Model 33 - Hood and Window Restoration – Tips/Hints

Here is the hood/window for my TTY Model 33 ASR S/N: 436614 as received. Note yellowing from UV exposure, dirt, oil, grease & mold. Two large penetrating rust stains on left/right top surface. Deep scratches throughout including window top. Window held in with ~5 of original 9 heat stakes. First steps: Remove hood from machine and carefully remove window from hood.

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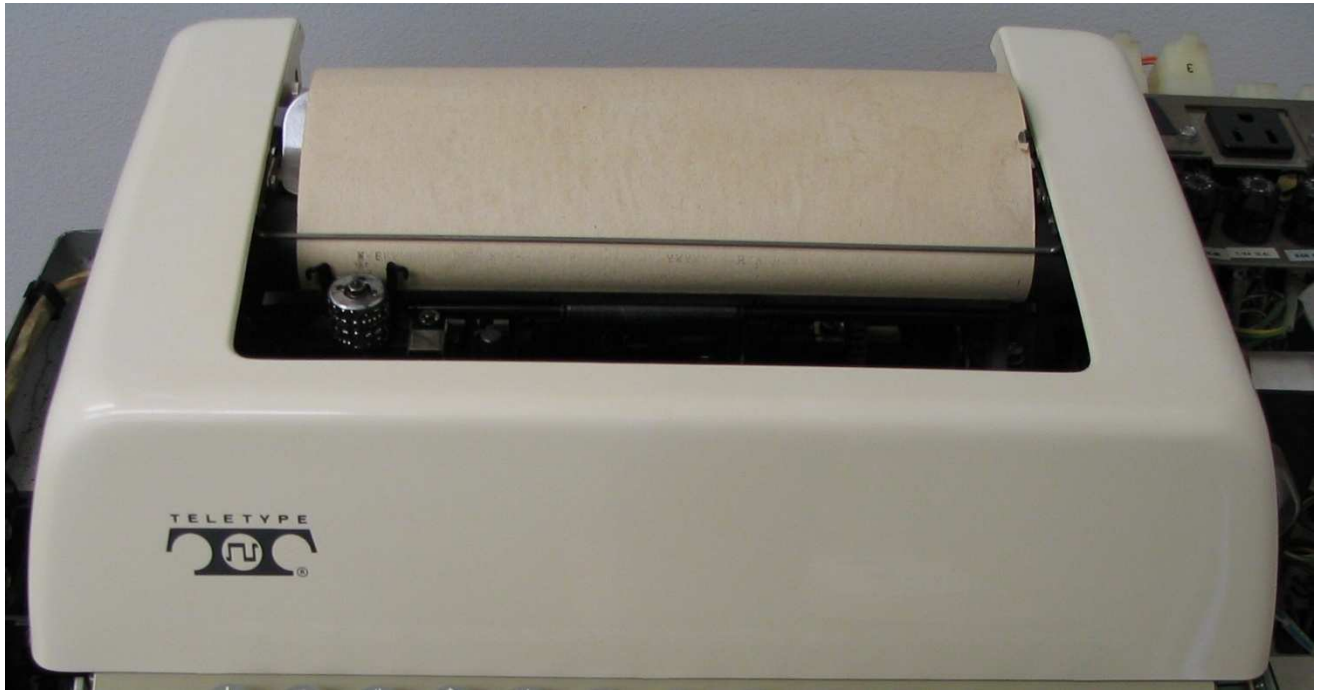

Incredibly, this is the same hood sans window after cleaning, RetrObright, wet-sanding with #1500 and polishing (Meguiar's 105 compound & AutoSpa wool bonnet on rotary buffer). NOTE: I covered the Teletype logo with blue painter's tape before sanding/buffing. RetrObright process will not harm screened logo.

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After cleaning the paper window, I wet-sanded with #1500 then used a buffer wheel with automotive products for headlamp restoration. With a little work, all the scratches can be completely removed and the window polished perfectly clear like glass.

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I drilled a hole in an artist's spatula just large enough to fit over the residual stakes. Then using a Dremel tool with sanding drum, I removed the remaining plastic. The spatula prevents collateral damage to the hood.

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Next, using a new, sharp X-acto blade, I removed any plastic remaining after the sanding.

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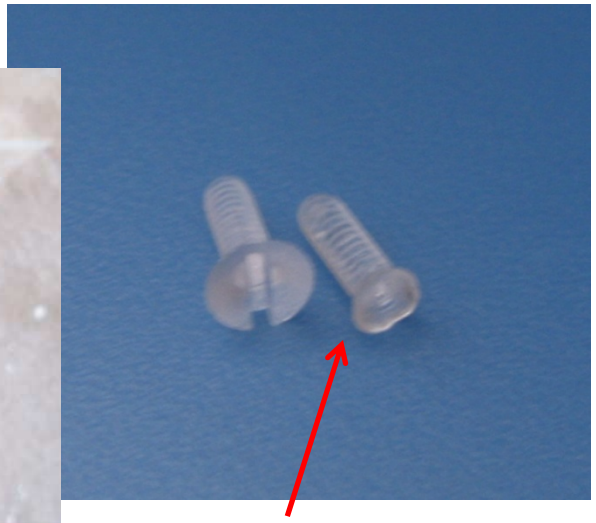
Before Prep



After Prep

My plan was to replace the original stakes with Polycarbonate screws. I purchased 100 - #4-40 x 3/8” screws and using a washer, created a sanding jig that allowed me to remove the plastic to the bottom of the slot. My thinking is that using screws to hold the window in place, will make cleaning/replacing easier later. I prepared 9 screws for each hood.

5/30/15, D. Tumey

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I next placed the restored paper window back in its original position and used a mechanical pencil to trace the location of each of the mounting holes. DO NOT USE INK as the adhesive will cause the ink to run! (Found that out the hard way)

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Using a syringe with a large-bore tip, I applied a drop of Loctite #3926 UV-cure adhesive in the center of each marked location – it does not take a lot of glue to get a strong bond, just enough to extend about 1/16” around the screw head. NOTE: Only apply the glue to one position at a time, after that screw is cured in place, bond the next.

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The Poylcarbonate screws prepared earlier are then placed and centered over the location markings. The glue has enough “green” strength to keep the screw from moving, but also permits repositioning if needed.

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I rigged a UV-LED to permit curing of the adhesive. It takes ~30 seconds exposure for the glue to fully cure. These bonds are so robust, you will crack the hood's plastic before the bond itself will fail. These LEDs get HOT so you will need to use a heatsink if you build a light like this. This is why I used CLEAR polycarbonate screws – to permit the light to pass through and completely cure the joint.

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Next, I used a drill and sharp countersink around each mounting hole to permit the window to lay perfectly flat when installed in the hood. If you do not do this, there will be a slight gap between the top of the paper window and bottom of the hood "frame". Test fit the window to the hood and adjust as necessary.

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I then placed the paper window in the hood and installed nylon washers over each of the studs.

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I subsequently installed Polycarbonate #4-40 nuts and gently snugged them tight. NOTE: Do not over-tighten or you risk shearing the screw threads. (Also found that out the hard way)

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Lastly, I applied a drop of Ethyl Acetate to each screw/nut to prevent the nut from loosening due to machine vibrations. The threadlocking agent is not permanent and can be easily removed.

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The restored hood and paper window re-installed on the ‘614 cover. NOTE: The window is so clear you can barely see that it is there.