



# REPLACEMENT PARTS INFORMATION

file      ↑      TEK 050-040  
                   Type 131  
 date      ↓      March 8, 1961  
                                   (revised 12/4/62)

## TRANSISTOR

### INTRODUCTION:

Transistor TEK 153-515 replaces TEK 153-514 and 153-517, used in Tektronix Type 131 Current Probe Amplifier Models One and Two. Manufacturer (Amperex) has increased the Beta rating of the OC-170 transistor, thereby making it too difficult to select TEK 153-514 (OC-170, selected for Beta less than 100 for Model One) and TEK 153-517 (OC-170, selected for Beta 110-200 for Model Two) transistors.

The changes outlined below will enable you to use the replacement transistors TEK 153-515 (2N1517, selected for Beta 150 or greater). To insure optimum circuit performance, it is necessary to replace both Q464 and Q474 with the TEK 153-515 transistor.

### PARTS LIST:

Quantity	Description	Tek Number
1 ea.	Coil, variable, 3-5.3 $\mu$ h      CVC 302	114-141
1 ea.	Coil, variable, 8.5-17 $\mu$ h      CVC 852A	114-142
2 ea.	Transistor, 2N1517, checked, Beta 150 or greater	153-515
1 ea.	Capacitor, cer.      18 pf      500 V $\pm$ 10%	281-542
1 ea.	Resistor, comp.      51 $\Omega$ 1/2 w.      5%	301-510
1 ea.	Resistor, comp.      620 $\Omega$ 1/4 w.      5% (Model 1 only)	315-621
2 ea.	Resistor, comp.      100 $\Omega$ 1/4 w.      10%	316-101

### INSTRUCTIONS:

NOTE: Before attempting to mount new parts to board, we suggest clearing hole of solder with a piece of #20 wire, heated with soldering iron.

NOTE: Steps 1 through 4 apply to Model One only.

- ( ) 1. If present, remove ground lug from BNC connector to switch shield, as it causes considerable waveform distortion.
- ( ) 2. Remove C477, 4.7 pf capacitor, located adjacent to Current/Div switch.

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INSTRUCTIONS: (continued)

- ( ) 3. Remove R477, 39 K resistor, soldered to L478 and circuit board.
- ( ) 4. Replace R458, 680  $\Omega$  resistor, with the 620  $\Omega$  resistor supplied.

NOTE: The following steps apply to both Models One and Two.

- ( ) 5. Replace R407, 62  $\Omega$  resistor, with the 100  $\Omega$  resistor supplied.
- ( ) 6. Replace R401, 56  $\Omega$  resistor, with the 51  $\Omega$  resistor supplied.
- ( ) 7. Replace R463, 150  $\Omega$  resistor, with a 100  $\Omega$  resistor from kit.
- ( ) 8. Replace C473, 47 pf capacitor, with the 18 pf capacitor supplied.
- ( ) 9. Replace L478, 3-6.5  $\mu$ h coil, with the 3-5.3  $\mu$ h coil supplied;  
color-coded: orange-black-red.
- ( ) 10. Replace L457, 9-18.5  $\mu$ h coil, with the 8.5-17  $\mu$ h coil supplied;  
color-coded: gray-green-red.
- ( ) 11. Replace Q464 and Q474 with new transistors supplied.
- ( ) THIS COMPLETES THE INSTALLATION. Recheck your work.

For future reference, correct the instructions manual as required.

Refer to the instruction manual and recalibrate your instrument as required.

CALIBRATION NOTES:

Select a value for C407B for proper HF response in the 1 ma position if required.

In some cases, the new transistors may cause excessive overshoot or ringing, for which you may be unable to compensate. In this event, we suggest interchanging Q454 and Q474 or Q464.

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