Precision

SECTION 6

PRINTING

• PRINTING THE JOB •

THE SHIRT BOARD or PRINTING PLATEN

You've exposed and dried your screen and you're ready to set up to print. Remove the exposure unit and replace it with the printing platen. Locate your screen onto the press using the screen pin locators. With the screen in place, adjust the platen to the image on the screen and tighten. Tighten the platen clamp in a clockwise motion. Do not over tighten, moderate pressure is all that is needed.

TAPING OUT THE SCREENS

Before putting ink in the screens, you should tape out the inside perimeter of the screen frame. This is done to keep ink from creeping under the edge where the screen frame and the mesh come together. Taping also makes clean up quick and easy. The tape supplied with your system is referred to as "split liner" tape. The Blue portion of the tape has no adhesive and lays against the screen frame without sticking. The White portion has the adhesive and is placed against the mesh. When it's time to clean up the tape removes easily since it is not stuck to the aluminum frame and only to the mesh.

INKING THE SCREENS

Open the ink container and stir the ink until it feels smooth and creamy. Plastisol ink is thixotropic and loosens up when stirred. Squeegee action during printing keeps the ink smooth.

Place a generous portion of ink across the bottom (the clamp end) of the screen so that *it* is spread across the screen just a little wider than the width of the squeegee you're going to be using.

CHOOSING THE SQUEEGEE

Choose a squeegee that fits the image. Example; If your image is 8 inches wide you should use a squeegee that is approximately 9 or even 10 inches wide. In other words, do not use a 12" squeegee to print a 4" image. The pressure is transferred to the outer edges instead of over the image area where it needs to be. The quality of your print can be dramatically affected.

PLATEN PAPER

Peel off a piece of platen paper that is a couple of inches larger than your platen. Place the adhesive side to the platen and smooth it out making sure there are no wrinkles or air bubbles. Tuck the loose ends over and under the edges of the platen. You do not have to use platen paper but when it's time to clean your platens you will be very glad you did.

PLATEN ADHESIVE

Garments need to be held in place for printing. The Precision system uses water base adhesive applied with a foam roller a'◆chment that screws directly onto the glue bottle. Squeeze the bottle to get the adhesk1e flowing and simply roll it over the platen until the image area is covered. Let the adhesive dry so that it is tacky to the touch but does not come off on your fingers. Placing the curing unit over the adhesive on the platen speeds up the process. If you find the adhesive becoming weak after printing several shirts, roll some more adhesive on top of the first coat.

When you are through with the job, peel off the paper and the adhesive comes with it. Result, clean platen to cover for the next job.

TEST PRINTING

Before you attempt to print the actual garment, place a test square [provided with your supply package) onto the platen and smooth it out. Place your screen in position, print and inspect the image to make sure it looks the way it should. When you are satisfied with the test print then you can put a shirt on and go for it.

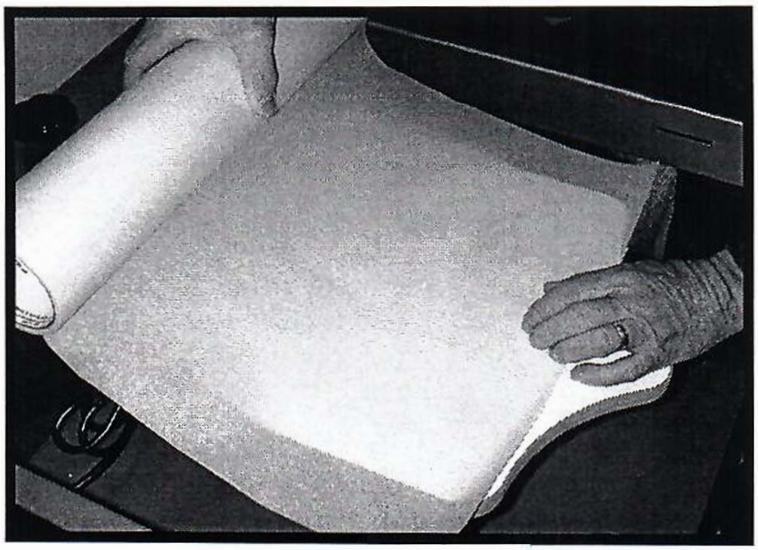
THE PRINT STROKE

After your screen is in position, your ink is in place and you have your squeegee in hand, place the squeegee behind the ink and draw the ink towards you in one smooth motion. Apply just enough pressure to force the ink through the image area. You do not have to apply a lot of pressure. Using too much pressure will only serve to wear you out and degrade the quality of your prints. If you find you need to apply another pass, no problem, your screen will register perfectly each time.

WET ON WET or PRINT FLASH PRINT

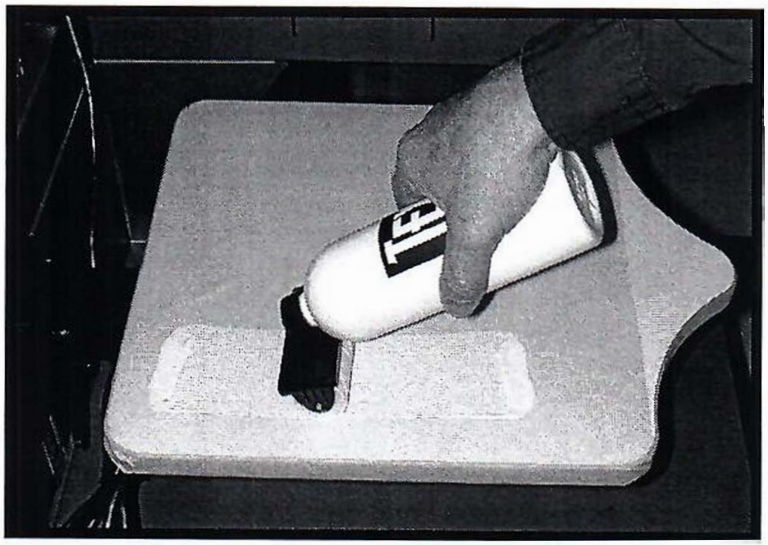
Two methods of printing are used on garments. Wet on Wet means that you print one color, position your next screen and print the second color right on top of the first without spot curing in between. Curing is then done after all of the colors are printed. Some art work lends itself well to this type of printing while other images may not. The purpose is to speed up the process. Test print to determine if the job will allow you to use the wet on wet process.

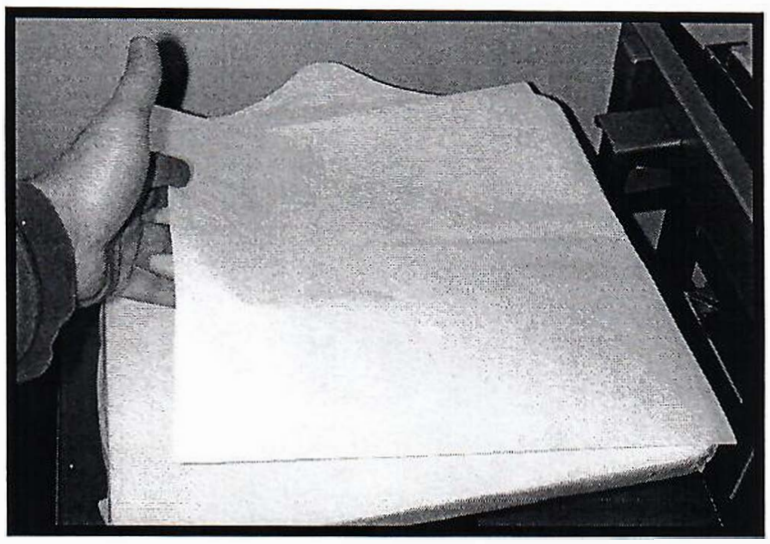
The other method is the print-flash-print method. This means that you spot cure between every color. Print your first color. remove the screen, spot cure the ink for approximately 7 - 10 seconds, position your next color and repeat. Spot curing in between assures sharp, clean edges on every print but obviously requires more time in production. Again, test to determine which works best for the particular job.
Note: Spot curing does not serve as a final cure, you need to cure the total print for 45 seconds whether printing wet on wet or spot curing between colors.



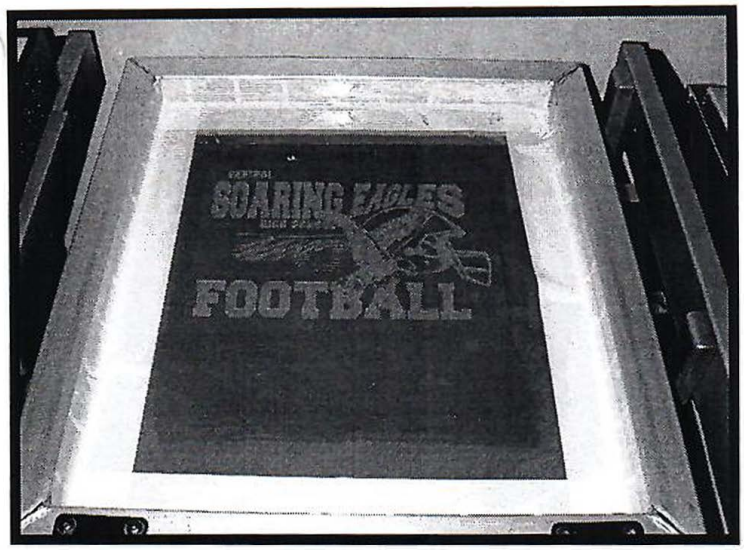
Step 1. Place roll of platen paper on shirt platen. Cut at least 1" away from edge of platen board. Fold edges around shirt board.

Step 2. Apply platen adhesive to top of platen paper. Gently squeeze bottle and roll adhesive over entire board. Use the heat curing unit to dry adhesive until tacky.



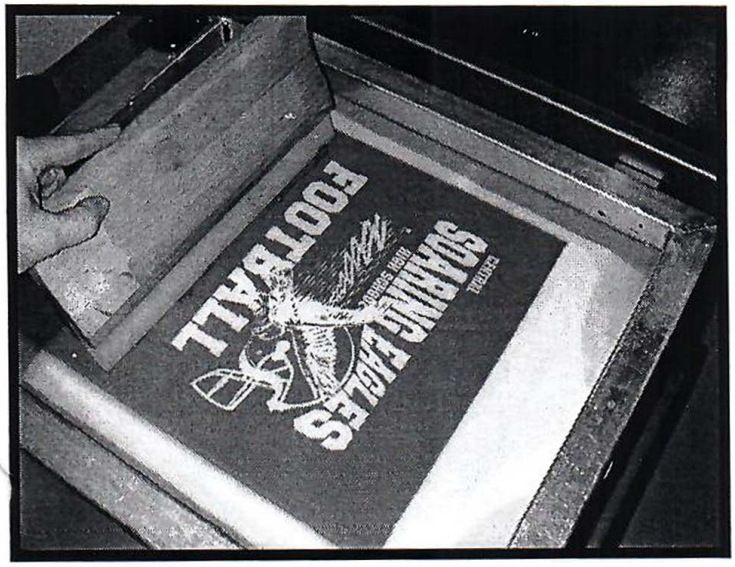


Step 3. Apply test pellon to board. Smooth out any wrinkles with your palm.

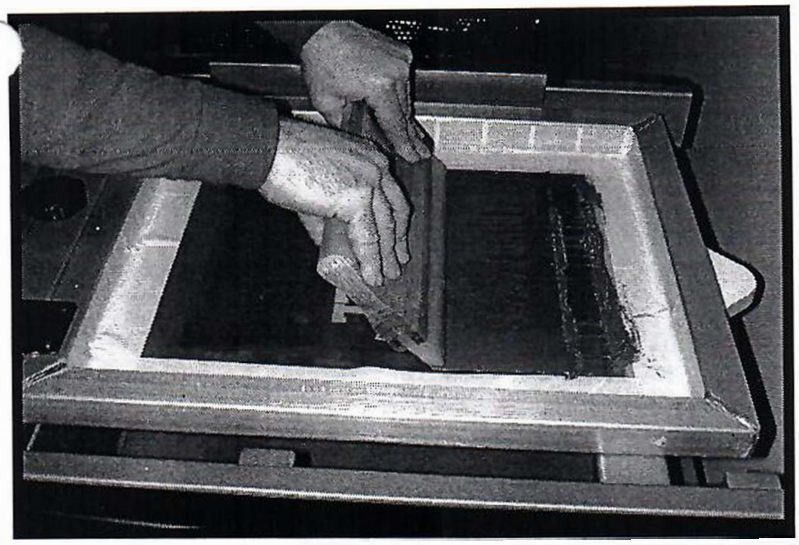


Step 4. Place exposed screen onto print unit.

Step 5. Apply generous amount of ink to end of screen.

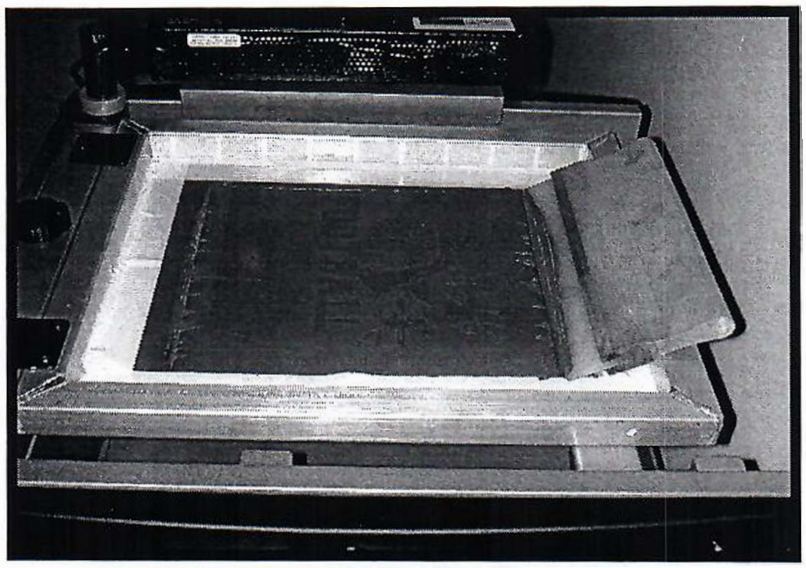


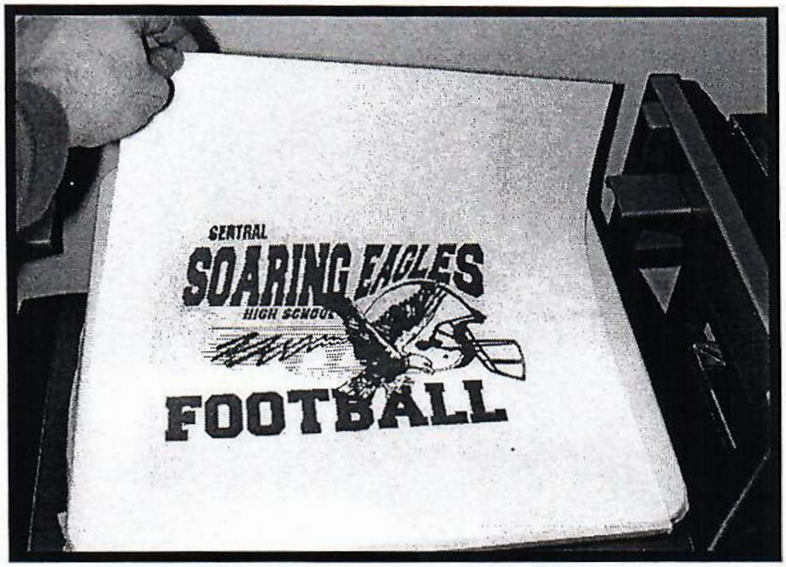
Step 6. Choose the appropriate size squeegee. The squeegee should not be more than 1/2" longer on both sides of your print area.



Step 7. Firmly grasp squeegee handle with both hands, pull toward you. You may have to do a couple of strokes to completely flood your image area.

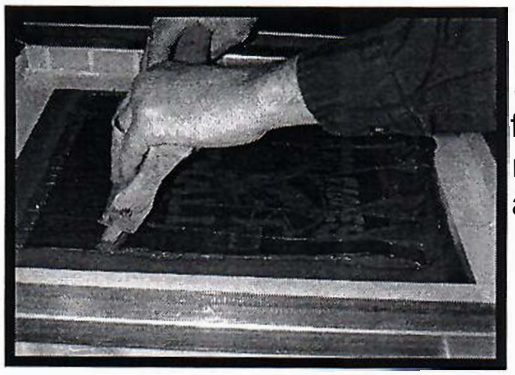
Step 8. After you have completed your print stroke, rest your squeegee on the end of the frame to avoid leaving ink in your work area.





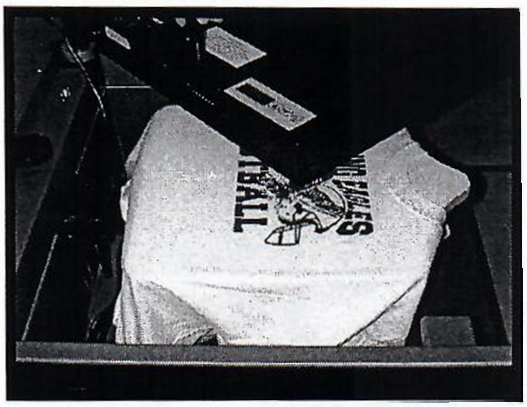
Step 9. Remove screen, place on screen rack. Check print on pellon for any imperfections. If you are satisfied with the image, you are now ready to begin!

Step 10. Place t-shirt on shirt board. Place shirt all the way down so the end of the board sticks out of the neck opening. Smooth out any imperfections on the surface.



Step 11. Place screen back on unit. Press firmly and begin your print stroke. Again, you may have to apply several print strokes to achieve a solid print.

Step 12 Remove screen, check image. If it is not opaque enough, place screen back on unit and print again.

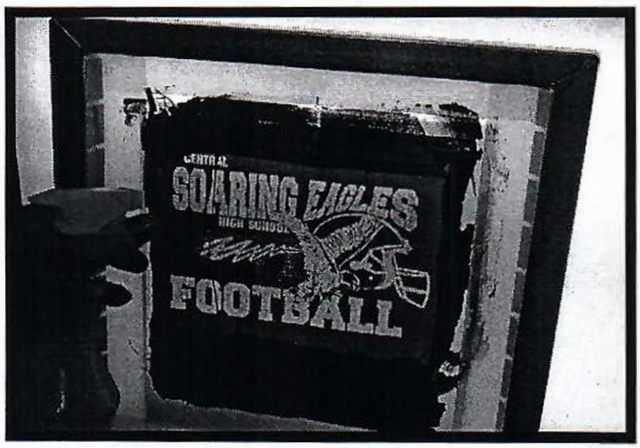


Step 13. When finished, swing over heat curing unit and cure ink for 45 seconds if final cure. If doing 2 color, you can spot cure for 10 seconds before printing the next color.

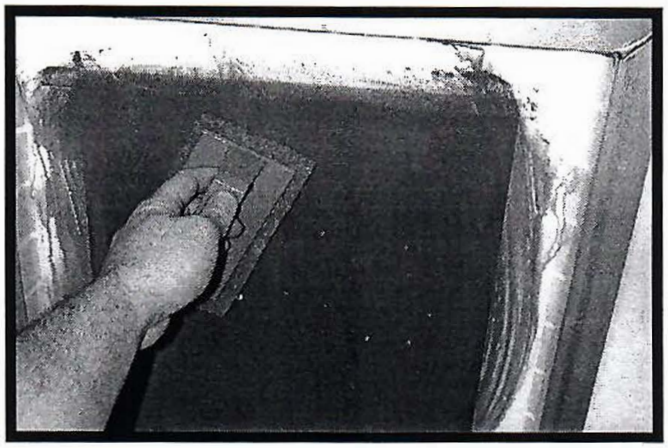
SECTION 6

Clean up

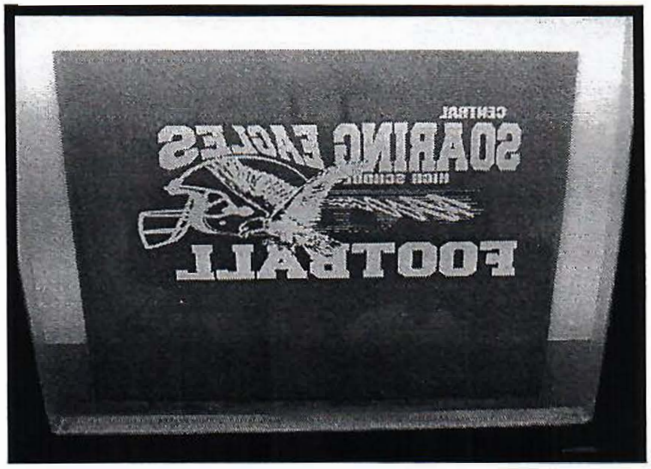
Step 1. When finished printing, scrape off excess ink and place back in container.



Step 2 Take screen to washout area, spray with ink remover, let soak for 30 seconds.



Step 3. Scrub screen with pad, then spray down with water. Paper towels can be used also clean up excess ink.



Step 4. Your screen should be clean with no ink remaining. If you plan to keep the screen, store in a dry environment. If not, refer to the screen reclaiming section of the manual to remove the image.

Precision

SECTION 7

CURING

• CURING •

CURING THE INK

There are many different types of inks and requirements for curing them. For our purpose we will devote the space to explaining the curing of plastisol inks. Plastisol is the choice of ink for 95% of all garment printing. Plastisol is solvent free and therefore will not dry by the normal evaporation method. It must be heat cured or it will remain wet indefinitely.

TEMPERATURE/ TIME

The two things required for curing Plastisol are a temperature of 330 degrees fahrenheit or above and a time duration of 45 seconds or more depending on the thickness of the ink deposit. Plastisol cures from the surface down and cannot be considered cured until the heat reaches all the way through the ink to the surface of the garment. Once done you have a very durable, washable print that in many cases will outlast the shirt. If not done properly you have an unhappy customer bringing back a shirt with the design cracked or washed out.

Ink deposit has everything to do with cure times. The thicker the deposit the longer the cure time, it simply takes longer to go all the way through the ink to the surface of the garment. To properly cure, Plastisol should reach and maintain that 330 degrees until the ink is fused all the way through. For example; a print that has one pass of ink is one third the thickness of a print having 3 passes. At 330 degrees the one pass may cure in 35 seconds while the 3 pass print may take 60 seconds. Testing is always suggested. The only true cure test is a wash test. Launder a couple of test prints and inspect the results.

THE CONVEYOR OPTION

Your Precision printer comes with an attached curing unit that is used for both spot and final curing. While this does an excellent job of curing the ink it also takes time away from producing another print while you wait for the ink to cure. Two ways to approach this are;

1. Print the shirt and swing the spot cure unit over the print for the required time to thoroughly cure the ink. Remove the shirt and stack.
2. Print the shirt and spot cure it until the surface of the ink is gelled, usually 7 - 10 seconds. Remove the shirt from the board and set it aside. When you are through printing all of the shirts, go back and final cure them one at a time.

A tremendous time saving option is a curing oven with a motor driven conveyor belt. After you print, remove the shirt, drop it on the belt and it will be carried through the oven at a pre-set belt speed that allows the ink to be cured when it exits the end of the tunnel. Place a box at the end of the belt and the cured shirts drop off the end of the belt and into the box. As your business builds you may want to consider this option to increase your production.