



SideSkirt Repair Procedure

Please Read All Instructions Before Beginning

These guidelines are provided in good faith, but without guarantee. The manufacturer and/or distributor of the product bear no responsibility for actions taken or not taken. There are many nuances of repair techniques that are assumed to be general knowledge; such nuances are not included in these instructions. Rather, these guidelines are strictly recommendations and are not intended to serve as a step-by-step, foolproof repair checklist. Selection of an experienced repair facility is the sole responsibility of the owner.

Since conditions of use are beyond the control of Crane Composites, all risks are assumed by the user. Nothing herein shall be construed as a recommendation for uses which infringe on valid patents or as extending a license under valid patents.



If you have any questions about repair techniques for your particular project, please call 1.800.435.0080 or 1.815.467.8600 and ask for Customer Care or e-mail sales@cranecomposites.com.

CAUTION: Wearing protective and/or chemical resistant gloves, goggles, and appropriate respirator as per the MSDS are recommended. Read and follow all manufacturer safety recommendations on labels of materials used for repair. Some materials may be flammable and should be used with caution.

Please review the MSDS at www.cranecomposites.com before beginning repair.

Safety Precautions

1. Protect your eyes with goggles or safety glasses, wear an appropriate respirator as per the MSDS, wear protective gloves when cutting and sanding fiberglass and wear chemical resistant gloves when using polyester resin, epoxy, and acetone.
2. **CAUTION:** Resins and solvents are highly flammable. Keep away from all sources of ignition. Do not smoke or use electric tools that cause sparks. Always read the caution labels on all solvent containers and take the necessary precautions.
3. Make sure the work area is well-ventilated.

Repair Disclaimers

1. If the panel has a tear or hole within 2" of a fastener, we recommend that the panel be replaced.
2. If the tear is over 12" in length, we recommend that the panel be replaced.
3. Edge damage (small cracks or chips out of the edge) larger than 2" should be repaired to prevent damage propagation.
Note: Edges may be slightly trimmed or shaped with a cutting tool or Dremel to improve aesthetics.

Assess Damage

Evaluate the severity of the damage to select the appropriate repair method.

- **Method 1:** Small Tear, Puncture, or Hole (max length 2"; max gap or hole diameter 1")
- **Method 2:** Large Tear or Hole

Note: Due to the unique finish of Crane Composites panels, an exact match is impossible to achieve with a repair.

Supplies and Equipment

Contents of SideSkirt Repair Kit*

Method 1- Repair Kit (R50RK85SKT)

- 1 Piece WR Fabric 2' x 2' (R77037) 18 oz.
- 1 qt. Polyester Resin Mix
- Smooth Film (R04506): 2 pc, 3' x 4'
- Hardener (catalyst): 2 Tubes, 15cc each
- 2 Spreaders
- Protective Gloves: 1 Pair
- 2 Mixing Cups (500cc graduated)
- 4 Mixing Sticks
- Instruction Manual: 1
- MSDS Mixture for Resin
- MSDS for Bondo Hardener

Method 2- Supplies Needed

- Overlay repair piece size needs to be specified at time of repair and a separate order must be placed
Note: Overlay piece must be 2" larger than the damaged area on all sides (except along an edge)
- Commercially available 1 or 2 part urethane adhesive
Suggested Brands:
 - LORD 7545
 - MANUS 25-AM
 - MANUS Flex Weld

*Note: Repair kit includes contents for a Method 1 repair. Supplies needed for a Method 2 repair, will need to be ordered separately.

For Most Repairs, You'll Also Need

- Acetone for Clean Up (**Caution:** acetone is extremely flammable)
- Rags (White)
- Masking Tape 1" or 2" wide
- White Spray Paint (acrylic enamel or acrylic urethane)

Tools That Are Useful

- Utility Knife
- Sander with Medium Grit Paper
- Wire Brush
- Stiff Bristle Brush
- Putty Knife
- Scissors
- Jigsaw or Router
- Drill

METHOD 1: For Small Tears, Punctures, and Holes

The Wet Lay-Up Repair Process

CAUTION WEAR APPROPRIATE PROTECTIVE EQUIPMENT BEFORE BEGINNING A REPAIR!

The wet lay-up repair using Crane Composites' sideskirt repair kit is a useful method for repairing rips, tears, and gouges that have broken through the surface of the fiberglass sideskirt panel. Use this method to repair damage up to 2' in length where the material is intact; consider Method 2 if material is missing.

The success of a wet lay-up repair depends on proper preparation of the fiberglass surface. The surface must be abraded for good adhesion between the resin mix and the sideskirt panel. The surface must be dry and free of grease, dust, and dirt for adhesion to succeed.

1. Sand damaged area; extend sanding 2" beyond the damage in every direction.

2. Clean damaged area with acetone or a similar solvent.

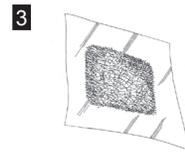
Damaged
Sideskirt-
Small Hole



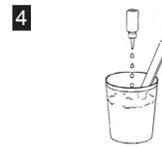
Damaged
Sideskirt-
Tear



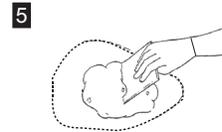
3. Cut the glass mat $\frac{1}{4}$ "- $\frac{1}{2}$ " smaller than the sanded area on every side. Place the glass mat on smooth film. Cut the smooth film 2" larger than the damaged area on all sides. If the sanded area is 6" x 6", the film should be 10" x 10".



4. Measure the repair mix into a plastic beaker (approximately 100cc is needed for an 8" x 8" repair). Add 1%-2% of Bondo hardener to the repair mix (1% = 1cc or about 20 drops per 100cc of mix). Stir the hardener and mix together for 45 seconds. The repair mix will gel in 25-40 minutes with 1% hardener (15-20 minutes with 2% hardener).

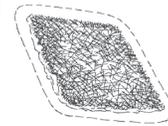


5. Spread a layer of mix $\frac{1}{8}$ " thick over the sanded area using the plastic squeegee. Leave $\frac{1}{2}$ "-1" space between the mix and the edge of the sanded area.

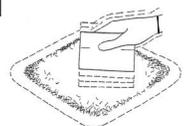


6. Place the glass reinforcement in the center of the damaged area. Use the squeegee to saturate the glass with the mix and smooth any wrinkles in the glass mat. Add mix to the topside of the glass if needed.

6a



6b



7. Spread a thin layer of additional mix on top of the glass reinforcement or on the smooth film. Be sure glass is thoroughly wet through, especially at the edges of the repair.

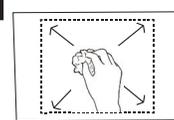
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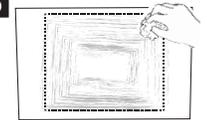
8. Center the smooth film over the glass mat. Using light pressure, take a soft rag and lightly work the mix to the edges of the sanded area.

Note: When the repair is completed, but before it has cured, wipe off excess mix that went beyond the sanded area (use a white rag and acetone). A full cure should be achieved in 1-2 hours. Apply moderate heat using a heat gun or heat lamp to speed up cure time. Afterwards, trim off excess film with a knife.

8a

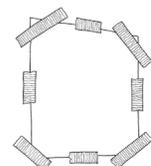


8b



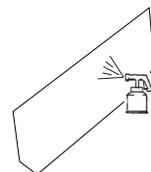
9. Tape film edges down with masking tape while the repair is curing.

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10. After the repair has cured, the color may be slightly different than the sideskirt panel. An acrylic enamel or urethane paint can be used to blend the repair into the panel. Wear appropriate respiratory protection when spraying paint.

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METHOD 2: For Large Tears and Holes

The Panel Over-Lay Repair Process

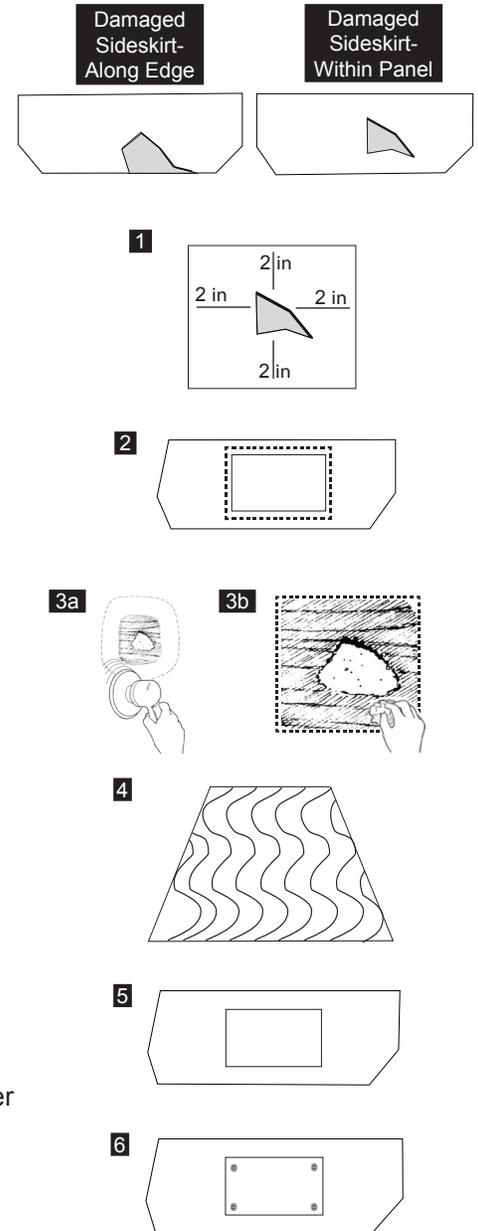
CAUTION WEAR APPROPRIATE PROTECTIVE EQUIPMENT BEFORE BEGINNING A REPAIR!

The panel over-lay repair is a useful method for repairing large tears and holes that have removed part of the fiberglass panel.

Use this method to repair damage where the material is not intact or missing. If material is not missing you will want to consider method 1.

Note: The success of a panel over-lay repair depends on proper preparation of the fiberglass surface.

1. Cut a section of the over-lay sideskirt panel that is at least 2" larger than the damaged area on all sides (except along an edge).
2. Center the replacement panel over the damaged area. While holding securely, trace around the perimeter of the overlay panel.
3. Sand within the traced lines using a sander. After sanding, clean with acetone. Also, clean the backside of the overlay panel.
4. Apply adhesive to the back of the overlay. Follow adhesive suppliers recommendation, if in doubt, use 100% coverage.
5. Press the over-lay into position over the damaged area.
6. Drill holes at the four corners and insert pop rivets. If the over-lay is large (greater than 12") you may want to add additional rivets.



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Crane Composites is the manufacturer of ArmorTuf, Kemlite and a variety of other fiberglass reinforced plastic (frp) composite panels. Inspired by the Kemlite tradition, Crane Composites has over 55 years of experience in Transportation Products and is a recognized industry leader in frp applications.

We believe all information given is accurate. It is offered in good faith, but without guarantee. Since conditions of use are beyond our control, all risks are assumed by the user. Nothing herein shall be construed as a recommendation for uses which infringe on valid patents or as extending a license under valid patents.

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