# USER MANUAL - DTG PRO P640 DIY DTG

Congratulations on your selection of the DIY DTG P640 EVO.

The affordable way to Do it yourself (DIY) Desktop garment printing.

The system is composed of a lower stand, the BASE, where the printer rests, and the PRINTER itself. Colors and style of base may vary.
The base has a long rail arm which has a motor on one end that drives the Print Plate back and forward (This Plate is where the TShirt or other garment will lay flat and be printed on).

TIGHTEN THE RAIL MOTOR BELT – if needed
After you have the Base sections assembled, you can then tighten the belt with the supplied Allen wrench. The Rail ships with the belt loosened to prevent damage.

Ensure medium tension is present in the belt when you pull the plate with the Motor ( at the rear of the rail) to create tension. Once the correct tension exists, tighten both the screws on the plate near the stepper motor roller.

You may notice oil on the rail edge. Do not wipe, this is lubrication for the moving of the track arm on the rail.

The Base has a wheel-less design that allows for ultra-stable movement using a rail system that removes the unstable movement of wheels. This allows for better prints. You must connect the Motor and the sensor cables to the printer, by connecting the ends with the plastic connectors. You will see a “pigtail” of cables coming from the printer’s rear right side. Connect these to the motor and sensor on the rail.

. 

SETTING UP THE PRINTER

Gently place the printer on the fully assembled base.

The printer has a power connection and USB connection.
Once you have setup the base, please connect the motor connector to the printer via the provided clip connectors. Please ensure they are out of the way, and do not get caught in the rail section during rail and platen movement.


Do not install CARTRIDGES or EPSON PRINTER DRIVERS until the Printer Base and electronics have been tested and calibrated. If you do so, you may damage the printer, and it may be costly to repair.

This HEIGHT adjustment is very important for sharp prints. If the Tshirt or other substrate is too far from the Printhead, the resulting prints will look blurry.
For optimal prints you must get the print surface on the PLATEN to be as close to the printer's Printhead as possible, without risking collision. For this purpose we have installed a barrier in front of the printer to allow for perfect height selection, without allowing for the risk of damaging the Printhead by collision.

The Printhead should never move into contact with anything.
If the Height of the platen is incorrectly adjusted it can cause a Printhead STRIKE.
When the print-head comes into contact with the media being printed, this appears as smeared ink in a particular spot on the print. The friction can damage the head.
Printhead strikes can damage the Printhead permanently.
If the nozzles are damaged there's not much you can do. The nozzles are extremely delicate.

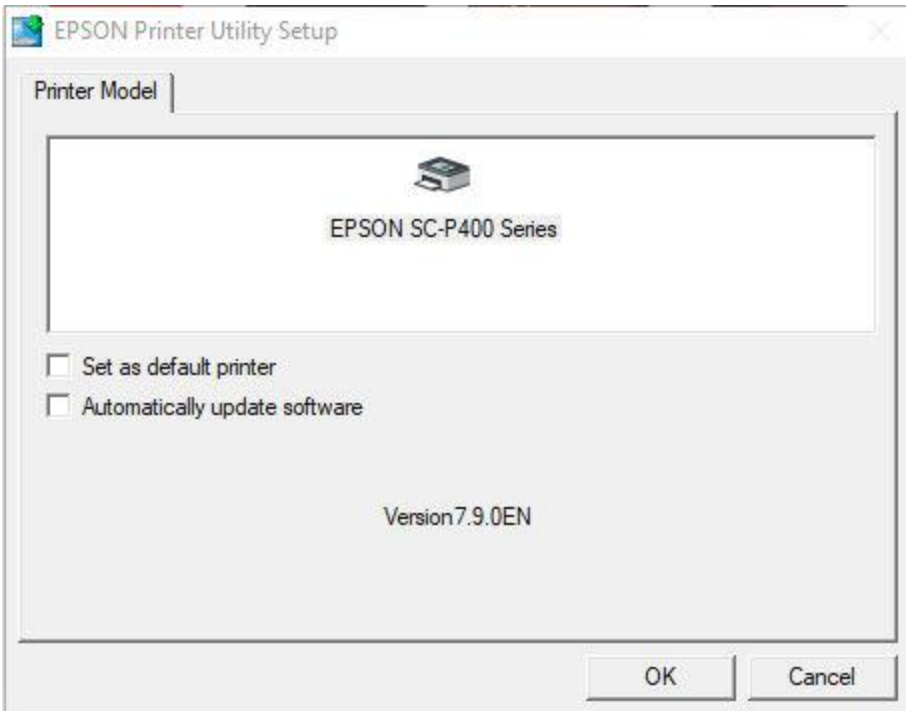
Optimal DTG printing is done with the fabric at 2-3mm below the Printhead. Note that, Prints will appear BLURRY and with ink spray edges, if the correct distance is not achieved.

NEVER UPDATE THE PRINTER SOFTWARE EITHER DURING THE INSTALLATION OF THE DRIVER, OR IF PROMPTED BY YOUR COMPUTER.

## Windows PC Installation and connection to printer.

Install the Epson P400 (DTGPROP640) print driver on your computer.

DO NOT CHECK UPDATE SOFTWARE BOX. – You must UNCHECK IT.



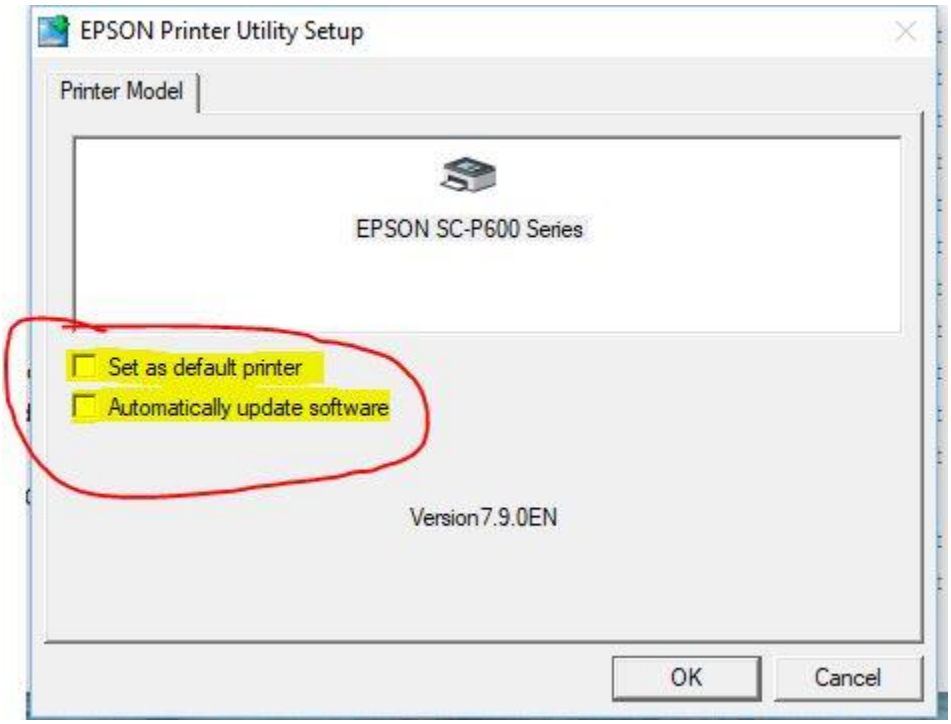

IMPORTANT

**NEVER UPDATE the CUSTOM FIRMWARE/SOFTWARE of the EPSON PRINTER**, nor check the box that says “update automatically”.Ensure boxes are UNCHECKED.

If the Epson driver is updated with new firmware, it will prevent the printer from working and we will have to reinstall complex firmware software over a remote connection, which can take some time to co-ordinate.

The Epson printer is programmed with custom Garment printing software. If you

update the firmware to Epson's paper-only firmware, it will not print,and YOU WILL VOID THE WARRANTY.




You may use the RIP software of your choice, including : AcroRIP/PartnerRIP,Kothari RIP, EKprintStudio etc

INK CONTAINERS / REFILL CARTRIDGE INSTALLATION


Your DTG pro printer ships with an included set of Refillable INK Container cartridges. (8 Cartridges.)
Please ensure you strictly follow the order of INK COLORS. 8 cartridges will be filled with ink.

CARTRIDGE FILLING

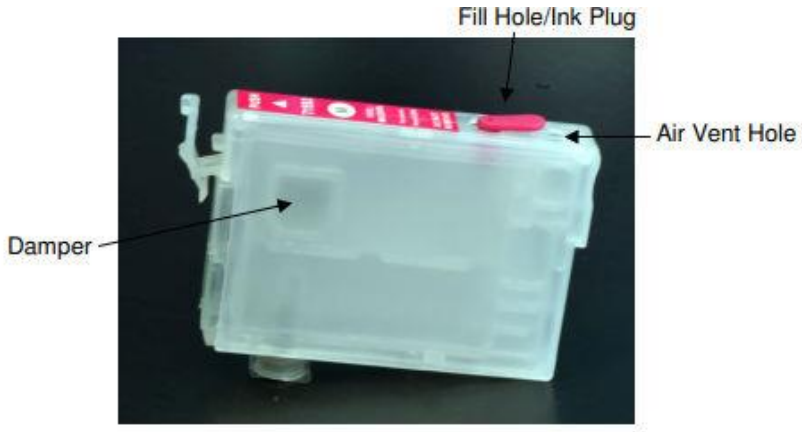
Once you have obtained ink, either your own DTG ink, or purchase DTGPro brand ink, you can fill the cartridges with it. We recommend you use a Funnel, and pour slowly to prevent any spillage. Never pour into the cartridges while they are inside the printer.

The cartridges use a very specific vacuum chamber and must be PRIMED by being filled using the supplied Plastic tip needle and syringe to ensure that the vacuum chamber is correctly filled and the cartridge is primed.
You can fill the cartridges initially from the top fill hole, by pulling off the rubber seal cap, keeping the air inlet plug sealed, and then you must fill at least 10-20ml from the bottom, by inserting the provided syringe (image below) , with gentle but sufficient pressure from the bottom to the valve inside.
If the cartridge is not primed, you may not get ink flowing to the Printheads.
Nothing will print.

FILLING video is provided below. VIDEO:
https://www.dropbox.com/s/0jjsc1lxzfzyblx/P640-400-Cartridge-Priming-Filling.mp4?dl=0

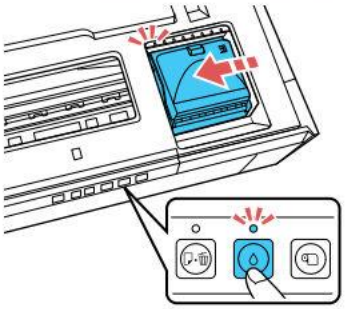
Below is an example of an INCORRECTLY PRIMED CARTRIDGE. The Cavity inside must be fully filled.


Ensure the clear plastic plug is removed allowing the air vent hole to be open.

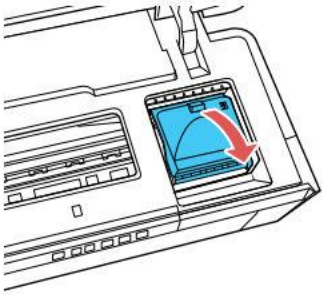




2.1 ***** VERY IMPORTANT *****
Ensure that the air vent hole on the cartridge is not blocked. This is required so that ink can flow correctly. Please DO NOT cover these air vent holes for any reason. Remove any tape or plug if present.

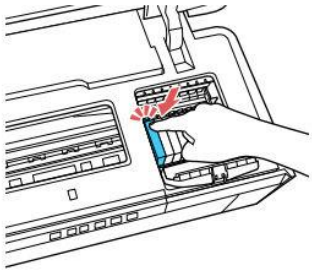
Press the ◊ ink button. The print head moves to the ink replacement position.



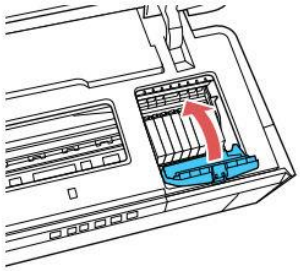
Press the latch and open the ink cartridge cover as shown.



Insert the new cartridge into the holder and push it down until it clicks into place.



Close the cartridge cover and push it down until it clicks into place.



Press the ink button to begin charging the ink delivery system. This takes about 4 minutes.

NOTE :
You can clean the print head using the printer's control panel.
1. Press and hold the ink button for 3 seconds or more to start the head cleaning process.
Head cleaning takes approximately 3 minutes to complete.

## The Cartridge INK POSITIONS

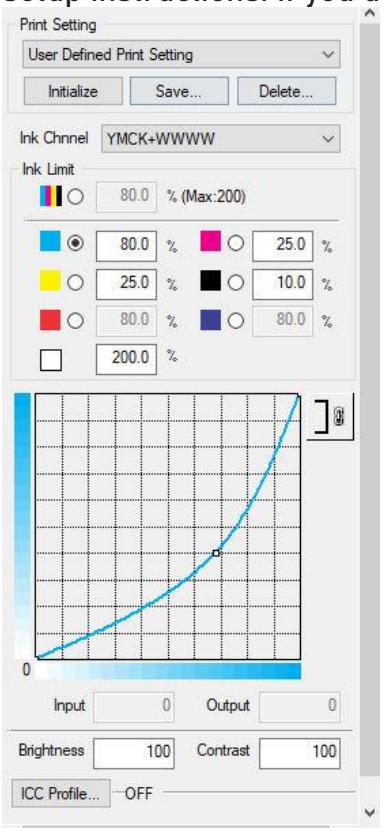
In the RIP software, you must follow a very specific Ink Channel Position.

That position order (physically on the printer) is: YMCK WWWW

Starting from Left to Right Cartridges with ink should be : YMCK WWWW
Yellow, Magenta, Cyan, Black, White, White, White, White

The RIP engine used is Epson Stylus Color R2000

On the RIP Software (for example AcroRip) you will need YMCK+WWWW in the ink channel selection. The provided RIP software instruction manual contains detailed setup instructions. If you do not closely follow the setup, you may not get good prints.



Once you have mastered the basics, you may then adjust the RIP settings and experiment for customized needs you will have.
Check your settings in the final DIALOG BOX before your print to ensure the right printer and port etc have been selected.

Please consult your RIP software manufacturer or manual or Settings Document for CHANNEL positions and set accordingly, BEFORE inserting and FILLING the cartridges.

REMINDER


Never fill the ink cartridges while they are IN the printer, or you could risk leaking ink into the printer area where sensitive electronics may short.
Always gently REMOVE the cartridge and then, fill in an area away from the printer.
Ensure you replace the cartridge quickly to prevent the ink receptacles from drying out.

Never drip any liquids into the printhead area, or they will short out the printhead and mainboard, destroying all the electronics, and voiding your warranty. Ensure you use the utmost care when cleaning or flushing the printhead area.

Filling Procedure:

1. Place empty cartridges, ink bottles and syringes on a work surface. Choose filling area and clothes you wear carefully, as accidents can happen, and pigment ink is permanent. Have glass cleaner and paper towels handy in case ink is spilled, and wear rubber gloves when working with ink.
2. Select the correct bottle of ink for the cartridge, and shake it gently. Unscrew the cap, and remove the silicone plug or cut around the foil seal to open the bottle.
3. Fill a syringe with 15ml of ink using a blunt needle to draw ink out of bottle. Make sure to fill each cartridge with the correct ink; if mis-filled with the wrong ink, cartridges can not be cleaned and must be replaced.
4. Remove fill hole plug from top of cartridge. Keep the air vent tab (or plug) in!
5. Leaving needle attached to syringe, insert needle into cartridge fill hole. Hold cartridge at an angle with fill hole up then gently push syringe plunger to slowly refill cartridge with ink. Tap side of cartridge with your knuckle to release trapped air and allow ink to settle, then continue filling.
6. Once cartridge is filled with ink, remove needle from cartridge and insert rubber plug securely back into the fill hole. For accurate ink level tracking, cartridges must be totally filled (a small air bubble is ok, but too much air can cause the cart to empty before the printer gives warning).
7. Gently tap filled cartridge a few times exit valve (cartridge outlet) down on a folded paper towel to force air up and ink down. Remove air vent plug/tab from the cartridge, making sure vent hole is fully OPEN. Do not remove top or side labels.
8. Install cartridges into printer (make sure they snap firmly in place for proper instillation), wait 10-15 minutes to allow ink to settle, then run 1-3 cleaning cycles and print a nozzle check to verify all positions are fully printing. Now you are ready to print! Syringes and needles can be rinsed out with water, air dried and reused many times.
9. If you notice that one or two ink channels are clogging when you have put brand-new (NEW) cartridges into your printer, you will need to take those cartridges out and prime them with the optional priming tip that comes with your kit. This tip can be rinsed out between uses.
10.

a. Put your priming tip on one of the syringes that came with your cartridge kit. These tips simply fit directly over the end of the syringe.
b. Push the syringe (with priming tip) into the cartridge outlet and suck just a tiny bit of ink out (about 1mL will do).
c. This action will get rid of any air that is locking the ink from entering your printer's head.
d. Do 1 or 2 standard cleanings on your printer. Let the printer sit a few minutes between cleanings. At this point you should see all nozzles working!
e. You never have to prime your cartridge again. This is only done as an optional procedure the first time you use a brand-new cart.

Refilling Procedure:

Keep track of the ink level and do not allow cartridges to run dry. When a cartridge is empty and needs to be refilled, check the other carts and refill any others that are also low if you . Gently shake ink bottles to ensure ink is in suspension before filling or refilling carts. Always make sure carts are filled and refilled with the correct ink- if carts are mis-filled with the wrong ink, they cannot be cleaned and corrected- in this case you must use new carts.

These cartridges can be refilled and reused MANY times, though for best results we recommend replacing after about a year of use.

1. Have ink, blunt needles and syringes ready on a workspace before removing carts from printer to refill.
2. Remove colored plug from cartridge fill hole and leave air vent hole OPEN. Draw 15ml ink into the syringe. Leaving needle attached to syringe, insert needle tip into cartridge fill hole. Hold cartridge at an angle with fill hole up then gently push syringe plunger to slowly refill cartridge with ink. Tap side of cartridge with your knuckle to release trapped air and allow ink to settle then continue filling.
3. Once cartridge is refilled with ink, remove needle and reinsert fill hole plug, then tap cart exit valve down on a folded paper towel a few times and reinstall into printer. After installing refilled carts into the printer, wait 10-15 minutes for ink to settle. Always print a nozzle check after refilling carts before printing images.

**GENERAL TIPS**

- Use the printer on a regular basis for best function. To keep the ink moving thru the cartridges and head moist, print a small image or do a cleaning cycle at least once a week if the printer is not used regularly. It is NOT good to leave DTG ink installed in a printer that will not be used for an extended time- its best to install flush carts and flush ink for safe storage if your printer will sit unused for a month or more (see below for additional information on flushing and storing your printer).
- Long term storage of printer: We do not recommend letting a printer sit unused with DTG inks installed. If you do not plan to use a printer for an extended period of time, it is best to remove ink cartridges, install a set of flush cartridges and flush ink from the print head by doing 3-4 cleaning cycles, before turning it off for safe storage. Store unused cartridges upright in a sealed plastic bag to avoid drying.
- When carts are not being used (in or out of the printer), we recommend sealing air vent holes with plugs or electrical tape to keep carts moist and prevent drying. Make sure air vent holes are OPEN before printing for proper ink flow.
- For the best results, monitor and maintain humidity levels between 40-60% in the printing area (this is based on Epson's recommendation). Both low and high humidity can cause problems with the printer, ink garment.

Cartridges + Cleaning Solution

We recommend you purchase a set of Cleaning and Maintenance cartridges.
These are Refillable Cartridges that are the same as your INK cartridges.
If you are not printing for a period of time, it is important to keep the Printhead moist, to avoid clogging and preventing dried ink to harden and clog the Printhead.
WHITE INK is especially prone to clogging.


If you intend to not use the Printer for an extended period of time, as part of the required maintenance, we recommend filling each cartridge with the provided cleaning/maintenance solution and inserting the maintenance Solution cartridges.
Do several cleanings to flush out the white ink from the printhead. You may store your Ink cartridges you have taken out ( that probably still have ink), and store in a zip lock bag that is air-sealed, to keep ink from drying/evaporating).

If you experience clogging and need more powerful cleaning, you would use these maintenance cartridges to flush out any clogs. You can run the cartridges as if they are ink, and run several cleaning cycles (never more than five in one 24 hour period).
You can also run the provided EPSON ADJUSTMENT program for deep cleaning.

**BASE and PRINTER OPERATION AND USE**

Base operation

Buttons on Front left side of printer.

1st button : Begin/PRINT Button. This will position the PLATEN to the rear BEFORE you begin printing. This button sends the PLATE to the rear. You must always have the Plate in the back area of the printer before you click the print button on your PC.

2nd Button : Eject /FRONT Button. This button brings the PLATEN forward.

The P640/400 will sometimes just run cleans before prints or nozzle checks. The system determines when it is necessary.
Always let it finish what it's doing. Never stop it. Cleanings may take 2-5 minutes.

## CARTRIDGE RECOGNITION – INK ICON BUTTON

When you begin PRINTING, you will get a prompt, indicating that the printer is looking to confirm and recognize that cartridges are installed
Press the CARTRIDGE INK ICON button on the exterior button panel let the printer know they are installed and continue.

The best method is to push the ink button, install the cartridges, and then push the ink button again to let printer know they are ready and installed.

Note that the Power light will flash continuously to indicate “ready to print”. Flashing is the default.

**LIQUID SPILLS near the printhead**

Please note that the printhead is an area that has data and power cables that connect to an electronics board that connects to the mainboard.

Be extremely careful with any liquids and in handling the ink cartridges near the printhead. Excess ink and liquid can flow to the right hand side of the printhead area and short the mainboard and the printhead electronics board.
If the printer does not power up, it is a sure indicator of a blown or shorted printhead and mainboard. This will void your warranty, and will mean you will need to replace and repair the parts. We can assist with this process, but prevention is better in this case.

Whenever you are changing cartridges, doing any cleaning, or flushing the head, always be extremely careful with any liquids and always place a protective absorbtive tissue, or cloth in the right hand side edge of the printhead and cartridge receiver to help avoid leaking into the mainboard.


## Maintenance is REQUIRED to prevent clogging.
## Clogging can be serious and costly.

Wet-capping is part of the required maintenance.

DTG ink is pigmented, this means it is made up from physical particles allowing it to maintain a strong vivid color on cotton and often treated polyester fabrics where dye based inks would look weak. The pigmented ink left sitting in the capping station slowly dries by way of evaporation leaving behind the pigment. This will form a rubber like substance that can be physically peeled from the outside of the capping station seal, this also happens inside the workings of the capping station. This is especially true for WHITE INK.
Wet capping helps to keep the print head moist while not in use and in some cases can flush itself through automatically.

Maintenance with our Blue Cleaning Solution, is designed to break down the direct to garment ink on the print head nozzles while preserving the print head. There are several ways you can use it, from injecting it into the wet capping station, to wiping the print head and printer parts (in more extreme circumstances).

One of the best methods to avoid it clogging is preventative maintenance. Wet capping and daily printing, as well as an environment with good humidity is needed.

Do not Overfill the capping top area, or the fluid will cover the printhead and cause poor print quality and will take a lot of effort to clean and restore printhead ink to normal function.

VIDEO (Wet-capping how to) :

https://www.dropbox.com/s/2tt78dr4oyw9qwh/WetCaping_Cleaning_EpsonP600.mp4?dl=0

MAINTENANCE REQUIRED

*Daily*
- ONE print ( nozzle check works) to move printhead or ONE Cleaning
- Shake WHITE ink cartridges ( gently and every 24-48 hours)
- Cleaning at beginning and end of shift (OR every 15-20 cmyk // 10-15 white ink prints)
- Nozzle check ( a good practice before printing)
- wet capping regularly ( 24-48 hours)
- Additional good optional practice : Overnight : Place cleaning carts in the printhead ( ensure filled with good cleaning solution) and remove ink carts and store in sealed Ziplock bag

*Monthly/Quarterly*
-Cartridge Flush using Additional Cleaning Cartridges ( Filled with cleaning solution and distilled water).
Remove ink Cartridges, and place the Cleaning cartridges instead and run 2-3 cleanings and 2-3 prints to force ink out and solution in.
Then do the same with the ink cartridges to print again.

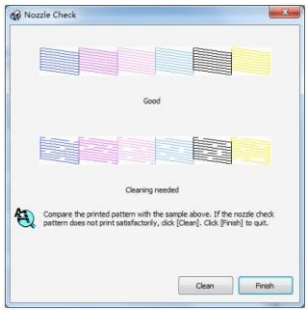
*Annuals*
Replace cartridges
Review Wiper blades
Review capping station
Review encoder strip

https://www.dropbox.com/s/2p5dyehttirg676/DTG-MAINTENANCE-REQUIRED.pdf?dl=0

## TEST PRINTS

You are now ready to do various test prints. You do not need to use garments (tshirts) or for initial testing - you may tape regular white paper onto the platen and test. If you are testing on Tshirts or other garments, remember that DTG inks require garments to be pretreated (especially dark garments), so the tests will work best on pre-treated garments. Testing can be used to configure position, alignment etc

Note that if you are running nozzle tests, White and Yellow ink will NOT be visible on white paper.
Clear Projector film or screenprint film may be used to see the nozzle test results for white and yellow ink visibly.
A nozzle test can be run from the printer's LCD screen touch menu, using the maintenance function.
Please note that the internal Epson alignment is not configured for the Plate system, and it may just print very close to the edge of the plate.




You may also run the nozzle check via the PC menu in the printer settings inside windows operating system.

You may need to run some cleanings if you see serious gaps in your nozzle check (never more than 5 cleanings in a 24 hour period – or you will risk burning the Printhead) to ensure that air bubbles and ink flow is optimal. Running the printer every day, even if only for a nozzle test or a single simple print is required to prevent Printhead clogging. You can print one simple page with various colors.

If you intend to leave the printer unused for an extended period of time, install the maintenance cartridges and ensure they are filled and flushed with at least 50% with Maintenance/cleaning solution and distilled water to prevent the Printhead from drying out or clogging.

Obtaining Sharp Prints

Note, the closer you can get to the desired Printhead to garment distance of 2-4 mm, the sharper the prints. If you have set the Print Plate/Platen too far below the Printhead, you will notice that your prints will appear blurry. The steel plate/barrier in front of the printer is to prevent raising the platen to a height that would collide with and damage the Printhead. Getting the plate with the garment as close to that barrier is preferred. Ensure any garment is completely flat and no raised section will rub against the printhead.

**WHITE INK separation and GRAY PRINTS – SHAKE LIGHTLY**

White ink, due to its unique chemical composition, is different to the other (CMYK) inks and has a tendency to separate after 24 hours of standing idle. This can be easily addressed with removing and gently shaking the WHITE INK CARTRIDGE a few times before printing. You may also have to do a White print to get the newly-agitated ink flowing into the printhead.

White ink for all direct to garment printers uses a very heavy pigment, as does any ink or paint because white needs to be a strong color. When you open a can of white house paint you will see how it has separated and needs to be stirred. White ink in direct to garment machines will do the same thing and needs to move from time to time to get a nice white.

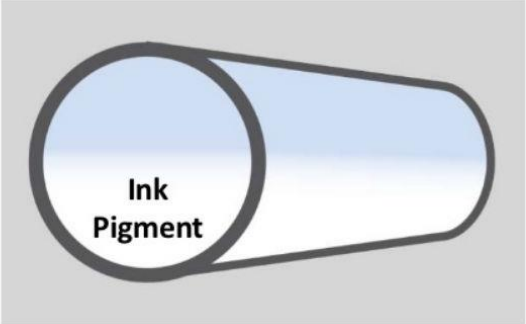
If your printer has been sitting for a few days you will notice the white ink looks a little transparent. This is not a bad thing but you will not get a strong white print until all of the pigment has moved forward.
If you have not used your machine for a few days you will want to get the white ink primed and ready for action. The first step as always is to shake your white ink cartridges. Give them a good shake to get the white ink nice and solid, it will start to separate in the bottles also. Just keep this in mind if you have not printed for a few days. You may have to do several prints to get the grayish ink out of the printhead and tubes.

You may find a good overview here:

https://www.slideshare.net/ronnyv/achieving-optimal-white-ink-results-with-your-ana-jet-direct-togarment-printer-11111

The below is a good general overview and is not specific to Epson printers, but DTG printer in general

## White Ink Pigment Separation




Since the titanium dioxide pigment in the white ink is so heavy, when the white ink is not used for a few days the pigment may begin to settle in the ink tubes.

Before printing with white ink check the white ink tubes where they enter into the print carriage. If they appear milky or bluish the pigment has settled and you will need to advance past this settled ink.

## White Ink Pigment Separation

If the pigment in your white ink has settled, a good way to advance past this settled ink is to print a square of just white ink underbase. Use a setting of Heavy Drop Size, Level 3. You will see when the printing begins that the white inks appear milky and grey but as the print continues the white ink will become stronger. When the underbase is satisfactory press the cancel key. This process will advance just the white ink without wasting any CMYK ink. You will then be able to print with a strong white underbase.

PRETREATMENT

Pretreatment is a critical element of DTG printing, especially Dark Garments.

Although it is outside the scope of our DTG printer system, we can share some useful information, below. You may find much information on Youtube and Forums on this topic.

## Fabric Fibers

The image above shows a close up view of the fibers of a standard t-shirt. To achieve the best results when printing it is necessary to flatten these fibers.

## Fabric Fibers

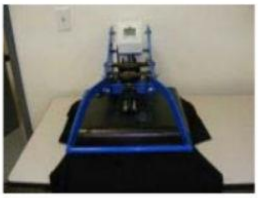
The images below show the results of printing when the fabric fibers have not been pressed down.

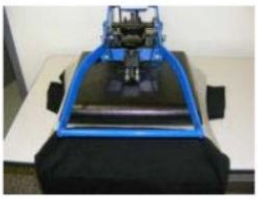
# Fabric Fibers & Heat Press Settings

To flatten the fibers of a pretreated garment place it in the heat press and clamp down for about 5 seconds. A higher pressure setting may be necessary to flatten stubborn fibers.

After the garment is printed, place it on the heat press and hover the heat element over the garment by approximately ½" (15mm) for 15 seconds.
*(This procedure allows the layers of ink to set up before applying pressure, this keeps the white underbase layer from pushing up through the color layer resulting in fading of the image.)*

Place parchment on the garment and clamp down the heat press with medium pressure for 90 seconds at 330˚F, 165˚C.

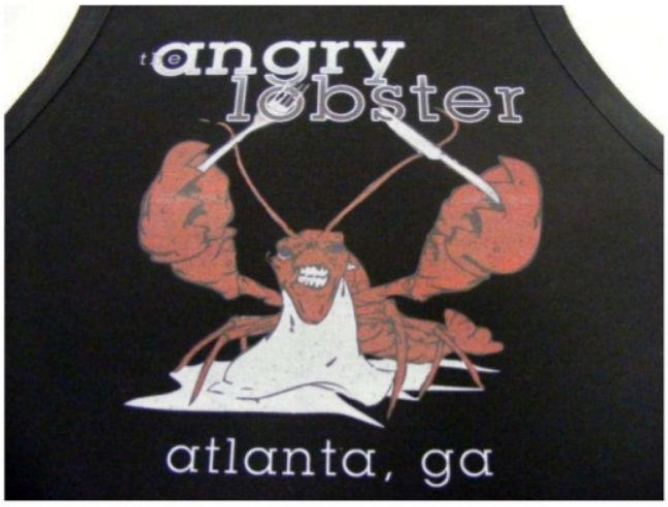




# White Ink and Polyester Fabrics

When printing on blends of cotton and polyester keep the following in mind. Since the ink will not adhere to the polyester fibers in the garment the underbase will not be a vibrant and this will in turn lead to the colors also appearing muted. The higher the polyester content in the fabric blend the greater this effect will be.

This becomes even more pronounced after heat pressing.



**Printing on Dark Garments ( Black TSHIRTS)**

More than 90% of DTG success is found in the areas of Pre-Treatment and Garment types. Although those areas are not our area of responsibility, we can share the following:

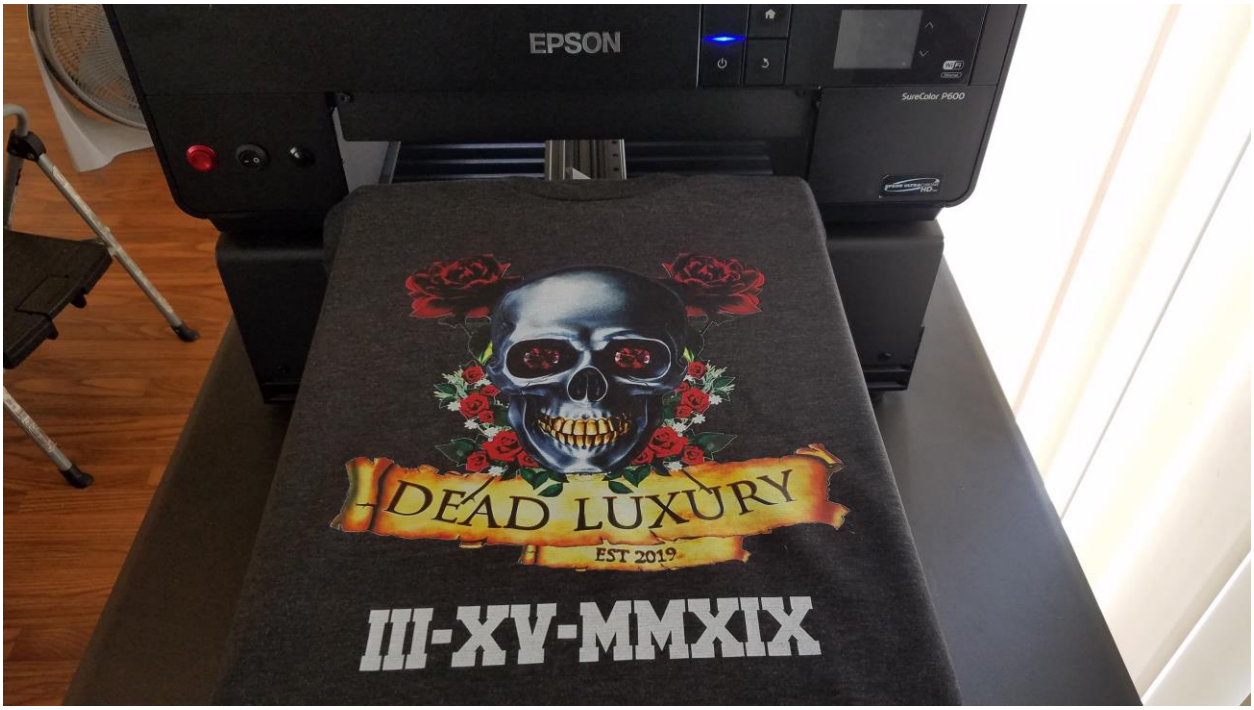
Correct Pretreatment chemical, Spraying technique and Heat-press technique, temperature and duration, as well as the right combination of the above and garment type and weave determines quality of print. Not the printer.

This information is outside of our scope, but there are forums and articles with ample information from the DTG community that are helpful and useful.

**TWO PASSES**

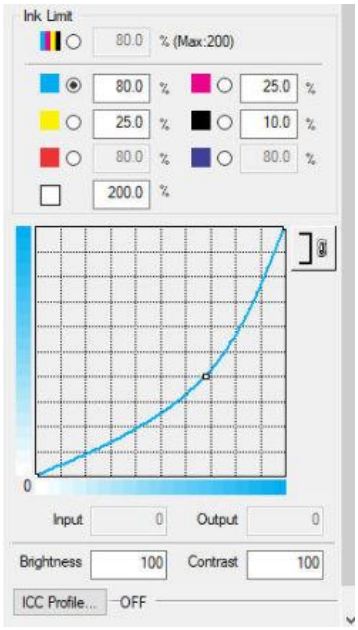
Some users report RIP settings of two passes of WHITE and one of color printing yielding best results. Percentage output settings may also be a factor.

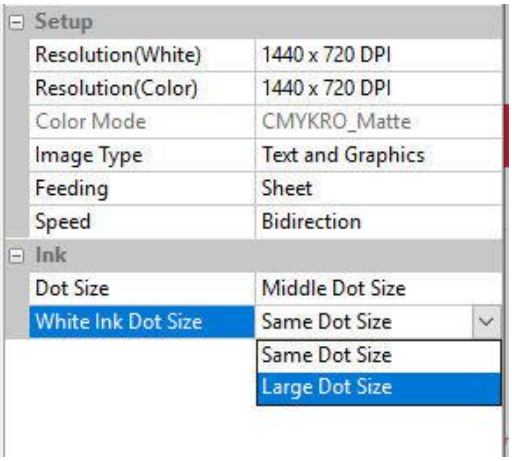
For example, the Tshirt below was printed by a user of a P600 EVO using AcroRIP

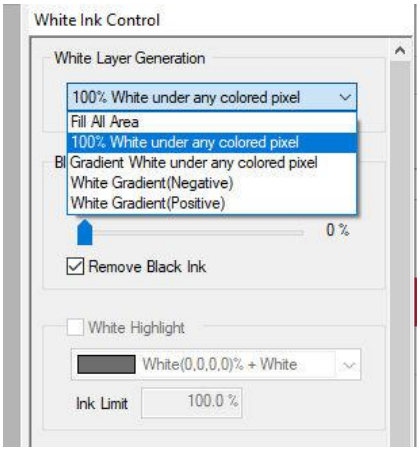



"In the RIP software, I switched the underlying layer to *100% white* and the *output to 80%* (because the white wasn't as vibrant at first). Then on the second pass I switched it back to *white gradient underlay*. Then ran the color print on top. A double pass worked."

Some users have reported good results using the RIP settings of Large Dot, 200% White etc
Your Testing will prove what works best, with your garment type.



**Remember! MAINTENANCE:**

DTG inks, especially WHITE ink, dry fast and they can clog Printheads easily if you do not print daily (even one image on paper). Follow the maintenance guide of wet-capping or maintenance cartridge install for periods of non-use.

Dry conditions with little humidity can also be a problem and lead to a clogged Printhead. A thermometer with humidity display is useful.

If your Printhead is clogged and the adjustment software is unable to clean it with a number of deep cleanings, you may have to try more extreme types of cleaning techniques, or even send the Printhead in for service, at additional cost.

For this reason, prevention is always best. We provide Cleaning and maintenance solutions.

# What causes print head nozzles to clog?

## Consistent climate = consistent printing.
## And A LOT less stress on the machine (and you by default).

The most common causes of printing issues are:

1. inactivity
2. a dry dusty environment
3. low humidity

## Inactivity: you're not printing enough

From our experience, the number one cause of printhead clogs is infrequent usage.

If your printer sits idle for long periods of time until the next job needs to be printed (often weeks to months apart) the ink hasn't been circulating through the channels. An idle print head will dry up and nozzles will clog. Especially WHITE ink.

At the very least, we recommend running a nozzle check every few days to circulate ink through the print head.

## Your print environment is dusty

If your print environment is dusty, the dust particles can get inside the printhead,block nozzles, and prevent them from firing.

A dusty printhead is a sure cause of headaches.

If possible, relocate your printer to a non-dusty area. Keep the printer covered when not in use, and cover carpets or other dusty flooring with a dust-free mat under the printer.

## Humidity is often overlooked

It's important to check the relative humidity level in your printing environment to ensure that it's between 40%-60% . When relative humidity is lower than 40%, it's likely that ink will dry out and cause nozzle clogs.

To raise humidity in your print environment, consider purchasing a non-misting, evaporative humidifier. Also, if the printer is located near a heater or exhaust vent, relocate the printer or the vent to keep dry air flow to a minimum.

Humidity


Humidity measurement range: 10%-99%
Humidity measurement accuracy: +/-5%
Humidity sampling period: 10 seconds

## DESIGN SOFTWARE

**GIMP Design Software** – Windows and Mac :
Download location

https://download.gimp.org/mirror/pub/gimp/v2.10/windows/gimp-2.10.8-setup-2.exe

User manual

http://docs.gimp.org/2.10/en/

Tutorials

https://www.youtube.com/watch?v=2EPlUyFJ4ag

https://www.youtube.com/watch?v=L5uVTEItvHo

Product Description

The DTG PRO P640 printing system is a true photo quality DTG printer at an ultra-affordable price. It produces durable and intense color prints, is built on the popular Epson P400 engine, and features durable drive train and motors. Similar systems sell for upwards of $9,000. What makes the DTG PRO so cost effective? Buying DTG PRO DIY printer system means buying manufacturer direct, without the markups that go into other brands due to marketing and distribution or due to fancy casings that often drive the price unnecessarily up. DTG PRO focuses on allowing you the DIY flexibility to do it your way.

Specifications:

- Footprint Size: 40 in x 27 in
- Printable Area: 11.7 in x 16.5 in
- Features a fully electronic base with drive belt, and an adjustable plate (platen)
- Set of new empty refillable cartridges (easy to refill) – No ink included means, you may purchase our ink or other ink of your choice. You have the freedom.
- Manual garment Height Adjustment (0.9 inches) allows for printing of garments and other substrates up to approximately 1 inch thick.

12 Month Warranty: DTG PRO offers a 12 month warranty which pertains to replacement of faulty materials during the first twelve months from the date of purchase of the machine (except for damage caused or other that does not depend on manufacturing defects). Consumable parts are excluded from the warranty, such as: printheads, encoder strips, capping stations and cartridges. See the full warranty details on our guarantee page here:
https://dtgpro.com/info/terms.php

What is included with this purchase:

- DTG PRO P600/P640 Direct to Garment printing system (includes printer and base)
- Design Software
- RIP Software
- Refillable Cartridge Set with accessories
- Cleaning and maintenance kit

DTG ink (sold separately) is available. If you choose to use DTG inks from other providers, we recommend KODAK and DTGPRO ink, and pretreatment.

Additional info:

- System uses the powerful Epson SC-P400 print engine
- Color (CMYK) + White for printing on light and dark garments
- Non-Slip print plate keeps shirts and garments stable for sharp printing
- Removable print plate/platen so you can change out for smaller sizes ( baby size – onesies etc)
- Plate spacer system to quickly adjust to thicker garments ( Smaller plates are available for purchase)
- Easy to level print plate. A level print surface is important for sharp prints.
- Modular design (minimizes downtime if you have an additional backup DTG printer)
- 12 x 17 inch approximate maximum printable area
- Optional size platens for baby or pocket printing (8 x 8, 8 x 10)

**What's NOT Included, but you may need**

- Windows 7 or higher Computer (PC)  with an available USB port
- Heat press for finishing the final print - We recommend a 16x20 inch press
- Wagner Sprayer or Automatic pretreat machine to apply pretreatment, especially if you're using white ink.
- Ink and Pretreatment solution and a Pretreatment iron press
- Humidifier to keep the humidity above 40% in the print room

What you need to know before buying a DTG printer

- DTG Printing has a learning curve. It is not difficult, but it is not as simple as plug and play. You will need Patience and a desire to learn… DTG appears to be push a button and go, and it becomes that way, over time. There is learning and some experience to be gained.

- Understanding that DTG inks are water-based textile inks and will clog the Printheads if the machine is left unused for more than 1-2 days (and the humidity/temperature climate is not optimal). Clogging is nothing to be scared of, if it occurs, you can resolve the clogs via a number of procedures (such as utilizing the cleaning function on the printer, or for a more advanced clean, you could flush the printheads with our provided flush system).
  To avoid and/or resolve clogs, you need to perform daily / weekly maintenance, and/or print frequently to keep the ink flowing. Maintenance takes a few minutes per day and will save your printheads and save you time.
  Understand and acknowledge that Printheads, Capping stations, and any other items that come in contact with ink and/or are subject to wear and tear or consumable are not covered under our warranty.
- Provide a clean and climate friendly work space to print in.
  Humidity of 40% - 70% and temperatures of 70 – 75 degrees Fahrenheit must be maintained at all times while ink is installed in printer. Failure to keep these tolerances may cause clogging and other issues that will then require extensive cleaning measures.
- Use DTG PRO printer approved inks, supplies, and equipment to achieve results claimed.
- Retain shipping crate or original packaging for 30-90 days and until no longer needed.
- Agree to perform simple daily and weekly maintenance, including keeping print heads and capping stations cleaned.
- Apply all pretreatment in a separate room isolated from the printer Printhead and other sensitive parts.
- Agree and understand that that DTG PRO printers are built to order, sales are final and no returns or refunds are permitted. All issues must be remedied per warranty.
- You may be required to do troubleshooting and repairs with DTG PRO's help and direction.

Our full Warranty information is found here and also below.

TERMS AND CONDITIONS:

- Before Buying a DTG Printer – what you should know
- What You Will Need (not included in your purchase)
- Customer Responsibilities
- Limited Warranty

Before buying a DTG printer
A DTG printer will print amazing full color prints on light and dark shirts in just a few minutes. You can be doing short runs with no setups, no color separations, no tear down - and you are getting more than wholesale for a shirt – you will love it!
There is a learning curve to DTG printing (much like screen printing or other forms of printing). It takes time and experimentation to become proficient and knowledgeable about this new craft.
The secret to DTG success is proper printer maintenance and proper pretreatment of the garment:

- Proper Printer Maintenance takes 5-10 mins, details are included in our instruction manuals (print nozzle test / print head cleaning / wet capping)
- Proper Pretreatment is necessary especially for printing with white ink to dark garments (separate pre-treatment hand sprayer or automatic sprayer are needed, as well as heat press)

You may have to work on and troubleshoot your printer at some point. Between user error and just the effects of use over time you may encounter errors and will learn to fix them, with DTG PRO's assistance.

You may need to climate control your print room. DTG works best in 70 -75 degrees and humidity from 40% - 60%. (50% + is needed at times). A humidifier may be needed if you have unusually low humidity in your environment.

Inks will clog if not used often, especially if the printer is left idle more than 1-2 days or proper maintenance is not conducted. There are many unclogging procedures available to you (including the printer's self-cleaning function, and a more forceful manual flush with our flush system).

Never take customer orders until you have learned how to use the printer and pretreatment.

Every day that you use the printer you will need to do Maintenance. A routine of 5-10 minutes of cleaning the printer prior to using, is easy and quick.

Join a community of users, such as online user groups and forums for T-shirt printing.

You will learn and share knowledge that will be valuable to you and your business.

Ensure you have RIP software (such as Kothari, AcroRIP, PartnerRIP etc.) if none is provided with your purchase.

What you will need (not included in your purchase):

- Windows 7 or higher Computer (PC) with an available USB port. Artwork design software like Gimp, Adobe Photoshop, Adobe Illustrator or CorelDRAW
- RIP Software (if not already included in your purchase) and RIP software training or support. We do not support RIP software, we only have the ability to share what other users are having success with.
- Heat press for curing the pretreatment and final print. We recommend a 16x20 inch press.
- Wagner Hand Sprayer or Automatic pretreat machine to apply pretreatment, required for printing with white ink to dark garments
- A Humidifier to keep the humidity above 40% in the print room, if you have low humidity in your room / environment

Customer Responsibilities
Your responsibilities include:

- Provide a clean and climate friendly work space to print in.
  Humidity of 40% - 70% and temperatures of 70 – 75 degrees Fahrenheit must be maintained at all times while ink is installed in printer. Failure to keep these tolerances may cause clogging and other issues that will then require extensive cleaning measures.
- Understanding that inks are water-based textile inks and will clog the Printheads if the machine is left unused for more than 1-2 days (and the humidity/temperature climate is not optimal). Clogging is nothing to be scared of, if it occurs, you can resolve the clogs via a number of simple procedures (such as utilizing the cleaning function on the printer, or for a more advanced clean, you could flush the printheads with our provided flush system). To avoid and/or resolve clogs, you need to perform daily / weekly maintenance, and/or print frequently to keep the ink flowing.  Maintenance takes 5 mins a day and can be part of your daily standard operating procedures.
- Understand and acknowledge that Printheads, Capping stations, and any other items that come in contact with ink and/or are subject to wear and tear or consumable are not covered under our warranty.
- Use DTG PRO printer approved inks, supplies, and equipment to achieve results claimed.
- Retain shipping crate or original packaging for 30-90 days and until no longer needed.
- Agree to perform simple daily and weekly maintenance, including keeping print heads and capping stations cleaned.

- Apply all pretreatment in a separate room isolated from the printer Printhead and other sensitive parts.
- Agree and understand that that DTG PRO printers are built to order, sales are final and no returns or refunds are permitted. All issues must be remedied per warranty.
- Customer may be required to do troubleshooting and repairs with DTG PRO's help and direction.

Limited Warranty
DTG PRO warrants the DTG PRO direct-to-garment inkjet printer ("unit") to be free from defects in workmanship and materials (warranty does not include printing head, ink cartridges or capping station which are subject to wear and tear and/or consumable over time).
The warranty is valid for a period of one year from date of purchase for parts and labor provided that the unit is properly maintained and operated under normal use. This warranty does not authorize any on-site repair and is considered to be a "depot" warranty which requires that the unit or defective part must be returned freight prepaid to DTG PRO in Irwindale CA for repair.
Replacement parts such as print heads are available from either DTG PRO and/or various alternative suppliers.
Should a return for repair be necessary, DTG PRO will provide assistance locating an approved shipping company. The unit must be insured for the full retail value. If the unit is shipped by a non-approved company or is not in original packaging when it arrives, DTG PRO reserves the right to refuse the shipment. These steps eliminate potential for damage in shipping.
Although every effort has been made to provide accurate specifications, DTG PRO does not assume any liability for damages, whether consequential or incidental, that may result from the use or misuse of this product or from damage caused by unit modifications made by the user.
DTG PRO reserves the right to alter specifications in the manufacture of its products.
It is understood and agreed that DTG PRO 's liability in contract, in tort, under any warranty, in negligence, in strict liability or otherwise shall not exceed the return of the amount of the purchased price paid by Buyer. Not withstanding the foregoing provision, under no circumstances shall DTG PRO be liable for special, indirect or consequential damages (including loss of profit).
The price stated for the equipment is a consideration in limiting DTG PRO 's liability. No action regardless of form, arising out of the transactions under this Agreement may be brought by Buyer more than two (2) years after the cause of action has occurred. Our warranty as specified is exclusive and no other warranty, whether written or oral, is expressed or implied. DTG PRO specifically disclaims the implied warranties of merchantability and fitness for a particular purpose.
This warranty initiates from date of shipment to original customer. It is non-transferable.
This warranty does not extend to the print head or expendable parts such as dampers.
This warranty does not cover a unit that has been subject to misuse, neglect,

negligence, accident, or unit that has been operated in any way contrary to the manual and operating procedures specified by DTG PRO.

This warranty does not apply to damage resulting from improper maintenance, lack of proof of maintenance as outlined by DTG PRO, improper shipping, damage caused by disasters, such as fire, flood, and lightning, improper electrical current, software problems, interaction with non-DTG PRO products, or service other than by DTG PRO . Written authorization must be obtained from DTG PRO before any unit or part will be accepted.
Replacement parts are sent out via standard freight carriers such as UPS / FEDEX / USPS. Parts sent out prior to receiving a defective Unit or part from the customer will be sent C.O.D., cost plus freight. Upon return of defective part, if it is deemed that the part was not damaged by customer but failed, the cost of the replacement part will be refunded.

THE WARRANTY AND REMEDY PROVIDED ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, NON- INFRINGEMENT OR FITNESS FOR A PARTICULAR PURPOSE. SOME LAWS DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES. IF THESE LAWS APPLY, THEN ALL EXPRESS AND IMPLIED WARRANTIES ARE LIMITED TO THE WARRANTY PERIOD IDENTIFIED ABOVE. UNLESS STATED HEREIN, ANY STATEMENT OR REPRESENTATIONS MADE BY ANY OTHER PERSON OR FIRM ARE VOID. IN THE EVENT THE REMEDIES ABOVE FAIL, DTG PRO 'S ENTIRE LIABILITY SHALL BE LIMITED TO A REFUND OF THE PRICE PAID FOR THE PRODUCT COVERED BY THIS LIMITED WARRANTY. EXCEPT AS PROVIDED IN THIS WRITTEN WARRANTY, NEITHER DTG PRO NOR ITS AGENTS SHALL BE LIABLE FOR ANY LOSS, INCONVENIENCE, OR DAMAGE, INCLUDING DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, RESULTING FROM THE USE OR INABILITY TO USE THIS PRODUCT, WHETHER RESULTING FROM BREACH OF WARRANTY OR ANY OTHER LEGAL THEORY.