How to Use the Rotary Buffer

3 Key Guidelines

1. Evaluate the finish

2. Choose the right products

3. Use good technique

There are a lot of different ways to approach working on any given car, usually you'll want to determine what you're working on, such as new paint, old paint, basecoat clearcoat or single stage paint. Then diagnose the condition of the paint and determine what it is you're going to try to correct, such as removing swirls, scratches, sanding marks, oxidation etc.,

After you have evaluated the paint you can then choose what you think will be the best products and pads for the job

Next you'll want to use the correct technique to apply the products and work them until you've removed all the defects you can to the best of your ability and within what's practical for the paint you're working on. Understand that some defects are too deep and you'll be better off and safer to learn to live with the deeper ones versus trying to remove them all the way and risk removing too much paint.

When you're first learning how to use a rotary buffer, it's a good idea to just tackle a single panel your first time. Considering you have to do the rotary buffer step and then after that a number of more steps until you get the paint up to the waxing step, just tackling a panel, like the hood of a car, is going to take some time to go from start to final wipe-off. So don't tackle an entire vehicle your first time out.

Also don't try to learn on something that's important to you, like a Black Viper, or whatever your pride and joy is, instead either work on an older car that no on will care if you make a mistake or spend a little time obtaining a hood off a car out of the wrecking yard.

Following the advice above, we recently worked on only one half of a panel, and from the time we started to the time we finished to clean, clay clean, polish and the wax and wipe-off took about one hour and that was just for one half of the hood. So start out slowly, and start out on something you can afford to make a mistake on. Then as you gain experience, skill and confidence, you'll be tackling entire cars in no time.

Removing Oxidation and Restore Gloss to One Half of a Hood

Here's what you do,

Gather your supplies Get yourself a 2-6 W-8006 foam polishing pads. These pads are not only versatile, but very easy to use. Get a bottle of M83 and M80 maybe even M82 for some **"Tools"** for your tool chest.

You'll need plenty of clean, soft microfiber polishing cloths and a bonnet or two if you want to remove the wax by machine.

Painters tape, tinfoil, Beach Towels, Bed sheets, Newspaper, Plastic Drop cloths, Plastic Bags... (Just some examples)

Work Clean
Always work clean, this means a clean car and a clean work environment. You don't want any dirt getting into any of the machine buffing processes as you will risk instilling swirls into the paint.

Dress for success
Put some work clothes on including a soft cotton t-shirt that covers your waist line and you don't care if it gets splatter on it. Sometimes you'll find yourself leaning over a panel and your body touching the paint, have a soft cotton t-shirt to cover your pants so the waist of your paints, things like belt loops, snaps etc., don't come into contact with the paint, only the soft cotton t-shirt. Also be careful so that you can avoid touch the paint by leaning on it but if you have to, then do everything you can not to instill any scratches. The bigger the car, the bigger the panel the better the odds you might have to "touch" the paint somewhere when you're leaning out to get the hard to reach areas. You can wear an apron but most of the time it's hard to find an apron that's as soft as an old cotton t-shirt.

Safety glasses are a good idea if you don't wear glasses. The rotary buffer does have a spinning head/pad on it and it could throw something into your eyeball.

Hearing protection is also a good idea as these machines are noisy. You probably don't need hearing protection for working on only one panel, but when you go to buff out an entire car you should have some type of ear protection.

Good shoes. Using the rotary buffer involves you legs, back, arms, shoulders, etc. You'll find that you'll use your legs/feet to anchor your stance while you control the machine. Again it's not that big of a deal if you're just working on just a singe panel but when the day comes and you start tackling entire cars, especially larger vehicles in bad condition where you're going to go around the vehicle 2-3 times with just the rotary buffer, if you don't have good shoes your feet and legs and even the rest of your body are going to pay a price as you work through the day. Something that encases your ankles like high-top tennis shoes work really well.

Prepare the car
Chose a car, wash it and then clay it if it needs it and only tackle one panel on one day to start with. Choose either the hood or the deck-lid, a horizontal panel.

Evaluate the condition of the finish. Inspect with your eyes and look to see what's wrong with the paint, does it have swirls and scratches. Is the finish horrific? As in really horribly swirls-out? Or just light swirls and scratches?

Meguiar's **ALWAYS** teaches people to use the least aggressive product to get the job done, but with experience you can make a judgment call based upon the visual inspection of the paint you're about to work on to choose the appropriate product. For example if the finish is in really bad condition you could do a test spot with something like M80 Speed Glaze or jump right to M83 Dual Action Cleaner Polish. Both are cleaner/polishes but the M83 is more aggressive than the M80 but at the same time it's they are still both very gentle when compared to a true compound. This is especially true when you consider you're also applying them with a polishing pad, not a cutting pad. You also have control over how aggressive they are with your Speed Setting, Downward Pressure, and Size of work area.

Perform a Test Spot

Map out a section on the car about 16" square or so and work the product against this area, apply a strip or bead of product about 6" to 8" long and pick up your bead using the technique shown in this how-to video. After you pick up your bead of product instantly hold the pad flat to trap the product between the face of the pad and the surface of the car and begin making slow, overlapping passes to the section. Like the G100/PC you can make overlapping passes and go in two different directions to insure **UMR**, ***Uniform Material Removal***. Work the buffer for about a minute, basically long enough to make two to three passes in two directions over this section. Don't buff to a dry buff.

Wipe of the excess residue and inspect.

Are the majority or all of the swirls and scratches gone? If yes you now know what product to use and how long to buff with it, as far as how to use the buffer that's going to come with practice. Start out working on the easy stuff, (large flat panels) and as you get more comfortable with the tool you can start tackling A-Pillars, B-Pillars, doors, fenders, etc.

If after you inspect the finish and most of the swirls and scratches are still there, then re-buff the area a second time, see of a second application of the same product using the same pad will get the job done, if not then it's likely you'll have to try a more aggressive product/pad combo like M84/W-7006 or M85/W-4000.

In most cases, M83 with a W-8006 polishing pad on a rotary buffer will at least remove the light or shallow defects and if this is the case then this could be an indicator that the paint is hard and/or the defects are deep but if you're just learning how to use the rotary buffer then it could also be that you're technique just isn't dialed-in enough for "you" to be effective with this combination. That will come with time and for now since you're learning if you're seeing "better" results then when you started then continue with the

M83 over the rest of the panel. Before you continue however let's tape-off and cover up.

Tape-off and cover up
Even though the idea is to be very good at what you do so that you don't have splatter onto trim or into cracks and crevices, even the best can make these mistakes, so you need to make a judgment call as to whether you want to tape off and cover up trim, emblems, cracks and crevices or hard sharp body lines where the paint might be think like the edge or corner edge of a hood.
One trick to help you avoid splatter is to have plenty of pads on hand so that if the pad you're using becomes to wet with product you can simply switch to a clean dry pad. This tends to improve buffing performance and reduce the potential for any splatter. Generally speaking, more pads are better no matter what tool you're using.

The First Step Process – The Cutting or Cleaning Step
once you have your first step process figured out and you have taped-off or covered up anything you want to protect, continue to buff the panel you did your test spot on working each section of the panel equally. In most cases, you'll want to carve out sections of large panels and only buff sections or quadrants of the entire panel during the first step. Smaller panels can be buffed in one or two sections. ***"Let the panel be your guide"***

The most important part of any detail job is the first cutting or cleaning step. It is this step that will determine your end-results. If you don't remove the defects in the first step, then you're going to be seeing them at the end of the job. So invest your time into the first step. Work each quadrant of the panel you're working on carefully, thoroughly and sufficiently to equally remove enough paint over the entire section to remove the defects to the level you're comfortable with. Understand not all defects can be removed without the risk of removing too much paint and going through the clear on a clear coat paint job and exposing the color coat, or going through the color coat of a single stage paint job and exposing primer.

After working each section, wipe off and remove any excess product. Never apply fresh product to spent product it will dilute and adulterate the fresh product. Always work clean.

After you have worked each quadrant or section over the entire panel, then do what's called a few **"Cover Passes"**, this is where you use the rotary buffer to now buff the entire panel to more or less tie all your work together, that is to give the finish a uniform, level surface with equality in appearance over the entire panel. In most cases the paint is going to have light swirls or haze after this step but that's okay as the next step will remove most of these.

The Second Step Process - The Polishing Step
At this step you can either make another pass using a less aggressive pad and product on the rotary buffer or you can try to move to a machine that oscillates instead of rotates for example the G100 Dual Action Polisher. If your goal is a swirl free finish then you need to find out if the G100 will remove any remaining swirls from your First Step Process or

if you need to use a rotary buffer to remove these and then go to the dual action polisher. What determines what you have to do is usually the paint hardness or softness, i.e. ***polishability*** and of course your ability as a craftsman in the art of polishing paint. ***Polishability you can't control***, but your skill level you can with experience.

At this point you could do another Test Spot, usually you would try to use the G100 and a light cleaner/polish to see if you can remove any remaining swirls and produce a finish perfect for applying your choice of LSP to. This would usually be something like the G100/M80/W-8006, or G100/M82/W-8006, even though it's possible that the perfect combination could be the G100/M83/W-8006, yes it's possible you could use the same pad and product you used with the rotary buffer only with the dual action polisher and it will product the best results the fastest and most effectively.

After you decide upon a tool, pad and product to remove the remaining swirls and polish the surface to a smooth, high gloss, (***take the paint to its maximum potential***), the repeat the above step of carving the panel up into sections and working your product over each quadrant thoroughly. Then wipe the entire panel clean and make some Cover Passes. Next wipe the panel clean for the next step.

The Third Step Process – The Protection or Waxing Step
Use your G100 Dual Action Polisher to apply the **LSP** of your choice usually using a finishing pad but you can also use a polishing pad. Set your speed setting at around the 3.0 to 4.0 speed setting and apply your LSP over the entire panel making, slow, methodical passes. Try to go over each square inch 2-3 times to allow the oscillating foam pad to really do a good job of pushing the wax or paint protectant into all the microscopic surface imperfects. Leave a thin, uniform layer over the entire surface.

Swipe Test
After allowing the wax to fully dry for anywhere from 10 minutes to longer, how long depends upon temperature, humidity and how thin or thick your layer of wax is, but after some time has gone by test the wax to see if it's dry by performing the Swipe Test, that is to take your clean finger and give the waxed area a brisk swipe. After you do this inspect the swiped area, it the wax is dry and ready to remove the swiped area will be clear and glossy. If so, the remove the wax. If the area you swiped is smeary, then wait for more time to go by and maybe evaluate how thick the coating of waxy you applied is, perhaps you applying your wax to thick and this is why it's taking a long time to fully dry? In most cases, in average temperatures and humidity, a coating of NXT Tech Wax will fully dry in about 15 minutes.

Remove the wax
Once you determine the wax has fully dried, then remove the wax by hand or machine using a soft, clean microfiber polishing cloth.

De-Tape
Remove any tape or other items you used to cover and protect areas or components on the

car.

Wipe down
Remove any remaining residue and inspect.
Sometimes moving the car into a different light setting will show you places with wax you missed.
Sometimes getting another set of eyes to help you to inspect will help you to insure all wax and residue is removed.

Put your tools away... you're done for the day...

Below are some pictures from a recent Saturday Detailing Class we held for Team Hybrid. One of the members brought a truck to the class that had not been washed or maintained for years. The paint surprisingly enough came from the factory with a single stage paint job. We followed pretty closely the outline listed above to one half of the hood.

Step one - Wiped down one half of the hood with Quik Detailer

Step two - Quickly machine cleaned one half the hood using M80 Speed Glaze with a W-8006 foam polishing pad on the rotary buffer on the 1500 rpm setting to remove all the surface oxidation so it would not fill up our clay bar with dead paint

Step three - Clayed the finish. Yep, we did things a little differently because this was an extremely oxidized single stage paint, that is we did a quick machine cleaning with a cleaner/polish to remove the dead paint otherwise it would have just clogged up our clay bar. **AFTER** we removed the dead, oxidized paint we then went back to the claying step and clayed the paint to remove the above surface bonded contaminants. And **YES**, even after machine cleaning with M80 Speed Glaze, there were still bonded contaminants stuck onto the surface of the paint. That's because Claying is the most **EFFECTIVE** method to remove above surface bonded contaminants. Will hand or machine applied paint cleaner, cleaner/polish or cleaner/wax do the job? Yes, to some degree, but not as effectively as using the best tool for the job and that's detailing clay. **Often times a foam pad will merely glide over above surface contaminants an NOT abrade them or kick them off.**

Step Four - Re-machine clean the paint with M80 Speed Glaze using a W-7006 foam cutting pad on the rotary buffer at the 1500 rpm setting. This was done slowly and methodically to insure as many of the stains in the paint were removed as it had lots of etching into the paint.

Step Five - Machine polish the paint using M80 Speed Glaze with our W-8006 foam polishing pad on the G100 Dual Acton Polisher on the 5.0 setting.

Step Six - Applied one coat of NXT Tech Wax using a W-8006 polishing pad on the G100 on the 4.0 setting.

Step Seven - Removed the wax using a microfiber bonnet on a clean, new and dry W-7006 foam cutting pad on the G100 on the 5.0 setting.

Before

First we taped off one half of the hood to insure nice clean before and after shots. Then we did a couple of quick passes over the paint using M80 Speed Glaze with a foam cutting pad to remove most of the dead, oxidized paint. By doing just enough cleaning to remove the dead paint, we can then go back to the claying step and remove the bonded contaminants without filling and ***loading up our new clay bar with dead paint***.

We know some people may wonder if this is not backwards as we usually recommend claying first and then using a paint cleaner of some sort but when you're working on oxidized single stage paints it helps and makes sense to remove the dead oxidized paint first and then go back and clay.

Some people always ask the question, "*Well won't using a paint cleaner, a compound, or cleaner/polish or even a cleaner/wax, (by hand or machine), remove the above surface bonded contaminants?"*

And the answer is *"Yes and No"* , that is sure, using some type of paint cleaner will remove some of the above surface bonded contaminants, but claying them off is more effective with emphasis on the word effective. After we cleaned off the dead paint we felt the finish and it was shiny red but filled with little bumps still on the paint, and that's after using a cutting pad on it. In most cases, foam buffing pads will tend to glide over bonded contaminants, not abrade or kick them off, even a cutting pad. Now a wool pad would

abrade and physically kick them off.

So after a quick pass or two to remove the dead paint, the owner used our clay in our Smooth Surface Clay Kit to clay the paint on the drivers side of the hood.

Then we went back to the Rotary Buffer using M80 Speed Glaze with a cutting pad on the 1500 rpm setting and carefully machine cleaned on half the hood breaking the hood up into 4 quadrants and then after working each section till it was as perfect as we felt comfortable with, we wiped the surface clean, cleaned our pad, added fresh product and re-cleaned the entire hood again using cover passes to even out all our work.

Picking up a bead or strip of M80 Speed Glaze and then working each section thoroughly.


Meguiar's

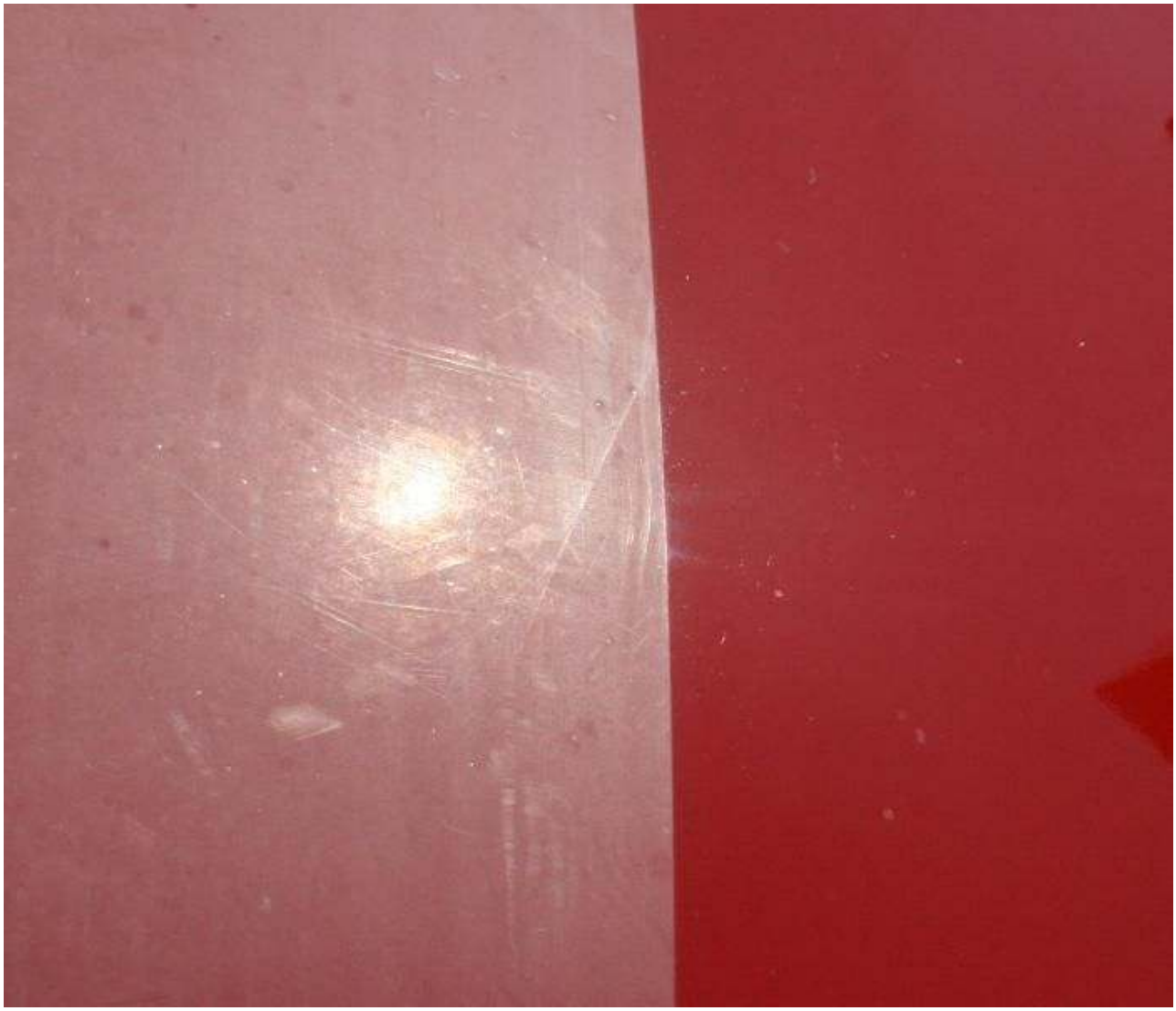

Crazy People!

After the Rotary Buffer step we switched to the G100 Dual Action Polisher with a W-8006 foam polishing pad, we continued to use the M80 Speed Glaze and then machine polished each square inch to remove any swirls and bring up the gloss, clarity and richness of color. Next we applied a single coat of NXT Tech wax using the G100 with a W-8006 foam polishing pad on the 4.0 setting.

After the wax had dried, we removed the wax with the G100 using a microfiber bonnet over a new, clean dry W-7006 foam cutting pad on the 5.0 setting. Then we removed our painters tape and uncovered the wiper arms and took some pictures to show the results.

After - In the garage

After - In the sun



Summary...

When you're learning to use the rotary buffer, don't try to tackle an entire car in one day, just tackle a single panel, *or even half of a single panel,* and get some experience with the different pads and chemicals as well as how to hold and master the tool.