

The following is an article published by Eastwood Company. It has some great information for Polishing and Buffing toughs hard to find parts for your restoration project.

**BUFFING INSTRUCTIONS**

**Choose the Right Wheel and Compound for the Job**

Use the chart below to make your selection. The condition of the piece on which you are working will determine whether or not all three buffing steps will be necessary. A felt bob, facer, mushroom, goblet, or mini buff can be substituted as necessary to buff deeply recessed areas.

<b>Buffing Wheel and Compound Selection Chart</b>					
Materials	Steel, Iron Stainless, or Other Hard Materials	Soft Metals, Brass, Copper, Aluminum Die- cast, Zinc	Chrome Nickel Plate	Solid and Plated Gold Silver	Plastics
Step 1 - Rough Compound, Buff	<u>Emery, Treated/ Untreated Sisal</u>	<u>Tripoli, Treated/ Untreated Spiral/Ventilated</u>	N/A	N/A	<u>Plastic Loose/String</u>
Step 2 - Intermediate Compound, Buff	<u>Stainless Treated/Untreated Spiral/Ventilated</u>	N/A	<u>Stainless* Treated/Untreated Spiral/Ventilated</u>	N/A	N/A
Step 3 - Final Compound, Buff	<u>White Rouge Loose Section</u>	<u>White Rouge Loose Section</u>	<u>White Rouge Loose Section</u>	<u>Jeweler's Rouge* Flannel</u>	<u>Plastic Flannel String</u>
Recommended RPM for 4-10" Wheels	3600	3600	3600	1800- 3600	1800

NOTE: Condition of the workpiece dictates the steps necessary. Some pieces may only require final finishing (Step 3).

\*Use caution to prevent buffing through plating.

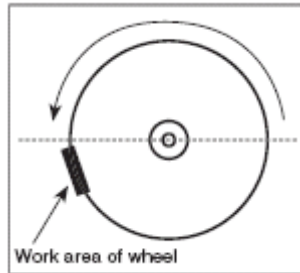
**BUFFING INSTRUCTIONS, CONT.**

**Buffing Wheel and Motor Selection**

For successful buffing, it is important that the motor and buffing wheel you use are matched. If your motor is not powerful enough for the wheel you are using, the motor will not be able to maintain proper speed. If the motor turns too fast, excess heat will build up and the work piece might become permanently discolored. Use the chart above to choose the right motor/wheel combination. Different wheel thicknesses can be achieved by stacking buffs together.

**Mounting the Buffing Wheel**

Attach the buffing wheel to the buffing motor spindle, Attach the buffing wheel to the buffing motor spindle, making sure that it is mounted securely between the flange washers. When mounted properly, the top of the wheel should spin toward you and down when the buffing motor is



running. NOTE: Wheel stitching orientation is of no consequence to wheel performance or durability.

### **Applying Compound to the Buffing Wheel**

With the buffing wheel attached and the motor running, gently touch the appropriate tube of compound to the face of the wheel for one to two seconds. Apply the compound slightly below the centerline of the wheel. (See illustration at right)

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**NOTE:** It is normal for the compound to appear to be dried out. The compound consists of a graded abrasive in a hard wax binder. The heat from contacting the spinning buffing wheel surface will melt the binder and the wheel will pick up the compound.

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### **BUFFING INSTRUCTIONS, CONT.**

#### **Buffing the Right Way:**

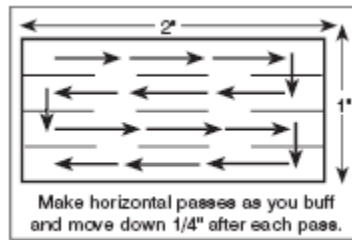
1. Wear a respirator, gloves, face shield, and long-sleeved shirt.
2. Stand in a comfortable position.
3. Hold the work firmly and use the area just below the centerline of the wheel.
4. Remember to let the wheel do the work!
5. Never leave a running buffer unattended.

#### **Dressing The Buffing Wheel**

After a period, it will be necessary to dress the surface of the wheel to remove dried compound and particle build-up. The [Eastwood Buffing Rake \(#13120\)](#) does this quickly and easily and also removes minor high spots on an out of balance wheel. Holding the rake securely, lightly touch the rake to the spinning wheel in the same manner as the compound and slightly below wheel centerline.

#### **Working the Piece**

Since much buffing is done with stainless steel, we will use that as an example. Keep in mind that the condition of the piece on which you are working will determine the wheel/compound combinations and steps necessary.



One of the keys to successful buffing is to let the wheel do the work. Use only light pressure against the wheel and always keep the piece moving.

Before you begin, double check the surface of the piece to ensure that there are no deep scratches in the surface. If you can catch your fingernail in the scratch, you will have to file and sand it out before you begin buffing. Please refer to **Preparing Pieces Before Polishing & Buffing**.

First, mount a treated or untreated Sisal Wheel and load it with Emery Compound. Emery is fairly coarse and will remove fine scratches, leaving a uniform finish. **NOTE:** The treated Sisal Wheel will produce faster results.

With the buffing motor off, make practice runs with your piece to determine your pattern. Be aware of any corners, sharp edges, or bolt holes that the wheel may catch. Work on one small area at a time.

Begin in one area and work the part across the buff horizontally. Use light pressure and move down 1/4" after each pass until you have finished. Inspect your work frequently. When you have finished that section, move on to the next one, reapplying compound as necessary.

#### **BUFFING INSTRUCTIONS, CONT.**

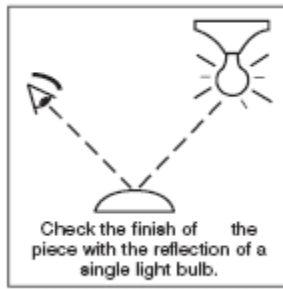
**NOTE:** If the work piece starts to bounce while you are buffing, either the wheel is improperly mounted, needs to be dressed, or you are applying too much pressure. **Remember to let the wheel do the work.**

After you have buffed the entire piece, clean it thoroughly with PRE (#10041Z), Metal Wash (#10120), lacquer thinner, or dish washing detergent and let it cool before continuing. Make sure all traces of the compound you were just using are wiped from the piece before continuing. Otherwise you will contaminate the next wheel and compromise your results.

#### **Store Wheels and Compounds Properly**

Remove the Sisal Wheel from the buffing motor and place it along with the Emery Compound in a sealable plastic bag.

**NOTE:** It is *very important* that only **ONE type of compound** be used on each buffing wheel. We suggest placing each wheel and its compound tube in separate, sealable plastic bags (i.e., one bag with your Sisal Wheel and Emery Compound, another with your Spiral Wheel and Stainless Compound, etc.) to prevent accidentally applying the wrong compound to your buffing wheel. This also helps to keep the wheels and compounds contamination free.



Now mount the treated, untreated, or ventilated Spiral Sewn Wheel to the motor and apply the Stainless Compound. Again, buff the piece in the same manner as when you used the Emery Compound, working the piece at right angles to the previous grit scratches until all Emery Compound scratches are eliminated. You will notice that the Stainless Compound is not as aggressive as the Emery Compound, but that it will smooth out the buffing marks left by the more coarse Emery Compound.

**NOTE:** A Ventilated Buff may be used as an alternative to a Spiral Sewn wheel. The pleats of the Ventilated Buff tend to slap the surface and cut about twice as fast as Spiral Sewn wheels. The Spiral Sewn wheel may be preferred when working on delicate parts or between fins on a valve cover. The Ventilated Buff is more likely to "grab" surface irregularities but yields faster results, and runs cooler. The "treated" versions of Spiral and Ventilated wheels speed results and last longer than untreated wheels.

### **Buffing in Restricted Spaces**

Buff deeply recessed areas with either the Stainless (#13136), Tripoli (#13135) or White Rouge. Use our Mini Buff Set (#13140) with either the 1/4" shank (#13054) or the 1/8" shank (#13063) mandrel. For more deeply recessed areas, use a Felt Cone (#13050), one of our sets of Felt Buffing Bobs, Tapered Goblet Buff (#13045), a Mushroom Buff (#13174), or Facer Buff (#13171, 13172, 13173),

Compound should be applied more sparingly to felt bobs. Periodically spin the bob against a wire brush or old hack saw blade securely mounted in a bench vise to remove buildup. **Use only one compound per felt bob.**

### **BUFFING INSTRUCTIONS, CONT.**

#### **Inspect Your Progress**

Check your progress from time-to-time while buffing. Inspect the piece by looking at the reflection of a single light bulb in the surface. If the reflection is irregular as you move the piece, the surface is uneven and will not buff out. Try to keep your buffing as smooth and even as possible. Remember: let the wheel do the work.

If you notice medium scratches in the piece, but your fingernail does not catch on them, mark those areas and repeat the Sisal/Emery process. Do not attempt to buff them out with the Stainless Compound.

If you notice scratches which are deep enough for your fingernail to catch, then you will need to re-polish the piece and repeat the buffing process from the start.

When you have finished the entire piece, let it cool, clean it, and put the Spiral Wheel and Stainless Compound in a sealable plastic bag.

#### **Final Buffing or "Coloring"**

Next mount the loose section wheel and apply White Rouge Compound to the wheel. Initially

work a small area at a time as done in previous steps. Again change your angle of attack by 90° so you can easily see when the Stainless Steel Compound scratches have been removed. Then make a light pass with the direction of wheel rotation over the longest length of the piece. Now you will see what the final piece will look like. The Loose Section Buff and White Rouge Compound has little cutting ability, but serves mostly to bring out the color of the metal.

**A Note About Heat Generated by Buffing A Note About Heat Generated**

The friction resulting from buffing generates heat. Be careful when handling just buffed parts: they will be hot. It is also very important to be sure to keep the piece on which you are working moving as you are buffing it to prevent discoloration and distortion. The heat is not beneficial, it is merely a by-product of the buffing process.

**Buffing Aluminum and Other Soft Metals and Plastics**

These materials require only two buffing steps. Please refer to the chart above for the best wheel/compound combinations. For more detailed information, we recommend the instructional video [The Art of Buffing Video \(#13004\)](#). It gives clear, concise advise on all stages of a buffing project.

**Keep that New Look Longer**

To keep your freshly-buffed parts looking their best, we recommend using [Autosol Polish](#).

**CAUTION**  
When buffing plastic parts, generation of any heat must be avoided to prevent damage.

**BUFFING INSTRUCTIONS, CONT.**

**Special Protection for Polished Metals**

Your polished parts will start to oxidize almost immediately. We strongly recommend using [Eastwood's DiamondClear for bare metal - High Gloss \(Aerosol, #10200Z or Quart, #10357ZP\)](#) to prevent oxidation and keep the beautiful luster you just worked so hard to achieve. For a virtually invisible shield of protection (protects for up to 2 years) try one of our [ZoopSeal kits: \(#10516Z\) Starter Kit and \(#105172Z\) Master Kit](#).

**For Superior Protection**

Use the [HotCoat™ Powder Coating System](#) to apply [Gloss Clear \(#10093\)](#) or [Super Gloss Clear \(#10286\)](#). For a custom look, use one of the [translucent powders](#).

**TROUBLESHOOTING**

Problem	Possible Cause: Corrective Action
The Wheel Turned Black	This is normal. No action needed,
Metallic Build-up On Wheel	This is normal especially when buffing soft metals like aluminum and brass. Eventually the wheel should be cleaned using the <a href="#">Buff Rake (#13120)</a> to avoid galling the surface.
Black Streaks On Part Being Buffed	This usually indicates excessive compound Apply compound often but sparingly.

Scratches/Pits Are Still Visible Even After Final Buffing

Even highly polished surfaces have fine scratches. Most of these can be eliminated by making your last pass with the direction of rotation.

If deeper scratches or pits are noticed, it usually that polishing and buffing steps were all done same direction thus disguising the deeper Always change the angle of attack by  $90^\circ$  ( as the shape of the part allows) as you work successively finer grit abrasives and compounds assure previous grit lines are removed.