

Assembly Instructions for: *R1800/R2400 Ink System*

EPSON PRINTER

Epson R1800/R2400
Part No. 27421, 28421,
28422, 28423

IMPORTANT

If your printer is new, set it up according to the enclosed manufacturer's instructions.

This is a check to ensure your new printer and drivers are working correctly before the Eco-Flo System is installed.



It is very important you read these instructions carefully before you begin!
We will take you through the following steps:

- 1 Preparing your Injector
- 2 Setting up of the Inks in the bottle tray
- 3 Installation of the modified injector to your printer
- 4 Fitting of the Tube Support System
- 5 Producing your first print.

Epson R2400 Eco-Flo Shown

Only start work on the installation once you have read the instructions fully!

What you will need to Install the Eco-Flo R1800/R2400

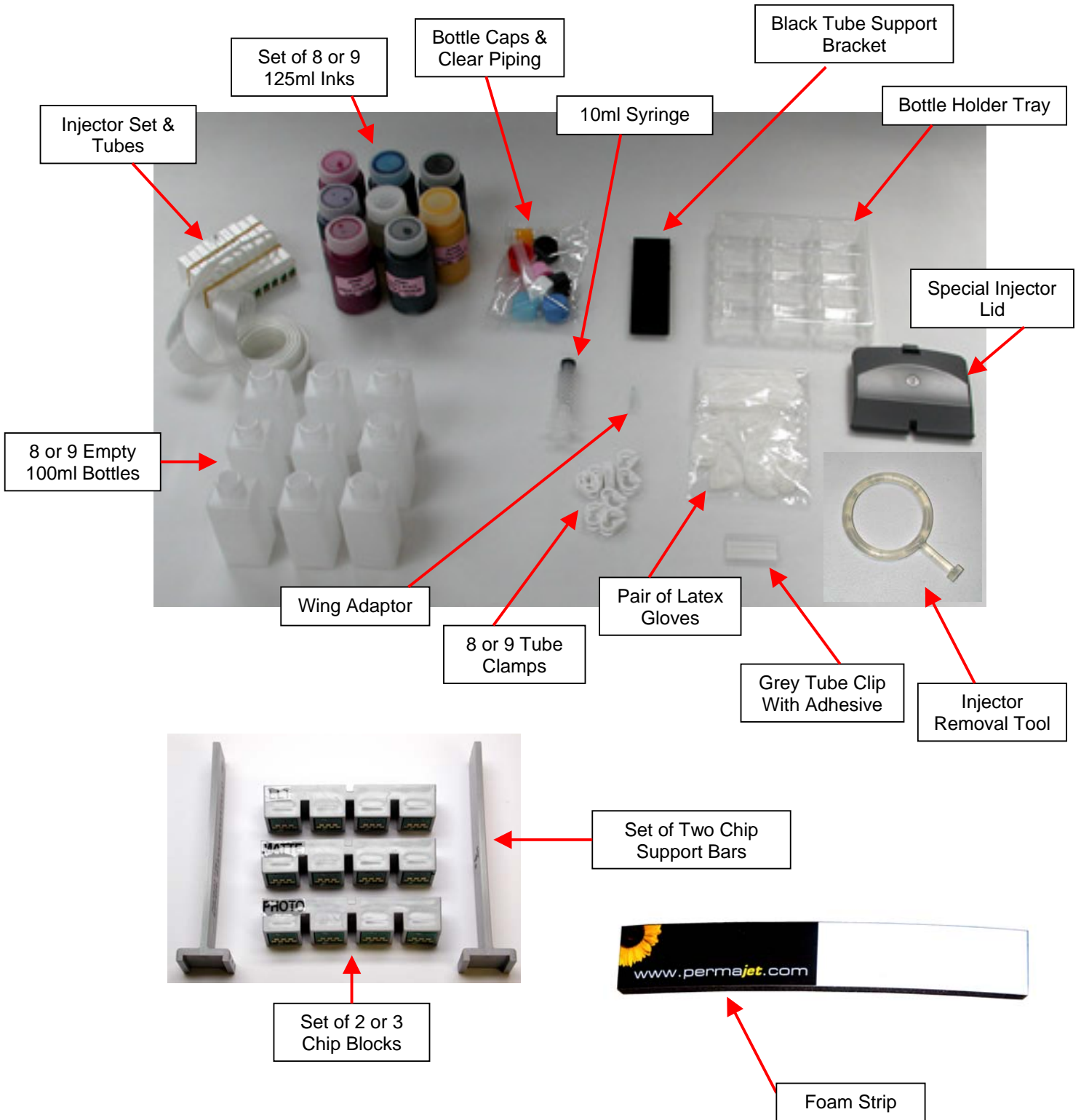
- Complete Eco-Flo R1800/R2400 Kit
- Sharp Blade (Stanley Knife type) & Scissors
- Measuring Tape or Ruler
- Marking Pen or Pencil
- Paper Towels

Please read carefully before you continue and refer to the components diagram over the page

What is included in your Eco-Flo R1800/R2400 Kit

- Injector Set with tubes attached
- Set of 8 or 9 x 125ml Inks
- Set of 8 or 9 empty 100ml bottles
- Set of 8 or 9 Bottle Caps & clear piping tubes
- Black Tube Support Bracket with Hook & Loop Fastener fitted
- Bottle Holder Tray
- Special Injector Lid & 2 or 3 Chip Blocks
- 1x Grey Tube Clip with adhesive pad
- Installation Instructions and Profiles CD
- 10ml Syringe & wing adaptor
- Pair of latex gloves
- 2 x Injector removal tools
- 8 or 9 White Tube Clamps
- Self Adhesive Foam Strip
- PermaJet Media A4 Test Pack

Check List for Components



Check Printer Condition

If you have a brand new printer, follow the Epson instructions for setting up your printer. Use the Epson cartridges that came with the printer. Follow normal installation instructions for the software. Test the printer by printing pictures. Learn how to use the Epson utilities to run a Nozzle pattern check and to run a Cleaning Cycle.

Make sure that the printer can produce a perfect nozzle pattern before proceeding with Eco-Flo installation.

If you have been using the printer in the past, just make sure it produces a perfect nozzle pattern before proceeding with the Eco-Flo installation. If the Nozzle pattern has any gaps whatsoever, then run cleaning cycles until it prints perfectly.

DO NOT INSTALL THE ECO-FLO IF YOUR PRINTER IS NOT FULLY FUNCTIONAL!

Disconnecting Power From the Printer

Press, but **do not hold** the INK button on the printer. This will move the print head to the “replacement” position.

After it has moved to this position, which is just slightly to the left of the parked position,

SWITCH OFF THE POWER AT THE WALL SOCKET.

Now the injector head can be moved from side to side by hand.

We will tell you later when to reconnect the printer power supply.

Remove the original Epson cartridges from the printer.

Place the used/part-used Epson cartridges in some paper towel for storage – they self-seal anyway and should not leak but we suggest you wrap them in a zip-lock or similar plastic bag for cool dry safe-keeping.

DO NOT throw them away unless totally empty!

INSTALLATION OF YOUR ECO-FLO KIT

Step 1 Removing the Injector Lid

You will need to remove the printer lid on the injector carrier as shown in this photo. Store this somewhere safe should you ever wish to return the printer to its original setup. It is held in place by two 'Lugs' on either side and a third in the centre. Once you have one side disconnected, the central third lug will also need to be removed; this can be done by tipping the cover and pull the lid towards the front of the printer allowing you to remove the lid with the plastic assembly. Use a fine screw driver to do this and gently push one of the lugs away as indicated below.



Fig.1

Step 2 Moving the Printer Head

You are now able to move the printer head manually to the centre area of the printer. See below.



Fig.2

Step 3 Bottle Preparation

Locate the coloured bottle caps and straight lengths of plastic tubes. Insert the straight tube firmly into the bottom of each bottle cap see Fig.3 below.

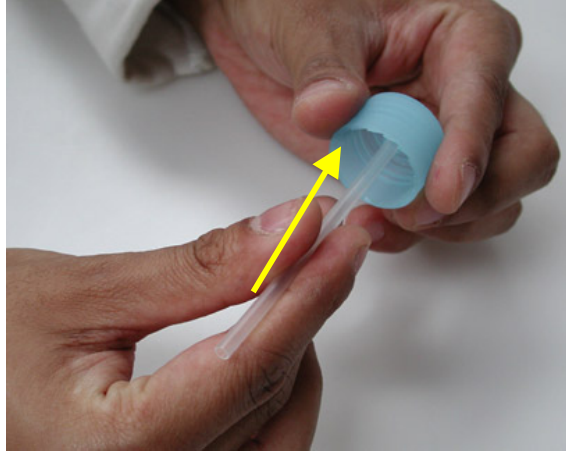
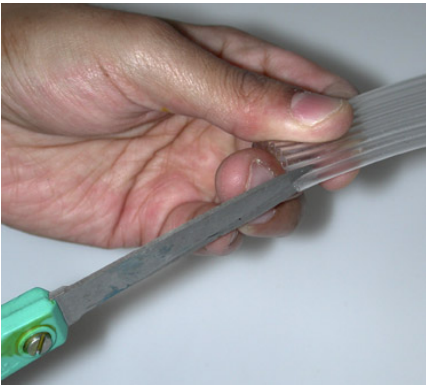


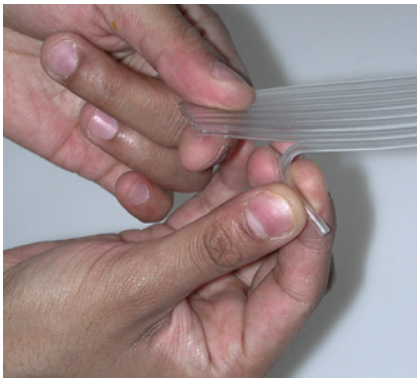
Fig.3

Step 4 Tube Preparation



Using a pair of scissors separate all tubes by snipping gently at the tube ends. Please see Fig.4 to the left.

Fig.4



Strip back all the tubes by approx 150mm. Please note when assembling the tubes to the bottle caps you may need to strip back more of the tubing in order for the bottles to be seated correctly within the bottle tray.

Fig.5

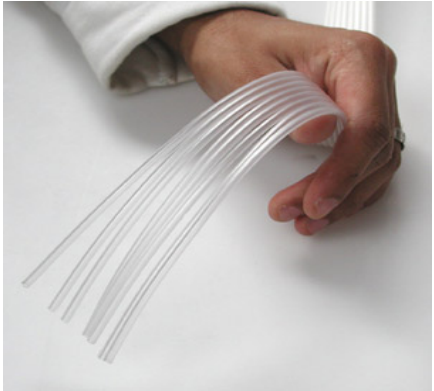


Fig.6 showing tubes stripped back

Step 5 Preparation of The Clamps & Inks

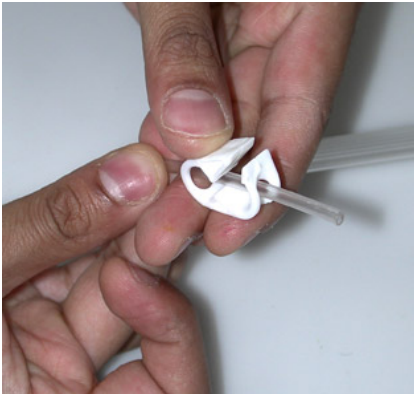


Fig.7

You are now ready to attach the white tube clamps to the tubes as indicated in Fig.7 to the left.

Now please fill all the bottles with the correct inks; please ensure that all ink has been filled correctly as indicated by the bottle caps that are colour coded, see Fig.8 to the right.



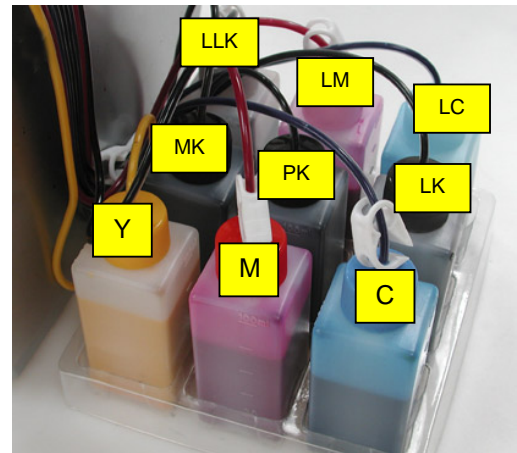
Fig.8

Step 6 Positioning the Ink Bottles in The Tray

You are now ready to position the ink bottles in the bottle holder tray as indicated below for R2400 USERS and for R1800 USERS at the side of the printer.



R1800 Setup



R2400 Setup

Step 7 Assembling the Tubing to the Bottle Caps



Fig.9

When you have completed the above process insert the correct tubes to the correct ink bottles. **PLEASE TAKE CARE when doing this as if this is connected incorrectly there is no turning back see Fig.9 & Fig.10**



Fig.10

Step 8 Priming the Ink through the Injectors

You are now ready to start the ink priming process starting with the **YELLOW** injector for R2400 users, Gloss Optimizer for the R1800 users.



Wing Adaptor Shown

This process is carried out by inserting the 10ml syringe and wing adaptor at the base of the injector. **PLEASE ENSURE THAT THE WING ADAPTOR (TIP ONLY) IS GENTLY INSERTED INTO THE BASE OF THE INJECTOR, DO NOT** push the tip any further than 3mm (see diagram opposite) otherwise this will split the base of the injector.

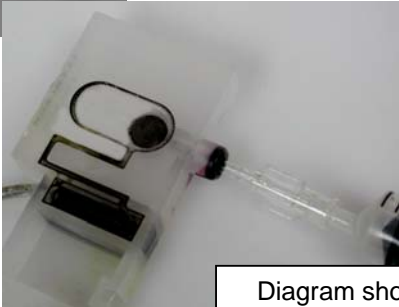
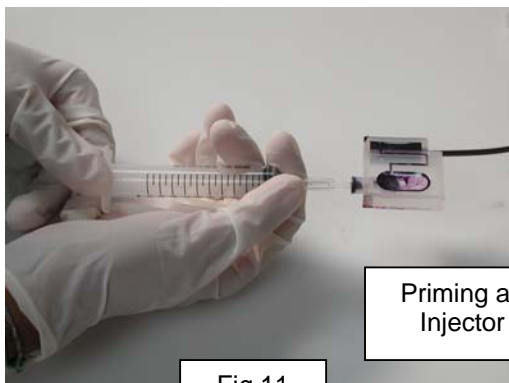


Diagram showing the wing adaptor tip only inserted gently in the base of the injector.

PLEASE ENSURE that you **DOUBLE CHECK** that the correct tube is located to the correct ink bottle before pulling back on the syringe (see Fig.11).

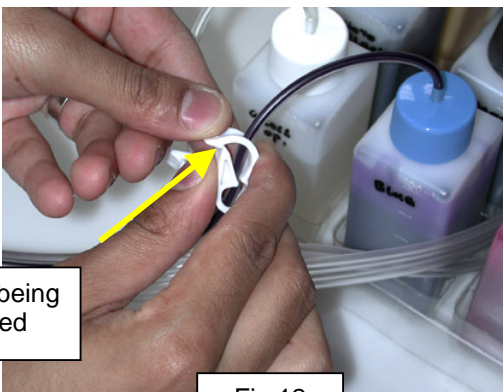
At this point **LOCK** the tube with the white clamp (see Fig.12) before removing the syringe from the bottom base of the injector to avoid any air traveling in the injector.

Any ink remaining in the syringe can be put back into the correct ink bottle. **MAKE SURE** you wash the syringe with warm water ready for the next colour to be primed. Repeat this process for all the inks so that you finish up with a set of injectors and tubes full of ink as illustrated in Fig.13.



Priming an Injector

Fig.11



Ink tube being clamped

Fig.12

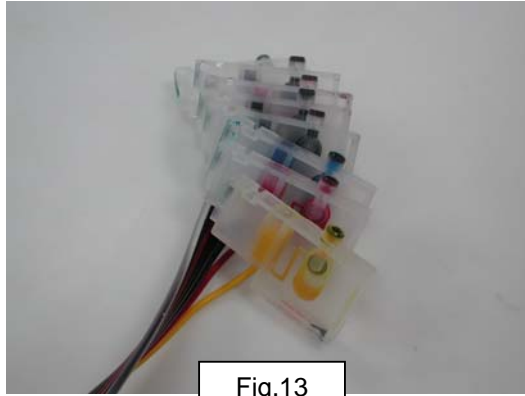


Fig.13

Step 9 Installing the Chip Block Unit

At this stage decide which ink you are going to use this will determine what chip block you shall be installing whether that be the Photo Black or Matt Black. Ensure that you hold the chip block as indicated in Fig. A and do not touch the contacts as this can cause damage or failure.

Ensure that you locate the CORRECT chip block making sure that the writing is right side up & relevant to the colours that are indicated within the printer see Fig. B. PLEASE NOTE INSERTING THE CHIP BLOCKS INCORRECTLY CAN CAUSE DAMAGE TO THE CONTACTS.

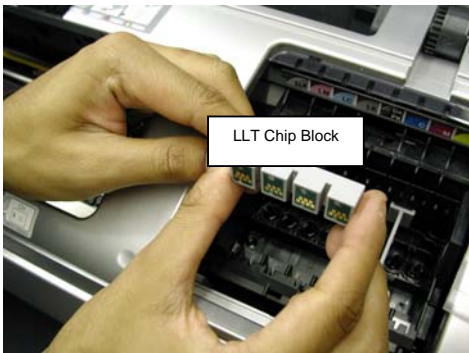


Fig. A



Fig. B

Step 10 Installing the Chip Support Bars

When you have positioned the chip blocks into place you will need to insert and install the support bars as indicated in Fig. C. Please ensure that you insert the bars as illustrated below making sure that the cut out piece is on the bottom as indicated by the arrow.

Insert the bar as illustrated in Fig. D making sure that this is pushed firmly into place, repeat this for the other side.



Fig. C

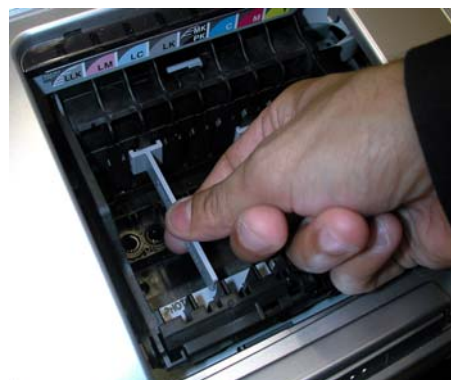


Fig. D

Step 11 Install Injectors

Please place the set of 8 or 9 injectors in the printer carriage that is now parked in the centre of the printer. At this stage decide if you are going to use the Photo or Matt Black injector.

Carefully align them, and when you are happy the injectors are in position. **PLEASE BE CAREFUL NOT TO PUSH TOO HARD, AS THIS WILL CAUSE DAMAGE TO THE INJECTOR & PRINTER HEAD.** Push the injectors home until you feel a positive seated position see Fig.14 below.

When all are in, they should look like Fig.15 below. Please make sure either the photo black or matt black injector has been seated and **(for R2400 users only)** the other black injector remains on the top of the module in the printer head.



Fig.14



Fig.15

Picture shows injectors fully installed in a R2400

Step 12 Fixing the Special Printer Lid

Attach the special printer lid that has been supplied making sure that none of the tubing catches or squashes between the lid and housing, as this will stop any ink flowing into the printer heads.



Fig.18

Step 13 Unlocking the Tube Clamps

Please ensure that you **UNLOCK** the white tube clamps on all the tubes so that ink can flow into the heads when in operation, apart from the Matt or Photo Black depending which one is **NOT** in use.

Please note these two injectors only apply to R2400 users.

If there is evidence of a kink or dent in the tube where the tube clamp has been closed, simply squeeze the tube with thumb and forefinger to flatten out the dent.



Fig.19

Step 14 Installing the Central Tube Support Bracket & Aligning the Tubes

The tubes can be inserted at this time through the available opening in the bracket – the tubing goes under the bracket, then up and then through. It is advisable to slide the tubes as far forward to the front of the printer within the tube support bracket as indicated in Fig.20 below.

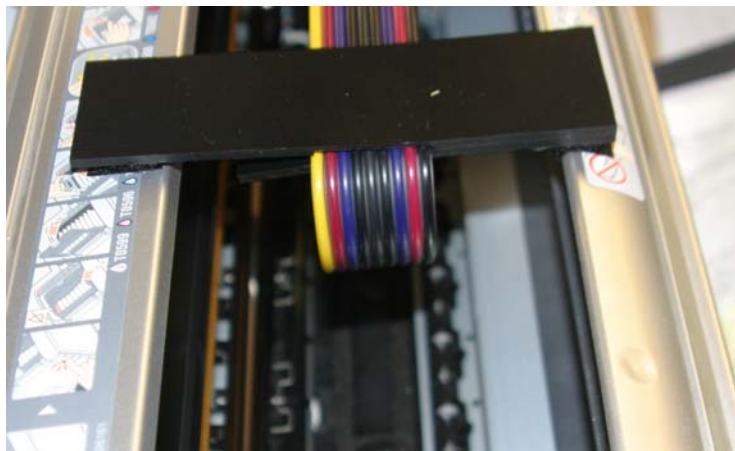


Fig.20

Next, you will notice that the Tube Support Bracket has both the Hook and Loop Velcro on it. The Hook portion of the Velcro is going to end up attached to your printer. The Loop portion will remain on the Tube Support Bracket. Do not separate the Hook and Loop.

Use an alcohol or cleaning solution and clean the top of the printer housing where the Black Tube Support Bracket is going to be attached. Then make sure the area is dry before proceeding.

Keeping them together, remove the adhesive backing from the Hook portion of the Velcro. Carefully install and align the Tube Support Bracket in its proper location 85mm from the right edge of the recess, as shown in Fig.21 below.

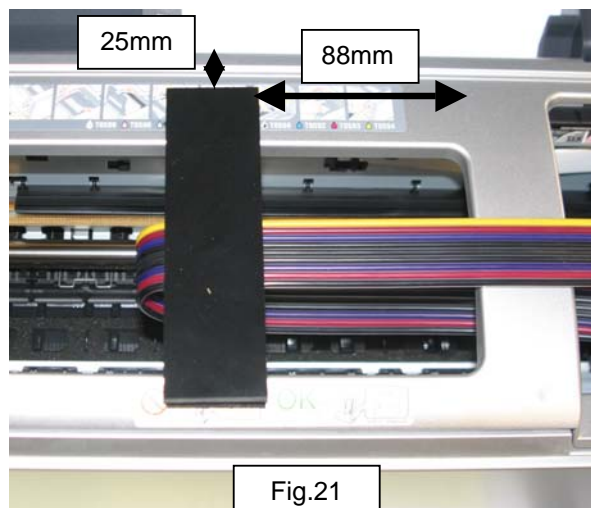


Fig.21

Please ensure that the Central Tube Support Bracket, the top and bottom Velcro and loop are firmly stuck down to the printer body.

Please ensure that the tubing has just enough slack to allow movement of the print head without restriction.

This can be done manually by moving the head to the left and right and checking that there is just enough tubing to allow the print head to move freely, without it dragging against any part of the printer.

Step 15 Install Final Tube Clip

The last tube clip goes on the right edge of the printer housing see Fig.22 below. Clean this area with alcohol and wipe dry with a paper towel.

Place the grey plastic clip onto the printer body, making sure it is in the correct position to hold the tubes in a straight line along the length of the printer to the Black Tube Support Bracket. When you are happy with the location, remove the adhesive backing from the back of the clip. Carefully install and align the tube clip in its location and ensure that the clip is snap shut.

All the tubes must lay flat so they do not interfere with print head motion. You must ensure that the tubes do not come into contact with the printer body.



Fig.22

Step 16 Installing the Foam Strip

The purpose of the Foam Strip is to ensure that the tubing on the Eco-Flo travels under the printer body correctly, as well as to cushion the tubes from hitting the printer casing when in motion.

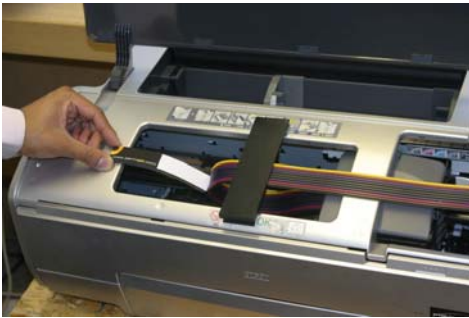


Fig.23

Move the head manually across as per the diagram above.



Fig.24

Peel back the yellow sticky tape ready for installation on the printer body.

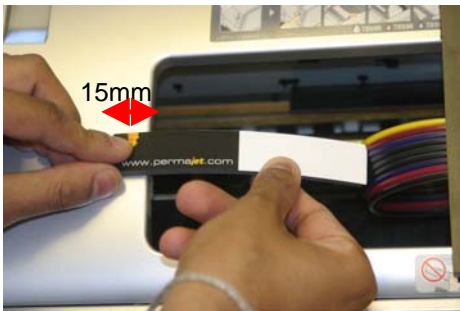


Fig.25

Position the Foam Strip in its correct location as indicated in Fig.25, You **MUST** align the Foam Strip with the centre of the tubes ensuring that you lightly tack the left hand side onto the casing.



Fig.26

When you have placed the left hand side of the Foam Strip, very carefully bend it back to the white point as illustrated in Fig.26.



Fig.27

Now ensure that you lightly tack down the bottom half of the Foam Strip.



Fig.28

Please move the head manually across ensuring that it travels in perfect alignment under the Foam Strip. If you are happy with the position and movement press firmly on the top and bottom halves of the Foam Strip so that it adheres to each side of the casing.

Step 17 Testing the System

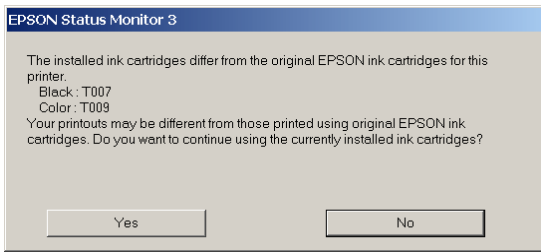
Push the injectors to the far right and plug the printer back on. Have your graphics program (e.g. Photoshop) open and ready to use.

The printer should come on and the head should move back and forth a few times and do a cleaning cycle. When it stops moving, only the green light should be on.

A red light at this point indicates that one of the chips has not been recognized or seated correctly. If this is the case please push firmly on the Chip block that is not registering. If this does not solve the issue then please LOCK all tubes with the white clamps and very carefully remove the Injectors with the Chip removal tool provided see **Step17** for a detailed guide. Now very carefully check the chip that is not registering. It is advisable to clean the chip by wiping the contacts with a soft cloth and re-install the system again. **Remember** when the system has been re-installed to UNLOCK the white tube clamps.

HOW THE SPECIAL PERMACHIP WORKS: -

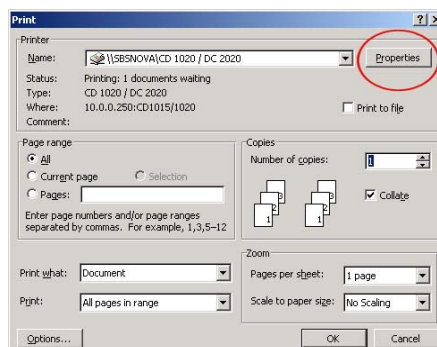
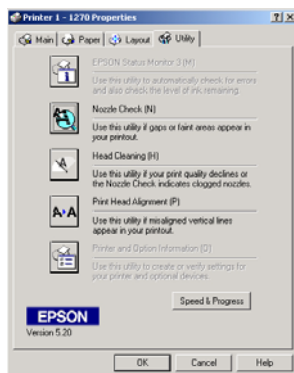
The PermaChips operate as a normal chip on an injector and while printing the ink levels will drop as a normal injector on the status monitor. When the ink levels reach low indicated by a flashing red light on the printer panel, you will need to turn the printer OFF, wait for 30 seconds and restart the printer. This process will reset the chips to FULL.



A window will open when you make your first print. This informs you that these are not Epson injectors and gives you the option to continue or quit – choose **YES** and continue printing in the normal way.

At this stage, your Eco-Flo system is in a position to be used as your injectors are now filled with ink. You may need to carry out a head clean in order to get a complete nozzle check.

To execute a head clean you will need to open a document in any program and select the print option from the tool bar (this can normally be found in 'File'). Ensuring you have selected the correct printer driver, click on the 'Properties' button. This will open a new window in which you will need to select the 'Utilities' tab. In this window you will find all the options for head cleaning and nozzle checks. For more detailed instructions please refer to the Epson manual that came with the printer.



Step 18 Removing the Injectors or changing the Chip Block

Please note before removing the injectors you **MUST** clamp the tubing on the relevant injectors by **LOCKING** the white tube clamps to avoid air traveling up the injector and into the tube. At this point press the ink change button on the front panel of the printer so that you are ready to change or remove the injectors, this function will bring the head unit to the left.



Locking the tube clamps

You are now in a position to remove the tubes from the final tube clip as indicated below by pushing down on the front bracket as indicated; this will release the clip and pop the upper section.



Removing tubes from the final clip

When you have done the above process you are now ready to remove the injectors with the removal tool that has been included with the kit. At this stage ensure that you insert the tool in the opening slot that is available as indicated below on the top of the injector. When you have inserted this, turn the tool as indicated below and pull the injector out as shown, making sure the injector next to the one you are removing is being held down.



Inserting the tool on the opening slot of the injector



Turn the tool as indicated above



Injector being removed

When you have removed the injectors you are now in a position to change the chip block as you installed them. Please refer to **Step 9** for this process.

FAQ'S & Caring For Your Eco-Flo – READ CAREFULLY!!!

Here are some tips to make sure that your new system performs trouble-free.

- It is advised to gently shake by rotation each ink bottle on a regular weekly basis. This is to ensure the pigments stay suspended in solution and give consistent results.

When changing between the Matt Black & Photo Black on the R2400 printer please ensure that when you UNLOCK the white tube clamp that you make sure the tube is squeezed back to it's normal condition, as the clamp may have creased the tubing and restricted the flow of ink at that point.

- After printing, ink in the tubes should be close to the injectors. The next morning, the ink may have retracted a little – do not panic, this is absolutely normal. When you start to print again the ink will be drawn into the injectors and it will function normally. Small air bubbles visible in the tubes generally pose no problem and are a characteristic of the system. However, if you see that any of the inks have retracted all the way back to the bottles, this may be a technical problem. Contact our technical line immediately before taking any action.
- It is not advisable to let your printer sit idle for long periods of time without actually printing something. In general, we suggest that if you are not going to print for 3 or more days or are going away on a holiday, then clamp off each ink with the white tube clamps. On your return, release them before turning the printer back on – this action prevents any ink moving forward or backwards in the tubes whilst not in use and eliminates the need for any wasteful head cleaning.
- Keep the whole unit, particularly the inks, out of direct sunlight and sources of direct heat.
- Avoid letting the ink bottle levels fall below halfway as this places more effort on the printhead and can lead to erratic printing output or colour issues. Buy replacement PermaJet inks and top them up in order to keep everything working perfectly.
- Routine Maintenance: - Assuming that you have followed all routine maintenance guidance provided by the printer manufacturer (this includes print head alignment, lubrication & cleaning of moving parts and waste pads, and nozzle cleaning procedures), there may be times when you need to additionally carry out Eco-Flo maintenance. Therefore, always keep all the items that came with your kit in their original box in a safe place and retain this instruction manual with them. A charge is applicable for occasions where we have to send you maintenance items which you have mislaid.

IMPORTANT

IF YOU EXPERIENCE ABSOLUTELY ANY ISSUE WITH YOUR PRINTER TO WHICH THE ECO-FLO SYSTEM IS FITTED, PLEASE CONTACT PERMAJET IN THE VERY FIRST INSTANCE TO ASCERTAIN WHAT THE PROBLEM MIGHT BE AND THE BEST COURSE OF ACTION TO TAKE. CONTACTING THE PRINTER MANUFACTURER MAY TAKE A LONG TIME AND NOT BE PARTICULARLY HELPFUL WHEN THEY KNOW YOU ARE NOT USING THEIR ORIGINAL PRODUCTS!

DO NOT remove the injectors from the printer unless specifically instructed by an authorised Permajet technician to do so.
Removing the injectors unnecessarily may cause system damage.
DO NOT lift the inks above the Printer. This would cause the ink to flood inside - keep the bottles at the same level as the printer at all times.

www.permajet.com

ON THE COMPACT DISC :-

THERE IS A CD SUPPLIED WITH YOUR KIT. ON THE CD ARE COPIES OF THE FOLLOWING :-

- 1 **ECO-FLO INSTALLATION INSTRUCTIONS FOR ALL TYPES OF PRINTERS AND SYSTEMS**
- 2 **TROUBLESHOOTING GUIDE**
- 3 **INK PURGE TEST FILES AND TONE CHARTS**
- 4 **ICC PROFILES FOR USE WITH PERMAJET COLOUR INK AND PAPER COMBINATIONS**
- 5 **CURVES FOR USE WITH MONOCHROMEPRO INK SYSTEM.**

In order to use the PermaJet ink system to its full potential, you should now take the time to open the enclosed CD and proceed to read the full section on PROFILES and the “How to install and use ICC Profiles” document. Full data is included in this file explaining how to get the full benefits of colour management and best results with your images.

Within this Eco-Flo packaging, you will find we have included our very latest inkjet paper Test Pack. This give you the opportunity to try all our papers in your own printer and select your favourite two or three to work with in the future. ICC Profiles are provided on the CD as mentioned above but you can also get totally FREE custom profiles once you buy your first full paper packs.

Check out our website for all technical data sheets, full pricing and to place an order online....



www.permajet.com

CANVASES



SHEETS



ROLLS

