

# Troubleshooting the Washout Process

Symptom: Photo resist washes out slowly and ends up ruined before I can finish.

Check list for Successful Washout:

- Correctly exposed photo resist film.
- Good water pressure
- Warm water
- Spray gun with an even fan spray

Test: Expose a strip of film with a film positive that is know to be good. Our Letralite kits comes with a sample sheet. Wash-out should occur in about 60 seconds.

•Problem #1: Poor film positive. Masking not washing out correctly is often caused by having a poor film positive. Check your film positive by holding up to a bright light. If the black is not totally opaque it will allow some exposure to occur. With partial exposure to the black areas you will end up washing the mask too long and ruining the mask.

•Problem #2: Poor water pressure. Turn your hot and cold water on all the way. Ideal wash distance is 4" from the film surface. Often times people with well water find that they do not have enough pressure in their system. If this is the case you may need to purchase a pressure washer available from your local hardware store.

•Problem #3: Cold water. Masking washes out best with warm water. Turn your hot and cold water on all the way.

Symptom: My photo resist will not wash-out at all.

Test: Wash-out an unexposed strip of photo resist. The film should wash clean in about 60 seconds. If the mask will not wash out it has been pre-exposed to ultraviolet light. If it passes this test look at other possible problems:

•Problem #1: Putting the film positive on the wrong side of the light source. The film positive needs to be between the light source and the photo resist film.

•Problem #2: Photo resist over exposed to ultraviolet light. Exposure time is 20 seconds for 3-6 mil on a Letralite.

## Helpful Hints for Letralite™ Users

Symptoms: If you're exposure blanket is worn on the edges, loose or starting to tear, you are probably having trouble getting a consistent washout with your photo resist film. You may have even said to yourself, "This vellum worked just fine last week..." and spent some time checking your toner coverage or even trying a new vellum with a new sheet of film. You probably ended up with another sheet of un-even washed photo resist film and more frustration. Upon inspecting both sheets of mask, you may have noticed the areas where the film did no wash were slightly different from the first, proving that it could not be a vellum problem. At this point, most people call us thinking it's a film problem.

When a Letralite™ blanket is loose, it can not hold the photo resist film and your film tool (vellum, etc) against the clear cylinder tightly. Light is then able to seep between areas where there is no a tight contact between the two. It usually never happens in the same spot twice and is more prevalent when exposing larger sheets of resist.

Solution: Replace the black blanket. Your blanket should have 1/2" - 1" worth of tension to clip to the other side of the cylinder.

Hint: A good practice is to leave one side of the blanket unclipped when no in use to avoid loss of tension. It's also a good idea to check the clear cylinder to see if it is badly scratched and obstructs light. You might not get accurate exposures, particularly in areas where the scratches are the worst. Another thing to look for is discoloration of the cylinder - it could be defusing critical light for good exposure.

Replacement Parts:

- Blanket
- Cylinder

•Bulb: The standard life of a bulb for this unit is approximately 700 hours. It is typical for the bulb to have blackened edges after time. The blackened edges do not emit any less UV light, nor will it effect the exposure. The peak UV output for the Letralite™ is 365 nanometers. The lamp may start to flicker before burning out.

•Timer: If your timer is getting stuck and you're constantly over-exposing, the timer may need replacement. Starter: If the light is not coming on after 3-6 seconds and seems to flicker for more then 10-15 seconds, replace your starter. Ballast: If the bulb does not flicker, and if the unit has not come on after 30-45 seconds, and the bulb has been changed, you may need to replace the ballast.

Disassembling the Letralite™ Exposure Unit: Disassemble the Letralite™ unit by unplugging and removing the end caps and bulb. Remove the two (2) screws from right and left sides of the unit. Remove the two (2) end identification stickers and find four (4) small screws. Remove only one (1) screw for the top and the corresponding screw on the bottom. Do the same to the other side and you will be able to separate the Letralite™ into two halves.