

S E R V I C E N O T E

SUPERSEDES: 8166A-01

8166A Lightwave Multichannel System

Serials: DE396001001 / DE39600322

Recommended MOV removal in 8166A power supply

To Be Performed By:Agilent-Qualified Personnel

Parts Required:None

Situation:

In few cases, a metal oxide varistor (MOV) used in the power supply can blow instantly, accompanied by a loud noise, smoke and possible spray of small particals. There is no safety hazard involved. Because customers might perceive such failures as serious quality problem, Agilent/OCMD decided to offer a full modification on all related products, despite of not having seen a failure so far.

Solution / Action:

- The MOV shall be removed without replacement (component is redundant)
- Disassemble the 8166A to get access to the power supply
- Remove the power supply from the chassis
- Cut off the MOV by use of wire cutting pliers
- Re-install the power supply
- Re-assemble the 8166A
- Perform a functional test

Continued

DATE: March 2001

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:			
MODIFICATION RECOMMENDED			
ACTION CATEGORY:	<input checked="" type="checkbox"/> IMMEDIATELY <input type="checkbox"/> ON SPECIFIED FAILURE <input type="checkbox"/> AGREEABLE TIME	STANDARDS:	LABOR 0.5 Hours
LOCATION CATEGORY:	<input type="checkbox"/> CUSTOMER INSTALLABLE <input 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
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	USED PARTS:	<input type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input checked="" type="checkbox"/> SEE TEXT
AUTHOR: VE	ENTITY: OCMD	AGILENT RESPONSIBLE UNTIL: November 2002	
		ADDITIONAL INFORMATION:	



Disassembly and Assembly

This document contains the procedure to remove the redundant metal oxide varistor (MOV) on the 8166A power supply. Assembling the instrument is the reverse of this procedure.


WARNING

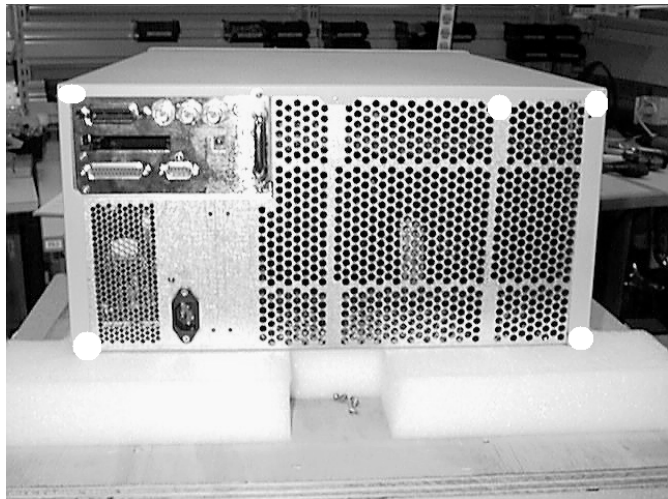
Static electricity can damage a board, the following precautions must be taken when working inside the product. Handle the boards by the edges. When handling the board always wear a grounding wrist strap. **Disconnect the instrument from power before opening !**

Required Tools:


TORX 10
Pozidrive 2
Wire cutting pliers

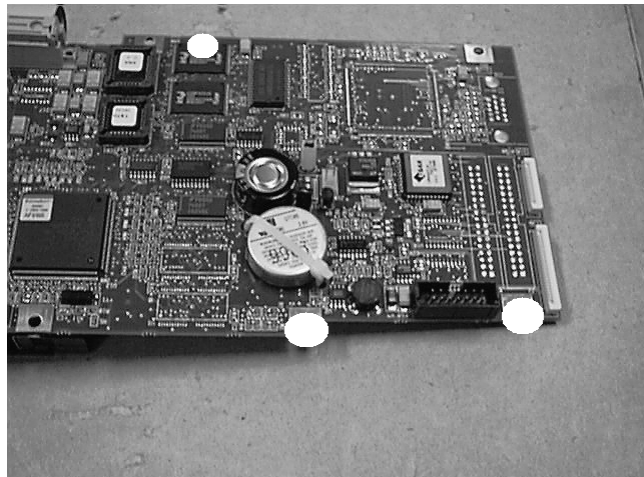
1. Open the instrument

- Unscrew the cover fixed with 5 ea M3.5x6, marked by 




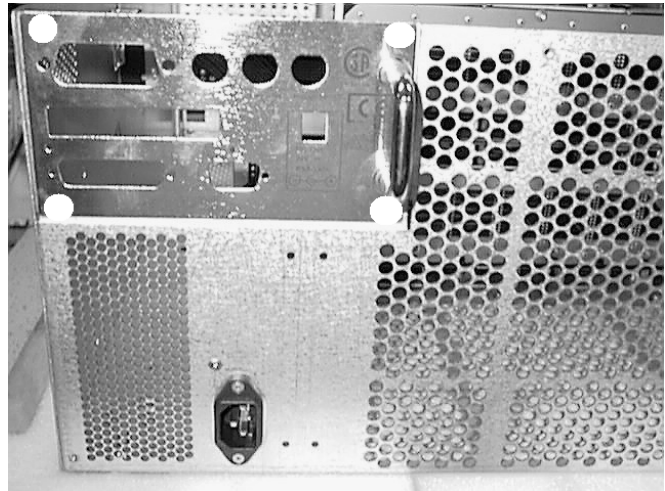
2. Remove the I/O-CPU Assy

- Disconnect the 2 flat cables leading to the display.
- Disconnect cable of Fan Assy, small, from CPU board assy.
- Unfasten 3 ea screws 0515-0372, marked by 



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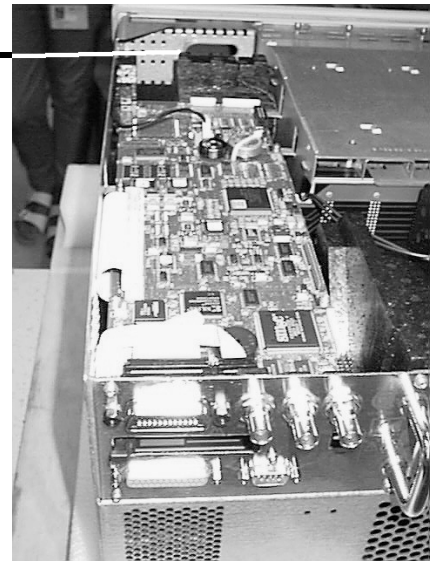
- Unfasten I/O-CPU Board Assy by unscrewing 4 ea screws, marked by  holding the board panel on the rear to the chassis
- Remove I/O-CPU Board Assy from chassis



• **When re-assembling:**

Make sure the I/O board fits well into the connector on the back plane.

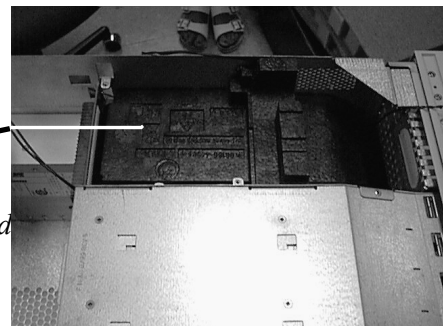
You can hold the back plane with a tool to not to let it move away

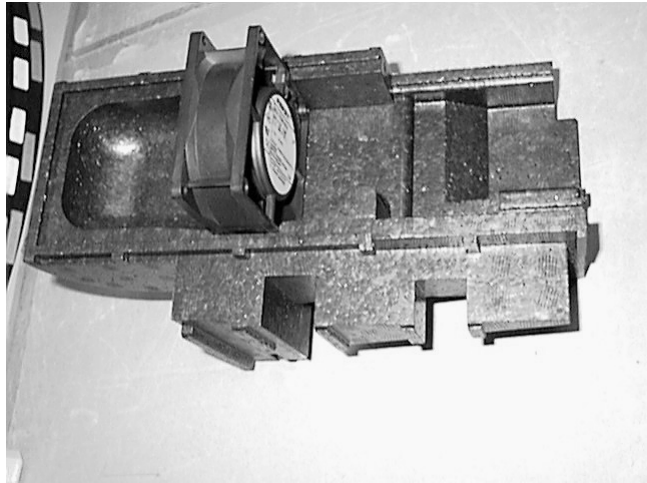


3. Remove the the Fan Assy, small

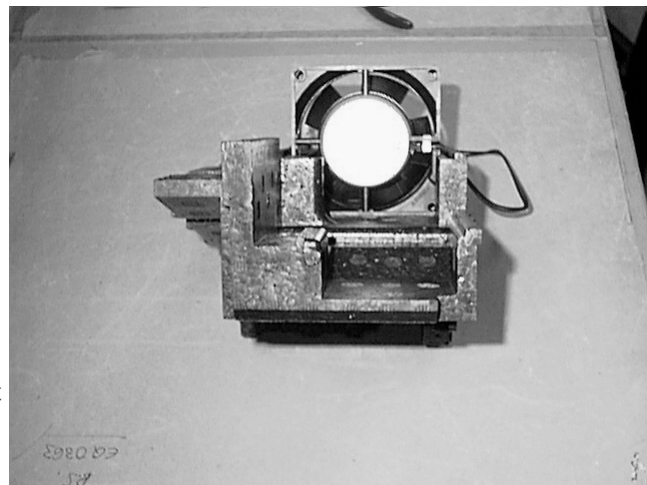
- Disconnect power supply cable (twisted, 2 wires black and red) from backplane
- Remove foam part, labeled 08166-44504

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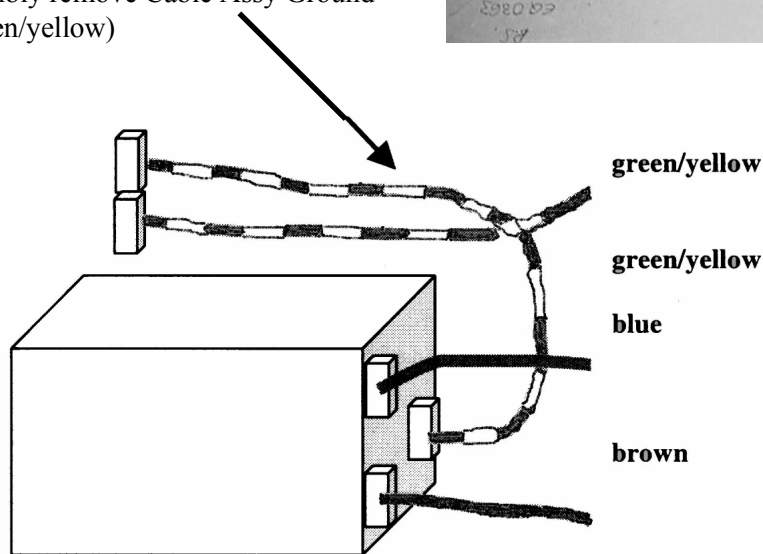


- Remove fan assy, small, and both foam parts, labeled 08166-44504 and -44503



4. Remove the Power Supply Assy

- Remove foam parts, labeled 08166-44505 and -44506 above the power supply
- Disconnect power cables from power inlet
- Possibly remove Cable Assy Ground (green/yellow)



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- Disconnect multiple single wire assy , colored cables, with white connector from back plane (mother board)
- Disconnect multiple single wire cable assy , black and white, with black connector from back plane (mother board)

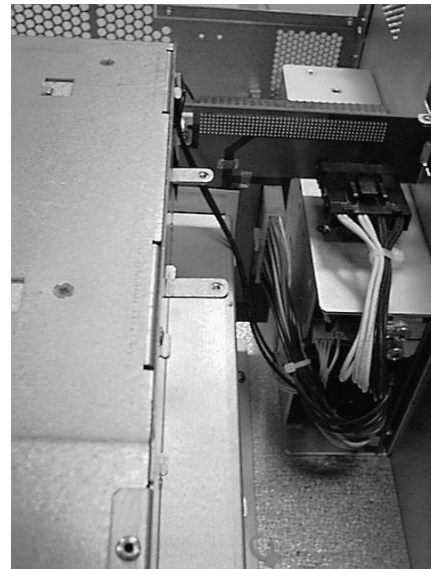
Attention: When re-assembling check if all 4 wire cable assies and 1 wire cable are fixed well on the Power Supply Assy



- Unfasten 4 ea interlock screws 0515-0390 on the left of the chassis
- Remove Power Supply Assy

5. Cut off the MOV

The MOV is a component located on the rear of the power supply right between a big black capacitor (possibly with a label "PFC375-S150" on it) and the input power line cables. It's covered by a - mostly white - shrinking tube. Use wire cutting pliers to cut it off. See Figure 1 and Figure 2 on next page.



6. Reassemble and Functional Test

After modification of the power supply, reassemble the 8166A. This is reverse to the procedure described in item 1 to 4. **Make sure, all cables are connected properly.**

Finally, do a functional test: Switch on the 8166A and wait until it has booted. Indication for proper work:

1. booting without failure
2. all slots are displayed on the screen
3. Mainframe is recognized:
 - Press [Config]
 - Using the RPG, select "About Mainframe", press [Enter]
 - A window pops up and displays the manufacturer, model number, serial number and firmware revision

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Photos showing a power supply of 8164A. That of the 8166A looks equal but with label "PFC375-S150" on the capacitor



Figure 1: MOV shown while being removed by use of wire cutting pliers



Figure 2: rear view of the power supply, MOV (VR1) has been removed