

1503B/C SERIES COMPONENT REPLACEMENT

For TEKTRONIX 1503B/C Series Metallic TDR Cable Testers

Serial Numbers: 1503B.....All

1503C.....B020000 and above

This component replacement kit contains parts and instructions to replace the 151-0448-00 and 151-1174-00 transistors used on the 670-9290-04 (and earlier) circuit boards. These transistors are no longer available and must be replaced with 151-0951-00 transistors. Whenever one of these parts is defective, all must be replaced. Additionally, two capacitors must be replaced to compensate for device capacitance.

This kit should also be used to replace the 151-0965-00 transistors that were initially used to replace the 151-0448-00 and 151-1174-00 transistors. The 151-0965-00 transistors do not have sufficient voltage ratings to meet the 1503B/C specifications.

CAUTION

STATIC SENSITIVE DEVICES

Static discharge can damage any semiconductor components in this instrument. Static voltages of 1kV to 30kV are common in unprotected environments.

TO AVOID DAMAGE, OBSERVE THE FOLLOWING:

1. Minimize handling of static sensitive components.
2. Transport and store static sensitive components or assemblies in their original containers, on a metal rail or on conductive foam. Label any package that contains static sensitive assemblies or components.
3. Discharge the static voltage from your body by wearing a wrist strap while handling these components. Servicing static sensitive assemblies or components should be performed only at static free work stations by qualified service personnel.
4. Nothing capable of generating or holding a static charge should be allowed on the work station surface.
5. Keep the component leads shorted together whenever possible.
6. Pick up components by the body, never by the leads.
7. Do not slide the components over any surface.
8. Avoid handling components in areas that have a floor or work surface covering capable of retaining a static charge.
9. Use a soldering iron that is connected to earth ground.
10. Use only approved, anti-static type, desoldering tools.

KIT PARTS LIST:

Ckt. No.	Qty.	Part Number	Description
A4Q2034			
A4Q3020			
A4Q3050			
A4Q3080	4	151-0951-00	Transistor, NPN
A4C3030			
A4C3031	2	283-0328-00	Cap, Fxd, 0.03uF

TOOLS REQUIRED:

Soldering Iron (18 to 25W)
Desoldering tool

CAUTION

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

INSTRUCTIONS

NOTE: These instructions assume you have removed the circuit board from the instrument while troubleshooting to the component level. It also assumes that a 1503B or 1503C service manual is available for component location.

- () 1. Locate the four (4) 151-0951-00 transistors and cut off the ground lead. See figure 1.

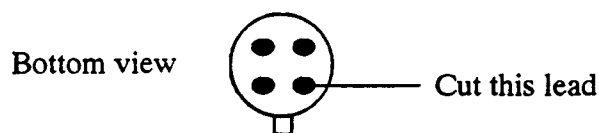


Figure 1

- () 2. Locate Q2034 on the 670-9290-xx board and replace with a 151-0951-00.
- () 3. Locate Q3020 on the 670-9290-xx board and replace with a 151-0951-00.
- () 4. Locate Q3050 on the 670-9290-xx board and replace with a 151-0951-00.
- () 5. Locate Q3080 on the 670-9290-xx board and replace with a 151-0951-00.
- () 6. Locate C3030 on the 670-9290-xx board and replace with a 283-0328-00.
- () 7. Locate C3031 on the 670-9290-xx board and replace with a 283-0328-00.