

RUST ERADICATION

> Derust or bust.



From Gels to Dips to Projectiles, It's Not Too Late To Save Your Rusty Steel.

By Christopher Campbell
Photography: Christopher Campbell

Typically when we go out hunting for a project car, we look for ones with a minimal amount of corrosion—but not this time. We actually sought out the rustiest, crustiest, most-weathered muscle car we could find that hadn't yet developed large holes or structural issues. Why on earth? Because rust is a reality for most decades-old project cars, especially budget-friendly ones. And for rodders up north and Back East, we'd like to prove that it's not necessarily something to fear. It also doesn't have to mean hours of sanding till your fingers bleed or using noxious and harsh chemicals to convert or strip the rust away. There are plenty of options and in some cases it's cheaper and easier to get back to shiny steel than you may realize.

Tucked away in a SoCal beach city, we found our inexpensive candidate: a stone-stock, unrestored, unpainted, and clearly unloved '68 XR7 Cougar sitting under a tree just a scant few blocks from the shore. While our Mercury score was complete, fully functional right down to the hideaway headlights and sequential turn signals, and a gem mechanically, years of neglect in a coastal environment had left more surface rust than paint on the sheetmetal. We negotiated and drove it away for \$300. Hate us?

Let us clarify; when we say it had surface rust, we're not talking about that common, lightweight, simple-to-sand-off layer of corrosion—that would be too easy. No, what we had was that deep-seated, thick, metal-pitting stuff that scoffs at any grade of sandpaper. We even attacked a spot on the roof with a DA and an aggressive sanding disc that did little more than create shiny rust. This one will be a real test for any rust remover.

So we've got our beater to derust, but to make the plot a little more interesting, we set our goal with this project to limit our scope to environmentally safe, biodegradable, and nonhazardous rust removers. The solutions we'll try are products anyone can use at home without fear and without any guilt over what the hose is washing down the street. None of our test products has harmful VOCs or really even requires more than normal ventilation. On top of that, they're all formulated specifically to only attack the iron oxide that composes rust and will leave copper, brass, aluminum, plastic, rubber, and vinyl untouched, which means you don't necessarily need to strip the car or parts before using them.

Thinking about all the rusted bits on your project already? Good. Follow along as we show some of the most effective derusting products available and take this Cougar from eyesore to enviable using the most earth-friendly methods possible.



RUST BOMB

Orison's product line revolves around environmentally friendly products, and the company has two different rust solutions that we'll be testing. Rust Bomb is by far the most gelatinous and colorful of our products and was the only one that stuck easily to the rounded edges of the roof without sliding off. While many of the rust removers don't require gloves, this one does. If nothing else, it'll turn you blue. Ask us how we know.



> The bright blue goo worked effectively and quickly. After two applications that were allowed to sit overnight, our rusty roof was stripped down to bare steel nearly everywhere. One more application in the heavy spots and we'd be rust-free.

Price: 1 quart \$9.95, 5 gallons \$100.00

Verdict: Works exceptionally well and very quickly. The only downside is it took a whole quart to finish a quarter of our roof.

SOURCE

ORISON MARKETING; Abilene, TX; 800/460-2403; www.orisonmarketing.com



> Here's our lineup of environmentally friendly chemical rust strippers. From left to right: Safest Rust Remover, Rust-eze, Evapo-Rust, Rust Bomb, and Cortec's VpCI-423 Rust Remover and accompanying VpCI-415 corrosion inhibitor.

CORTEC VPCI-423

Cortec's VpCI-423 is a USDA-approved organic and biodegradable acid gel that removes rust and corrosion from ferrous and nonferrous metals and leaves behind a film that prevents flash rusting. It can even clean rust stains from paint, wood, and other surfaces. While it was obviously effective on the light-to-medium surface rust on the roof section, we had problems keeping it in place with its maple syrup-like consistency, which likely affected performance. To be fair, we dunked a rusty bracket in the bottle to see the real potential.



> Just as we suspected, after 12 hours of immersion, the bracket emerged completely rust-free. In cooler weather, this one may be a clinger, but in warm climates, it's best left as a dipping solution.

Price: Contact Cortec

Verdict: Works very well as a dipping solution and was effective on the light-to-medium rust on our roof panel.

SOURCE

CORTEC CORP.; St. Paul, MN; 800/4-CORTEC; www.cortecvci.com





RUST-EZE

We were particularly enthused by Rust-eze's recommendation of applying the solution with a roller and eagerly dug out our somewhat infamous blue-handled foam roller from the "\$98 Dollar Paint Job" feature (July '07). The instructions specify that the surface should be kept consistently wet, which was not an issue with the foaming fluid. A swipe every 10 to 15 minutes or so seemed to be adequate and created far less mess than you'd think.

> We admittedly had our doubts about this method, but by the end of a long day at the shop, most of the rust had been dissolved. We let the solution dry overnight, returned in the morning, and began reapplying. By the middle of the second day, the door and fender were virtually 100 percent rust-free. Also, the Rust-eze was practically an organic paint stripper, removing all the primer it contacted and denaturing the paint enough that it could be scraped away with a fingernail in many spots.

Price: 1 gallon \$26.00, 5 gallons \$110.00

Verdict: Works exceptionally well; the only product to eliminate rust without constant immersion.

SOURCE

ENVIROTECH; Eau Claire, WI; 715/832-1717; www.envirotechcoating.com



SAFEST RUST REMOVER

Inspired by some of Ultra One's own testing, we devised a derusting shower for the severely rusted hood with a length of PVC pipe with holes drilled into it, a hose, and a 1/2hp bilge pump sitting in a pool of the remover. The plastic was used to keep the solution isolated to the rusty sheetmetal and away from dirty parts that could contaminate the remover and affect performance.

> The hood represented by far the thickest, most advanced rust on the car, so the Safest Rust Remover required some time to work. But just as promised, it made significant inroads and removed nearly all the rust after a three-day bath. Another 24-hour soak would have likely left it with bare steel.

Price: 1 gallon \$25.00, 5 gallons \$100.00, 55 gallons \$935.00

Verdict: The rust bath is an excellent option for derusting large parts. The solution is likely even more effective when used as a dip.



SOURCE

ULTRA ONE CORP.; Hackettstown, NJ; 877/743-7878; www.ultraoneusa.com; www.safestrustremover.com



EVAPO-RUST

We have used Evapo-Rust on plain, rusted metal parts, so for this test we tossed in the assembled grille centersection for the Cougar, complete with plastic emblem, chrome, and paint in addition to the rust on the brackets.

> Just as in our previous experience with Evapo-Rust, after about 24 hours of soaking, the submerged side of the centersection looked like we'd just given it a liquid restoration. The paint was not damaged, and there was no trace of rust.

SOURCE

ORISON MARKETING; Abilene, TX; 800/460-2403;
www.evaporust.com



Price: 1 gallon \$21.00, 5 gallons \$80.00, 55 gallons \$715.00. Half sizes available.

Verdict: Evapo-Rust works exceptionally well as a dipping solution.



HOME-BREWED METHODS

Bet you didn't know there are a couple of household items likely lurking in back of your pantry right now that have fairly potent derusting capabilities: vinegar and molasses. For our testing, we used apple cider vinegar, which is reputed to leave a nice rust-inhibiting film on metal, and molasses straight from a feed store.



> **Above:** It's not as sweet as you might think, but it's not too bad. For large amounts of this stuff, check out your local feed store, since it's sometimes used for mixing sweet feed for horses. For our testing, we'll be submersing a rusty bracket from our Cougar.

> **Left:** It doesn't taste like apples or cider, but you can definitely taste that tart and pungent acetic acid—the ingredient that supposedly attacks iron oxide. Just as with the molasses, a rusty piggy bank will be the guinea pig.

> **Bottom:** Holy crap. After four days of soaking the bracket in the vinegar, we were greeted with a smell that was reminiscent of dirty feet and vomit. However, the rusty section of our part was almost completely clean.

Price: \$1.99

Verdict: If you can stand the smell, we've found that a \$1.99 bottle is the cheapest way to clean lightly rusted metal. For the heavy stuff, go with one of the pros.



> After four days in the molasses, there was little change in our bracket, though we did notice the steel on the end was bright and rust-free. More time may be required, or we may have the wrong ratio.

Price: 5 gallons \$24.00

Verdict: There's more than one recommended method for using molasses; our method of using it uncut was not overly effective.

SOURCE

STEVE'S FEED AND GRAIN; Sunland, CA;
818/352-4594

BLASTING

While all the organic cocktails we tested could absolutely derust an entire car, provided you have access to enough of the solution and a suitable place to use them, they do require time and dedication for something on the scale of our Cougar. For those looking for a little more instant gratification, there are environmentally friendly alternatives available for media blasting as well. To learn more, we called our friend Manny Vega at Anacapa Blasting and asked him what our options were. His suggestion was sodium bicarbonate (baking soda) or a versatile stone known as garnet.

Vega and his crew are car guys at heart, but with one of the largest blasting booths in California, they handle a great deal of large industrial parts. They're also well-versed in North American Industry Classification System (NAICS) standards and regularly handle Navy and NASA parts ranging from weapons systems to aircraft, radar, and deep-sea submersibles. Even NAWS China Lake sends its ray domes to Anacapa for precision stripping. On top of that, they regularly strip high-end classic cars for guys seeking concours restorations, so they can handle our jalopy.

Want to learn a little more about common blasting media and their applications or see a few horror story photos? Log on to www.HOTROD.com for more from Anacapa.



> We ran short on time while prepping our Cougar, so there was a little masking to do. Ideally, a car should be as stripped as possible, especially sans interior and all windows. As long as our gunman, known only as The Rock, doesn't score too direct a hit, our side glass and dash wiring are safe behind a sheet of heavy butcher paper followed by cardboard. In general, it's much cheaper and to your benefit to bring a car that needs zero prep work. Note the new hood; our original had too much rust-through in the inner structure to reuse.



> The blasting process is actually more than just pointing a hose at the rust and letting the media fly; there is technique at work here, and carelessness can quickly result in damaged panels. The Rock balances PSI and CFM, stand-off distance, blast angle, and nozzle size to the material and its condition.



> Here we can see the benefits and drawbacks of soda. The relatively light abrasion will strip paint, body filler, and very light rust easily but isn't suited for well-established rust. On the upside, the surface of the sheetmetal is left unaltered, revealing even the lightest past bodywork—note the DA swirl marks on our replacement hood. If you really want the full story on a car's bodywork, go with soda first.



> When it's time to step up to a more aggressive media to tackle well-established rust like ours, there are a couple of excellent natural choices: walnut shells and garnet. While Anacapa can spray either, Manny Vega prefers garnet, since it's more versatile and can be easily tailored to a variety of materials. Plus, it creates less dust, which means less cleanup afterward, and it can usually be filtered and reused multiple times. More-aggressive media also means more heat, so a blaster's technique becomes critical. The Rock will keep moving and blast a spot at a time rather than an entire panel to allow for cooling time.

> If there's one negative aspect to blasting a car, it's that it reveals the truth. We didn't have any real surprises, like many unfortunate customers, but we do have our work cut out for us on this ex-vinyl top car. We're not intimidated, though. Watch for the correct ways to do this kind of patchwork in an upcoming paint and body story.

> And there we have it—from rusty turd to project with potential, all by using natural materials. Just pick your poison depending on your patience and how much rust you have. Despite its original appearance, we were

pleasantly surprised by a very straight and problem-free body once the distractingly ugly rust was removed. For this level of work, Vega typically charges in the neighborhood of \$1,200.00 to \$1,500.00, which still leaves us feeling pretty good with our total investment standing at \$1,800.00.

Price: \$1,200.00 to \$1,500.00

Verdict: By far the priciest method, but also the fastest and most thorough. Not every car warrants blasting, but it was the logical choice for ours, considering that all the paint as well as the corrosion needed to be removed.

SOURCE

ANACAPA SODA BLASTING; Oxnard, CA;
805/981-0748;
www.anacapasodablasting.com

