

M78687

# 045 KIT

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## Fan Replacement

**TDS520** All Serial Numbers  
**TDS540** All Serial Numbers  
**TDS620** All Serial Numbers  
**TDS640** All Serial Numbers

This kit contains parts and instructions to replace the cooling fan. The new fan operates at a slower speed reducing audible noise.

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## Kit Parts List:

Quantity	Part Number	Description
1 ea	119-5044-00	Fan, DC: Tubeaxial, 20-28V, 0.275A, 5W
1 ea		Label: 045-kit

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## Minimum Tool Requirements:

Tool	Part Number
Scewdriver, magnetic, holder for Torx head tips	Tektronix, pn 003-0264-00
Torx head screwdriver tip, T-20	Tektronix, pn 003-0866-00

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## Instructions

### **WARNING**

*Dangerous shock hazards may be exposed when the instrument covers are removed. Before proceeding, ensure the instrument power switch is in the off position. Then, disconnect the instrument from the power source. Only qualified service personnel should attempt to install this kit.*

### **CAUTION**

*Many components within this instrument are extremely susceptible to static-discharge damage. Service the instrument only in a static-free environment. Observe standard handling precautions for static-sensitive devices while installing this kit. Always wear a grounded wrist and foot strap while installing this kit.*

### **NOTE**

*These instructions assume a certain familiarity with the instrument. If further details are required for disassembly or assembly, refer to the maintenance section of the TDS Service Manual.*

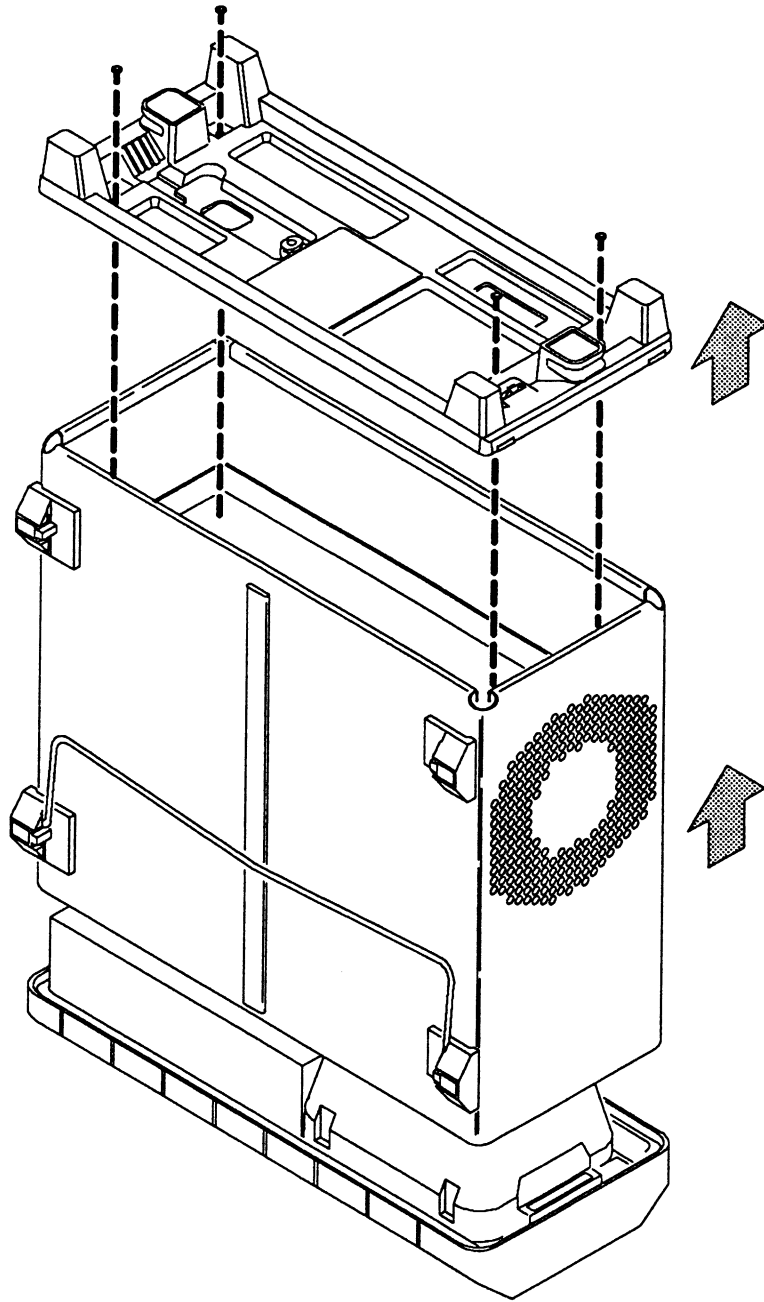
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## Rear Cover and Cabinet Removal

- Step 1:** *Orient the instrument:* Set the oscilloscope so its face is down on the work surface and its bottom is facing you.
- Step 2:** *Disconnect the power line cord:* Unplug the line cord from its receptacle at the rear cover.
- Step 3:** *Remove rear cover:* Remove the four (4) Torxdrive screws (T-20) securing the rear cover to the oscilloscope. Lift off the rear cover.
- Step 4:** *Remove the cabinet:*
  - a. At the rear of the cabinet, grasp its left and right edges.
  - b. Pull upward to slide the cabinet off the oscilloscope. Take care not to bind or snag the cabinet on the oscilloscope's internal cabling during removal.

**CAUTION**

*Be careful not to damage the EMI gasket(s) when removing and installing the oscilloscope cabinet.*



**Figure 1: Rear Cover and Cabinet Removal**

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## Fan Replacement

- Step 1:** Position the oscilloscope on its side so the fan is facing the installer.
- Step 2:** Disconnect both wire connectors from the fan. Note color codes and wire locations for later reassembly of the new fan. The remaining end of the the wires are connected to J20 on the Processor/ Display circuit board A11.
- Step 3:** Remove the two (2) panhead Torxdrive screws (T-20) that secures the fan to the chassis. Save the screws for reassembly of the new fan.

### **NOTE**

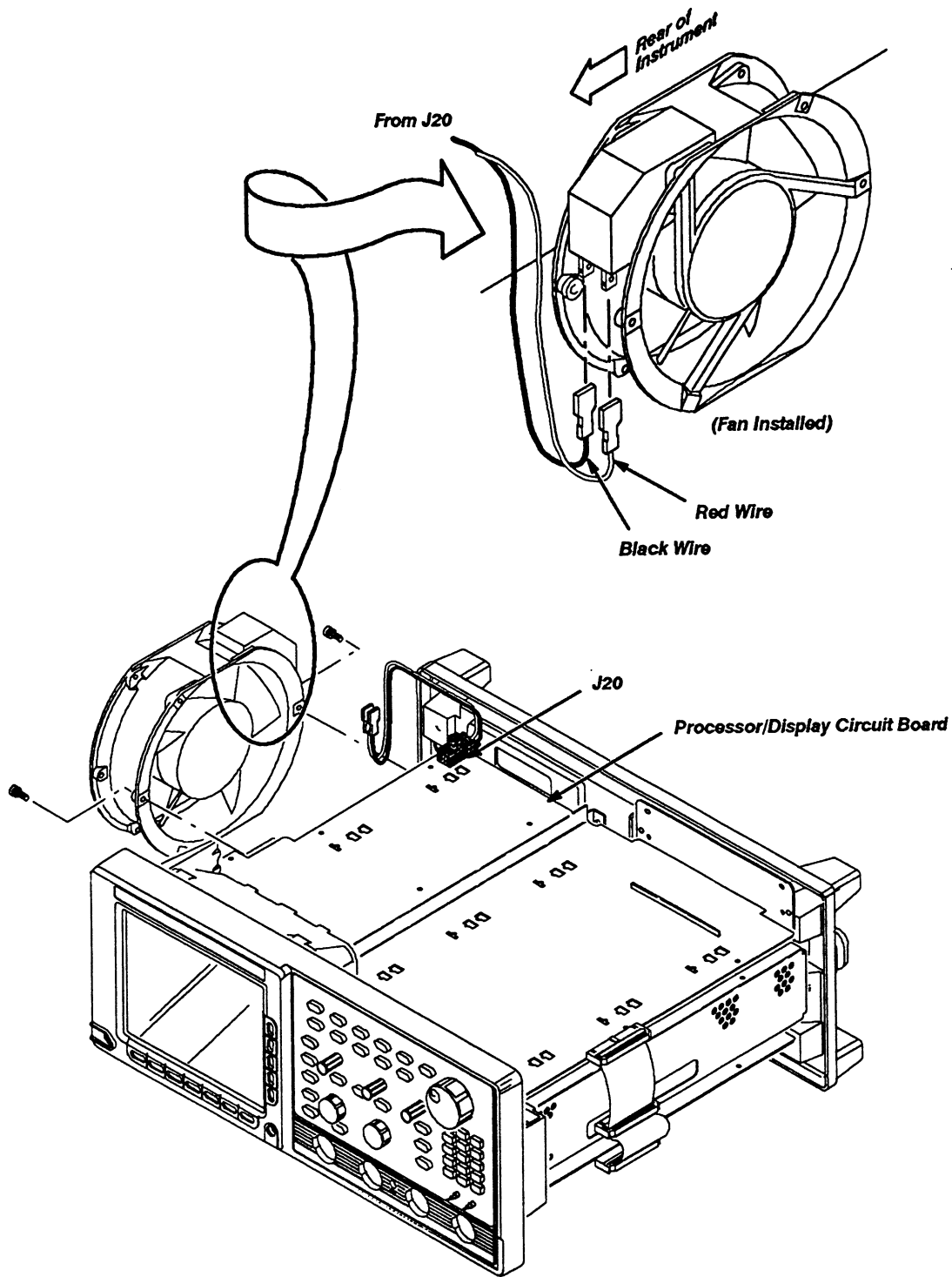
*Note air flow direction of the old fan. There is a air flow indicator stamped on the side of the fan housing.*

- Step 4:** Remove and discard the fan.
- Step 5:** Position the new fan on the chassis. The air flow direction must flow away from the oscilloscope. The fan label should be facing up.
- Step 6:** Secure the fan to the chassis using the two (2) panhead Torx-drive (T-20) screws removed from the old fan.
- Step 7:** Reconnect both quick-connectors to the fan housing. The red wire must be towards the cabinet of the instrument.

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## Reinstallation of Cabinet and Rear Cover

- Step 1:** At the rear of the oscilloscope slide the cabinet on the instrument. Take care not to snag the cabinet on the oscilloscope's internal cabling (redress cables as necessary) while sliding it into place.
- Step 2:** Make sure that the ridge around the rear chassis slides into the groove containing a second EMI cable on the rear of the cabinet.
- Step 3:** Replace the rear cover securing it into place using the four (4) screws removed earlier. Apply 16 foot-lbs torque.
- Step 4:** Reconnect the power cord plug into the rear of the oscilloscope.
- Step 5:** Remove the protective backing from the 045-kit label, provided in this kit, and apply it to a clean area on the rear cover of the instrument. This label indicates that this kit has been installed.



**Figure 2: Fan Removal**