

Repair of PC 415 when you have a defect print head or needle driver.

If some of the text printers does not work the main reason is probably that the driver is defect, or the print head, or both.

You can measure the print head to see if they are defected, see main picture of the print head. Resistance measured from common to each coil, if the coil is OK you should measure app 4,8 Ohm on Microlys print head, and app. 3.8 on Axiohm print head. Please notice that if you measure 4.4 or 4.9 when you should have 4.8 it is most likely your volt meter that show a little wrong, if the coil is defect you will most likely measure less than 2 Ohm. Or higher than 100 Ohm.

The reason for the print head and driver to be defect is that they become to hot, please notice that we have decreased the current for the print head in all new boards. R59 on PC415 is now 180 Ohm, most likely it will be 5K1 , 4K7 or 3K3 K-Ohm on your board. (Resistor R60 should be 1K2 Ohm)

How to measure the transistor driver look at Image for measuring the driver. To measure the transistor, measure from GND to the leg on the transistor as shown in the picture, if the transistor is OK you should measure less than 3 Ohm. If the transistor is defect you will measure several K-Ohm.

If you look close at the Image you see the component for 1 needle, Transistor Q19, Resistor R52 (0.68 Ohm) Resistor R43 (510 Ohm) and Diode D55. + Resistor R57 = 1 KOhm

9 out of 10 times when the transistor is defect you will have to change Q19 and R52 as well as R43, so far we have never had to change the Diode.
PLEASE NOTICE THAT WHEN I SAY Q19, R55 AND R43 IT CONCERN ONLY NEEDLE 2 ON PRINTER 2.

The main picture of PC 415 show the positions of the components for the different print head and needles.

Look at picture

1/10 = print head number 1 needle number 10, print head number 1 is the left most printer in the machine, needle number 10 is the bottom needle.

The needles are counted number 1 from the top, and number 10 at the bottom.

IMPORTANT: Please notice that the print head only have 9 needles, even if our driver board has drivers for 10 needles.

In other word, the bottom needle is needle 9 and not needle 10.

5/9 = print head number 5 needle number 9 and so on.

Check also the common Resistor for each print head. See Schematic drawing
Printer 1 / R32, Printer 2 / R57, Printer 3 / R 84, Printer 4 / R109, Printer 5 / R 159, Printer 6 R 134, Printer 7 / R 184