

TECH TIPS

For Texmac **SOLO** Garment Printer

Maintenance Procedure: Purging White Ink Lines & Head

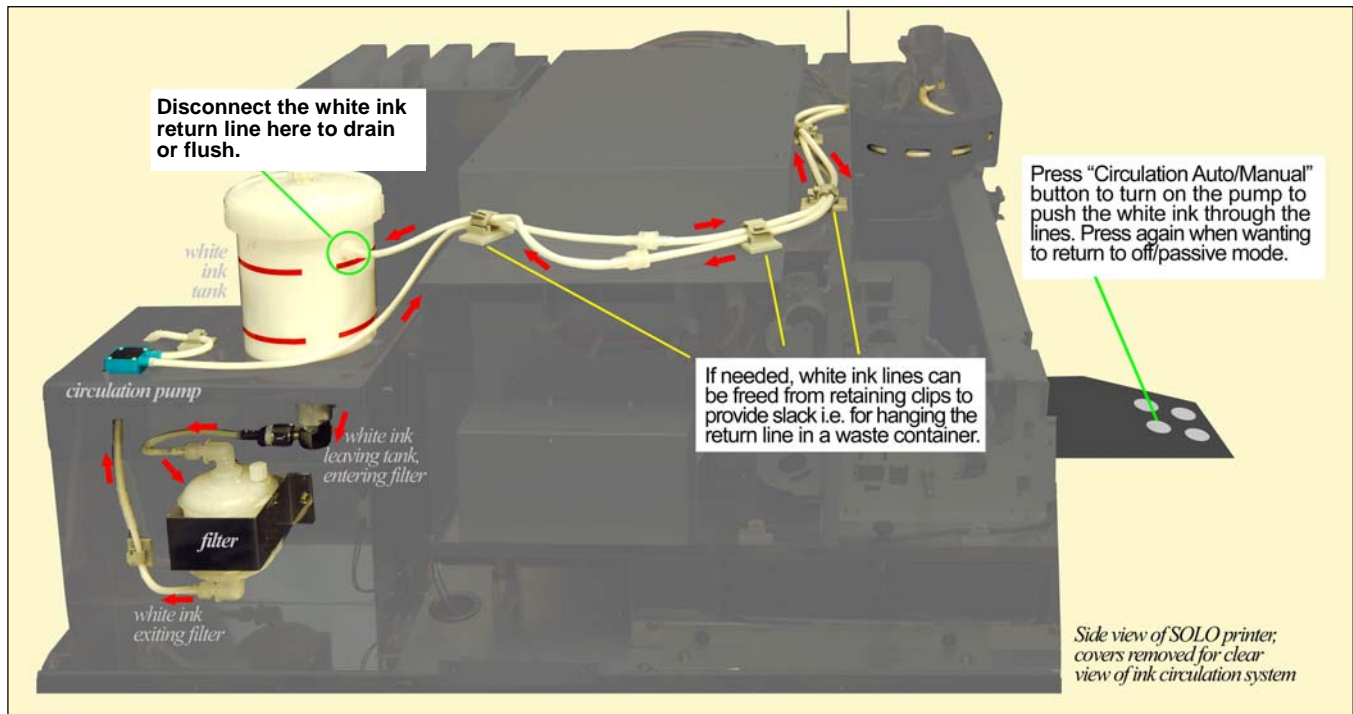
From time to time, the white ink lines and head may need to be purged. This is good for yearly maintenance, extending the life of the print head and maintaining overall print quality and performance of your SOLO printer.

Things You'll Need:

- 1 gallon of distilled water
- Syringe, 10 – 60 cc capacity, luer-lok type tip
- Liter bottle of cleaning fluid
- Container for waste ink (i.e. empty gallon jug)
- Clean container for "good" white (can use existing 1L bottle)

Illustration

The illustration below shows a side view of the SOLO printer with the cover removed, and the white ink circulation system highlighted. Refer to this diagram when following the procedure in this document.



Procedure

Follow these steps to purge your ink system – be prepared to work with the printer for 1-1 ½ hours (see below).

1. **Open the rear cover**, hinging it upwards and letting it rest in the open position
2. **Empty the white ink from the ink tank.** Referring to figure 1, do the following:
 - a. **Disconnect the return line** as shown above and "hang" the end into a clean, sealable container to empty the white ink into (you can use the bottle that the ink came in, if there is room).
 - b. **Start the draining process** by pressing the "Circulation Auto/Manual" button. Let the white ink circulation pump run until the white ink is drained from the ink lines as possible. Do not worry about air getting into the lines – let out as much white ink as practical, until no white ink is coming through the drain tubes at all. As air enters the white ink lines, the pump noises will become louder. This is ok.
 - c. **Stop the pump.** When finally empty, press the "Circulation Auto/Manual" button one more time to stop the pump.
 - d. **Cover and seal the white ink** that you've just emptied, and store carefully. Don't forget to stir at least 1x per week if to be unused for an extended period.



Figure 1: Empty the white ink into an appropriate storage bottle.

3. **Pre-soak the circulation system (filter) with cleaning fluid** (optional but recommended). Think of this step like soaking dirty, caked-on dishes in a sink full of soapy water. If needed, this extra step (which can be repeated again later in this procedure) will improve the filter flush procedure in step 4 below, and extend the life of the filter before it needs to be replaced. Follow this short procedure:

- a. **Reconnect the return line to the tank** (see diagram on the 1st page). To minimize twist/kinking the line, pre-twist the line counter-clockwise, then press onto the connector onto the tank and turn. Do not over tighten.
- b. **Pour a small amount of cleaning fluid into the white ink tank**, just enough to fill the bottom bowl-shaped portion of the tank (figure 2 on the right).
- c. **Circulate the fluid for a few minutes** by toggling the Circulation Auto/Manual button on. Allow enough time for the cleaning fluid to circulate and thoroughly soak into all areas of the circulation system. (Note 1: this will not reach the head and capping station, see additional step below. Note2: The fluid will turn opaque white due to the remaining white ink in the lines at this stage. This will not hurt the cleaning fluid's effectiveness.
- d. **Using a syringe, pull cleaning fluid through the head and capping station.** Referring to Figure 3 below right, close the rear cover and open the front cover. Find the white ink drain line (there are 2, the other is for color ink), separate and connect the syringe and pull – a little at a time - until about 50cc of fluid has slowly drained into the syringe. Normally, with only the white ink pump running, fluid follows the red arrows in a circulation pump pattern from the white tank to above the head and back to the tank. When either the capping station pump pulling on the ink, or in this case, the syringe, fluid will additionally follow the green arrows down into the dampers, print head, capping station and ultimately down through the drain lines towards the waste ink tray.
- e. **Let soak.** At this point, let the circulation system soak in cleaning fluid. Leave for a longer period of time for deeper cleaning, such as overnight. Be sure to press "Circulation Auto/Manual" to return the circulation system back to passive mode if you haven't done so already. If intending to let soak overnight, be sure to add enough cleaning fluid to restore to the level shown in figure 2 above.

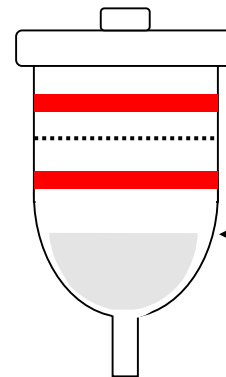
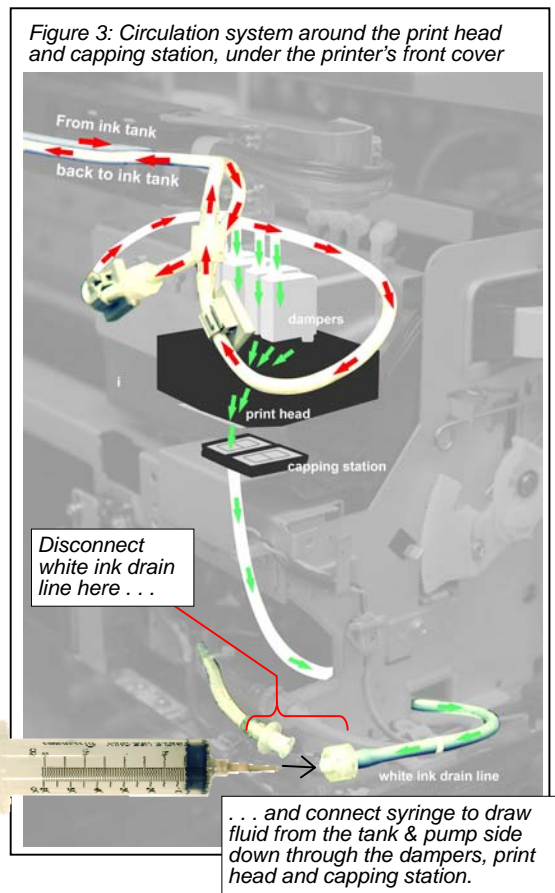


Figure 2:
Fill only to the top of the bowl section with cleaning fluid (step 3b) or distilled water.



A Note About the Circulation System, Head & Capping Station

Referring to figure 3 above, when only the white ink pump is running, fluid follows the red arrows in a circulation pattern from the white tank to above the head and back to the tank. When either the capping station pump pulling on the ink, or in this case, a syringe, fluid will additionally follow the green arrows down into the dampers, print head, capping station and ultimately down through the drain lines to the waste ink tray.

4. **Flush the upper circulation loop and filter.** After the filter, lines and head have pre-soaked in cleaning fluid for an appropriate period of time, flush the upper circulation loop and filter following this procedure until the lines are clear:
- Disconnect the return line and hang into a waste container** similarly to what was done in step 2 on the first page. An empty gallon milk jug is excellent for this, but any large container will do. For a smaller container, be ready to empty the waste ink into a sink from time to time. Be careful not to spill any ink or fluids on the printer while performing this procedure!
 - Start the white ink circulation pump** by pressing "Circulation Auto/Manual". Leave this on for the remainder of this procedure, even during short periods when the lines temporarily run dry.
 - Let the remaining fluid run into the waste container.** Let the lines run as empty as practical.
 - Fill the white ink tank to the top of the bowl section of the tank with distilled water.** (as in Figure 2 above)
 - Let the pump continue to run** until the fluid has exited the lines into the waste container.
 - Repeat steps "d" and "e" above until the fluid exiting the bottom of the filter is as clear as the fluid entering the top of the filter.** (refer to the left side of the diagram on the first page). Don't forget to check the waste container to make sure it doesn't overflow. While there is no need to turn off the pump between re-fills of distilled water, be sure to turn off the pump while changing the waste container.

Note on steps d, e, and f: At first, the fluid coming from the bottom of the tank and entering the top of the filter will be white, but will turn clear a couple of flush cycles – the connection tube should be completely clear. It will take quite a few cycles of filling and draining the tank with distilled water, and consume from nearly $\frac{3}{4}$ gallon to 1.5 gallons of distilled water, taking over an hour. This procedure effectively cleans the filter and significantly seems to extend its service life. Warning: Only used **DISTILLED** water for this procedure.

5. **Perform a normal cleaning of the head and capping station** wiping the rubber lip of the capping station and wiper with a foam swab and ammonia based cleaner, and wipe around the head with rubbing alcohol and a fiber-free cloth. Do NOT touch the head unless necessary, only gently dabbing it with the special cloth and alcohol (or cleaning fluid).
6. **Perform one final flush with cleaning fluid.** After the filter is flushed and the ink lines have run clear, do the following:
- Re-connect the return line** to the white ink tank
 - Re-fill the white ink tank with cleaning fluid**, no more than to the bottom of the bowl section of the tank
 - Turn on the circulation pump.** The white ink lines may become slightly cloudy again.
 - Perform several auto head cleanings** by pressing and holding the INK button several times. This allows the cleaning fluid to flow into the dampers, head and capping station, while running the capping station pump and wiper.
 - (Optional) Allow the head and circulation system to soak again.** At this point, all power may be disconnected from the printer and the printer can be left without power for an extended period of time. When ready again, simply power back on and allow to re-initialize as normal, and continue to the next step.

When ready to re-fill with white ink, follow steps (f) and (g) below. Otherwise, the printer may be left powered off with the cleaning fluid remaining in the lines.

- Suction as much of the remaining cleaning fluid with a syringe** from the white ink drain line (as in step 3d on the previous page), while the circulation pump is running. This allows further flushing of the head with the last of the cleaning solution. The coming from the drain line may still appear white. This is OK. Then, shut off the circulation pump.
- Drain as much of the remaining cleaning fluid from the circulation system as possible.** Disconnect the return line and hang into a waste container. Re-start the white ink pump and run until as much cleaning fluid as practical has been emptied from the line. This is to minimize dilution when white ink is re-introduced into the printer.