



050-1779-00

PC-130, M50742

U950 REPLACEMENT

For the following TEKTRONIX® oscilloscopes:

2445 Serial Numbers B010100 - B010999

2465 Serial Numbers B010100 - B010999

This kit contains parts and instructions to replace the Z-axis autofocus microcircuit, U950, pn 155-0242-00 or pn 155-0242-01, on the Main circuit board. A diode, capacitor, and resistor are added to the High Voltage circuit board (A9) to provide protection from crt arcing for U950.

NOTE

If the serial number of your instrument is greater than those listed above or if this kit has been installed, disregard the instructions and use the provided microcircuit as a direct replacement for U950.

PARTS INCLUDED IN REPLACEABLE PARTS KIT:

Ckt. No.	Quantity	Part Number	Description
CR1915	1 ea	152-0061-00	Semiconductor dev, di, sw, Si, 175V 0.1A
U950	1 ea	155-0242-01	Microcircuit, li, z-axis autofocus
C1915	1 ea	281-0783-00	Capacitor, cer, 0.1 μ F, 20%, 100V
R1913	1 ea	315-0101-03	Resistor, cmpsn, 100 Ω , 5%, 0.25W
R1922	1 ea	315-0331-03	Resistor, cmpsn, 330 Ω , 5%, 0.25W
	1 ea		Label, 050-kit

INSTRUCTIONS:

WARNING

Before proceeding, ensure the power switch is in the off position, then disconnect the instrument from the power source.

CAUTION

Static discharge can damage any semiconductor device in this instrument. Refer to the Maintenance Section of the appropriate Service Manual for static-sensitive device handling precautions.

- () 1. Remove the instrument wraparound cabinet by performing the following steps:
 - () a. Unplug the power cord from the rear panel connector.
 - () b. Install the front protective cover, place the cabinet handle against the bottom of the cabinet, and set the instrument face down on a flat surface.
 - () c. Unwrap the power cord from the instrument feet.
 - () d. Remove the four screws in the rear panel feet. Refer to Fig. 1.
 - () e. Remove the two screws from the top, center and bottom, center of the rear panel. Refer to Fig. 1.
 - () f. Lift the rear panel and power cord away from the instrument, leaving the rear panel feet attached.
 - () g. Slide the cabinet off the instrument.

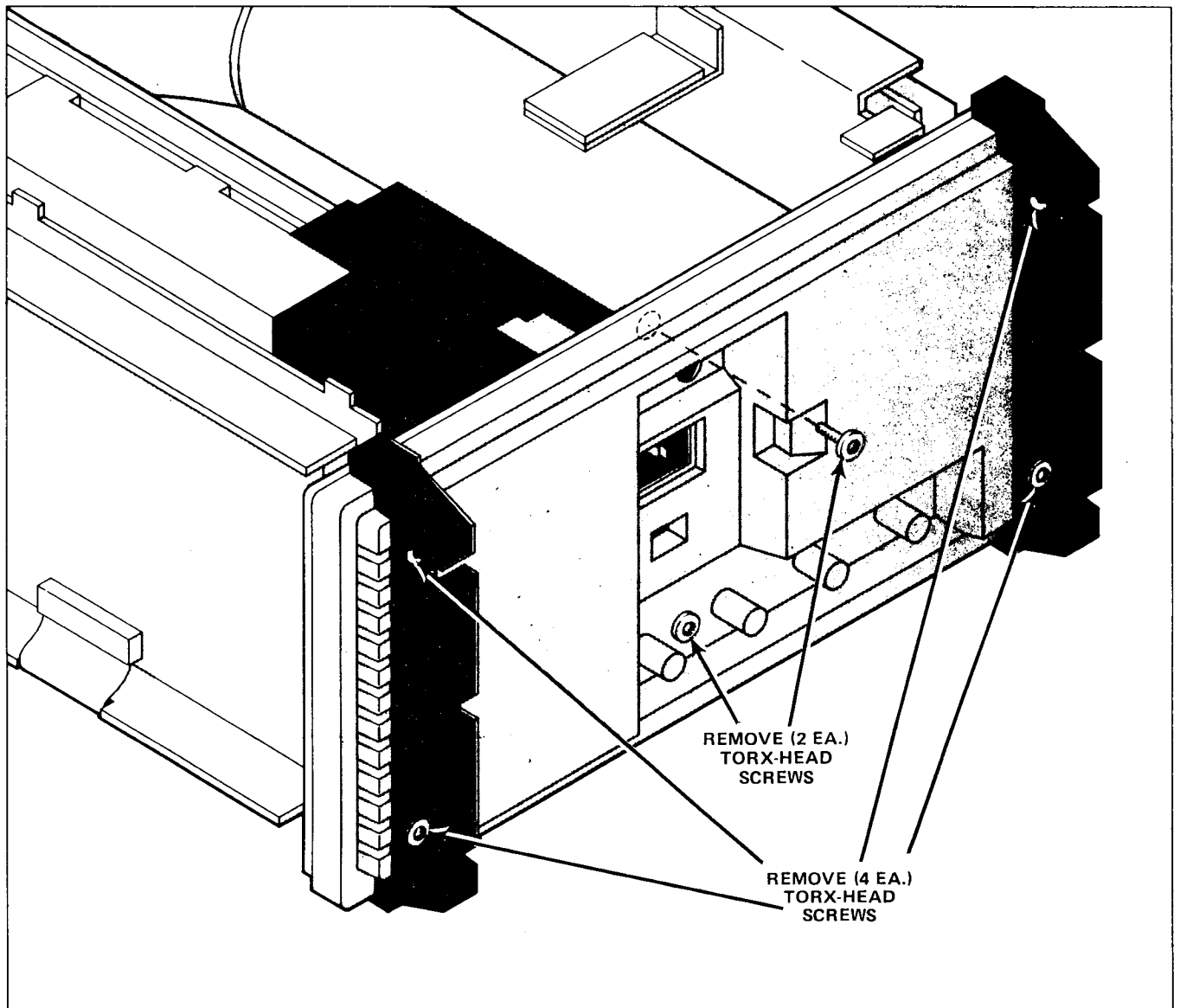


Fig. 1. Locations of Screws on Rear Panel.

- () 2. Set the instrument on its right side as viewed from the front panel.
- () 3. Remove the screw, grounding contact, and hexagonal post spacer securing one corner of the z-axis hybrid microcircuit, U950, to the Main circuit board.
- () 4. Remove the remaining three nuts securing U950 and remove U950.

- () 5. Install the new z-axis microcircuit, provided in the kit, using the hardware removed previously. The diagonal corner on the heatsink aligns with the diagonal corner on the ground plane.
- () 6. Remove the screw securing the lower rear corner of the high voltage shield to the Main circuit board.
- () 7. Set instrument down and remove the remaining four screws securing the high voltage shield and remove the shield.

Refer to Fig. 2 when performing steps 8 through 14.

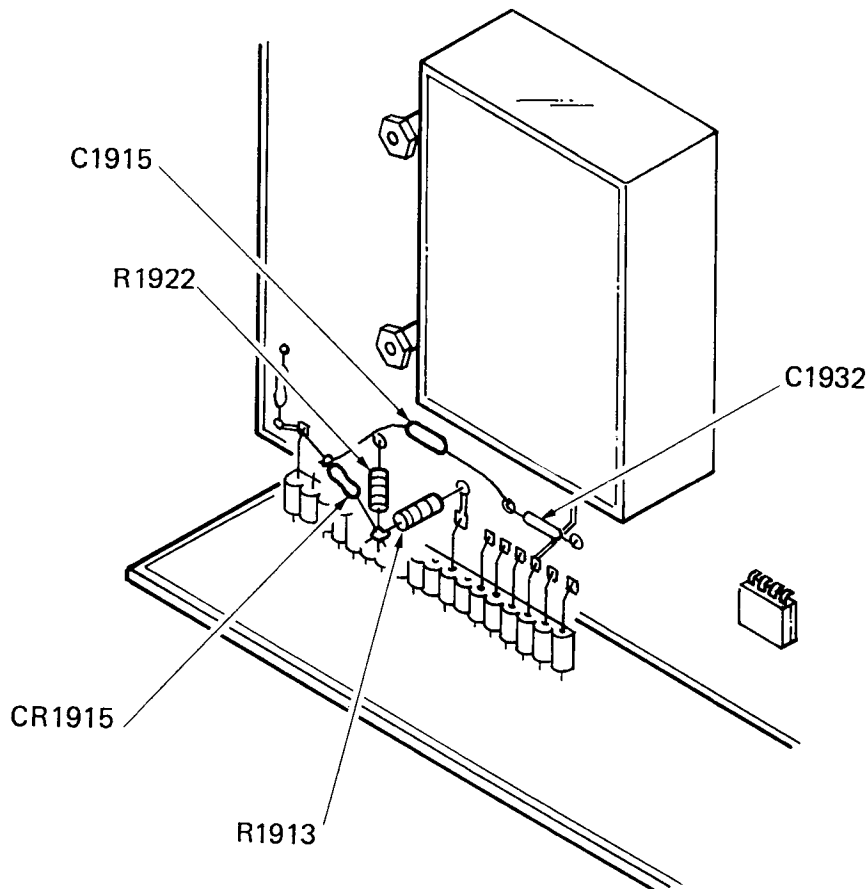


Fig. 2. Component Locations on the High Voltage Circuit Board.

- () 8. Remove R1922 from the circuit board. Use a vacuum type desoldering tool to remove any excess solder from the circuit board pads.
- () 9. Trim one lead of R1922, the 330 Ω resistor provided in the kit, to approximately 1/4 inch. Solder the shortened lead to the pad vacated by the old resistor nearest the rear of the instrument.

- () 10. Trim one lead of R1913, the 100 Ω resistor provided in the kit, to approximately 1/4 inch. Solder the shortened lead to the remaining pad vacated by R1922.
- () 11. Trim the cathode lead (banded end) of CR1915, the diode provided in the kit, to 1/2 inch. Solder the cathode lead to +87V (pin 14 of P191)
- () 12. Solder the free leads of R1922, R1913, and CR1915 together in tepee-fashion and trim the leads.
- () 13. Trim one lead of C1915, the 0.1 μ F capacitor provided in the kit, to 1/2 inch and solder the shortened lead to the cathode lead of CR1915 (added previously), next to the body of the diode.
- () 14. Solder the remaining lead of C1915 to the lead of C1932 (ground) nearest the rear of the instrument. Trim the lead of C1915 as needed.
- () 15. Reinstall the high voltage shield using the hardware removed previously.
- () 16. Refer to the Adjustment Procedure in your Service Manual and make any necessary checks and adjustments. Especially check the Z-axis transient response.
- () 17. Reinstall the cabinet by performing the reverse of the procedure described in step 1.
- () 18. Remove the protective backing from the provided 050-kit label and apply the label to a clean, dry area on the rear panel.
- () 19. For future reference, fasten the attached Manual Modification Insert in your Service Manual.

INSTRUCTION MANUAL

MODIFICATION INSERT

U950 REPLACEMENT

For the following TEKTRONIX® Oscilloscopes:

2445 SN B010100 - B010999

2465 SN B010100 - B010999

Installed in _____ SN _____ Date _____

This modification insert is provided to supplement the Instruction Manual for the above listed products. The information given in this insert supersedes that given in the Manual.

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GENERAL INFORMATION

This kit contained parts and instructions to replace the z-axis autofocus microcircuit, U950, pn 155-0242-00 or pn 155-0242-01. A diode (CR1915), capacitor (C1915), and resistor (R1913) were added to the High Voltage circuit board (A9) to provide protection from crt arcing for U950 (on Main circuit board).

