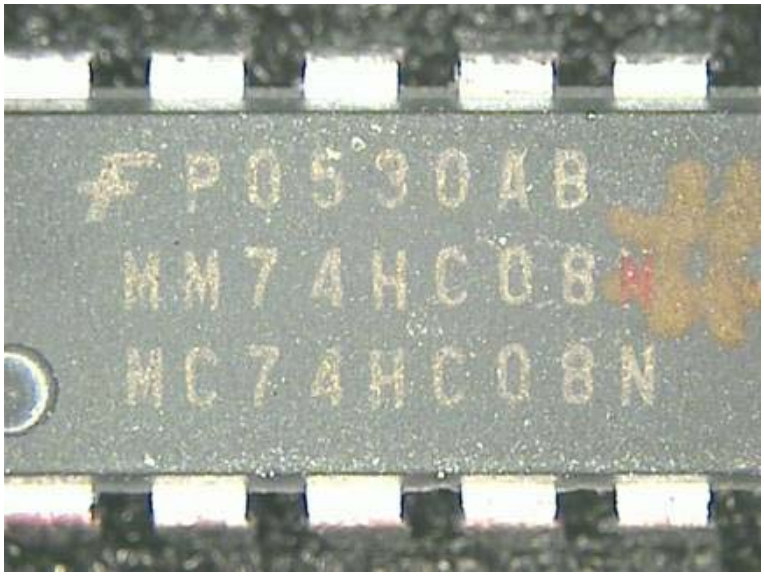
Solution/Action:

The Mainframe PCA P/N 66000-60020 and the tested assembly p/n 66000-61020 may have a defective IC (circuit reference U80), P/N 1820-3097.Fairchild has been identified as the defective manufacturer of defective. The IC's MPN 74HC08 (Figure 1) shows the defective date code P0530AB. Fairchild has determined that these ICs may have been damaged due to ESD.

It has been recommended that any 66000A mainframe that has (Circuit Reference "U80") with the defective date code shown in figure 1, the defective part should be replaced. The replacement part can be any approved manufacture of p/n 1820-3097. It has been determined that any approved manufacture and dated code can be used except for Fairchild date code P0530AB.

Figure 2 below has been provided to help locate the IC (circuit reference "U80") which is on the PCA P/N 66000-60020 and the tested PCA assembly p/n 66000-61020.

FIGURE 1



NOTE

Replacement of this IC (Circuit reference "U80") will not effect calibration.

Electrostatic Discharge

CAUTION The Modular Power System has components that can be damaged by ESD (electrostatic discharge). Failure to observe standard anti-static practices can result in serious degradation of performance even when complete failure does not occur.

When working on the Modular Power System, observe all anti-static work practices. This includes, but is not limited to:

- Working at a static-free station, such as a table covered with static-dissipative laminate or with a conductive table mat (Agilent P/N 9300-0797).
- Using a conductive wrist strap (Agilent P/N 9300-0969 or 9300-0970).
- Grounding all metal equipment at the station to a single, common ground.
- Connecting low-impedance test equipment to static sensitive components only when those components have power applied to them.
- Removing power from the Modular Power System before removing or installing printed circuit boards.

Service Tools and Equipment

The following tools are required to repair the Agilent 66000A MPS Mainframe:

- T15 and T25 TORX drivers.
- 10mm and 7mm HEX NUT drivers.
- #2 POZI driver.
- Slot-head screwdrivers - small and medium.
- DIP component removal tool.
- Soldering iron and solder.
- De-solder removal tool.
- Needle-nose pliers.
- Anti-static work mat and wrist strap.

If there are any 66000A mainframes that have the problem described above and the serial number of that 66000A mainframe is not included in the serial number range described above Agilent will repair the instrument.

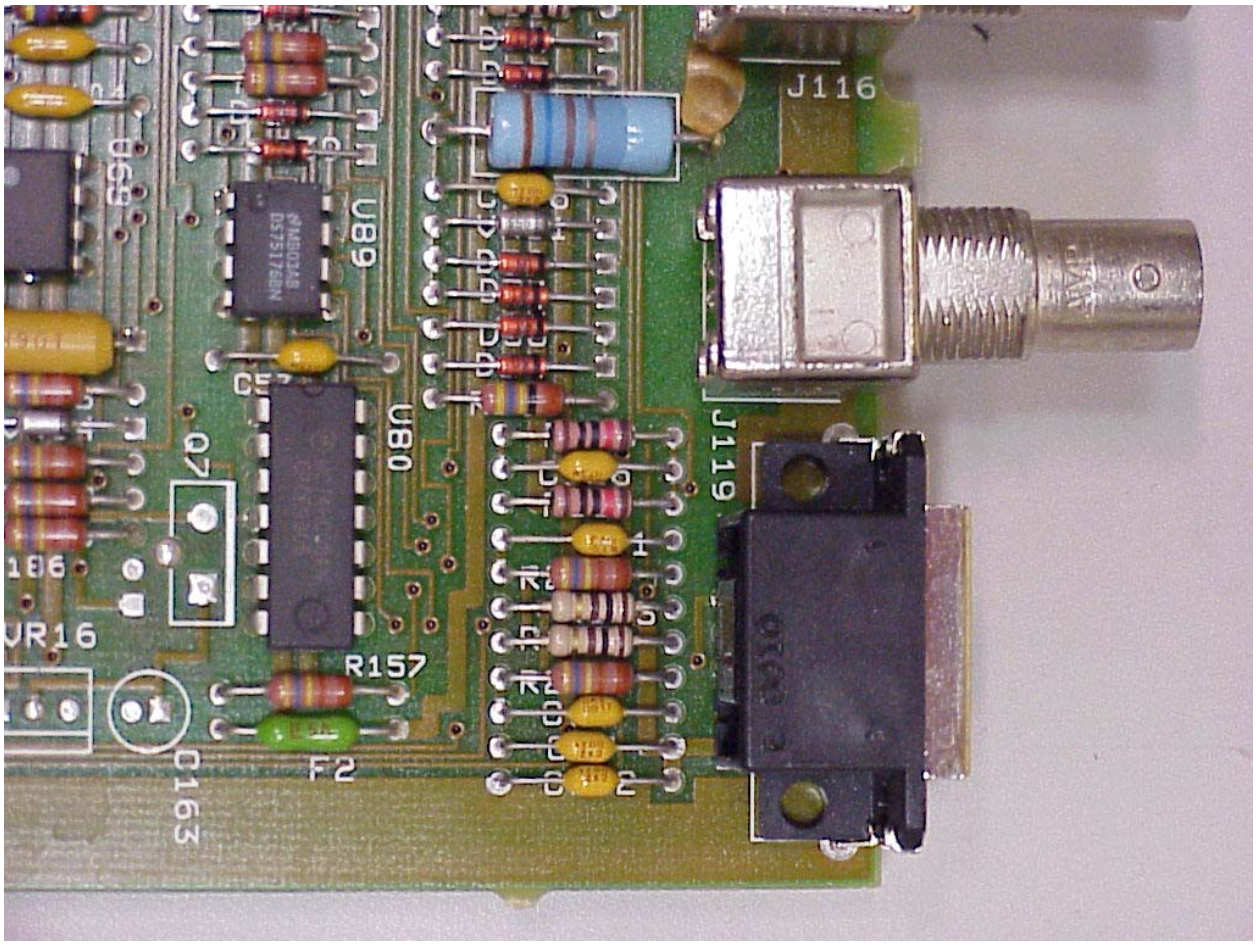
SPECIAL NOTE

When this failure exists and a defective part is found to be U80 part number 1820-3097. Determine if the defective parts is a Fairchild part with a date code of P0530AB.All defective parts, Fairchild or any other manufacture, should be returned to the following address:

Agilent Technologies, Inc. (M) Sdn Bhd,
Bayan Leps, FIZ,
11900 Panang,
Malaysia
Attn: Thivagaran Singgaram

Note: Fairchild is doing a failure analysis to determine root cause of the failure

FIGURE 2


J116
J119
U89
U80
Q7
R157
F2
D163
VR16