

A Guide to Replacing the Print Head in a DTG Kiosk

Replacing the Print Head in the DTG Kiosk is not a difficult process, however it is reasonably time consuming and will require attention to detail, patience and a certain level of dexterity.

What you will need:

Small Phillips Head Screwdriver

Small flat blade Screwdriver

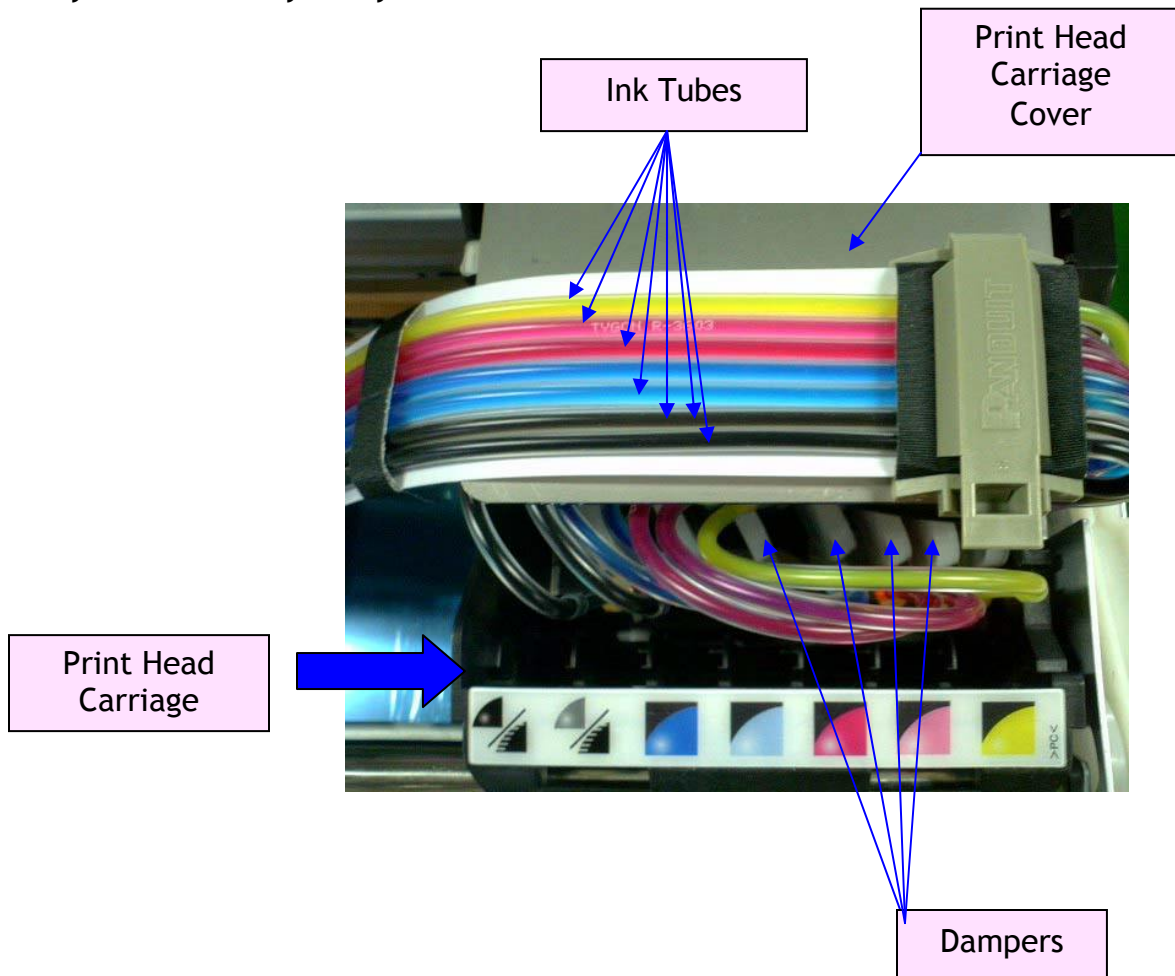
New Print Head

Clear Working space

A friend with a spare pair of hands (not essential, but would be helpful)

Overview:

The Print Head is an electronic component that delivers ink to the printing surface via a series of nozzles contained within the Print Head. The Print Head assembly contains points of attachment for the ink supply, a small circuit board and the nozzle firing surface. The nozzle firing surface is quite sensitive and you should take care to ensure that it does not get scratched or otherwise damaged during the installation process. We recommend not removing the new print head from it's packaging until the old print head has been removed and you are actually ready to install the new one.



To actually get to the print head, there are a number of components that must be removed first. Take care to note which screws go where, and in which direction components are placed as you remove them.

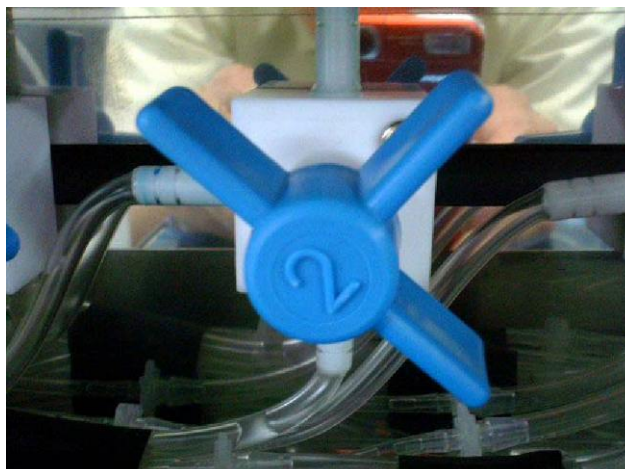
Step by Step

All instructions assume that you are positioned to the front of the printer, unless otherwise specified.

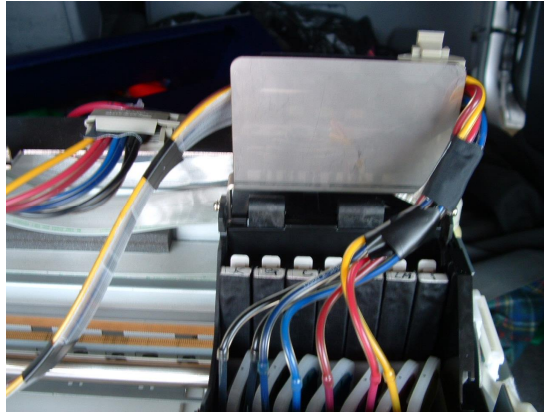
1. Remove the 3 screws which secure the printer cover to the body of the printer (1 screw on each side of the front of the printer, and one on the rear, on the opposite side to where the ink bottles sit):



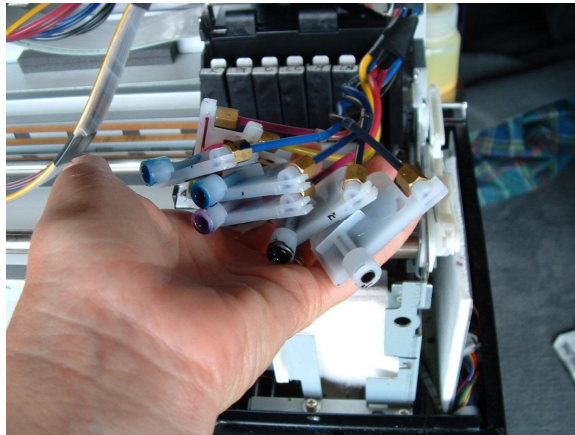
2. Gently lift the printer cover vertically until it is clear of the moving printer components and put aside.
3. Turn all of the ink valves (located at the rear of the printer) to the “closed” position:



4. Raise the Printer Head Carriage Cover to allow easier access to the dampers (there may be black tape holding the cover down to the Head Carriage, you can remove this):



5. Remove the dampers one by one by firmly (but carefully) lifting them straight up and off the Ink “nipples” on which they sit.

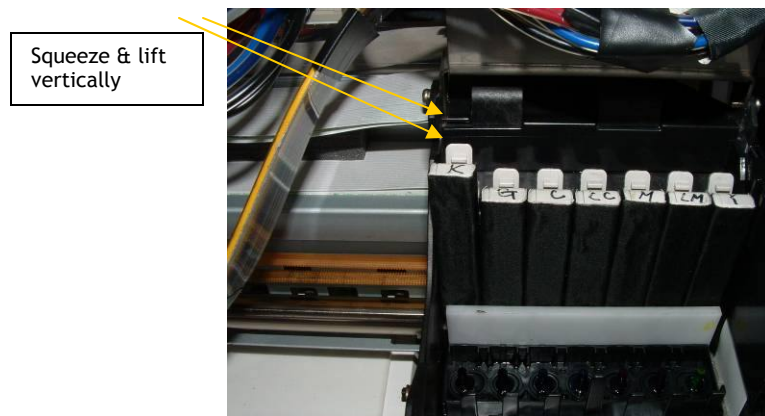


6. Holding the dampers carefully out of the way, remove the two screws which hold the Printer Head Carriage cover to the carriage (one screw on either side of the pivot point for the cover). Lift the carriage cover out of the way, along with the dampers. (You may wish to sit the dampers on a piece of scrap fabric to absorb any small amounts of ink which may leak from the dampers).

7. Using a pair of long nose pliers or similar, lift the brass / copper coloured leaf springs from the front of the carriage:



8. (YOUR MODEL MAY NOT REQUIRE THIS STEP): Remove and put aside the cartridge “blanks” which are positioned at the rear of the Printer Head Carriage by squeezing the clip to release each one from it’s holding position and lifting vertically:



9. (YOUR MODEL MAY NOT REQUIRE THIS STEP): Remove and put aside the white nylon spacer, again by lifting it vertically from the Printer Head

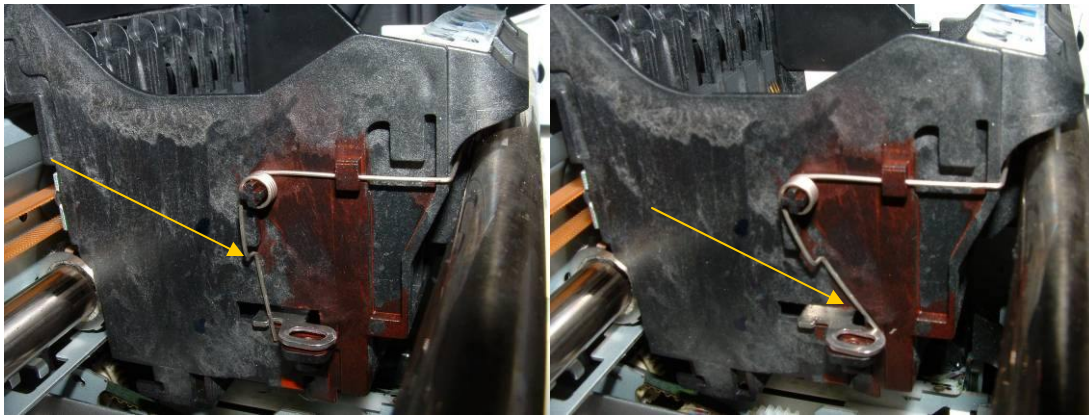


Carriage:

10. The next step involves removing the metal bar which holds the Print Head securely in place. The metal bar protrudes through each side of the carriage and is secured on each side with a screw. Remove these screws.



11. Before attempting to remove the metal bar, you will need to un-hook the spring that is located on the left hand side of the printer carriage from it's holding position and re-hook it on the tab to which the metal bar was screwed:



12. Using your fingers, grasp the left hand end of the metal bar (where it protudes outside the Printer Head Carriage). Slide it to the left, so that the right end of the bar slides through the slot in the side of the carriage until it is inside the carriage. Now lift the right end of the bar up and over the right side of the carriage in order to pull the left end of the bar through the slot in the side of the carriage and clear of the carriage:

13.

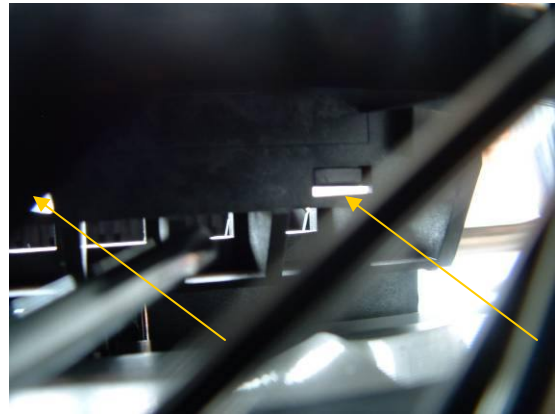


Lifting bar up &
to the right

You will now be removing the black plastic guard which houses & protects the flat ribbon cables which are connected to the Print Head Carriage, and curving around the right hand side of it. This guard does not screw in, it is secured in place by three locking tabs. These tabs can be released by pressing them firmly with a small screwdriver. One tab is located on the right hand side of the print carriage (where the guard is vertical), and the other two are located behind & underneath the rear of the guard (which at this point is horizontal):

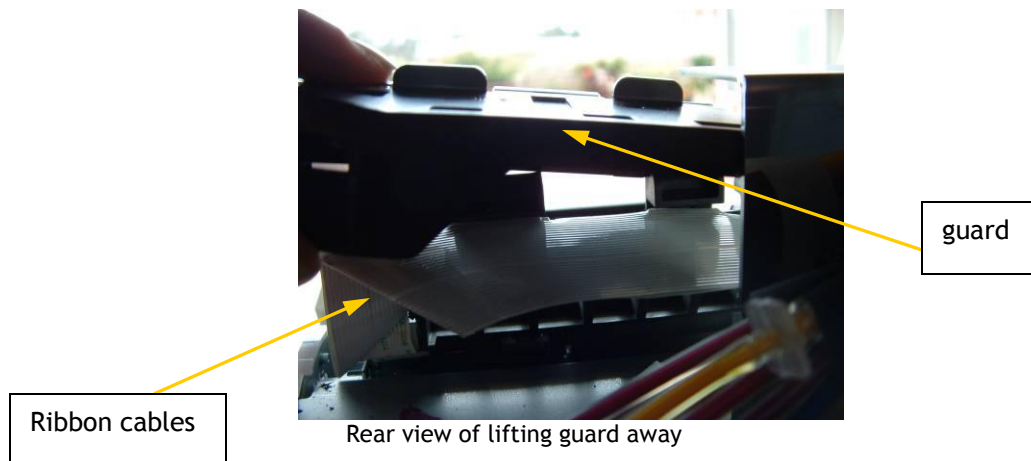


View from right hand side of carriage



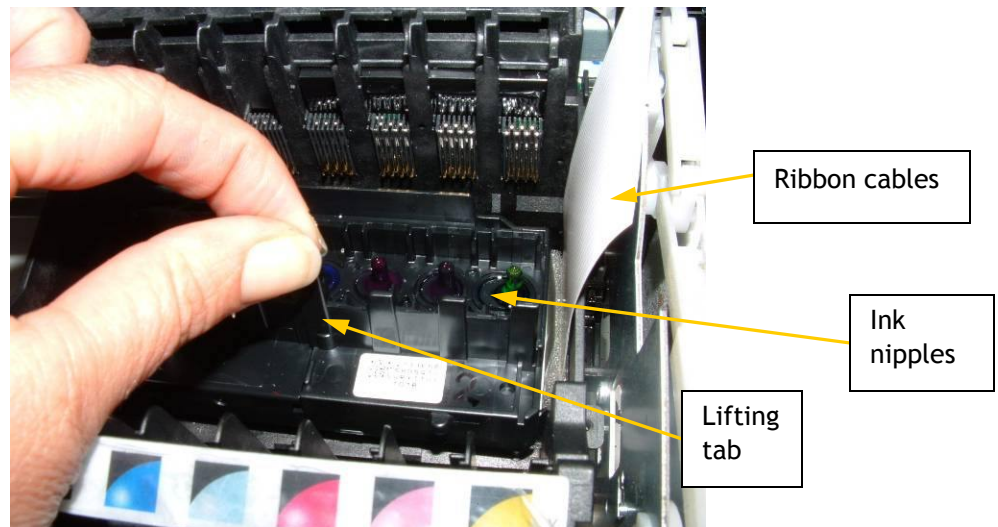
View from behind & underneath carriage

14. Once you have released all three tabs, you should be able to gently “wiggle” the guard up and away from the carriage and the ribbon cables that the guard protects:



Rear view of lifting guard away

15. The Print Head Assembly is now clear to be removed. What you see when you look into the carriage is the top of the assembly. Towards the rear of the Assembly are seven Ink “nipples” - the dampers push on to these and deliver the ink during normal printing. Near the centre of the Assembly is a tall, vertical plastic tab which you can grip with your fingers to simply lift the print head away from the carriage. Take care not to pull the Print Head Assembly too far out, as the ribbon cables are still attached to the circuit boards contained within the assembly:

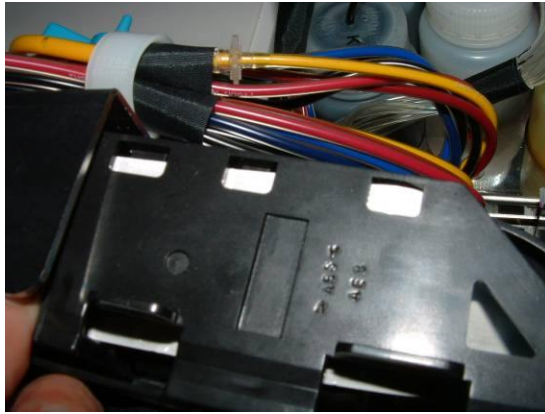


16. You will need to now disconnect the two ribbon cables which are attached to the circuit board, at the right hand side of the Print Head Assembly. The top cable is approx 40mm wide, the one underneath is approx 20mm wide. To disconnect them, (one at a time), firmly grip the print head assembly in one hand, and firmly (but carefully) pull the ribbon cable from the slot in which it is connected. Ensure that you pull straight out, not at an angle. Repeat for the second ribbon cable:



17. It is now time to unpackage your replacement print head. Connect the ribbon cables to it, ensuring that you push the connectors firmly (again, but carefully) home into their respective slots in the side of the print head. Take care that the ribbon cables go in straight and that the connector pins are clean & not damaged in any way. Also take care not to touch the nozzle firing surface (or print face) of the Print Head Assembly, nor to rest this print face on any surface. Hold the assembly by the sides and / or the tabs on the top.
18. Place the new Print Head Assembly (with connected ribbon cables) back into position in the Print Head carriage.

19. The re-attachment of the guard for the ribbon cables is a little fiddly. Slide the ribbon cables under the top of the guard so that they sit flat and over the small guides at the rear of the guard. Take great care not to pinch or bend the ribbon cables during this procedure:



Top view with ribbon cable over guides

Side view with ribbon cable contained in guide

20. Position the guard over the Printer Head Carriage so that the slots at the front of the guard line up with the rounded “hinges” at the top rear of the carriage. Tilt the guard down towards the rear while allowing the slots at the front to “roll” onto the hinges of the carriage. Keep the ribbon cables clear of these hinges, ensuring that they are still sitting flat and within the guides at the rear of the guard. Also check that the ribbon cables are sitting within the side guide of the guard:



21. Gently press down on the guard (check that the ribbon cables are within the guides and clear of the hinges) until it “locks” in place. Check that the 3 holding tabs (two at the rear and under the guard, one at the side) have also locked in.

22. From here, the reassembly of the components into the printer head carriage is simply carried out in reverse to the disassembly:

- ◆ Re-insert the metal holding bar and replace the screws
- ◆ Hook the spring back into it's normal holding position
- ◆ Replace the 2 leaf springs, ensure that they are fitted firmly in place
- ◆ Re-insert the white nylon spacer at the rear of the carriage
- ◆ Re-insert the cartridge blanks, ensuring that the correct colour goes into the correct slot, and that they each "click" into place
- ◆ Re-attach the cover to the Printer Carriage with the two screws
- ◆ If you are fitting new dampers, please refer to the "Removing & Replacing Dampers" section below, otherwise simply press each damper firmly in a downward direction back on to their corresponding Ink Nipple. You will need to angle the front of each damper slightly to the left to achieve correct positioning & fit.
- ◆ Lower the Print Head Carriage Cover.
- ◆ Re-assemble the Printer Cover, ensuring that you don't catch the ink tubes at the rear of the printer under the edge of the cover.
- ◆ Turn the ink valves back to the Ink position
- ◆ Run an ink fill for approx 5 - 10 seconds to fill the head with ink.

23. Run nozzle checks (from your printer driver), and if necessary head cleans until your nozzle check is satisfactory.

24. Run vertical & horizontal print head alignments until satisfactory

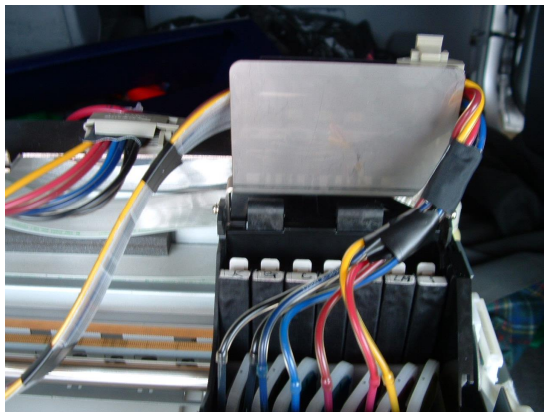
Removing & Replacing Dampers

If you are replacing one or more of the Ink Dampers, the procedure is very straight forward:

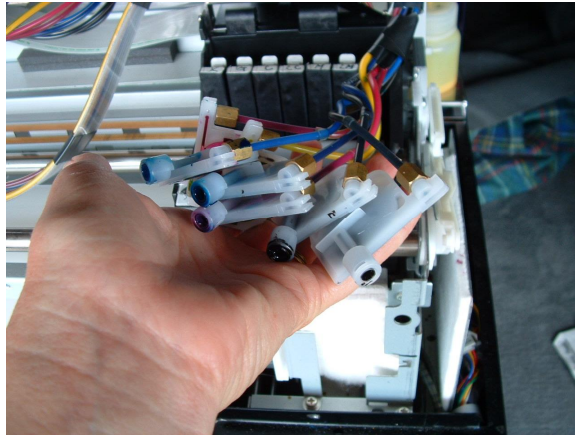
1. You may need to remove the printer cover as described in steps 1 & 2 of the head replacement procedure above to allow easier access to the dampers.
2. Turn all of the ink valves (located at the rear of the printer) to the "closed" position:



3. Raise the Printer Head Carriage Cover to give further access to the dampers (there may be black tape holding the Cover down on to the Head Carriage, this can be removed):



4. Remove the dampers one by one by firmly (but carefully) lifting them straight up and off the Ink “nipples” on which they sit. You only need to remove as many as you are replacing.



5. Unscrew the brass nut which attaches the ink tube to the damper - please be careful as there is a very small black rubber o-ring which sits around the ink tube within the brass nut and you do not want to lose this.
6. Discard the old damper, and attach a new damper by screwing it gently back into the brass nut. Repeat as necessary for each of the dampers you are replacing.
7. Press each damper firmly in a downward direction back on to their corresponding Ink Nipple. You will need to angle the front of each damper slightly to the left to achieve correct positioning & fit.
8. Lower the Print Head Carriage Cover
9. Replace the printer cover (if necessary)
10. Turn the valves at the rear of the printer to the “open” or “on” position.
11. Power the printer on.
12. Press the Ink Fill button for a few seconds until you see ink flowing into the new dampers.
13. Press and hold the Ink button for 3-4 seconds to start a head clean routine (this also closes the Ink Fill valves properly).
14. Run nozzle checks and head alignments until you are satisfied with the results.