

## How to Prepare Fiberglass for Paint

### Step 1. Test Fit

First, and always **TEST FIT ALL PARTS BEFORE PAINTING!** It will only cost you time and frustration if you have to do a minor modification to a part that is already painted. In addition most parts suppliers are reluctant to accept a return if you find the part is not to spec and you have painted it.

### Step 2. Preparation: Sand and Fill

#### Preparation Overview

The difference between a poor paint job and a terrific paint job often has little to do with spraying the paint. It has to do with preparation. This is not a difficult job, but it requires patience and an eye for perfection. And whether you are an amateur or professional, the techniques are the same. Basically, preparation is a three-step process which you repeat until the car is as smooth as you want it. First, you block sand to contour. Second, you fill low spots. Third, you primer. Each time you do this, you should be filling and block sanding smaller areas. If you goof and miss a high area or go too far on a low one, just fix it the next time around.

#### Door & Deck Lid Clearance

The first place you will need to begin looking for high and low spots is in the clearances around the doors and decklid. Your body and related parts should be aligned and shimmed in place before starting. Generally, you will want to make the gaps match width along the entire length of the opening, although ours are pretty good to begin with. (If the gaps seem way off, go back and re-check your alignment.)

#### Gap Width

Deciding on a correct width for the gaps is a compromise. Show cars, which are not driven on real roads, generally have narrower gaps than "drivers" because the motion of any car, metal or fiberglass, can cause narrower gaps to vibrate together and paint to chip. Keep in mind that the addition of primers and paints will reduce clearances. The gaps on our bodies are normally adequate, but still need to be checked to make sure there will be enough clearance with the addition of paint. You need to allow at least 1/16" clearance (before paint) in all body configurations, so check your clearance with the doors and decklid open as well as closed. Also check the clearance along the entire arc as you open and close them. You should make sure that there is at least 1/16" clearance at all times.

#### Adjusting the Gap

If you want to grind the gaps to make them wider or fill them in to make them narrower this is your next step. Always **SAND or GRIND THOROUGHLY** any area to be filled to assure adhesion of the filler. In areas that need more clearance, grind off high spots carefully. Don't go through the fiberglass layup!!! It is not a problem to grind through the gelcoat, as you can later cover the area with primer or filler. Remember to keep checking the contour of your gaps as you sand and fill.

#### Choose Your Putty

Use a good grade of catalyzed polyester body filler. (Be sure to use the catalyst recommended by the manufacturer -- they are not all the same). Polyester fillers and primers have basically the same chemical composition as fiberglass resin so they should be totally compatible. In addition, catalyzed fillers and primers do not shrink like air-dry materials. Also, always use fillers that can be water-sanded. (Check the manufacturer's recommendation). These are easier to work with and do not absorb moisture, which

can be a problem. Follow the manufacturer's directions for your particular putty, and fill the areas you have prepared.

#### Disassemble the Car

Now disassemble the car as much as is necessary for paint. If you are removing the body from the chassis, be careful to mark all shims, heights, and locations. You may want to do this in several steps: Remove the body while the doors and decklid are still on it. Next paint the chassis, body floor, and firewall. Now reassemble and re-shim the body before you remove the doors and decklid to paint them and the body.

#### Sand & Fill Seams

Before moving on to priming, you will want to do a little more sanding and filling. Sand all mold seams and other rough areas (including any filler you have used on the gaps) with a hand held block. This can be done with 80 to 220 grit paper; sand carefully to avoid doing any damage to areas surrounding mold seams. It is easy to over-sand and end up with a flat spot.

#### Sand & Fill Low/High Areas

Most professionals and other picky people would sand the entire body and related parts at this time, carefully watching for low and high spots. Low spots are easy to see because as you sand through the black gelcoat finish, it appears gray. The finish on low spots does not abrade if you are using a fairly stiff block, so these spots will remain black. (If you are sanding on other gelcoats that do not appear different colors, and also in subsequent steps on our parts, you will have to apply a guide coat to get this same effect. More about that later).

#### High Spots

High spots will, of course, be the first areas to sand down. You may end up sanding all the way through the gelcoat and into the fiberglass layup. This is perfectly O.K. as long as you don't sand through the layup, because the area will be painted with primer. However, since our parts are very straight to begin with, this should be rare, so double-check! (This is a little different than the process you would use on metal. When you are block sanding metal and a high spot shows it cannot be sanded down, but must be worked down carefully with a hammer and dolly).

#### Sanding Blocks

Sanding blocks can be of any shape, size, or material to do the job you intend to do, but the more rigid the block, the better it will cut high spots and leave low spots. The more flexible it is (such as a rubber block) the easier it will follow contours (including ripples). Basically, you will want to start out with a harder block for your first sanding steps, and move to a softer block for your final sanding(s) with the finer grit paper.

#### Sanding Tips

When block sanding with any block, you must take care to use a diagonal or somewhat sideways operating pattern with the block to avoid cutting grooves with the sides of the sandpaper. Hold the block at an angle to the direction that you are sanding. When sanding into corners, where you are forced to hold the block head-on, care must be taken not to gouge material around the area to be sanded. It sometimes helps to make your own miniature sanding block by wrapping sand paper around paint stir-sticks or other handy objects--but you still have to be careful.

#### Final Sanding & Filling

After this initial sanding, any areas that still appear black are low and should be filled. But before you fill, be sure to **SAND or GRIND** these areas to assure good bonding. Since you will be sanding off the black finish, you may want to mark the areas first. Once again, use a good grade of catalyzed polyester filler.

### Step 3. Primer

After all high areas and filled areas have been water-sanded to proper contour with 220 grit paper, all sanded areas should be primed. This is best done by an experienced painter.

#### Choose Your Primer

Primer selection requires careful planning. Each material used must be able to adhere to the base material under it. We recommend that you use a two-part sanding primer that does not require air drying and does not shrink after curing. Most catalyzed polyester primers will adhere well to a fiberglass or polyester filler base. (As with filler, be sure to use the recommended catalyst for your primer). Polyester primers and fillers are incompatible with self-etching primers. Never use a self-etching primer over a polyester primer, polyester body filler, or fiberglass! Also, never use a polyester primer or body filler over self-etching primer. Check the primer manufacturer's recommendations for use and incompatibilities for any other type of two-part catalyzed primer.

#### High Areas

Be careful when you primer over an area that was high, particularly if you are not priming the surrounding area. The primer adds thickness, and you may just end up sanding it all off again unless you are careful to feather in the edges of the primed area.

#### Pinholes

Sometimes small air bubbles will come through the primer and burst, causing pinholes. This often occurs when you primer over filler or over areas where you have sanded through the gelcoat. If pin holing occurs, primer can be brushed, squeegeed, or "gun putty" to fill the holes. (To "gun putty" set your paint gun on narrow fan, and blow primer into the holes). Once again we want to caution you against using an air-dry material for this operation because of secondary shrinkage.

#### Sand it All Again

Now you start the whole process over again, to catch any high or low spots that you missed the first time, or that you created while fixing another problem. You can again choose to do the whole car, or just select areas. This time, use 220 grit wet paper on your hand held sanding block.

#### Guide Coat

To be able to block sand effectively you should use a guide coat, since you have already removed all or part of the original black finish. A guide coat consists of a very light application of a contrasting color sprayed over the area to be sanded. As you sand, the guide coat is removed, letting you know that you have sanded thoroughly. Areas where the guide coat doesn't sand off are low, and should be filled. Even "rattle can" paint can be used for the guide coat, because you will be sanding off the entire coat each time.

#### Fill Low Spots

After block sanding with 220 grit wet paper over the guide coat, fill any low spots with your catalyzed polyester filler or primer. Make sure areas to be filled have been thoroughly sanded before putting filler in. (Sand off the guide coat).

#### Primer Again

If filler has been used or if the gelcoat has been sanded through, these areas should then be primed. (Be sure to sand the filled areas first). Fill any pin-holes with primer.

#### Repeat

These steps can be repeated as many times as is necessary to get your body to its desired smoothness. Professionals and other perfectionists may sand and fill an entire car five or six times. Not just on our bodies--ours are actually straighter to begin with than most original and reproduction Fords.

#### Final Sand

When you are satisfied that the car is as smooth as you want it and after all areas sanded with 220 grit wet paper have been primed, guide coat the entire area to be painted. For the final block sanding, use a more flexible block with 320 grit wet paper for solid color paint jobs or 360 grit wet paper for metallic colors, unless your paint manufacturer has different recommendations. Always be sure to check your paint manufacturer's directions before taking anyone else's advice. Even ours!!!!

#### Another Tip

Sand each primer coat in only one direction; don't criss-cross or circle. Good professional painters primer and sand the entire car several times, sanding each primer coat in a different direction--up, down, and both diagonals. The final sanding should follow the line of the car from front to back.

### Step 4. Sealer Selection

#### Choose Your Sealer & Paint

The project is now ready for sealer and paint. The sealer should be a good grade compatible with the top coats. It is O.K. to use air dry materials at this point, but we prefer a catalyzed sealer, since it will be used with catalyzed polyester primer and gelcoat. However, it is more important that the sealer is compatible with top coats, and not all paints come with catalyzed sealers, so follow the manufacturer's recommendation for your paint. It is usually best to buy an entire paint system (sealer and top coats--not primer) from one manufacturer, to be sure that they are compatible.

#### Paint Tip

Always apply your paint according to the manufacturer's recommendations. Be sure to follow the manufacturer's recommendations for personal safety equipment, ventilation, and any other requirements.

While all of these steps may seem confusing at first, remember that they are all just variations on the basic pattern of block sand, fill, primer. The block sanding step consists of spraying a guide coat, then sanding to contour. The filling step consists of sanding or grinding low spots, filling, and sanding again. Finally, the priming step consists of priming, filling pinholes, and sanding. When this is done, your car is ready for a beautiful paint job.

*CAUTION: If it becomes necessary to strip paint off of fiberglass parts, you should take care not to allow removers to penetrate into the fiberglass layup. Special removers that don't attack polyesters can be used--but carefully.*