

# STAINLESS STEEL POLISHING

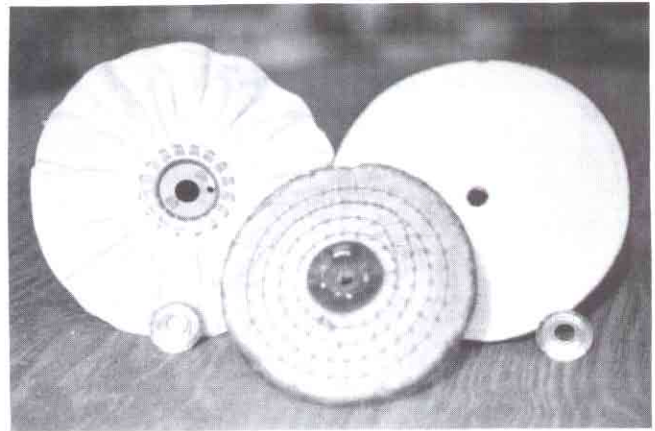
By Tony Catalano

One of the most economical and easiest ways of improving the appearance of your Corvette is to buff the stainless steel. Look around your straight axle; you'll find stainless steel just about everywhere, front to back, inside and out. Over the years the stainless becomes dented and scratched. I found that with few materials and a bit of time, you can get your stainless steel to shine like chrome.

You'll first need a bench grinder. I have a minimal  $\frac{1}{2}$  horse power, 3450 R.P.M., 6 inch grinder. The secret for excellent polishing results is speed. The greater the R.P.M. of your grinder, the easier it will be to obtain the desired results.



As I said, I feel my grinder to be minimal, but with it, I was able to do a fantastic job. You will also need buffing wheels, or as the guy behind the counter called them, cotton mops. Start by taking off all the grinding wheel shielding that normally surrounds the stone or wire wheel area of your grinder. This will enable you to use 8" wheels if you choose. After trying both 8" and 6" wheels, I find that I prefer the smaller 6" wheels. They are stiffer and tend to provide more friction when applying the more coarse and abrasive compounds. If your grinder is six inches in size and has the stationary shielding that cannot be removed, then you will have to use the 6" buffing wheels. I use the small wheels despite the fact that the final finish coloring is best done on a soft wheel and one that will provide a fast surface rotation. The larger 8" wheel is both. The buffing wheel sizes will be 8" or 6"x $\frac{1}{2}$ "x $\frac{1}{2}$ ". By doubling up the wheels, that is, putting two on each side of the grinder, you increase your buffing area from  $\frac{1}{2}$ " to 1". The additional wheels also increase the stiffness. A  $\frac{1}{2}$ hp. motor is capable of handling up to a 2 inch thickness of buffing wheels on each side.



I also prefer to spend a little more for the wheels and get the kind that have the leather reinforcement at the center hole. With this leather reinforcement, you have no trouble in getting a very true alignment, plus the wheel will grip very securely to the grinder when tightened down. I find this type of wheel easier to align than the type that rely on metal centering flanges for support and non-slippage.

Next, you will need the buffing compounds. There are many kinds of compounds and it is important that you use the correct compounds intended for the job. In our case, stainless steel. There are two basic actions you want to take place. First, you wish a cutting down action to remove the scratches. And, next, a coloring action to bring out the natural color of the metal.

Of the buffing compounds, I first used a compound specifically called (aptly enough) stainless steel compound. This compound provides abrasives for cutting down and some coloring action. The second compound is jewelers rouge, a premium composition that will bring out the natural color. Each compound is used separately.

There is a compound called emery. This is a coarse buffing compound with a very fast cutting action for removing the deeper scratches. I have not used it myself but I do intend to try it. I did a lot of hand sanding on the deeper stubborn scratches. I believe the emery compound would minimize this tedious procedure.

Before you start to buff, each piece to be polished must be prepared. Check each piece for any dents or deep scratches. If there are any dents, you can hope that they're located in a spot that you can easily reach with your make shift dollys and hammer. Scratches, on the other hand, seem to be much easier to deal with. If you find that a part is more deeply scratched than just buffing will get out, then you may have to consider sanding the part with sandpaper.

The stainless door sills always seem to suffer the heaviest and deepest scratches. My sills



were not only deeply scratched but had gritty pock marks. I found that for some areas using a 400 grit wet and dry type sandpaper and then a 600 grit, worked wery well. Although I would not recommend it in general, I did resort to using a 260 grit paper and in some instances, I even used a metal file on some very deep scratches. Keep in mind, the heavier sandpaper and file make scratches of their own but they are smaller than the heavier scratches and marks that they have removed. With each pass you are taking away scratches and leaving smaller ones. By the time you are through with the 600 grit you will be amazed at how good the piece can look from only using sandpaper.

Next, apply the stainless buffing compound directly to the rotating cotton wheel on one side of the grinder. Keep in mind there are two compounds and each has a different cutting grit. The coarse, cutting down compounds will scratch your final finish so a separate buffing wheel must be used for each type of compound. The buffing is a better place to start for the smaller and less severely scratched pieces than going directly to the sandpaper. Work the part back and forth under the wheel, keeping the work constantly moving. Remove the part away from the wheel with a slanting downward movement. You'll have to experiment to find the ideal spot to hold the part, but generally you will want to keep the work below the center of the wheel. If you're too high on the wheel the work can hop and vibrate, if you hold it too low, the part could pull out of your hand. This is where you have to be very careful. You could damage the part as it flies across the room, not to mention the very sharp edges and your fingers.

After this cursory buffing, you will be able to see the deepest scratches. These may not readily come out. This is where the sandpaper and the appropriate grit come in. With the sandpaper, work the general area of the scratch, then begin buffing again. Keep this up until the scratch is gone or until you can't sand it any more or don't care. You see, there really isn't a definitive stopping point, you could go on forever.

Wipe the part off with a rag to get all the stainless compound off. Make sure the piece is wiped clean so you do not contaminate the next and final buffing. The next step is buffing with the jewelers rouge compound. Apply it to the clean buffing wheel the same way you did for the stainless compound wheel. Work the part back and forth across the face of the wheel.

It does take a lot of time and practice to develop your own technique. Your parts will come out like they were new. I have had several people ask me where I bought the new door sill plates.

## STARTER SOLINODS '53 - '56

All original solinods will have the part number stamped into the base area. Figure A is '53-'54 6V second design. It also uses a rubber dust boot on the rear to protect the plunger from oil. Figure B is '53-'54 6V original design and doesn't use a rubber boot. Number 1118135.

Figure C is '55-'56 12V original design and has one small post marked "S" where the key wire goes. Number 1119789. Figure D is '58 and up car and second design replacement for 1119789 and now has two small posts, "S" for key starting side and "R" for key assery side but this solinod also has the same part number, 1119789, stamped into the base area.

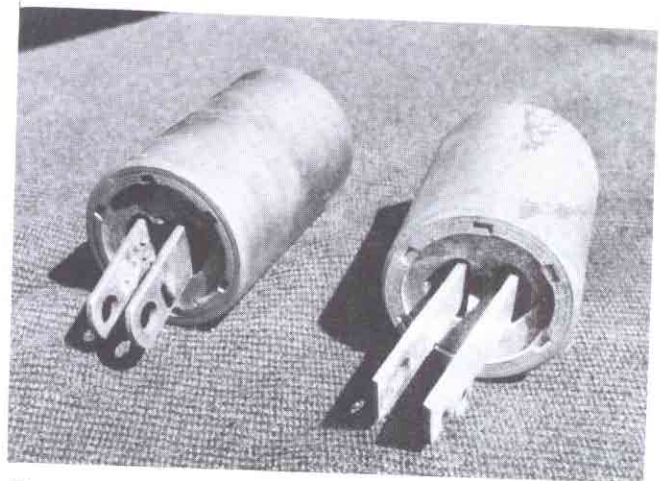
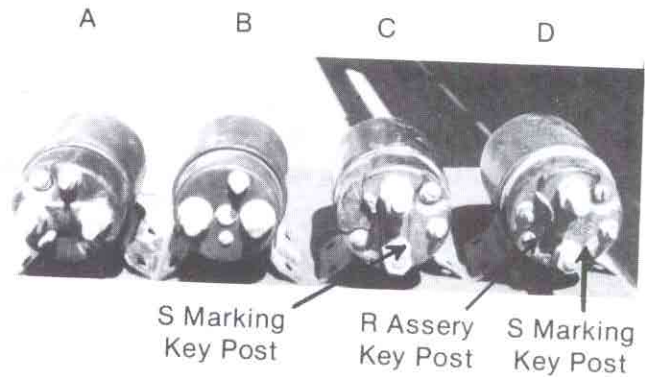


Figure 2 shows the plunger used. Left one is a 6V plunger and is connected to the starter using a pin and cotter pin arrangement. Right one is a 12V plunger and is connected to the starter using a bolt arrangement.