

Instructions



TDS6UP, TDS7UP, and CSA7UP Option CPU Upgrade Kit

071-1244-01

Warning

The servicing instructions are for use by qualified personnel only. To avoid personal injury, do not perform any servicing unless you are qualified to do so. Refer to all safety summaries prior to performing service.

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Service Safety Summary

Only qualified personnel should perform service procedures. Read this *Service Safety Summary* and the *General Safety Summary* in the product service manual or the instruction manual.

Do Not Service Alone. Do not perform internal service or adjustments of this product unless another person capable of rendering first aid and resuscitation is present.

Disconnect Power. To avoid electric shock, switch off the instrument power, then disconnect the power cord from the mains power.

Use Care When Servicing With Power On. Dangerous voltages or currents may exist in this product. Disconnect power, remove battery (if applicable), and disconnect test leads before removing protective panels, soldering, or replacing components.

To avoid electric shock, do not touch exposed connections.

Kit Description

This document supports upgrading the NLX CPU board and microprocessor. To upgrade your NLX CPU board and microprocessor perform each of the following procedures in order.

Products

TDS6000 Series	All serial numbers
TDS7000 Series	All serial numbers
CSA7000 Series	All serial numbers

Minimum Tool and Equipment List

Table 1: Equipment list

Required tools and equipment	Part number
Screwdriver handle	620-440
T-20 Torx tip	640-250
T-15 Torx tip	640-247
1/8 inch flat-bladed screwdriver	Standard tool
#0 Phillips screwdriver	Standard tool
3/16 inch open-end wrench	Standard tool

Kit Parts List

Circuit/figure number	Quantity	Part number	Description
1	1 ea	650-4562-00	COMPONENT KIT;MOTHERBOARD/ MICROPROCESSOR UPGRADE;TDS6/7UP OPTION CPU
2	1 ea	407-4880-01	BRACKET; CD-ROM, REAR DRIVE BAY CHASSIS, 0.035 CRS
	1 ea	020-2349-XX	SOFTWARE KIT; LICENSE CERTIFICATE,O/S EASY RESTORE,CERTIFICATE AUTHENTIC- ITY,WIN98 RESTORE CD
	1 ea	063-3645-01	SOFTWARE; BIOS UPDATE CD

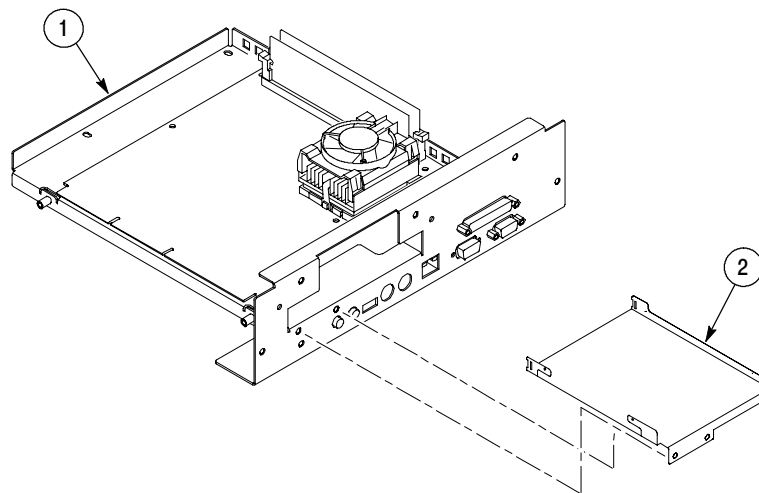


Figure 1: CPU upgrade kit parts

Installation Instructions

This section contains all procedures needed to install TDS6UP, TDS7UP, or CSA7UP Option CPU in the TDS6000, TDS7000, and CSA7000 Series instruments.

These instructions are for personnel who are familiar with servicing the product. If you need further details for disassembling or reassembling the product, refer to the appropriate product manual. Contact your nearest Tektronix Service Center or Tektronix Factory Service for installation assistance.



CAUTION. *To prevent static discharge damage, service the product only in a static-free environment. Observe standard handling precautions for static-sensitive devices while installing this kit. Always wear a grounded wrist strap, grounded foot strap, and static resistant apparel while installing this kit.*

Remove

This section contains procedures for removal and installation of all mechanical and electrical modules.

- Line Cord
- Trim (all)
- Bottom cover
- Left and Right covers
- NLX board
- Rear chassis
- CD drive bracket

Preparation



WARNING. *Before doing this or any other procedure in this manual, read the Safety Summary found at the beginning of this manual.*

This subsection contains the following items:

- This preparatory information that you need to properly do the procedures that follow.
- List of tools required to remove and disassemble all modules.
- Procedures for removal and reinstallation of the electrical and mechanical modules.



WARNING. *Before doing any procedure in this subsection, disconnect the power cord from the line voltage source. Failure to do so could cause serious injury or death.*

NOTE. *Read Equipment list for a list of the tools needed to remove and install modules in this instrument. See Table 1, on page 3.*

Equipment Required. Most modules in the TDS6000, TDS7000, and CSA7000 Series Instruments can be removed with a screwdriver handle mounted with a size T-15, Torx screwdriver tip. Use this tool whenever a procedure step instructs you to remove or install a screw unless a different size screwdriver is specified in that step. All equipment required to remove and reinstall each module is listed in the first step of the procedure.

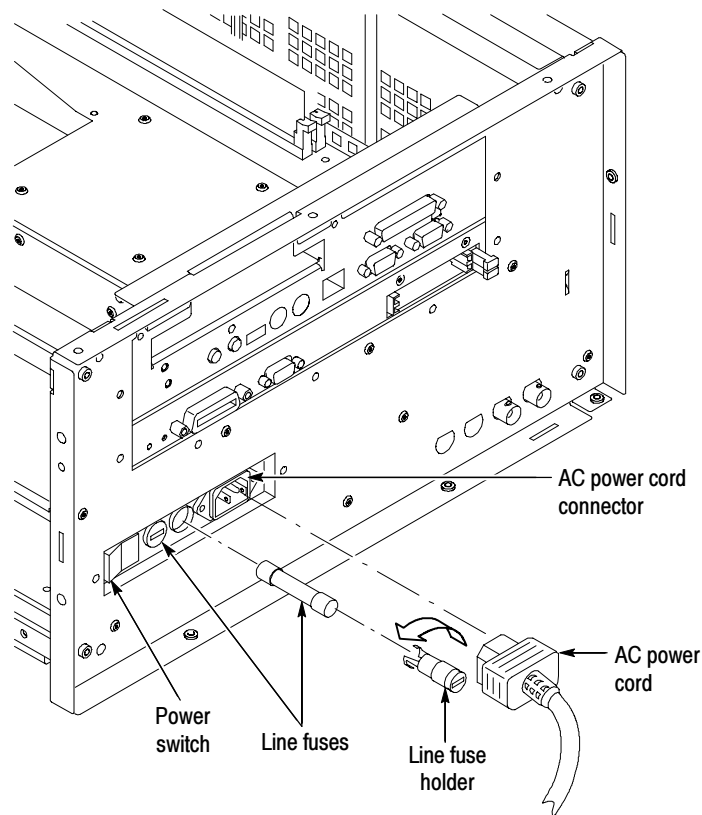
Procedures for External Modules

The following procedures are found here and are listed in the order presented.

- Line Cord
- Trim (all)
- Bottom cover
- Left and Right covers

Line Cord

1. *Assemble equipment and locate modules to be removed:* Locate the power switch and AC power cord connector in Figure 2 on page 7.
2. The instrument has a built-in soft power-off function that safely powers off the instrument when you press the On/Standby switch.
3. Power off the rear panel power switch before servicing the power cord.
4. *Orient the instrument:* Set the instrument so that the bottom is down on the work surface and the rear is facing you.
5. *Remove line cord:* Find the line cord on the rear cover. Pull the line cord away to remove from the AC power connector.
6. *Reinstallation:* Do in reverse step 5 to reinstall the line cord.

**Figure 2: Line cord removal**

Trim and Carrying Handle

1. *Locate module to be removed:* Locate the Trim in the locator diagram. See Figure 3, on page 9.
2. *Remove the front panel trim:* Use Figure 3 on page 9 as a guide.
 - a. To prevent the power button from falling out of the front panel trim, place a piece of tape over the button.
 - b. Grasp the trim ring by the top edge and pull toward you to detach the three plastic snaps. (Alternatively, you can use a flat-bladed screwdriver or other small prying tool to help you detach the snaps.)
 - c. Swing the bottom of the ring upward and off the front panel.
3. *Remove the acquisition trim:* Use Figure 3 on page 9 as a guide.
 - a. Remove the three T-15 Torx screws that secure the acquisition trim to the instrument.
 - b. Remove the acquisition trim from the instrument.
4. *Remove the top cover trim:* Use Figure 3 on page 9 as a guide.
 - a. Remove the accessory pouch; it snaps off.
 - b. Remove the four T-15 Torx screws that secure the top cover trim to the instrument. The T-15 Torx screws also secure the snap studs to the top cover.
 - c. Remove the top cover trim from the instrument.
5. *Remove the carrying handle and the right/left side trim panels:* Use Figure 3 on page 9 as a guide.
 - a. Remove the T-20 Torx screws that secure the handle to the instrument. Remove the handle from the instrument.
 - b. Slide the side trim panels towards the rear of the instrument allowing the tabs to clear the cover openings, and then pull out to remove the panels from the instrument.
6. *Reinstallation:* Do in reverse steps 2 through 5 to reinstall the appropriate trim.

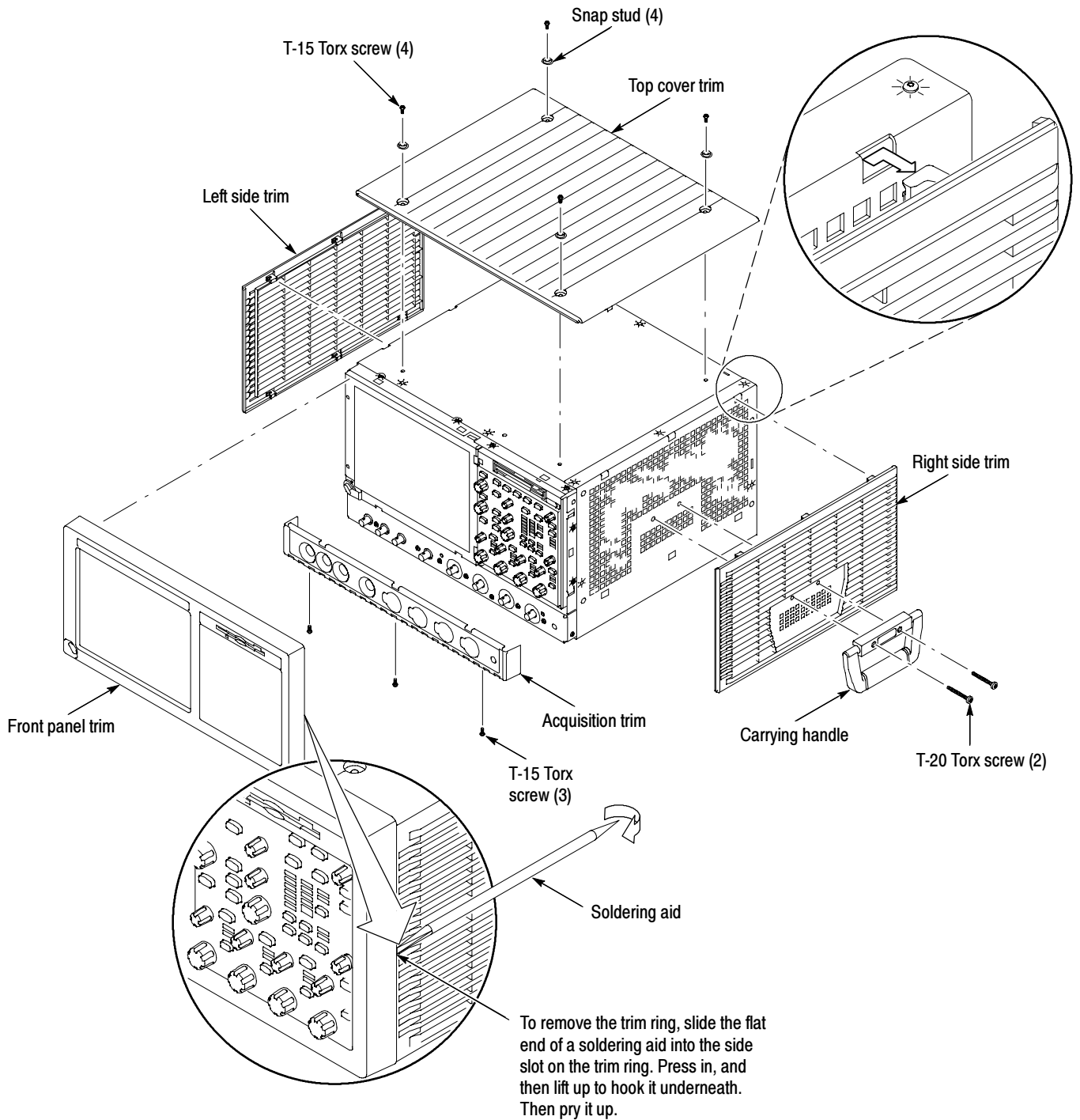


Figure 3: Trim removal

Bottom Cover

1. *Remove the bottom cover:* See Figure 4 on page 10.
2. *Orient the instrument:* Set the instrument so the top is down on the work surface and the bottom is facing you.
 - a. Remove the four T-15 Torx screws that secure the bottom cover to the instrument.
 - b. Remove the bottom cover from the instrument.
3. *Reinstallation:* Do steps a and b in reverse to reinstall the bottom cover.

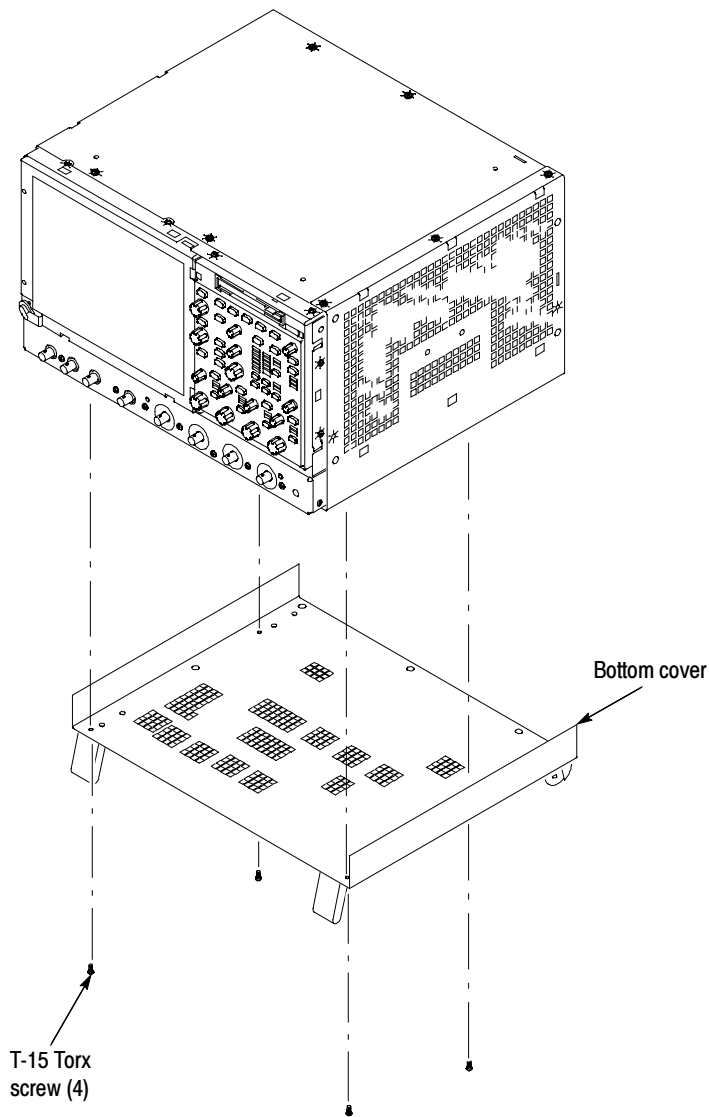


Figure 4: Bottom cover removal

- Covers**
1. *Remove the left and right covers:* See Figures 5 and 6 on pages 12 and 13.
 - Trim (all)
 - Bottom cover
 2. *Orient the instrument:* Set the instrument so that its rear is on the work surface and the front of the instrument is facing you.

NOTE. *All mounting screw holes are indicated by a star etched around the mounting hole.*

- a. Remove the eleven T-15 Torx screws that secure the covers to the top and both sides of the chassis.
- b. Remove the seven T-15 Torx screws that secure the covers to the bottom of the chassis.
- c. Pull the bottom-right cover down and slide to the right to remove from the instrument. Pull the top-left cover upward and slide to the left to remove from the instrument.



CAUTION. *Take care not to bind or snag the covers on the internal cabling of the instrument as you remove or install.*

3. *Reinstallation:* Do in reverse steps a through c to reinstall the cabinet covers.

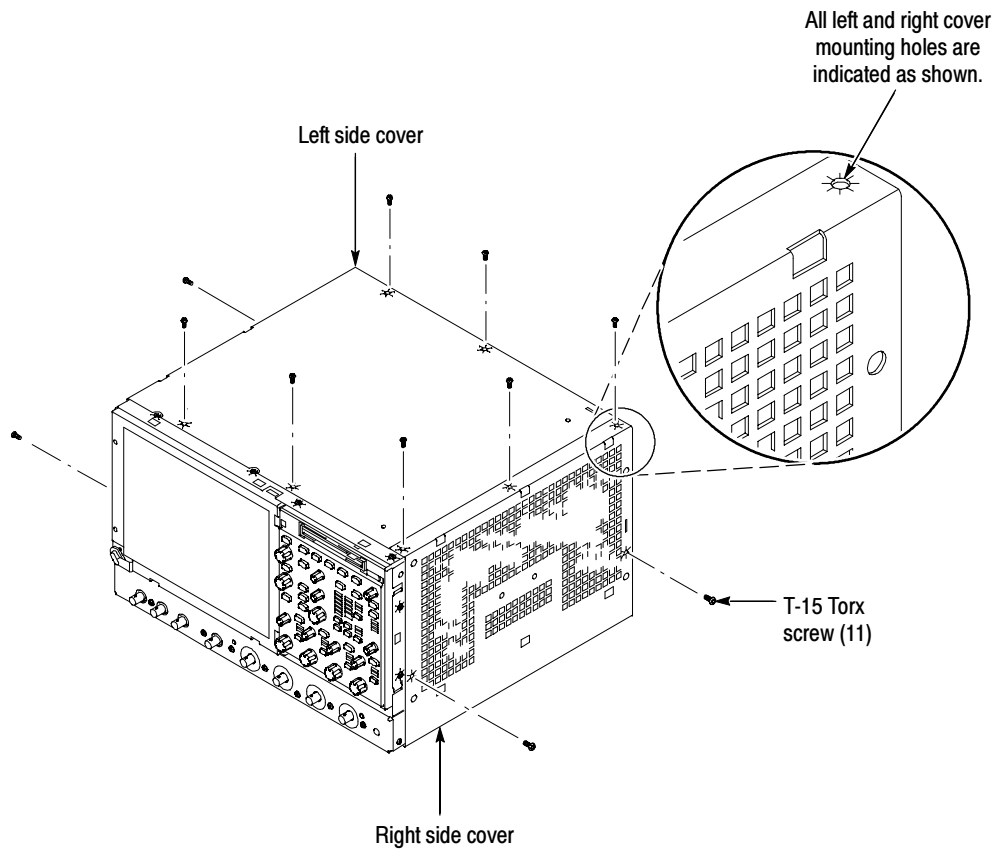


Figure 5: Cover removal

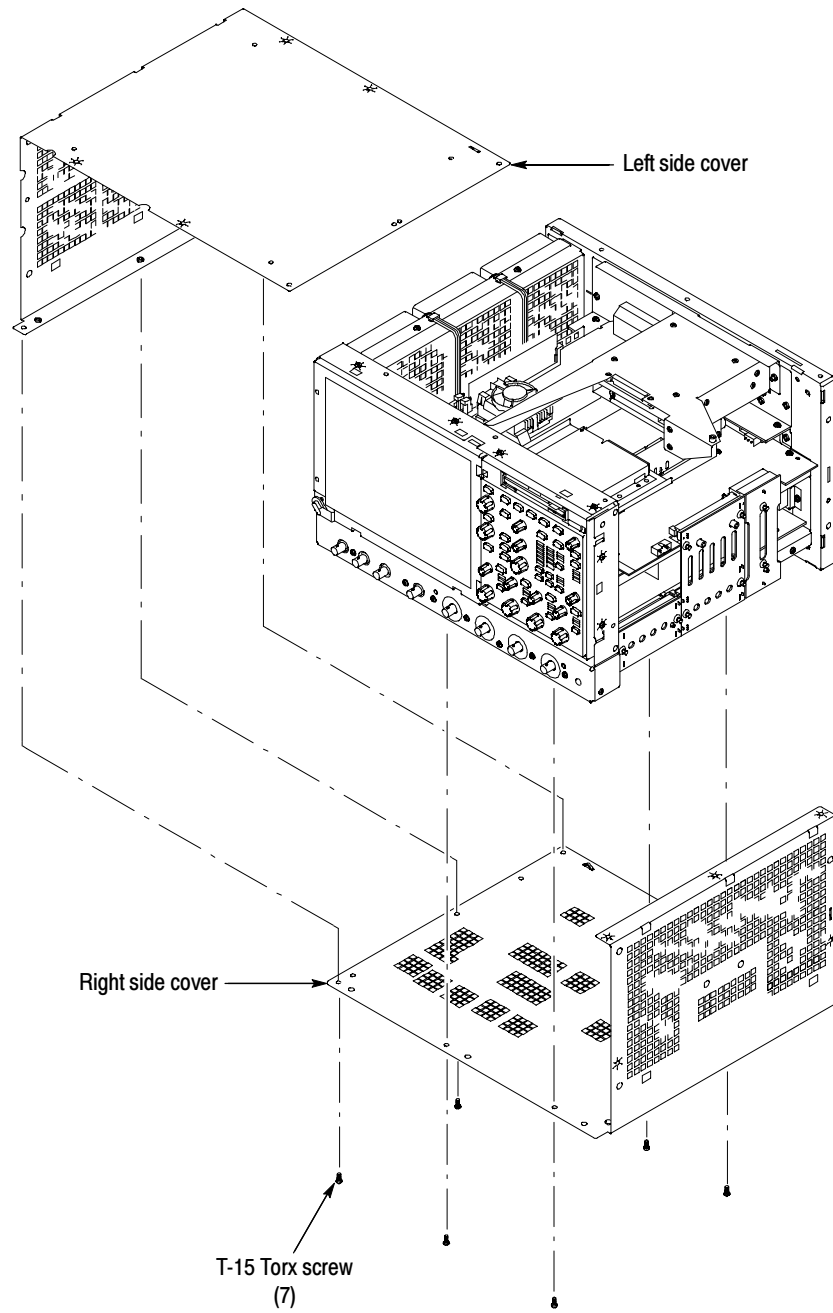


Figure 6: Cover removal

Procedures for Internal Modules

The following procedures are found here and are listed in the order presented.

- NLX board
- CD drive bracket

NLX Board

1. *Locate module to be removed:* Locate the NLX Board in the locator diagram *Internal Modules*, Figure 7, on page 15. Additional modules to be removed:



WARNING. *Remove the line cord before removing the covers from the instrument.*

- Trim (all)
- Bottom cover
- Left and Right covers

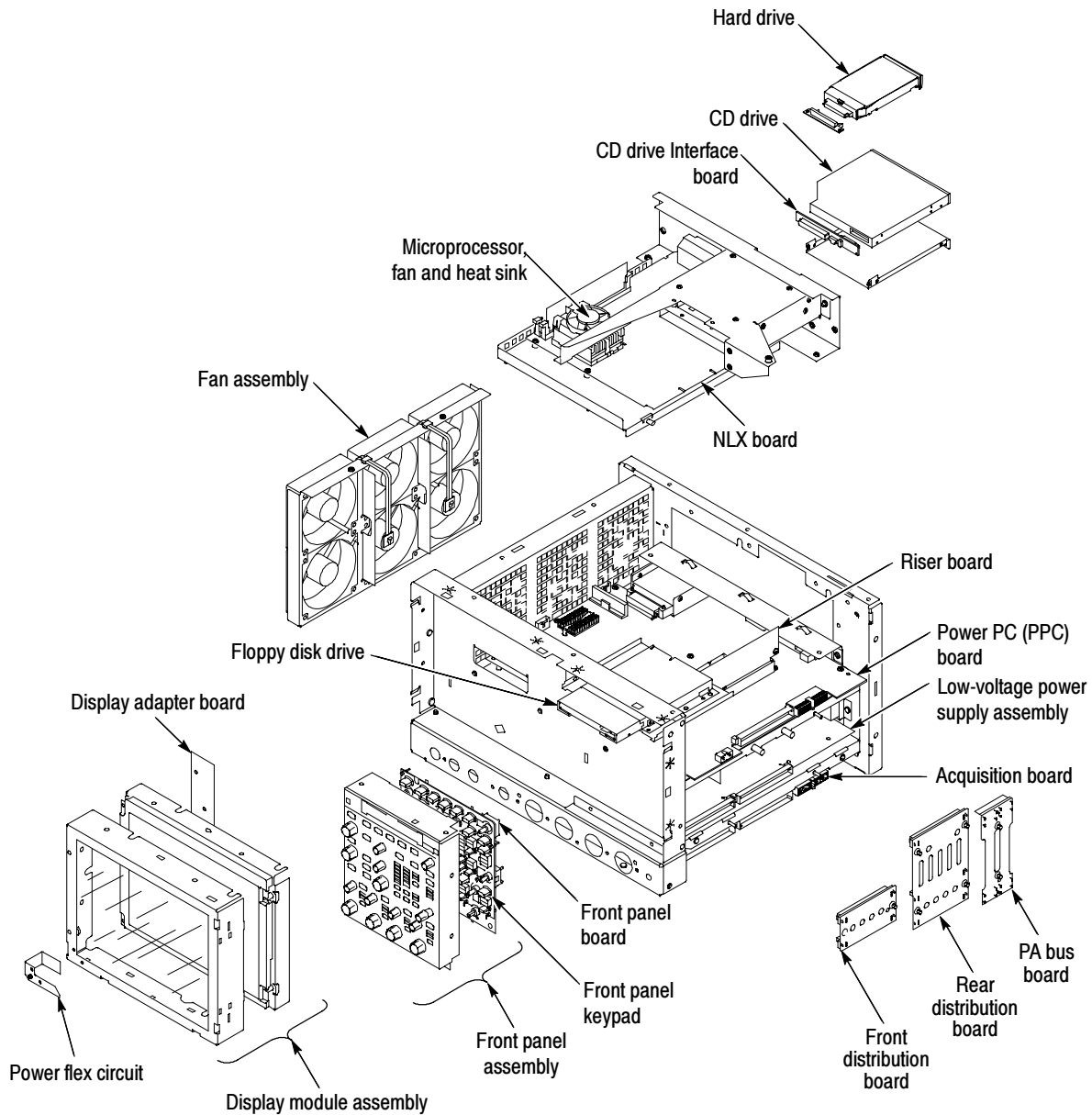


Figure 7: Internal modules

2. *Remove the NLX Board assembly:* See Figure 8 on page 17.
3. *Orient the instrument:* Set the instrument so that the bottom is down on the work surface and the top panel is facing you.
 - a. Remove the two T-15 Torx screws that secure the floppy disk drive assembly into the front chassis.

- b.** Slide the floppy drive assembly, with cable attached, out toward the rear of the instrument. Place floppy drive assembly on top of the hard/CD drive bracket.
- c.** Remove the five T-15 Torx screws that secure NLX board assembly to the chassis.
- d.** Remove the five T-15 Torx screws that secure NLX board assembly to the rear chassis.
- e.** Grasp the front edge of the NLX board assembly and pull up on the assembly to disconnect the Riser Adapter from the Processor board edge connector.
- f.** Remove the NLX board assembly from the instrument.

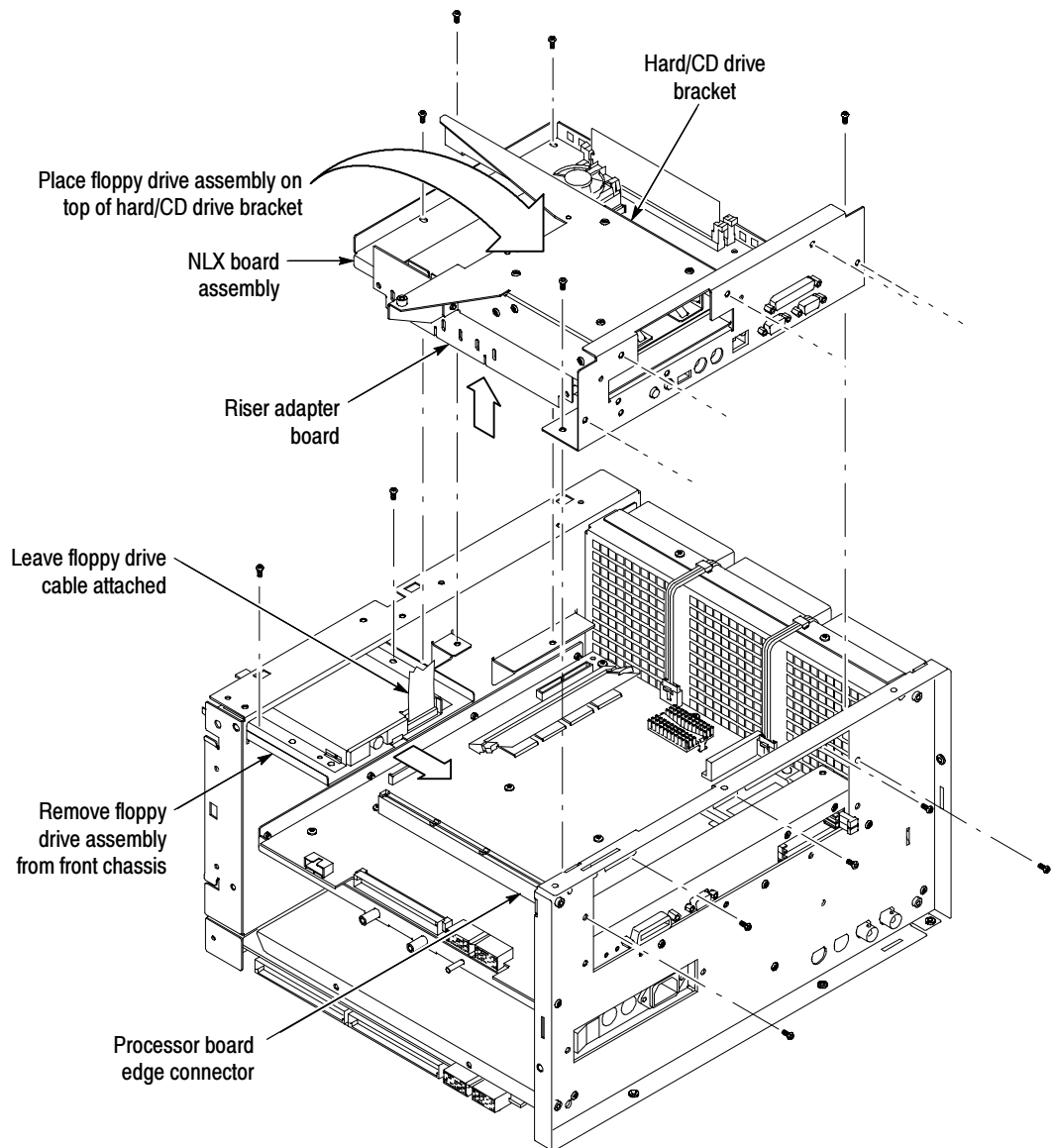


Figure 8: NLX assembly removal

4. *Remove the Riser Adapter and NLX Boards:* See Figure 9 on page 18.
 - a. Remove the screws that secure the hard/CD drive bracket to the NLX board assembly.
 - b. Remove the two T-15 Torx screws that secure Riser Adapter board to the NLX support bracket.
 - c. Disconnect the ribbon cable connectors from the floppy drive, hard drive, and CD drive.

- d. Remove the floppy drive assembly from the NLX board assembly.
 - e. Grasp the Riser board and pull it straight out to disconnect J510 edge card connector from the NLX board. Remove the Riser Adapter board from the NLX board assembly.
 - f. Remove the CD drive from the NLX board assembly. Discard the NLX board assembly.
5. *Remove the CD Drive bracket and Rom interface board:* See Figure 10 on page 19.
- a. Remove the four #0 Phillips screws that secure the bracket to the CD Drive. Remove the CD Drive from the bracket.
 - b. Replace the CD Drive bracket with the one that came in your kit.
6. *Reinstallation:* Do in reverse steps 3 and 4 to reinstall the NLX board assembly.

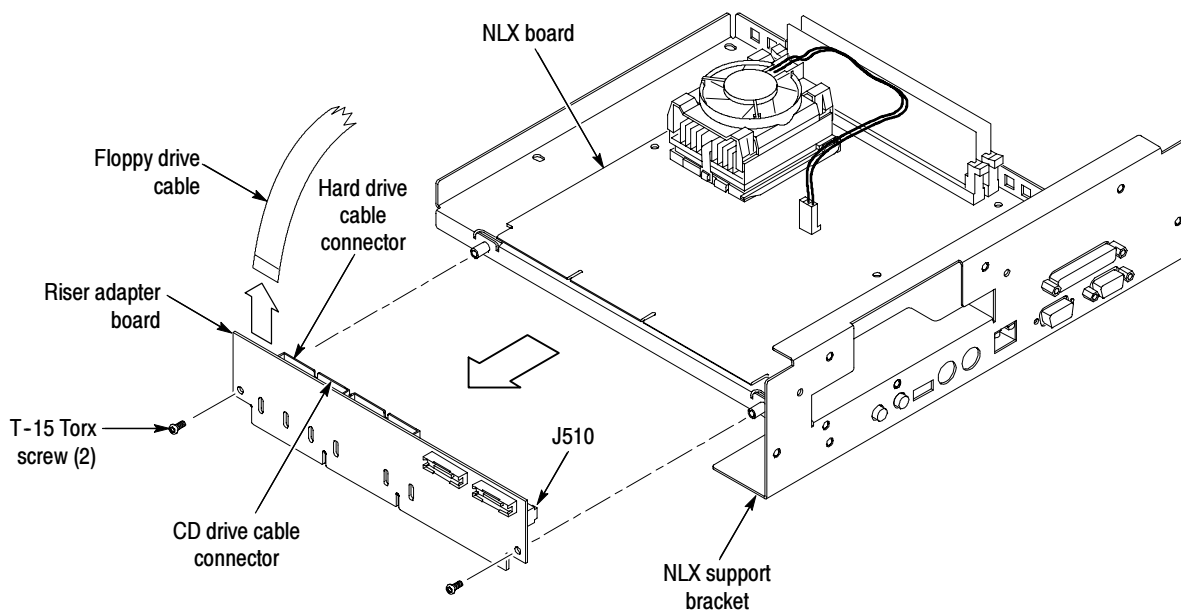


Figure 9: Riser adapter and NLX board removal

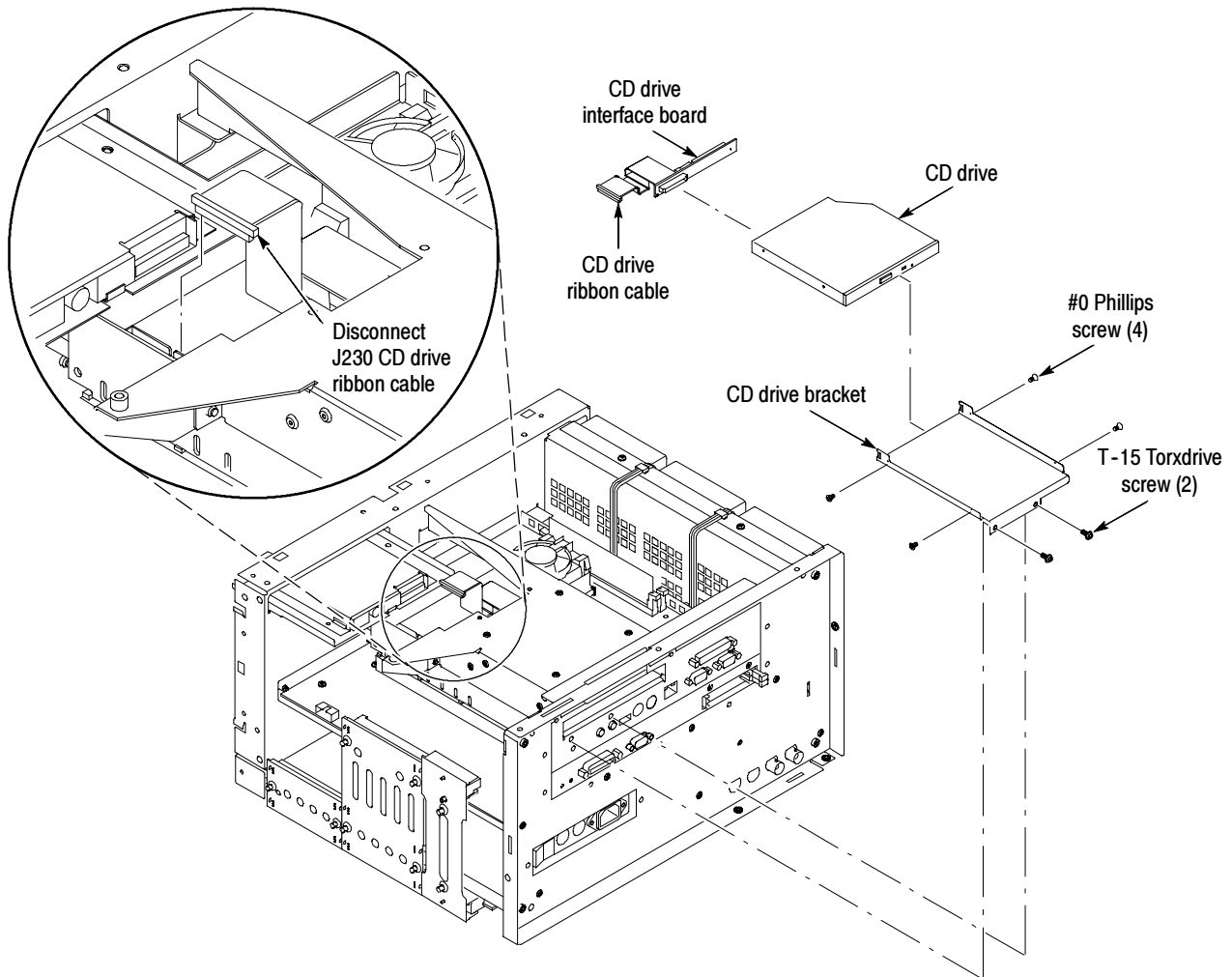


Figure 10: CD drive and bracket removal

Install

Reassemble and Install

This section provides instructions for reassembly of the instrument and reinstalling the operating software.

1. Reinstall the CD drive, riser adapter, and NLX board assembly (refer to page 18).
2. Reinstall left and right covers (refer to page 11).
3. Reinstall the bottom cover (refer to page 10).

4. Reinstall the trim and carrying handle (refer to page 8). Make sure that the interlock tabs and the standby power button are correctly positioned when installing the trim.
5. Reinstall the line cord (refer to page 7).

Install the Operating System Software

After you install the NLX board assembly, you need to reinstall the operating software provided in this kit.

Use the following procedure to install the software:

1. Install the new Windows 2000 Operating system CD. Follow the instructions provided with the Windows 2000 Operating system CD.
2. To update the instrument BIOS, follow the instructions in the Instructions.txt file on the *BIOS Update* CD.
3. Install the TDS6000 or TDS7000 Series Product software CD. Follow the instructions provided with the Product software CD.
4. Install the Applications software CD. Follow the instructions provided with the Applications software CD.

Verify Operation

This section contains instructions to check that the additional memory that you installed is functioning.

1. Connect the power cord to the rear panel of the instrument and then to the mains power.
2. Switch the power button to the On position.
3. Push the Standby/On button to power on the instrument.
4. After the instrument application opens, select Minimize from the File menu to minimize the application.
5. Right-click the My Computer icon.
6. Select Properties from the pop-up menu.
7. Select the Performance tab in the Properties dialog box.
8. Check that Memory lists the correct amount of RAM.
9. Click the TekScope button on the Windows toolbar to display the instrument application.

This completes the verification of the NLX board assembly in your instrument.

■ End of document ■