



DETAILING HAND BOOK

PROVIDED BY,



WRITTEN BY,
MICHAEL (MIKEYC) COHEN

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Introduction

Welcome to the New England Nor'Easter! As an added bonus for Nor'Easter attendees, the New England S2000 Owner's Club (NES2KO) is providing the *Detailing Hand Book*.^{*} Please read the *Detailing Hand Book* carefully before attempting to use any of the techniques described within these pages. The *Detailing Hand Book* is intended to provide you with the knowledge needed to keep your prized S2000 looking like a show car!

To begin with you probably already have some questions . . .

I already keep my car clean. Why should I read the *Detailing Hand Book*?

After reading the *Detailing Hand Book*, you will be equipped with the knowledge to detail your car. Detailing involves cleaning all areas of your car including the engine bay, restoring the finish of your car through the art of paint polishing, and finally protecting & maintaining your restored finish. Your car will never look better.

Why should I bother doing it myself? There's a car wash on every corner.

Taking your S2000 through a car wash *will* damage the car's finish. The brushes of a tunnel car wash will put hundreds of fine scratches in the car's finish which will result in a paint condition known as cob webbing or spider webbing.

Touchless wash facilities are not much better. Without any agitation through brushes, the touchless wash is unable to remove 100% of the dirt on your car.

To compensate for the lack of agitation touchless washes use high pressure jets and extremely strong chemicals to remove as much dirt as possible. These cleaners are so strong that they remove any paint protection you apply after 2-3 washes. The high pressure jets are also detrimental to the rubber seals found on a convertible like the S2000. These jets can prematurely wear out the rubber seals and are so powerful water may enter your car's cabin during the wash.

Touchless washes featuring hand drying cause even more damage. As some dirt is left on the paint's surface after a touchless wash, any attempt to towel dry will result in the aforementioned dirt being rubbed against the paint resulting in scratching. The towels themselves often contribute to the scratching as they are typically dirty and of low quality.

Coin-op wash bays are no better than touchless washes or tunnel washes. The foaming brush is typically loaded with dirt and sand from the cement truck that was in the bay before you. These particles will cause scratching.

^{*} NES2KO and the author of the *Detailing Hand Book* are not responsible for any damaged caused to your car while attempting the car care techniques described in these pages.

The pressure sprayer wand in the coin-op wash bay is no better than the brush. These sprayers employ the same extremely strong chemicals found in the touchless wash. Also, like with the touchless wash, high pressure spray is not sufficient to remove 100% of the dirt on your car's surface.

I live in an apartment/condominium where I do not have access to a hose. How can I wash my car if I you say I shouldn't take it to the car wash?

There is a relatively new washing product which is an alternative to the car wash and the traditional hose wash. This new category of product and the technique for its use is described in depth in the Rinseless Washing chapter of the *Detailing Hand Book*.

There's some guy who comes to my office building and details cars. Also, my dealership and local car wash offers detailing services. Should I have any of them detail my car?

The answer to that question is simple . . . *maybe*. 90% of all people who call themselves a "professional detailer" are complete and utter hacks. Some of these people will leave your car looking worse than it did before they "detailed" it.

I don't have the time or desire to detail my own car. How can I tell the hacks from the real detailers?

Weeding out the hacks from the good detailers is fairly simple. Talking to the detailer will go a long way in this process.

First before interviewing a potential detailer, read the *Detailing Hand Book* to familiarize yourself with the terms and techniques of detailing. After reading the *Detailing Hand Book* you will be equipped to discuss detailing intelligently with a prospective detailer.

Before agreeing to have your car done by the detailer, make sure to also pay them a visit. During your visit ask to see some cars that the detailer has worked on. Do not accept pictures of a detailed car as proof of the quality of the detailer's work. Pictures often do not capture all paint defects and can be doctored to give the car's paint the appearance of a better finish. Also, insist on seeing a black car if possible. Black cars are a true test of a detailer's ability as they show every little imperfection in the paint. Finally, ask to see the detailer's work area (or truck if they are mobile). If the work area is a completely disorganized mess with towels and wash mitts all over the floor, chances are you do not want to work with this detailer. Also, make sure to take a peak at the detailer's wash bucket. If they're washing cars with dirty water and dirty mitts/towels you do not want to work with this person.

In a broad sense, when it comes to detailing "you get what you pay for." Don't expect a detailer at a car wash who charges \$50 for a detail to do the same quality of work as a detail shop which charges \$200 for a full detail. However, you should also not automatically expect that because a shop charges \$200 for a detail that they are any good.

Take a few minutes to do your homework on a detailer and in the end you'll be much happier.

There are a lot of chapters in the *Detailing Hand Book*. I'm confused already. What should I do first?

The *Detailing Hand Book* is arranged so that you can follow the chapters in numerical order to perform a complete detail of your car. Not all chapters need to be followed each time your car is detailed. Which steps to perform on your car's paint and when is discussed in the [Assessing Paint Condition](#) chapter.

Specific brands & products are mentioned in the *Detailing Hand Book*. Do I need to buy the same products in order to get the same results?

Absolutely not! Detailing product selection is 100% personal preference. Most detailing product lines will get the job done and there are a lot of great brand names out there from Autoglym to Zymöl. The only way to find out which products are "the best" for you is to try them.

I really enjoyed reading the *Detailing Hand Book*. Where I can I learn more about detailing?

While there is no substitute for seeing techniques in action and learning through practice, there are a number of great detailing resources available to learn more about detailing. Additionally, the *Detailing Hand Book* does not cover some aspects of detailing such as polishing with a rotary buffer and wet sanding which you may be interested in learning more about.

Books about detailing include *Ultimate Auto Detailing Projects* by David H. Jacobs Jr., *Auto Detailing* by Don Taylor, and *The Haynes Automotive Detailing Manual* by J.D. Storer and John Harold Haynes. Some parts of these books are out of date or flat out bad technique, but they make for interesting reading if you are curious about detailing.

One of the best ways to learn more about detailing is to attend a Meguiar's class. There really is no substitute for first hand experience. You can find the schedule for these classes on Meguiarsonline.com.

While there are various detailing videos available, one new video comes highly recommended: *How to Use the PC for Show Car Results* starring Mike Phillips by ShowCarGarage.com. The video is an excellent resource and allows you to view proper technique for machine polishing. Mike teaches most of the Meguiar's detailing classes which were mentioned in the previous paragraph and is an expert at paint polishing.

On-line discussion of detailing is also extremely prominent. Some great web forums for detailing discussion include Autopia.org, DetailCity.org, Meguiarsonline.com, ShowCarGarage.com, AutoGeekOnline.net, and the wash & wax forum of S2KI.com.

Engine Detailing

Before:



After:



Detailing your engine bay will make hoses look darker and metals look brighter. Plus properly cared for hoses, belts, and other rubber/plastic pieces last longer than those which go uncared for.

Famous car designer/builder Chip Foose often refers to a car's engine bay as the "jewel box" and the engine as the "jewel." You'll be amazed by the amount of impact a shiny "jewel" can have when you are showing your car either simply to a friend or to a larger group at a car show.

You should only need to fully detail your engine bay 1-2 times per year depending on your environmental conditions. You can decrease the number of times per year needed to detail your engine bay by regularly using a quick detailer to keep it clean.

What you'll need . . .

- **Water** – you'll need a water source with a hose and a spray nozzle attached.
- **Assorted brushes** – nylon bristled brushes such as a body brush, old toothbrushes, and detailing brushes work well.
- **Chemical cleaner** – various chemical cleaners can be used. A quick detailer spray such as Poorboy's Spray & Wipe can be used for a dusty engine, Meguiar's Safe D-Greaser or Meguiar's All Purpose Cleaner can be used for moderately dirty engines, and Gunk Engine Cleaner can be used for extremely greasy engine bays.
- **Engine dressing** – CD2 Engine Detailer and Meguiar's Hyper Dressing are popular choices. However, almost any vinyl/rubber protectant product can be used.
- **Microfiber Towels** – cheap microfiber towels from a wholesale club like Costco are a great tool for engine detailing. They're cheap enough so that you won't mind getting them really dirty, but they are absorbent and soft like more expensive microfiber towels. Make sure they are clean and that all tags have been removed before use.
- **Rubber gloves** – using rubber gloves will help to keep dirt and cleaning chemicals off your skin.

How to get it done . . .

1. Make sure the engine is cool. A hot engine should never be detailed. It's dangerous for both the detailer and the engine.
2. Before opening the hood, spray down the front end of the car with water. This will dilute any over spray or splatter that may land on the fenders. This will help prevent any damage to the finish from grease splatter and cleaner overspray.

3. Open the hood and cover sensitive items like the alternator and the battery with plastic wrap or aluminum foil. It's also a good idea to stuff a towel in the air intake to prevent water from entering.



4. Lightly spray the entire engine bay with water. Do not spray the water directly at the engine. The idea is to simply mist the engine.
5. Spray the entire engine bay generously with your degreaser of choice and let dwell for a few minutes. Don't forget to spray the underside of the hood too!



6. Scrub all accessible surfaces of the engine bay with a brush. It's OK to scrub painted areas gently, but take caution not to damage any electrical connections and to avoid the covered areas.



7. Rinse off the entire engine bay and the fenders being careful not to spray water directly at the covered areas or electrical connections.



8. Shut the hood and turn on the engine. Running the engine for 10 minutes or so will dry the engine bay much faster.
9. After 10 minutes shut off the engine and open the hood. Using a microfiber towel dry any remaining water. Make sure to dry the underside of the hood as well.
10. Spray the entire engine bay with your vinyl dressing or CD2 Engine Detailer.



11. Shut the hood again and start the engine. Running the engine again for 10 minutes will help the dressing to dry faster.
12. Open the hood again and wipe off any excess dressing with a clean microfiber towel.



Wheel Well Detailing

Before:



After:



The wheel wells are one of the areas most frequently ignored by amateur detailers. However, wheel wells which have not been detailed can severely detract from the visual impact of an otherwise well detailed car. Detailed wheel wells will not only enhance the look of your car, but keeping your wheel wells clean can help to prevent underbody rust.

What you'll need . . .

- **Water** – you'll need a water source with a hose attached.
- **Pressure washer (optional)** – as there is not enough room to squeeze a brush into the wheel well a pressure washer will allow you to clean the wheel wells more thoroughly. Alternatively, the “jet” setting on a hose nozzle works well too. If you can manage to remove the wheels or find a brush that will fit into the wheel wells that is the most effective method.
- **Chemical cleaner** – a moderately powerful cleaner like Meguiar's Safe D-Greaser or Meguiar's All Purpose Cleaner works well for cleaning wheel wells.
- **Wheel well dressing** – Meguiar's Hyper dressing is a popular choice for wheel well dressing. Other good choices include Armor All diluted 2:1, CD2 Engine Detailer, and Griot's Undercarriage Spray.
- **Undercoating spray** – the rubberized undercoating found on one side of the rear wheel wells often wears away revealing the metal panel underneath. Keep a can of rubberized, quick drying undercoating spray on hand to touch up these areas.
- **Rubber gloves** – using rubber gloves will help to keep dirt and cleaning chemicals off your skin.

How to get it done . . .

1. Before getting started make sure the car is cool. Detailing the wheel wells of a hot car can result in damage to the car such as warped rotors.
2. Spray the areas surrounding the wheel wells with water. This will help to prevent damaging the surrounding finish with strong cleaners.



3. Spray generous amounts of your chemical cleaner on all surfaces in the wheel wells and let dwell for a few minutes.



4. Use your pressure washer to wash away the cleaner and any dirt in the wheel well. Exercise extreme caution when using a pressure washer on painted surfaces included areas in the wheel wells that have been sprayed with undercoating.



5. After completing your washing & drying regimen on the entire car, return to the wheel wells. Spray paint any areas needing touching up with your rubberized undercoating spray paint.
6. Spray an even coat of your chosen wheel well dressing on the entire wheel well. Do not spray any areas which have been touched up with undercoating spray.

Wheel & Tire Detailing

Before:



After:



Nothing says “bling-bling” like really well detailed wheels and nothing detracts from bling-bling wheels like brown tires. One of the most common car modifications is to put on aftermarket wheels. It’s a shame to spend hundreds if not thousands of dollars on aftermarket wheels and to have them constantly caked with brake dust or dulled by oxidation.

Keep in mind when detailing OEM S2000 wheels that they are painted. No surfaces of the OEM wheel are bare metal even if they look to be. So, treat your wheels as you would the paint on your car and **never** use metal polish on your OEM wheels.

Some wheel cleaners such as Meguiar’s Wheel Brightener and Poorboy’s Spray & Rinse are acid based meaning the active ingredient is some type of acid like citric acid, hydrofluoric acid, or ammonium bi-fluoride. These types of cleaner are extremely powerful. Professional strength cleaners such as these should only be used by those trained in their use as many of them are potentially hazardous to your health or to the finish of your wheels when used improperly. These cleaners should be used only when absolutely necessary.

What you’ll need . . .

- **Water** – you’ll need a water source with a hose and a spray nozzle attached.
- **Assorted wheel brushes** – Griot’s Garage Wheel Scrubbers and the Meguiar’s Wheel Face Versa-Angle Brush are both great wheel brushes. Alternatives to these brushes include old toothbrushes or a parts cleaning brush. Be sure when choosing a brush that it is gentle enough not to scratch paint. Almost all wheels are at least painted with a clear coat so abrasive brushes will create scratches in the finish.
- **Tire brush** – Some detailers use a nylon bristled tire brush while others use a brass bristled tire brush. Both types of brush work well, but if you’re using a brass bristled brush be careful around the edge of the wheel or the brush will scratch the wheels.
- **Wheel cleaner** – Meguiar’s Wheel Brightener is an extremely powerful acid based cleaner which works well on clear coated and chromed wheels. Acid based wheel cleaners should not be used on polished wheels. P21S Wheel Cleaner Gel, Menzerna Wheel Cleaner, and Detailer’s Pride Wheel & Tire Cleaner are excellent wheel cleaners suitable for all types of wheels. Alternatively, well detailed wheels can be cleaned with car wash solution.
- **Wheel sealant** – a sealant with cleaners in it is most suitable for sealing wheels as it will polish the wheel at the same time. Wheel Wax is a very good wheel sealant and Klasse All-in-One Polish is also very popular. Poorboy’s Wheel Sealant and Detailer’s Pride Wheel Glaze also are highly recommended. If you’re wheels have a polished finish then a metal polish should be applied to the wheel prior to sealing.
- **Wheel sealant applicator** – applying your wheel sealant using a Mother’s Mini Powerball will save you some time. Application of wheel sealant can also be done with a foam wax applicator, a folded microfiber towel, or a microfiber applicator.
- **Tire cleaner** – Meguiar’s Safe D-Greaser does an excellent job cleaning tires without turning the rubber grey or brown. Whestley’s Bleche-White Tire Cleaner also does an excellent job and so does Detailer’s Pride Wheel & Tire Cleaner.

- **Tire dressing** – your choice of tire dressing. Meguiar’s Endurance Tire Gel is highly recommended and can be had in either high gloss or a matte version.
- **Tire dressing applicator** – Eagle One Tire Swipes are excellent for applying an even coat of tire dressing to your tires. Alternatively, you could use an old towel or a foam wax applicator.
- **Microfiber towels** – cheap microfiber towels from a wholesale club like Costco are a great tool for wheel detailing. They’re cheap enough so that you won’t mind getting them really dirty, but they are absorbent and soft like more expensive microfiber towels. Make sure they are clean and that all tags have been removed before use.
- **Cotton towels** – cotton towels were once a staple of the detailing arsenal. However, they have been replaced by microfiber towels which are more absorbent and cause less scratching. Most people have old towels around the house which are great for drying areas of the car like the tires where scratching is not a concern and which are really dirty.
- **Rubber gloves** – using rubber gloves will help to keep dirt and cleaning chemicals off your skin.

How to get it done . . .

1. Before getting started make sure the car is cool. Detailing the wheels of a hot car can result in warped rotors.
2. Spray the areas surrounding the wheel wells, the wheels, and the tires with water. This will help to prevent damaging the surrounding finish with strong cleaners and will help in the dispersion of cleaning chemicals.



3. Spray generous amounts of your wheel cleaner on the wheel and tire cleaner on the tires then let dwell for a minute. Do not allow wheel cleaner to dry on your wheels. It is recommended that you only clean one wheel at a time to prevent this.



4. Scrub the wheel and tire with the appropriate brushes. Be sure to scrub around the lug nuts and in the barrel of the wheel if accessible.



5. Rinse the wheels and tires thoroughly with water from your hose. If stubborn brake dust remains you may need to repeat step #4, use a stronger wheel cleaner, or use detailing clay (see chapter VIII) to improve the result.



6. After finishing your entire wash regimen, dry the wheels using a microfiber towel and dry the tires using an old cotton towel.
7. Apply and remove your chosen wheel sealant according to the instructions found on the product's label.
8. Apply tire dressing to the tires using a foam tire swipe.



9. Allow the tire dressing to dry for at least 10 minutes and then wipe off any excess with an old cotton towel. Not following this step can result in the tire dressing “slinging” off the tire and onto the paint as you drive the car.

Washing & Drying

Before:



After:



Washing & drying is perhaps the most important part of detailing. Proper washing technique can help to prevent the formation of marring and therefore extend the period of time between polishing sessions.

The “two bucket method” is widely considered to be the most scratch free method of washing. This method simply involves using one bucket of car wash solution and a second bucket of plain water used to rinse the washing tool. Using a separate rinse bucket will help to keep the dirt off of your wash tool and therefore away from your paint.

As far as drying your car, it is not recommended that you use drying products that do not have a knap such as the California Water Blade or the Absorber. Products such as this can trap particles against your paint causing marring and/or scratching. Towels that have knap will pull any particles on the paint into the knap thus keeping the debris away from the paint.

Never ever place your wash mitt on the ground.

What you'll need . . .

- **Water** – you'll need a water source with a hose and a spray nozzle attached.
- **(2) 5 gallon buckets** – be sure your buckets are clean. Buckets which have been used for other uses may have chemical residue on their surface which could enter the wash solution and be harmful to the LSP or paint.
- **Grit Guard(s)** – at least one grit guard will be needed. The Grit Guard will help to assure dirt stays in your rinse bucket and does not get trapped in your wash mitt where it would be rubbed against the paint. One Grit Guard in your rinse bucket is good, but one in your rinse bucket and one in your wash bucket is even better.
- **(2) Genuine sheep skin wash mitts** – synthetic wash mitts are not as soft and will cause marring in your paint. So, be sure to use genuine sheep skin mitts. Sheep skin mitts do a great job cleaning and have knap which will hold dirt particles away from the paint during washing. However, sheep skin mitts also release dirt better than any other type of wash tool once placed in the rinse bucket. Use one mitt for the top half of the car and a second mitt for the bottom half of your car to help prevent marring. Boar's hair brushes are also popular but cost quite a bit more than a sheep skin mitt.
- **Car wash soap** – your choice of car wash soap. Some popular choices include Optimum Car Wash, Poorboy's Super Slick & Suds, Meguiar's Gold Class Soap, Top of the Line's Bubble Bath, and 1Z Einszett Perls. Do not use dishwashing liquid to wash your car. Dishwashing liquid will dry out plastic & rubber exterior trim & seals. Additionally, dishwashing liquid will strip off wax. Even the manufacturers of dishwashing liquid advise consumers against using their products to wash a car.
- **Microfiber waffle weave towel** – while any type of microfiber towel will work well for drying, waffle weave towels are the most absorbent type of microfiber towel. There are many great waffle weave towels available such as the Cobra Ultimate Guzzler and Big Blue II.

How to get it done . . .

1. Fill two buckets with 2-3 gallons of water and place your Grit Guard at the bottom of the bucket which will be the rinse bucket. If you have two Grit Guards place one in each bucket.
2. Add car wash soap to the wash solution bucket. Follow the manufacturer's instructions of how much soap to add to the wash bucket.
3. Spray a small amount of additional water into the wash bucket to generate foam.



4. Using your hose nozzle spray the entire car with water. Make your best attempt to spray off as much loose dirt from the car as possible.



5. Dip your wash mitt into the wash bucket.

- Using the mitt, wash one panel of the car. Move the wash mitt back-and-forth in straight lines following the direction air flows over the panel. Do not apply any downward pressure onto the mitt as this may result in marring. Start with sections at the top of your car and work toward sections at the bottom.



- Place the wash mitt in the rinse bucket after washing a panel.
- Once a panel has been washed rinse it with a spray of water from the hose. Be sure that the entire car remains wet while washing. If the water on the surface of the car is allowed to evaporate then water spots may form.
- When you are ready to wash the next section of the car take the wash mitt out of the rinse bucket and squeeze some of the water out.
- Continue to wash the car using the technique outlined in steps 5-9 until the entire car has been cleaned. If using two wash mitts be sure to switch to the second wash mitt when cleaning the lower half of the car.
- Remove the hose nozzle from the end of the garden hose.
- Using the now nozzle-less hose run a stream of water over the entire car starting from the top and making your way to the bottom. This will cause most of the water on the car's paint to sheet off leaving very little water on the car. This technique works best on a well waxed/sealed car. Use caution not to touch the metal hose end against the car's paint as this may result in a scratch.
- Dry any remaining water on the car's surface with your waffle weave microfiber towel. To reduce the possibility of marring, do not drag the towel over the car's paint. Instead, blot the water with the towel. This will help to reduce marring caused by the drying process.



Rinseless Washing

Before:



After:



Rinseless car wash soaps are a relatively new innovation and create quite a bit of flexibility in terms of washing conditions. Due to rinseless washes not requiring a hose car washing can be done conveniently in the garage during winter, at an apartment complex, on a road trip in a parking lot, or in an area with water use restrictions. Additionally, rinseless wash soap combined with water in a spray bottle makes an excellent, cost effective clay lube spray and quick detailer.

Keep in mind that when using a rinseless wash you do not want foam in your wash solution as it will make the drying phase more difficult. Rinseless wash soap typically will not foam much. However, to avoid having any foam at all be sure to fill your bucket with water first and then add the soap.

Never ever place your wash mitt on the ground.

What you'll need . . .

- **Water** – you'll need approximately 4-6 gallons of water.
- **(2) 5 gallon buckets** – be sure your buckets are clean. Buckets which have been used for other uses may have chemical residue on their surface which could enter the wash solution and be harmful to the LSP or paint.
- **Grit Guard(s)** – at least one grit guard will be needed. The Grit Guard will help to assure dirt stays in your rinse bucket and does not get trapped in your wash mitt where it would be rubbed against the paint. One Grit Guard in your rinse bucket is good, but one in your rinse bucket and one in your wash bucket is even better.
- **(2) Genuine sheep skin wash mitts** – synthetic wash mitts are not as soft and will cause marring in your paint. So, be sure to buy genuine sheep skin mitts. Sheep skin mitts do a great job cleaning and have knap which will hold dirt particles away from the paint during washing. However, sheep skin mitts also release dirt better than any other type of wash tool once placed in the rinse bucket. Use one mitt for the top half of the car and a second mitt for the bottom half of your car to help prevent marring. Boar's hair brushes are also popular but cost quite a bit more than a sheep skin mitt.
- **Rinseless car wash soap** – your choice of rinseless car wash soap. There are three rinseless car wash soaps currently available Protectall's Quick & Easy Wash, Optimum No Rinse Wash & Shine, and Detailer's Pride 4-in-1 Rinseless Wash.
- **Microfiber waffle weave towel** – while any type of microfiber towel will work for drying, waffle weave towels are the most absorbent type of microfiber towel. There are many great waffle weave towels available such as the Cobra Ultimate Guzzler and Big Blue II.
- **32 oz. Spray bottle** – mix together some of the rinseless wash soap, 1-2 ounces of Quick Detailer, and some water (preferably distilled water) in a clean spray bottle. Never re-use a spray bottle that has been used for a different chemical as harmful residue may remain in the sprayer.

How to get it done . . .

1. Fill two buckets with 2-3 gallons of water and place your Grit Guard at the bottom of the bucket which will be the rinse bucket. If you have two Grit Guards place one in each bucket.

2. Add the rinseless car wash soap to the wash solution bucket. **Please note: rinseless wash soap does not foam.** Follow the manufacturer's instructions of how much soap to add to the wash bucket.



3. Spray the panel to be washed with the water/rinseless wash/QD solution in the spray bottle. Pre-treating the panel with this solution will help to float the dirt away from the paint and therefore reduce marring.
4. Dip your wash mitt into the wash bucket. If you are washing indoors give the mitt a light squeeze to remove excess water. This will prevent the excess water from ending up on the floor.
5. Using the mitt wash one panel of the car. Move the wash mitt in straight lines following the direction air flows over the panel. Start with sections at the top of your car and work toward sections at the bottom.
6. Place the wash mitt in the rinse bucket after washing a panel.
7. Dry any water on the area just washed using your waffle weave microfiber towel. Do not drag the towel over the car's paint. Instead, blot the water with the towel. This will help to reduce marring caused by the drying process.



8. When you are ready to wash the next section of the car take the wash mitt out of the rinse bucket and squeeze some of the water out.
9. Continue to wash the car using the technique outlined in steps 3-7 until the entire car has been cleaned. If using two wash mitts be sure to switch to the second wash mitt when cleaning the lower half of the car.

Convertible Top Care

Before:



After:



All model years of the Honda S2000 come equipped with a vinyl convertible top. The top is a vinyl weave which gives a very convincing appearance of fabric. However, the top is definitely made of vinyl. The first few model years of the S2000 convertible tops featured a plastic rear window. Later model year convertible tops are equipped with a glass rear window and a rear defroster.

Proper maintenance of your S2000's convertible top will not only make the car look good, but will help to premature top failure. Putting the top up and down puts a good deal of stress on the vinyl material. Uncared for vinyl tops crack, split, or tear much easier than a well cared for top. Replacing the top can cost thousands of dollars whereas a bottle of vinyl protectant which will last an entire year costs \$5-\$20.

Normal maintenance of the top can be performed by simply washing it with car wash soap along with the rest of the car. However, 1-2 times per year you will want to deep clean the top using this procedure. You may also spot clean stains from the top using these techniques.

What you'll need . . .

- **Water** – you'll need a water source with a hose and a spray nozzle attached.
- **Convertible top cleaner** – any cleaner made specifically for cleaning vinyl will work well. The most popular vinyl cleaners include Ragg Topp Convertible Top Cleaner and 303 Convertible Top Cleaner.
- **Brushes** – an upholstery brush or a boar's hair wash brush will work well to clean your top. Tougher stains may require additional elbow grease and the use of an old toothbrush or detailing brush.
- **Microfiber waffle weave towel** – while any type of microfiber towel will work for drying, waffle weave towels are the most absorbent type of microfiber towel. There are many great waffle weave towels available such as the Cobra Ultimate Guzzler and Big Blue II.
- **Convertible top dressing** – any vinyl dressing with UV protection will do a good job protecting and restoring your convertible top. The most popular vinyl dressings include Ragg Topp for Vinyl, 303 Aerospace Protectant, and Vinylex.
- **Dressing applicator** – foam applicators, folded microfiber towels, and sponges all work well to apply vinyl dressing.
- **Microfiber towels** – cheap microfiber towels from a wholesale club like Costco are a great tool for convertible top detailing. They're cheap enough so that you won't mind getting them really dirty, but they are absorbent and soft like more expensive microfiber towels. Make sure they are clean and that all tags have been removed before use.

How to get it done . . .

1. Soak the convertible top with water from your hose. It is important that the top remain wet at all times during cleaning.

2. Spray generous amounts of your convertible top cleaner on the entire top. Try to avoid spraying the paint with any convertible top cleaner. Allow the cleaner to dwell for a minute before proceeding.



3. Scrub the entire top lightly with your upholstery or boar's hair brush. Scrub any tough stains with your toothbrush.



4. Rinse the top thoroughly making sure all cleaner has been rinsed from the top.



5. When drying the rest of your car use the waffle weave microfiber towel to dry the convertible top as well.

6. Apply the vinyl dressing to the top. Never spray the dressing directly on the top. First spray the dressing on your applicator



and then use the applicator to apply the dressing to your top. Allow the dressing to set for about 20 minutes.



7. Thoroughly buff the top with a microfiber towel to remove any excess dressing. Buffing the top well will prevent any run off of dressing onto the paint when the car next gets wet.



Assessing Paint Condition

While it's easy to tell when a car is dirty and needs to be washed, it's not as easy to tell when other parts of the detailing regimen need to be performed. The simple answer is that each step should be performed "as needed." This chapter contains tips & tricks which will assist you in deciding which steps are necessary to perform during each detailing session.

There are many different types of paint issues which can be corrected during a detailing session. The diagram below is a cross section of what average pre-detailed paint looks like. The black blobs on top of the paint represent bonded contaminants and the v-shaped marks in the clear coat paint layer represent scratches. These conditions combine to create an uneven paint surface which produces little to no shine.



Most of the conditions in the diagram above are correctable. Surface contaminants such as bug remnants, tar, & sap can be removed chemically with bug & tar remover or mechanically with detailing clay and scratches can be removed through polishing. After a complete detail, a cross section of your paint would look similar to the diagram below.



Detecting these conditions in your own car's paint is a fairly simple matter. Being able to detect the defects in your car's paint will go a long way in helping you to correct them. Each of the two types of paint defect has a corresponding method of correction.

Bonded contaminants are a more common paint imperfection than most realize and can be found on almost any pre-detailed car including brand new cars which are straight off the truck. Sap, tar, and rail dust are some of the most common types of bonded contaminant you will find on your paint. While bonded contaminants are not always easy to see they are always easy to feel.

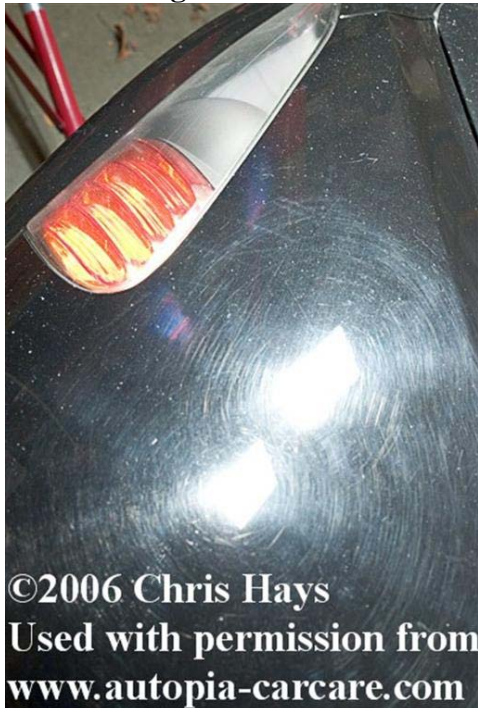
To detect bonded contaminants all you need is some thin plastic preferably plastic wrap or a plastic zip lock bag. **On a clean car**, place the plastic between the paint and your hand. While pressing lightly on the plastic, run your hand over the paint. If you feel bumps on the paint then bonded contaminants are present. In order to remove this type of imperfection, simply treat your paint with detailing clay (see chapter IX). If you

do not feel any bumps, then there are no bonded contaminants and claying is not necessary. Be sure to feel multiple areas of the car. Bonded contaminants are most commonly found on horizontal surfaces.

Scratching is also present on more cars than most realize. Of course, there are varying degrees and type of scratching. When the average car owner thinks of scratching most picture the marks resulting from an accident or when the car is keyed. These types of scratches are often extremely deep. However, there are more subtle types of scratching such as cob webbing (a/k/a spider webbing), swirls, and buffer trails which can even more severely impact the appearance of your car.

To detect these types of scratches, you will need to look at your paint's surface under a strong light. The best light to examine paint under is the sun. Bright sunshine will expose almost all types of paint scratches. If you do not wish bring your car outdoors to examine the paint or are working at night or on an overcast day artificial light can be a powerful tool as well. Fluorescent lights, xenon lights, and halogen lights can all be used to see paint imperfections. It's a good idea to have all three types of light on hand as each light works better with certain colors of paint and certain types of imperfections. Determining the severity or depth of more subtle scratch can be done visually. Expertise in this area will come with experience. In order to remove these types of imperfections, the paint must be polished (see chapter X). However, not all scratches can be polished out. Polishing removes scratches by removing paint around the scratch until the level of the paint is even with the lowest level of the paint. Some scratches penetrate the clear coat deep enough that you would have to remove much or the entire clear coat in order to put the paint level with the bottom of the scratch.

Cob webbing



Buffer trails



Some other common paint imperfections include paint chips and water spots.

Paint chip



Water spots



The only way to repair a paint chip is to use touch up paint and a “blob remover” product like Langka or wet sanding. Paint chip repair is not covered in the *Detailing Hand Book* as the book instead concentrates on how to make your remaining paint look as good as possible.

Water spots are a very common problem for many people. These spots can result from several situations like not drying the car properly, sprinklers, or rain. How to remove the water spots depends upon how hard the water was that caused the spot and the length of time the spot has been on the paint. First try using vinegar, detailing clay, or bug & tar remover to remove the water spots. These can remove the minerals left on your paint by the hard water. If this fails then the water spot may have etched the paint. Removing etched spots will require polishing and some etching may be so deep that it is through the clear coat and can only be repaired by a body shop.

Claying

Before:

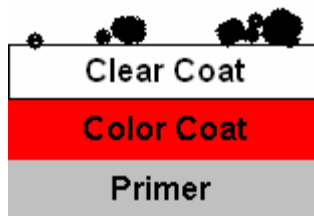


After:



The key to having shiny paint is to create as smooth a surface as possible. Dull looking paint is often the result of an uneven paint surface due to scratching, oxidation, or bonded contaminants. After claying you'll likely only see a difference in the paint when detailing an extremely neglected car. The benefits of clay are much more obvious when feeling the paint surface.

Detailing clay is a powerful tool to use to smooth the paint's surface. Clay was originally used by body shops to remove overspray on the paint's surface. However, it also works to remove environmental fallout and rail dust which are common bonded contaminants.



Clay works similar to a razor by shaving off bonded contaminants from the surface of the paint. Detailing clay is an abrasive substance and is sold in different levels of aggressiveness. However, all detailing clay except aggressive clay when used with enough lubrication is completely safe and will not scratch paint.

When shopping for clay, it is advised that you shop by price. All clay is manufactured in the same factory under the same patent. Aside from color and abrasive level, there is little difference between the different brands of clay.

Claying like washing should be done from the top of your car down. Also, always rub the clay in straight lines preferably matching the direction of airflow over the car. Even if you are planning to polish your car, it is still recommended that you first use clay. Removing the bonded contaminants with the clay first will allow the polish to be more effective at leveling the paint.

Depending upon your local conditions, it should not be necessary to clay your paint more than 1 or 2 times a year.

What you'll need . . .

- **Detailing clay** – only buy detailing clay labeled medium, mild, fine, or ultra-fine. There is rarely any need for a detailer to use aggressive detailing clay. Additionally, aggressive detailing clay even when used with lubrication often leaves marring in the paint.
- **Clay lube** – many car care companies sell dedicated clay lube. However, while clay lube works well, it's not necessary to use a dedicated clay lube. Quick detailer spray works well as clay lube and so does car wash solution or rinseless wash solution. If you wish to use rinseless wash soap or car wash soap as clay lube, then simply mix them with water in a spray bottle. Using a spray bottle makes it easier to disperse

your clay lube. Also, keep in mind if you use car wash solution for clay lube then you will need to rinse your car afterward to remove any soap residue.

- **Microfiber waffle weave towel** – while any type of microfiber towel will work for claying, waffle weave towels are the most absorbent type of microfiber towel. There are many great waffle weave towels available such as the Cobra Ultimate Guzzler and Big Blue II.

How to get it done . . .

1. Before starting to clay be sure that the paint surface is clean. Prior to claying the paint should always either be washed or quick detailed. If you have washed the car prior to claying do not dry the car. The rinse water from washing left on the surface of the car will provide extra lubrication
2. Cut your clay bar into 3-4 pieces. If you should drop your piece of clay on the ground, you must throw this piece away. Cutting the clay into multiple pieces will prevent you from dropping your entire clay supply at once and will make the clay easier to handle.
3. Spray the panel generously with your clay lube of choice.
4. Mold the clay into a ball and then flatten it in between your hands into the shape of a pancake.



5. While holding the clay in your fingers, rub the clay over the surface of the paint until it glides effortlessly over the paint. It is only necessary to apply minimal downward pressure to the clay.



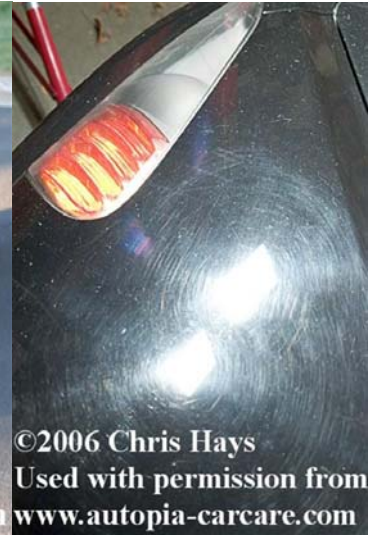
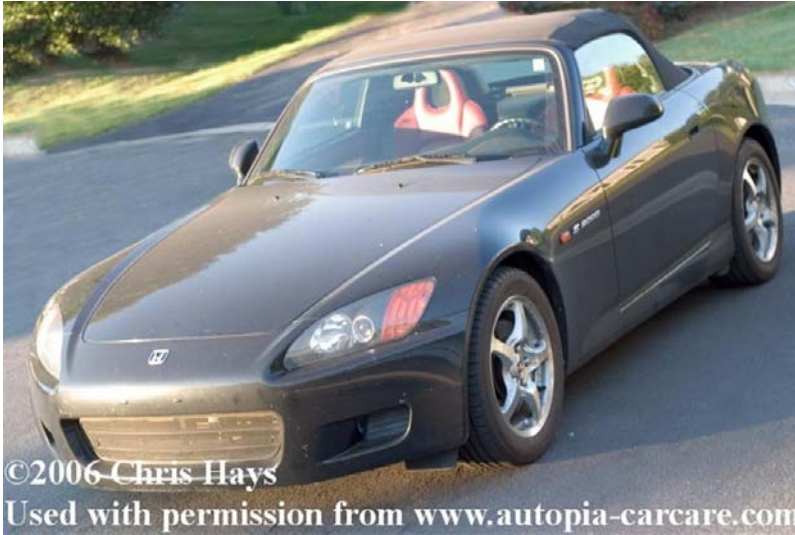
6. After claying an area check to see how dirty the clay has become. If a significant amount of contaminants has been picked up by the clay, fold and remold the clay to expose a clean surface. If any large particles have been picked up by the clay pick them out with your fingers before folding and re-molding the clay.



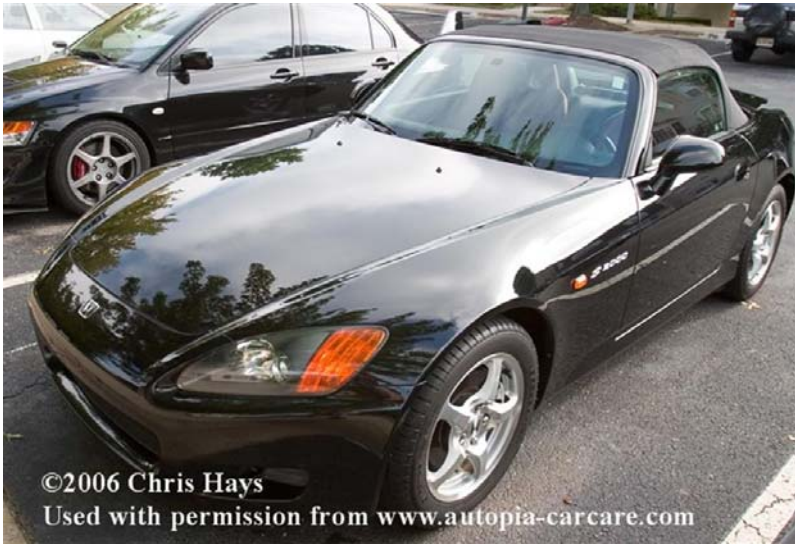
7. Dry the panel with your waffle weave towel.

Polishing/Defect Removal

Before:

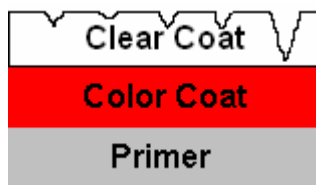


After:



Polishing will add more shine to your paint than any other step in the detailing process. Basically, polishing will level your paint by thinning the paint a small amount. The now flat surface will appear much glossier and wetter than prior to polishing.

Polishing will also remove defects from the paint such as scratches, swirls, water spots, etc. The polish accomplishes this by removing paint until the surface is level with the lowest point of the defect thus establishing a flat surface. Keep in mind that while all defects *can* be removed through the use of a polish not all defects *should* be removed. Some defects such as the scratch pictured farthest right in the below diagram are very deep. Bringing the surface level of the paint to the lowest level of the defect would leave little to no clear coat on the car.



A good rule of thumb to follow is that if a scratch catches your fingernail then it's likely too deep to remove. Polishing the scratched area is still recommended. However, do so with the idea that you are attempting to make the defect less noticeable and not trying to remove it.

Unfortunately, the term “polish” is not used in the same way universally across all car care brands. So, be sure to check the definition of the term “polish” in the glossary.

There are two ways to apply polish: by hand and by machine.

While you can polish a car by hand effectively with a product designed for hand application like Meguiar's Scratch-X, defect removal is a very labor intensive process when done by hand. Additionally, polishing by hand is less effective and may only remove a defect 80% while machine polishing may remove 90%-100% of the defect.

Polishing by machine is the most effective and time efficient method. Machine polishing will remove more defects than hand polishing is capable of performing due to the amount of heat the machine can develop due to friction.

There are two types of polishing machine: the random orbit polisher and the rotary buffer.

The pad on a random orbit (R/O) a/k/a “dual action” polisher not only spins on an axis but also jiggles around the axis. This results in the pad not remaining in the same spot for too long and therefore there is less chance for heat to build up. This makes the R/O slower at removing paint, but also safer and easier to use. The learning curve with an R/O is very steep and people with little experience can become skilled quickly. The most popular and most versatile of the R/O polishers is the Porter Cable 7336SP/7424/G100.

The PC is more powerful and more versatile than other less expensive R/Os and therefore the most popular.

The pad on a rotary buffer simply spins in a circle around an axis. This creates a great deal of heat through friction and therefore removes paint faster than the R/O. The rotary buffer removes defects faster and more efficiently than the R/O. However, in untrained hands the rotary can burn paint or create buffer trails in the paint.

There are two types of polish available: abrasive and chemical.

Abrasive polishes work similar to sand paper by scouring the paint mechanically. Also like sand paper, abrasive polishes come in different levels of abrasiveness. These abrasive levels are often referred to using various terms such as compound, finishing polish, and medium cut polish. Most modern abrasive polishes feature diminishing abrasive particles which break down during use to prevent excessive amounts of paint removal and to leave the paint surface as smooth as possible. It is often necessary in order to get the best result to “step down” polishes. This involves starting with a more abrasive polish to remove paint defects and then to polish the car again with a finishing polish to “jewel” the finish and to remove any remaining fine defects. Abrasive polishes work best for removing paint defects, but also can remove oxidized paint.

Chemical polishes contain no abrasives at all and work similar to a solvent by chemically dissolving oxidized paint. Typically a chemical polish excels at removing oxidized paint (and also polishing metal) because it is formulated to chemically break down and remove the oxidation. Chemical polishes are often referred to as “paint cleaners” or “pre-wax cleaners.” They are excellent for use on oxidized finishes and for simply removing old wax. Chemical polishes can be used to remove paint defects but are less effective than abrasive polishes because the chemical polish completely depends on the abrasiveness of the foam pad to remove the paint around the defect. Chemical polishes are best used on paint with little to no defects.

It is important to note that the amount of abrasion the polishing process has is a product of the combined abrasiveness of the pad and the polish.

It will vary based on several factors, but you should not need to polish your car’s paint more than 2-3 times per year. You may need to “spot polish” on occasion to remove defects which are only found in a small area of the paint. Keep in mind when you are polishing that you are removing paint. If you penetrate the clear coat then your car will need to be repainted.

What you’ll need . . .

- **Shade** – Most polishes are not designed to be used in direct sunlight. Therefore, it is important to find a shady spot to work in. This can be under a car port, a canopy, or in a garage. It is not recommended that you detail under a tree as sap, leaves, pollen, or other debris could fall on your car during the detail.

- **Tarp** – when machine polishing it is common to have polish spray from the pad onto other parts of the car. In order to minimize clean up, it is highly suggested that you cover your convertible top with either a plastic tarp or an old bed sheet.
- **Porter Cable R/O polisher** – Either model G100, 7424, or 7336SP work well. In fact, all three models are virtually the same machine. The only difference is the counterweight and most cannot tell the difference between the two. The 7424 and G100 come with a 5” counterweight and the 7336SP comes with a 6” counterweight.
- **5”-6” backing plate** – You’ll need an appropriate size backing plate to mate the PC with the foam pads. The diameter of the backing plate should be at least ½” less than the diameter of the pads being used to prevent the backing plate from touching the car.
- **6.5” foam buffer pads** – A variety of pads may be needed to polish your paint. It’s best to have on hand at least (1) cutting pad, (1) light cutting pad, (2) polishing pads, and (1) finishing pad. If you have at least these pads you should be equipped to handle most paint conditions.
- **Polish** – Depending on the condition of your paint you may need to use 1-2 different levels of polish. You will certainly need a finishing polish (ex. Menzerna FPII or Poorboy’s SSR1), but there may also be a need for a medium cut (ex. Menzerna Intensive Polish or Poorboy’s SSR2.5) or heavy cut polish (ex. Menzerna Power Gloss or Poorboy’s SSR3). The more aggressive the polish the more severe paint imperfections it will be able to remove. If the paint has little to no defects try a chemical polish like Poorboy’s Pro Polish.
- **Microfiber towels** – high quality microfiber towels are critical for polish residue removal. After a long day detailing you don’t want to use a cheap towel which will undo all of your hard work by instilling scratches in your paint. To test the “softness” of a microfiber simply rub it *gently* on a blank CD making sure to use both the center of the towel and the edging. If the towel leaves scratches then it could possibly scratch your paint. Always be sure before testing a new towel or using it on your paint that it is clean and that any tags have been removed. One last item to note is that microfiber towels with a shorter knap will remove polish residue faster than towels with a deeper knap, but will also clog with residue faster.

How to get it done . . .

1. Before beginning to polish make sure the car is completely clean and dry. Always wash or QD a car *immediately* before polishing. The car cannot be driven in between washing and polishing.
2. Cover as much of the convertible top as possible with your plastic tarp or old bed sheet.

3. Begin by testing combinations of pads and polishes on an inconspicuous area of the car (see steps 4-10 for polish use instructions). If the paint is simply lacking some gloss then a finishing polish and a polishing pad may do the trick. Start with this combination and work down toward your most aggressive combination (heavy cut polish with a cutting pad) until you find the polish/pad combination which will remove the defects from your paint. Be sure to use a strong light or even sunlight to check the test results.



4. Once you have found the polish & pad combination which will remove the defects in the paint, you will need to polish the rest of the car. Apply a ring of the polish to the foam pad along the outer edge of the pad's bottom.



5. **With the machine turned off**, spread the polish onto your working area. Your working area will consist of a 16" x 16" section of paint preferably bordered by a character line or panel gap.



6. Turn the PC speed dial to setting five (you can also use speed 6, but keep a careful eye on your foam pad as heat may build up causing the Velcro backing to delaminate).

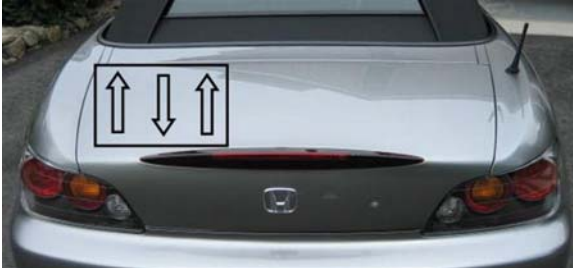
7. With the pad flat against the surface of the paint, turn on the machine.



8. Move the machine very slowly across the surface of the paint while applying approximately 5-15 lbs. of downward pressure. First move the machine in a back and forth motion



and then follow with an up and down motion.



Whether moving the machine up and down or side to side be sure to overlap your passes by 50%.

9. Continue repeating step #7 until the polish residue has turned clear. Once this occurs, while keeping the pad flat on the paint's surface, turn the machine off.

10. Using a clean microfiber towel gently wipe the remaining polish residue from the paint. If the polish residue is difficult to remove spray the area with some water or quick detailer spray. Do not rub harder as this could create scratching in the paint.



11. Repeat steps 4-10 until all paint on the car has been polished.
12. If you have used either a medium cut or heavy cut polish to this point then repeat steps 3-10 using a finishing polish on a polishing or finishing pad. This will instill a high gloss shine in the paint.

Waxing/Sealing

Before:



After:



Waxing/sealing the paint is one of the most important parts of the detailing process. After spending countless hours polishing your car's paint, you'll definitely want to protect it with a wax or sealant. Not only is the LSP a layer of protection for your paint, but it also provides the "lens" through which you see your paint. So, it will affect the look of the paint.

Choosing your LSP like many detailing decisions is a matter of personal preference. Your options for this decision are wax, sealant, or both.

A wax will typically give your paint a very warm appearance. It will also make metal flake in the paint really "pop" and give the paint an extremely wet, deep shine. Waxes also have filling capability. So, using a wax can help to hide paint imperfections. However, depending on climate waxes do not typically last more than 1-3 months.

Most sealants will give your paint an almost lacquered look. Sealants like waxes will give your paint a very wet look and typically leave the paint surface feeling ultra smooth. Another property of sealants is that they make the paint surface ultra-reflective. However, these reflections typically lack depth. Also, most sealants do not fill well. So, some paint imperfections may stand out more after a sealant is applied. Sealants are also much more durable than wax. Many brands of sealant will last up to 5 months or more.

Using a layer of sealant topped by a layer of wax is a common practice and makes for a good compromise between the two LSPs. Using both a wax and a sealant gives the durability of the sealant combined with additional depth of shine from the wax.

What you'll need . . .

Shade – Most waxes/sealants are not designed to be used in direct sunlight. Therefore, it is important to find a shady spot to apply your LSP. This can be under a car port, a canopy, or in a garage. It is not recommended that you detail under a tree as sap, leaves, pollen, or other debris could fall on your car during the detail.

- **Wax/Sealant** – your choice of wax or sealant. There really are quite a few excellent waxes & sealants available either at your local auto parts store or on-line. Just to mention a few there is Meguiar's #26 Yellow Wax, Detailer's Pride Max Wax, Pinnacle Souveran, Zymöl Concours, Wolfgang Deep Gloss Paint Sealant, and Menzerna Full Molecular Jacket (FMJ).
- **Applicator** – your choice of applicator. There are many tools which can be used for wax/sealant application. Application can be done using a foam wax applicator, a microfiber applicator, or a folded microfiber towel. Paste wax is typically easiest to apply using a foam applicator and liquids are easiest to apply with the other types of applicator mentioned.
- **Microfiber towels** – high quality microfiber towels are critical for wax residue removal. After a long day detailing you don't want to use a cheap towel which will undo all of your hard work by instilling scratches in your paint. To test the "softness" of a microfiber simply rub it *gently* on a blank CD making sure to use both the center of the towel and the edging. If the towel leaves scratches then it could possibly scratch your paint. Always be sure before testing a new towel or using it on your

paint that it is clean and that any tags have been removed. One last item to note is that microfiber towels with a shorter knap will remove wax or sealant residue faster than towels with a deeper knap, but will also clog with residue faster.

How to get it done . . .

1. Make sure the car is completely clean and dry before beginning. Always wash or QD a car *immediately* before waxing. If the car was washed and then polished there is no need to wash again before waxing. The car cannot be driven in between waxing/sealing and washing.
2. Apply some of the LSP to your applicator. Using the applicator spread the LSP thinly across the paint of one panel or half of a large panel.



3. Consult the product's directions for how much time the LSP needs to setup. Then allow the LSP to set for the prescribed amount of time.
4. Using a microfiber towel folded in half twice and minimal pressure wipe away the excess LSP from the paint. Any wax that is difficult to remove should be sprayed with QD or distilled water rather than using extra pressure to remove it.



5. If you desire to add more than one layer of LSP wait 12-24 hours before doing so. Follow steps 1-4 to add additional layers. If you are using both a sealant and a wax always be sure to apply the sealant first, then wait 12-24 hours for the sealant to cure, and then apply the wax.

Head Light Care/Restoration

Before:



After:



Over time your S2000's headlights may "fog." If you do not properly care for your headlights, this condition will occur faster. This "fogging" can impact the performance of your headlights. Properly caring for your headlights will allow them to function better and therefore enable you to see better at night. Plus, your car will look much better with properly detailed lights.

You should only need to polish your headlights at most once per year. However, you should seal them every time you wax or seal the rest of your car.

What you'll need . . .

- **Shade** – Most polishes are not designed to be used in direct sunlight. Therefore, it is important to find a shady spot to work in. This can be under a car port, a canopy, or in a garage. It is not recommended that you detail under a tree as sap, leaves, pollen, or other debris could fall on your car during the detail.
- **Porter Cable R/O polisher** – Either model 7424 or 7336SP work well. In fact, both models are virtually the same machine. The only difference is the counterweight and most cannot tell the difference between the two. The 7424 comes with a 5" counterweight and the 7336SP comes with a 6" counterweight.
- **3" backing plate** – You'll need an appropriate size backing plate to mate the PC with the foam pads. The diameter of the backing plate should be at least an inch less than the diameter of the pads being used.
- **4" foam buffer pads** – A variety of pads may be needed to restore headlights. It's best to have on hand (1) cutting pad, (1) light cutting pad, and (2) polishing pads. Be very careful with 4" pads. The smaller size of this pad allows it to generate more heat than a larger pad. It is much easier to burn the surface of your car with a 4" pad.
- **Polish** – Depending on the condition of your headlights you may need to use 1-2 different levels of polish. You will certainly need a finishing polish (ex. Menzerna FPII or Poorboy's SSR1), but there may also be a need for a medium cut (ex. Menzerna Intensive Polish or Poorboy's SSR2.5) or heavy cut polish (ex. Menzerna Power Gloss or Poorboy's SSR3). You can also try using a chemical polish like Poorboy's Pro Polish.
- **Plastic Sealant** – Your choice of sealant. Once you've gone through the effort of restoring your headlights, you'll want to seal them to protect the work you've done. There are products made specifically to protect plastic like Plexus and Wolfgang Plastik Sealant, but paint sealants like Menzerna FMJ and Wolfgang work equally as well.
- **Applicator** – your choice of applicator. There are many tools which can be used for wax/sealant application. Application can be done using a foam wax applicator, a microfiber applicator, or a folded microfiber towel. Paste wax is typically easiest to apply using a foam applicator and liquids are easiest to apply with the other types of applicator mentioned.
- **Microfiber towels** – high quality microfiber towels are critical for polish & wax residue removal. After a long day detailing you don't want to use a cheap towel which will undo all of your hard work by instilling scratches in your headlight's surface. To test the "softness" of a microfiber simply rub it *gently* on a blank CD making sure to use both the center of the towel and the edging. If the towel leaves

scratches then it could possibly scratch your paint. Always be sure before testing a new towel or using it on your paint that it is clean and that any tags have been removed. One last item to note is that microfiber towels with a shorter knap will remove residue faster than towels with a deeper knap, but will also clog with residue faster.

How to get it done . . .

1. Before beginning to polish make sure the headlights are completely clean and dry. If you are only going to be working on the headlights then a quick cleaning with a micro fiber towel and a quick detailer like Meguiar's Quick Detailer or Poorboy's Spray & Wipe will suffice.
2. Begin by testing combinations of pads and polishes on one of the headlights. If the plastic is simply lacking some gloss then a finishing polish and a polishing pad may do the trick. Start with this combination and work down toward your most aggressive combination (heavy cut polish with a cutting pad) until you find the polish/pad combination which will remove the defects from your plastic.
3. Once you have found the polish & pad combination which will remove the defects in the headlight, apply about a nickel size blob of the polish to the foam pad.
4. With the machine turned off, spread the polish onto the entire headlight.
5. Turn the PC speed dial to setting five.
6. With the pad flat against the surface of the headlight, turn on the machine.



7. Move the machine very slowly across the surface of the headlight (about 1" per second). First move the machine in a back and forth motion



and then follow with an up and down motion.



8. Continue repeating step #7 until the polish residue has turned clear. Once this occurs, while keeping the pad flat on the headlight's surface, turn the machine off.
9. Using a clean microfiber towel gently wipe the remaining polish residue from the headlight.
10. If you have used either a medium cut or heavy cut polish to this point then repeat steps 3-9 using a finishing polish and a polishing pad. This will instill a high gloss shine in the plastic.
11. Apply a pea size blob of your chosen plastic sealant to your applicator. Then apply the sealant to the headlight. If you're using a spray on sealant like Plexus then an applicator is not necessary.
12. Allow the sealant to setup for the amount of time specified in the product's instructions.
13. Remove any sealant residue with a clean microfiber towel.

Exterior Trim Care

Before:



After:



Dirty or dried out exterior rubber/plastic can really stand out on a well detailed car. Plastic/rubber exterior trim if left uncared for can quickly dry out and rot and/or crack. Luckily, aside from the tires the Honda S2000 has little exterior plastic/rubber trim. The few exterior plastic/rubber pieces on the S2000 include the front grill, window trim, soft top trim, and rubber seals. Of these areas the rubber seals are the most functionally important as they help to keep water from entering the interior of the car.

The black surface on the windshield surround is also part of the exterior plastic/rubber trim. This area is actually coated with a vinyl sticker. It is best to treat this area the same as paint and should be polished and waxed/sealed along with the rest of the car.

There are many factors which determine how often you need to care for your exterior plastic/rubber. However, you shouldn't need to follow the steps in this chapter more than 1-2 times per month.

What you'll need . . .

- **Shade** – Most car care products are not designed to be used in direct sunlight. Dressing rubber/plastic in the hot sun can often result in streaky and splotchy finishes. Therefore, it is important to find a shady spot to work in. This can be under a car port, a canopy, or in a garage. It is not recommended that you detail under a tree as sap, leaves, pollen, or other debris could fall on your car during the detail.
- **Applicators** – a few different types of applicator can be used to apply dressing. A folded towel works well, but so do foam applicators, microfiber/terry cloth covered applicators, and foam paint brushes. Foam paint brushes work particularly well on small areas of trim because their small tip gives you more control on where the dressing is applied. Whatever type of applicator you use make sure it is clean before use.
- **Rubber/plastic dressing** – your choice of rubber/plastic dressing. There are many good dressings available including popular choices like Vinylex, 303 Aerospace Protectant, and Meguiar's #40. However, these dressings are water based and will likely wash away during the first rain. Dressings designed specifically for exterior use will last longer. Some of these exterior dressings include Poorboy's Trim Restorer, Meguiar's #38, and Black Again. For the rubber convertible top seals use a dressing specifically designed for soft seals such as Zymöl Seal or Shin-Etsu Grease.
- **Microfiber towels** – cheap microfiber towels from a wholesale club like Costco are a great tool for removing excess dressing. They're cheap enough so that you won't mind getting them really dirty, but they are absorbent and soft like more expensive microfiber towels. Make sure they are clean and that all tags have been removed before use.

How to get it done . . .

1. Wash & dry all exterior trim along with the rest of the car.

2. Apply your dressing to the applicator.



3. Using the applicator apply the dressing liberally to the trim.



4. Allow the dressing to soak in for 2-3 minutes (10 minutes for soft seals).
5. Thoroughly wipe away any excess dressing using a microfiber towel.
6. For extra glossy trim add a second coat of dressing by following steps 2-5 a second time.

Exhaust Tip Care

Before:



After:



Aside from the wheels, there are very few flashy accents that come with the S2000 straight out of the factory. Really, the exhaust tips are the only other exterior accent piece. Exhaust tips are often ignored by many amateur and “professional” detailers, but well detailed exhaust tips will enhance immeasurably the view most other drivers see of the S2000 . . . the rear!

You shouldn’t need to follow all remove your exhaust tips to detail them more than 1-2 times per year. However, you should wash your exhaust tips each time you wash your car. Lightly polishing your exhaust tips should also be done once per month or every other month.

What you’ll need . . .

- **Socket set** – It’s easiest to detail the exhaust tips if you remove them from the car. They are attached with a single screw on the bottom side of the tips. If you have an older car the screw may be rusted in place and you may not be able to remove the exhaust tips without damaging the mounting system. If this is the case then you should detail them while they’re still mounted.
- **Water** – you’ll need approximately 4 gallons of water preferably warm or hot water.
- **5 gallon bucket** – be sure to use a bucket which you are not going to use for car washing. Detailing exhaust tips often leaves a good deal of tar residue in the bucket which could enter the wash solution and be harmful to the LSP or paint.
- **Old wash mitt or towel** – use an old wash mitt or towel to detail your exhaust tips as the mitt/towel will likely end up very dirty and stained.
- **Soap** – the same car wash soap that is used to wash your paint can be used to clean your exhaust tips. However, if your tips have a lot of road tar on them then you may want to use dishwashing soap.
- **Metal polish** – a good quality metal polish like Flitz or Meguiar’s All Metal Polysh will not only restore shine to your exhaust tips, but will also protect them.
- **Microfiber Towels** – cheap microfiber towels from a wholesale club like Costco are a great tool for exhaust tip detailing. They’re cheap enough so that you won’t mind getting them really dirty, but they are absorbent and soft like more expensive microfiber towels. Make sure they are clean and that all tags have been removed before use.

How to get it done . . .

1. If possible use your socket set to remove the exhaust tips from the car.
2. Clean the exhaust tips.
 - a. If you have removed the tips . . .
 - i. Soak them in a bucket of hot water and dishwashing soap for 15 minutes.
 - ii. Scrub the tips with your wash mitt, a brush, or towel to remove any debris.
 - iii. Soak the tips again in the wash solution for 10-15 minutes. Leave them in longer if a good deal of tar & dirt remains on the tips.
 - iv. Scrub the tips again if necessary.
 - v. Rinse the tips with fresh water.

- vi. Dry the tips with a microfiber towel.
- b. If you have not removed the tips . . .
 - i. Use left over car wash solution from when you washed the car and an old wash mitt to wash the tips as thoroughly as possible.
 - ii. Dry the tips with a microfiber towel.



- 3. Fold a microfiber towel in half twice to use as an applicator.
- 4. Apply metal polish to one side of the towel.
- 5. Scrub the exhaust tips with the metal polish until the polish turns black and you can see the shine of the metal peeking out from behind the polish. Add more polish to the towel as necessary.



- 6. Remove the polish residue with a clean microfiber towel.



Glass Cleaning

Before:



After:



Dirty, poorly maintained auto glass is not only unsightly but also a safety hazard. A dirty windshield can obscure your vision when driving and will not repel rain water effectively. On the other hand, a clean well detailed windshield can be as shiny and reflective as paint.

Polishing your windshield will go a long way to giving you clear sparkling glass. This can be done by machine or by hand, but machine polishing will require less effort. Polishing will remove unsightly water spots, make scratches & pits less noticeable, and will remove “wiper frame” (the stained area on your windshield that the wipers do not clean). While you can also polish your side glass and glass rear window, it’s not really necessary as these pieces of glass are not exposed to anywhere near the same amount of abuse as the windshield.

It should not be necessary to polish your windshield more than once per year in order to keep it clear and shiny. However, you should wash & dry all exterior glass each time you wash your car and clean the inside of the glass with glass cleaner with the same frequency.

During the process of cleaning your windshield you will put the wipers in the raised position. **Remember not to open your hood while the wipers are in the raised position.**

What you’ll need . . .

- **Shade** – Most car care products are not designed to be used in direct sunlight. Therefore, it is important to find a shady spot to work in. This can be under a car port, a canopy, or in a garage. It is not recommended that you detail under a tree as sap, leaves, pollen, or other debris could fall on your car during the detail.
- **Microfiber towels** – cheap microfiber towels from a wholesale club like Costco are a great tool for removing excess glass polish. They’re cheap enough so that you won’t mind getting them really dirty, but they are absorbent and soft like more expensive microfiber towels. Make sure they are clean and that all tags have been removed before use.
- **Tarp** – when machine polishing it is common to have polish spray from the pad onto other parts of the car. In order to minimize clean up, it is highly suggested that you cover your convertible top with either a plastic tarp or an old bed sheet.
- **Porter Cable R/O polisher** – Either model G100, 7424, or 7336SP work well. In fact, both models are virtually the same machine. The only difference is the counterweight and most cannot tell the difference between the two. The 7424 and G100 come with a 5” counterweight and the 7336SP comes with a 6” counterweight.
- **5”-6” backing plate** – you’ll need an appropriate size backing plate to mate the PC with the foam pads. The diameter of the backing plate should be at least ½” less than the diameter of the pads being used to prevent the backing plate from touching the car.
- **6.5” foam buffer pads** – typically speaking to polish glass all you’ll need is a cutting pad. A 6.5” pad is large enough to polish the windshield quickly, but small enough to allow the PC’s motor to work effectively.

- **Glass polish** – dedicated glass polishes like Autoglym Glass Polish and Detailer’s Pride High Performance Glass Restorer work best. However, paint polishes like Meguiar’s #2 and Poorboy’s SSR2.5 can also be used to polish glass.
- **Glass Cleaner** – house hold glass cleaners such as Windex are not formulated to clean some of the conditions found in the automotive environment like “vinyl fog” and many contain ammonia which can damage window tint. Therefore, it is best to use a dedicated automotive glass cleaner like Sprayway Glass Cleaner, Meguiar’s NXT Glass Cleaner, Eagle One 20/20, or Detailer’s Pride Krystal Vision Glass Cleaner.
- **Waffle weave microfiber towels** – high quality waffle weave microfiber towels work extremely well for glass cleaning. Most waffle weave towels are marketed for car drying so some are too big making them awkward for glass cleaning. So, make sure when buying your waffle weave that it is small enough to hold in one hand when folded in quarters. It is not advised that you use paper towels, shop towels, or cotton towels to clean your glass as these types of towel can leave lint or particles on the glass. Other types of microfiber towel are effective alternatives to the waffle weave and so is newspaper. However, cleaning glass with newspaper can often leave ink stains on your hands. So, if you choose to use newspaper wear rubber gloves to keep the ink off your hands.
- **Rain-X** – coating your windows with Rain-X or another water repellent coating meant for glass will increase many fold your vision when it is raining and make your windshield wipers much more effective. Water will literally fly off your windshield. As an alternative to a dedicated water repellent glass coating, many use a sealant on their glass. This has nearly the same effect, but has been known to cause the window to fog in some weather conditions. It is not recommended that you wax your glass as wax is not as transparent (a/k/a “optically true”) as sealants.
- **Distilled water** – distilled water in a spray bottle is very helpful to have on hand during the Rain-X application process. Distilled water is different from tap water or bottled water in that it contains no vitamins, minerals, or additives. Distilled water is simply pure water. It can be found in your local grocery store in the aisle with bottled water and is very inexpensive.

How to get it done . . .

1. Make sure your car’s glass is cool to the touch before beginning. Hot glass can cause your products to dry/evaporate too quickly making them less effective.

- Put your windshield wipers in the upright position so that you can clean/polish all the glass.



Make sure your glass is clean. You can either . . .

- Wash & dry your car's glass along with the rest of the car.
- Spray the glass liberally with glass cleaner and then wipe it down with a waffle weave microfiber towel.

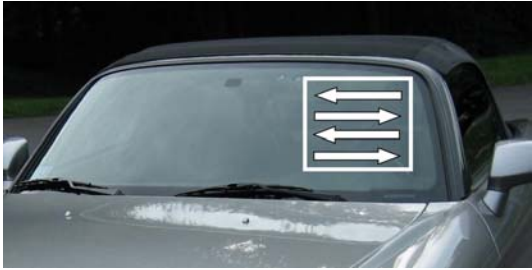


- Apply a drop of polish about the size of a nickel to the foam pad near the outer edge of the pad's bottom.
- With the machine turned off, spread the polish onto your working area. Your working area will consist of a 16" x 16" section of glass.



- Turn the PC speed dial to setting five (you can also use speed 6, but keep a careful eye on your foam pad as heat may build up causing the Velcro backing to delaminate).
- With the pad flat against the surface of the paint, turn on the machine.

7. Move the machine very slowly across the surface of the glass while applying approximately 5-15 lbs. of downward pressure. First move the machine in a back and forth motion



and then follow with an up and down motion.



Whether moving the machine up and down or side to side be sure to overlap your passes by 50%.

8. Continue repeating step #8 until the polish residue has turned clear. Once this occurs, while keeping the pad flat on the glass, turn the machine off.
9. Using a clean microfiber towel gently wipe the remaining polish residue from the glass. If the polish residue is difficult to remove spray the area with some water or glass cleaner.
10. Spray a liberal amount of Rain-X onto one side of a cheap microfiber towel which has been folded into quarters.



11. Using the folded towel apply the Rain-X to all glass on your car using a circular motion. Spray more Rain-X on the towel as necessary.



12. Allow the Rain-X to haze.
13. Reapply the Rain-X in the same manner as described in steps 10-12 to insure adequate coverage.
14. Mist the glass with distilled water.



15. Wipe the glass with a waffle weave microfiber towel until all Rain-X haze is gone.



Leather Care

Before:



After:



The leather interior of the Honda S2000 is quite comfortable. However, leather is a rather delicate material and it must be cared for in order to maintain its appearance and suppleness.

Leather which has not been properly cared for can fade, harden, crack, and even tear. The leather in the S2000 takes a particularly bad beating from the sun when the top is lowered. Leather can also be soiled by body oils particularly those from sweat. Examining your steering wheel will undoubtedly show that the places where your hands normally sit are the dirtiest.

The leather areas on the S2000 include . . .

- Seats
- Door inserts
- Steering wheel
- Shift boot (MY 04+)
- Shift knob (MY 04+)
- Arm rest
- Emergency brake handle

There are many leather care products to choose from. All in one (cleaner & conditioner) products tend not to work as well as separate cleaner & conditioner products.

Additionally, many people maintain their leather with products designed for use on vinyl/rubber (ex. 303 Aerospace Protectant, Armor All, etc). While these products provide UV protection they often leave leather slick & glossy. Also, these products lack the essential conditioning oils which keep your leather supple. In the end, it's better to use products intended only for leather.

Always take great care when dealing with leather. Leather can easily be scratched or even torn. Additionally, leather has a top coat which contains the dye. Essentially, you should treat leather gently like a painted surface because if the top coat is removed the repair will need to be done by a leather shop.

Leather cleaning should be done as necessary. Some leather parts like the steering wheel may need to be cleaned more often due to their constant contact with your skin. Leather conditioning should be done once per month depending on climatic and other conditions.

What you'll need . . .

- **Shade** – Most car care products are not designed to be used in direct sunlight. Using leather products in a hot interior can often cause the product to dry prematurely resulting in a streaky or blotchy finish. Therefore, it is important to find a shady spot to work in. This can be under a car port, a canopy, or in a garage. Sometimes even just putting the top up will provide enough shade to work on the interior. It is not recommended that you detail under a tree as sap, leaves, pollen, or other debris could fall on your car during the detail.
- **Vacuum** – a 5hp+ shop vacuum is a detailer's best friend. However, a household vacuum with a hose and attachments will suffice as well. The most useful attachment

to use when simply vacuuming is the crevice attachment. The crevice attachment works well in all areas not just in tight areas.

- **Microfiber towels** – cheap microfiber towels from a wholesale club like Costco are a great tool for leather care. They're cheap enough so that you won't mind getting them really dirty, but they are absorbent and soft like more expensive microfiber towels. Make sure they are clean and that all tags have been removed before use.
- **Scrubber** – dusty or lightly dirty leather can often be cleaned using only a microfiber towel. However, dirtier leather may require the use of an interior brush, an old toothbrush, or even a Mr. Clean Magic Eraser. Use a brush on mildly dirty leather and a Mr. Clean Magic Eraser on very dirty leather. When using a scrubber do so extremely gently. Never scrub leather with a lot of elbow grease as you may remove the top coat.
- **Leather cleaner** – your choice of leather cleaner. Some popular leather cleaners include Lexol, Zymol, Townsends, Leatherique, and Meguiar's Aloe Leather Cleaner.
- **Leather conditioner** – your choice of leather conditioner. Some popular leather conditioners include Lexol, Zymol, Townsends, Leatherique, and Meguiar's Aloe Leather Conditioner.

How to get it done . . .

1. Before beginning to work make sure the interior leather is cool to the touch.
2. Vacuum up any loose dirt from the seats. Spread open any pleats in the leather with your hand as you vacuum to insure all dirt is collected by the vacuum.



3. Spray a liberal amount of leather cleaner directly onto the larger leather surfaces. For smaller leather surfaces like the steering wheel and shift knob it's less messy to spray the cleaner onto your scrubber.



4. Gently agitate the cleaner with your scrubber.



5. Wipe down the seats with a damp microfiber towel. If you can dampen your towel with warm water that will help to lift any remaining dirt out of the leather.
6. Apply your leather conditioner to one side of a microfiber towel folded in quarters (or an applicator).
7. Using the folded towel (or applicator) add a light coat of leather conditioner to the leather's surface. Add more product to the towel as necessary and massage the conditioner in as much as possible.



8. Allow the leather to absorb the conditioner for a few moments.
9. Wipe off any excess leather conditioner with a clean microfiber towel.



Upholstery Cleaning

Before:



After:



S2000 owners spend more time inside their cars than outside them. However, not everyone takes the time to properly detail the interior. The upholstery makes up almost half the surfaces of the interior and detailing it can have a large visual impact on the overall interior.

The upholstery in the S2000 takes a lot of beating not only from the sun, but from dirt, spills, and normal wear and tear. Having the top down constantly really contributes to dirt getting inside the car. Taking the time to care for your car's upholstery will keep it looking like new.

You should vacuum your carpets each time you wash your car. With the exception of the need for stain removal, deep cleaning the upholstery only needs to be performed no more than every 4-6 months.

What you'll need . . .

- **Shade** – Most car care products are not designed to be used in direct sunlight. Therefore, it is important to find a shady spot to work in. This can be under a car port, a canopy, or in a garage. Sometimes even just putting the top up will provide enough shade to work on the interior. It is not recommended that you detail under a tree as sap, leaves, pollen, or other debris could fall on your car during the detail.
- **Upholstery brush** – cleaning carpet often requires a lot scrubbing. Try out several upholstery brushes until you find one that you can hold comfortably.
- **5 gallon bucket** – fill a clean bucket with several gallons of warm water.
- **Carpet cleaner** – your choice of carpet cleaner. Some popular choices include Folex, Meguiar's APC, Oxy Clean, and Detailer's Pride Carpet & Upholstery cleaner. Carpet cleaners intended for home use work well too, but be careful to choose a carpet cleaner that does not contain bleaches or that will leave a residue on the carpet fibers.
- **Wet/dry vacuum** – a 5hp+ shop vacuum is a detailer's best friend. It's important that you have a wet/dry vacuum when cleaning upholstery as it can speed up the drying process quite a bit.
- **Fabric Guard** – once you've gone to the trouble of cleaning your upholstery you'll want to protect it from staining or fading in the future. 303 High Tech Fabric Guard is a popular choice.

How to get it done . . .

1. Pull the floor mats from the car so that the carpeting underneath them can be cleaned. The floor mats should also be cleaned using the same techniques.

2. Vacuum up any loose dirt from the upholstery & mats. It may be necessary to use a brush or a butter knife to lift the nap of the carpet to insure all dirt is collected by the vacuum. Also, don't forget to vacuum under and around the seats. You may want to move the seats forward and backward to clean as much of the carpet as possible.



3. Spray liberal amounts of carpet cleaner on all the carpeted surfaces. Spray extra amounts of cleaner on any noticeable stains.



4. Dip your upholstery brush in the bucket of warm water.
5. Scrub the upholstery with the brush in multiple directions. You can scrub side to side, up & down, and even in a circular pattern. Be sure to scrub any stains until they disappear. Dip the brush in the bucket again as necessary to add additional water to the upholstery for cleaning.



6. Using the wet/dry vacuum extract as much moisture as possible from the carpeting. Vacuuming in a single direction will result in an eye pleasing pattern in the carpet.



7. Spray all upholstery liberally with fabric guard.
8. Allow fabric guard to dry completely before driving the car or replacing the mattes.



Int. Vinyl, Rubber, & Plastic Care

Before:



After:



S2000 owners spend more time inside their cars than outside them. However, not everyone takes the time to properly detail the interior. The vinyl surfaces of the interior like the dashboard and door panels make up about half of the interior surface area and detailing them can have a large visual impact on the overall interior.

The interior vinyl in the S2000 takes a beating not only from the sun, but from dirt, spills, and skin oils. Also, having the top down constantly really contributes to dirt getting inside the car. Taking the time to care for your car's interior vinyl will keep it looking like new and prevent it from cracking or fading.

Vinyl can dry out quickly in a convertible. This is especially true in warmer/sunnier climates. Vinyl should be conditioned every month or more depending on where you live. Deep cleaning the vinyl with the exception of cleaning up spills and removing scuffs really only needs to be performed no more than 1-2 times per year.

What you'll need . . .

- **Shade** – Most car care products are not designed to be used in direct sunlight. Using vinyl care products in a hot interior can often cause the product to dry prematurely resulting in a streaky or blotchy finish. Therefore, it is important to find a shady spot to work in. This can be under a car port, a canopy, or in a garage. Sometimes even just putting the top up will provide enough shade to work on the interior. It is not recommended that you detail under a tree as sap, leaves, pollen, or other debris could fall on your car during the detail.
- **Vinyl cleaner** – very soiled vinyl or vinyl often exposed to skin oils may need to be cleaned before being protected. Some popular vinyl cleaners include Meguiar's APC, Meguiar's #39, Meguiar's Interior Quick Detailer, and Detailer's Pride Total Interior Cleaner.
- **Vinyl dressing** – your choice of vinyl dressing with UV protection. Some of the most popular vinyl dressings include 303 Aerospace Protectant, Meguiar's #40, Poorboy's Natural Look, and Vinylex.
- **Microfiber towels** – cheap microfiber towels from a wholesale club like Costco are a great tool for vinyl care. They're cheap enough so that you won't mind getting them really dirty, but they are absorbent and soft like more expensive microfiber towels. Make sure they are clean and that all tags have been removed before use.
- **Applicator** – foam applicators are a great tool for applying dressing to vinyl & plastic surfaces. It is much easier to apply an even coat with a foam applicator and if you get a rubber or plastic backed applicator your hands will stay cleaner.
- **Mr. Clean Magic Eraser** – the Magic Eraser is a great tool for removing scuff marks and other stains from vinyl & plastic. A suitable alternative to the Magic Eraser is an old tooth brush.

How to get it done . . .

1. Before beginning to work make sure the interior vinyl is cool to the touch.
2. Vacuum up any loose dirt. Pay special attention to cracks and crevices where dirt may hide.

- Using a clean microfiber towel (or a small California Car Duster) dust off the center console, dashboard, and door panels. If you do not dust off these surfaces the dust will later gum up your towels and along with the vinyl dressing form into a mud like substance.
- Spray a liberal amount of vinyl cleaner directly onto any stained, scuffed, or soiled surfaces. (For smaller areas it's less messy to spray the cleaner onto a folded towel. Then apply the cleaner and scrub with the same towel.)



- Gently agitate the cleaner with the Magic Eraser.



- Wipe down all areas cleaned with a clean microfiber towel.



- Apply your vinyl dressing to one side of a microfiber towel folded in quarters or a foam applicator.

- Using the folded towel/applicator add a light coat of vinyl dressing to all interior vinyl & plastic. Add additional product to the towel/applicator as necessary and massage the dressing into the vinyl & plastic as much as possible.



- Allow the vinyl & plastic to absorb the dressing for a moment.
- Wipe off any excess dressing with a clean microfiber towel.



- For a more glossy appearance add a second coat of dressing by repeating steps 7-10.

Detailing the Gauge Cluster

Before:



After:



The gauge cluster in the S2000 is digital one and covered with a very delicate, soft plastic. This plastic is easily scratched and can dull over time. It's important to see your gauges therefore it's important to care for your gauge cluster.

Be sure that you are very gentle with the plastic surface of the gauge cluster. Otherwise, you will introduce new scratches.

The gauge cluster should be dusted as necessary and then protected after each dusting. Polishing the plastic should also be done as necessary, but should likely not be necessary to do more than 1-2 times a year.

What you'll need . . .

- **Shade** – Most car care products are not designed to be used in direct sunlight. Using plastic care products in a hot interior can often cause the product to dry prematurely resulting in a streaky or blotchy finish. Therefore, it is important to find a shady spot to work in. This can be under a car port, a canopy, or in a garage. Sometimes even just putting the top up will provide enough shade to work on the interior. It is not recommended that you detail under a tree as sap, leaves, pollen, or other debris could fall on your car during the detail.
- **Plastic Polish** – plastic polish will help to remove and possibly fill any scratches in your clear plastic. It will also defog older clear plastic. Some popular plastic polishes include 3M, Mothers, and Meguiar's Plastx
- **Plastic Sealant** – Your choice of sealant. Once you've gone through the effort of restoring the plastic of your gauge cluster, you'll want to seal it to protect the work you've done. There are products made specifically to protect plastic which work extremely well like Plexus and Wolfgang Plastik Sealant.
- **Applicator** – your choice of applicator. There are many tools which can be used for plastic polish & sealant application. Application can be done using a foam wax applicator, a microfiber applicator, or a folded microfiber towel.
- **Microfiber towels** – high quality microfiber towels are critical for polish & sealant residue removal. After a long day detailing you don't want to use a cheap towel which will undo all of your hard work by instilling scratches in your plastics. To test the "softness" of a microfiber simply rub it *gently* on a blank CD making sure to use both the center of the towel and the edging. If the towel leaves scratches then it could possibly scratch the soft plastic of your gauge cluster. Always be sure before testing a new towel or using it on your paint that it is clean and that any tags have been removed.

How to get it done . . .

1. Before beginning to work make sure the gauge cluster is cool to the touch.

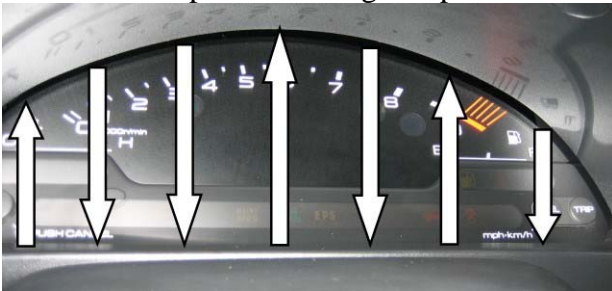
2. Gently dust off the gauge cluster with a clean microfiber towel or a dashboard duster. If you do not dust off the gauge cluster the dust will later gum up your towels and along with the plastic cleaner or polish can form into a mud like substance.



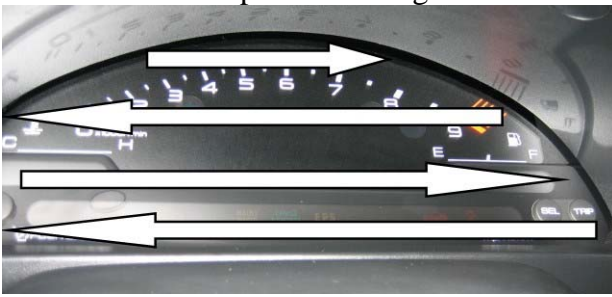
3. Apply a nickel size drop of plastic polish to your applicator.
4. Use the applicator to spread the polish onto the entire plastic surface. Then gently work the polish into the plastic using multiple directions.



First work the polish in using an up & down motion



and then work the polish in using a side-to-side motion.



5. Gently wipe off any polish residue with a clean microfiber towel.



6. Apply the plastic sealant to a clean applicator then use the applicator to apply the sealant to the plastic surface. If you are using a spray on sealant like Plexus then you can spray it directly on the surface. However, be careful not to spray the protectant on other surfaces as this will create unnecessary additional clean up.



7. Allow the sealant to haze.
8. Gently wipe off any sealant residue with a clean microfiber towel.



Thoughts & Insights

In this chapter you'll find a few detailing insights that don't necessarily fit in to the subject matter of other chapters in *The Detailing Hand Book*.

Caring For Microfiber . . .

Microfiber towels can be very expensive and are a very important detailing accessory. Proper microfiber care can extend the life of your towels and keep them soft and absorbent. Here are a few rules to caring for your microfiber towels:

1. Avoid dropping your microfiber on the ground. Microfiber is very “grabby” and whatever dirt it picks up is often difficult to remove from its knap even after washing.
2. Wash your microfiber after each use.
 - a. Always wash your microfiber separately from any other type of fabric to avoid picking up lint from the other fabrics.
 - b. Never use bleach as it will eventually stiffen the towel's fibers.
 - c. Never use fabric softener as it will clog up the knap of the towel making it less absorbent.
 - d. Use a detergent with that does not contain perfumes, bleach, fabric softener, or a wrinkle releaser. You can also use a dedicated microfiber detergent like Micro-Restore, Pinnacle Micro Rejuvenator, or Sonüs Der Wunder Wasche.
 - e. Always wash your towels in warm or hot water as this will help to remove polish & wax residue from the towel.
 - f. Adding vinegar to the rinse cycle can help to release any remaining residues on the towel.
3. Store your microfiber in an enclosed container where it will not accumulate dust or get dirty.

Caring For Wash Mitts & Cotton Towels . . .

Wash mitts and cotton towels are fairly easy to care for. After each use you should rinse out your wash mitts, squeeze them out, and then place them on a clean surface to dry. If your wash mitts begin to look dirty simply wash them in your washing machine along with your cotton towels. Here are some rules for washing wash mitts and cotton towels:

1. Do not wash your mitts and cotton towels in the same load with your household towels or cloths. Residue from your automotive towels & mitts which can be a skin irritant may end up on your household towels/cloths.
2. Never use bleach as it will eventually stiffen the towel's fibers.
3. Never use fabric softener as it will clog up the knap of the towel making it less absorbent.
4. Use a detergent with that does not contain perfumes, bleach, fabric softener, or a wrinkle releaser.
5. Always wash your towels in warm or hot water as this will help to remove polish & wax residue from the towel.
6. Adding vinegar to the rinse cycle can help to release any remaining residues on the towel.

Take proper care of your wash mitts & cotton towels and they will last longer and be more effective.

Caring For Brushes . . .

Taking proper care of your brushes can make them last longer and be more effective. Brush care is amazingly simple. Just rinse them with water when you're done with them. Many brushes are often used in conjunction with strong cleaners. The cleaners often eat away at the brush or the glue holding the bristles to the handle. Simply rinsing away the remaining cleaner will prevent the cleaner from continuing to erode the brush.

Caring For Foam Pads . . .

Foam buffer pads can be expensive costing from \$10-\$20 a piece. Properly caring for these pads will extend their life and effectiveness. Other types of foam pads like wax applicators are much less expensive but can be cared for in the same way.

1. Fill a bucket with several gallons of warm water.
2. Add some soap to the bucket. You can use Dawn, rug cleaner, APC, or a dedicated foam pad cleaner like Detailer's Pride Foam Pad Rejuvenator.
3. Allow the pads to soak for 20 minutes.
4. Massage the pads with your hands to release the polish/wax residue.
5. Rinse the pads with water.
6. Squeeze the pads as dry as possible.
7. Place on a clean area to dry.

Once the pads are completely dry put them in plastic bags to keep them clean until the next time you use them. Do not put the pads in plastic wet or mildew will grow on them.

Measuring Chemicals . . .

Measuring chemicals is something done quite frequently in detailing. Sometimes you are simply measuring out some car wash soap and other times you are diluting a concentrated cleaner.

Diluting concentrated cleaners can be made very simple. All you have to do is buy the spray bottles with the dilution lines on the side. The bottle will have a line to indicate where to fill the concentrate to in order to achieve a particular dilution level (ex. 2:1, 4:1, 10:1, etc.). Making sure to buy spray bottles with these marks on them saves you from having to do any math.

Measuring out car wash soap is an extremely frequent practice in detailing. Many car wash soaps will indicate on the instructions how much soap to use per gallon of water in your wash bucket. Using a household measuring cup to measure out car wash soap will likely not be appreciated by your spouse or your taste buds and buying a dedicated measuring cup is an unnecessary expense. Follow these simple steps to make your own measuring cup for car wash soap:

1. Get a plastic cup (preferably a clear one).

2. Fill your household measuring cup with an amount of water equal to the amount of car wash soap you typically put in your wash bucket.
3. Pour the water into the plastic cup.
4. Place the cup on a flat, level surface and using a permanent marker, mark the water level in the cup all the way around.

Next time you wash your car, simply fill the cup up to the line with car wash soap. To keep the cup from getting crusted with old soap simply immerse the cup in your wash bucket and swish it around until all the soap is gone from the cup.

Getting Organized . . .

Detailing a car can be a long and tedious process. Being organized can go a long way to shaving off time from your detail session. Here are some suggestions for being organized:

- Keep all your towels, brushes, and applicators in plastic drawers or containers.
- Keep your PC and pads in a tool box.
- Invest in some shelving to keep all your chemicals organized on.

Also, don't forget to store your chemicals in a place that will not expose them to extreme heat or cold. Extreme temperatures will quickly ruin your chemicals forcing you to replace them.

It's also important to make sure your bottles are clearly labeled. Detailers often rebottle chemical into smaller bottles either to make them easier to handle or to dilute them. However, few detailers clearly label their bottles. This can result in the detailer accidentally using the wrong bottle and causing damage to the car. Taking a few moments to clearly label your bottles will allow you to quickly identify products and prevent accidents.

Avoiding Aches & Pains . . .

Detailing can be tough on the human body. It can be particularly taxing on your arm muscles and your back. Use a rolling seat or creeper when polishing the lower parts of the car or cleaning the wheel/tire/wheel well area.

Another tool which can lower the amount of stress you place on your body when detailing is the Glass Master Pro. This tool allows you to reach far away corners of the windshield or the rear window without contorting or straining your body.

Planning Ahead . . .

Always try to keep a mental or even better a written check list of what you want to accomplish with each detailing session. Whenever you are walking near your car try to take a moment to gauge the current condition of the exterior so that you will know what needs to be done during the next detailing session. Then do the same for the interior when you get inside the car. It may also be a good idea to keep a calendar or schedule for describing when you want to perform certain detailing tasks.

Being an Informed Consumer . . .

There are many, many great detailing products and many, many great places to buy them. Keep in mind though that there are just as many unscrupulous business people in the car care industry as in any other. Some car care products do not work as well as advertised and some distributors charge inflated prices. Your best defense against unscrupulous business people is to be an informed consumer. If a product makes an unbelievable claim then it likely shouldn't be believed. Also, know what products cost. Sometimes products can be had cheaper locally than they can on-line and vice-versa.

Maintaining the Shine . . .

After all your hard work detailing your car, you'll want to maintain that look. Some plush microfiber towels and quick detailer spray will go a long way in helping you to do that. You can use these items to clean your entire car when it is dusty or slightly dirty. You can also use a car duster like the California Car Duster to remove dust from your recently cleaned car.

Dealing with Bird Droppings . . .

Depending on the type of bird and what the bird has been eating bird droppings can be highly acidic. This acid can dissolve your car's paint causing etching. Making matters worse bird droppings contain sand or grit which can scratch paint and can often contain tannins from berries the bird may have eaten which can leave stains on your convertible top. So, it is critical that bird droppings be removed from the car as soon as they are uncovered. For this purpose, it is recommended that you keep a small bottle of quick detailer in your car along with a microfiber towel. Use plenty of QD to provide lubrication and never rub always dab to prevent scratching.





Using a Car Cover . . .

Many people use a car cover to protect their car's finish while not in use. However, these covers can often cause more damage to the finish than they prevent. When using a cover make sure it's clean, soft, and breathable. You can use the same CD test as you do with microfiber to test the softness of your car cover. Also, dirt trapped under the cover can rub against the paint resulting in scratches. Finally, make sure you are using a car cover that is made of a breathable material. Never use a plastic tarp to cover your paint. This will trap moisture in between the cover and the paint. Eventually, the moisture will migrate into the paint resulting in the paint looking foggy.


Using a Car Bra . . .

It is not advised that you use a vinyl bra on the front of your car. Dirt often gets trapped under a car bra and can rub against the paint resulting in scratches. Also, vinyl car bras are not made of a breathable material. This traps moisture in between the car bra and the paint. Eventually, the moisture will migrate into the paint resulting in the paint looking foggy. If you do insist on using a vinyl bra on your car, remove it often and clean away any dirt trapped behind it. Also, remove it whenever you wash the car or whenever the car becomes wet. Alternatively, a clear bra which is adhered to the paint has none of these negative aspects.





Appendix A - Polish Chart

					
Heavy Cut	10	<ul style="list-style-type: none"> • Diamond Cut Compound 2.0 #85 	<ul style="list-style-type: none"> • Super Duty Rubbing Compound Heavy Cut 		
	9				
	8	<ul style="list-style-type: none"> • Power Cleaner Heavy Cut #84 • Heavy Cut Cleaner #4 	<ul style="list-style-type: none"> • Perfect-It III Extra Cut Rubbing Compound 	<ul style="list-style-type: none"> • Extra, Intensiv Paste 	<ul style="list-style-type: none"> • Power Gloss
Medium Cut	7	<ul style="list-style-type: none"> • Medium Cut Cleaner #1 	<ul style="list-style-type: none"> • Imperial Micro Finishing Compound Medium Cut 	<ul style="list-style-type: none"> • 1Z Ultra 	
	6	<ul style="list-style-type: none"> • Dual Action Cleaner Polish #83 	<ul style="list-style-type: none"> • Perfect-It II Rubbing Compound Fine Cut • Perfect-It III Rubbing Compound 		
Light Cut	5	<ul style="list-style-type: none"> • Fine-Cut Cleaner #2 	<ul style="list-style-type: none"> • Finesse-It II Machine Polish • Finesse-It II Finishing Material • One Step Cleaner Wax, Medium Oxidation Remover 	<ul style="list-style-type: none"> • Paint Polish 	<ul style="list-style-type: none"> • Intensive Polish
	4	<ul style="list-style-type: none"> • Quick Detailer #66 • Speed Glaze #80 • Scratch-X #108 	<ul style="list-style-type: none"> • Perfect-It III Machine Glaze 		
Polish	3	<ul style="list-style-type: none"> • Swirl Free Polish Light Cut #82 • Swirl Remover #9^(F) • Body Scrub 	<ul style="list-style-type: none"> • Perfect-It Swirl Mark Remover Dark Cars^(F) • Perfect-It Swirl Mark Remover Light Cars^(F) 	<ul style="list-style-type: none"> • Metallic Polish 	<ul style="list-style-type: none"> • Final Polish
Light Polish	2	<ul style="list-style-type: none"> • Deep Crystal Paint Cleaner #30 	<ul style="list-style-type: none"> • Perfect-It III Trizact Machine Glaze • Imperial Machine Glaze • One Step Cleaner Wax, Light Oxidation Remover 	<ul style="list-style-type: none"> • Express • Waxfinish 	
Glazes	1	<ul style="list-style-type: none"> • Professional Hand Polish #81 • Machine Glaze #3 • Show Car Glaze #7 	<ul style="list-style-type: none"> • Perfect-It III Finishing Glaze • Imperial Hand Glaze 		<ul style="list-style-type: none"> • Finishing Touch Glaze

^(F) Product contains significant amounts of filler.

		Poorboy's World 	=KLASSE=	SONÜS	BLACKFIRE
Heavy Cut	10				
	9				
	8	• SSR3			• Scratch Resistant Clear Compound
Medium Cut	7				
	6	• SSR 2.5		• Restore SFX-1	
Light Cut	5	• SSR2			• Scratch Resistant Clear Finishing Polish
	4			• Enhance SFX-2	
Polish	3	• SSR1			
Light Polish	2	• Polish w/ Carnauba • Polish w/ Carnauba (Blue)	• ALL-IN-ONE ^(C)	• Paintwork Cleanser ^(C) • Final Finish SFX-3	• Gloss Enhancing Polish
Glazes	1				

^(C) Product contains chemical cleaners with no significant amount of abrasives.

					
Heavy Cut	10				
	9				
	8		<ul style="list-style-type: none"> • XMT Intermediate Swirl Remover #3 		<ul style="list-style-type: none"> • Hyper Compound
Medium Cut	7				
	6				
Light Cut	5	<ul style="list-style-type: none"> • PowerPolish 	<ul style="list-style-type: none"> • XMT Fine Swirl Remover #2 		<ul style="list-style-type: none"> • Compound
	4	<ul style="list-style-type: none"> • Pre-Wax Cleaner 			
Polish	3		<ul style="list-style-type: none"> • XMT Ultra Fine Swirl Remover #1 		<ul style="list-style-type: none"> • Polish
Light Polish	2		<ul style="list-style-type: none"> • Paintwork Cleaner • XMT Carnuba Finishing Glaze^(C) 	<ul style="list-style-type: none"> • Paintwork Cleanser^(C) 	
Glazes	1	<ul style="list-style-type: none"> • Sealer/Glaze 			

^(C) Product contains chemical cleaners with no significant amount of abrasives.

Appendix B – Foam Pad Chart

	Propel	Lake Country Classic	Lake Country Hi-Gloss	Edge 2000
Medium Cut	Orange	Yellow	Yellow	Yellow
Light Cut	Yellow	Orange	Orange	Green
Polish	Green	White	White	Orange
Light Polish	Blue			Blue
Finish	Grey	Black	Black/ Red	White

	Sonus DAS	Sonus SFX	Meguiar's
Medium Cut			Burgundy
Light Cut	Orange	White	
Polish	Green	Blue	Yellow
Light Polish	Blue		
Finish			Tan

Glossary of Terms

APC – abbreviation for “all purpose cleaner.” These types of cleaner are typically dilutable to achieve different levels of cleaning power and are safe for use on multiple surfaces materials.

Backing Plate (pictured below) – the piece which mates the buffer to the buffing pad. Typically, backing plates are made of flexible plastic and are available in multiple sizes. One side will have a threaded post which attaches to the machine and the other side has Velcro which attaches to the polishing pad.



Dressing –protectant for vinyl, rubber, & plastic surfaces.

Glaze – also known as a “pure polish” a glaze contains no cleaners and no abrasives. Instead a glaze contains fillers and oils which help to brighten and deepen the shine of paint. Glazes are a temporary fix to many problems and will typically wash away with the first car wash or rain fall.

Knap – the soft or fuzzy surface of a carpet or towel.

LSP – short for “last step product.” This term is typically used to represent wax or sealant

Marring – fine scratching.

Microfiber – type of fabric. The term itself actually describes the construction of the fabric and not the material the fabric is made from. Microfiber towels can be made from any mix of cotton, polyester, or nylon.

Polish –a chemical which levels the surface of a car’s paint either through mechanical (abrasives) or chemical means.

PC (pictured below) – short for Porter Cable Dual Action Polisher. The PC is sold under multiple model numbers. The most common are the G100, 7424 and 7336SP. The only difference between these three models is the size of the counterweight. The counterweight is intended to help reduce vibration in the machine, but most cannot tell the difference between the two sizes of counterweight. Additionally, the G100 is sold through Meguiar’s with a lifetime warranty.



Glossary of Terms

Sealant – a protectant applied to the paint. Sealants come in the form of a liquid and provide excellent UV protection for the paint. Sealants are very durable and can last twice as long as a carnauba wax. They are optically true (i.e. perfectly clear) and provide a highly reflective finish. However, the shine provided by most sealants lack depth and warmth.

Vinyl Fog – the formation of fogginess on interior glass due to out gassing of vapors from vinyl & plastic materials. This condition occurs frequently in new cars, but is also common in cars where vinyl dressing is used frequently.

Waffle Weave – a type of microfiber weave which results in the surface of the towel having a visible pattern of small squares like the surface of a waffle.

Wax – most car wax is made from carnauba wax. Carnauba is one of nature's hardest waxes. So, carnauba must be combined with solvents or oils to make it soft enough for application. Wax is not as durable as sealants. However, wax provides a deep, wet shine.