S E R V I C E N O T E

SUPERSEDES: NONE

8166A Lightwave Measurement System

Serial Numbers: DE39600101 / DE39600322

Recommended MOV removal in 8166A power supply

Duplicate Service Notes: 8166A-01

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 the relatively small number of failures (7 out of 2500 within 18 months).

Continued

DATE: December 2000

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:

MODIFICATION RECOMMENDED

ACTION CATEGORY:	■ IMMEDIATELY ☐ ON SPECIFIED FAILURE ☐ AGREEABLE TIME	STANDARDS: LABOR 0.5 Hours		
LOCATION CATEGORY:	☐ CUSTOMER INSTALLABLE ☐ ON-SITE ■ SERVICE CENTER	SERVICE INVENTORY:	☐ RETURN ☐ SCRAP ☐ SEE TEXT	USED PARTS: ☐ RETURN ☐ SCRAP ■ SEE TEXT
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	AGILENT RESPONSIBLE UNTIL: December 2002		
AUTHOR: VE	ENTITY: B101	ADDITIONAL INFORMATION:		

Agilent Technologies

Solution / Action:

The MOV shall be removed without replacement (component is redundant)

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

1. Disconnect the instrument from power before opening.

2. Open the instrument.

   2a. Unscrew 2 ea foot-rear fixed with M3.5x16.

   2b. Unscrew the strap handle fixed with 2 ea M5x10.

   2c. Unscrew the cover (part of chassis-kit A5) fixed with 1 ea M3.5x6.

3. Remove the Hard Disk

   3a. Disconnect cable assembly ribbon from harddisk.

   3b. When reconnecting make sure to have the connector with closed pin to HDD. Spare 2 rows of pins on right.

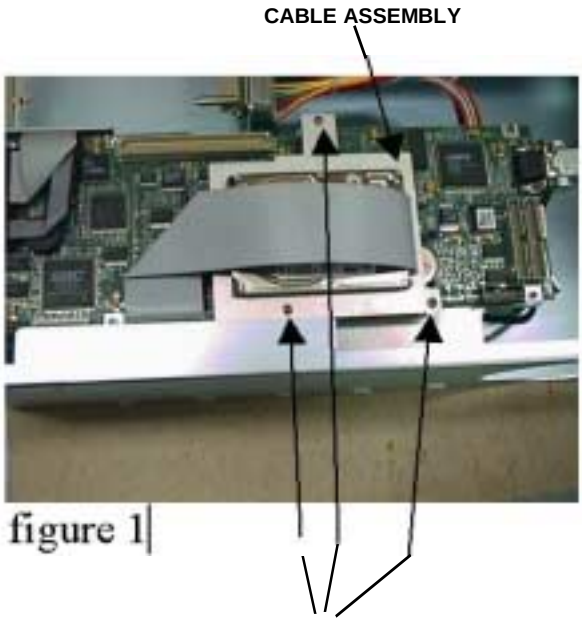

figure 1

   3c. Unscrew hard disk assembly fixed by 3 ea M3x20.

Continued

4. Remove the CPU Assembly

4a. Unscrew the sheet metal (part of chassis kit) covering VGA cable connector.

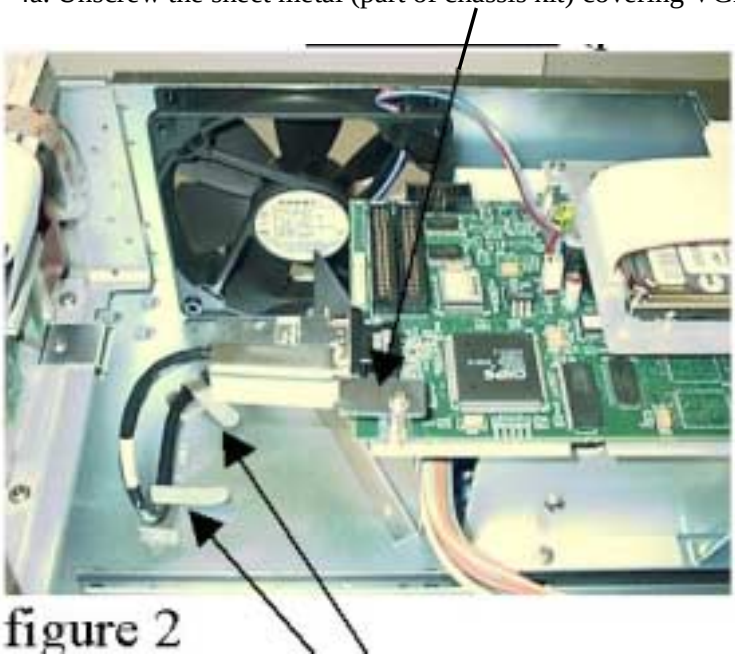

figure 2

4b. Unfasten VGA cable from the clamp at the bottom of the chassis.

4c. Disconnect cable assembly (96 ribbon, shielded) from CPU board to backplane.

figure 3

4d. Unscrew CPU pca tls fixed by 4 ea M3x4 screws at the rear panel and one more at the corner close to the fan.

Continued

5. Remove the power supply

5a. Unfasten cable assembly on air guiding sheet using cable tie.

figure 4

5b. Disconnect primary voltage supply with cable assembly ground.

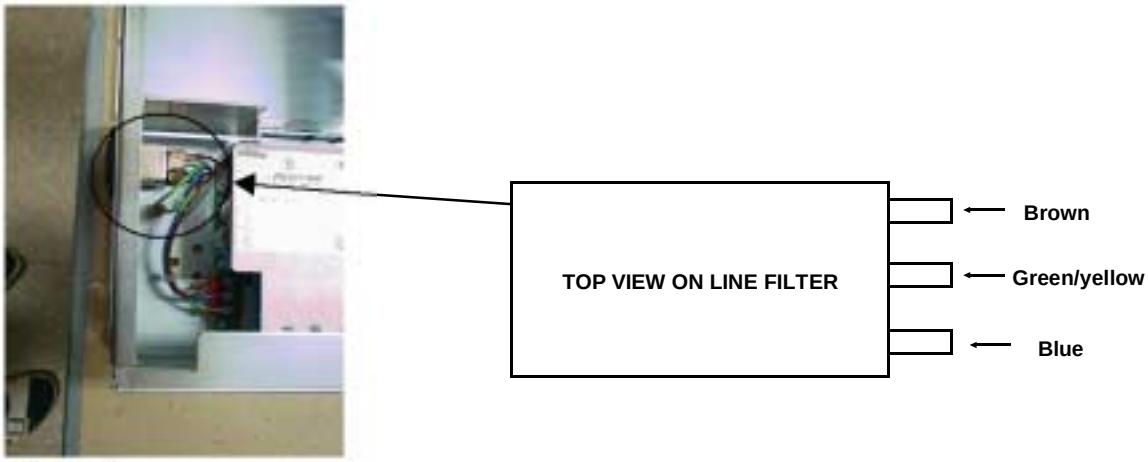

figure 5

Continued

5c. Unscrew power supply assembly from chassis-kit A5
fixed by 2 ea M4x6.

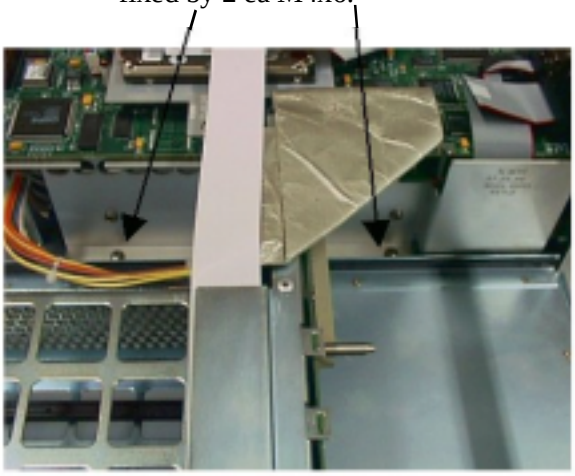

figure 6

5d. Remove the power supply by pulling it off the slots in the left side of the chassis.

6. Cut off the MOV.

The MOV is a component located on the rear of the power supply right between a big black capacitor (with a label "PFC375-S132" on it) and the input power line cables. It's covered by a - mostly white - shrink tube. Use wire cutting pliers to cut it off. See figure7 and figure 8.

7. Reassemble and Functional Test

7a. After modification of the power supply, reassemble the 8166A. This is reverse to the procedure described in item 1 to 5. *Make sure all cables are connected properly.*

7b. Finally, do a functional test:

7c. 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

Continued

Figure 7. MOV shown while being removed by use of wire cutting pliers.

Figure 8. Rear view of the power supply; MOV (VR1) has been removed