

TUD152, TUD153, TUB161, TUB162, TUA159 & TUA160 DISPLAY, DISPLAY BOARD, & DISPLAY ASSEMBLY INSTALLATION INSTRUCTIONS

1. With the unit unplugged, remove the top cover of the machine.
2. Looking at the right side of the machine, remove the ribbon cables attached to the Display Board (PREDG) and the small cable from the keypad at JP4.
3. Disconnect the wires leading to the power switch. Note the location where each wire is attached to the switch, numbering the wires if necessary.
4. Remove the (3) screws holding the display bezel and the LCD Display Assembly to the chassis; set the screws aside for later use in Step #17.
5. Remove the entire Display Assembly including the bezel from the machine.
 - If installing a new LCD Display, proceed to Step #6 below.
 - If installing a new LCD Display Assembly or Display Board (PREDG), proceed to Step #16 below.

Installation of the LCD Display (RPI Part #'s TUD152 & TUD153)

6. Remove the nuts and grounding lug holding the Display Board (PREDG) to the front keypad, and set aside for later use in Step #16.
7. Separate the Display Board (PREDG) from the keypad.
8. Remove the screws and spacers holding the LCD Display to the Display Board (PREDG).
9. Gently remove the LCD Display from the JP3 connector on the backside of the Display Board (PREDG).
10. Unsolder the (2) wires at D14 on the Display Board (PREDG).
11. Place the new LCD Display on the JP3 connector on the backside of the Display Board (PREDG).
12. Install the (4) screws and spacers that were included with the new LCD Display.
13. When replacing the LCD Display on an OEM board, cut and strip the ends of the included male connector/wire assembly to a usable length (approximately 1-1/4"). On RPI boards, this connector is already in place.
14. Solder the male connector/wire harness to the board making sure that the red lead is connected to the positive pad on D14 (*see Figure 1 - LCD Display Connector*). Then connect the male and female LCD Display connectors.
15. Now proceed to Step #17.

Installation of the LCD Display Assembly (RPI Part #'s TUA159 & TUA160) or the Display Board/PREDG (RPI Part #'s TUB161 & TUB162)

16. If replacing the LCD Display Assembly or the Display Board (PREDG), it is important to note the following:
 - a) The microprocessor chip from the old Display Board (PREDG) must be installed in the new Display Board (PREDG) because the board is not sold with a microprocessor chip. **It is strongly recommended that a Chip Extractor (RPI Part #RPT962) be used to remove the microprocessor chip from the old board, and a grounding strap (RPI Part #RPS998) is used when handling the microprocessor chip as even a small static discharge can damage the microprocessor.**

When installing the microprocessor chip into the new Display Board (PREDG), match the chamfered corner of the microprocessor to the chamfered corner of the socket on the Display Board to ensure proper seating (*see Figure 2 - Microprocessor Chip*).

- b) All boards from RPI will automatically have all switches in the switch bank (SW1) placed in the "OFF" position (*see Figure 3 - Switch Bank (SW1)*). Before installing the new LCD Display Assembly or Display Board (PREDG), the switch bank must be configured per the **Switch Bank (SW1) Settings Chart** to the right.
17. Reinstall the Display Board (PREDG) to the front keypad using the nuts and grounding lug from Step #6. Note that this has already been done if installing the LCD Display Assembly.
18. Reinstall the LCD Display Assembly and bezel to the front of the machine using the (3) screws from Step #4.
19. Reconnect the ribbon cables and the small cable from the keypad to the Display Board (PREDG).
20. Reconnect the wires to the power switch.
21. Reconnect the power cord to the machine.
22. Power the unit ON to test the contrast of the new display. If it needs to be adjusted, use an adjustment tool to adjust "POT 1" on the Display Board until the display is legible (*see Figure 4 - POT 1 Contrast Adjustment*).
23. After the POT 1 contrast adjustment is completed, then reattach the top cover of the machine.
24. Test and return the unit to operation.

SWITCHES	SWITCH BANK (SW1) SETTINGS								SETTING RESULTS
	1	2	3	4	5	6	7	8	
Switch 1 & 2 - Unit identification on the print out if using multiple units	ON	ON							Number 1
	ON	OFF							Number 2
	OFF	ON							Number 3
	OFF	OFF							Number 4
Switch 3 - Locks keypad from changing cycle parameters			ON						Keypad locked
			OFF						Keypad unlocked
Switch 4 - Enable or disable preheat function				ON					Preheat enabled
				OFF					Preheat disabled
<i>This switch should be set to the ON position for any EK, EKA, 3850 and 3870 E series units; all other units set switch to OFF. (When this switch is enabled, the unit will begin heating as soon as the power is turned ON and will remain on for 2 hours or until a cycle is ran to reset the time. If no cycle is selected within the 2 hour time limit the unit will turn off the preheat automatically.)</i>									
Switch 5 & 6 - Selects temperature and pressure parameters					OFF	OFF			°F, psi
					OFF	ON			°F, kPa
					ON	OFF			°C, psi
					ON	ON			°C, kPa
Switch 7 - Factory use							OFF		Factory setting
Switch 8 - Enable or disable the printer								ON	Printer enabled
								OFF	Printer disabled

DISPLAY BOARD (PREDG) AND RELATED COMPONENTS

FIGURE 1 - LCD Display Connector

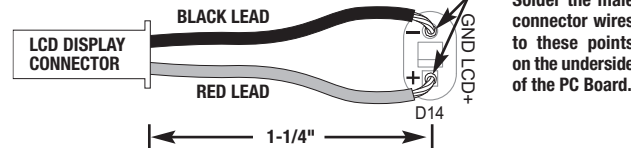


FIGURE 2 - Microprocessor Chip

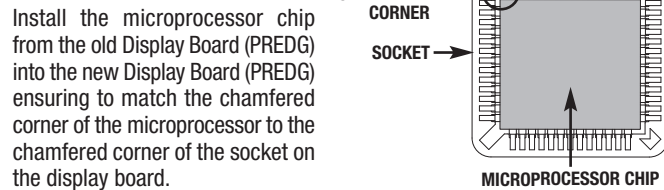


FIGURE 3 - Switch Bank (SW1)

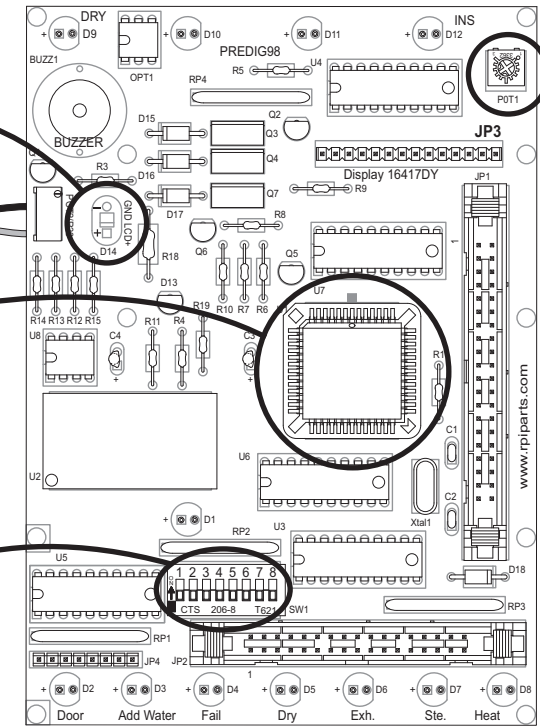
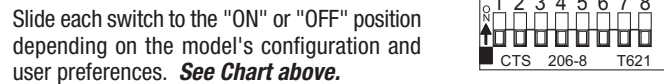
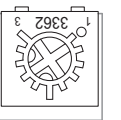


FIGURE 4 - POT 1 Contrast Adjustment



POT1

If the contrast needs to be adjusted, use an adjustment tool to adjust "POT 1" on the Display Board until the display is legible.