FRP Techniques

Recommended Procedure For How to Prepare and Paint Carbon Fiber and Composite Parts

Figure 1. A primered composite tailbase with a carbon fiber top wing element.

Figure 2. Installing and adjusting the fit of the tailbase prior to any preparation for painting.

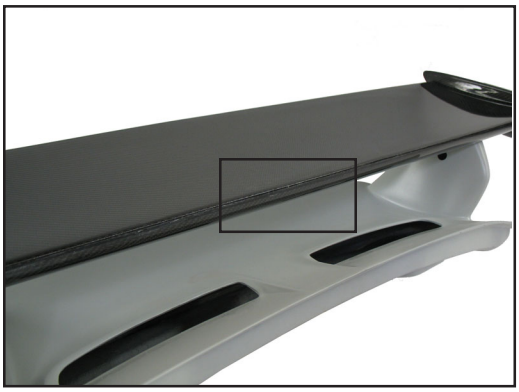

Figure 3. A primered composite tailbase with a carbon fiber top wing element. The outline box shows a close-up of the parting line in Figure 4.

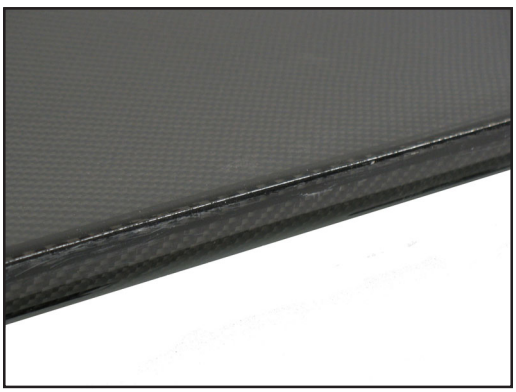

Figure 4. Close-up of the parting line, which will be masked off and have a black trim line painted on.

Figure 1 shows a typical Carbon Fiber Wing and composite tailbase ready for installation.

Figure 2. The first step, as outlined in all of the FRP TECHNIQUE installation booklets is to install the tailbase onto the car and to make any adjustments needed to attain a perfect fit. These include but are not limited to; positioning the tailbase at the swinging portion of the hinge, positioning the fixed portion of the hinge,installing and setting the bumpstop heights, adjusting the latching point, loosening and adjusting the tail lights, shimming the edge of the bumper to the decklid and light sanding of the sides.

Figure 3. Once the installer is satisfied with the fit he may begin preparing the parts for painting. Beginning with the Carbon pieces, UNLESS SPECIFICALLY ORDERED OTHERWISE, THE CARBON PARTS WILL NEED TO BE REFINISHED AND PAINTED USING EXACTLY THE SAME STEPS AS THOSE USED FOR REFINISHING AND PAINTING THE COMPOSITE TAILBASE. That is the surface will be prepared and a high quality automotive paint will be sprayed on. In most cases this will be a clear coat.

Figure 4. Shows a close-up of the parting line on the leading edge of the wing. This is the joint where the 2 halfs of the wing are bonded during manufacture. The parting lines on the front, rear and sides will have to have any imperfections filled with a tiny amount of body filler, then sanded and masked off to create a thin trim line that is painted black.

Figure 5. Shows a tiny pinhole being filled prior to sanding the complete wing

Figure 5. Filling in small pinholes, prior to sanding.

Figure 6. Block sanding the wing to remove any surface imperfections.

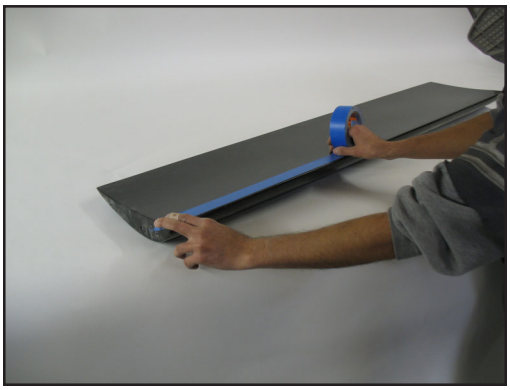

Figure 7. Masking off for painting the trim lines.

Figure 5 shows a small pin hole in the parting line being filled in with a standard body filler.

Figure 6. Shows the entire wing being sanded in readiness for painting. This is done to remove any surface texture from the carbon weave or small scratches from handling and attain the correct smoothness for painting. The wing is sanded in 3 stages,using wet sand paper. Starting with #220, then #400 and finishing with #600.

Figure 7. Here the painter is masking off the parting lines so they can be painted black first.

Figure 8. With the wing masked off, the painter sprays the trim lines black.

Figure 9. Once the black trim lines are applied, then the entire wing is sprayed with a finish clear coat.

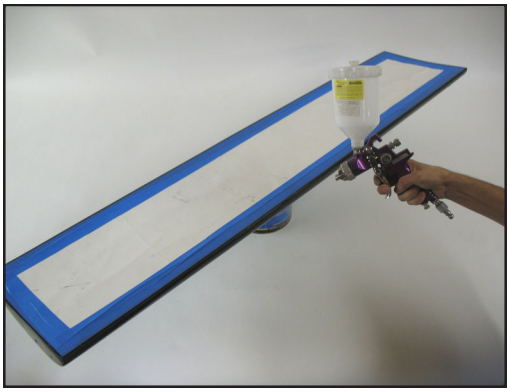

Figure 8. Painting the trim lines black.

Figure 9. Spraying the entire wing with a high quality clear coat.

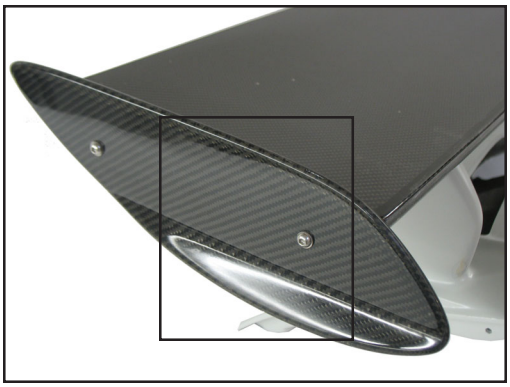

Figure 10. A wing end plate. The portion in the outline box is shown in close-up view in Figure 11.

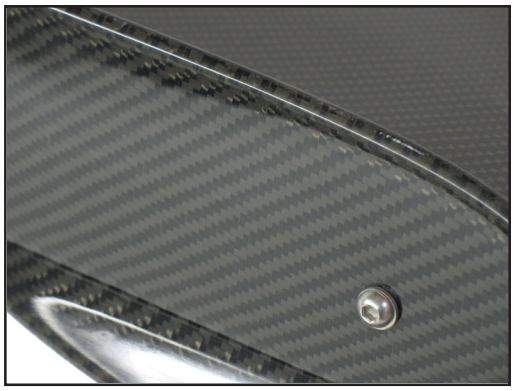

Figure 11. The parting line around the perimeter of the end plate needs to be detailed and painted black, just like on the wing.

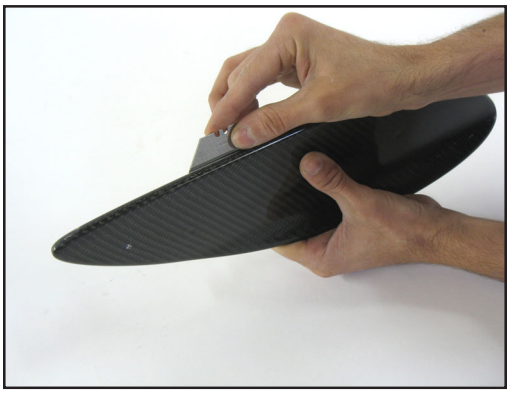

Figure 12. Your first step is to repair any imperfections. Here, the paint technician is using a razor blade to spread some body filler in small pin holes.

Figure 13. Next, the end plate is block sanded.

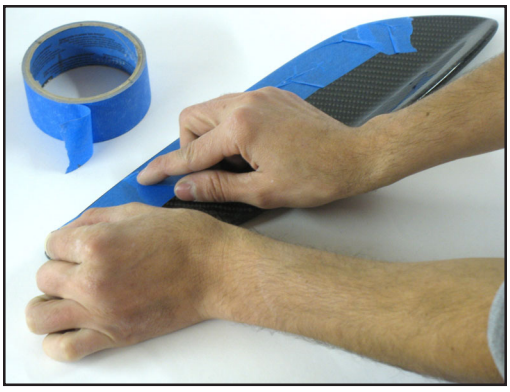

Figure 14. The trim line is taped off.

Figure 10, 11, 12, 13, 14, 15. These 6 pictures illustrate the exact same steps that are applied to finishing any additional carbon parts, in this case the wing endplates.

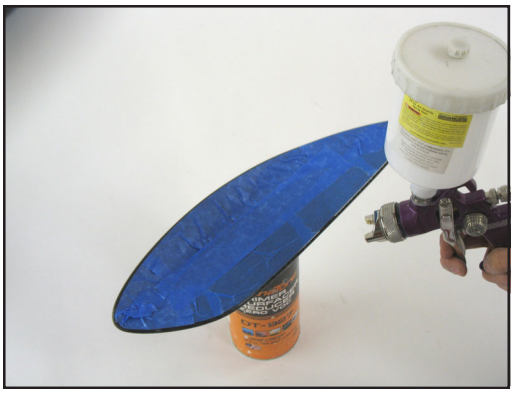

Figure 15. The trim line being sprayed black.

Figure 16.

Figure 17.

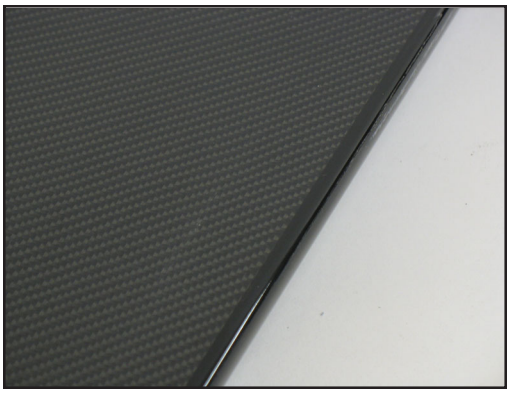

Figure 18. A close-up of the finished, clear coated wing, showing a thin, elegant black trim line

Figure 19. A primered composite tailbase, ready for preparation. If you are starting with a gel coated part, please refer to FRP TECHNIQUES for the correct additional steps required to reach the primer stage.

Figure 20. Filling in small imperfections with body filler.

Figure 21. Block sanding so that the last primer can be applied.

Figure 19 shows a primered tailbase that is ready for the final stages of preparation before paininting.

Carefully examine the tailbase and fill in any small imperfections with body filler.

Continue examining the surface of the tailbase and sand as needed, depending on the desired amount of smoothness for the paint, before applying the last primer.

I acknowledge that I have read Recommended Procedure For How to Prepare and Paint Carbon Fiber and Composite Parts and I understand the steps my installer, body shop or painter must take to install my new part. I also understand that I am receiving these parts in an unfinished state, and that any minor scratches, nicks or imperfections that may have been incurred during shipping and handling will be addressed in the normal course of the procedural steps of preparing the wing for painting, as both the composite part and the carbon fiber part will both have to be completely sanded to accept their new top coats.

This procedure applies to all clear, carbon parts, including, but not limited to: wings, end plates, scoops, ducts, hoods, doors, fenders, quarter panels, bumpers, roofs, hoods, decklids, mirrors, etc.