

MODIFICATION RECOMMENDED –  
CORRECTS MANUFACTURING OR DESIGN DEFECTS

**54642A-04**

# S E R V I C E N O T E

Supersedes:  
NONE

## 54642A 500MHz 2-CH MegaZoom Oscilloscope

Serial Numbers: MY00000000/MY99999999

### Correcting environmentally caused trace tilt

To Be Performed By: Agilent-Qualified Personnel or Customer

### Parts Required:

NONE

## ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:			
<b>MODIFICATION RECOMMENDED</b>			
ACTION CATEGORY:	<input type="checkbox"/> IMMEDIATELY <input checked="" type="checkbox"/> ON SPECIFIED FAILURE <input type="checkbox"/> AGREEABLE TIME	STANDARDS:	LABOR: 0.5 Hours
LOCATION CATEGORY:	<input checked="" type="checkbox"/> CUSTOMER INSTALLABLE <input type="checkbox"/> ON-SITE <input checked="" type="checkbox"/> SERVICE CENTER	SERVICE INVENTORY:	<input type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input checked="" type="checkbox"/> SEE TEXT
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	USED PARTS:	<input type="checkbox"/> RETURN <input type="checkbox"/> SCRAP <input checked="" type="checkbox"/> SEE TEXT
AUTHOR: DPM	PRODUCT LINE: PL1A	AGILENT RESPONSIBLE UNTIL: November 2011	
ADDITIONAL INFORMATION:			

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**Situation:**

The magnetic deflection display system used in this oscilloscope can be susceptible to some external magnetic fields. Both the earth's magnetic field as well as nearby fields like video displays can cause trace tilt.

If relocating the oscilloscope away from adjacent fields does not correct the tilt the display yoke may require adjustment. The earth's magnetic field only causes tilt when shipped from one hemisphere to another.

**WARNING:**

Do not perform the display alignment with power applied to the instrument. Lethal voltages are present in this area.

**Solution/Action:**

1. Make note of the direction of the tilt then remove power from the instrument.
2. Remove the oscilloscope from the case.
3. Place instrument (board down) on bench.
4. Make note of the original orientation of the yoke assembly on the CRT neck.
5. Loosen yoke clamp by rotating Phillips screw counterclockwise three turns, and carefully rotate yoke assembly back and forth to loosen it (see Note 1).
6. Rotate the yoke assembly from its original orientation (noted in step 4) slightly in direction opposite of tilt observed in step 1.
7. Power instrument on and check alignment.
8. If alignment is correct, power instrument off and tighten screw three turns.
9. If alignment is still not correct, repeat steps 6 and 7 until alignment is correct, being sure that power is off during any adjustments.

**Note:** Care should be taken to not bump the adjustment pot labeled "SUB BRT" while performing this procedure. This pot adjusts the gray shade levels and can adversely affect this parameter if adjusted.