LOADING THE INKS

A. Gather your 4 **W**hite ink cartridges, along with your **C**yan, **M**agenta, **Y**ellow, **B**lack ink cartridges, and a single **F**lushing solution cartridges
   1. Place them on the bed of the machine
   2. The 8 Flushing cartridges would replace the ink cartridges, in the event we wish to flush the ink delivery system out.
B. Raise the ink cartridges cover
C. Arrange the cartridges, on the bed, in the order listed on the sticker; on the inside lower portion of the cover
   1. The order from left to right is: Flush, White, Black, Yellow, White, White, Cyan, Magenta, White

Raise the front edge of the cover “up”, to open

Proper Ink Cartridge Order

LOADING THE INKS CONT.

D. Before loading the cartridges, agitate the inks by holding the cartridge upright (vertical), then turn the cartridge over, so the lower end is now at the top. Then turn back upright.
   1. **Do NOT shake the inks, unless not shaken in a while**
   2. Repeat 8 to 10 times for each cartridge

E. To load the cartridges;
   1. Hold the cartridge horizontal
      a) Opening towards the machine
      b) The beveled edge down and towards the left
   2. Gently push the cartridges in until they lock in place
      a) You will hear them “click”, when in properly
      b) The release lever will rise when the cartridge is in properly

NOTE

Do NOT open the ink cartridge cover unnecessarily, as it allows the cartridges to de pressurize

F. In the event you get a “1400” error, that means your pressure pump ran for too long without achieving it’s operating pressure
   1. The “Status” light will be “Red”, and you will have an “Error” message on the screen, stating “SERVICE CALL ERROR 1400”
   2. You **do NOT** need to call technical support

LOADING THE INKS CONT.

3. To Resolve
   a) Make sure **ALL** of the cartridges are installed correctly
   b) Make sure the ink cartridge cover is **CLOSED**
   c) Turn the "Power" off
      1) **Don't forget to wait for the machine to "beep", indicating it has powered off correctly**
   d) Turn the "Power" back on
   e) Repeat several times, if necessary
      1) Once there is a little ink in the lines (not necessarily filled), that should allow the machine to pressurize the ink cartridges properly

G. Make sure the shut off ("pinch") valve, on the waste bottle, is all the way open (the wheel is all the way towards the top).

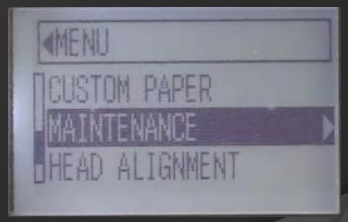
LOADING THE INKS CONT.

H. To load the inks, we will put the machine into a “Power Cleaning”, which will get ink into the ink lines (harness), the dampers, and the print head

1. Make sure the machine is in “Ready” status
2. Press the “Menu” button

3. The display will show “Menu”, “Printer Setup” (which will be selected - highlighted), “Test Print”, and “Printer Status”

4. Use the “Down” arrow to highlight (select) “Maintenance”



5. Press the “Menu” button to select “Maintenance”

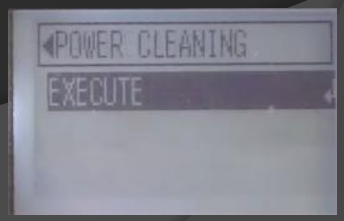
LOADING THE INKS CONT.

6. The display will show “Maintenance”, “Black Ink Charge” (which will be selected - highlighted), “Power Cleaning”, and “Clock Setting”

7. Use the “Down” arrow to highlight (select) “Power Cleaning”

8. Press the “Menu” button to select “Power Cleaning”

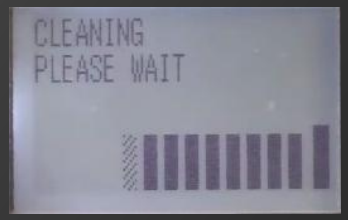
9. The display will show “Power Cleaning”, and “Execute” (which is selected – highlighted)



LOADING THE INKS CONT.

10. Press the “Enter” button to select “Execute,” thus beginning the execution of the “Power Cleaning”

11. The display will show “Cleaning Please Wait”

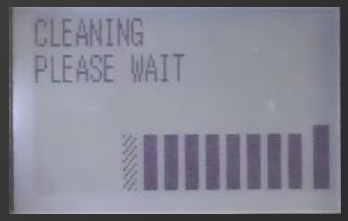


I. Watch the ink lines, to see when they become filled with ink, all the way to the print head (all 9 lines - the 4 colors, the four whites, and the flushing solution)
J. Now inspect the waste bottle. Look at the volume of ink in there (if any), and closely look at the color of the ink
   1. The ink, in the waste bottle, should be a VERY dark grey, if not black.
   2. If the ink is a lighter grey, or a greenish or bluish color, your lines are not primed enough
K. You will need to do from 2 to 6 “Power Cleanings” to get the inks fully loaded

LOADING THE INKS CONT.

L. Next, we must finish priming the print head, by doing a head cleaning
   1. Press and hold the “Menu” button for 3 seconds, once the machine is in a “Ready” status

   2. The machine will go into a “Cleaning Please Wait” status, which is a “Head Cleaning”
      a) It is finished when it is back in a “Ready” status



   3. Do one or two of these
   4. Then let the machine just sit idol for 5 to 10 minutes (could be up to an hour)

M. Perform a “Nozzle Check”, preferably on a transparency (available at your local office supply stores), so you can see your colors as well as the white inks.
   1. This ensures that the print head is fully primed and ready to print

LOADING THE INKS CONT.

2. Place the transparency, oriented in landscape, so it hangs off the front of the front platen by 1in to 1.25in, and off the right side by about 1in (just make sure it will clear the right side of the opening of the machine, as you load it)

3. Slowly push the platen into the machine, by hand, until the beginning edge (the one that goes into the machine first) of the transparency is under the gap sensor's light beam (so the sensor light will hit the transparency)
4. Press and hold the "Bed Up" button until the bed stops rising

LOADING THE INKS CONT.

5. Once you release the “Bed Up” button, the bed will drop down slightly, and the “Bed Up and Bed Down” light will turn “Green”
6. Now press the “Bed Load / Eject” button

7. The platen will be drawn into the machine
8. When in “Ready” status, press the “Menu” button

9. The display will show “Menu”, “Printer Setup” (which will be selected - highlighted), “Test Print”, and “Printer Status”

LOADING THE INKS CONT.

10. Use the “Down” arrow to highlight (select) “Test Print”

11. Press the “Menu” button

12. The display will show “Test Print”, “Nozzle Check” (which will be selected - highlighted), “Status Sheet”, and “Network Status Sheet”

13. Press the “Menu” button to select “Nozzle Check”

LOADING THE INKS CONT.

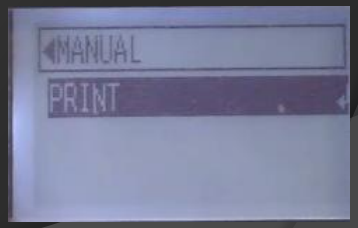
14. The display will show “Nozzle Check”, “Manual” (which will be selected - highlighted), and “Auto”

15. Press the “Menu” button to select “Manual”

NOTE

You never want to use the “Auto” Nozzle Check, as it throws off certain features on the machine

16. The display will show “Manual”, and “Print” (which will be selected - highlighted)



LOADING THE INKS CONT.

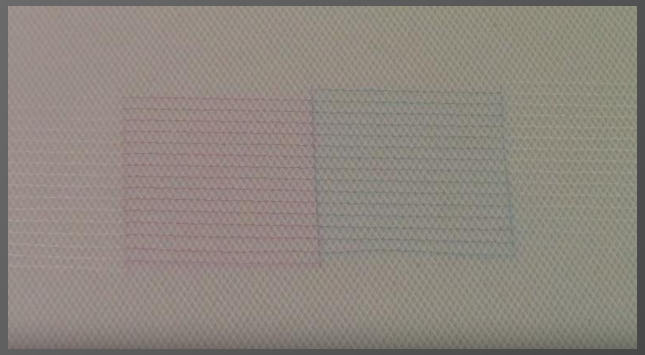
17. Press the “Enter” button to select “Print”, and execute the Nozzle Check printout

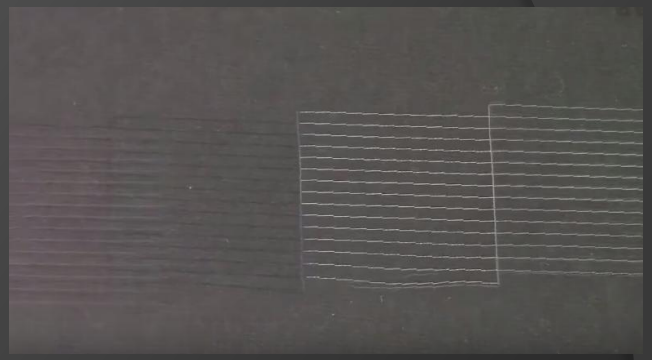
18. The display will show “Printing”

19. The machine is now printing a test pattern onto the transparency
20. When completed, carefully examine the test pattern
    a) **We do not want to see breaks in the lines**
    b) A break here or there, as long as there are **not many breaks**, and they are **not grouped together**, may not be an issue
        1) Especially if the breaks are in the white channels, since there are four of them, it is less likely to affect the print
        2) Breaks in the color inks are of greater concern
        3) Breaks that remain in the exact same places indicates clogging / a clog
            i. Always keep the prior nozzle check (previous – earlier in the day, a few minutes ago, prior day, etc.), so you can compare it to the most recent nozzle check

LOADING THE INKS CONT.

c) Place the transparency on a black background, to make it easier to see the white ink areas
d) Place the transparency on a white background, to make it easier to see the color ink areas





21. If you do have breaks in the lines, perform steps “L” and “M” again
22. If you keep repeating those two steps (6 to 10 times), and things are getting worse, walk away from the machine for at least an hour, then come back and do a “Nozzle Check” (Step “M”)
    a) Make sure you always keep your prior Nozzle Check for comparison
    b) The transparency can be cleaned off with Isopropyl Alcohol and reused, until it becomes wrinkled
23. If you do not see an improvement, contact technical support at clicking on this link, scrolling to the bottom of the page, and filling out the request : Support Request

LOADING THE INKS CONT.

EXTREMELY IMPORTANT

Once there is ink in the machine, nozzle checks should be performed *every day*, whether you are printing or not (it is actually MORE important to do nozzle checks the days you are not using the printer, since you will not be pushing ink through the print head, which is the best thing for a print head). If you are not running jobs on the printer, at least once or twice a week, run one or two sample designs, to help maintain a healthy print head

Click here for video: Loading Inks

NOZZLE CHECKS AND HEAD CLEANINGS

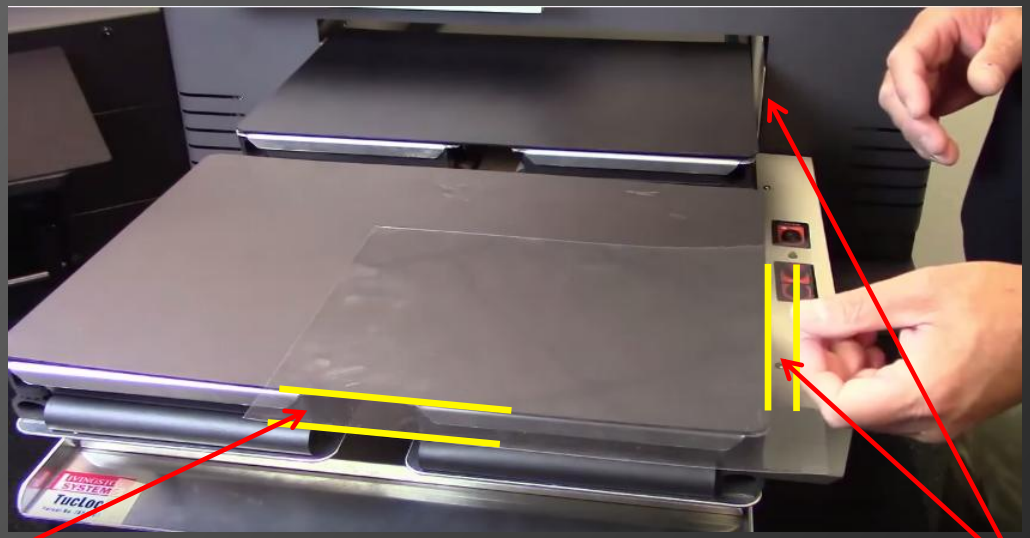
A. Perform a "Nozzle Check", preferably on a transparency (available at your local office supply stores), so you can see your colors as well as the white inks.
   1. This ensures that the print head is fully primed and ready to print

EXTREMELY IMPORTANT

Once there is ink in the machine, nozzle checks should be performed *every day*, whether you are printing or not (it is actually MORE important to do nozzle checks the days you are not using the printer, since you will not be pushing ink through the print head, which is the best thing for a print head). If you are not running jobs on the printer, at least once or twice a week, run one or two sample designs, to help maintain a healthy print head

NOZZLE CHECKS AND HEAD CLEANINGS CONT.

2. Place the transparency, oriented in landscape, so it hangs off the front of the front platen by 1in to 1.25in, and off the right side by about 1in (just make sure it will clear the right side of the opening of the machine, as you load it)



Transparency hanging 1 ¼in to 1 ½in off the front of the platen

Transparency hanging off the control panel side of the platen, as far as possible, but making sure the platen will not hit the side of the machine

3. **Slowly** push the platen into the machine, by hand, until the beginning edge (the one that goes into the machine first) of the transparency is under the gap sensor's light beam (so the sensor light will hit the transparency)

NOZZLE CHECKS AND HEAD CLEANINGS CONT.

4. Press and hold the “Bed Up” button until the bed stops rising

5. Once you release the “Bed Up” button, the bed will drop down slightly, and the “Bed Up and Bed Down” light will turn “Green”
6. Now press the “Bed Load / Eject” button

7. The platen will be drawn into the machine
8. When in “Ready” status, press the “Menu” button

NOZZLE CHECKS AND HEAD CLEANINGS CONT.

9. The display will show “Menu”, “Printer Setup” (which will be selected - highlighted), “Test Print”, and “Printer Status”

10. Use the “Down” arrow to highlight (select) “Test Print”

11. Press the “Menu” button

12. The display will show “Test Print”, “Nozzle Check” (which will be selected - highlighted), “Status Sheet”, and “Network Status Sheet”

NOZZLE CHECKS AND HEAD CLEANINGS CONT.

13. Press the “Menu” button to select “Nozzle Check”

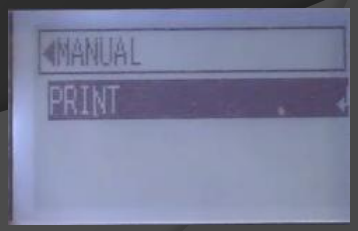
14. The display will show “Nozzle Check”, “Manual” (which will be selected - highlighted), and “Auto”

15. Press the “Menu” button to select “Manual”

NOTE

You never want to use the “Auto” Nozzle Check, as it throws off certain features on the machine

16. The display will show “Manual”, and “Print” (which will be selected - highlighted)



NOZZLE CHECKS AND HEAD CLEANINGS CONT.

17. Press the “Enter” button to select “Print”, and execute the Nozzle Check printout

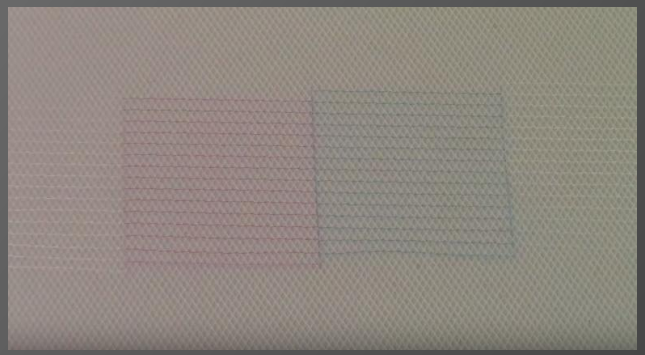
18. The display will show “Printing”

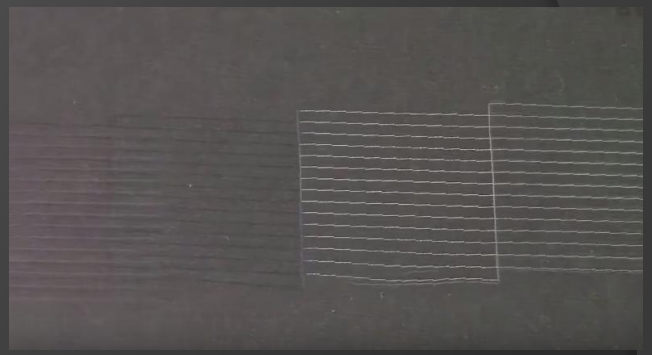
19. The machine is now printing a test pattern onto the transparency
20. When completed, carefully examine the test pattern
    a) **We do not want to see breaks in the lines**
    b) A break here or there, as long as there are **not many breaks**, and they are **not grouped together**, may not be an issue
        1) Especially if the breaks are in the white channels, since there are four of them, it is less likely to affect the print
        2) Breaks in the color inks are of greater concern
        3) Breaks that remain in the exact same places indicates clogging / a clog
            i. **Always keep the prior nozzle check (previous – earlier in the day, a few minutes ago, prior day, etc.), so you can compare it to the most recent nozzle check**

NOZZLE CHECKS AND HEAD CLEANINGS CONT.

c) Place the transparency on a black background, to make it easier to see the white ink areas

d) Place the transparency on a white background, to make it easier to see the color ink areas





21. If you do have breaks in the lines, perform one of (or a combination of) the following head cleanings

NOTE

Any time the “Status” light, on the front of the control, is green and gently pulsing (fading in and out), the machine is in standby mode. Before performing any (other) operations with the control panel, press the “ENTER” button to wake the machine up. The machine will move the print head, and then you will have a solid green light, indicating a “ready” status

NOZZLE CHECKS AND HEAD CLEANINGS CONT.

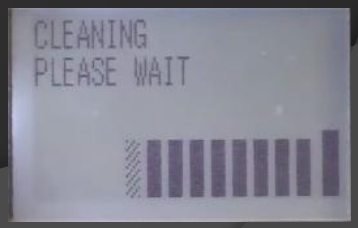
NOTE

When working with the control panel, if you see an "arrow - ▶" indicator to the right of any function (menu item), that indicates that there are additional functions (sub menu's) associated with that operation, and you would press the "Menu" button to get into them. Any time you see a "carriage return - ↵" indicator to the right of any function (menu item – operation), you press the "Enter" button to execute that operation (function).

B. There are three types of head cleanings, each a little more intense, to further clean the print head. They are as follows:

1. Common head cleaning – Everyday (daily) type of head cleaning
   a) With the machine in a regular "Ready" status, press and hold the "Menu" button for approximately 3 seconds

   1) The display will show "Cleaning Please Wait"



   2) The machine will start doing a head cleaning

NOZZLE CHECKS AND HEAD CLEANINGS CONT.

3) When done, the display will show “Ready - Photo Black”

4) After doing 1 or 2 of these head cleanings (depends on what YOUR print head usually wants), let the machine sit from 10 to 30 minutes, but could be as long as 60 minutes (depending on YOUR print head wants, and how many times you have done this), before doing your next “Nozzle Check”
   i. On some machines, if you only do a single head cleaning, it is possible that you may not have to wait, and can do a nozzle check right away (dependent on YOUR print head)
   ii. When you do a bunch of cleanings in a row, it often introduces air to the system, causing the nozzle checks to temporarily get worse
   iii. If you should ever see this, walk away from the machine and let it rest, before doing any further nozzle checks
5) When doing the nozzle checks, we are looking for a “good” nozzle check, or at least improvement over the prior nozzle check

NOTE

Remember to always keep your PRIOR nozzle check for comparison

   i. Breaks that move around may not be of any concern
   ii. Breaks that remain in the same places often indicates clogging, and should be resolved immediately

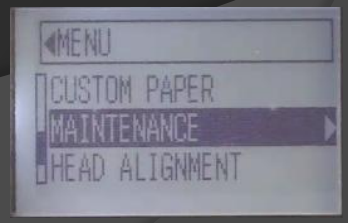
NOZZLE CHECKS AND HEAD CLEANINGS CONT.

b) If you have done 8 to 10 head cleanings, with resting time between the nozzle checks, and your nozzle checks are barely improving (or not improving at all), then move on to Step "**2**"

2. The second most aggressive type of head cleaning would be a "Power Cleaning"
   a) Make sure the machine is in "Ready" status
   b) Press the "Menu" button

   c) The display will show "Menu", "Printer Setup" (which will be selected - highlighted), "Test Print", and "Printer Status"

   d) Use the "Down" arrow to highlight (select) "Maintenance"



NOZZLE CHECKS AND HEAD CLEANINGS CONT.

e) Press the “Menu” button to select “Maintenance”

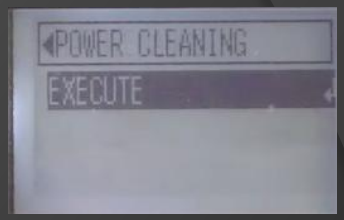
f) The display will show “Maintenance”, “Black Ink Charge” (which will be selected - highlighted), “Power Cleaning”, and “Clock Setting”

g) Use the “Down” arrow to highlight (select) “Power Cleaning”

h) Press the “Menu” button to select “Power Cleaning”

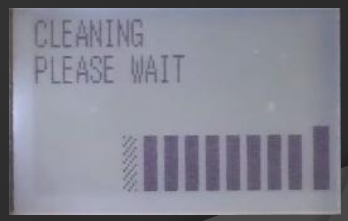
NOZZLE CHECKS AND HEAD CLEANINGS CONT.

i) The display will show “Power Cleaning”, and “Execute” (which is selected – highlighted)



j) Press the “Enter” button to select “Execute,” thus beginning the execution of the “Power Cleaning”

k) The display will show “Cleaning Please Wait”



1) We are hoping that by the machine pushing this larger quantity of ink through the print head, it will create extra pressure behind the clogs, and it will force the clogs out

l) We may try doing this several times

NOZZLE CHECKS AND HEAD CLEANINGS CONT.

m) After each one, we will perform 1 to 2 “regular” head cleanings, followed by “rest time” of 10 to 60 minutes, and then perform the “Nozzle Check” to see if the head is getting better or resolved.

n) If you have done several of these “Power Cleaning” procedures, and your nozzle checks are barely improving (or not improving at all), then move on to Step “**3**”

3. The most aggressive head cleaning method is to place a paper towel (perfectly clean - soft rag, or non treated facial wipe), saturated with cleaning solution, in contact with the print head.

a) We are placing the treated item in contact with the print head, which should soften the edges of the dried ink in the nozzle(s) of the print head (which is what a clog usually is), so when we do another “power” or “regular” head cleaning, the machine can force the clog out of the print head

b) Start by removing the platen from the machine, and set aside

c) Lower the bed all the way down, by pressing the “Bed Down” button until the machine stops lowering (this makes things easier – but not essential)

d) Then remove the top cover, by sliding it to one side (if it will not slide, slide it the other direction), then lift it up and off, and set it aside

NOZZLE CHECKS AND HEAD CLEANINGS CONT.

e) Start the machine into a “regular” head cleaning, by pressing and holding the “Menu” button for approximately 3 seconds, provided the machine is in a “normal” ready status.
   1) This will “undock” the print head, so we can move it away from the capping station

f) As soon as the print head moves off the capping station, press the “Emergency Stop” button

g) Grab a hold of the print head, and position it so that it is over the middle of the bed
h) Saturate your paper towel (or perfectly clean – soft rag, or non treated facial wipe), with cleaning (preferred) or flushing solution
i) Hold that saturated cleaning item in contact with the print head, for 5 to 10 minutes

NOTE

<u>NEVER</u> WIPE the print head print surface

NOZZLE CHECKS AND HEAD CLEANINGS CONT.

j) Remove the saturated cleaning item from contact with the print head
k) Saturate a new item (if using a rag, find a different – clean area)
l) Hold the new item in contact with the print head for (another) 5 to 10 minutes
m) Remove the saturated cleaning item
n) Then perform a "regular" head cleaning, by pressing and holding the "Menu" button for approximately 3 seconds, provided the machine is in a "normal" ready status

o) Follow this up with a "nozzle check"
   1) **Follow procedure "A"**

C. If all of the above procedures fail to yield a good nozzle check, contact technical support as soon as possible

Link to submit a technical support request: Scroll to the bottom of the page, and fill out the request form - SUPPORT

Click here for video: Nozzle Checks and Head Cleanings

DAILY START UP

A. Agitate the white inks by holding the cartridge upright (vertical), then turn the cartridge over, so the lower end is now at the top. Then turn back upright.
   1. Only **shake** the inks if they have not been agitated in a while
      a) **Also shake the white inks vigorously if the white in your ink lines, or during your nozzle checks, appears to be clear rather than a very milky (somewhat solid) look**
   2. Repeat 8 to 10 times for each cartridge

   3. Do not forget to agitate any white ink cartridges that are **NOT** in the machine

B. Inspect the ink levels in all of the cartridges, to ensure you have enough ink for that job/day

DAILY START UP CONT.

1. You can visually inspect the ink levels by removing the cartridge from the machine, and hold it vertical, and look at the ink levels
2. You can tell by the weight of the cartridge, once you get used to what a full vs. empty cartridge feels like

NOTE

Do NOT open the ink cartridge cover unnecessarily, as it allows the cartridges to de pressurize

C. Inspect the waste bottle, to ensure it is not too full
   1. Empty when needed – not recommended to let the bottle to become more than half full

DAILY START UP CONT.

2. Close the pinch valve
3. Unscrew the lid
4. Place a paper towel or rag under the lid
5. Pour out waste
6. Rinse out the waste container
7. Wipe it out with a rag or paper towel
8. Screw the bottle back on to the lid
9. Open shut off valve
10. Place back into the machine
11. Close the door

C. Perform your Nozzle Check (s)
D. Perform your Head Cleaning (s) as needed
E. If all of the above procedures fail to yield a good nozzle check, contact technical support as soon as possible

Link to submit a technical support request: Scroll to the bottom of the page, and fill out the request form - SUPPORT

Click here for video: Daily Start Up Procedures

PRINTING A WHITE SHIRT

A. Start by pre pressing the shirt if it is wrinkled or if you live in a climate that is humid.
   1. Press the garment for 10 to 15 seconds on medium to medium heavy pressure
B. Load the garment(s) onto the platen(s)
   1. Tuck the bottom and collar
      a) For a standard front or back of a garment, the collar is on the control panel side of the machine (portrait orientation), not the ink cartridge side
      b) For a print that is wider than it is tall (landscape orientation), the collar is usually toward the front of the machine
   2. Tuck the two sides

   3. Tuck excess material underneath the platen (not under the base)
   4. Make sure no material is sticking up
C. Push the platen into the machine by hand, VERY SLOWLY, until the beginning of the garment is in line with the path of the height sensor beam (light)

PRINTING A WHITE SHIRT CONT.

D. Set the gap height by holding the “Bed Up” button until the light turns red, and the bed stops rising

E. Release the “Bed Up” button
   1. The bed will drop down slightly and the light will turn green
      a) If the bed does not lower slightly, then the platen is not under the gap sensor beams properly
      b) Re position the platen and reset the gap height

F. SLOWLY push the platen into the machine, so the gap sensor can scan the entire surface of the garment

G. Pull the platen back out toward the front of the machine, SLOWLY
   1. Make sure the machine did not try to adjust the platen height
      a) If it did, it is because something (some part) of the garment is sticking up or your platens are not level

H. Make sure the back edge, of the base of the platen, is just in front of the media sensor

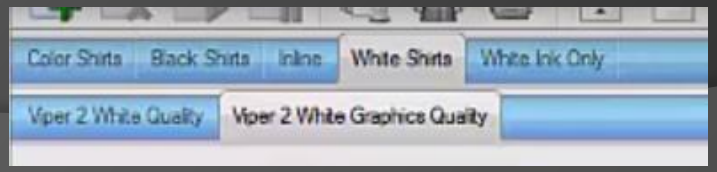
PRINTING A WHITE SHIRT CONT.

I. With the “standard” print queue, since your are only printing one pass of color ink, make sure the layer function is turned off
   1. The top of the layer button will NOT be blue if this function is turned off

This is what it looks like when it is turned on – notice the blue light – you do NOT want this when printing a shirt without and underbase, or if it only has one layer (pass) of color ink.

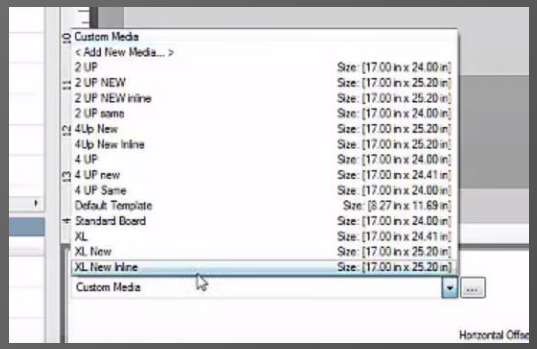
J. Press the “Bed Load” button to load the platen (with the garment on it) into the machine
   1. If you experience a 1600 series error, that is a loading error.
      a) Power off the machine at the control panel (don’t forget to wait for the beeps indicating that it has powered down completely/properly.
      b) Then turn power back on, wait for the start up procedure to complete, then repeat steps “**C**” through “**J**”

K. Next go to your computer, which is hooked up to the printer, and has the RipPro software on it
   1. Select the garment color and print queue you wish to use

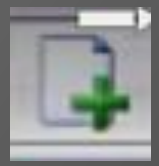


PRINTING A WHITE SHIRT CONT.

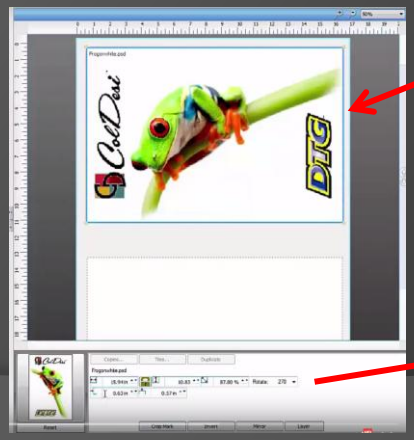
2. Select the template (platen configuration) you are using – 1 up, 2 up, 4 up, etc.



3. Import the image you wish to print

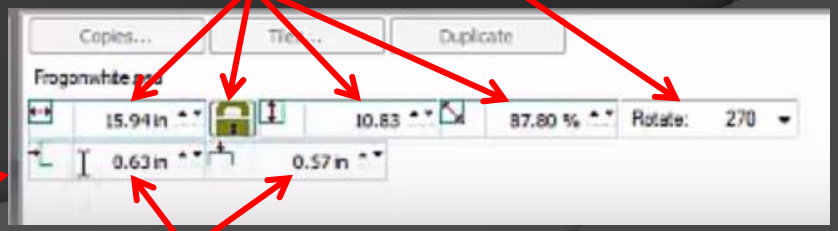


4. Once the image opens on the preview screen, click on the image and scale, rotate, and position the image as needed



Click on image in preview area

Scale and rotate the image

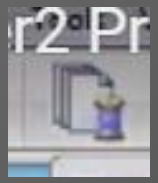


Close up of area

Position the image – placement on garment

PRINTING A WHITE SHIRT CONT.

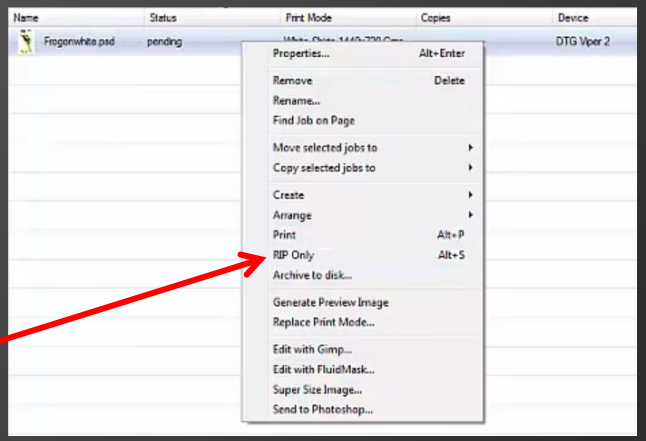
5. Now Rip (also called spooling) or print the image
   a) I prefer to rip the files first, that way I can:
      1) Bring in all of the files that I am going to print for the day, and I know that I chose the placement and print queue that I wanted to use. Now an employee can load the platens and release the files to actually print them
      2) Determine my costing information
      3) Set the number of runs (copies) I am going to print



Click on spooling icon

OR

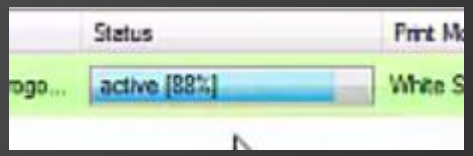
Rip Only



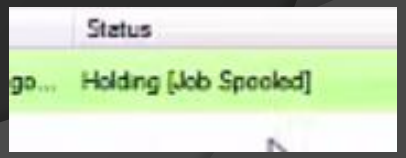
Right click (mouse) on the file name and choose "Rip Only"

6. The "Status" will change from "Active" (the status while it is processing) to "Holding(Job Spooled)" (the status once the file has completed processing)

Changes from



To



Status while processing (ripping)

Status when done processing (ripping)

PRINTING A WHITE SHIRT CONT.

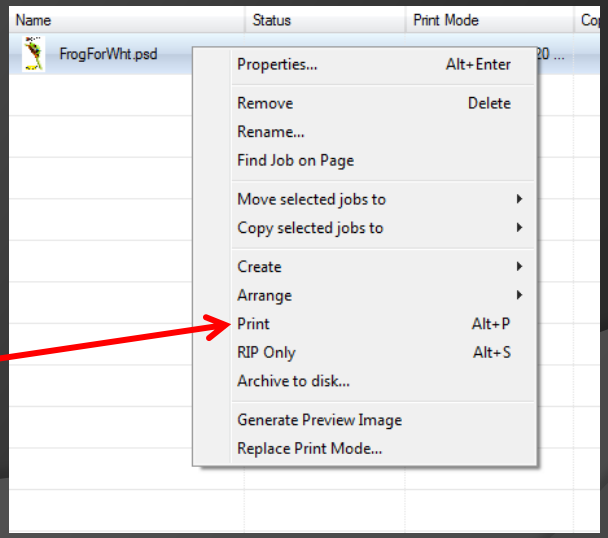
a) If you get a “Holding Error” status, it usually means you have lost communication, or have not established communication, between the RipPro software and the printer
   1) Click on “queue” in the upper left hand corner, and then choose “Manage Queues…”
   2) Under “ports”, click on the port box, and choose the “EPSON Stylus” as the port
   3) When it asks if you would like to “change them all” (meaning the ports) to this option, answer “**yes**”

7. Make sure the printer is loaded properly (the platen is in the machine)
8. Print the image; select “Print” to start printing
   a) This can be done by clicking on the “Print Job” icon or by right clicking (right mouse) on the file name, and choosing “Print”

Click on printing icon

OR

Print



Right click (mouse) on the file name and choose “Print”

PRINTING A WHITE SHIRT CONT.

L. Remove the garment(s) from the printer
   1. Be very careful when handling the garments, as they are wet at this point and will smear, if you let another part of the garment touch the print or if you rub anything against the print (avoid even slight contact with printed area)
      a) Removal of the garment from the platen is best done on a table or some other flat surface, not on the machine
M. Bring the product over to the heat press
N. Dry the garment
   1. If it is a shirt, try to have the collar off the heat press, so you don't get the imprint from the collar
   2. The heat press should BARELY make contact with the surface of the garment (little pressure – contact only)
   3. Place a piece of "release paper" or a Teflon sheet (both are available through Colman and Company – link: http://colmanandcompany.com/) on the surface of the print, being careful when putting it down, to avoid smearing the print
      a) This will prevent ink from getting on to the iron of your heat press
   4. Dry at 340 degrees

PRINTING A WHITE SHIRT CONT.

5. Dry for 2 minutes
   a) If you experience scorching (discoloration of the garment), you can break up the time into two 1 minute sessions, allowing the heat off the garment in between each of the minutes, so it can cool slightly. The total time will be 2 minutes
   b) You can also try placing a piece of heavy weight (3 or more ounces) cutaway embroidery backing, on top of your covering sheet, to help prevent scorching

Click here for video: Printing a White (non underbased) Shirt

PRE TREATING

A. Pre treat is **necessary any time you are going to print with a white underbase**, and **may** be used when printing without an underbase.
   1) Should you choose to do so, a **very light amount** of pre treat, on a garment without an under base, will keep the ink on the surface more, thus making your colors (especially dark ones – like black) deeper and richer
   2) The down side to doing this, is it may compromise the washability of the garment
   3) Pre treat flattens fibers, seals the surface of the item being treated, and helps bond the ink to the garment

B. Pre press the garment first
   1. This will be done on medium to medium heavy pressure on the heat press
   2. The heat press temperature should be 340 degrees
   3. Press for 10 to 15 seconds
      a) This process will help flatten the fibers
      b) It will also drive any moisture, that is in the garment, out of it.
   4. When possible, make sure the collar is off the heat press
   5. If the heat press iron is dirty, be sure to use release paper or a Teflon sheet on the surface of the garment, to prevent the fibers from being raised (from sticking to the iron)

C. Apply the pre treat to the item to be printed
   1. Using the Spider Mini
      a) Load the pre treat into the spider mini

PRE TREATING CONT.

b) Load the garment onto the drawer platen
   1) The position of the collar does not matter if you are doing a full front or a full back.
   2) The collar must be towards the front (drawer handle) if you are going to set how tall, of an area, it is going to spray, like when doing left chest logos (you can not alter the width of the spray, it is always the full width of the drawer platen
   3) Tuck under all excess material, so the overspray does not get all over the garment
c) Push the drawer closed
d) Set the timer
   1) The lower the number the more pre treat it will apply and the higher the number, less pre treat will be applied
   2) Try between 2 and 3.5 (usually start between 2.5 and 3) for garments you are printing with a white under base (usually your color and black shirts
   3) If pre treating garments with no underbase (usually very light color or white), try between 7 and 9.5 (usually start between 8.5 and 9)

NOTE

The amount of pre treat is going to vary based on how it flattens the fibers and seals the surface of the garment. Usually heavier weight garments will absorb more pre treat, thus not sealing the surface, therefore requiring more pre treat. Lighter weigh, and smoother materials usually require less pre treat.

e) Press the green "Start" button
f) Watch the machine to ensure and even amount of spray

PRE TREATING CONT.

g) Open the drawer
h) Remove the garment
i) Proceed to Step **"D"**

2. Using the Wagner Sprayer (manually pre treating)
   a) **Make sure you do NOT pre treat near the printer**, as overspray in the air can find it's way to the print head, thus potentially ruining your print head
   b) Shake the pre treat
   c) Pour the pre treat into the container for the sprayer
      1) Make sure the bottom of the tube, which will go into this container, is pointing toward the front of the container.
   d) Adjust the trigger to a position where **you** are comfortable spraying, depending on how fast you would like to move when spraying
      1) Most people like it towards the middle: the forward edge of the adjustment screw, it at the end of the plastic collar, which is in the center of the spring
   e) Set your garment up where you are going to spray it
      1) Having some type of walls or an enclosure (such as a spray booth or a basin like they use to wash/recover screen printing screens) will help control the overspray
   f) Prime the gun by spraying off to the side of the garment (not on it)
   g) Spray the pre treat onto the surface of the pre pressed garment
      1) Keep the tip of the sprayer about 12 to 14 inches above the surface of the garment

PRE TREATING CONT.

2) Spray horizontally, being sure not to stop at the outer edges (that will over pre treat), as well as being careful not to overlap too much when spraying
3) Then spray vertically, being sure not to stop at the top and bottom edges (that will over pre treat), as well as being careful not to overlap too much when spraying, to ensure even coverage over the surface of the garment

h) The surface should look like white droplets of dew on the early morning grass (or like there is white fuzz all over the surface of the garment)
1) If you touch the surface, it should leave a mark where you finger touched (a fingerprint)

NOTE

If you do not apply enough pre treat, you will not get a nice, smooth, solid white under base, thus resulting in poor white and color. If you over pre treat, you may compromise the washability of the garment. If you are ever printing, and you want to eliminate the possibility that the pre treating is compromising the quality of your prints, apply double or triple the amount of pre treat, and then dry it and print the garment. This garment can not be given to a customer, as it will not last. However, if your print comes out good, then you know pre treating is an issue. Continue reducing the amount of pre treat, until you get good prints, yet when you wash them, the colors are not washing out. That is the correct amount of pre treat. If the over pre treated garment did not print well, there is a different issue causing the poor prints.

PRE TREATING CONT.

i) Remove the garment
j) Proceed to Step **"D"**

D. Dry the pre treated garment
1. Place the sprayed garment onto the heat press
2. Make sure the pressure on the heat press is medium to medium heavy pressure
3. Make sure the temperature is at 340 degrees
4. Cover the garment with some kind of cover sheet
   a) You use a Teflon sheet or a Teflon bonnet
      1) Don't forget to wipe these down, with Isopropyl Alcohol after every few pre treated garments are dried, to help prevent the pre treat from building up on the sheet, which can cause it to stick to the garment, thus raising the fibers
   b) You use "Release Paper"
      1) You need to use a new piece of release paper once it becomes wrinkled
   c) NEVER use Parchment paper when drying pre treat
5. Dry the garment for 30 to 40 seconds

PRE TREATING CONT.

E. You can now print the garment or store it to print in the future
   1. Pre treated garments can be printed for up to one month from the date it was pre treated
      a) You must store these garments carefully, so the surface fibers do not get disturbed
         1) Store them as little sandwiches, with a piece of release paper between them, with the pre treated surface contacting the release paper
         2) Do not use release paper that you used while drying the pre treat
         3) Once you have them stacked about a dozen tall, fold them in half, and place them in a box (even better is a plastic storage container with a lid, to help keep out moisture)

Click here for video: Pre Treating

PRINTING A BLACK/COLOR SHIRT

A. Start by pre pressing the shirt
   1. Press the garment for 10 to 15 seconds on medium to medium heavy pressure
B. Pre treat the garment
   1. Apply an even coat of pre treat to the surface of the garment
   2. Dry the garment for 30 - 40 seconds, at medium to medium to heavy pressure, with the heat press at 340 degrees
C. Load the pre treated garment(s) onto the platen(s)
   1. Tuck the bottom and collar
      a) For a standard front or back of a garment, the collar is on the control panel side of the machine (portrait orientation), not the ink cartridge side
      b) For a print that is wider than it is tall (landscape orientation), the collar is usually toward the front of the machine
   2. Tuck the two sides

   3. Tuck excess material underneath the platen (not under the base)
   4. Make sure no material is sticking up

PRINTING A BLACK/COLOR SHIRT CONT.

D. Push the platen into the machine by hand, VERY SLOWLY, until the beginning of the garment is in line with the path of the height sensor beam (light)

E. Set the gap height by holding the “Bed Up” button until the light turns red, and the bed stops rising

F. Release the “Bed Up” button
   1. The bed will drop down slightly and the light will turn green
      a) If the bed does not lower slightly, then the platen is not under the gap sensor beams properly
      b) Re position the platen and reset the gap height

G. SLOWLY push the platen into the machine, so the gap sensor can scan the entire surface of the garment

H. Pull the platen back out toward the front of the machine, SLOWLY
   1. Make sure the machine did not try to adjust the platen height
      a) If it did, it is because something (some part) of the garment is sticking up or your platens are not level

PRINTING A BLACK/COLOR SHIRT CONT.

I. Make sure the back edge, of the base of the platen, is just in front of the media sensor

J. With the "black/color" print queue, since your are printing one pass of underbase and then a pass of color ink, make sure the layer function is turned on

1. The top of the layer button will be **blue** if this function is turned **on**

This is what it looks like when it is turned on – notice the blue light – you want this when printing a shirt with an underbase.

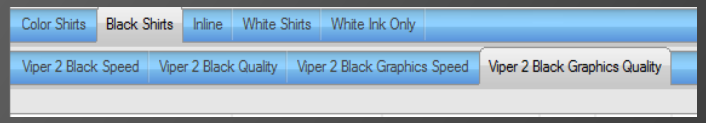
K. Press the "Bed Load" button to load the platen (with the garment on it) into the machine

1. If you experience a 1600 series error, that is a loading error.
   a) Power off the machine at the control panel (don't forget to wait for the beeps indicating that it has powered down completely/properly.
   b) Then turn power back on, wait for the start up procedure to complete, then repeat steps "**C**" through "**J**"

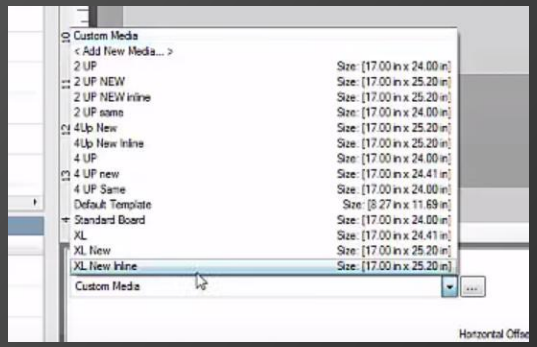
PRINTING A BLACK/COLOR SHIRT CONT.

L. Next go to your computer, which is hooked up to the printer, and has the RipPro software on it

1. Select the garment color and print queue you wish to use

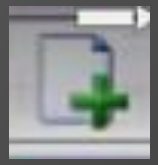


2. Select the template (platen configuration) you are using – 1 up, 2 up, 4 up, etc.

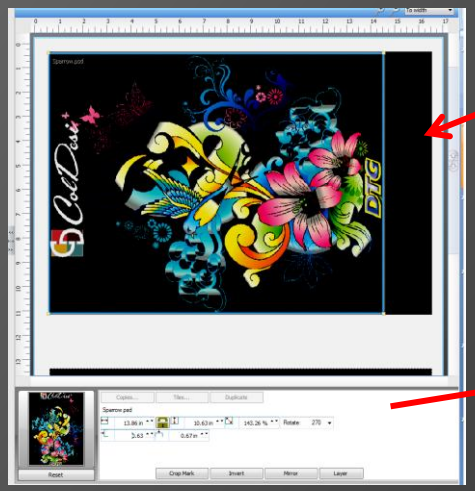


PRINTING A BLACK/COLOR SHIRT CONT.

3. Import the image you wish to print

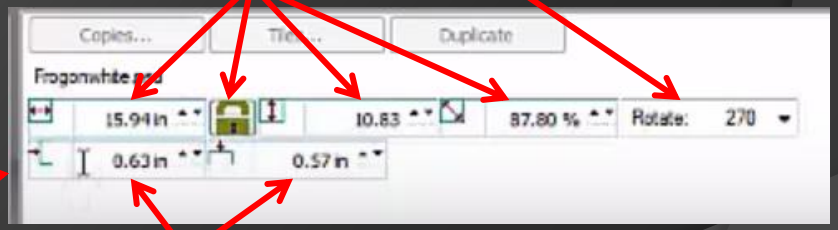


4. Once the image opens on the preview screen, click on the image and scale, rotate, and position the image as needed



Click on image in preview area

Scale and rotate the image

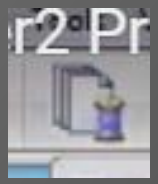


Close up of area

Position the image – placement on garment

PRINTING A BLACK/COLOR SHIRT CONT.

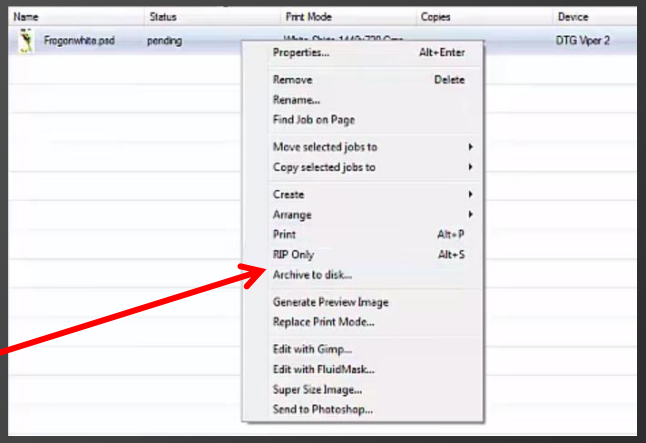
5. Now Rip (also called spooling) or print the image
   a) I prefer to rip the files first, that way I can:
      1) Bring in all of the files that I am going to print for the day, and I know that I chose the placement and print queue that I wanted to use. Now an employee can load the platens and release the files to actually print them
      2) Determine my costing information
      3) Set the number of runs (copies) I am going to print



Click on spooling icon

OR

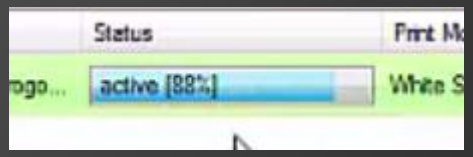
Rip Only



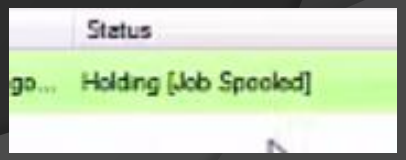
Right click (mouse) on the file name and choose "Rip Only"

6. The "Status" will change from "Active" (the status while it is processing) to "Holding(Job Spooled)" (the status once the file has completed processing)

Changes from



To



Status while processing (ripping)

Status when done processing (ripping)

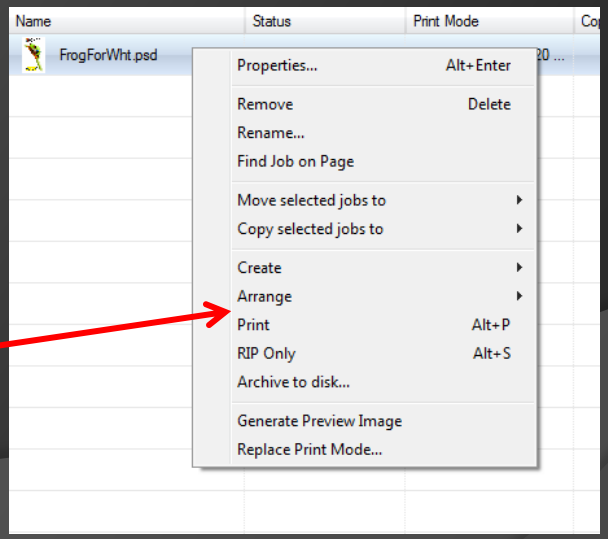
PRINTING A BLACK/COLOR SHIRT CONT.

a) If you get a “Holding Error” status, it usually means you have lost communication, or have not established communication, between the RipPro software and the printer
   1) Click on “queue” in the upper left hand corner, and then choose “Manage Queues…”
   2) Under “ports”, click on the port box, and choose the “EPSON Stylus” as the port
   3) When it asks if you would like to “change them all” (meaning the ports) to this option, answer “yes”

7. Make sure the printer is loaded properly (the platen is in the machine)
8. Print the image; select “Print” to start printing
   a) This can be done by clicking on the “Print Job” icon or by right clicking (right mouse) on the file name, and choosing “Print”

Click on printing icon

OR



Print

Right click (mouse) on the file name and choose “Print”

PRINTING A BLACK/COLOR SHIRT CONT.

M. Remove the garment(s) from the printer
   1. Be very careful when handling the garments, as they are wet at this point and will smear, if you let another part of the garment touch the print or if you rub anything against the print (avoid even slight contact with printed area)
      a) Removal of the garment from the platen is best done on a table or some other flat surface, not on the machine
N. Bring the product over to the heat press
O. Dry the garment
   1. If it is a shirt, try to have the collar off the heat press, so you don't get the imprint from the collar
   2. The heat press should BARELY make contact with the surface of the garment (little pressure – contact only)
   3. Place a piece of "release paper", a Teflon sheet (both are available through Colman and Company – link: http://colmanandcompany.com/) , or a piece of Parchment paper on the surface of the print, being careful when putting it down, to avoid smearing the print
      a) This will prevent ink from getting on to the iron of your heat press
      b) Release paper and Teflon will leave the print with a little more SHINY (glossy) finish
      c) Parchment paper will result in a more satin like (flat) finish

PRINTING A BLACK/COLOR SHIRT CONT.

4. Dry at 340 degrees
5. If you have a hover feature, hover for 30 to 40 seconds
   a) The iron of the heat press is just above the surface of the garment
   b) For this step, do not put anything on the surface of the garment (no cover sheet), since you are not putting the iron in contact with the garment
   c) This procedure will help prevent ink migration (where the under base ink pushes into the color ink)
6. Dry for 3 minutes
   a) The heat press should just be in contact with the surface of the garment

Click here for video: Printing Black/Color (Under based) Garments

END OF DAY MAINTENANCE

A. Using the “Bed Down” button, lower the bed as far down as it will go
   1. Press and hold the “Bed Down “ button, until the bed stops lowering

   2. This will make the head cleaning process easier
B. Fill the syringe, fitted with a (green) tip, with 30 to 35cc’s of flushing or cleaning solution
C. Remove the top cover, above the print head, from the machine
D. Start the machine doing a head cleaning
   1. With the machine in a normal “Ready” status, press and hold the “Menu” button for approximately 3 seconds

      a) If the “Ready” status light is pulsing green, press the “Enter” button to wake the machine up

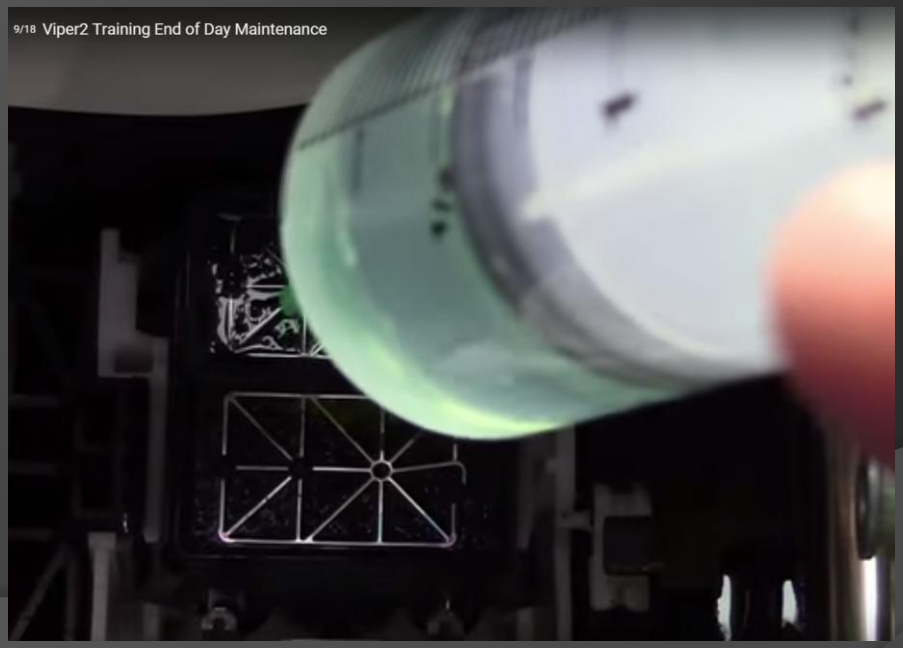
END OF DAY MAINTENANCE CONT.

E. Squirt the capping station with the syringe - DONE DAILY
   1. You want to be ready with your filled syringe in your hand
      a) Do not hold the syringe over the machine, in case it drips, we do not want to drip any liquid onto the electrical components
   2. You want to be standing off to the side of the machine, over by the control panel
   3. Carefully watch the print head carriage
      a) When the print head moves off of the capping station the first time, it is only a tiny amount. We don't do anything with this movement
   4. When the print head moves off the capping station the second time, it exposes the capping station
      a) Squirt the surface of the capping station, being sure to get both halves (it has a divider in the middle, separating the white and color sections of the capping station)
      b) Keep squirting as **long as you hear the evacuation pump running.** Stop squirting when the evacuation pump stops
      c) You should be able to deliver about 15 – 20cc's of solution, during this first opportunity
         1) You are cleaning the surface pad, as well as flushing the internal lines and pump of the capping station, preventing it from clogging, thus prolonging the life of the capping station
         2) How quickly the liquid is evacuated from the surface, indicates it's health, and should always be observed

END OF DAY MAINTENANCE CONT.

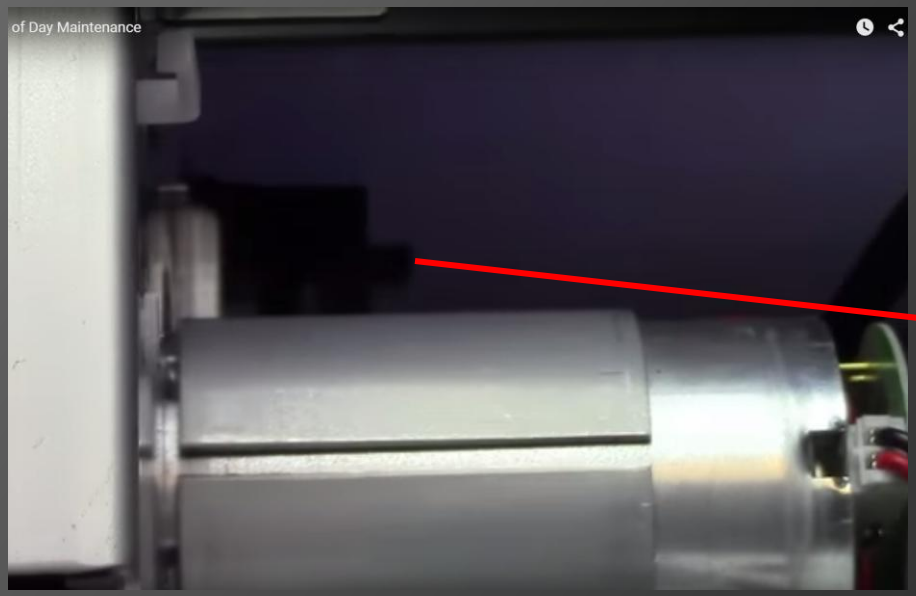
3) The capping station plays a major role, in assisting with Head Cleanings, as it helps pull ink through the print head, thus cleaning the nozzles

5. The print head will then return to the capping station, thus covering it up
6. The print head will then move out a third time, thus exposing the capping station for the second time, and affording us our second opportunity to squirt the surface of the capping station
   a) Again, squirt as long as you hear the evacuation pump running
   b) Between this opportunity and the last one, you should be able to squirt approximately 30 to 35cc's of solution
      1) Squirt fast enough to keep the surface wet, but not so hard and fast the liquid is splashing all over.

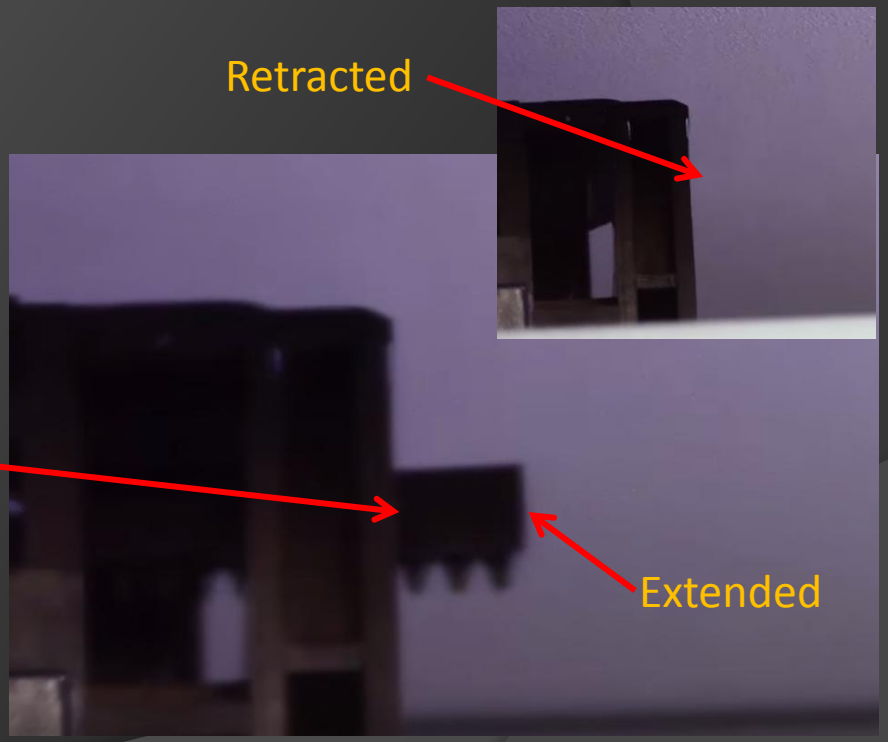


END OF DAY MAINTENANCE CONT.

F. Now carefully watch the gear piece, which is located in front of the electric motor, mounted to the right of the print head carriage, when it is in a docked position
   1. When that gear piece disappears (retracts), press the “Emergency Stop” button, on the front of the machine
      a) This will ensure that the wiper is out (in an extended position)



Zoomed out view to get an idea of the location

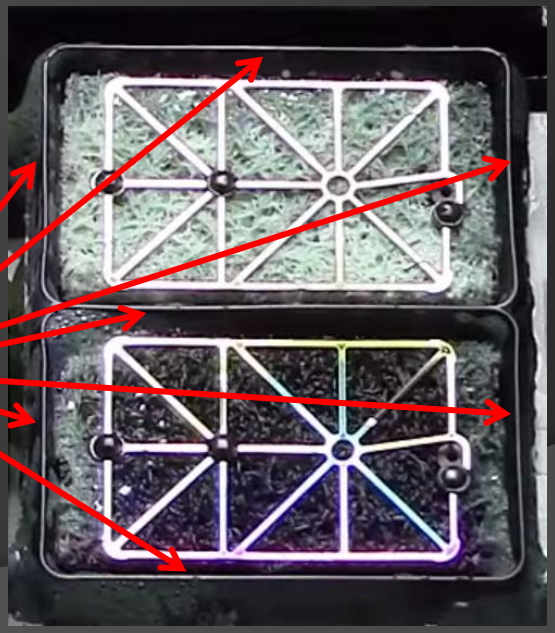


Zoomed in view to know exactly what you should be looking at

END OF DAY MAINTENANCE CONT.

G. Clean the rubber seal of the capping station – DONE DAILY
   1. Dip a foam (or cotton) swab into some flushing (or cleaning) solution
   2. Wipe off the seal until it is perfectly clean
      a) This seal is what seals (caps) the print head, so no air gets to it, thus preventing it from clogging
         1) A clog is usually ink that has dried in the nozzle(s) of the print head
         2) When the ink is exposed to air, it dries
      b) Don't forget the divider portion of the seal
   3. When the foam swab becomes dirty, squeeze it into a rag or paper towel to clean it, then dip it into some flushing (or cleaning) solution
      a) Repeat as necessary

Rubber seal of the capping station



Cleaning the seal with a foam swab

END OF DAY MAINTENANCE CONT.

H. Clean the wiper – DONE DAILY
   1. Using the same technique as cleaning the rubber seal of the capping station, thoroughly clean the wiper blade
   2. Stern force can be used on this
   3. Be sure to clean the front, top, and back sides of the wiper blade
   4. Clean the white plastic part, that holds the wiper blade in the machine
   5. The wiper blade is perfectly clean when it is smooth, shiny black, without any trace of ink on the blade
      a) If the wiper blade appears to be bluish, greenish, or greyish, **it is not clean**

I. Clean the end coder strip – DONE EVERY 2 to 3 MONTHS, or AS NEEDED
   1. Saturate a paper towel or clean rag with flushing (or cleaning) solution
   2. Drape the treated item over the top of the end coder strip, so half is in front and half is in back of the strip
   3. Gently squeeze and wipe the strip clean
   4. Repeat until when you inspect the towel (rag), it is still clean

END OF DAY MAINTENANCE CONT.

J. Clean the RAMP of the print head carriage – DONE DAILY
   1. Brace the top of the print head carriage, from the top, with your other hand
   2. Saturate a rag or paper towel with cleaning (or flushing) solution
   3. Thoroughly clean any dried ink from the ramp
      a) A dirty ramp, wiping against a clean wiper, can transfer dirt to the wiper, which will then wipe your print head

Ramp – Angled plastic piece

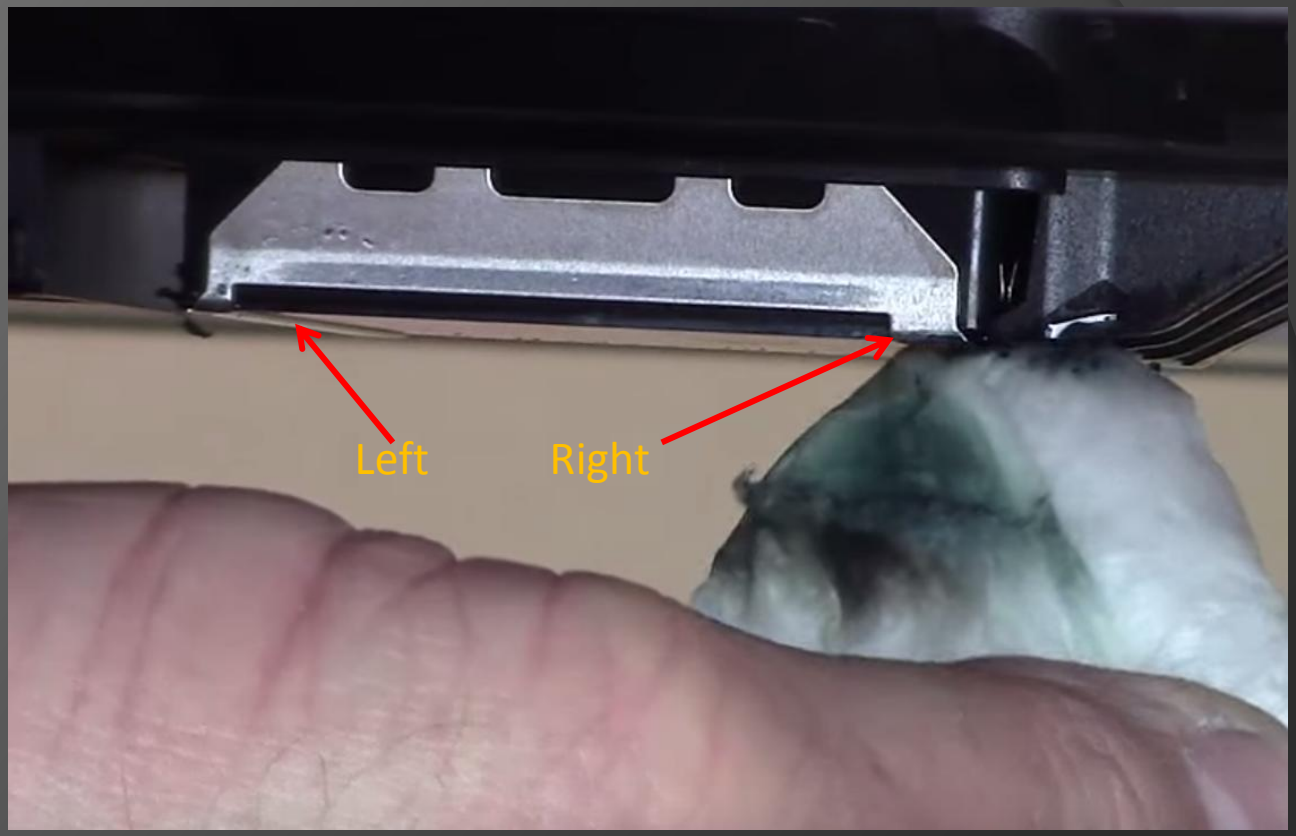
END OF DAY MAINTENANCE CONT.

K. Clean off the edges of the print head – INSPECT DAILY, CLEAN AS NEEDED
   1. Using a clean rag or paper towel (or a non treated facial wipe – cotton round) dipped in cleaning soultion, wipe off the front and back edges of the print head
   2. VERY CAREFULLY clean off the metal pieces on the left and right sides of the print head
      a) Avoid brushing the print surface of the print head – accidental brushing is going to happen, just be very careful when performing this cleaning procedure

Front

Back

END OF DAY MAINTENANCE CONT.



L. **Be sure to power the machine back on, by releasing the emergency stop button, and ensure the print head docks itself on the capping station**

Click here for video: End of Day Maintenance

DRYING TIMES, TEMPERATURES, AND PRESSURES

- For everything, the temperature of the heat press will be 340 degrees

- When you heat press anything, **before it has ink on it**, the pressure will be medium to medium heavy on the heat press
- When you heat press the ink (once the garment is printed), you will either hover (no contact being made at all) - or dry, with very little pressure (the heat press just making contact with the surface of the print

- We pre press for 10 to 15 seconds
- We dry pre treat for 30 to 40 seconds
- We dry non under based garments for 2 minutes
- We dry under based garments for 3 minutes, and if you have a hover feature, hover for 30 to 40 seconds before drying the garment