Figure 1

Turn off the power supply to the LTC Plus satellite. Remove the cabinet's front cover to access the internal components. Disconnect all cables labeled **A** through **F** from the timing mechanism and 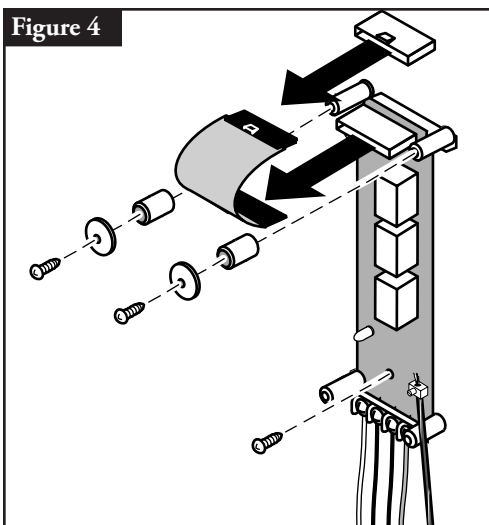the front distribution board. Retain cables **B**, **D**, **E** and **F** for installation. Cables **A** and **C** will no longer be required for the conversion and should be sent back to Toro for proper recycling or disposal procedures. See **Figure 1**.

Figure 2
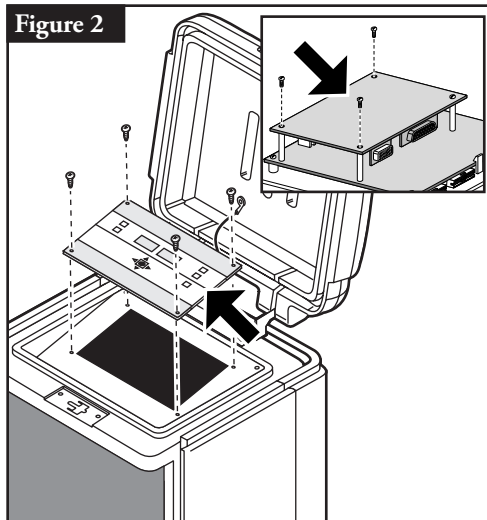
Open the cabinet's top cover to access the timing mechanism (TM). Remove the four retaining screws from the TM and lift it out of the cabinet. Remove the modem from the back of the TM and retain it for installation. The LTC Plus TM will no longer be required for the conversion and should be sent back to Toro for proper recycling or disposal procedures. See **Figure 2**.
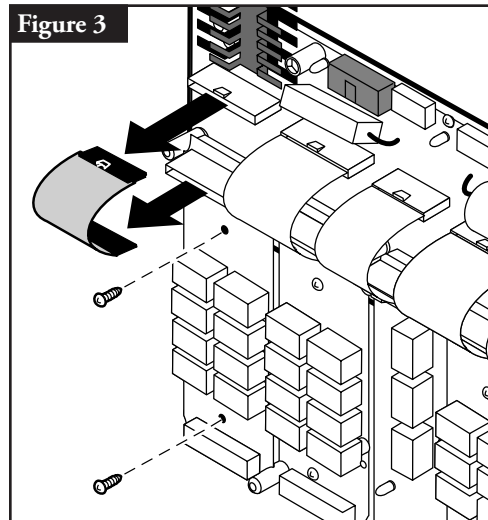
Figure 3

Disconnect the flex cables from the distribution board on the front side of the cabinet. Detach the output boards by removing the two retaining screws. Retain all flex cables, screws and output boards for installation. See **Figure 3**.
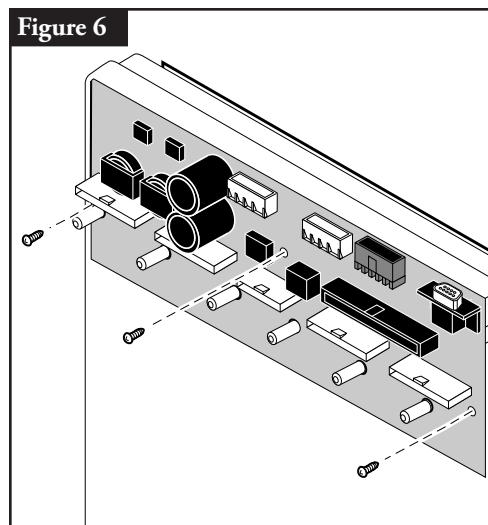
Figure 4

Disconnect the flex cable that connects the distribution board to the pump/common module on the front side of the cabinet. Detach the pump/common module by removing the three retaining screws and washers. Retain the flex cable, screws, washers and pump/common module for installation. See **Figure 4**.
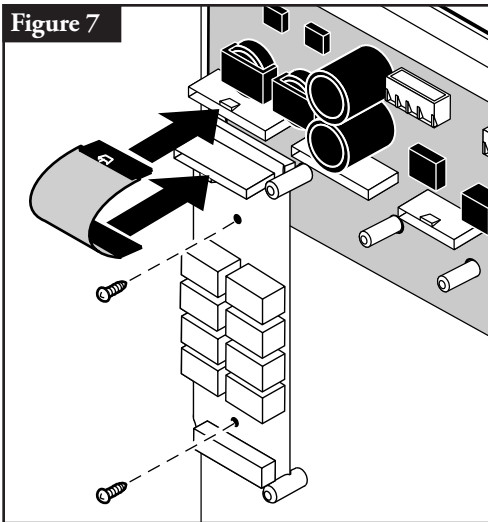
Figure 5
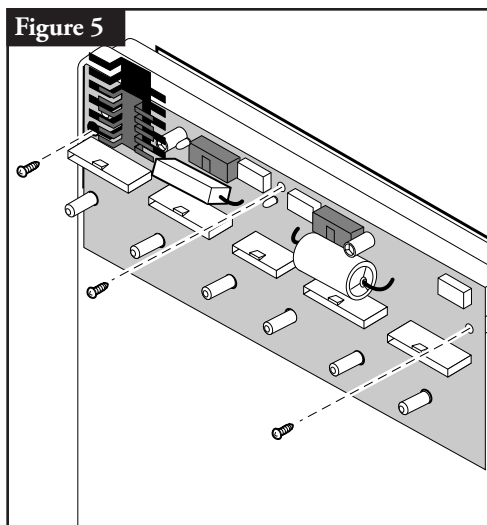
Remove the three retaining screws from the distribution board and detach it from the backplate. Retain the screws for installation. The LTC Plus distribution board will no longer be required for the conversion and should be sent back to Toro for proper recycling or disposal procedures. See **Figure 5**.

NOTE • Only the front distribution board is being replaced with a Network VP conversion board. The rear distribution board (If equipped) will communicate directly to the Network VP conversion board.

Figure 6

Install the Network VP/VPE conversion board onto the backplate. Use the three retaining screws removed from the old distribution board to secure. See **Figure 6**.

Reinstall the output boards and the pump/ common board. Secure the flex cables onto the Network VP/VPᴇ conversion board. See **Figure 7**.

Figure 8 - Determine Which Modem You Have

The LTC Plus wireline satellites use one of three possible modems. There are two ways to determine which modem you have:

1. Look at the sticker on the back of the modem. Choices are:
   - 89-7519
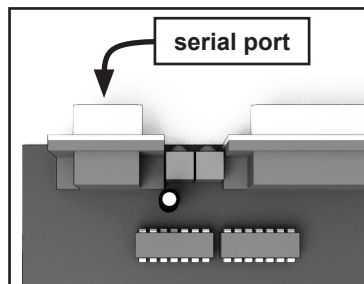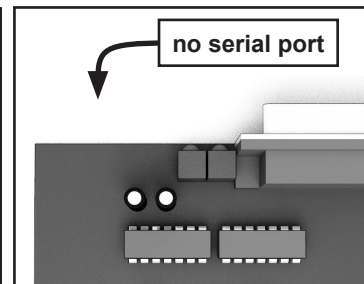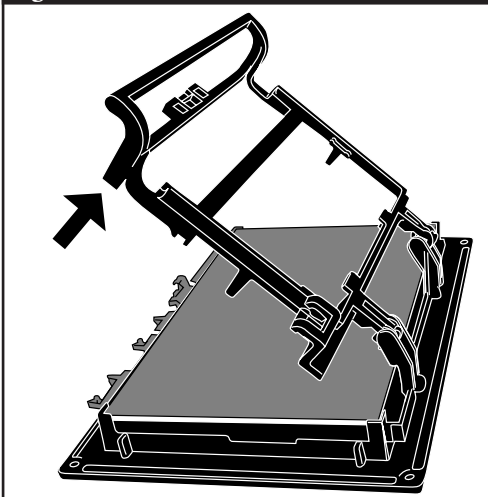   - 102-0104
   - 102-8568

2. The 89-7519 modem has a serial port. The 102-0104 / 102-8568 modems do not.

For 89-7519:
See **Figures 9 and 10**.

For 102-0104 / 102-8568:
See **Figure 11 and 12**.

serial port

no serial port

89-7519 modem   **102-0104 / 102-8568 modems**

Figure 9 - 89-7519 Installation

If not already installed, install the modem tray onto the Network VP/VPᴇ TM. Match the hinges together and swing the tray open. The hinges are designed to snap into place when opened. See **Figure 9**.
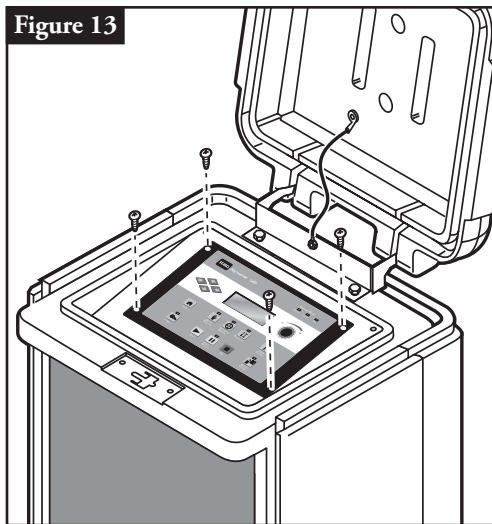
Figure 10
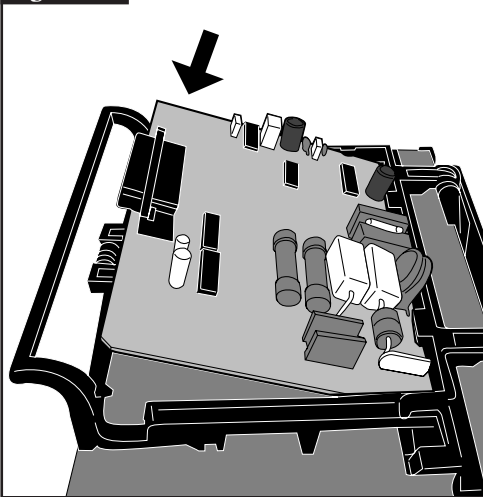
Slide the modem onto the modem tray. Press onto the board firmly until it snaps securely into place. Connect the short 16-pin ribbon cable between the modem and TM. See **Figure 9** and **Figure 14** item **B**.

Figure 11 - 102-0104 / 102-8568 Installation
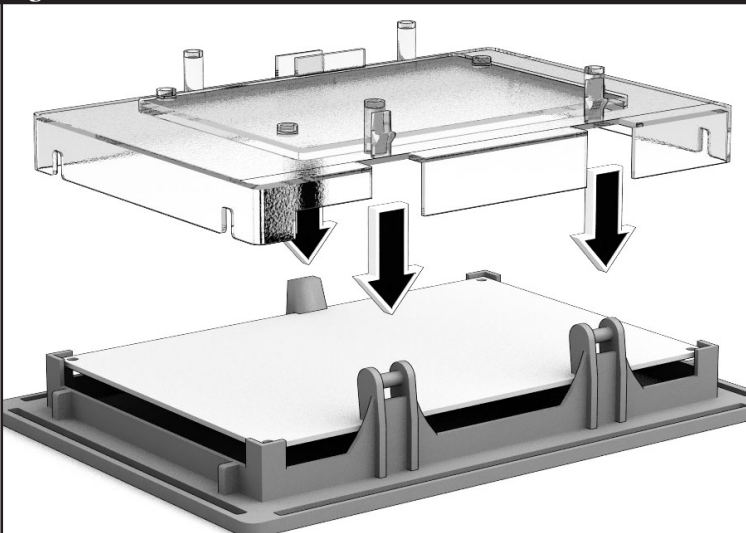
Snap the large protective cover over the TM. Be sure the tabs lineup.

Figure 12
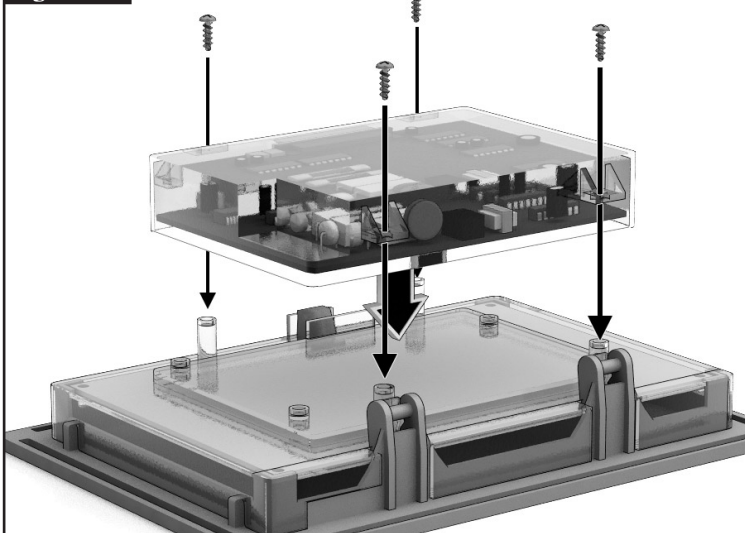
Place the modem onto the large protective cover.
Secure with the four included screws.
Connect the short 16-pin ribbon cable between the modem and TM.

Figure 13

Install the Network VP/VPᴇ TM onto the plastic satellite cabinet. Install cable assembly **D**, **E**, **F** and **G** as shown in **Figure 14**. Turn the satellite ON and check for proper operation.

B - Modem Cable, 4.75 Inch, 16-Pin Ribbon Cable
D - 4-Wire Power Cable Assy. from Power Supply.
E - Conversion Board to Distribution Board Power Cable, 5.5 Inch 4-wire Cable Assy.
F - Conversion Board to Distribution Board Ribbon Cable Assy., 5.75 Inch, 16-Pin Ribbon Cable
G - TM to Conversion Board Ribbon Cable, 12 Inch, 40-Pin Ribbon Cable

⚠ **IMPORTANT**: Although the cable assemblies are keyed, it is possible to install them incorrectly. Verify the key is as shown in **Figure 14**.

Figure 14
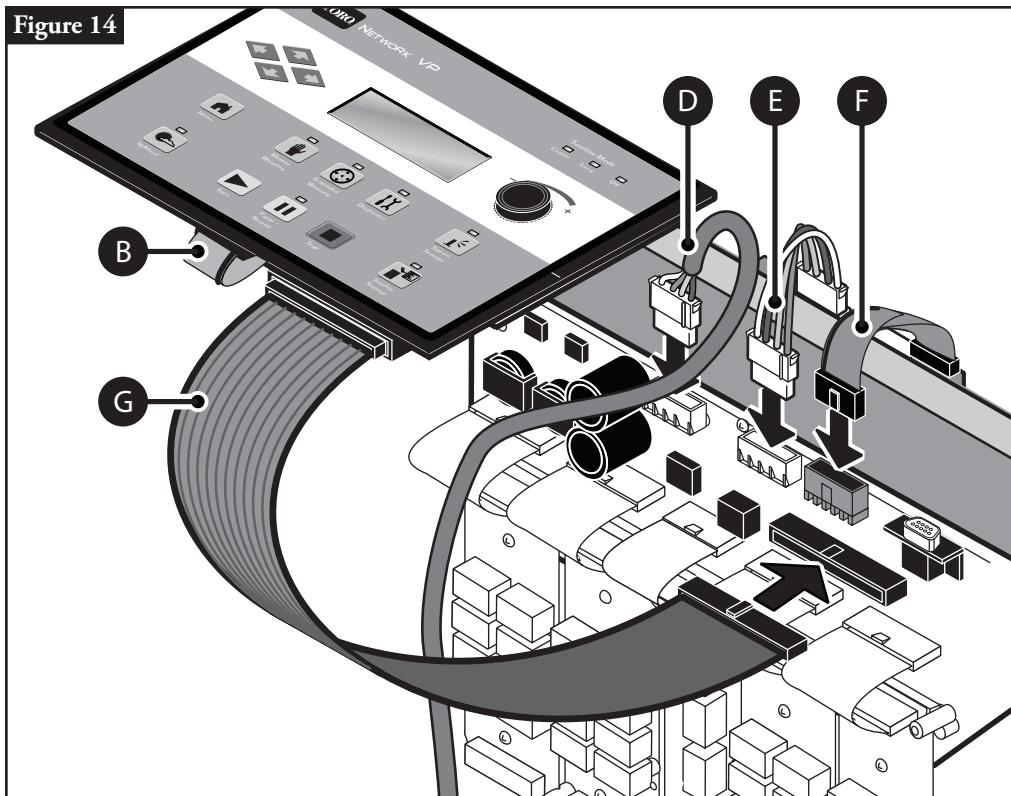
Send items for recycling or proper disposal to:

The Toro Company
Attn: Controller Repair
5825 Jasmine St.
Riverside, CA 92502-0489

TORO. **Count on it.**