

Date	18 Oct 2011	Service Note #	6x00-1022	Updated	N/A
Product	6100 & 6300	Description	4851-0009 LCD Display Replacement		
Created By	Joey Yangco				

Release	<input checked="" type="checkbox"/>	Internal	<input checked="" type="checkbox"/>	Distributors	<input type="checkbox"/>	Customers
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Parts Required	Serial Numbers Affected
<ul style="list-style-type: none"> • New LCD Display, part number 4851-0009 • New Display Driver, part number 2451-5109. • Coiled Cable, Part Number 2451-0030B (if needed) • Hardware kit for new LCD display. • Chip (IC) Puller or Small flat tip screw driver. • Number 2 Philips Head Screw Driver. • ¼" Nut Driver or Socket. 	<p>All Model 6100/6300 that needs LCD replacement.</p> <p>NOTES:</p> <ul style="list-style-type: none"> ○ Serial number break for instruments with the new LCD display are: 6100 = 6102102 6300 = 6301410 ○ As of October 21st 2011, the LCD used in the 6100 and 6300 dissolution systems was changed because the previous one is no longer manufactured. ○ The new display requires different mounting and connections. ○ Instruments with EPROM (U13) R2.14 must be upgraded to at least EPROM R2.15 in order for the new display to function correctly. ○ Instruments with EPROM R2.13 or lower must be upgraded to R2.13B to be compatible with the new display. ○ Instruments with EPROM R2.13 or lower cannot be upgraded higher than R2.13B without also upgrading the ATD board (2451-5109) to R1.1 and the FPGA (U11) to R1.1.

NOTE: Due to the LCD display change (becomes obsolete) a replacement with another LCD display model will need to be assembled/mounted differently on the existing molded front cover.

Solution / Action

Step 1 Before proceeding, discharge any static electricity from your body by touching a bare screw from the instrument. Turn off the instrument and disconnect the AC power cord.

Step 2 Remove the five screws as shown in Figure 1 to open the front cover assembly.

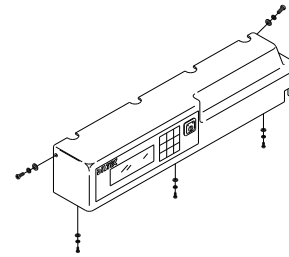


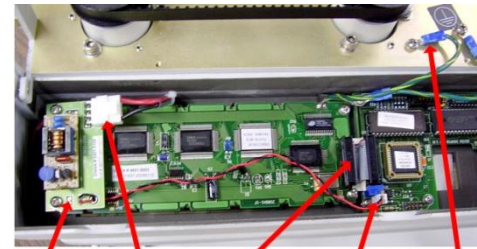
Figure 1

Step 3 Gently pull the front cover forward and rotate downwards slowly to expose the circuit boards mounted inside the cover. The hanger pins, on the inside left and right surfaces of the cover, should hold the cover in place.

Unscrew the display ground wire from the drive plate.

Step 4 Carefully unplug the following connections:

- ✓ Backlight connector
- ✓ Ribbon cable
- ✓ Display Driver Power



Display Driver Backlight Connector Ribbon Cable Display Driver Power Ground Wire

Figure 2

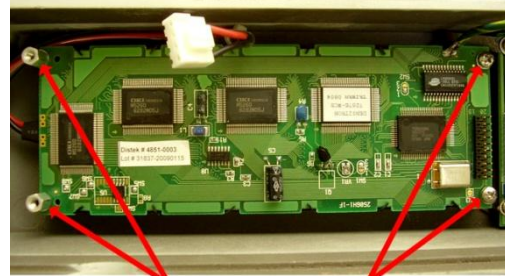
Step 7 Remove the display driver by unscrewing the 2 Philips head screws labeled 'A' in Figure 3 then lift the driver board out of the front cover assembly.



Figure 3

Step 8

Remove the LCD display by unscrewing the 2 Philips head screws and 2 standoffs labeled as shown in Figure 4 then lift the display out of the front cover assembly. Remove the 4 standoffs from the cover also.



Remove Standoffs

Remove Screws

Figure 4

Remove the protective screen from the new LCD display. Mount the new LCD display as shown in Figure 5.

Step 9

ITEM	Part No.	Description	QTY
1	2451-5109	LCD Backlight Driver	1
2	4851-0009	L C D D i s p l a y	1
6	5535-2016	#6 Internal Tooth Lock Washer	6
7	5510-1015	6-32 x 3/8 lg. S/S PPH	2
9	5550-0027	6-32 x 1/4 lg. M-F Standoffs	2
12	2700-0201	LCD Flat Cable Assy.	1
15	5520-0023	Nylon Spacer	2
16	5510-0071	4-40 x 5/8 lg. S/S PPH	1
17	5535-2101	4-40 Hex Nut	1
18	5510-0045	6-32 x 7/8 lg.	1

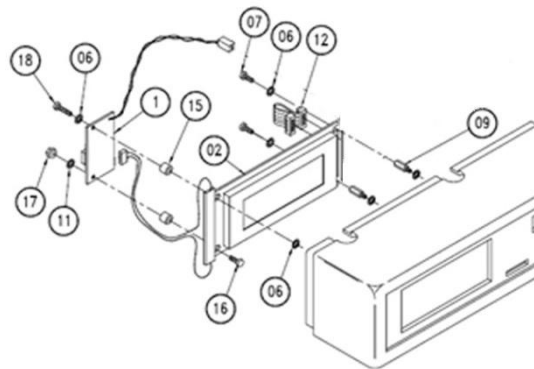


Figure 5

Step 10 Connect all cable and connectors as shown in Figure 6.

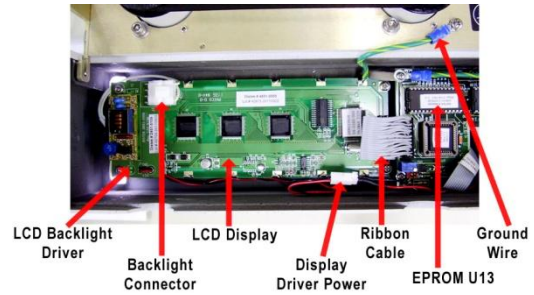


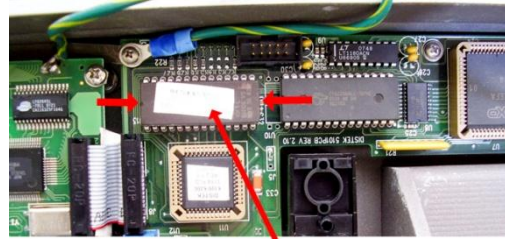
Figure 6

Up-grading the EPROM

Step 11

Remove the old EPROM chip (IC) located at U13 on the Stage board (240-5154) using a chip puller. A small flat tip screw driver may be used if a chip puller is not available.

Place the tip of the screw driver under the EPROM chip at one end as shown in red arrow on Figure 7 and gently raise it a little at a time from each end until it is un-plugged from the socket.



EPROM U13 Chip

Figure 7

Step 12

Orient the new EPROM chip (IC) with the notch on the chip towards the display.

Align the pins with the holes in the socket then insert the pins to the socket.

Verify that all pins are in their respective holes on the socket then gently press down on the chip to fully insert it to the socket and secure in place.

Notch

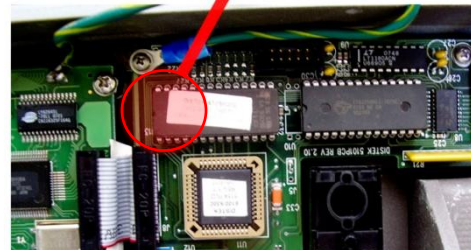
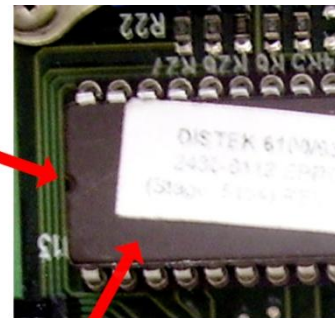


Figure 8

Step 13

Procedure complete, turn on the instrument and step through the menu screens to verify the display is functioning correctly. Close up and secure the front cover assembly.