

INSTALL GUIDE – 420-400

Replacing the Print Head on a DC3/4/4SX/5/5SX Printer

Required tools:

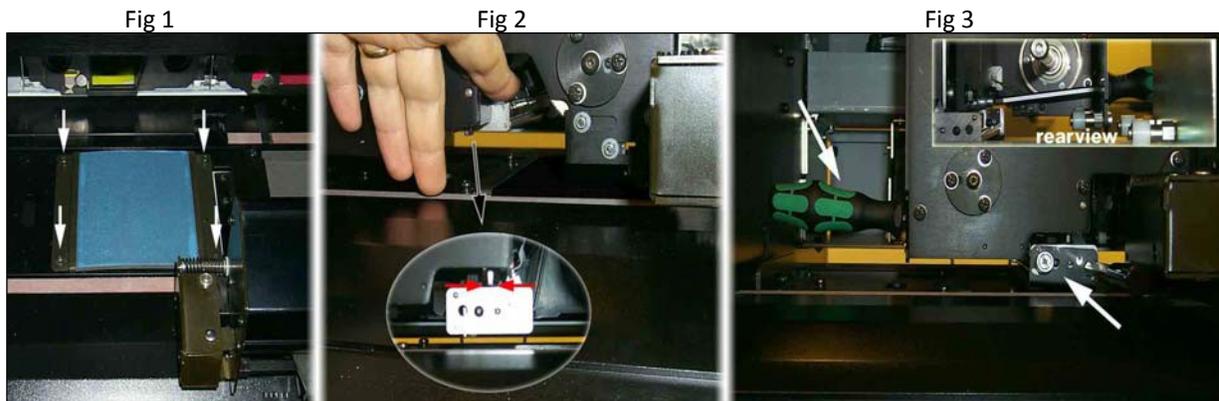
1. Tooling kit head replacement (part# 420-403 see fig.)
2. Wrench #8mm
3. Wrench #10mm
4. 3mm Allen
5. Magnifying glass (+/- 8x)



Instructions:

Removal of the head

1. Switch the machine off (follow procedures described in the user's manual to shut down and disconnect).
2. Open front cover, move by hand the carriage to the right.
3. Loosen the 4 screws, which hold the cleaning plate, 5 turns.
4. Remove the cleaning plate (see fig 1 picture below).
5. Push the printer carriage back over the place where the cleaning plate was.
6. Now manually push the head down until the top rim of the head comes parallel to the bottom part of the guiding (see fig 2 picture below)
7. Screw the print head replacement tool on the head (see fig 3 picture below).
8. Move the carriage slightly to the right (make sure the handle of the tool does not push against the idler Y pulley of the cutter guiding).
9. Loosen the three screws that secure the head to the carriage. Seven turns is more than enough. The screws are secured with a rubber o-ring. Do not pull on the screws, otherwise the o-rings will fall off.

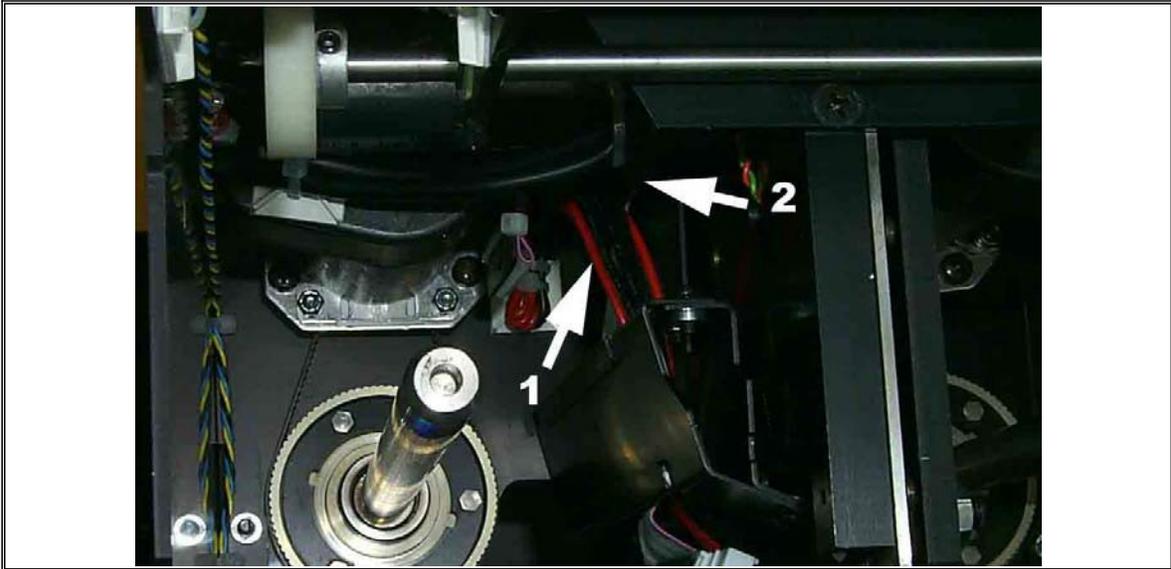


10. Now move the head gently to the right (there are still two guiding pins, which hold the head in its correct position).
11. As soon as the head is completely loose from the carriage, gently pull it forward. Stop when the first cable can be disconnected. Disconnect it and then do the same for the second cable.
12. Remove the print head replacement tool from the head.

Installing of the head

1. Take the head out of its protective packaging.
2. Check whether the serial number on the head corresponds to the serial number to the head profile that was emailed to you.
3. Screw the print head replacement tool on the print head.
13. Align the head in front of the carriage, begin to move it under the carriage.
14. Connect the two cables as soon as the cables reach (first the power supply cable - the black and red ones, then the data cable - the gray one). While connecting the cables support the PCB with one hand.
15. Align the two guiding pins in the head.
16. When the head is over the pins, screw the head secure to the carriage. Begin with the middle one. Turn it until it is almost secure. Then screw the two outer screws almost secure. Then fasten the middle one. Finally secure the outer ones.

Open the rear cover and check for the path of the cables. While replacing the print head, make sure that the path of the power supply cable (1) stays in the loop of the data cable (2)



17. Remove the print head replacement tool.

18. Push the head in its up position.

It is advised to start with a new cleaning surface for the cleaning pad after a head change, so before reinstalling either turn it or replace it if the other side was already used.

Calibrating of the head DC5

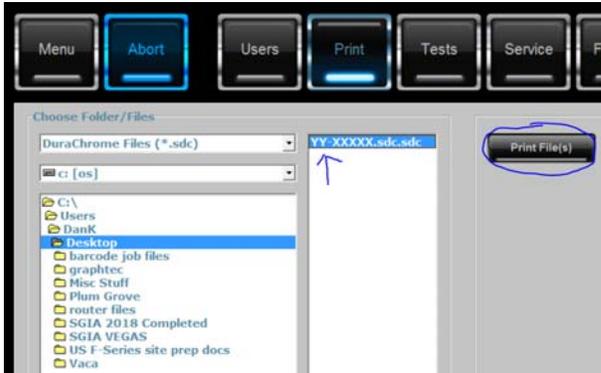
Electronic calibration DC5 (see below for DC3/4)

1. Switch on the DC5.
2. Wait until the printer boots up.
3. Press Settings/System Menu/CAL TEMP SENSOR.
4. After the test is done the DC5 will prompt the user to reboot the machine, do so

This test is a calibration of the temperature sensors of the head. To obtain accurate results, the head has to be at least for three hours in the same room as the DC5 itself.

5. After the DC5 restarts starts up, open the Summa Printer Control program.

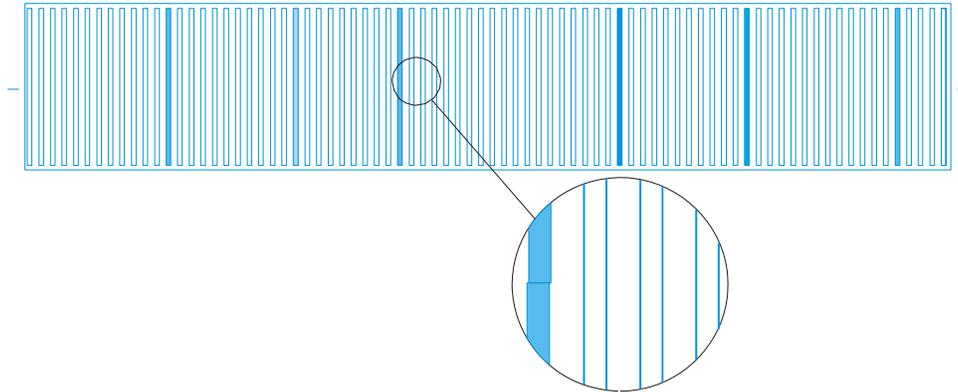
5. Click on the PRINT button to send the profile file to DC5. Download the profile from the attachment that was emailed to you and save to a location on the computer easy to find (i.e. desktop). The name of the file should be the serial number of the head...YY-XXXXX.sdc.



6. Calibrate the density. The profile will update the density automatically and will use the setting of the density that was used when qualifying the head. This value is a good starting point, but some machines and types of vinyl might require another density setting. There is an optional density calibration:
7. Make a rectangle of 98 by 200mm 95% cyan. Print that out with Summa Color Control, use default printer settings as screen settings. In the printout the coverage may not be a 100%, a clear pattern should be visible.
8. If the coverage is a 100, redo the test with a density setting 300 lower. Check for this pattern, repeat this until the pattern is regular. Then raise the density by 100.
9. If the pattern is regular, redo the test with a density setting that is 300 higher, repeat this until the white dots start to close up. Then lower the density by 200. Switch the machine off.

Mechanical calibration DC5 (see below for DC3/4)

1. Switch on the DC5.
2. Wait until it is initialized.
3. Press the Settings button, then enter the Printer menu.
4. Select HEAD ALIGNMENT and choose the Manual Test.
5. The DC5 will now print out a test pattern in two passes. The lines must meet in the middle. Fig below shows non-meeting lines in close up. To align them correctly, the carriage has to be rotated. It is possible that in this test the lines do not touch or overlap. This is because the line feed test has not been done yet. If it makes the alignment to difficult, then first do a linefeed calibration.



7. If the lines do not meet loosen the carriage. The carriage is fixed to the carriage plate with 4 bolts (#8mm). Bolts 1 and 2 are visible in the figure, bolt 3 is at the rear of the carriage behind the y-guiding and bolt 4 is under the carriage plate. Loosen the bolts just enough that the carriage can rotate freely (this means usually app. 1.5 turns).

