

# SECTION 5

## MAINTENANCE

### 5.1 INTRODUCTION

This section provides information for disassembling, testing, calibrating, and troubleshooting the Model 3000B Service Monitor. Measurements and adjustments will be facilitated by placing the instrument so that the front panel faces the user.

### 5.2 SERVICE AND MAINTENANCE INFORMATION

#### 5.2.1 IN-FIELD SERVICE

The Model 3000B features modular PC board construction for convenient servicing. Should a problem arise, contact the Customer Service office for assistance (see Section 2.2). A replacement board will be shipped immediately. When you are satisfied the problem has been corrected, return the defective board.

#### 5.2.2 DISASSEMBLY INFORMATION

##### **WARNING**

**High voltages are used within this instrument. Before servicing, remove AC power from the instrument.**

To remove the instrument top cover, remove the six screws (three on each side) securing the top cover and lift the cover off.

To remove the instrument bottom cover, invert the instrument, remove the six screws (three on each side) securing the bottom cover and lift the cover off.

To remove the high voltage shield, remove the top cover and then remove the seven screws securing the shield. Carefully lift the shield straight up.

Removal of the Front Panel assembly provides access to PC boards A9, A10, and A11, mounted on the front panel.

To remove the Front Panel assembly, remove the top and bottom covers. Stand the instrument on its rear feet. Remove the INTENSITY and FOCUS control knobs. Disconnect the three ribbon cable assemblies on the under side of the instrument. Disconnect the POWER switch harness. Disconnect 2 pin connector to Mother board, and 4 pin connector to Mother board (early versions). Disconnect coaxial cable W1 from the A1 board (SMB

connector). Remove the handle by unscrewing the two black knobs securing the handle to the chassis side rail. Remove the four screws (two each side) securing the front-panel brackets to the chassis side rail. Carefully lift the Front Panel assembly straight up from the instrument.

The top cover, bottom cover, high voltage shield, and Front Panel assembly are reinstalled by reversing the removal procedure.

#### 5.2.3 PLUG-IN PC BOARD SERVICING

Refer to Figure 5-1.

To remove boards A1 through A4, remove the instrument top cover. Disconnect the connection coaxial cable(s), remove the phillips head screws securing the board to the card cage and pull (do not turn) the knurled knobs. Lift the board straight up from the instrument.

Before reinstalling a board, check the board's gold "fingers" and the Mother board (A12) edge connector. Carefully replace the board into its Mother board edge connector and reverse the removal procedure.

##### **NOTE**

**Harness connectors are not keyed. Note the connector orientation before disconnecting.**