

## Wrap-around Body Styling



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Near the end of production, Volkswagen updated the Vanagon's look with wrap-around fiberglass bumpers, a small front air dam, and, depending on the model, matching fiberglass rocker panel covers. The 'street' models (Carat, Wolfsburg Special Edition, and Westfalia Weekender) usually got the full treatment, while the station wagon, Syncro, and Westfalia Camper only received the wrap-around panels at the bottom of the front doors.

By the summer of 2002, I had been driving the Vanagon around for a couple of years with a broken left front mud flap. This was a bit of a downer since one of the first 'accessories' I had found was the matching right front flap. I had always liked the look of the full wrap-around body styling and was keeping an eye out for the necessary pieces. Serendipitously, an otherwise great-looking white 1990 GL turned up at the local wrecking yard; a catastrophic engine fire had rendered it not suitable for repair.

### Disassembling the Puzzle

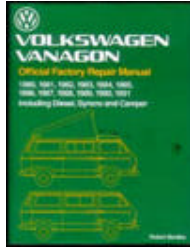
To remove the fiberglass pieces, you will need a 10mm socket, extension, and ratchet. Peering up the inside of the panels, you will see several 10mm nuts. Loosen each of these (it's not necessary to remove them entirely), swing the lower edge of the panel out, and lift it off of the top of the mounting brackets. Set the panel aside and collect all of the clamps (the nut-bolt-plate assemblies that you loosened in the first step).

Next, you'll need to remove the mounting brackets. These are pop-riveted on the body and the rivet heads can be easily removed by carefully drilling them with a 3/8" drill. You may need a small center

punch or scratch awl to clear the small hole in the center of the rivet (the hole helps guide the drill); drill slowly and only deep enough to remove the head – DON'T DRILL THROUGH THE BRACKET!

With both rivet heads removed, it's a simple matter to pull the mounting bracket off the body.

## Preparation



Thankfully, the **Bentley Book** provides very good diagrams and measurements detailing how to install the brackets onto the car body. Two important recommendations:

- Take the time to get your sliding door well aligned before you start. Top to bottom alignment will simplify the installation process, but don't forget the *flush alignment* of the door to the rest of the car; this is particularly important at the rear edge of the door!
- Mark the holes for the front-most and rear-most brackets and snap a chalk line between them for the vertical position of the remaining holes. Because of slight misalignment of the body panels (not to mention the sliding door), measuring each hole from the horizontal body crease may result in brackets mounted at different levels (and consequent misalignment of the panel pieces, particularly on the passenger side).

## Assembly

To mount the brackets, you will need a bunch of 3/16" medium-length aluminum pop rivets, a pop rivet tool, and a 3/16" drill. Measure and mark all of the top holes, center punch the metal to keep the drill from wandering, and drill the holes. The book also gives measurements for the bottom holes, but I have found that it is easy to do these by sight after you are sure that the brackets are hanging perfectly vertical from the top. Don't neglect to center punch the bottom holes, too.

To install the panels:

1. Run the nut on each nut-bolt-plate (NBP) assembly down to the end; make sure the nut moves freely (WD-40 or penetrating oil will help).
2. Place an NBP in each notch of the side panel; the rounded head of the bolt and the lock washer should be on top of the notch with the plate and nut hanging below.
3. Carefully hang the panel in the upper notches of the mounting brackets.
4. Pull the bottom edge of the panel in toward the body as you watch from below; make sure that the NBPs line up with, and slide into the bottom notches of the mounting brackets.
5. Tighten each nut to firmly clamp the panel in place.

Remember that installation of the side panels will **decrease your ground clearance by 1½ to 2½ inches!** You will be especially aware of this if the side panels you found are in need of repair (like mine were).

## Basic Fiberglass Repair

The skirts I found were in good condition with the exception of the driver's side, which had a broken area just ahead of the rear jack pass-through hole.



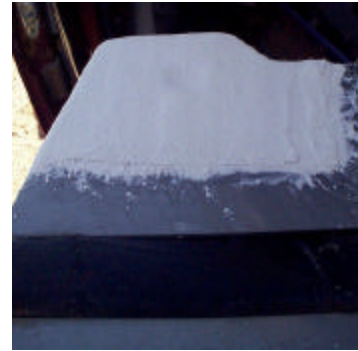


Since a good chunk of the edge was missing (and the exact contour wasn't perfectly obvious), I began the repair by making a plaster cast from another side panel (also found at the wrecking yard but damaged at the front edge).

I coated the needed area of the side panel with spray wax (as a mold release) and used several layers of orthopedic plaster cast material to make the mold. This is quite easy to use: just cut appropriately sized pieces, dip each into a bucket of water for a few seconds, and apply.

As each layer is added, I smoothed the plaster and gauze with my fingertips. It's really important to press the gauze down into all the cavities of the piece and to wrap it down around the edges as well.

The plaster sets up fairly quick and within 15 minutes of the last application, it was possible to carefully separate the mold from the panel. At this point the cast was still a bit flexible (which helps when removing it); I set it face up on a flat surface and allowed it to cure completely.



Next, seal working surfaces of the plaster cast with multiple applications of clear acrylic spray. This helps keep the fiberglass resin from infiltrating the plaster and causing more work. I didn't get mine sealed enough and had about 1/16" of resin-impregnated plaster to sand away.

Fix the mold tightly in place on the panel. Try to minimize any gaps that would allow resin to seep out on the undamaged surface of the panel. Apologies to the USPS for the obvious misuse of their tape; it was the only thing handy at the moment!



From a small fiberglass repair kit, I cut several pieces of fiberglass cloth (itchy-scratchy!) and mixed up a few ounces of resin. I placed a layer of cloth in the void and drizzled on enough resin to cover it and overlap the remaining edges of the panel.

Using a popsicle stick, I worked the cloth down into all edges of the void. I continued adding cloth and resin and working it down to fill the mold. About three layers in the *sandwich* seemed about right.

After the fiberglass set up, I tore away the plaster mold and set about shaping the repair to match the contours of the panel. Since my plaster-sealing job wasn't so good, I had to grind away a good deal of resin-impregnated plaster to get down to the final surface.

I then gave the area a first coat of Bondo in preparation for the final shaping.





From this point, the repetitive process of sanding, Bondo-ing, sanding, spot-puttying, sanding, and priming took over.

Finally, the piece was good to go. I finished up by lightly sanding the entire panel with 400 grit wet-dry sandpaper to provide adequate *tooth* for the coating of matte black bumper paint.

If you find some minor cracks, you can usually repair them with a liberal application of cyanoacrylate cement (super glue). Don't waste time with the small tubes from the grocery store (the exposed fiberglass cloth will soak it up fairly well); pick up a 1oz bottle of ***Thin-Fast Setting*** at a local hobby shop. After it sets spot putty and sand the surface for a smooth appearance.