

Do-it-yourself plastic repair kit by Wisconsin Aviation

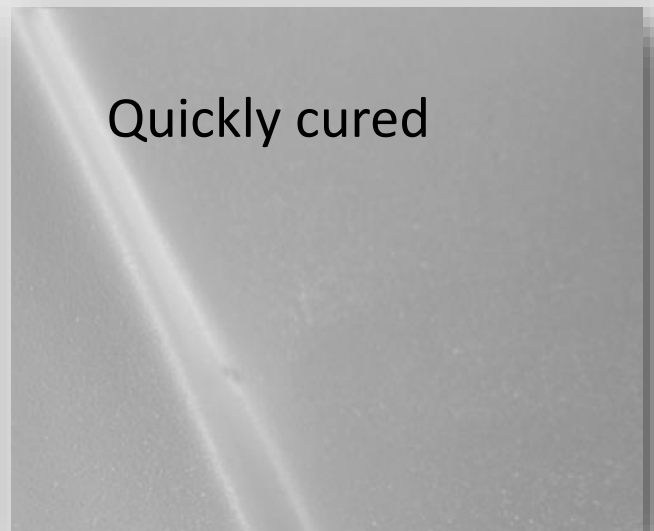
If your aircraft is adorned by yellowed, cracked or broken window trim, side panels or headliner there is something you can do about it!

In the past, upholsters were forced to cover deteriorated plastics, fabricate custom parts or get new ones. Today, there's another choice.

Wisconsin Aviation offers a simple, inexpensive and effective way to repair plastic. Whatever your airplane, this technique can make a difference.

Complete explanation is contained in the pages that follow. You can be proud of your airplane once again for an investment of your time and a very few dollars. Repair one piece or many — the choice is yours.





Soft aluminum, acrylic transfer tape, EZ Sand epoxy and Poly-Flex can do wonders.

Attempts with fiberglass, epoxies, special adhesives and some so-called miracle cures were all disappointing. Fabric covering also has its faults. Though new parts may be an option, cost and difficulty with fitting are issues.

Acrylic transfer tape, thin flexible soft aluminum, EZ Sand epoxy, Poly-Flex glazing, SEM and Dupli-Color finishes provide quick and practical solutions. Your plastic can have new life.

The series of photos and explanations in this guide detail simple and effective ways to recondition broken and discolored plastics.

Kit materials include:

- ♦ This on-line Illustrated information manual
- ♦ 6 feet of 2 inch wide soft aluminum/acrylic tape patch material
- ♦ 3M EZ Sand two part kit
- ♦ 100 color coordinated gray or tan #6 1/2 inch screws
- ♦ 7/64th bit to create proper size openings for #6 screws (not included)
- ♦ Plastic patch material for a large blemish and stir sticks for preparing EZ Sand
- ♦ Optional silicone rubber edge trim and adhesive to cover unfinished and repaired edges is available at \$2.00 per foot

Kit price: \$149 plus shipping

Additional required materials and suggested tools:

- ◆ Hand tools for removal of interior plastics
- ◆ Cleaning supplies, Scotch Brite scrubbing pad, SEM 38353 Plastic Prep aerosol to assure bonding of tape and finishes, soft clean cloths and masking materials
- ◆ Dremel tool with grinding, cutting and brushing bits for profiling cracks and blemishes as well as rough finishing of cured EZ Sand
- ◆ Scissors for trimming patch material
- ◆ Detail sander with coarse sanding papers
- ◆ Coarse hand sandpaper



- ◆ Bulldog or equivalent adhesion promoter
- ◆ Dupli-Color light colored texture finish
- ◆ Etching primer for visible soft aluminum edges
- ◆ SEM and Dupli-Color aerosol finishes
- ◆ UV resistant clear protective coating
- ◆ SEM 13023 low luster clear protective top coat or Dupli-Color Matte clear finish for desired final look

Remove plastics from your aircraft. Unless severely deteriorated, eyeball vent headliners containing wiring, vents and lights are most effectively reconditioned in place.



For eyeball vent models with headliner in place, apply plastic prep aerosol and scrub with Scotch Brite pad. Wipe with soft cloth and mask as needed. Before applying aerosol finishes, repair blemishes as described in the following pages.



Contact Wisconsin Aviation for insight into repairing pulled through headliner attachment screws and replacing speaker cover fabric.



An option to replace early model overhead fresh air louvers with eyeball vents is also available.

Plastic repair procedures



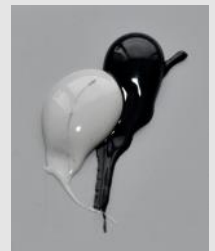
After scrub cleaning, profile every blemish with a Dremel narrow wire brush or pointed Dremel grinding stone. Keep edge openings to a minimum. Scuff underside with coarse sandpaper and clean with Plastic Prep or denatured alcohol.

Plastic is now ready for masking or soft aluminum/acrylic transfer tape patch and EZ Sand epoxy. ***Unless blemishes extent to an edge, the quickest and most effective repair is to apply EZ Sand from the back side only.***

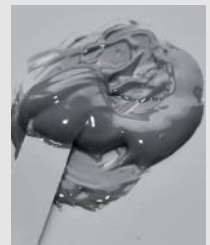


EZ Sand Kit

Mix thoroughly in small equal quantities of parts A and B

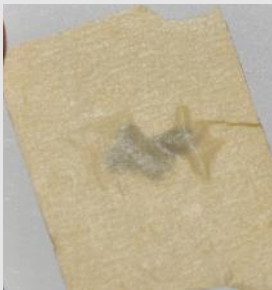


Consistency holds the mixed epoxy in place with enough working time to repair multiple blemishes.



Smaller blemishes that do not extend to an edge are quickly repaired by sanding the back side to create a flat surface and clean with alcohol. Apply masking tape to the finish side. Press mixed EZ Sand into the void created by the masking tape. Allow EZ Sand to extend approximately 1 inch beyond the blemish edge with 1/8th inch thickness. Tape can be removed after a brief curing time followed by sanding, application of texture, color and protective finishes.

As in this sample, profile blemish to remove any crack or rough edge, Dremel stiff wire brush or slowly turning pointed grinding stone works well.



Cover entire blemish opening with masking tape on the finish side.

Apply blended EZ Sand into the void observing on the finish side that it is totally filled.



An EZ Sand finished thickness of approximately 1/8th inch extended one full inch from the blemish edge will provide good patch strength.

Remove masking tape after one hour cure time. Sand or profile to a smooth finish. Any remaining surface void or roughness can be filled with Poly-Flex applied to the finish side.



For warped or deep seated blemishes, fill the void with Poly-Flex, remove excess by sanding while feathering the edge. After applying adhesion promoter, texture, color and protective clear finish, the blemish has miraculously disappeared. Be careful with the amount of hardener as it takes only drops for a complete cure.

Blemish extends to an edge

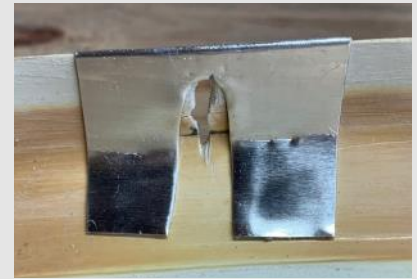
Widen entire blemish with Dremel wire brush.



Soft aluminum patch strips



After scuffing and prepping back side, apply soft aluminum/acrylic tape patch as shown. Leave a portion of the inside area open. Overlapping edge by 1/4 inch provides an area for EZ Sand overflow. Trimming, folding and crimping edge provides extra strength, but leaves an unfinished edge. Trimming after cure without crimping also works well.



Apply masking tape to finish side covering the entire blemish, if possible, leaving a void between the patch and tape to accept EZ Sand.

As shown in this example, apply blended EZ Sand from the back side pressing the mixture against the masking tape filling the void and extending approximately 1 inch radius at 1/16th to 1/8th inch thick-



Following cure time, remove masking tape. Apply Poly-Flex as needed to fill any remaining surface void. After curing, sand or profile surface to a smooth finish. Apply texture, color and protective clear coats.

Warped window trim edges can be a significant problem.

Plastics stressed by poorly placed screws can be permanently warped by the sun's heat. Replacing is no longer the only option.



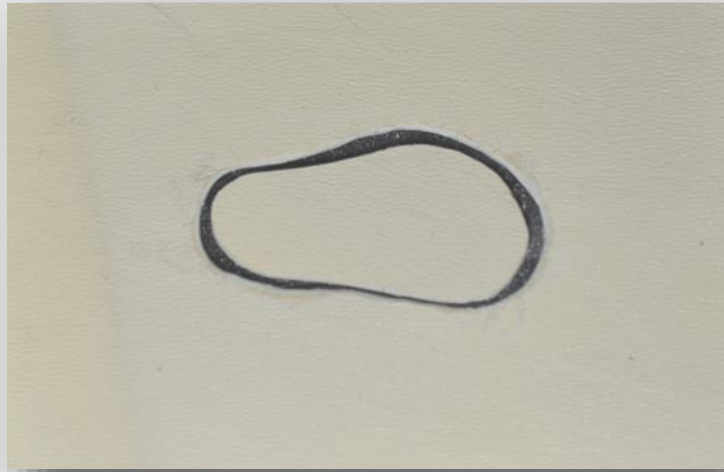
Wrapping the edge with soft aluminum patch material allows reshaping the edge. Applying silicone rubber edge trim will finish the job.

Contact Wisconsin Aviation for explanation of the oxygen mount repair.



Repaired areas will no longer have the texture of original plastics and color is needed. After Plastic Prep cleaning and use of metal primer over any visible aluminum patch, apply Bulldog or equivalent adhesion promoter. Return a textured surface with a light colored Dupli-Color aerosol texture spray. Following brief curing time, apply SEM or Dupli-Color aerosol finish with the color of your choice. Seal your repaired plastics and colored finish with a UV resistant clear coat such SEM low luster clear finish.



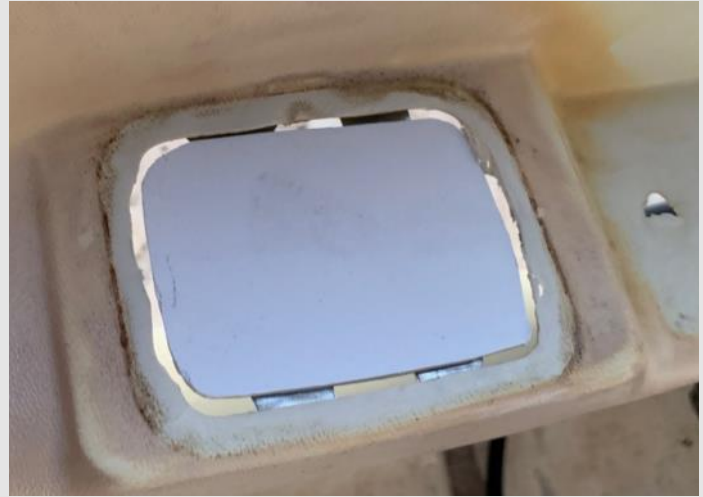


For major repairs or large open edges, filler plastic material provided with the kit may be helpful.

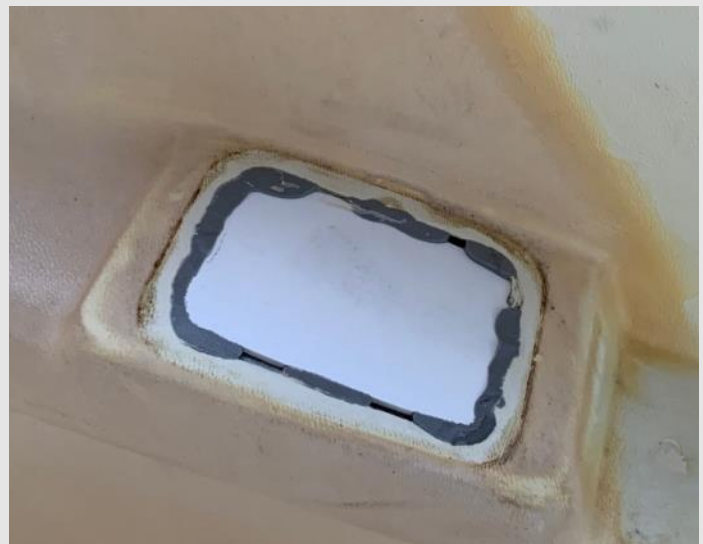


Even an opening as large as an ashtray can be remarkably removed. Trace a plastic filler to fit into the opening. Secure this filler with soft aluminum patches applied randomly around the joint leaving room for pressing EZ Sand into voids. Apply masking tape and complete repairs as with other blemishes.

Even a blemish as large as an ashtray can be eliminated with soft aluminum patching, EZ Sand and Poly-Flex.



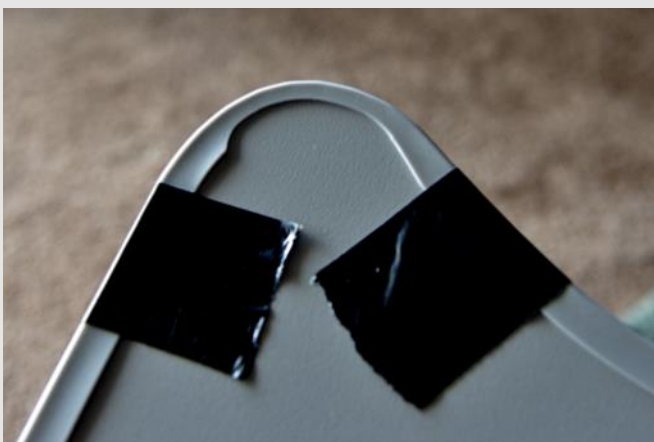
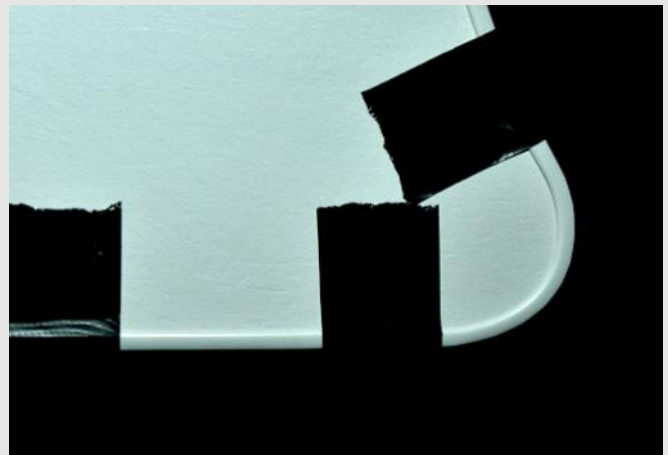
The same technique can be used to repair and reinforce cracked or broken arm areas.





Window trim and other unfinished edges can be enhanced by installing optional color coordinated silicone rubber trim. Available in tan (shown) or light gray.

Film of silicone adhesive is applied to only the back side. Then hold temporarily with duct tape for a brief cure time.



Slight stretch at corners eliminates buckling. Trimming the back side enables a perfectly flush fit for tight inside or outside corners.

Silicone rubber edging works well in numerous areas like this joint.



For warped plastics or large blemishes, contact Jaeger Aviation for additional procedure and material suggestions.

Common errors:

- ♦ Not following plastic repair guide suggestions
- ♦ Inadequate initial inspection and profiling — may lead to disappointing discovery of additional cracks when finishing
- ♦ Many screw holes can be permanently filled.
- ♦ Incomplete blended 3M EZ Sand or Poly-Flex will not cure
- ♦ ***Reoccurring open edge crack due to too short length of soft aluminum or not wrapping patch to the finish side.***
- ♦ Incomplete sanding of EZ Sand or Poly-Flex may result in visible edges after finishing. Be sure to fill any depression with Poly-Flex or equivalent glazing.
- ♦ Need for excess sanding — apply the minimum amount of EZ Sand. Filling a small hole requires very little. Any remaining void can be filled with more easily sanded Poly-Flex.
- ♦ Visible depression at repair site - repair by addition of Poly-Flex or equivalent totally filling the depression. Sand as needed.
- ♦ Less than 1 full minute of vigorous shaking Color Coat aerosol can result in an uneven finished color.
- ♦ Cracks protruding from screw holes are created. Do not reinstall screws in repaired areas. Tighten to touch, not press.

No need for special skill, expensive tools or parts: just a desire to make your Mooney look better.

You can do-it-yourself.

For the answer to your questions or to order a kit, contact:

Wisconsin Aviation:

Phone: 920-261-4567

Email: Interiors@WisAv.com

Website: JaegerAviation.com

Indicate tan or gray color choice for your screw set.