

Direct to Garment Transfers for Headwear



For use on mixed media decoration.

Copyright 2017 Jesse Arthur Martin



Materials Used

Direct to Garment Printer – DTG HM1 Kiosk

Image Armor E-Series Inks – CMYK+White

Image Armor ULTRA Pretreatment

Silicone Coated Transfer Sheets - 16.5 x 21 inches

NPT Powder Transfer Adhesive (Rutland Plastic Technologies)

Heat Gun

Wooden Board(s) – approx. 12 x 18 inches

Foam Brush

Heat Resistant Tape

Paper Towels

Empty Box or Tray

Heat Press for Garments

Heat Press for Headwear

Process

Artwork

The DTG transfer is the distressed jeep in the background of a frayed twill applique custom embroidery.



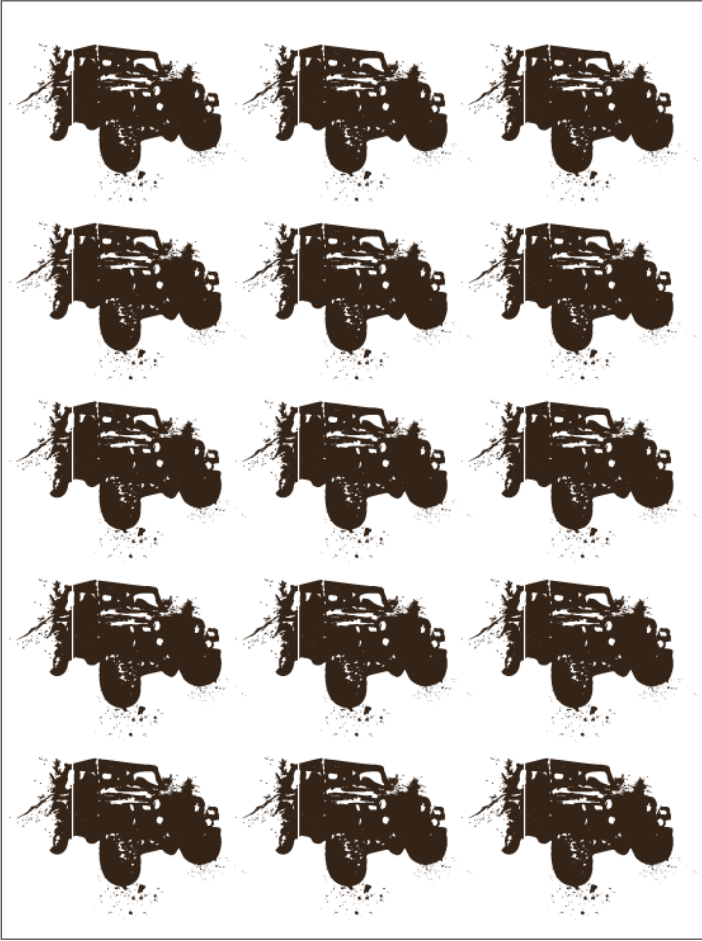
Step 1 – Decide on the S/S for the design. What is centered and how high up from the visor?



Step 2 – Use the crosshairs to mark a placement indicator on each print. Here, the bottom of the distressing will be right up against the visor, so my only mark was the vertical centering line that will match up to the center seam of the cap. I created a clear line to match with the center seam because the applique will be covering that portion of the print.



Step 3 – Layout your sheet to print. **YOU MUST VERTICALLY MIRROR THE ART BEFORE PRINTING.**



Printing

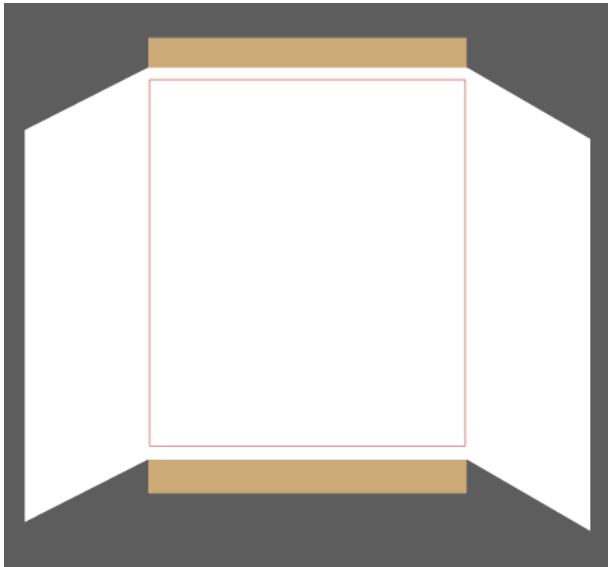
Prep the sheet of parchment.

Step 1 – Use a foam brush to paint the pretreat onto the center of the parchment sheet. (See the drawing below) The pretreat will not absorb well into the sheet. Just continue to brush the sheet until the droplets are very small and evenly spread.



Step 2 – Press the sheet in the heat press under teflon/ parchment for 20-30 seconds at 325 degrees to cure the pretreat. The sheet will not be perfectly flat. That is okay.

Step 3 – Wrap the parchment sheet, as shown below, around the board and set the board on the platen so that the weight of the board presses down on the "wings" of the sheet. Tape the top and bottom with masking tape.



Send the artwork to the printer.

I printed these at 1440 x 720 bi directional color ink only.



Make the Transfers

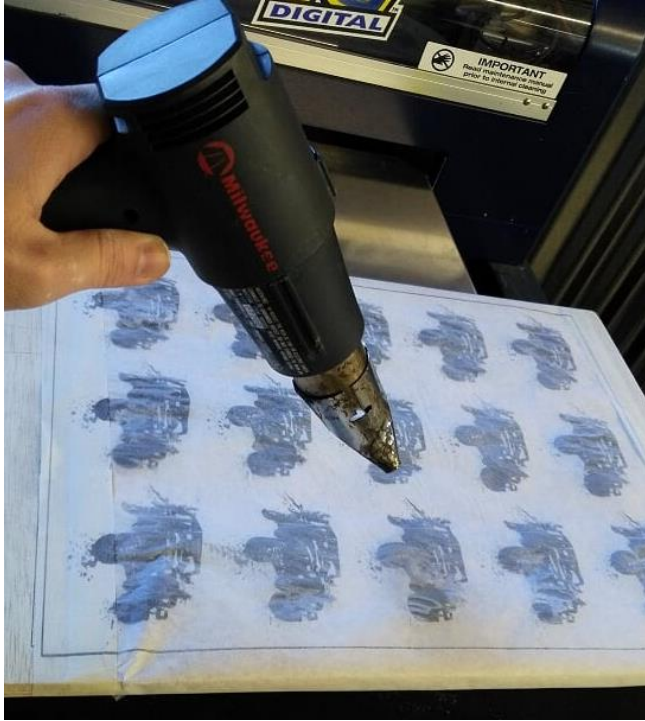
Step 1 – When the print finishes, immediately sprinkle the adhesive powder on top of the ink while it is still wet.



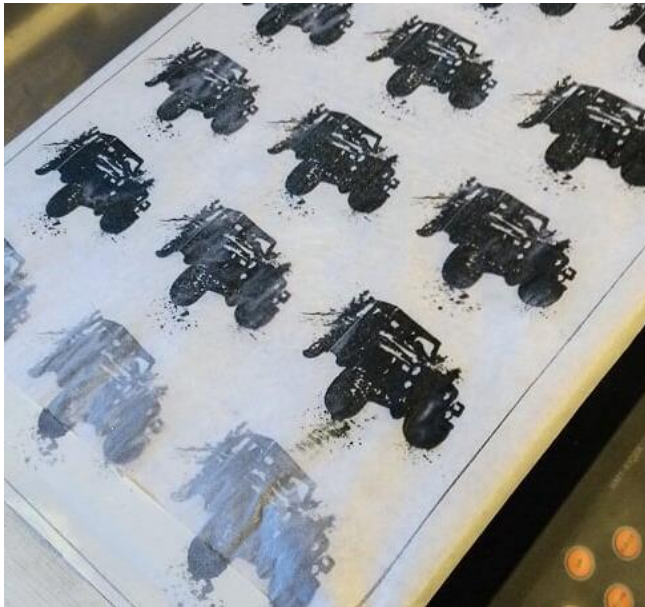
Step 2 – Place the empty box on the floor and knock off as much of the excess powder that you can.



Step 3 – Use the heat gun to cure the powder to the ink.



The print appears darker when the powder is cured.



Step 4 – Use a small dry brush to remove any additional excess powder from around the prints. Use an X-Acto or scissors to divide up your transfers.



Applying the transfers

Step 1 – Set the hat up on the press and place the transfer on with heat resistant tape.



Step 2 – The powder is a cold peel adhesive. After pressing the hat for 10-15 seconds at about 310-320 degrees remove the hat from the press. **Allow to cool for at least 1 minute.**

Step 3 – Remove the parchment slowly.



You may see some of the excess powder around the image from areas you did not completely get clean. That is okay.

Step 4 – Put the hat back on the press and place a clean sheet of parchment over the transfer. Press again for another 10 seconds.



The excess powder will disappear and you are ready for embroidery.



We completed 96 hats (5 colorways) in a day to compliment the tees I made up for this local organizations yearly fundraiser. They looked great and I have heard the event was a great success.



Today, for us, the ideal use for these transfers is for distressed contrasting or tonal prints for mixed media use.

However, I have experimented with other print settings and a variety of art. This technique will work to capture any print and there are some potential markets that this process opens up that current DTG machines don't cover.

First, you can do headwear without buying a custom platen. Also, though, the powder adhesive is a screen print additive for better adhesion on poly and nylon, so these transfers work and wash on materials that DTG inks won't. And, you can capture white ink or a 2 pass color print on dark fabric without pretreating the fabric because the ink is cured to the adhesive before you press.

The current limitations are the inconsistency and general "warping" of the pre treat on the parchment sheet that create too many imperfections and overall inconsistent printing. These limitations are non factors in contrasting or tonal distressed 1 color prints. Further tests, alternative materials and better technique may continue to improve this technique to be more versatile and useful in decoration.

