



Do your feet get soaked every time it rains? Do your Nike's need a retread from dragging on the pavement? Are you tired of asking your passengers to please keep their feet inside the car? The problem is obvious — the floor pan of your prized VW is rusted clean through.

Your arch nemesis *rust* is at it again, this time attacking from the bottom of your car up. Rusted out pans are a serious concern for several reasons. First, it is obviously dangerous to be riding around in a car that has no support under foot. Car design has progressed a bit since the days of the Flintstones. Second, and more important, the floor sections are primary structural components, giving strength to the pan of your car.

But a rusted floor doesn't have to mean the early retirement of your VW. There is a repair that will literally make your car's pan as good as new.

Floor pan repair is a serious matter because you are replacing a major structural member of the car. While it is

RIGHT, rusted out pans are a common VW problem. With the seat and carpeting removed, it's obvious just how bad the problem was on this Bug!

possible to temporarily cure the problem by welding or pop riveting a sheet metal patch over the rusted out area, we highly recommend you spend the extra time and money to do the job right. Otherwise, the problem will be back to haunt you, and in the long run it will end up costing a lot more to repair the car twice.

VW Restorations and Customs, 8223 Conner Drive, Manassas, VA 22111, (703) 361-3374 has been our authority and source for rust repair advice throughout this series. Paul Suplizio and crew quite possibly do more VW rust repair than any other shop in the country, and these guys know their stuff. The many years of experience are evident in the show quality restorations and customs this shop turns



Replacement floor panels are available only for '70 and earlier Beetles, but these can be made to work on later cars with minor modifications. Notice the seat rails welded to the replacement panel — you will need to remove these for later cars.

out on a regular basis.

A professional floor pan repair isn't cheap, but it's the only way to properly correct the problem and hang on to your classic VW. Typical repairs of this type at VW Restorations and Customs run in the \$600 to \$700 dollar range per side. Some models are more, but that is a good average. As you'll see, considering the amount of work involved, this price is quite reasonable.

The only floor pan replacement panels currently available are designed to fit '70 and earlier Bugs. These can easily be modified, however, to fit later cars. The main difference is in the way the front



ABOVE LEFT, the first step of our repair required removing the nine body bolts along the outer edge of the floor pan that secure the floor to the body. **RIGHT**, if you are working on the right side of the car, it is wise to carefully relocate the gas tank evaporator hose. Welding, grinding and gasoline fumes are not a good combination.



ABOVE, after removing the seats and carpeting, the interior floor pan will be exposed. Pry the outer edge of the pan down from the heater channel, taking care not to damage the pan gasket. Then use an air chisel to break the welds along the tunnel, and front and rear of the floor.



seats attach. The seat tracks on '70 and earlier cars are attached right to the floor and the replacement panel comes with tracks welded in place. On '71 and '72 cars, you simply replace the seat tracks. On '73 and later cars, like the one in our sample repair, you must remove the tracks on the replacement panel, then mount the



TOP, if using the later seats, remove the rails from the new pan with an air chisel. **RIGHT**, now carefully remove the seat pedestal from the old floor. **ABOVE LEFT**, check pedestal fit by placing on the new pan, and trim as necessary to fit — don't weld in place until the pan is in the car. **RIGHT**, check the new panel for fit, it may be necessary to trim and notch the front edge to clear a factory weld.

seat pedestal from the old pan on the new floor. The seat slide tracks mount to the tunnel on the inside and the inner heater channel rail on the outside. If these need to be replaced, they are still available from VW. Convertibles are the same except for the jack support that is integrated into the floor pan, requiring extra work.

With minor modifications, the '70 and earlier replacement panels can be adapted

to fit all cars except Ghias. Replacing a Ghia floor requires more extensive modification to a Beetle replacement floor section to fit the Ghia pan. Naturally, this will add to the cost of the repair.

Paul Suplizio offered to take us through a sample floor section repair. As you will see, this is not a job for the faint hearted. Basic body working and welding skills are required. If you are at all

hesitant about cutting out the bottom of your car, this might be one job best left to a professional shop.

The first step of the repair is to remove the seats and carpeting from the inside of the car. This will give you a good view of just how extensive the rust damage is. Next, inspect the bottom of the car, and remove any obstructions. If you are repairing the right side, temporarily relocate the gas evaporator hose that is clipped to the floor pan bolts. You don't want venting gasoline fumes in the area when welding or grinding for obvious reasons.

Next, remove the floor pan bolts, nine per side, that hold the floor section to the pan. Pry the pan down from the heater channel being very careful not to damage the floor pan gasket sandwiched between the two. Break the inside tunnel, front and rear edges of the floor loose with an air chisel. This can be done with a hammer and chisel, carefully breaking



ABOVE, clean and grind off all old welds along the bottom edge of the tunnel where you will be welding to ensure a proper fit. Position the new floor back in the opening after mounting the original pan gasket.



ABOVE LEFT, reinstall the nine bolts then secure the floor to the outer portion of the car making sure the gasket is aligned. **ABOVE RIGHT**, press the two pieces together on the tunnel-side edge of the floor and tack weld in position. Use a body hammer to knock down any high spots. This is how the section will look once installed.

each weld, but the air chisel is quicker and leaves a fairly clean edge.

Once the old floor section is dropped out of the car, it is time to prepare the replacement section. There is not much to do on '70 and earlier cars, but later cars will need modifications for the seat mounts. Our sample car was a later model, so the seat pedestal was removed from the old floor. The seat rails were then removed from the replacement panel to accept the later model mounts. The front edge of the replacement floor will likely need to be trimmed and notched to fit the pan.

Next, clean the surface along the tunnel and front and rear of the pan to be welded. Knock any old spot welds down with a grinder so that you have a flush surface to mate the new panel to. Mount the original floor pan gasket to the new floor. Position the replacement panel to the car, checking for a proper fit.

Secure the part by reinstalling the nine

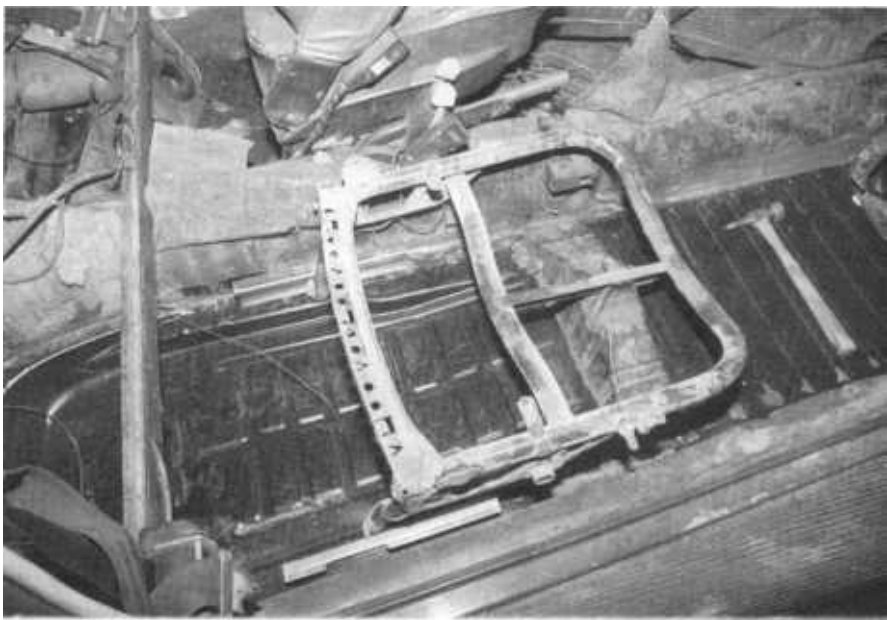


ABOVE LEFT, complete the welding by laying short beads, approximately 1.5-in. long and four inches apart, along tunnel-side of the floor. To prevent warpage, jump around and keep heat buildup to a minimum. Weld front and rear in place using the same method. **ABOVE RIGHT**, now weld old seat pedestal in place on the new floor panel.

bolts along the outside edge. Press the inside (tunnel) edge together tightly and tack weld in place. If there are any high spots, use a body hammer to fine tune the fit. Weld the tunnel side in, Paul recommends using beads approximately 1-½ inches long and 4-inches apart. Jump from one part of the panel to another to keep from concentrating the heat in one area. If you just lay a nice long bead down the seam, the panel is very likely to warp from the excessive heat. Weld the front and rear of the panel in place. Using a bare seat frame as a jig, you can weld the seat pedestal in and replace the side seat rails if necessary.

Use professional grade body seam

RIGHT, using seat frame as a jig, position side seat rails and weld in place to tunnel and heater channel if they need to be replaced. **BELOW**, body seam sealer is used along welded edge to prevent moisture entry. Prime to prevent rust.



ABOVE RIGHT, after seam sealing, spray the underside with undercoating. **RIGHT**, the finished product looks as good as new!

sealer along the inside seam of the floor section to keep moisture out of the car. Prime and paint the inside of the panel and all bare metal surfaces inside the car. Seam seal the front, back and tunnel side of the panel from the bottom, then coat the entire underside with quality undercoating material. Reinstall the interior and you are in business.

As you can see, floor pan repair is a rather involved process, but when you do the job right, the results are exceptional. This may be an area of the car that doesn't show, but one that should be a priority on your restoration/customizing agenda. Thanks to Suplizio and crew at VW Restorations and Customs, this car has a solid foundation and a new lease on life. ●

