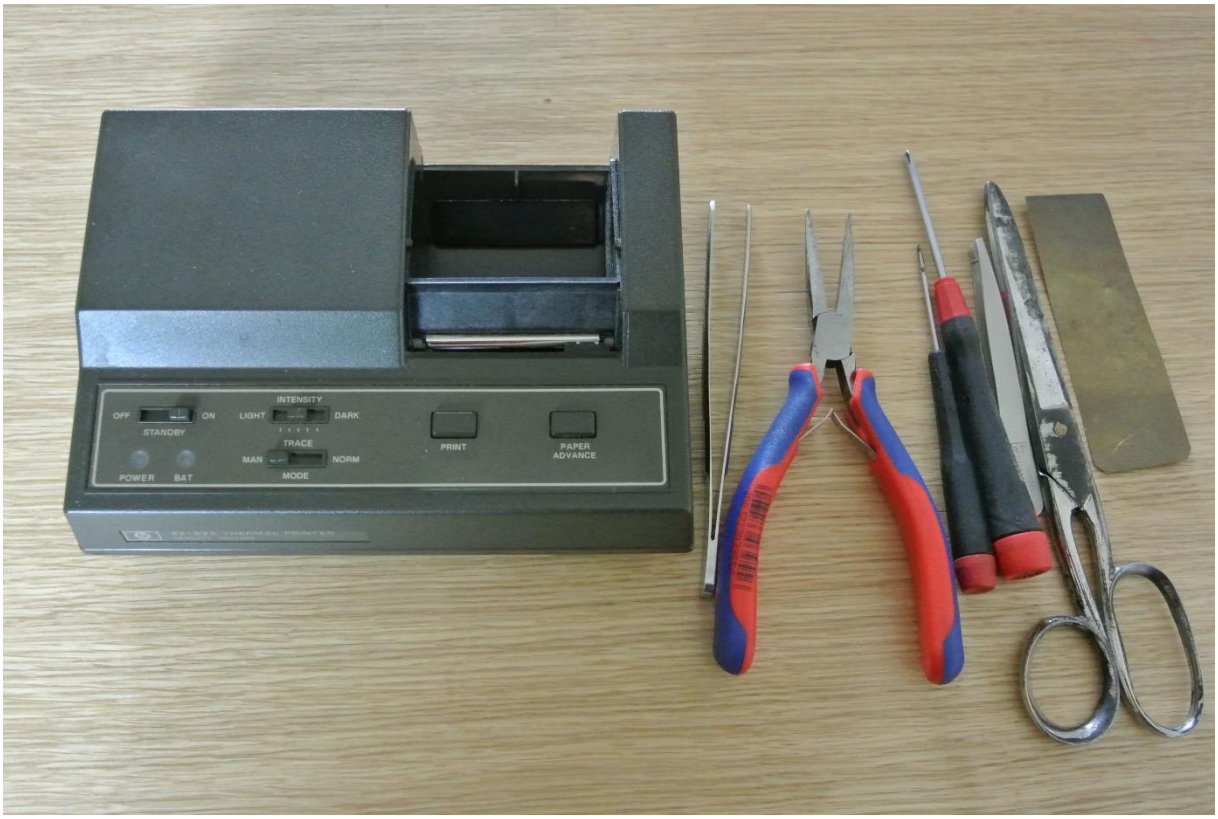
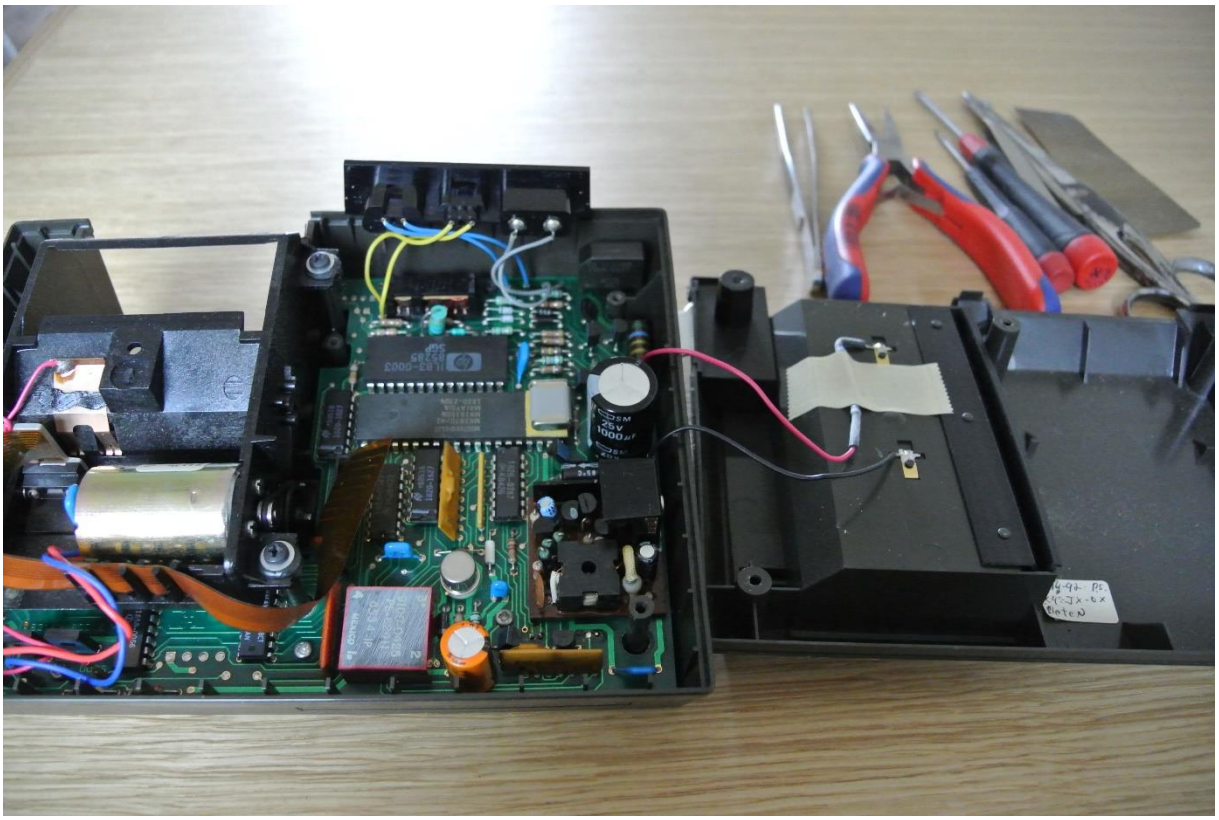
HP Thermal Printer (HP82143A,HP82166A) Paper Advance Repair

This pdf guides you through the reapair of the paper advance roller, a common problem of this type of printer.

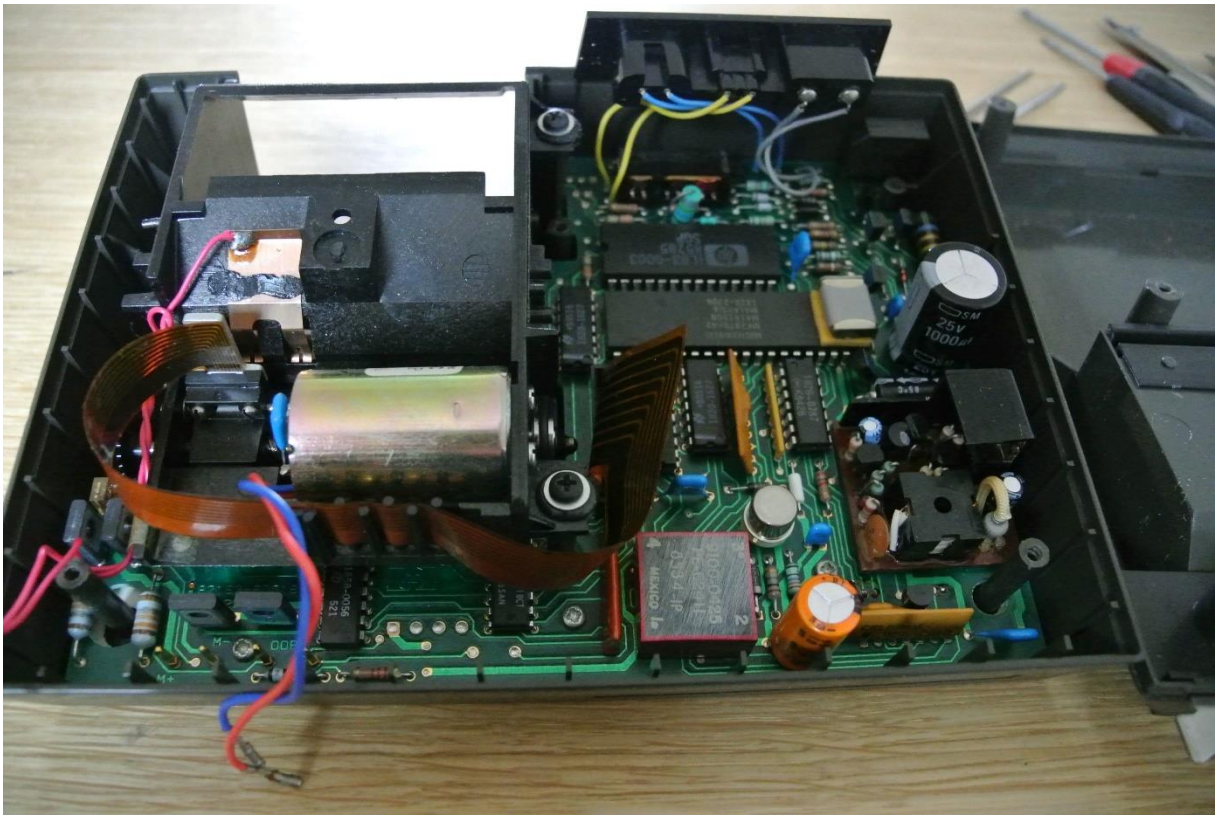
This is what you need of tools:



First remove paper roll, plastic window, the battery and all screws of the bottom, open the case:



Remove all electric cable using a pincer or plier.

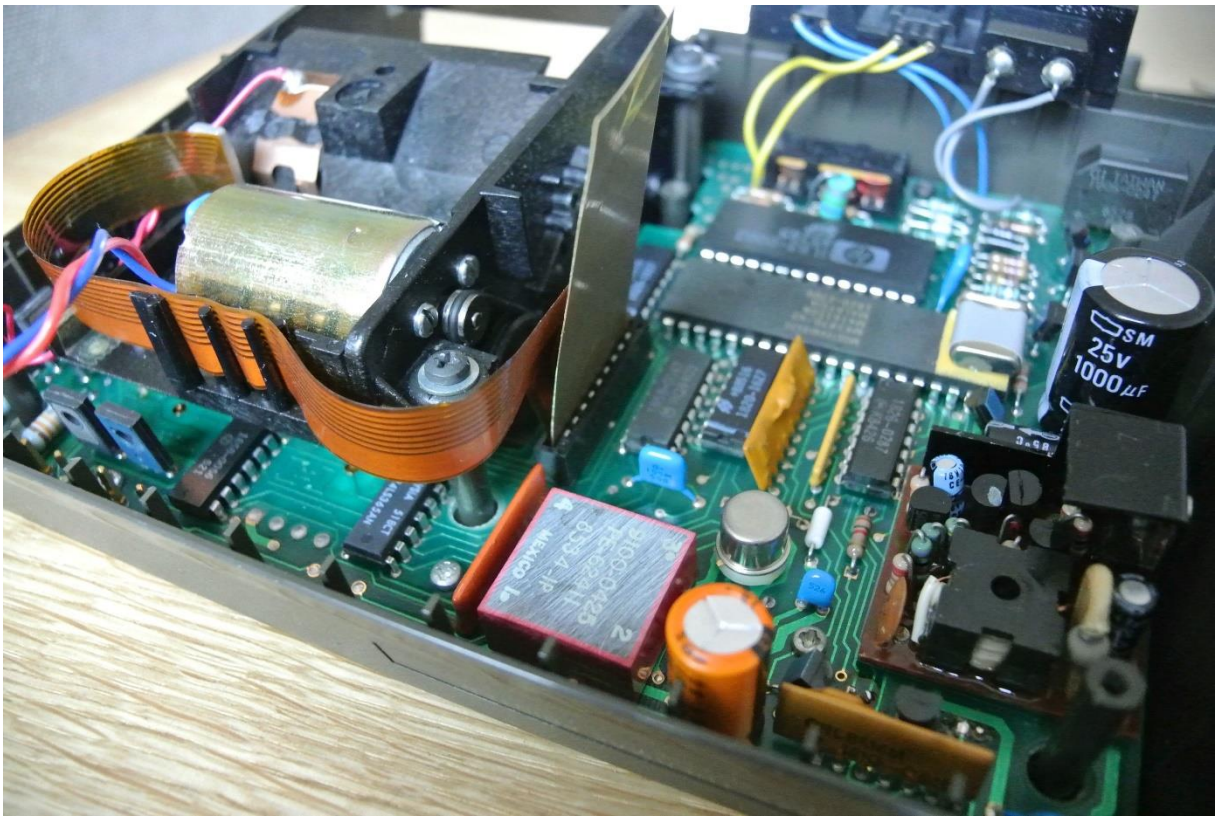


Put away the bottom part of the case.

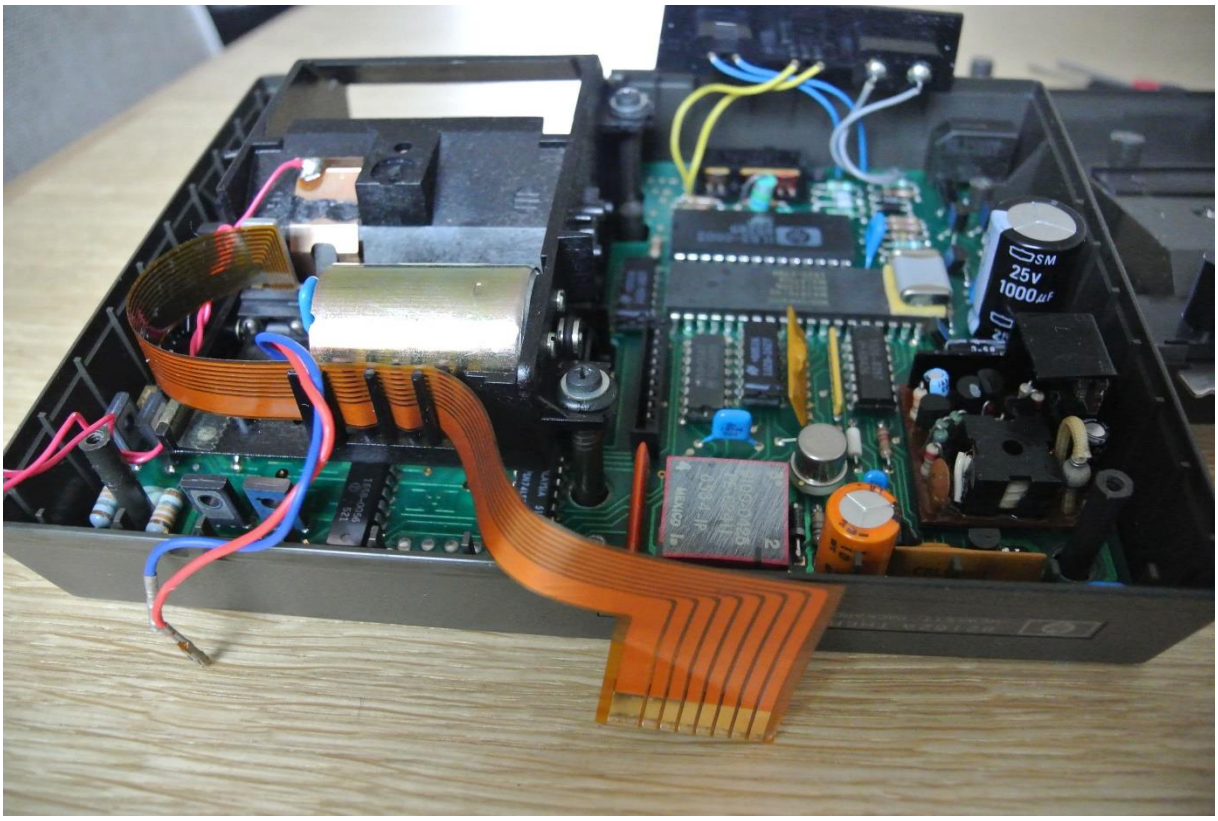
Make a tool to remove the connection from the printhead to the pcb. Don’t try to pull the cable out without a tool! This will damage the cable.

Take a tin or brass sheet about 0.3 mm thick. Make it suitable to fit into the socket with a pair of scissors. Round the edges a bit.

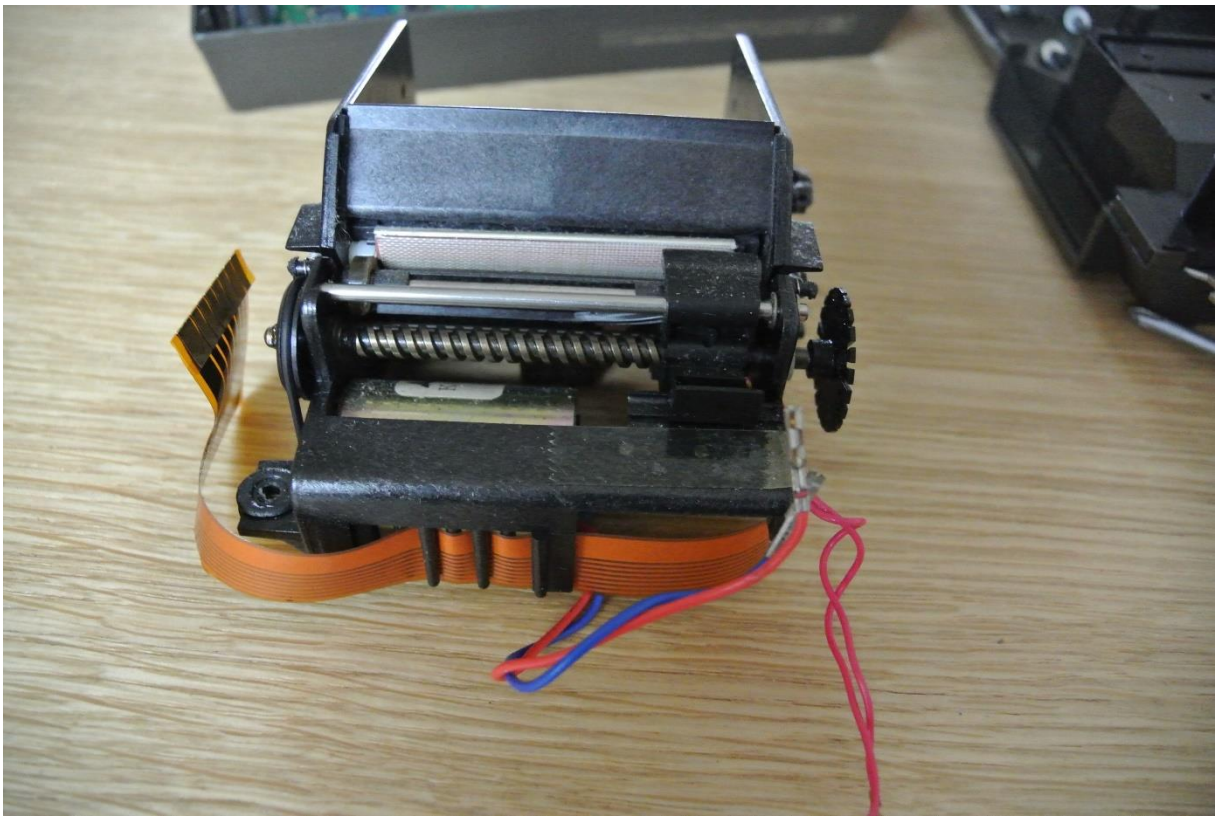
Put it into the socket and pul out the cable. An alternatove is to leave the cable in the socket and unscrew the printhead from the printheadholder.



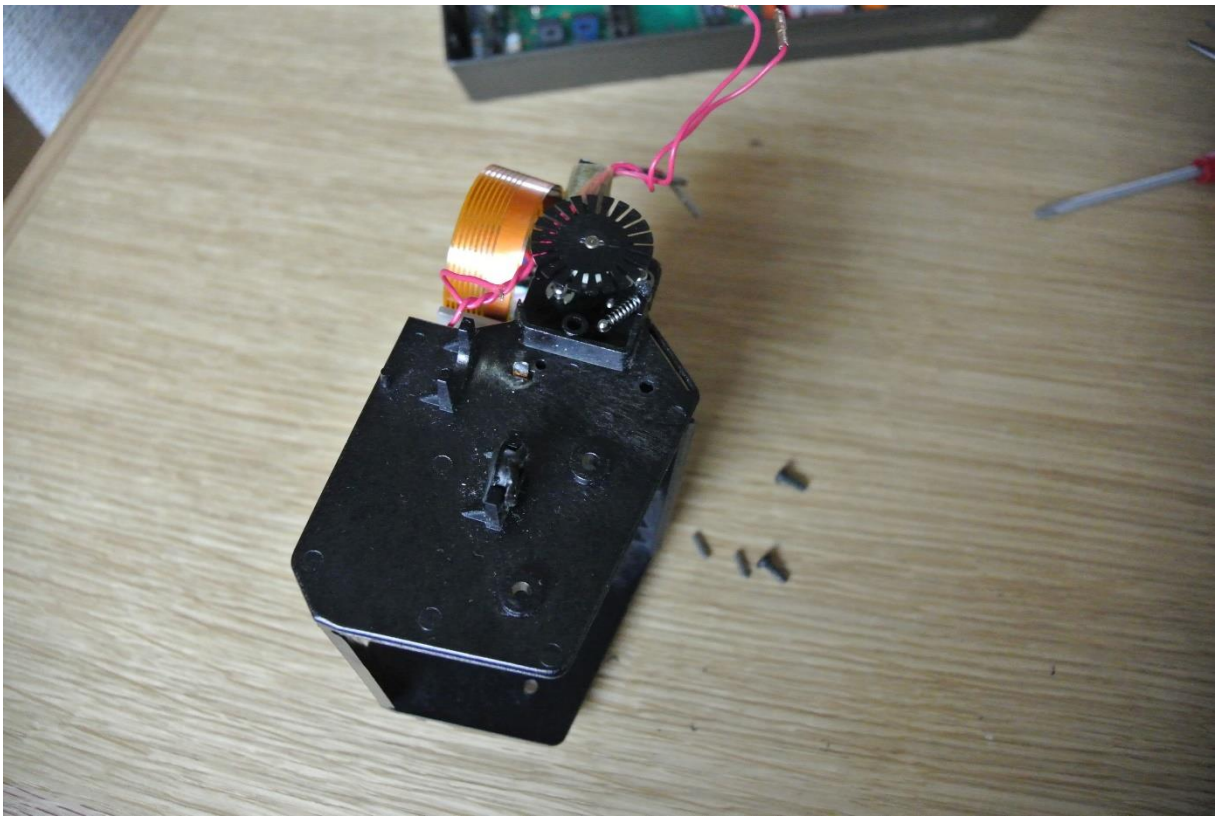
Pull ut the cable:



Remove the 3 screws which holds the printer assembly, take it out.

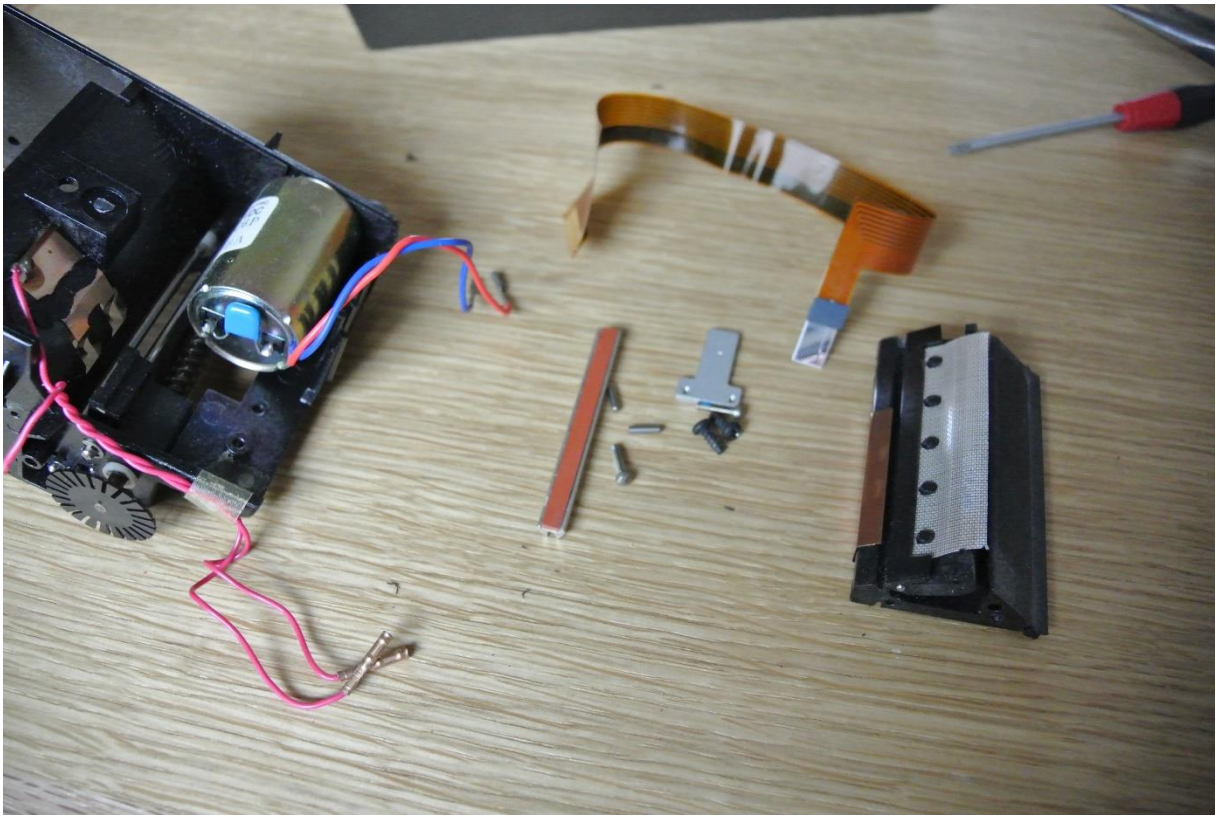


Unsolder the cable on the right side, unscrew the paperguide (2 small screws on the side). Remove the 2 little pins with a pair of pliers.



Take out the paper guide, move the head to the leftside using the optical wheel.

Unscrew the printhead and take it out.

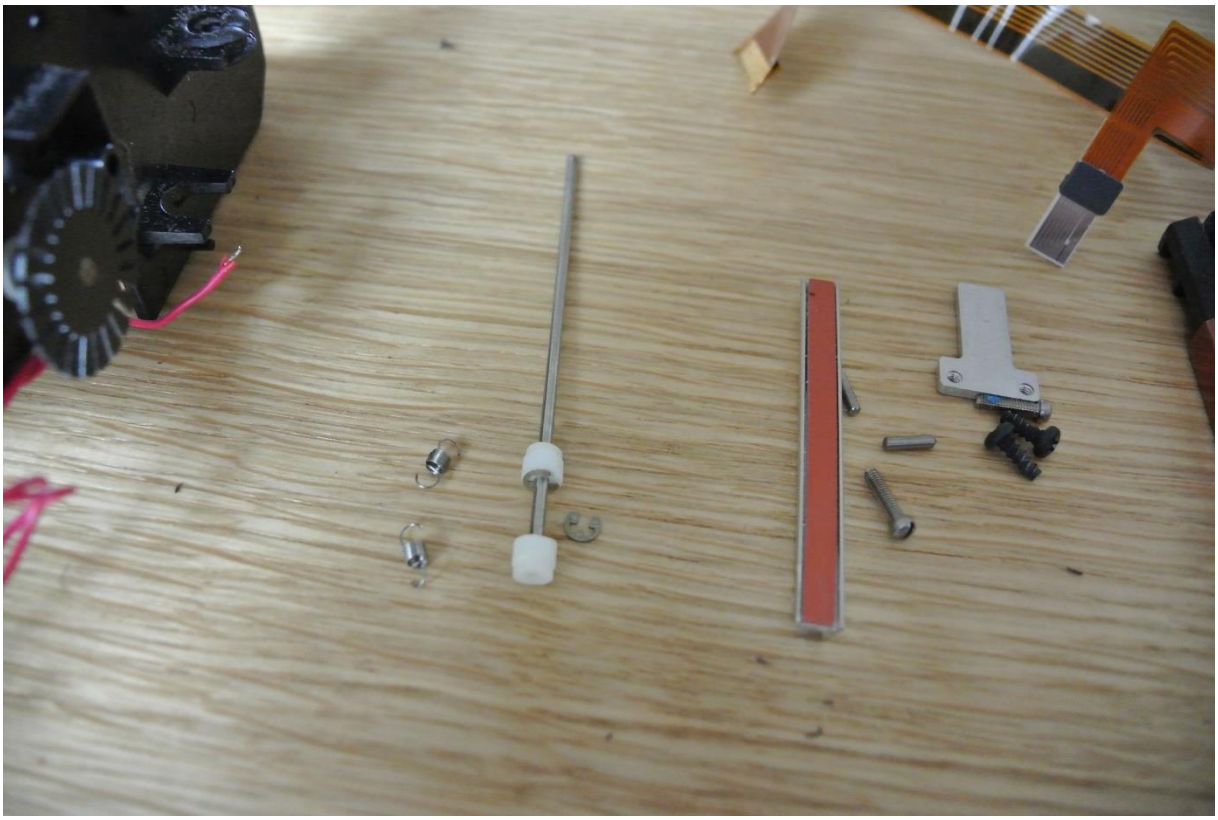


Take out the 2 little springs which hold the axle that gives pressure to the paper advance through 2 small plastic wheels

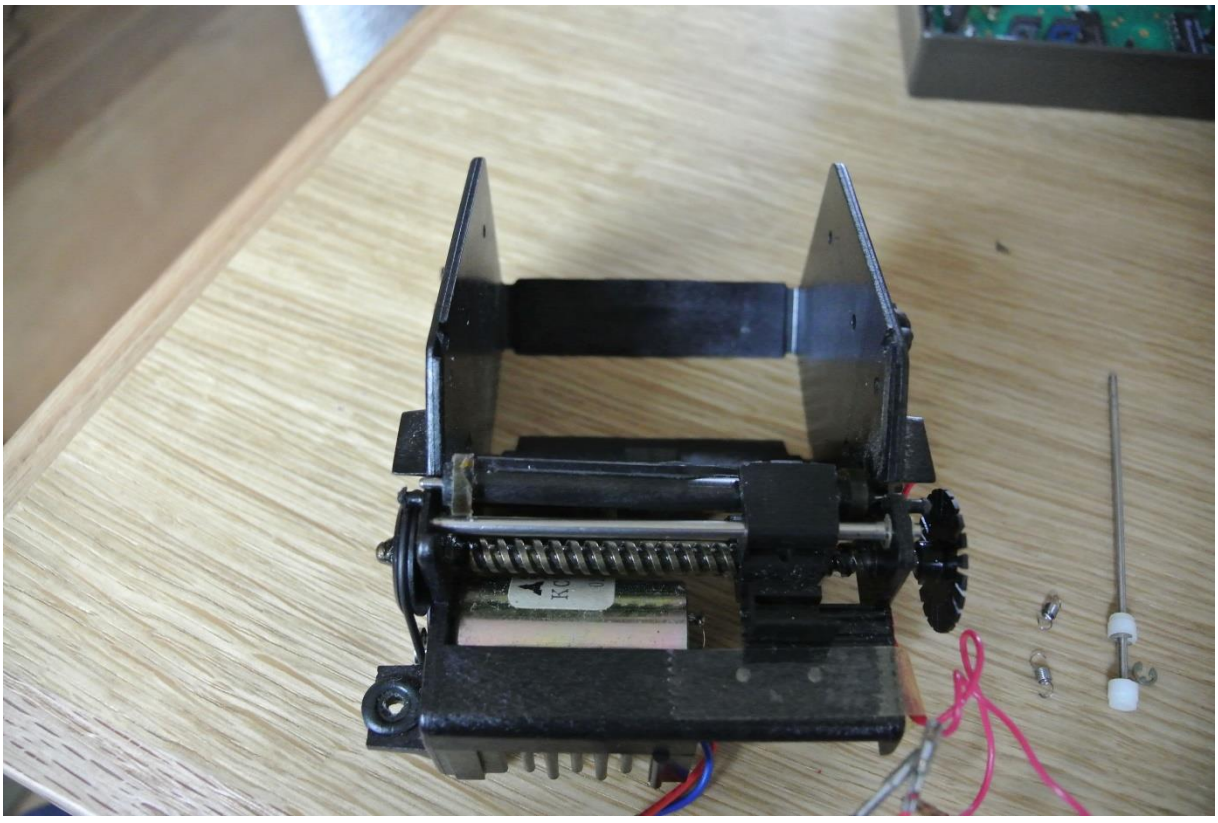
Remove the locking spring from the small axle only on one side with a small screwdriver!

A magnetic tool will help, you won't find these parts on your carpet in case they are jumped off!

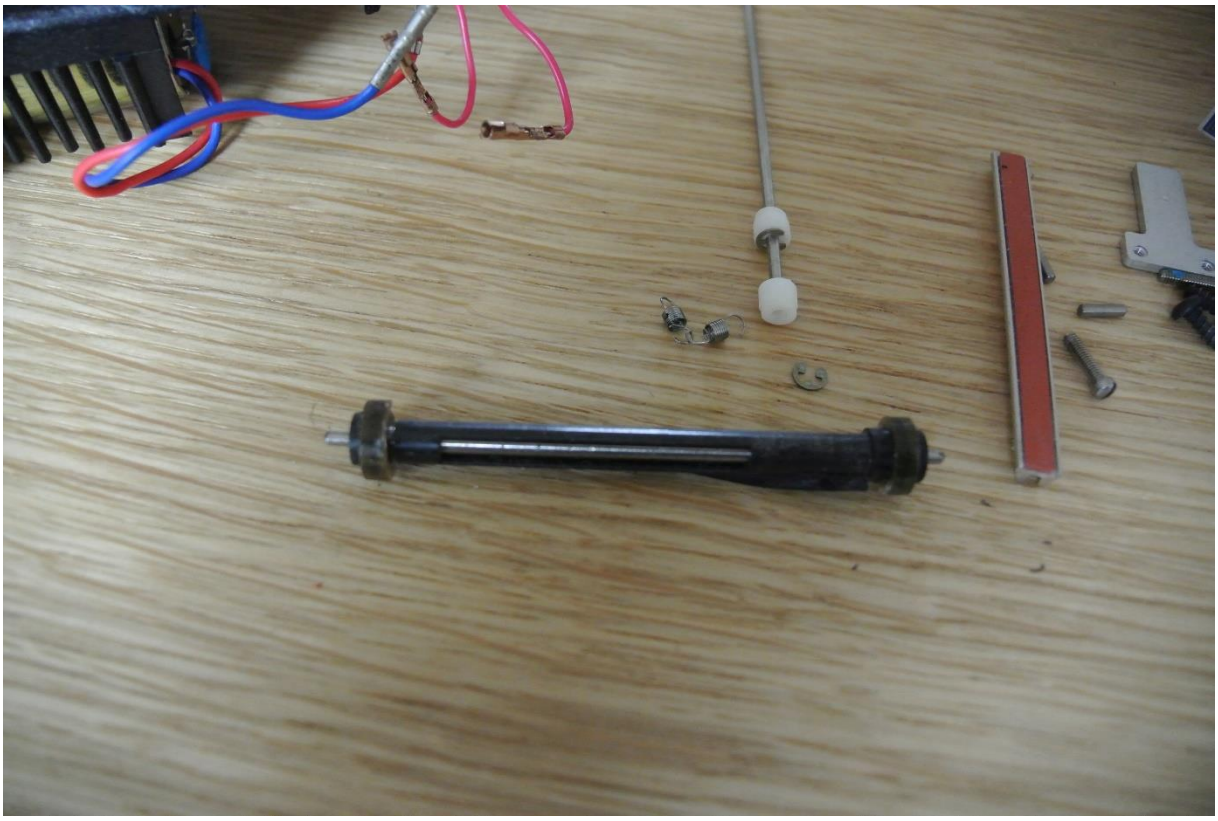
Pull out the small axle, this is only possible in one position, don't use force.



Now bring the head into right position like on the picture:



Lift the paper advance on the left side, accelerate the paper advance to the front for 90 degrees and pull out the paper advance using a light force.



Remove the old gum on bothe sides of the paper advance.

There is a small nose on both sides of the roller. Remove it using a side cutter and a sharp knife. Need not to be very exact.

Now take a silcontubing (modellhobby shop fuel line) and cut two pieces of 2-3mm each.

It is a bit diffucult to cut very excat, but this doesn't matter.

There are some different qaulities of silconetubing. I use a more solid one.

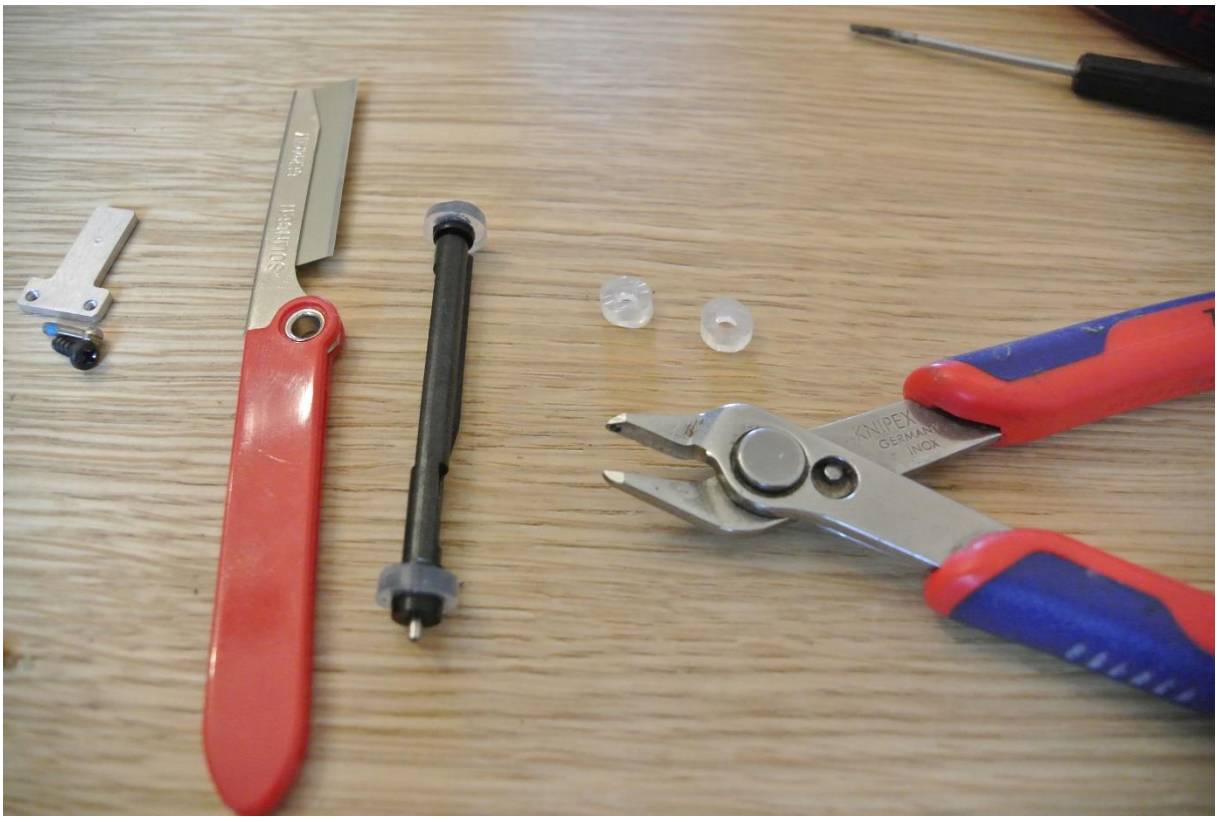
What is very important: The diameter of the original gum rollers is 8.25mm. The maximum is 8.5mm

Otherwise the head cannot path and will stuck.

Take a 1mm thick 7mm inner diameter tube.

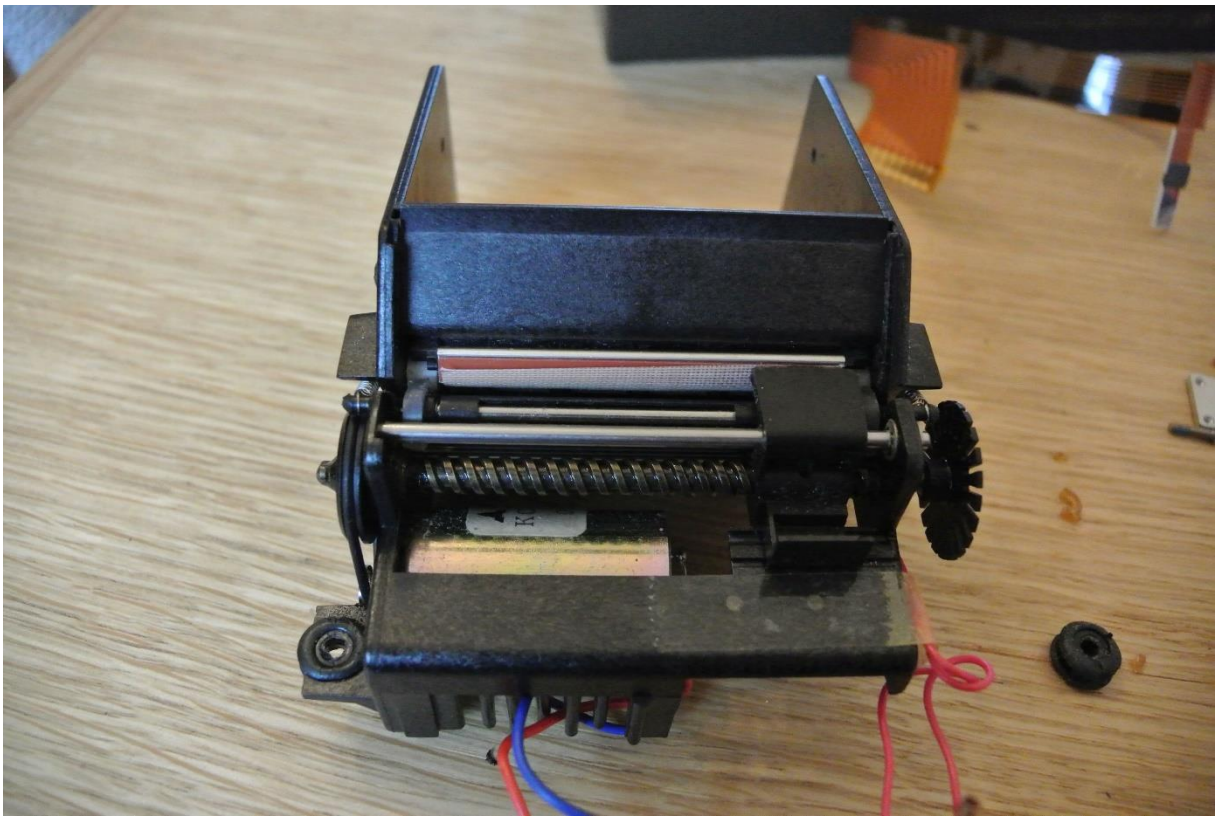
You can fix it with a very small amount of CA , but in practice it will hold without CA as well.

Adjust the tube rolling the paper advance on a flat surface.

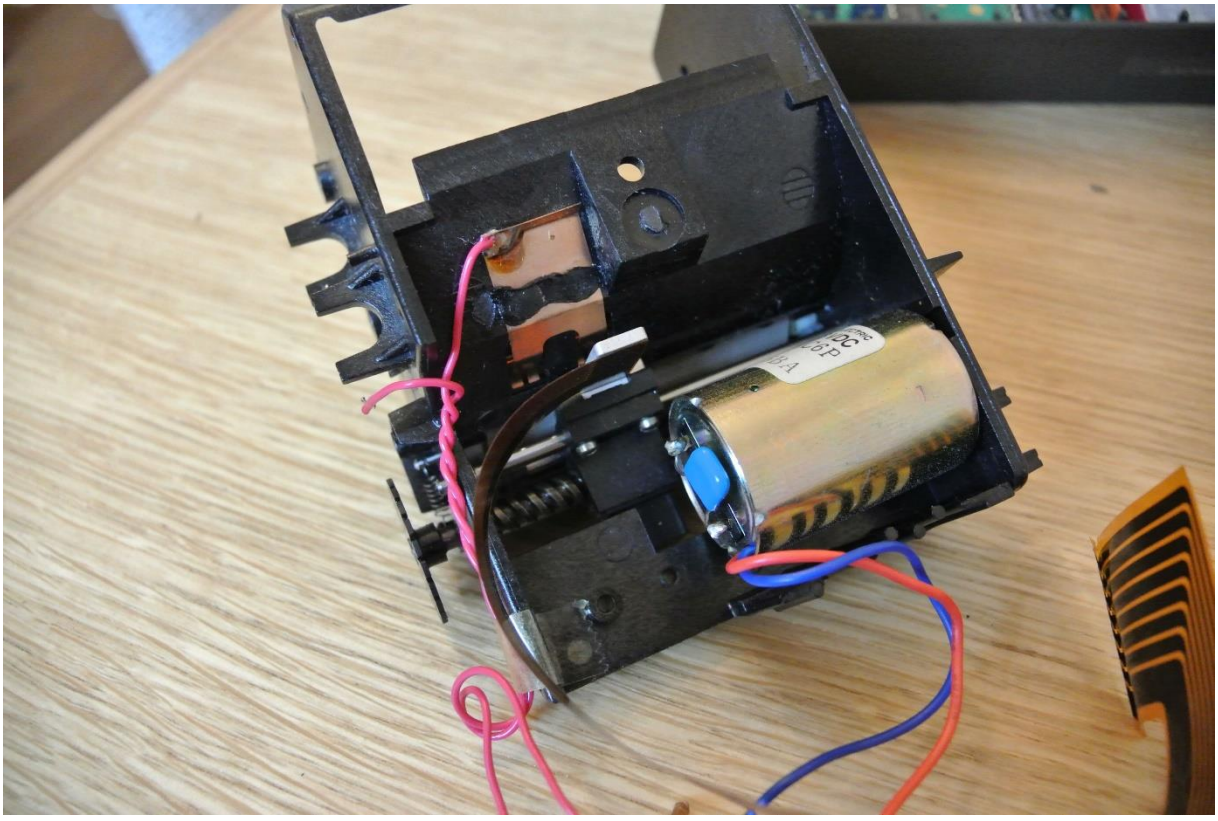


Now put the roller back into the printer assembly. The long open side to the left.

Put the paper guide back. Try not to bend the glassfiber foil to much. Look for the correct position.
Put the pins into the case. Put back the 2 small screws with not to much force.

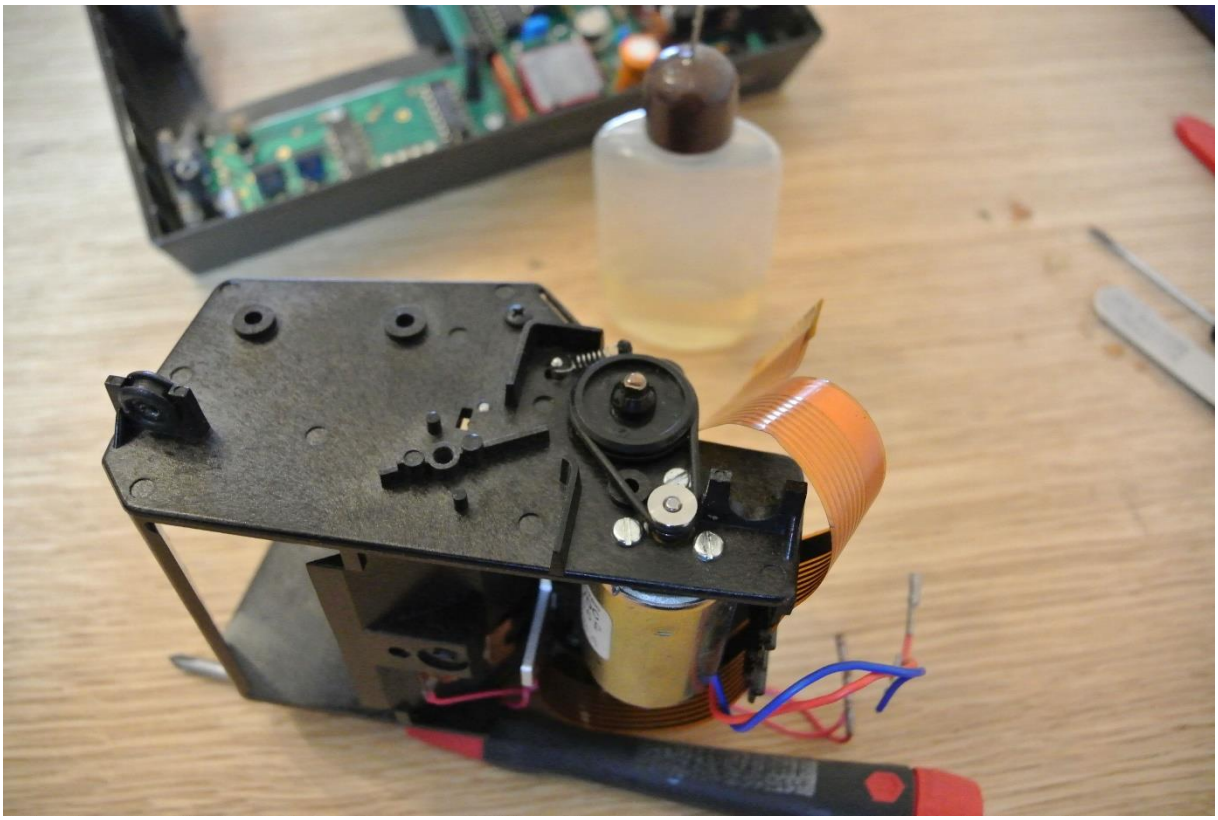


Now put the printhead back into the guide and mout the aluminum back plate. Look carfully for the correct fit. Doublecheck it, otherwise you could break the ceramic of the print head.

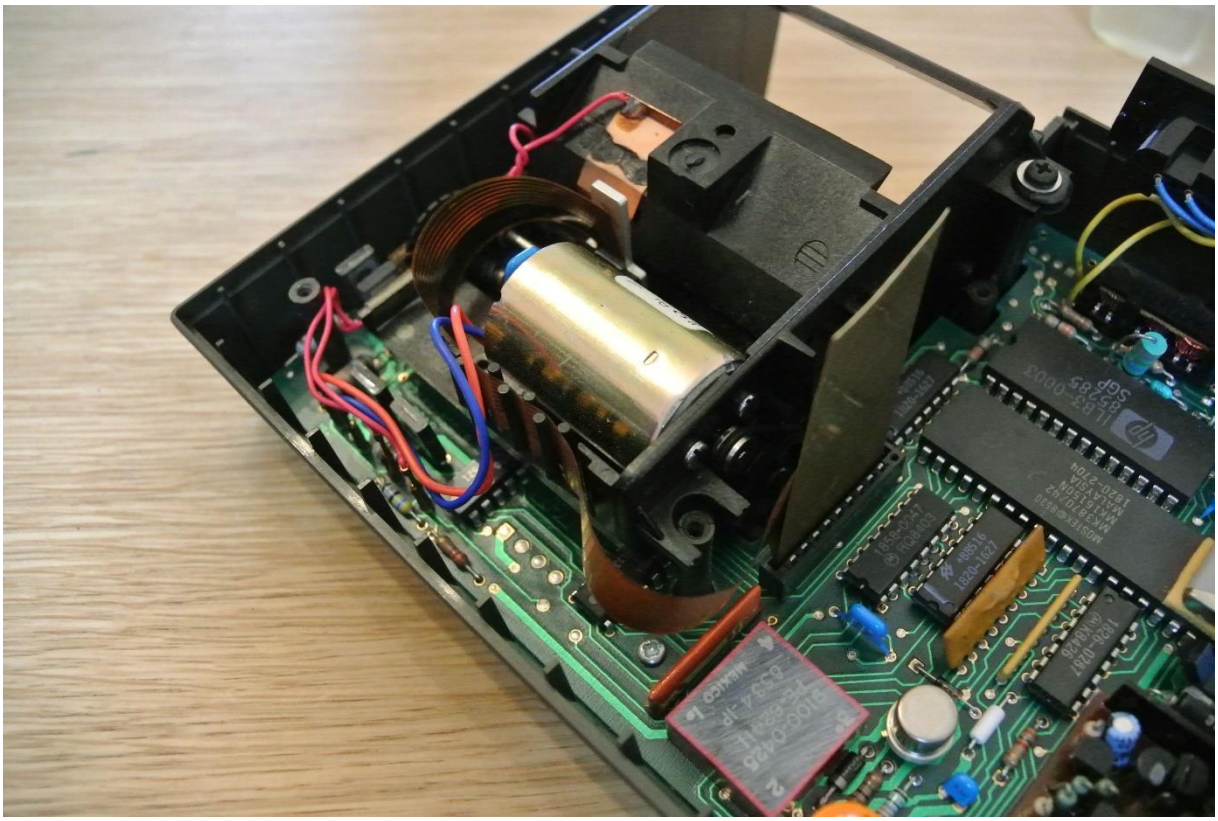


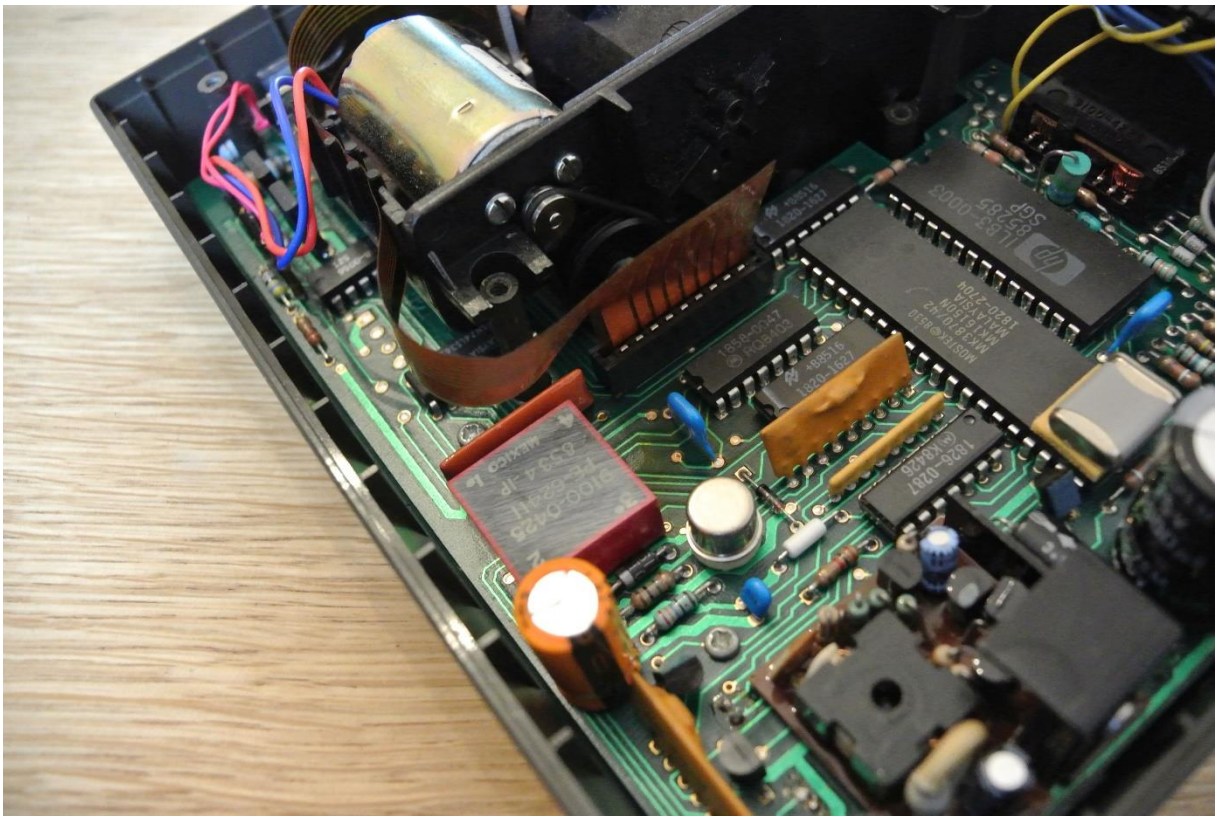
Now remove the drive belt and clean everthing, especially the motor pulley with alcohol.

Take resin-free fine machine and oil the plastic and brass bearings. Take only one drop.



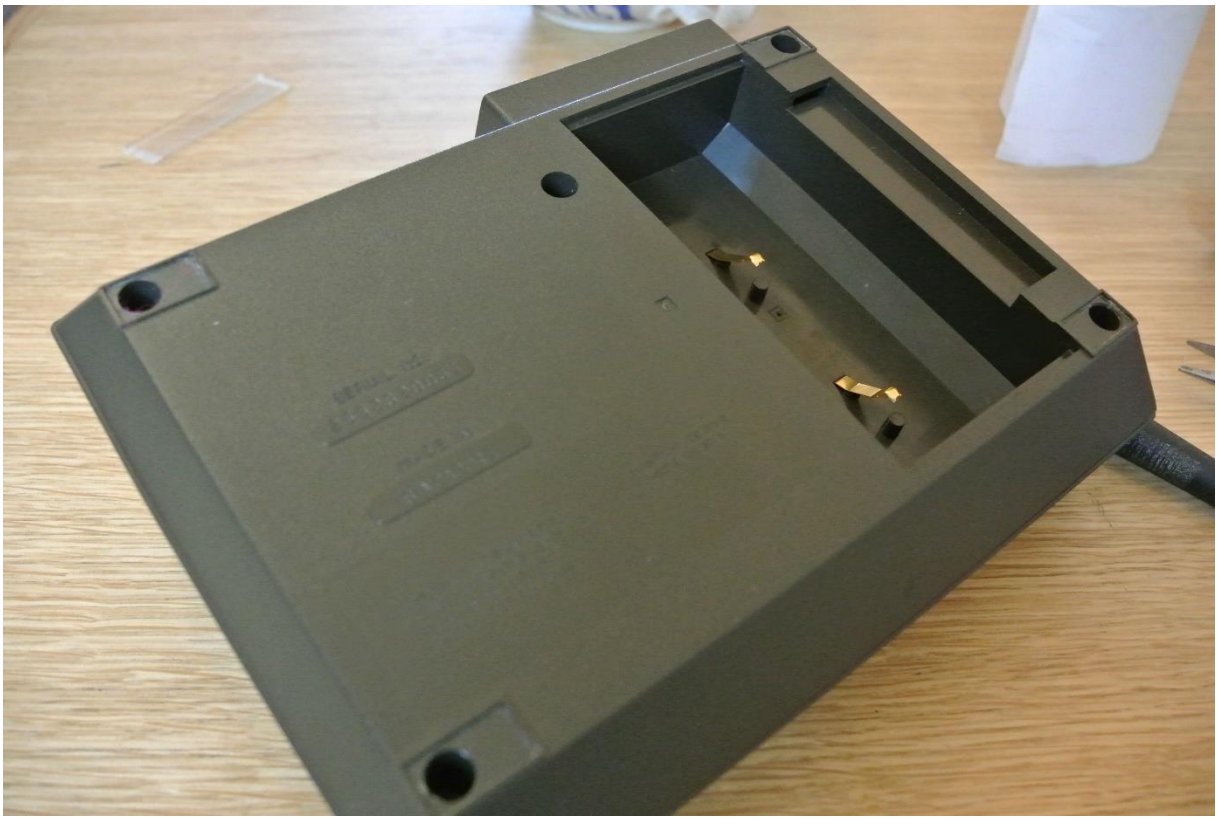
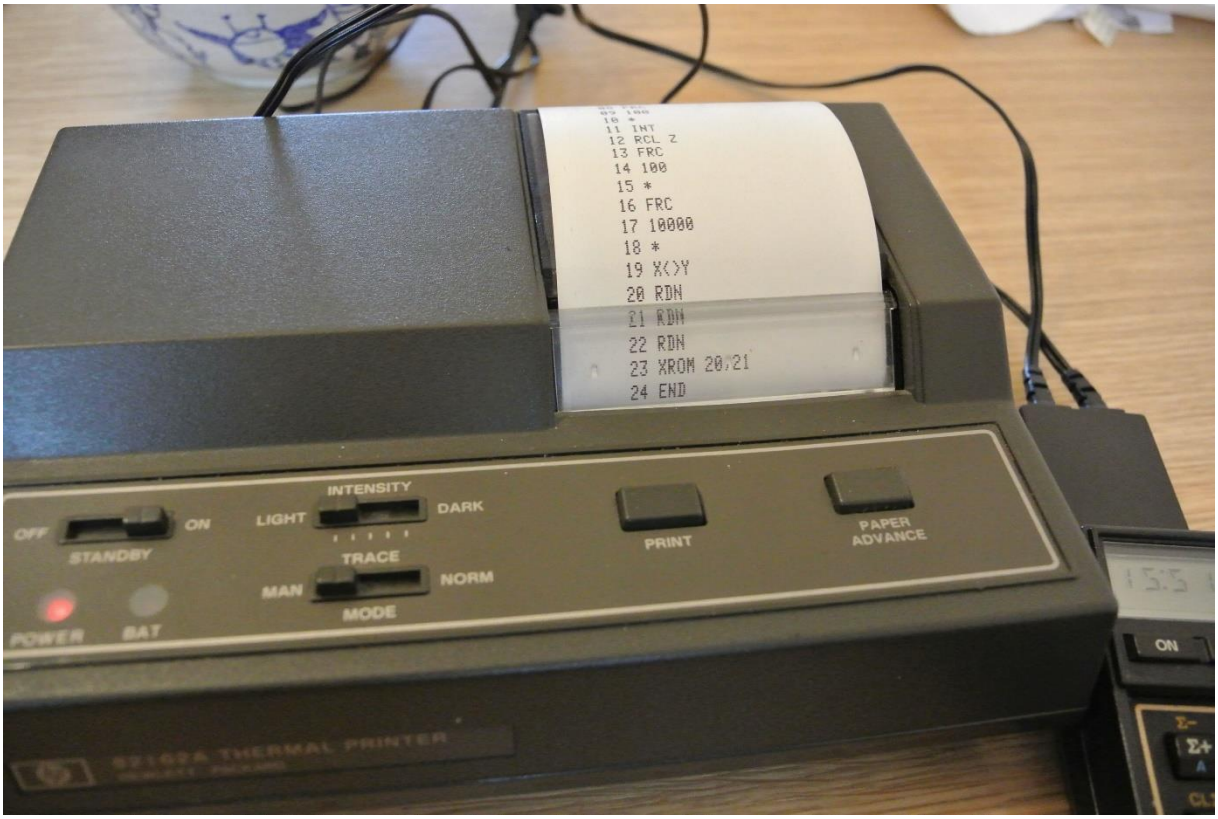
Put the printer assembly back into the printer housing and screw it tight, so that the assembly is not tilt or twisted. Use only small force. Use the tool and put the film cable back into the socket in the same way you took it out.





Put all together, look for the film cable not to be bend down from the housing. Look into the front of the housing and take a screwdriver to get it into the right position.

The back plate should fit snug and smooth, there should not be any resistance.



Do the final test: