

Molasses Rust Removal

This Process Is Inexpensive and Effective but Very S-l-o-w

THE APRIL *Auto Restorer* had a question from a reader regarding rust removal using a molasses mixture and whether it really works.

I have an answer: Yes.

Last year I was researching an inexpensive way of removing rust from my "rustang" project, as well as for my Edsel project.

What I was looking for was a way to remove rust CHEAPLY. I came across some information that claimed you could use molasses for this.

At first I was skeptical, since it seemed that it would take a LOT of molasses, and at \$2 a bottle at the grocery store, the cost would be prohibitive.

Some further reading let me know that most feed supply stores or grain elevators stock bulk molasses for feeding farm animals. The cost is astonishingly low! I bought five gallons a few blocks from my house for less than \$9, and that included a five-gallon jug!

The molasses is mixed 1:4 to 1:10 with water (which means I have enough to produce 20-50 gallons of solution), and you completely submerge your parts in it and let them sit for a while. Your parts must be degreased completely, since the solution does not cut grease and the grease will prevent the solution from contacting the oxidation. Also, you may need to brush the parts occasionally in order to speed up the process.

My Project

I performed an experiment using a very rusty fuel level sending unit from my '59 Edsel, and was fairly pleased with the results. I have posted my progress at <http://www.homercidal.com/molasses> though I should add some more photos and some updated info. (Feel free to print this link in *Auto Restorer* so that readers can check it out for themselves.)

For the first test, I used a one-gallon windshield washer jug with about a 1:6 molasses and water solution.

I cut the jug so that the opening is "hinged" in the front, and I can still screw the cap back on to help seal it. Needless to say, I sure appreciated that the next day when I kicked the jug over in the garage!

Here's how the process works, and it's all outlined on the Web page as well. The molasses rust removal, as far as I could

determine from my Internet research, works using the principle of chelating, by actually converting the Iron Oxide into something different. I won't attempt to get any more scientific than that, and there is some speculation about acid levels, and whatnot, but at any rate it works.

However, it works SLOWLY. I let the fuel level sender soak for a couple of weeks in order to get the results shown on my Web site. I also placed a squirrel cage from my Mustang project in the same jug, and it was bare in a week or so.

The heavier the rust, the faster it works? (I also theorize that the varnish from the gas tank acted as a barrier to the molasses, keeping it from working as quickly.)

Pros & Cons of Molasses

Note that I was not interested in "instant" rust removal. I was interested in CHEAP. There are many advantages to using Molasses other than cheap:

1. Cheap (OK, I know I've been emphasizing this, but it is cheap. And, the solution can be used repeatedly, for many months.)

2. Effective (Seems to do a pretty good job.)

3. Safe for the parts. (The molasses doesn't appear to affect the bare metal.)

4. Non-Hazardous (If you get some in your eye, you'll probably still be able to catch your favorite TV shows that day.)

5. Environmentally Safe (When your molasses is ready for disposal, simply pour it in your yard. I hear it makes a decent fertilizer, and if not, at least it doesn't hurt anything.)

Now for the downsides:

1. SLOW (You won't want to sit and watch it work!)

2. Smelly (Some claim that you need to let the molasses ferment in order to get it to work, but I doubt it.)

You can get a chemical from the local beer and wine-making store to keep it from coming alive. It will still smell a bit on your hands, and not in a good "Molasses cookies, yummy!" kind of way. I also am going to try adding just enough chlorine bleach to the mix to prevent the growth of that stuff, and see if the results are still good.

However, I've kept my experiment in a gallon jug with a lid on it in the kitchen without my wife commenting on it, so it can't be that bad, and that is without the no-ferment option. Another 20-gallon tank in the basement with a lid is also OK.

I've got some brake drums in that one, along with an oil pan, and I hope to check on them soon. I put them in last winter, and forgot about them!

Keep in mind that the parts will come out of the molasses process with no protection from future rust, and the oxidation will commence again immediately. You must be prepared to clean the molasses from the parts, and protect the metal right away, either by painting, oiling or other means, otherwise your parts will quickly begin to rust again.

Also, I'm doing some research on using a battery charger and Arm and Hammer Washing Soda to remove rust, but while that method is much, much faster, it's more dangerous and not as environmentally friendly. Plus, you have to be careful with Stainless, and the process, in addition to the usual hydrogen by-product, gives off toxic chromates, which have to be disposed of properly.

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