

OVERPRINTING ON A COMMON BLANKET

Presented by: Dean Ballard
Technical Field Representative
Townsend Industries, Inc.

There are people in the printing business who believe that overprinting on a common blanket cannot be done successfully. The fact is a considerable amount of overprinting can be done if the operator follows a few simple procedures. These "RULES FOR OVERPRINTING" are easy to remember if the operator understands why they exist.

When deciding which ink to put in each printing head, keep in mind the arrangement of the cylinders. Figure 1 illustrates an operator side view of the most common cylinder configuration for a single blanket 2-color offset machine. Because the blanket cylinder turns in a clockwise direction, the parent press plate cylinder on the left lays its image on the blanket first during the printing cycle. The T-51 plate cylinder applies its image to the blanket second. Immediately after both ink layers are applied, the paper removes the bulk of the ink from the blanket. This means that the parent press removes the bulk of the ink from the blanket. This means that the parent press parent cylinder has a relatively clean blanket to print on during each printing cycle.. that's why it is important to have the light color ink in the first unit. It's also the reason that the operator should not bring the T-51 plate cylinder into contact with the blanket unless paper is going through the machine. The blanket should be cleaned after misfeeds or any situation that would cause a buildup of the dark color of ink on the blanket.

The difference between a good overprinted image and a bad overprinted image is influenced greatly by the tack of the inks and the transparency of the inks being used. In figure 1, it is easy to see that the ink from the parent press, which is already on the blanket, must pull the ink off of the T-51 plate cylinder in the areas being overprinted. For this reason, the ink in the T-51 must be of lesser tack than the ink in the parent press. If the ink in the T-51 is of a greater tack than the ink in the parent press, then inks will not trap properly on the blanket, causing the image from the T-51 to be light in the overprinted areas (Figure 2). This situation can be corrected by adding tack reducer to the T-51 until the overprinted image has the correct density on the printed sheet (Figure 3).

Figure 1 shows how the two images on the blanket are transferred to the sheet. Think film from the parent press will actually be over the ink film from the T-51 on the printed sheet. This is why the ink in the parent press must be fully transparent. If it is not, the image from the T-51 will not be fully visible and will have an appearance similar to the ink tack problem in Figure 2. Metallic and fluorescent inks are not transparent and some PMS colors that contain large amounts of mixing white or black may not be fully transparent. Process colors and PMS basic colors are fully transparent and any color resulting from the mixing of these basic colors will also be transparent.

Another consideration to be mindful of is the amount of ink being run.. The light color of ink must be run at its normal strength. If run heavier than normal, it will overpower the dark color and "tint" the T-51 image. The dark color should also be run at normal strength. If it is run heavier than normal, contamination to the light color can result. This is because more ink will remain on the blanket after its impression with the paper.

These principles for trapping ink on a common blanket are the same principles used for trapping ink on paper on large, multiple color presses. Knowing these principles will certainly help a small offset operator on his next overprinting job.

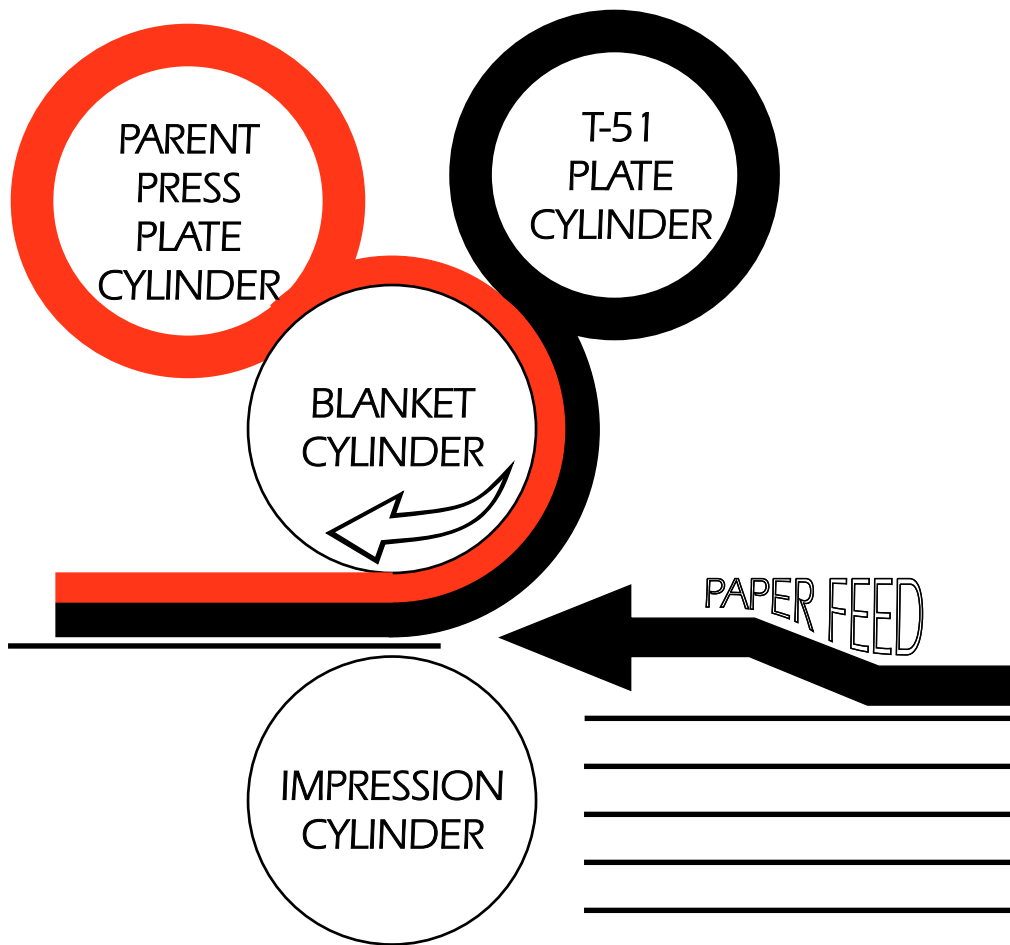


Figure 1



**Simulated Bad Overprint
Overprint Area Vague**

Figure 2



**Simulated Good Overprint
Overprint Sharp and Crisp**

Figure 3