



Plastic Pointers

The Newsletter on Repairing & Refinishing Automotive Plastics

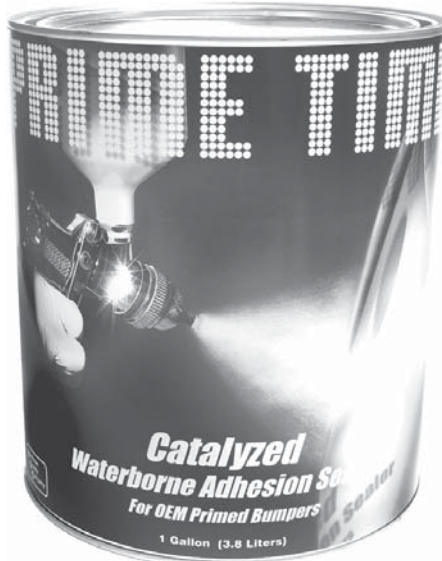
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Prime Time Takes The Drudgery Out Of Refinishing OEM-Primed Bumpers

Since we introduced our Bumper & Cladding Coat Adhesion Primer two years ago to help shops refinish raw TPO bumper covers, we discovered that refinishing OEM-primed bumpers is also a challenge for shops. Although, adhesion to this hard, slick primer is not usually a problem if the preparation is done properly, the biggest problem is the amount of time it takes to sand it. In order to properly prepare an OEM-primed bumper for refinishing in the traditional manner, the bumper has to be sanded overall with 400-600 grit paper. This sanding process usually takes anywhere from 20 to 40 minutes per bumper, and even longer for bumpers with grilles and style lines.

Whenever there's a problem with plastic repair or refinishing, you can be assured that Urethane Supply Company has a solution! After more than two years of research and development, we are proud to introduce Prime Time, a catalyzed waterborne adhesion sealer that sticks tenaciously to *unsanded* OEM-primed replacement plastic bumpers.

Sounds too good to be true, right? We know what you mean! That's why we invested over two years developing, testing, and abusing the product. We smashed it with sledgehammers, froze it, bent and twisted it, and yanked chunks out of it, and in the end, the Prime Time on *unsanded* OEM primer equalled the performance of the competitive 2K urethane



Prime Time catalyzed waterborne adhesion sealer lets you seal OEM primed bumpers without sanding.

sealers from the major paint manufacturers on *sanded* OEM primer.

Product Testing

Our benchmarks for Prime Time product performance are the 2K urethane sealers from DuPont and PPG (ChromaPremier and Chromatic). We

knew we had a winner when Prime Time worked as well on *unsanded* OEM primer as 2K urethane sealers worked on *sanded* OEM primer.

We took three brand-new bumpers, one from each of the major domestic manufacturers, and sprayed half with a 2K urethane sealer over sanded OEM primer and half with Prime Time over unsanded OEM primer. As you can see in the photo sequence, we smashed each bumper with a sledgehammer to simulate the effects of a collision. In every case, the adhesion of Prime Time equalled the urethane sealer. Then we let the bumpers age in the hot Alabama sun for six months and pounded them again and again, with no peeling or flaking at any time.

To get some "numbers" on the adhesion quality, we sent dozens of bumper samples to a test lab that measures the force it takes to pull a paint system apart. Called a "Patti-Pull" test, the lab glues a threaded lug onto the outer surface, then pulls on it with a calibrated tension testing machine. They can then tell the force required to pull the system apart and, more importantly, they can easily tell where the system failed. In every case, the weak link in the chain was the plastic substrate itself—the lug pulled a crater of plastic out of the bumper before it would peel any paint.

In quantitative terms, Prime Time over *unsanded* OEM primer was compared equally to the urethane sealers over *sanded* OEM

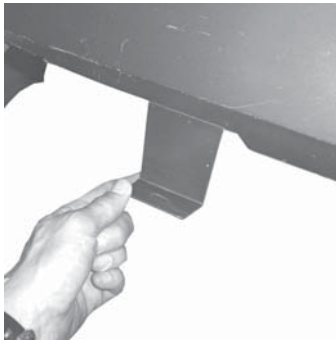


We simulated the effects of a collision by smashing bumpers with a sledgehammer. The Prime Time performed just as well as the 2K urethane in this test.

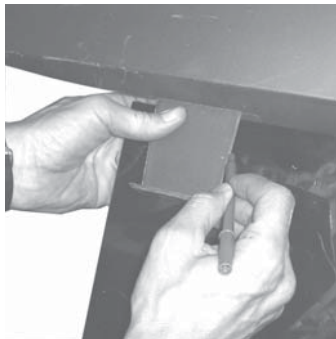


Repairing a "Living Hinge" Bumper Tab on a Ford Escort Rear Bumper

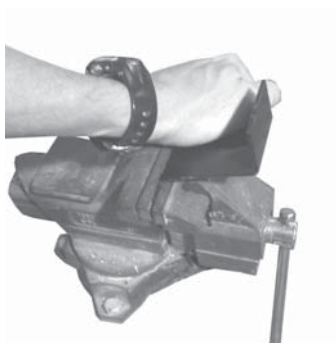
One of the most difficult tabs to repair are the ones that are designed to flex along a "hinge" line. We now offer the 5010-1 PP sheet to perform such repairs on TPO bumpers. This product was developed and created by Jim Stults of Collins Collision Products who wanted to dub it the "JS-3000 Super Turbo Tab Repair System." Although the name was too long for our computer system to take, kudos to Jim regardless for creating this outstanding new problem-solving technique!



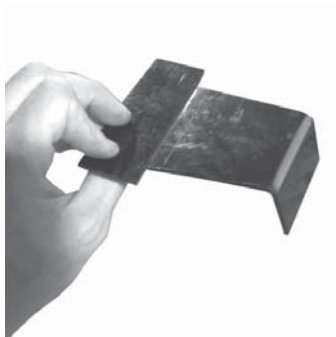
Step 1. Hopefully you have one good tab left to trace. This bumper has two living hinge tabs, one torn off, the other good.



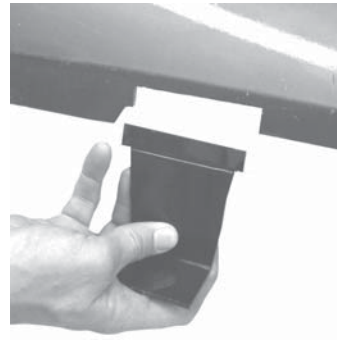
Step 2. Hold the 5010-1 PP sheet up to the good tab and trace the outline using a marker or a razor knife. This tab has a 90° bend in the bottom with the mount hole in it. Cut the tab out of the sheet using a jigsaw.



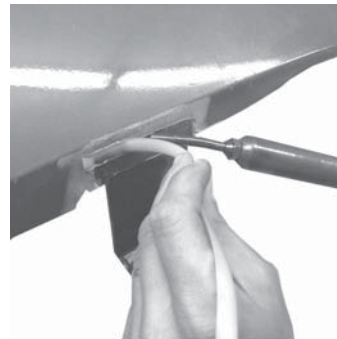
Step 3. Place the plastic into a vise and bend sharply along the hinge line. Bend the hinge back and forth several times to make it flexible. Only bend the hook one way to keep it stiff.



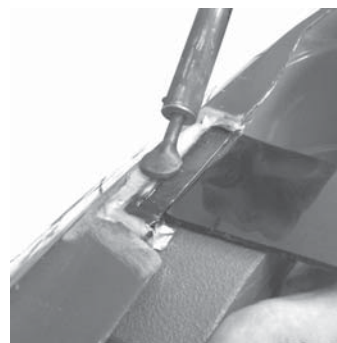
Step 4. Here's the tab roughed out after the vise. Note the flange where my hand is holding it. This is where we'll splice it into the bumper.



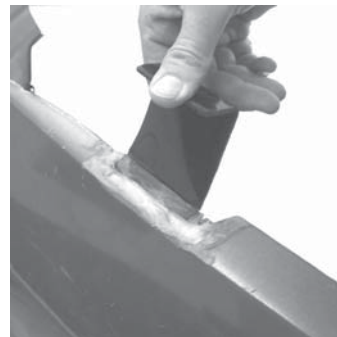
Step 5. Cut the flange on the tab to shape to fit the bumper, then cut a notch in the bumper to match the tab. Rough grind and bevel both the tab and the bumper for welding.



Step 6. Hold the tab in place with 6481-2 aluminum body tape. Weld the tab onto the bumper using the R13-W PP strip welding rod and the hot air welder.



Step 7. Immediately after hot air welding, burnish the PP strip into the tab and bumper with the 6028RT tip on the airless welder. Let it cool and repeat the process on the other side of the tab.



Step 8. Once the repair has cooled down, the tab is at least as strong as the original. Finish the cosmetic appearance by grinding slightly flush and melting 5003R10 FiberFlex onto the surface, cool, then finish sand.

primer.

Product	Avg. Tensile Force at failure (psi)	# of samples
Prime Time	410	25
2K Urethanes	335	8

(The 2K urethanes were tested on Chrysler bumpers and the Prime Time tested on GM bumpers, and the difference in tensile force is actually a function of the plastic substrate, not the sealer.)

How else did we abuse Prime Time? We took a bumper sample and froze it at 25 degrees below zero for 7 days, then bent and twisted it severely. The Prime Time performed just as well as the 2k Urethane sealer over sanded OEM primer.

If you're having a hard time believing that Prime Time can stand up to this kind of abuse, see it with your own eyes! Call today to order your FREE DVD that shows the results of all our tests and also how to use Prime Time.

Using Prime Time

First of all it's very important to identify whether or not the bumper has an OEM primer on it or not. If the bumper is from Toyota, Nissan, Kia, or Subaru, it most likely does NOT have an OEM primer applied. If the bumper is raw TPO, do NOT use Prime Time. It is not designed for adhesion to raw TPO. For these bumpers, use our Bumper & Cladding Coat Adhesion Primer.

OEM Primed Bumpers	Raw TPO Bumpers
Use Prime Time	Use B&C Adhesion Primer
GM, Ford, Chrysler, Honda, most others.	Toyota, Lexus, Nissan, Infiniti, Subaru, Kia

If the bumper is from one of the domestic manufacturers, it probably does have a primer already applied. To make sure, closely check the appearance of the surface on both sides. If the outside is smooth and black and if the inner surface is gray and waxy, it has a primer. If it's hard to tell from the appearance, sand the outside with some 400 grit paper to see if it dusts up. If so, it's primed.

The next step is to clean the bumper overall with 1000 Super Clean plastic

2K Urethane

Prime Time

Save Time With Prime Time!

Make sure bumper has an OEM primer, then clean bumper with 1000 Super Clean plastic cleaner.

With 2K urethane sealers, you need to sand the bumper overall. **You'll skip this step with Prime Time.**

After sanding, you need to clean again to remove sanding dust. **You'll skip this step with Prime Time.**

Mix Prime Time to get desired color, catalyze, and spray a light coverage coat. Speed cure 120° for 30 min.

Topcoat with any paint system. With Prime Time, your topcoat window does not close.

cleaner. Spray on Super Clean in a heavy, wet coat in an area 1-2 ft² and allow it to sit on the surface for a few seconds to dissolve any contamination. Then before it evaporates, use a clean cloth or paper towel to wipe the Super Clean off in one direction, exposing a clean surface of the towel with each wipe.

If the bumper has any scuffs or scratches from handling, sand them out with 400-600 grit paper. Once you sand all the rough areas smooth, clean the sanding dust from these areas.

Finally you're ready to apply Prime Time. First of all, depending on what color topcoat you plan to apply, choose from one of seven shades of Prime Time to provide the best topcoat coverage. Pour enough Prime Time to complete one bumper (8-10 fl. oz.) and add the included 3103 catalyst 2% by weight. If you don't have a paint scale, add 2 teaspoons of catalyst per pint of Prime Time. Mix thoroughly. Once catalyzed, Prime Time has an 8 hour pot life.

Using a basecoat gun, apply Prime Time in one or two light coats to achieve hide. You're just trying to get coverage, not lay it on heavy.

Prime Time will crosslink in six hours at 72°F, but for maximum production, we recommend speed curing it at 120°F for 30 minutes. Once cured, Prime Time can be topcoated with any automotive topcoat system. Furthermore, the topcoating window does not close. That means you can prime the bumper on Friday, then come back on Monday and topcoat without having to sand the Prime Time! That's right, Prime Time eliminates sanding completely!

Prime Time costs about the same or less than you're paying for your 2K urethane sealers: quarts are \$64.95 and gallons \$194.95. Prime Time includes catalyst and is ready to spray.

How can you take advantage of the labor-saving benefits of Prime Time? Call your jobber today to order a quart and try it out! If you need a little more information before you take the plunge, call us at 800-633-3047 and ask for your free DVD.