How to repair exhaust manifold damage with new Pyro-Putty

text and photography by Greg Donahue

Have you ever discovered a crack in one of your musclecar’s exhaust manifolds? How about pinholes or rust pits? The only cure for these problems was to find an NOS or used exhaust manifold. We all know how easy that is, even if you have a fairly common musclecar.

Another alternative is now available. Aremco Products’ new Pyro-Putty will repair cracks, pits and pinholes in any exhaust manifold without any special tools. Pyro-Putty is a single-part ceramic/stainless steel-filled putty which bonds to cast iron, carbon steel and stainless steel. It will withstand temperatures up to 2000 degrees Fahrenheit and resists fuels, oils and other corrosives. Pyro-Putty is applied with a spatula, putty knife or caulking gun to any roughened and thoroughly cleaned cast-iron, steel or stainless steel surface. This new product is environmentally safe, contains no asbestos or volatile organic compounds and, in its uncured state, is cleaned up with soap and water. It’s easy to apply and it works.

We repaired a cracked Fairlane GT exhaust manifold in one day with excellent results. Here’s how we made the crack in our exhaust manifold disappear like magic.

Thanks to Richard Gaudio of Greg Donahue Collector Car Restorations, Inc. for his assistance with this article.

Here is the Pyro-Putty 2400 Kit, which includes metal repair compound, thinner, mixing spatula, mixing cup and instructions. You will also need a Bondo spreader, 80-grit sandpaper, file, lacquer thinner, small paint brush and access to a sandblaster, wire brush or wheel.

Start by thoroughly sandblasting the crack and then the rest of the exhaust manifold. If you don’t have access to a sandblaster, a wire brush or wheel will also work. Remember to wear protective clothing when sandblasting.

This is the crack in our Fairlane GT exhaust manifold that we will repair. Do not try to fill cracks exceeding 3/8-inch wide.
4. After you have finished sandblasting, clean all of the sand and residue from the manifold. Thoroughly clean the crack with lacquer thinner.

5. Thoroughly mix the Pyro-Putty metal repair compound. Using the wooden spatula provided, spread it down into and on the crack. Make sure it covers completely. If the putty does not smooth out, add about one tablespoon of thinner.

6. Use the Bondo spreader to evenly work out the compound and then feather the edges. Spread the compound a little higher than the crack to allow for the slight shrinkage that will occur. Let the compound air dry for five to seven hours at room temperature.

7. After the putty has air dried, smooth it out with a file and 80-grit sandpaper. This will be the hardest part of the repair because the putty dries rock hard. You do not want the Pyro-Putty to be perfectly smooth over the crack; the cast-iron exhaust manifold has a rough surface, so if you make the repair perfectly smooth, it will be noticeable.

8. If you want the same rock-hard finish on the rest of the exhaust manifold, place a small amount of the putty into a container. Now mix in enough thinner to get a paint-like consistency.

9. Use your paint brush to thoroughly coat the exhaust manifold with the thinned Pyro-Putty.

10. After the manifold has dried to the touch, you can reinstall it. Start the engine and let it run for approximately 10 minutes and the Pyro-Putty will be totally cured to full strength. The manifold is not only repaired, it also looks like new. Just like magic. MCR