Fixing Leaking Between Colours

This is a guide to fixing ink leaks between colour channels in your Epson inkjet print head - caused by aging of the gasket.

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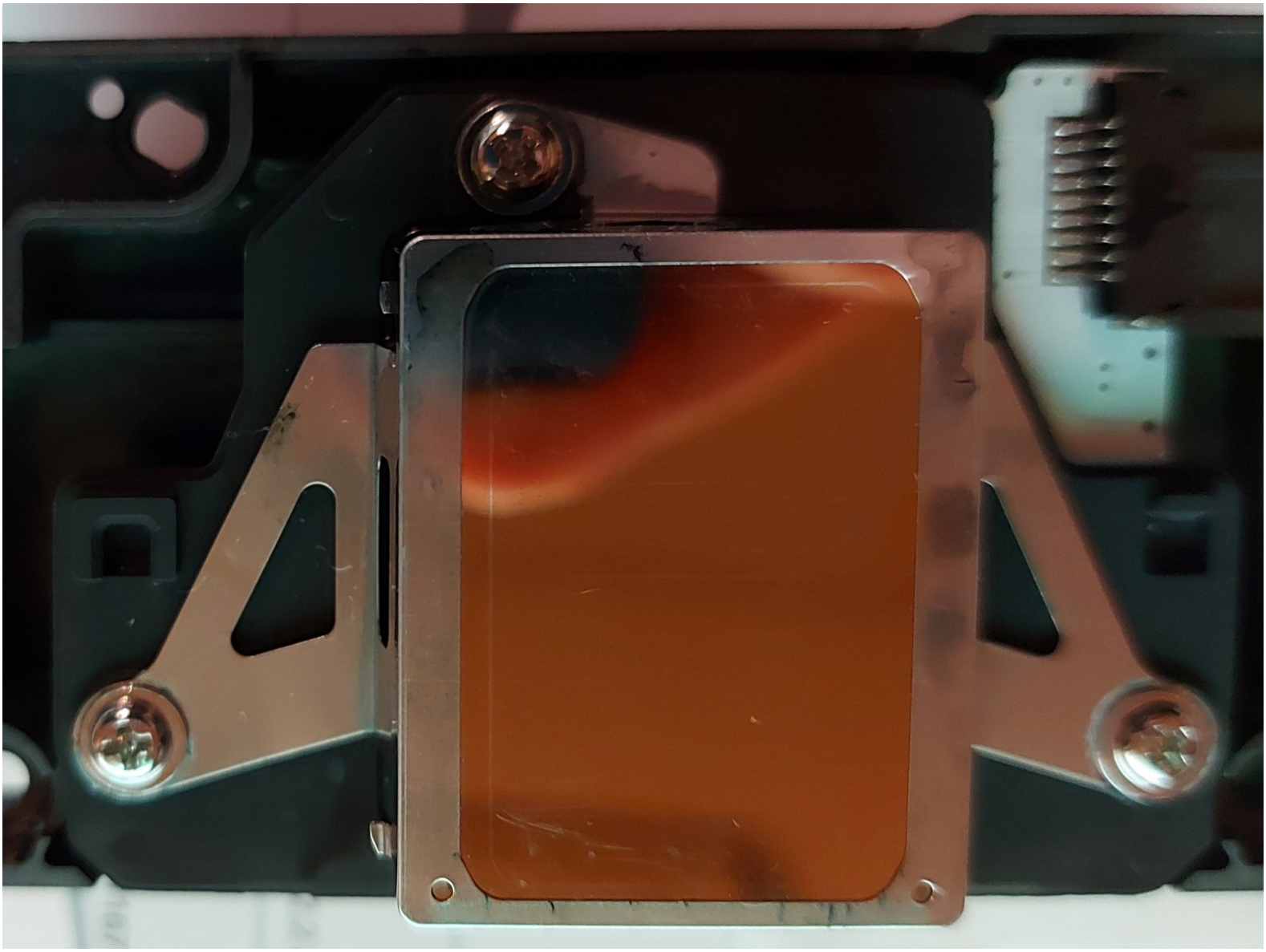


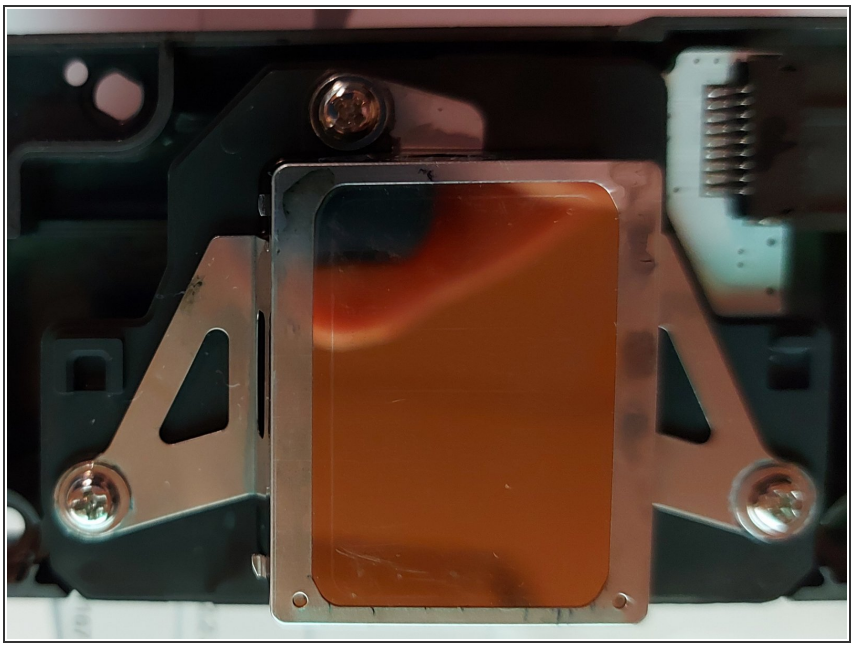
INTRODUCTION

The print head has a thick rubber gasket between the part that pierces the ink cartridges and the main printhead, and this gasket warps with age and no longer seals. This may result in altered colours, muddy colours, sometimes even contamination of one cartridge with ink from another and is very occasionally responsible for spotty printing, as a result of air bubbles getting into the jets.

Happily, there is a simple fix for this – once you have removed the printhead from the printer. There are a couple of guides for an Artisan 1430 on u-tube you can search for: it's worth looking at both of them before you start. A warning, though: take extreme care replacing the cables: misalignment can short out and kill your printer.

For this exercise, you will need a flat head screwdriver and a 'large' jeweller's cross-head screwdriver, a 20ml luer slip syringe, some rubber tubing to fit over the luer spout of the syringe (and over the ink port), some distilled water, lots of tissues….. and a tube of "705" clear silicone. This is a honey-thin liquid that sets on exposure to air to a fairly firm silicone rubber, with a little shrinkage. It is available from various suppliers on AliExpress and eBay.

Step 1 — Confirming this is the Problem

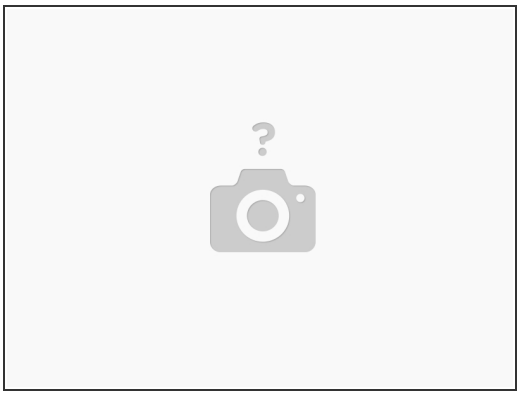


- Once you have removed the print head, the underside will look rather like this photo.The square golden part is the delicate, no-touch surface. However, you can place the unit with this bottom surface sitting on a wad of clean tissues.

Step 2 — Confirming the problem -2

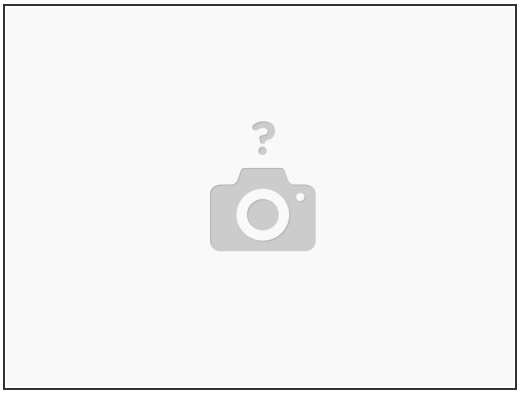
- Now, taking care not to spill any water on the circuit board or connectors, very gently inject distilled water into each cartridge-piercing black plastic hollow ‘needle’, using some appropriately sized tubing to fit over the ‘needle’. If no ink comes back out of any of the other needles, this is not the problem, and you can stop right there..

Step 3 — Dismantling -1



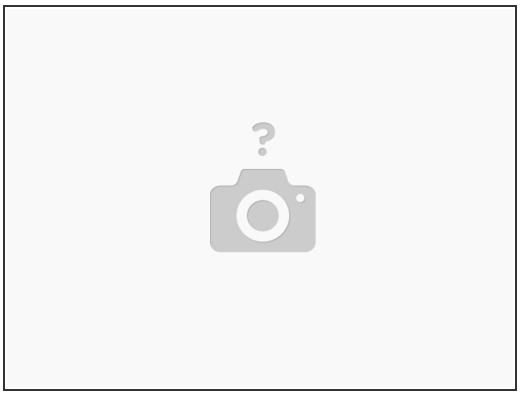
- Now dry the unit again, hold it upside down and remove the 3 screws you can see in the photo, together with the tin frame. Then lift the main part of the print head off from the black plastic top ink-guide section, applying force to one corner first to help break any seal.

Step 4 — Dismantling - 2



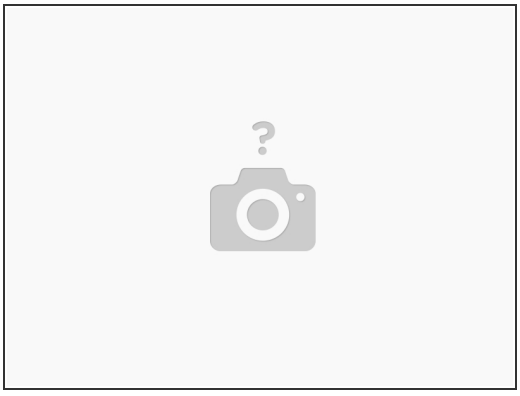
- Try to remember which way round the thick rubber gasket is sitting -although the indentations on the underside of the seal are the first clue, the way round the 2 rows of ink holes are - 2 on one side, 4 on the other - is the other clue. Dry everything again with tissues.

Step 5 — Fixing the problem - 1



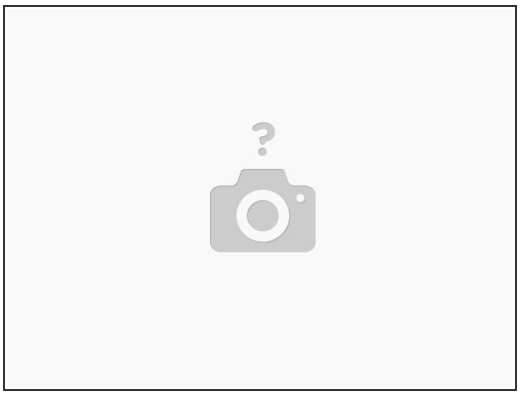
- Now get the gasket away from the rest of the clutter, wash it and dry it and put it down on a clean (and cleanable) surface upside-down - that is, with the side showing the ring indentations around the ink channel holes facing upward.

Step 6 — Fixing the Problem - 2



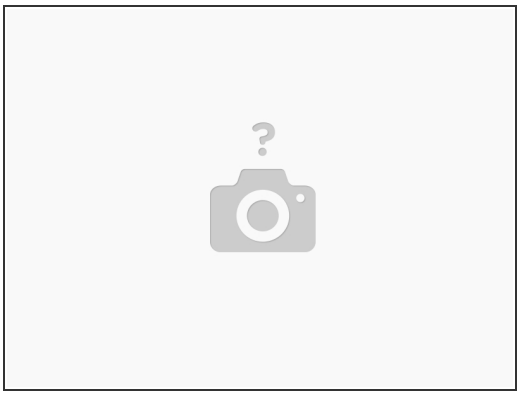
- Open the tube of 705 liquid and quickly pour a very small amount onto the surface of the gasket and spread it over the whole surface using a gloved finger. The idea is to fill those ring indentations but to avoid any bubbles, while keeping the layer of silicone as thin as possible.

Step 7 — Fixing the Problem -3



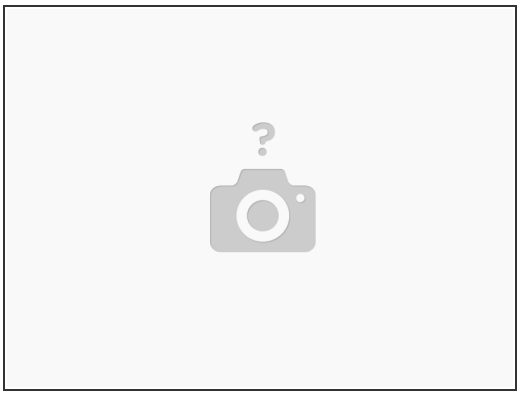
- Leave flat for 5 - 10 minutes to allow the surface to self-level while it can still flow easily. Then every 5 minutes, lift the gasket by its edges and quickly clear each ink-hole of silicone using a piece of wire - perhaps a lightweight paper-clip - passed down through the hole from the coated surface and wiped clean before withdrawing.

Step 8 — Fixing the problem - 4



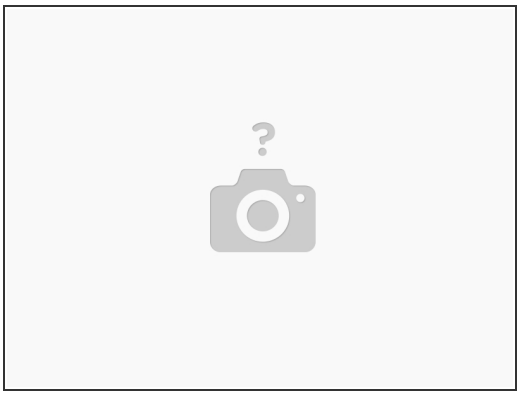
- Remember, there are 6 holes, so this will take too long to do all at once without disturbing the main silicone coat - unless you manage to keep the gasket pretty level while you are doing this. You should find that it’s only necessary to do this 3 or 4 times before the silicone is too stiff to flow back into the holes.

Step 9 — Reassembly -1



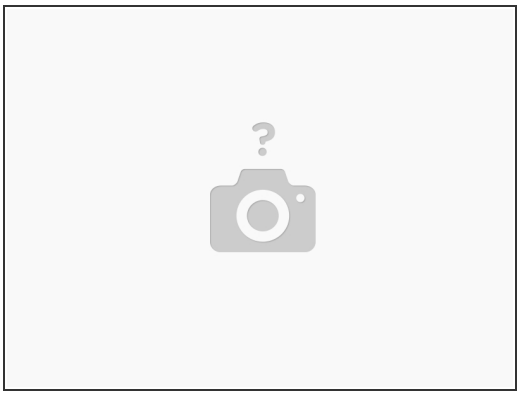
- Now leave the gasket flat overnight for the silicone to harden and re-assemble. Put the ink guide spike down and fit the gasket on top of that, making sure the two rows of ink holes in the gasket are over the corresponding two rows in the ink guide and that the two screw holes are also aligned (if not, the gasket is upside-down).

Step 10 — Reassembly - 2



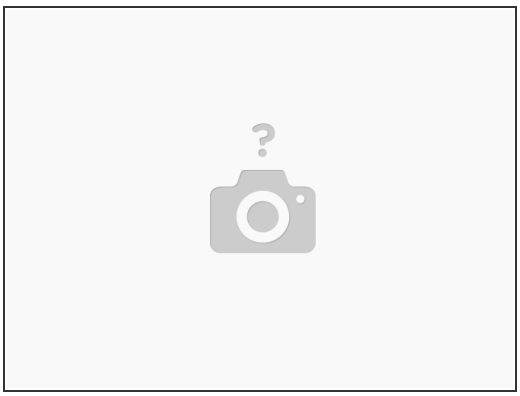
- Now replace the printhead with its 3 screws and tin frame.Don’t over-tighten the screws, and tighten them all evenly, so that the parts remain level with respect to each other - otherwise you may distort the gasket and cause more trouble.

Step 11 — Checking your work - 1



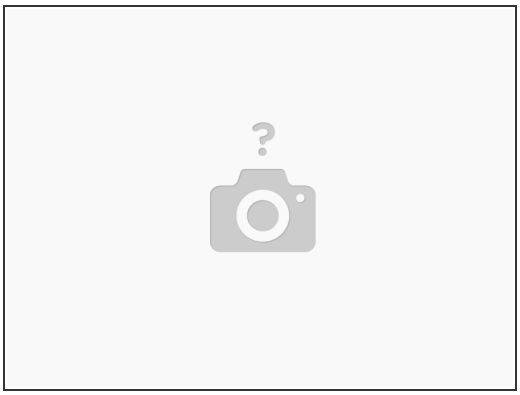
- To check that you have solved the problem, gently flush each “needle” again with distilled water and check that (a) the water comes out onto the wad of tissues from the jet surface, and (b) that no water flows back out of the other “needles”.

Step 12 — Checking your work - 2



- If either of these tests fails, you may have to start over, peeling off the previous layer of silicone before applying the new layer, but if the problem is the leak, then you might try tightening the screws a little more. The longer you have left the silicone to cure before reassembly, the less easily damaged it will be by tightening the screws

Step 13 — Re-installing the printhead



- To re-install the printhead, go back to the videos for removal. Take special care with the cables - and check how they were folded together before the final insertion of the cover. If you have any doubt at all that they are fully and correctly inserted, go back and check before connecting to power!

To reassemble your device, follow these instructions in reverse order.

