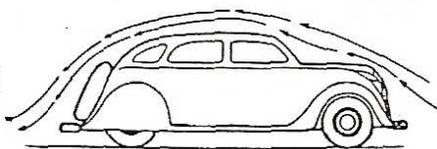


## How To Make 1935 Airflow Park Light Lens



By Jack A. Biickert

There will come a time in the restoration of your prized Chrysler Airflow when you just cannot locate that missing part, particularly pieces like park light lens.

In my case, I was in need of both park light lens for my 1935 Chrysler Airflow Model C-1. Even if they existed as surplus, I surmised the owners would be very reluctant to part with such a unique treasure. All I had was one badly cracked lens which I crazy glued together so that at least I had a pattern. Impossible to make replacements? Nonsense! You will be surprised what little miracles you can create in your own little basement workshop with a minimum number of hand tools. No prior experience or night school courses are required in this case.

Backup, brake, dome, side-marker, license plate and park light lens can be home-made using Crystal Clear Casting Resin and simple home-made molds. The casting resin and catalytic hardener can be purchased at stores that sell Plexiglas, fiberglass and epoxy resins. A one litre can with catalytic hardener costs about \$10 (illustrated in photo #1).

Molds can be easily fashioned out of tin-can tin, copper sheeting, aluminum flashing, ice cream pail plastic, wood or plaster-of-Paris. Copper and tinned or galvanized sheet metal are preferred because the mold joints can be easily soldered. Transparent color dyes, like red for brake light lens, are available.

The 1935 Airflow park light lens I needed to replace were made out of clear glass and the inside surface was lightly frosted. The exterior face was curved with a rectangular squared base and edge. The inside was concave to allow room for the park light bulb and its reflection against the frosted surface ( see photo #3).

A two-piece mold did the trick. One mold to produce the outside shape and a smaller mold that hung inside to give me that cavity and of course to produce the 1/4 inch thick lens itself. I chose .005 inch copper sheeting. Normally such copper sheeting is used for hand-tooling or engraving art work pictures. I required only one square foot. It can be purchased in such small quantity at any sheet metal store.

The outside mold was hand formed (finger pressed) around the exterior of my cracked park light lens. Flat end pieces were soldered on. A propane torch with a small soldering nozzle works great. Your neighbour probably has one you can borrow. Be careful to keep the copper sheeting wrinkle free on the outside part of the lens mold. The sides, ends and bottom surfaces are not so critical since these surfaces will be filed and sanded later to the correct dimensions. Be sure to gently clean up the solder acid residue on the mold after soldering with methyl hydrate or denatured alcohol. The finished outside mold looks much like a short length of eaves trough as illustrated in photo #1. Note that the outside mold is shaped to allow for that square rim edge to be formed when the mold is poured full of casting resin.

The smaller inner copper mold that will give the concave cavity to the lens was hand formed by finger pressing a correct width piece of copper sheeting into the cavity of the original (cracked) lens. End plates were cut to fit without any overlap. Regular scissors cut the copper sheeting nicely. Don't use your wife's good dress making scissors. Note in photo #1 that I kept the inner copper sheet long enough on the sides to allow me to cut out 4 tabs. These tabs allowed the inner mold to rest on the top outside edges of the outer mold so that the 1/4 inch lens thickness could be attained. When assembled for pouring the resin, the double mold looks much like a rimless bathtub sitting inside a larger bathtub with a square edged rim.

Place the double mold on a flat surface to ensure the liquid casting resin will be level in the mold. Before pouring, I placed several nuts and bolts into the inner mold to ensure it would not float up when the resin was poured into the larger outside mold. Pour the resin into the mold between the outer and inner molds. Fill it right up to the top. Excess plastic can be filed off later.

The casting resin can be mixed in any small container. I used a clean laundry detergent scoop and a popsicle stick to

stir in the catalytic hardener (see photo #1). The casting resin can has mixing instructions on the back label. In my case, I guessed 2 fluid ounces per lens pour would be enough. I mixed in 12 drops of hardener. Stir well and don't hurry as the resin takes many hours to harden. Don't worry about the bubbles when you mix and when you pour. They will all float away as the resin begins to harden. Don't add more catalyst than prescribed per fluid ounce because although it would certainly accelerate the hardening time, it will create excessive chemical heat and develop cracks as the plastic hardens too fast.

Be patient. I let my poured lens set and harden for 5 days. Unfortunately, this particular lens shape would not accommodate a mold with tapered sides that would allow for easy extraction of the hardened product. So....I simply peeled the copper mold away in strips much like peeling an orange as illustrated in photo #2. Of course, I had to make another mold for the second lens. That took me another hour to do. When you remove the lens from the mold you may find that the part exposed to the air is a little tacky. No problem as this is part of the excess size you allowed and it can be filed away.

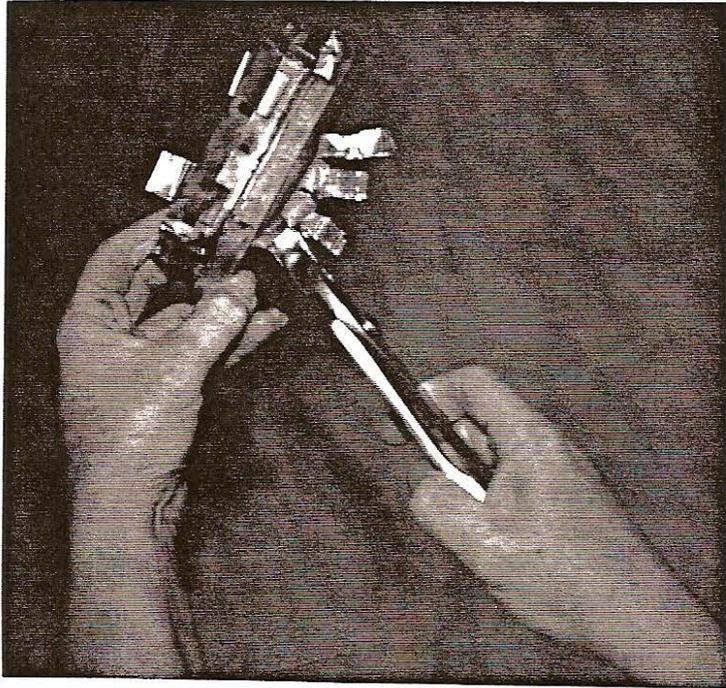
When you make a mold, make it just a tiny bit oversize. This allows you to precision file, sand, and polish it for a perfect fit. My plastic lens fits much better than the original version. It is also much more resilient to breakage than glass ones.

The hardened resin won't stick to molds made out of copper, aluminum, glass or soft plastic like that used in Tupper Ware or the 35mm film canisters. If you need to make a round lens, hand form the inner and outer molds with a hard round object like a billiard ball. Place the copper sheeting on a very firm cushion and press the object into the copper. Copper sheeting is very malleable. (The back seat of a '35' Airflow has a nice firm surface for pressing).

The lower lens in photo #3 is fresh out of the mold. The upper lens is the finished product. The edges, bottom and ends were cut to size using a medium wood file, followed by a fine metal file, 120, 200 and 600 grit sand paper. Crocus cloth and hand buffing with a superior cream chrome polish removed all scratches to give a super smooth crystal clear finish. The inside surface was lightly sanded with 400 grit sandpaper to produce that frosted finish. Don't hurry the

**PHOTO #1**  
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CASTING RESIN;  
HARDENER; MOLDS;  
MIXING TOOLS.

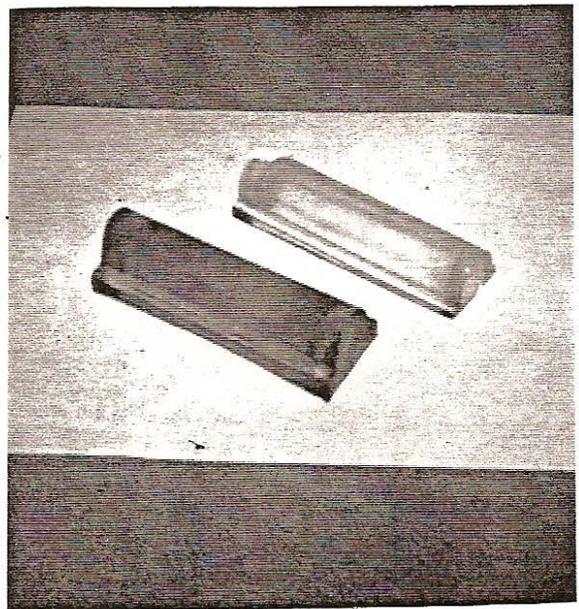


**PHOTO #2**  
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REMOVING THE  
COPPER MOLD

**PHOTO #3**  
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Lower - out of the mold  
Upper - after polishing

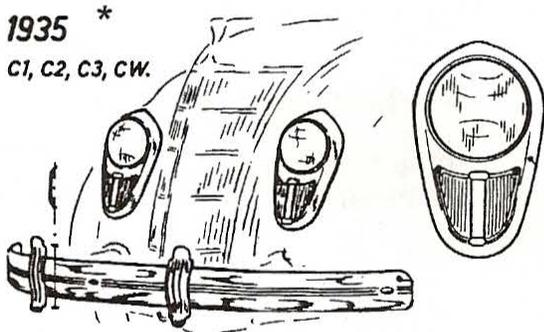


filing, sanding or polishing. The plastic resin will heat up too much if you work the plastic too vigorously.

Do these lens reflect light as good as the original glass ones? You betcha! They will be the subject of much admiration at your next Airflow car show.

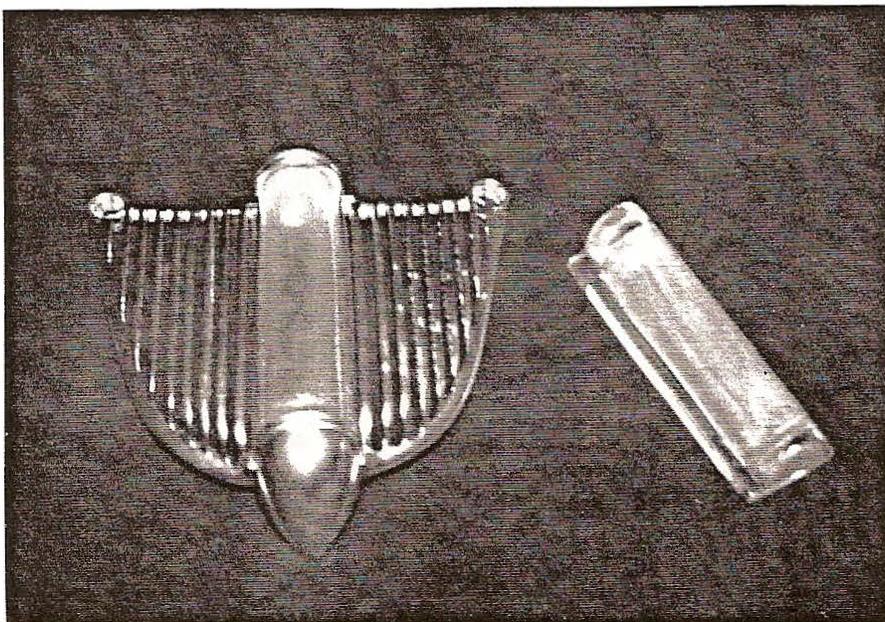
Photo #4 illustrates my '35 Airflow park light grille and my two new plastic park light lens. I think any car show buff or judge will have great difficulty in recognizing any difference.

Hopefully, in another installment article (Editor willing) I can pass on how to resin cast solid color gear-shift, turn-signal and other dashboard knobs. This process involves inclusion-casting of the necessary fastening bolts or screws inherent with various knobs. Looking for those simulated ivory knobs? .....piece of cake to make. How about a gear shift knob with a solid silver or brass inset which has your initials or perhaps a custom Airflow insignia imbedded in the top of a shift knob that matches the color of your car?



Cheers,

Jack A. Biickert



**PHOTO #4**  
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'35 Chrysler Airflow parking light grille and two new plastic parking light lenses