Thank you for taking the time to learn from this Detailer's Handbook. I've made every effort to provide you with as much information as possible to help you achieve superior results and have fun doing it!

You, the enthusiast, created this book. It is the result of the many questions and comments from Griot's Garage car care customers over the past 20 years.

I thank you and encourage you to continue to send me comments and suggestions so the next edition is even better. I have developed a car care system that is comprised of complementary products that produce superior results. My intent is to create products that are easy-to-use, gentle towards the many different applications on your vehicle, and safe for you and the environment. This is not a short-cut guide, but the proper way to use our product line so you may enjoy its maximum benefits. In order to produce perfection, you must take your time and enjoy the process. Maintaining your vehicle to perfection through our car care system can become a wonderful way to escape the pressures of everyday life and have some fun. After all, that's what Griot's Garage is all about. So read on, learn a little, and most of all...

Have fun in your garage!

Richard

Richard Griot
Strive for perfection in everything. Take the best that exists and make it better. If it doesn’t exist, create it. Accept nothing nearly right or good enough.

Sir Henry Royce, co-founder of Rolls-Royce
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This Detailer’s Handbook was written and designed by Richard Griot and Mark Greene, with a little help from the Mother-In-Law!

Many thanks to all of our customers and friends who donated the use of their wonderful automobiles for photographs used in this Handbook.

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CAUTION
Please read this disclosure statement before you start any project—it will make my attorney happy... The information contained in this Handbook should be used only as a guide and is not intended to warrant or guarantee any results that you may experience with Griot's Garage, Inc. products or anyone else's. Proper car care can be complicated due to the many different materials (both interior and exterior), types of paints, interpretations of our application methods or techniques, and including, but not limited to, chemical reactions with previous products you may have used. You may not experience the same results as me. When in doubt, always use common sense.

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At Griot's Garage, we want you as a customer for life. Everything you purchase from us comes with a lifetime guarantee against defect. We want you to enjoy our quality products for 180 days and have fun with them! If you don't like it for any reason during this time, return it for a full refund or credit. After that, you're covered with our lifetime guarantee against defect, in which we will either repair it or replace it. If we are unable to repair or replace your product, we will credit your purchase price. Some items have a life span during normal use and they wear out. Our warranty does not include replacement of such items after normal use. Of course our guarantee doesn't cover abuse... But you already knew that. Customers for life. That's our guarantee.

This Handbook is a collection of notes I've gathered from years of experience and you may do with them whatever you please. I hope you enjoy it. Now go and...

Have fun in your garage!

Richard Griot
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There are many terms in the world of car care. Most have been misused and misunderstood due to exaggerated marketing efforts and misinformation. So that the descriptions used in this Handbook are consistent and clear, here is a list of car care terms along with their proper definitions.

**ACID RAIN**
Chemicals in the air that are contained in moisture or rain. These chemicals normally reside as hydrochloric acid within a water droplet on your paint's surface. As the water evaporates, the concentration of acid becomes greater and eventually etches your paint; leaving behind a circular mark. This mark, underneath a magnifying loupe, will look like an etched crater. Leaving your car unattended under intense sunshine after a rain accelerates this process. Paint Cleaning Clay or polish should remove these marks. Some marks, however, cannot be removed and may have penetrated the clear coat entirely; polishing and waxing will make them less visible.

**BRAKE DUST**
Brake pads on your car slowly wear down due to the friction against the rotors or drums. This creates dust which sticks to the wheels. It usually looks black and is heavier on the front wheels because this is where most of your braking effectiveness occurs. This material is damaging to the finish of your wheels and should be removed on a regular basis or it may permanently pit the wheel's finish. Most wheels are painted and clear-coated and may be waxed or sealed to make the cleaning process much easier.

**BUFF**
To wipe off excess polish or wax and bring a surface to its maximum appearance. The kind of shape you'll be in if you polish and wax a lot of vehicles.

**CAR WASH**
A cleaner used to remove surface contaminants from your vehicle. Most car wash products use alkalies, detergents and/or sodium which can remove waxes, glazes, and natural oils and may accelerate paint oxidation. Good car wash soap will not contain any detergents and will be rich in lubricants (which safely lubricate the dirt, allowing it to glide from the vehicles paint). To "feel test" your car wash, put a small amount between your finger and thumb and rub it back and forth. Better car washes will be more slippery. Griot's Garage Car Wash is pH balanced, contains no detergents, and uses biodegradable ingredients which release dirt and contaminants, then disperse them for easy removal.

**CARNABA**
A naturally water-resistant substance derived from the South American Copernica Cerifera plant. May be used in a paste or liquid form and applied by hand or machine. In its natural state, carnauba is rock-hard and needs petroleum distillates to soften it so it is workable when applied to the paint's surface.

**CLEAR COAT PAINT**
Most vehicles today have clear coat paint. The paint on your car is a multi-layer paint comprised of a primer, a base color/pigment coat, and a clear coat. Clear coat provides excellent brilliance but is very easily scratched. Once you scratch or rub through a clear coat, repairs involve re-painting, as the base color coat has no brilliance, shine, or depth.

**PERFECTION IS IN THE DETAILS**
**TALKING CAR CARE...**

<table>
<thead>
<tr>
<th>Clear Coat</th>
<th>Color Coat</th>
<th>Primer</th>
<th>Metal</th>
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<tbody>
<tr>
<td>2-3 mil</td>
<td>1-2 mil</td>
<td>2 mil</td>
<td>20 mil</td>
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Clear coats protect the color coat. Careful polishing is required so damage does not occur to the clear coat.
**Cross-Hatch**
A method of application using back and forth, up and down motions to apply or remove products. This is safer than the traditional, circular “wax on, wax off” motion and provides more even application and removal.

**Colored Waxes**
Since there are thousands of different colors for vehicles, there is no way to match a colored wax with your paint color. Since most vehicles have a clear coat, the application of a colored wax on a clear paint creates an unnatural appearance.

**Contaminants**
Particles of dirt, grime, bird droppings, acid rain, hard water deposits, calcium, tar, oil, or any substance which adheres to your vehicle’s surface. Sometimes these are invisible to the eye. If left alone, they may permanently etch the paint. Remove with Paint Cleaning Clay or polish.

**Detailed**
Used to describe a vehicle which has been cleaned, polished, waxed, and dressed with a protectant. Implies every part of the vehicle has been cleaned and treated, including doorjams, the engine compartment, wheels, and the entire interior space.

**Direct Drive Polisher**
Direct drive polishers and rotary buffers operate at high speeds and work well to remove layers of paint, orange peel and overspray. However, they induce high heat and can cut through paint very fast, especially if used with wool or cotton bonnets. Most professional detailers use this method for fast detailing; however, it creates even more swirl marks which are usually hidden with a glaze. Your first car wash will remove this glaze, so the swirl marks will become visible and you’ll be very disappointed. My rule of thumb: Never let anyone touch your car with a direct drive polisher, especially using a wool or cotton bonnet. You can polish paint better using our Random Orbital, foam pads, and Machine Polishes.

**Glaze**
A petroleum based liquid, usually made of carnauba waxes and silicones that temporarily fills and hides small surface scratches and swirl marks. Glazes can be layered so the more coats you apply, the more you hide. We recommend using a glaze when polishing is not an option due to time constraints or on older paint where you don’t want to remove any more paint, even if it is microns.

**Gloss**
An optical term that describes a surface’s ability to reflect light. High-gloss paint reflects light with minimal hazing or diffusion. Contaminants, oxidation, swirl marks, and inferior polishes and waxes reduce gloss.

**Micro Fiber**
A unique, man-made fiber that is several hundred times finer than a single strand of cotton. These strands are then specially woven to maximize their ability to absorb moisture and pick up dust, polish and wax. There are many grades and weaves of micro fiber. Our various Micro Fiber Towels are ultra-soft and specially designed for use on your vehicle.
**PERFECTION IS IN THE DETAILS**

**TALKING CAR CARE...**

**Orange Peel**
A bumpy look to a painted surface, similar to the skin of an orange, due to poor paint application. It can be removed by wet sanding or machine polishing.

**Random Orbital (Dual-Action Machine)**
A machine, usually with variable speed settings, used to apply and/or remove polishes, glazes, waxes and cleaners. A dual-action polisher rotates in a random, circular motion in addition to moving back and forth in small increments while orbiting. This provides a safer application method than a direct drive polisher since it does not generate as much heat on the paint's surface. Best if used with foam pads since wool and cotton Terry bonnets could be harmful to your paint.

**Oxidation**
Damage done to unprotected paint due to prolonged exposure to sun, acid rain, and severe weather elements. The paint's appearance looks dull and chalky. In many situations there is good paint underneath the oxidized surface that may be exposed by polishing.

**Paint/Wheel/Window Cleaning Clays**
A soft, pliable bar of super-mild abrasives suspended in a clay used to remove contaminants from smooth surfaces. Used with a lubricant, such as Speed Shine, it glides smoothly over the surface. While other clays may be very abrasive and will scratch your paint, our Cleaning Clays are extremely mild and safe.

**Paint Sealants & Synthetic Waxes/Polymer**
A non-organic based wax used to seal paint with a thin barrier. Sealants use polymers to provide a longer lasting protective barrier compared to organic wax. A polymer is a substance composed of molecules with large molecular mass composed of repeating structural units, or monomers, connected by covalent chemical bonds. This allows the sealant to provide better protection than organic compounds like carnauba. Inferior sealants reduce color and clarity as they build up over time. Griot's Garage Paint Sealant and One-Step Sealant won't create a buildup of opaque protection. Unlike other silicone-laden products, our sealants will enhance color and clarity while providing long-term protection.

**Polish**
An abrasive liquid which removes thin layers of paint, smoothing out the surface and eliminating swirl marks, scuffs, overspray, and light scratches. Polish may be applied by hand or machine.

**Pressure Washer**
Gas or electric powered water sprayers which provide a very strong stream of water for cleaning. Never use a pressure washer on your vehicle. Too much pressure will damage paint and may even remove paint and undercoating in wheel wells. Great for cleaning engines, however, cover electrical components and paper or vinyl decals. Beware of forcing water into areas where it won't drain.

**Rail Dust**
Small particles of ferrous metal created by railroad car wheels running on the metal tracks. These particles become airborne and land on vehicles being transported via rail cars. When moisture combines with these metal particles, the iron rusts, creating small rust spots visible with a magnifying loupe. Remove rail dust with Paint Cleaning Clay.
Rubbing Compound
A very strong polish used after wet sanding, to remove deep scratches, to knock down orange peel, or remove heavy oxidation. Follow up with our polishes to bring back gloss. Generally not safe for clear coats or modern ultra-hard paints.

Rotary Buffer/ Direct Drive Polisher
Direct drive buffers which typically rotate at high, direct drive speed, unlike orbital buffers. Used to quickly remove layers of paint. Best left to professionals because if used improperly, they can burn through your paint. (See also Direct Drive Polisher)

Silicone
A synthetic substance in the form of a heat and water resistant oil. Used as a lubricant, water-repellent coating, or additive. There are many variations of silicone. Superior grade silicones can be beneficial to increasing a protective layer for surface protection.

Single Stage Paint
A paint where the color coat is the final layer of paint. You can tell if your paint is single stage by rubbing a small amount of polish on the paint with a cotton cloth and seeing if paint color shows up on the cloth. If no color appears, it’s a clear coat.

Spray-On Wax
A liquid, protective wax or synthetic wax that leaves behind a thin layer of wax protection. Should be used in addition to a wax or sealant as an "enhancer" and not as a primary protectant for your paint. May also be used to help buff dried-on wax.

Swirl Marks
Small surface scratches created by rough or low quality synthetic towels, abrasive cleaners and polishes, buffers with the wrong type of polishing pad, automatic car washes and by wiping dirt across a dry painted surface. Sometimes also referred to as spider webs. Swirl marks may be removed by hand or machine polishing. Some waxes may also help hide the appearance of swirl marks.

Teflon®
A synthetic formula sometimes sold as a paint protective sealant. The maker of Teflon® (DuPont Chemicals) has issued the following statement: "The addition of a Teflon® fluoropolymer resin does nothing to enhance the properties of a car wax. We have no data that indicates the use of Teflon® is beneficial in car waxes." Griot's Garage does not use Teflon® in any of our products.

Water Spots
Calcium deposits, especially in hard water, act just like acid rain to damage your paint. See Acid Rain on page 2.

Waterless Car Wash
A method of car washing designed to remove surface contaminants from your vehicle without using a hose, bucket, or water. These products are rich in lubricants and designed to soften and lift the dirt from your paint so they can be wiped off using a high-loft micro fiber towel. In most cases waterless car washes are safe for cleaning your paint, but if the vehicle is very dirty a traditional car wash should be used.

Wax
A protective substance, natural or synthetic, which provides a thin layer of protection over paint, metal, or wood. Wax can come as a paste, cream, or liquid. Pure wax should contain no abrasive.
PERFECTION IS IN THE DETAILS

GRIOTISMS...

For years our customers and associates have heard many "isms" about Griot's Garage. Our name, pronounced "Gri-oht's Garage" has lent itself to be used in what we've come to call "Griotisms". Here's a list of the most common ones we hear from our customers. Do you have a Griotism? Tell me about it. Enjoy!

GRIOTESQUE
(Gree-oh-esk) Adjective. Stemming from the phenomena of Griot's Garage. Very modern looking; usually red, black, or white in color. High quality, efficient, and capable of lasting an entire lifetime.

GRIOTAGE
(Gree-ahge) Adjective. A garage designed and styled after that of the Griot's Garage style.

GRISSIONANCE
(Gree-oh-noon-ence) Verb. Being anal-yally picky, insanely attentive to detail, almost to the point of annoyance to your car guy friends and/or your spouse.

GRIOTHER HALF

GRIOTUAL
(Gree-oh-choo-al) Noun. A ritual performed customarily or automatically that only a Griot's Garage customer would embrace. Example: To wash and squeegee one's garage floor on a regular basis is a Griotual.

GRIOCESIVE COMPULSIVE
(Gree-oh-ses-iv Compuls-iv) Adjective. Specifically obsessive about the finish of one's automobile paint.

GRIOTCRATIC
(Gree-oh-critical) Adjective. Neither Democratic nor Republican and mostly a car crazy guy interested in the politics of the automobile industry. The Griotcratic drinks motor oil for breakfast and breathes exhaust fumes from the time they wake up until the time they retire for the night. And then, they dream about racing.

GRIOTED
(Gree-ohd) Adjective. Someone devoted to the use of Griot's Garage car care products.

GRIOTILLUCINATE
(Gree-oh-los-en-ate) Verb. To envision Griot's products in your garage.

GRIOTFEIT

GRIOTION
(Gree-oh-ten-shun) Noun. The life cycle of washing the auto, washing the wheels, drying, claying, polishing, waxing, detailing the undercarriage, interior and the engine bay. One full cycle is a Griotation. For the most thorough of Griotations, the wheels are removed, detailed and remounted for true textbook results.

GRIOTUS INTERRUPTUS
(Gree-oh-tus In-te-rupt-us) Adjective. Someone with multiple kids and a million things to do on any given weekend. They must always plan for the "Griotus Interruptus" or having to drop everything and tend to some other 'more urgent' matter. Griother halves just don't get it sometimes.

MR. GRIOGI
(Mis-ter Gree-ah-gee) Noun. The sensei of car care. Often found teaching the cross-hatch method of application instead of the incorrect, circular "wax on, wax off" method.
Striving for perfection in everything we do, right down to our Flagship Retail Store. We have a Car Care School where we demonstrate any and all of the techniques found in this Handbook. You can also find videos for many of our products on our website. Look for this symbol.
Knowledge Is Power

Surface Evaluation...

Where do I start? A very common question I am asked by many customers. First things first; walk around your vehicle and determine the level of cleaning and detailing you want to do. A fast cleaning with Speed Shine®: fifteen minutes. A proper wash: thirty minutes. A little rubber, vinyl, and tire dressing: ten minutes. To properly clean the paint, polish out swirls, and apply a protective coat of wax: one to three hours. Each involves a different requirement and time dedication. Special situations like removing overspray, cleaning off large amounts of tar, detailing the engine bay, or dressing the interior can take minutes or hours depending on your level of perfection. One thing is for certain; our products will produce excellent results in the shortest amount of time. Whatever your commitment, begin with the paint. It's the largest area with the most visual impact.

I've diagramed several situations here to help you evaluate your paint. Usually, you'll only have to contend with paint which has surface contaminants and light swirl marks, but some cases may involve more intense correction when deeper scratches, etching, or oxidation are present. The car care system I've developed was created to allow you to integrate the cleaners, polishes, and waxes to work in small increments, evaluating as you go.

Paint Conditions

Having the proper tools to evaluate the condition of your paint is very important. Good lighting and a loupe of at least 10x magnification will allow you to accurately evaluate your paint's condition and what each of our products does to correct the defects. Even if your garage is well lit, a handheld light will greatly enhance your ability to find and correct defects in your paint.

Surface Contaminants

If you run your finger tips and palm gently over the paint's surface you'll feel small bumps or roughness. Surface contaminants are made up of things like dirt, grease, road oil, tar, industrial fallout, and bird droppings. (Bird droppings should always be removed as soon as possible as they contain highly acidic concentrations which will permanently etch your paint, sometimes within minutes.) These contaminants may be removed with Car Wash, Speed Shine® or, in more severe cases, Paint Cleaning Clay. Your objective is to create a surface which is as clean and smooth as possible before polishing or waxing. If you are cleaning your car in preparation for polishing or waxing, it is best to clay the paint to ensure all contaminants have been removed.
**Swirl Marks**

The next level of challenge involves minor surface scratches, swirl marks, spider webs, scuffs, and rock chips. These imperfections are caused by automatic car washes (which I never recommend), wiping the car down when dry (which drags dust and dirt across the surface), using harsh towels when drying the vehicle, leaving car covers on a dirty surface under windy conditions, or using harsh cleansers, abrasives, polishes, and waxes. These conditions can usually be corrected with Fine Hand Polish, but our milder Machine Polishes will provide the best results. Using One-Step Sealant with our Random Orbital can also reduce or remove swirl marks. Several coats of Best of Show Wax® or Paint Glaze can also "hide" these conditions if polishing may take more time than you have or the paint is older and you don't want to remove any more, even if it is microns.

**Deeper Scratches**

More severe scratches, acid rain etching or oxidation will require a good cleaning, claying, polishing and waxing. The only way to completely eliminate scratches is to remove a thin layer of paint down to the base of the scratch. This is not the best method as you always want to keep as much paint on the car as possible. In many cases you don't need to get down to the base of the scratch. Simply rounding off the "V" of the scratch (see diagram at right) and filling the remaining crevice with Best of Show Wax® or Paint Glaze will reduce the visibility of the scratch substantially. Polishing out deeper scratches requires the use of our Random Orbital and Machine Polishes, as hand polishing isn't an effective form of removing these more severe imperfections.

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**Surface Evaluation**

Swirl marks can be removed by polishing or hidden with several layers of wax or glaze.

Initial scratch before polishing and waxing.

For deep scratches to be less noticeable, round off the "V" and "fill" the crevice with wax.

Pneumatic or electric random orbitals are a fun, fast, and safe way to polish away scratches in your paint. You can also use them to apply wax for fast, even application. With the right pad, they can even be used to buff wax, which further cuts down on your detailing time.

*Car Care for the Perfectionist!*
STEP ONE

A PROPER CLEANING...

If I can pinpoint one step that gives the greatest benefit over an automobile's entire life, it's keeping your car's surfaces clean, including the glass, trim, paint, and wheels. There are two types of cleaning. The first is a thorough wash to keep the surfaces clean and free of road grime, tar, oils, bird droppings, industrial fallout and other contaminants. The second is cleaning when you're in-between serious washings and don't want to get out all your supplies. Not being careful during either of these processes can create swirl marks, so using care when cleaning your car is always important... but I didn't need to tell you that.

THE CAUSES OF SWIRL MARKS

Every time you wipe down, dust off or wash your car, you run the risk of putting minute scratches (often referred to as swirl marks) into the paint. When it comes to swirl marks, I am most frequently asked where they come from, how to avoid them and how to get rid of them. While swirl marks are inevitable, they are more frequent on daily drivers. However, I've seen terrible swirl marks on the most cherished garage queens. Here's why: anytime you push an object across a painted surface you'll induce micro scratches. Small dust and dirt particles act like sandpaper. Even some towels, if made from low quality polyester fibers, will scratch paint. Avoid some of these common swirl mark causes and you'll greatly reduce the number of swirl marks in your paint. We'll cover removing any swirl marks you already have in the Polishing section.

COMMON CAUSES OF SWIRL MARKS

• Car dusters, if used on very dirty surfaces or with too much pressure.
• Dragging a car cover over your car, especially if it's dusty or dirty (dirt on the car or the cover will cause scratches).
• Wiping down a dry car with a dry towel with the intent of keeping it clean. This is the most common cause of swirl marks.
• Infrequent rinsing of your wash mitt during washing.
• Using a dirty chamois or dry towel to dry the vehicle.
• Using towels for drying and/or wipe downs that are not suitable for paint finishes.
• Not thoroughly rinsing the vehicle before washing it.
• Not thoroughly cleaning the vehicle before drying it.
• Using an automated car wash or drive-through car wash. Even "touchless" drive through car washes will scratch because of high pressure water jets.
• Using harsh polishes, waxes and cleaners.
• Direct drive polishers or poorly designed random orbital systems.
Washing Your Vehicle

When you are ready to begin washing, make sure the vehicle's surface is cool. If the surface is too hot, the water or soapy water will dry on the paint and spot. If you’ve been out driving, wait an hour or two and let the car cool down since your engine heats up the metal surfaces around it and the wheels and brake components get very hot during use. Never spray cold water on hot wheels and brake rotors as this may damage them.

Begin by placing one ounce of Car Wash per two gallons of fresh water into your clean Ultimate Wash Bucket. It’s important to use the proper amount of cleaner. Like all of our car care products, less is more. Using more than the recommended amount is wasteful and won’t get your vehicle any cleaner. The measuring cup in our Ultimate Wash Bucket will ensure you have the right amount of Car Wash. If you have access to warm water, use it. The increased temperature will improve the cleaning ability of the Car Wash. Rinse the car thoroughly with a steady flow of water; not a fine mist. I start with a strong blast into the wheel wells, then move to the top and work down, spraying the wheels last. Avoid rinsing with high pressure or strong pressure washers as they can blast water into seals, under trim, and may even damage paint. The idea is to loosen dirt and rinse as much away as possible.

Now, starting with the top and working your way down, begin cleaning. Saturate our Micro Fiber Wash Mitt or Pad, Boar’s Hair Brush, or Sheepskin Wash Mitt with lots of Car Wash by dipping it into your bucket. For larger vehicles, use our Wash Mop Stick Kit or Round Boar’s Hair Brush & Handle as they will allow you to easily reach the higher parts of the vehicle. When washing, work in small areas. For instance, do half of the top and rinse off the soap. Then move to the other half. By concentrating on smaller areas you’ll do a more thorough job and be able to focus on trouble spots. Use gentle strokes in a straight, back and forth motion. With every rinsing, rinse your brush or mitt, too. If you are using a Micro Fiber Wash Mitt or Pad, a quick dip into the bucket and a shake will knock everything off.

Occasionally time doesn’t allow for a thorough washing with our Car Wash followed up by application of Spray-On Wax, but you still want to get a little extra protection on the paint for those few precious minutes of “garage therapy” you take for a weekend wash. Our Wash & Wax blends our fabulous car wash with a wax to supply a little extra shine and protection on your paint as you wash. Simple as that. Use the same tools and washing methods as recommended with our Car Wash.

With our Car Wash, use our super-soft Micro Fiber Wash Mitts and Pads that are gentle on your paint and rinse free of dirt with a quick shake!
STEP ONE CONTINUED

A PROPER CLEANING...

If you notice large tar spots, bird droppings, bugs, or any contaminant stuck on the paint, you’ve got a couple options for safe removal. First of all, be gentle. Saturate our Four-Finger Mesh Mitten with full strength Car Wash and carefully wipe the area using both sides of the mitten. For stubborn tar, use our 3M Adhesive Remover in the same manner. Remember, as you break up these contaminants, they contain minute bits of abrasive material that scratch paint. Even bird droppings contain sand and seeds that will scratch. If these processes don’t work for you, use our Paint Cleaning Clay as instructed later in this Handbook. Allow the product to soften the contaminant so you can gently wipe it from the surface without creating scratches or swirls. Never use lots of pressure to remove contaminants from your paint.

Clean the vehicle in this order: top, front hood, front fenders, doors, rear deck, rear fenders and rear. This is usually going from the least dirty parts to the dirtiest. If the car is very dirty, you may want to rinse your bucket half way through and add fresh Car Wash and water. Clean the wheels and tires last since they are usually the dirtiest areas. Step Three (on page 24) will cover the proper cleaning process for your wheels and tires.

When you do your final rinse, use a flat stream of water. You may even want to remove your spray nozzle and let a nice broad stream of water flow over the surface. This leaves a lot less water on the surface and allows you to dry the vehicle faster, reducing water spots and towel usage. If you suffer from hard water in your area, try using our Portable Water Deionizer or In-Line Water Softener during your final rinse. Both filter out contaminants that cause water spots and stains should the water dry on your paint. See a picture of our Water Deionizer on page 15 nestled among the Vettes!
**Removing Old Wax**

If you plan on doing a full detail, it may be necessary to remove old wax using Paint Prep. It is formulated to strip old wax so you may properly evaluate your paint condition. If you've used other products which contain silicone and sealants, our polishes and waxes may not adhere to these products or they may appear hazy. Test a small area. If the polish or wax smears, hazes and doesn't wipe off cleanly, there is probably a silicone laden sealing product on your paint that you need to remove.

Work in the shade and with the paint surface cool. Wash the car first. Leave the vehicle wet and spray Paint Prep in even layers. Wear gloves and avoid prolonged skin contact. Work in small areas, from the top down. Let it stand for 4-6 minutes and don't allow it to dry on the surface. Spray additional Paint Prep on areas that are drying. Once the old wax is dissolved, rinse the area with water. You may use a wet micro fiber cloth to wipe over the area before you rinse. If you see any leftover wax residue, repeat the process and wipe dry. Your paint is now ready for evaluation.

It's typical to see scratches or a blemished surface after the Paint Prep process. These marks are imperfections that have been hidden by waxes or glazes. Now is the time to properly evaluate the surface and decide if polishing is necessary or if simply waxing will suffice. Paint Prep won't remove all surface contaminants, so Paint Cleaning Clay is your next step. If you see swirl marks and scratches you need to polish. If the surface is free of swirl marks then waxing is in order. Either way, you now have an untreated surface and may properly evaluate the true condition of your paint.

**Massage The Paint**

When working with Paint Prep, it helps to work the product into the surface using your hands or one of our Four-Finger Mesh Mittens. This is a gentle way to ensure you remove all the old wax from the surface. Remember, keep the surface wet and rinse thoroughly when finished.

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Car Care for the Perfectionist!
WASHING YOUR VEHICLE
WITHOUT WATER

If you're unable to wash your car using the typical "water, hose, and bucket" method due to water restrictions in your community, or if the weather is freezing but you still want to wash your vehicle, waterless car washing is a safe and easy alternative to the traditional wash process. Our Spray-On Car Wash clings to your vehicle's paint, allowing the lubricious emulsions to lift and dissolve dirt, oil, greases, bird droppings and grime so you can gently wipe it away with a high-loft Micro Fiber Car Wash Cloth. In order to reduce the possibility of inducing scratches while cleaning, it is important to follow these easy steps. Be especially careful on surfaces coated with mud, sand and soil.

Similar to washing your car with Car Wash, work in small sections from the top down, saving the dirtiest portions of your vehicle for last. Begin by misting a moderate amount of Spray-On Car Wash onto a small section of the vehicle and allowing it to sit for 15 seconds (but do not let it dry). An extra spray on areas with bird droppings or that are heavily soiled is a good idea.

Quarter fold a high-loft Micro Fiber Car Wash Cloth and gently wipe the area clean using a side-to-side, wipe and lift motion; not in circles. The quarter fold gives you 8 usable sides to the towel so you can flip to a clean section as the towel gets dirty. Using a second dry cloth, gently buff any remaining product from the surface. Depending on how dirty your vehicle is, 3 to 4 cloths will be necessary for cleaning. Again, always use light pressure when wiping dirt from your vehicle as too much pressure may cause swirl marks.

BETWEEN WASHES

For this, Speed Shine® is the product I use most often. Why? It allows you to clean your entire car in about 15 minutes and leaves behind a deep shine that looks "just waxed". It's fast, fun, and won't harm glass, plastic, or rubber trim. Simply grab your Speed Shine® and a couple Micro Fiber Speed Shine® Cloths and clean the car using the same method as described in the previous section about waterless washing. While the process of cleaning is the same, quick detail products, like Speed Shine®, should not be used on heavily soiled vehicles like waterless car washes. Speed Shine® enhances your paint leaving the surface clean and brilliant. You won't believe the results. Great on boats, race cars at the track, as a final prep before a concours judging, painted cabinets, motorcycles, chrome, bicycles, and any painted or clear coated surface.

Our convenient Speed Shine® Wipes are perfect for getting into those hard to reach areas to remove that final dusting before a concours judging. Each wipe is impregnated with Speed Shine®, so you can simply pull out a cloth, gently wipe your paint surface and buff the area dry with a clean Micro Fiber Speed Shine® Cloth or 100% Cotton Buffing Cloth. Don't leave home without them.
If you live in an area with hard water and suffer from those hard to remove water spots, give our Water Deionizer a try. Replaceable, safe resins remove contaminants.
CONVERTIBLE TOP CARE

While being enormously fun, convertibles pose a unique set of challenges when it comes to caring for their tops. Most tops are made of a plastic vinyl or polyacrylic/polyester canvas. On older vehicles the rear window is a clear vinyl, while recently manufacturers have been primarily using glass. Care for these materials requires some extra time and thought.

Vinyl tops are easy to clean. Car Wash will remove most of the dirt and oils during your normal wash process. Any spots may be treated with our Interior Cleaner. Use a soft brush or our Yellow Scrubbing Pads to agitate the stain. The Yellow Scrubbing Pads are ideal because the open-cell foam is gentle on the vinyl while still being aggressive enough to remove the stain, and they won't deteriorate when you have tough cleaning to do! For better control of the scrubbing pad during hand application, use our 3" Foam Pad Holder or 3" Palm Grip Pad Holder. To increase cleaning power and reduce your effort, apply the pads to our 3" Random Orbital and use speed 3-4. Once the stain has been removed rinse the area clean with warm water and allow it to dry. Follow up by misting a Blue Detail Sponge with our Vinyl & Rubber Dressing and applying a light coating over the entire top. This will protect the vinyl from damage caused be UV light and also give it a nice, uniform finish.

If your black vinyl top has seen better days, you can dye your top back to its original color in about 30 minutes. After cleaning the top, but before dressing, apply our Black Vinyl Top Reconditioner. Apply the gel to the entire top with the included sponge applicator. This is a permanent dye that will restore your drop-top back to drop dead gorgeous. Not for use on canvas tops or on your interior.

Canvas tops require more work. Dust and dirt settle into the weave of the fabric and, if left over time, will start to break down the fiber. Interior Cleaner is a safe choice as a cleanser. You have a couple options to choose from for working the Interior Cleaner into the canvas and removing stains. Our Four-Finger Mesh Mittens or Yellow Scrubbing Pads work best for the general cleaning due to their lint free and mildly aggressive nature. For tough stains use our Nylon Carpet and Upholstery Brush since its stiff bristles can clean the fibers more thoroughly. Avoid using too much pressure or spending too much time on a stain when scrubbing as this can cause uneven wear on your convertible top. Mist Interior Cleaner onto the top, gently agitate to loosen the dirt. Spend extra time on spots and stains and rinse thoroughly with water to remove all Interior Cleaner residue. Use our Dimpled Synthetic Chamois to dry the top by laying it over the canvas and pressing down (avoid dragging it over the top). Do not use cotton towels or anything that will leave lint behind. Allow the top to air dry. Treat any rubber seals and fittings with Vinyl & Rubber Dressing.

There is a lot of misinformation about protecting convertible canvas tops. If water beads on the surface it's able to repel stains, right? No. The water protection you get from a convertible top comes from the butyl rubber core sandwiched between the outer canvas and the inner pre-shrunk cotton layer. So, for the life of the
top, I'm more concerned about stain protection and soiling on the outer canvas. Fabric Protector is the ultimate choice for stain protection. It works by deeply penetrating the molecules of the outer canvas and encapsulating them. Make sure the top is clean and dry before application of Fabric Protector. To help control overspray, mask surrounding areas that are not to be treated. Spray approximately 8-10 inches from surface in a sweeping motion using overlapping layers until the entire area is covered. Do not saturate; a light coating is all that is needed. Fabric Protector will not harm painted, chrome, plastic, or glass surfaces, but it is best to clean any overspray immediately after application. Allow 12 hours dry time before using treated fabric. Once dried it is visually undetectable and will protect your top from soiling, permanent stains, and harmful UV rays. Fabric Protector should not alter colors but always test a hidden area before treating. NOTE: Fabric Protector will not completely protect against stains caused by acid, dye, bleach, bird droppings, or other corrosives.

Convertible Top Windows

Fogged and scratched plastic windows are the biggest complaints I hear about. The fogging you see on polyvinyl windows occurs when the plasticizers in the material evaporate due to UV light and heat exposure. These plasticizers keep the material soft and flexible. Keep the sun off this material with a car cover whenever possible and keep it clean!

Be careful around the window during your regular washing. Don't use terry towels or paper towels to dry it, either. They will scratch. Dry with our Micro Fiber Dry Towel or Ultra Thick Micro Fiber Towel. Use our Plastic Cleaner for regular cleaning; it has special lubricants to suspend the dirt while cleaning your polyvinyl window. Spray the product on the window and wipe in a quick upward motion with a 100% Cotton Buffing Cloth. Refold or turn over the cloth frequently so dirt and grime are not dragged across the window. If the window is scratched, fogged or stained, apply Plastic Polish with our Random Orbital and an Orange Foam Pad to make it look new again. Our 3” Random Orbital is ideal. If you have to work by hand, apply the Plastic Polish with a Cotton Polishing Pad. While this isn't as effective as working with an orbital, it will improve the look of your polyvinyl window. Always make sure you clean the window with Plastic Cleaner before and after applying Plastic Polish. Don't forget the inside as well. If the rear window is glass, follow the care instructions covered in the Glass Cleaning section later in this Handbook.

Our Interior Cleaner is safe for all your cleaning needs in the car or around the home.
Maintenance, Care & Protection

Unfortunately, the worst thing you can do for your top is to keep it down. The constant rubbing of the material on itself and the top's mechanism creates wear spots and the rear vinyl window gets wrinkled and scratched. To avoid the vinyl window rubbing against itself or other parts, place one of our soft Micro Fiber Cloths on either side of the window when closing the top. Don't use terry cloth as it is too rough and will scratch. Keep the roof's mechanism clean of grease and oils. When lowering the top manually, be careful of the folds and creases. Avoid putting your top down wet as mildew and mold will grow. If you are considering a car cover for your convertible, purchase a Noah®, Evolution®, WeatherShield HP™, Ultra'tect® or Dustop™ style cover. Cotton or flannel car covers will leave lint behind. I prefer our WeatherShield HP™ cover.

Use Interior Cleaner and our Nylon Carpet & Upholstery Brush or Yellow Scrubbing Pads to clean convertible tops and then apply Fabric Protector to keep them clean and protect them from UV rays.

Safe For Any Color

It is often assumed that many products can only be used on black canvas tops. However, our Interior Cleaner and Fabric Protector are colorless, so they are safe for use on any color canvas top. Clean and protect black, blue, gray, tan, white... I think you get it.

Both this beautiful 1941 Cadillac Series 6267D convertible and this 1932 Auburn 8-100A with its landau top can benefit from some easy convertible top care. Fabric Protector is colorless, so you can use it on any color canvas top.
Use many of our car care products with our 3" Random Orbital for superior results in less time.

*Car Care for the Perfectionist!*
STEP TWO

SAFE DRYING...

Sounds silly. How to dry your car. Uh, well uh, you drag the towel across the paint until dry, right? Yeah, that's right. For those of you that care about your paint's finish, read further. Most of the scratches and swirl marks you'll notice appearing in your paint are a result of wiping the car down when it's dry or drying your vehicle improperly. There are a few no-nos for drying your paint's surface. The two most important factors when drying your car are using a high quality microfiber towel and make sure the car is clean. If your towel or chamois has any dirt on it after drying, you didn't clean the car properly.

With one exception, never use a towel with polyester in it. Polyester scratches show up as toweling marks; longer scratches versus the usual, small round swirl marks you normally see. Making sure your towel doesn't contain any polyester can be tricky since some 100% cotton towels use polyester in the stitching. So, how do you avoid scratches? Check the care tag on the towel for polyester content. If the tag is no longer on the towel, use the burn test to be sure. The only exception to this rule is high quality micro fiber.

Micro fiber is made up of a blend of polyester and polyamide that has been split into ultra-fine fibers, then specially woven together to maximize their softness and absorbency. This is the exception to the polyester rule because each of the ultra-fine fibers used in micro fiber are several hundred times smaller than a strand of cotton! Since each strand is so fine, they won't even scratch the softest black paint (as long as you are using high quality micro fiber). There are many grades and weaves of micro fiber out there, so make sure you dry your car with one designed for automotive paint. Our microfiber drying towels are the finest quality micro fiber you can find and will absorb so much water you'll get dehydrated just using them! For these reasons I've changed all the drying towels in my garage to micro fiber.

The Burn Test

To test your cotton towels for polyester, use a lighter to burn the edge of the towel. If the towel or stitching contains polyester, it will melt. If it burns, you've got 100% cotton.
**Safe Drying**

**Micro Fiber Drying Towels**

Drying your car with our Micro Fiber Drying Towel is simple. The waffle-woven micro fiber is super absorbent and its sewn-in hand pockets make it easy to navigate the large, 25" x 35" towel across your paint. Gently wipe the towel across the paint, working from top to bottom, front to back. While one pass across the car usually does the trick, I like to follow up with a second dry towel to make sure I get every last drop. The biggest mistake anyone can make when using a dry towel is rubbing hard on the paint to remove any dirt or sap they failed to remove during washing. If you run into any spots you missed, use a little Speed Shine® or Spray-On Car Wash to safely remove them from your paint. Make sure you are gentle as even bird droppings contain bits of dirt, seeds, and small rocks which, when rubbed over the paint, will scratch. Moisten the area with Speed Shine® or Spray-On Car Wash and gently wipe clean with the appropriate micro fiber towel.

**Synthetic And Natural Chamois**

If you enjoy using a chamois, either natural skin or synthetic, wet the chamois first in lukewarm water before using it. The proper use of a chamois is to lay it out flat over the wet area and pull it across the paint, drying the car from top to bottom, front to back, wringing your chamois out after every few passes. Our natural skin Stay Soft Chamois is extremely absorbent and its soft surface is safe for your vehicle's paint. As its name infers, our Dimpled Synthetic Chamois has a unique dimpled finish that quickly and efficiently picks up a lot of water, much more than smooth chamois. When it comes to care, keep all your chamois clean by not using them on wheels and oily areas such as the rocker panels of the vehicle. Our Stay Soft Chamois is machine washable and should be stored dry. When drying, lay it flat and stretch it slightly back to its original shape, then allow it to air dry. Unlike a natural chamois, our Dimpled Synthetic Chamois should be stored moist, back in its container. Chamois are safe for paint, glass, and trim if they are kept clean and stored properly, away from exposure to dust and dirt.

**Water Blades And Squeegees**

Another safe and quick way to remove water from the surface of your car is using a squeegee. It’s important to not use just any squeegee, but one specifically designed for use on vehicle's paint. A soft, flexible blade is very important! I’ve tested tons of these and finally found one that is safe and effective for drying my cars. Our Flexible Water Blade uses surgical

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**Image Notes**

- The flexible water blade clears water off your car quickly, greatly reducing drying time. The T-bar design contours to every curve on your vehicle, making it almost spotless.
- The waffle weave creates additional surface area for increased absorbency.

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**Car Care for the Perfectionist!**

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quickly wax your car while you dry it!

after washing and rinsing the vehicle, spray the areas you are drying with a little spray-on wax. dry the area as you normally would. using our flexible water blade helps. work from the top down and avoid overspray on the windows. this will add to the shine and give your vehicle a just-waxed appearance. it also makes it a little easier to dry. remember not to allow the spray-on wax to dry on the paint surface as it contains wax and will appear dull. if this happens, mist the area again and buff dry.

don't forget the details

doorjambs and the gutters around your trunk and engine bay trap dirt and water that can ruin your good drying towels since it is impossible to effectively clean them during your regular wash. for these areas i grab a bottle of speed shine® or spray-on car wash and a tim's dirty spots micro fiber wipe down towel. a quick mist of product and a gentle wipe will easily clean and dry these areas while keeping your good towels clean and your paint scratch free. don't forget the underside of your doors, hood and trunk. and always finish with a quick wipe down of the engine since the cloth is damp and will pick up more dirt and moisture.

step two continued

safe drying...

grade silicon, and its ergonomically-designed handle is flexible to form to almost any curve and features gripping ribs so it won't slip out of your hands. a small, yet absorbent drying towel is important to use along with your squeegee since any squeegee that is safe for your paint won't be able to remove 100% of the water. our ultra thick micro fiber towel is the perfect companion. with our flexible water blade in one hand and the ultra thick micro fiber towel in the other, i can dry my car in half the time, giving water spots almost no chance of forming. gently wipe the blade across your paint, use your towel to dry the blade and dry any remaining spots off the paint with your towel. repeat this process until your entire car is dry.

easily clean doorjambs.

dry water channels.

safely dry wheels.
Our Car Care products are all tested and safe for all finishes. Make any car look superb.
If there is one thing that makes your vehicle look great, it's clean wheels and properly dressed tires. This is usually the dirtiest area on your vehicle, yet keeping them clean is a quick and simple process. We have several cleaning tools that will shorten your cleaning time.

I recommend wearing a pair of our Vinyl, Latex, or Nitrile Gloves when working around your wheels. Brake dust and road tar are hard to remove from your fingers, nails, and hands. You never know what chemicals may be entering your skin. When I venture out of the garage, I also don't like my hands looking like I need a personal grooming class. Plus, if it's cold outside, your hands stay warm.

CLEANING THE WHEEL WELLS AND TIRE RUBBER

Rinse out the wheel wells before you start, otherwise, as you randomly spray the tires and wheels, you will invariably loosen crud that will drip on to your freshly washed wheels. Use the strongest pressure and degree of water you have to knock out the dirt and crud that gets caked up in the wheel wells. Spray the wheel well with a degreaser, like our Oil & Grease Cleaner or our Rubber Cleaner and use our Wheel Well Brush to loosen dirt, mud, and tar, then rinse thoroughly. If possible, remove the wheels to gain better access (be sure the vehicle is safely situated on jack stands).

Next, move to cleaning your tires. Tire cleaning is an easily forgotten step in the detail process, but it is very important. All the grease, grime, brake dust, and road dirt you see on your wheels is getting built up in your tires, too! Over time this will damage the rubber and it also takes away from the look, even when dressed with a tire dressing. With my regular washing I always use Rubber Cleaner to remove the regular buildup and prepare the rubber for protectants and dressings. Apply the Rubber Cleaner in a shaded area and make sure that the rubber is not hot to the touch. Spray the cleaner directly onto the surface. Allow it to soak into the rubber, but do not allow it to dry on the surface. Agitate with a stiff bristle brush or our Tire Scrubbing Brush to pull contaminants out of the rubber. For more intense cleaning, agitate your tires with our 3" Yellow Scrubbing Pad and 3" Random Orbital. Try this! You'll be amazed at how much crud comes out and how great your tires look. Finish by rinsing the tires and wheel wells with water.
On a less frequent basis, usually once every other month, I like to thoroughly clean my tires of any silicones, sealants, waxes, oils or greases that are starting to build up. Rubber Prep is the perfect product for this. Rubber Prep breaks down and removes the silicones, sealants, waxes, oils and greases without any scrubbing. (It'll even remove that "wet & sticky shine" you see on every dealership's used car lot!) Simply apply Rubber Prep to the tire with a sponge and allow it to evaporate leaving your tire perfectly prepared for our Vinyl & Rubber Dressing, Long-Lasting Tire Dressing or Tire Rejuvenator. Wait to dress your tires and wheel wells until after you've cleaned your wheels.

I added a special scent that makes it pleasurable to use, too.

One of the challenges in designing our quality Wheel Cleaner was creating one that was as safe to use on your wheels as on your skin. I've tested other wheel cleaners where the toxic smells alone nearly required a respirator during use. Those cleaners usually have a pH level so high that if you used it on an anodized rim, like on an older Porsche, the alkalis may etch the rim. Our Wheel Cleaner is a non-toxic, environmentally safe product that is properly pH balanced and cleans the dirtiest of wheels. Griot's Garage Wheel Cleaner is also factory approved by BBS, Dayton Wire Wheels,” and The Tire Rack! I am very proud of this as these are some of the world's premier wheel manufacturers and retailers.

For those of you with chrome wheels, I developed Chrome Wheel Cleaner just for you. It is safe for cleaning all of today's chrome wheels and your old school chrome wire wheels. With this cleaner I took a natural approach and used the power of citrus oil to formulate a powerful cleaner that's safe and effective. Chrome Wheel Cleaner will remove brake dust deposits, heavy road oils and other contaminants without damaging your chrome wheel's surface.

A question I often hear is, "Richard, could you make a wheel cleaner that I can just spray on and hose off?" That would be nice. The only problem is wheel cleaners that strong are also strong enough to etch or damage your rims; not to mention what they can do to the environment. Even though you have to use a sponge or wheel brush to help break up the brake dust on your rims, our Wheel Cleaner is completely safe for all wheel finishes. It will loosen road tar, grime, and brake dust making removal quick and easy.

**HOW TO USE WHEEL CLEANERS**

Before starting the process, make sure the wheels are cool to the touch. NEVER spray water or any type of cleaner to a warm or hot wheel as this can damage your wheels finish and your brake rotors. When your rims are cool to the touch, start by completely dousing them with water. This will allow the cleaner to be carried to remote areas that might not otherwise be reached by spraying on a dry wheel. I also think the extra amount of water allows the cleaner to

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**CLEANING WHEELS**

Car Care for the Perfectionist!
penetrate the brake dust and road grime easier. Next, work on one rim at a time and spray an even amount of cleaner over the entire rim. Agitate the cleaner right away with the cleaning tools of your choice. If the wheel begins to dry as you are scrubbing, apply more Wheel Cleaner and continue scrubbing. Occasionally heavy buildup may require a second cleaning. Once the wheel has been properly cleaned, rinse with water until clear. Finish by drying your wheels to avoid water spots damaging your finish, especially if you are working on a hot day in warmer temperatures. Since there always seems to be some brake dust that doesn't get completely washed away, I like to use our Tim's Dirty Spots Micro Fiber Wipe Down Towel. This will save your nice towels for another detailing session.

Cleaning Really Dirty Wheels

If you go a little too long between washings or you drive a vehicle with brakes that blacken your wheels, spray some Heavy-Duty Wheel Cleaner onto your wheels and let it sit for several minutes while the thick cleaning solution breaks up and dissolves tough road grime and brake dust build-ups. Heavy-Duty Wheel Cleaner is a pH balanced, non-acidic and non-caustic formula. It changes color as it works! As it becomes purple, agitate gently using any of our wheel cleaning tools. After a light scrubbing, simply rinse away the dirt and you'll be left with sparkling clean wheels. Safe for use on any painted, chromed, uncoated aluminum and powder coated wheels.

Wheel Cleaning Tools

Getting into all the nooks and crannies of your wheels creates another challenge, so I've created various tools to make this job easy. I always start with our Boar's Hair Wheel Brush since the long, soft bristles do a great job breaking up the initial brake dust and grime on the rim. Often this, by itself, will clean the wheel very well. For those of you that are really picky about cleaning your wheels, like me, keep reading. I then move to cleaning around the spokes and lips of the wheels with our Lamb-
skin Four-Finger Mitt and Three-Finger Detail Mitt. These are like mini wash mitts for your wheels. Next, move to the barrels and other tight areas with our Wheel Scrubber Brushes (use the long reach version for deep dish wheels) and Foam Swabs. These allow you to work around the brake calipers and rotors reaching all the way back. I finish using our Lug Nut Cleaning Brush, which are designed to fit perfectly down into the lug nut holes on your wheels. Don't use tooth brushes as the plastic bristles will scratch polished and painted surfaces. And, I always like to remind people to never use the same cleaning tool on your wheels that you use on your paint. You don't want to contaminate your paint with the type of grease, grime and dirt that's on your wheels.

Another great tool for cleaning tough-to-reach areas that routinely get heavy road grime and brake dust built up on them is our Compact and Large Bendable Wheel Brush. You can easily form either of them to reach around the wheel spokes, hard to reach engine bay locations, intricate grill work or just about anywhere on your motorcycle. The bristles of these brushes are extruded in a star-shaped pattern for maximum surface area resulting in better cleaning action. They are soft and flexible to reach into tight areas that are not much larger than the 1/2" nylon coated stem.
PROTECTING AND DRESSING
WHEEL WELLS AND TIRE RUBBER

Detailing your wheel wells can be a tough job. In addition to being a tight space, there are tons of areas around the springs and frame that are nearly impossible to reach, which is why I developed our Undercarriage Spray. Simply spray a light mist around the wheel well and you're done. It provides a nice look as if you've spent hours cleaning the wheel well. Perfect for SUVs where the wheel opening is large and you see a lot of this area. Be careful of the overspray mist as it makes garage floors very slippery! Put down a drop cloth or newspapers to catch any overspray. Also, avoid getting the overspray on your tires, wheels and paint. It won't harm paint, but it will smear and should be wiped away.

The final touch to detailing your wheels and tires is always tire dressing. Protecting and dressing tire rubber is an easy process that will greatly enhance the look of your car while keeping your tires protected from cracking, fading and hardening. First, apply the product onto your applicator sponge. I prefer our Tire Dressing Applicators for tires with grooves and raised lettering on the side walls, but the Blue Detail Sponges and 3" Blue Applicator Pads also do the trick. Spread it in thin, even coats across the tire, ensuring you get in and around all the grooves and lettering. Thin coats will give you a more even finish and help keep the dressing from flinging onto the side of your car. Do not buff the dressing into the tire rubber. Use smooth, clean strokes. The results should be a heavier coat of dressing that will provide a glossier look to the tire rubber. Keep the dressing off the tread. Second, wipe away any excess product from the wheels with a clean Tim's Dirty Spots Micro Fiber Wipe Down Towel. Application of our different tire dressings is the same, but each offers a different finish and longevity.

Vinyl & Rubber Dressing is my favorite tire dressing. It provides excellent UV protection, is water based and gives your tires a nice sheen similar to when they were brand new. While this dressing has the shortest life of any of our dressings (1-2 weeks), the finish is worth it. The satin finish provides professional results and is the perfect accent to your wheels. The dressing of choice at the Pebble Beach Concours d'Elegance.
Tire Dressing Tip

Apply our Tire Rejuvenator as a base coat 3-4 times per year. Then, on a more regular basis, apply Vinyl & Rubber Dressing over the top. This will keep your tires looking good even when the Vinyl & Rubber Dressing wears away.

Another easy way to apply Vinyl & Rubber Dressing is with our pop-up dispenser. I've taken a strong, cloth-like material and saturated it with Vinyl & Rubber Dressing. This provides a very controlled method of application to tires. The strong material won't rip, tear or leave lint. It enables you to use your finger tips for precise application near the rim. It also makes it easy to dress the valve stem and keep it from cracking.

Long-Lasting Tire Dressing is just that; long lasting. Longevity is one of the primary challenges with tire dressings. One rainy day drive or a car wash and you need to reapply most dressings. Long-Lasting Tire Dressing is specifically designed to withstand tough weather conditions. Being a super thick liquid, it's easy to apply, and unlike many dressings, it won't fly off of tires and onto your wheels and paint. It is also water repellent so it still looks great even after a rain storm or a good wheel cleaning. As for gloss? It's all up to you. Want a nice black, satin finish? After application, give a quick swipe with a disposable towel and your tires will have a natural rubber look. Want mega-gloss? Apply two coats and don't touch it. For those of you that like a shiny tire, this is the dressing for you.

Tire Rejuvenator is a water-based black dye that will provide a matte black tire with a look that will last for up to three months! Think about it, no more putting on tire dressing each and every time you wash your car or drive through inclement weather. Just apply the creamy tire dressing with the sponge (included) and within minutes you have a perfect looking tire. Our formula won't fly off, attract dust or make your pants dirty if you accidentally come in contact with your tire after it dries. Since this is a water-based black dye, do not use Tire Rejuvenator on whitewalls or tires with white lettering.
**Polishing and Waxing Wheels**

Most modern wheels have a painted, color base coat followed by two or three layers of clear coat. These types of wheels should be treated just like the paint surface on your car, which means you should polish and wax them on a regular basis. This provides maximum protection and makes cleaning the wheels much easier. Since detailing wheels can be a bit of a chore, I prefer using our Paint Sealant on my wheels (though our Best of Show Wax® can be used as well). Paint Sealant provides longer lasting protection that is more resilient against the intense conditions your wheels experience. Best of Show Wax® and Paint Sealant are safe to use on all wheels, including clear-coated, machined aluminum, anodized, chrome, and non-clear coated wheels.

Polishes, waxes, and sealants should be applied to your wheels using the same methods as you would on your paint (covered in the Polishing and Waxing sections of this Handbook). Here I’ll give you a few techniques that are better for application on wheels. Always start by thoroughly cleaning your wheels and removing buildup with Wheel Cleaning Clay. Clay is great on wheels since it can be formed to fit into all the cracks, crevices, and corners. Should your painted wheels have small surface scratches and need polishing, use Fine Hand Polish and apply it using a 100% Cotton Buffing Cloth or a 3” Orange Foam Polish Pad. Work in small areas and wipe the polish off before it dries. For wax or sealant on larger surfaces, use our 3” Red Foam Wax Pads. In tighter areas, a 100% Cotton Buffing Cloth works well to get down into crevices and work your way between spokes. Allow it to cure and buff using a clean Micro Fiber Wax Removal Cloth.

**Non-Clear Coated Wheels**

For non-clear coated, aluminum, and magnesium wheels, you need to take special care when polishing out oxidation and other imperfections. Our Metal Polish is perfect. It removes even the toughest oxidation from these types of rims and restores a bright, factory polished finish. Remember, the Metal Polish is for non-clear coated and non-anodized wheels only! If you are not sure whether your vehicle’s rims are clear coated or not, consult with the manufacturer of the rims or car dealer.
Heavy-Duty Metal Polish is safe and effective on non-clearcoated aluminum, steel, magnesium, stainless steel, Plexiglas®, plastic and acrylic surfaces when you need a slightly more aggressive polish. It is silicone-free and water soluble making is easy to rinse off after use.

Achieve amazing results when used by hand or with our Random Orbital. Conforms to commercial aviation requirements. Even our friends at J&L Fabricating tell me it’s the best polish available for the aluminum race car tubs they build.

If you've ever polished metal before, you know it always leaves behind a messy, black residue that will ruin your good cloths. This is why I love our 100% Cotton Wipes. They are great because they provide the same performance and softness of our 100% Cotton Buffing Cloths, but are disposable so you can throw them away when you are finished. Apply a very small amount of polish to the cotton wipe and rub it gently in a circular motion until black residue appears on the wipe and rim. Buff off the polish residue with a clean 100% cotton cloth or wipe, making sure not to let the polish dry on the rim.

There are a couple of options when it comes to machine application. The best option is to use our Felt Polishing Cones with a variable speed drill or die grinder. Wear eye protection! Wipe a small amount of polish onto the cone and work in small areas, wiping off the polish before it dries. If the polish sprays or splatters, you've put on too much. Be careful around the valve stem, lug nuts (if the wheel is still mounted) and along the edge of the tire. It's easiest to polish the wheel when it is removed and you can work on a bench top. If your wheel has any large, flat areas, you can use our 3" Random Orbital and our 3" White Foam Metal Polish Pads. Just spread the Metal Polish on the pad like butter on bread and work back and forth on the area until you see the panel starting to shine. Buff off the polish residue with a clean 100% cotton cloth or wipe, making sure not to let the polish dry on the rim.

Ever tried to polish a nine year old oxidized magnesium Indy Car wheel? That's exactly what I did just to prove the effectiveness of this amazing polish...

Our White Polishing Pads also work well for Metal Polish application.

Felt Polishing Cones on a pneumatic or electric drill make for fast easy polishing. A die grinder, though, provides the best control. Always wear eye protection!

Our White Polishing Pads also work well for Metal Polish application.

100% Cotton Disposable Wipes provide a very safe alternative to destroying your nice cotton towels when using Metal Polish!
STEP FOUR

PAINT CLEANING CLAY...

Before Polishing or Waxing, Remove Surface Contaminants

After you’ve washed your vehicle, run your fingers over the paint. If it feels rough instead of being totally smooth, or if you hear a "friction" sound, the surface has contaminants which need to be removed. Oils, dirt, brake dust, tar, and acid rain deposits from the environment form tiny particles which stick to your paint. Over time these particles build up and form an invisible layer. (Although you can see it with a 10x magnification loupe.) This is what you are feeling and hearing when you touch the surface. Even though you’ve washed the car, these contaminants won’t come off. There are some polishes on the market advertised as "paint cleaners" that are a lot of work but still can’t remove these contaminants! Before you polish or wax your paint, these contaminants must be removed. This will make polishing safer, easier and ensure maximum clarity and longevity from your wax.

Don’t make the mistake of polishing or waxing over these contaminants. If you polish or wax without claying first, these contaminants could get picked up into the pad and ground into your paint potentially creating swirl marks and scratches. In addition these contaminants, on a microscopic level, look like volcanoes on your paint and will not accept a wax barrier like a smooth paint surface. These "contaminant volcanoes" now act as a conduit for acid rain and take its harmful effects right to the base of the paint! If you don’t remove them before you wax, you simply cover them up, leaving them to attack the paint. In all my years of testing products there is only one way to remove these contaminants safely. (It also is the easiest!) Use our Paint Cleaning Clay. This product is amazing. There are many different grades of clay. Some are very coarse and will scratch paint. Others are too dense and leave a hard-to-remove residue on your paint. Our clay is extremely mild and will remove a variety of surface contaminants including paint overspray, tree sap, bug residue, tar, dirt, oil, hard water deposits, and brake dust without removing wax or scratching your vehicle’s paint. How does it work? The clay is pliable and sticky and acts like an exfoliate, lifting away contaminants. It must be used with a lubricant, allowing it to slide across the surface. Our Speed Shine® is perfect as it not only contains a cleaner, but has high lubricity, too. I like to wear vinyl aloe gloves when working with clay so it doesn’t stick to my skin or get under my fingernails.

Our clay is very mild and will remove a variety of surface contaminants that are difficult to remove any other way.

Size DOES matter!
Our Paint Cleaning Clay is safe for all types of paint and leaves no residue or scratches behind and we give you more, lots more!

80 Grams 100 Grams 100 Grams Griot’s Garage 220 Grams
**How to Use Paint Cleaning Clay**

Start by removing the plastic wrapper and tearing off about one quarter of the bar. If your clay is cold and not pliable from being stored in an unheated garage, try warming it in your hands first. If that doesn't work, remove the lid from the container and place it in your microwave for 10-20 seconds. Knead the clay into a ball and pat it into a flat pancake shape about the size of the palm of your hand.

Speed Shine® plays an integral part of the claying process. It provides the lubricity the clay needs to glide across the paint. Working in small areas, about 2’ x 2’, start by spraying the clay in your hand and then the two foot section with Speed Shine®. Now, wipe the clay back and forth in a cross-hatch pattern over the surface, making sure you keep your speed up. You don’t need to rub hard; the weight of your hand is usually enough pressure. A few passes will do it. If the clay starts to stick to the paint, it’s an indication that you need more Speed Shine® on the paint. For larger specs of tar or overspray you may need to make more passes and press down a little harder. As the surface gets clean and the contaminants are removed, you’ll feel the clay move more easily across the paint. Wipe the area dry with a clean Micro Fiber Speed Shine® Cloth. Now feel. Your paint’s surface should feel silky smooth! While doing an average size vehicle you will need three or four cloths for wiping off the lubricant. Don’t allow the Speed Shine® to dry on the surface. Work from the top of the car down, doing the lower valances and the rear of the car last. These areas tend to be the dirtiest. As you use the clay, the patty will flatten out. After each two foot section knead the clay back into a ball and re-flatten. This keeps the contaminates suspended in the clay away from your vehicle’s paint.

Your initial ball of clay should do the entire car several times unless your paint is very dirty. When the clay is looking pretty grimy, discard it and tear off another piece. An eight ounce bar should do your car 10 to 15 times. If you see any large chunks of tar, dirt or sap in the clay, pick them out. If you drop the clay, pick out the chunks and discard them so they don’t scratch the paint. If you can’t remove the grit, discard that piece of clay. When you store the clay, put it back into its container, spray in a few squirts of Speed Shine® to keep it moist, and seal the lid tightly.

Paint Cleaning Clay can also be used with our 6” Random Orbital using our Paint Cleaning Clay Pad. This allows you to get great results with less time and effort. The foam portion of the pad holds Speed Shine® and the center has a cut-out for the clay. Simply flatten out the entire clay bar, place it in the cut-out, spray the pad, clay and the area on the car to be cleaned with Speed Shine®. Place the pad in the machine and set it on the paint. Run the machine on a low speed setting (1-2). It is important to keep plenty of lubrication on the clay and surface of the pad so the clay moves freely over the paint. After each section, remove the clay, knead it and repeat the process across the entire car. Again, work in small areas and don’t allow the Speed Shine® to dry on the surface.

Paint Cleaning Clay works on any painted surface and is safe for all cured paints. You can also use it on painted wheels, chrome bumpers, hard plastics and metal trim. Once you’re done with the clay you’re now ready to polish out any scratches or swirl marks you want to remove. Or, move on to waxing if the surface is scratch free.

**Car Care for the Perfectionist!®**
**STEP FIVE**

**POLISHING...**

**EXAMINE YOUR PAINT**

There are many misconceptions regarding polishing and what the term means. Simply put, when you polish, you remove very thin layers of paint. To completely remove scratches, it is necessary to remove thin layers of paint around the scratch down to the same level as the base of the scratch. In most cases you only need to remove microns of paint, which isn't even measureable. However, you need to be careful with the polishes you choose since many polishes on the market are more aggressive than you need. This is done to reduce the amount of effort to remove the scratch, which is never worth it when risking your paint. With our polishes, especially Machine Polish 3, the thickness of paint removed is not measurable, but you can see the scratches disappear! Polishes have varying degrees of very small particles which act like the sand on sandpaper. As the polish moves over a surface, these particles remove the material they are moving over. Ideally, you want a polish which is just strong enough to eliminate or reduce the visibility of the scratch. That's it. If your polish is too aggressive, you remove more paint than is necessary and risk putting additional scratches in the surface. You don't have to worry about too much "paint removal" or "burning through" with our entire product line.

Our polishes are sold in various gradations. Machine Polish 1 is our most aggressive polish; however, it is about half the abrasiveness found in other paint polishes. It's designed to remove heavy oxidation and scratches. Machine Polish 2 is more mild than Machine Polish 1 and is used for moderate scratches and deeper swirl marks. Machine Polish 3, in most cases, is the mildest polish you will need. It removes swirl marks, light scratches, towel marks, etc. I use Machine Polish 3 more than any other polish. If you

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**Finger Tips And Palm**

Use your finger tips when evaluating the paint surface. You have many more sensory nerves here than on the back of your hand. If you have a lot of contaminants on the surface, you will feel them and hear an audible dragging noise from the paint.
have dark colored paint, like black or red, Machine Polish 4 may be necessary to remove the minute swirl marks that are only visible on those colors. It is the finest polish we offer (and the finest polish you will need). The abrasiveness of our Fine Hand Polish falls between Machine Polish 2 and Machine Polish 3 due to the fact that your hand is not able to exert the same pressure on the paint as an orbital can. You can vary the aggression you get when hand polishing by using a Cotton Polish Pad (more aggressive) or a Orange Foam Polish Pad (less aggressive), but all of our Machine Polishes should be applied using a Random Orbital and Orange Foam Polish Pad.

Scratches are tiny grooves left in the surface of your paint and come from a variety of sources. Some of the sources are: dirt particles which have been dragged over the surface while wiping down the car without the proper amount of lubrication; hard objects like articles of clothing rubbed against the paint; boxes left on the fender or trunk; or the simple act of rubbing a finger over a dusty dirty car. Inferior polishes, (trust me, I've tested many) when rubbed by hand or machine, can put more scratches into the paint than you originally had!

If the scratch is so deep that you can see the primer paint or metal, or it goes through the clear coat on two stage paint, the only correction is to use touch-up paint. If the scratch is not deep but can be felt with your fingernail, the best way is to polish the scratch in a perpendicular motion to reduce the visibility of the scratch. (Essentially it is not worth reducing the paint thickness to get down to the base of the scratch and eliminate it entirely.) If the scratch is less serious (swirl marks, towel marks and automatic car wash scratches), they are easy to remove. The idea is to remove enough paint around the scratch so the bottom of the scratch is now level with the surface of the paint.
**Why Machine Polishing?**

The best and safest way to polish out scratches or remove oxidized paint is with a random orbital machine. This is where many of you get scared. I know what you’re thinking. Don’t machines put those terrible swirl marks in my paint? Yes, if you use the wrong machine and the wrong polishes. I’ve developed a safe, fast, and fun system that you can’t mess up. But first, let’s talk about polishing machines. The Random Orbitals I sell are professional duty machines. They’re perfect for the weekend user or the professional detailer. They have enough torque so they won’t bog down and stall like other random orbitals, but they don’t generate enough heat to burn through your paint. Direct drive polishers, on the other hand, are the ones you’ve heard all the horror stories about. They are normally seen in paint shops and used by professional detailers. They rotate in a single action like a drill and operate under high heat and very high speed conditions. Combine this with a heavy polish and/or a wool or cotton bonnet (even a foam pad!) and they will remove paint very quickly and burn through the paint in thin areas and edges. You can also spot the work of one of these machines by looking at the side of a vehicle and seeing uniform buffing marks going down the side. The paint literally has uniform scratch marks everywhere. The owner never really sees these swirl marks when he picks up the car after a detailing because they use fillers and glazes to cover them up. But after the first wash the glazes and fillers are washed away and the swirl marks appear!

Our Random Orbitals operate in an orbiting motion while also spinning around. Even at the highest speed setting, the system I have developed over the years is completely safe. You
can still scratch paint with an orbital machine if you use the wrong bonnet and products. With my specially designed foam pads and my extra-gentle micro polishes you can enjoy all the benefits of machine polishing without the worry of scratches or swirl marks. Less labor, better results. It is my opinion that there is no another method, by hand or machine that can perfect the paint to the level that our Random Orbital System can achieve. Period.

**SAFE MACHINE POLISHING**

Center the foam pad on the orbital’s backing plate and press down firmly so the pad is secured to the machine. Apply polish onto the pad and spread it around like you would butter a piece of bread. Cover the whole pad evenly with a thin amount of polish. I like to use the dome cap on the bottle to spread my polish, but your finger works as well. You don’t need a lot of polish. If your polish is splattering when in use, you’ve put way too much polish onto the pad. Place the pad on the paint surface, set the machine to speed 4 and turn on the machine. Starting in the upper left hand corner, spread the polish across a 2’ x 2’ section in a cross-hatch pattern. The first pass should spread the polish across your working area while also working some of the polish into your pad. Then, if necessary, increase the speed to 5. Polishing speeds will vary based on the surface condition, product and pad you are using, so adjust accordingly to find what works best on your vehicle. I’ve found that in most cases, speeds 4 and 5 are best for polishing. Continue polishing until the product has been evenly distributed across the area and has almost disappeared or if the polish starts to dry out and become chalky (you’ll start to see a dust). This is usually between 6 and 8 total passes of the cross-hatch pattern. Apply an even amount of pressure to the machine so the entire pad is touching the surface of the car. For the majority of your polishing you will only need a light amount of pressure, but you may press down in areas that need more polishing. When you have finished polishing, turn off the machine while it is still on the paint and lift off the paint as it slows down. Don’t lift the machine off the paint without turning it off or you may spray product all over the place or your foam pad may fly off the backing plate. Gently buff the excess polish off the surface using a clean, Micro Fiber Polish Removal Cloth. These cloths are ultra soft and have a long nap so they lift and hold the polish away from the surface as you remove it. If the polish has dried and is difficult to remove, do not use more pressure. A light misting of Pre-Wax Cleanser or Speed Shine® will soften it up to aid in removal.

**CHOOSING THE RIGHT POLISH**

Even though my polishing system is completely safe, it is always best to only do as much polishing as necessary. This will avoid wasting product and time, as well as saving your paint from needless polishing. Begin with a very mild polish; I almost always start with Machine Polish 3. (The only exception is when I’m work-
ing on a dark colored car with very few imperfections. Then I start with Machine Polish 4.)

After your first application of Machine Polish 3, examine the surface closely. If the scratches aren’t gone you may need another application, but always start with Machine Polish 3. It is the final polish that will remove many imperfections. If you would like to remove even more imperfections, use Machine Polish 3 one more time. It is the most fool-proof way of polishing your paint. When you start with Machine Polish 3, it also lets you evaluate what type of paint you have. Even with all of my years of experience, I never start off with Machine Polish 1 or 2. Why? Because paints vary in hardness. Softer paints are easy to polish and you’ll notice a dramatic improvement with just one pass of Machine Polish 3 or 4. Ultra-hard paints may require you to increase the speed and bear down harder to remove swirl marks.

Sometimes you may need to use Machine Polishes 1 and 2 for deep scratches or heavily oxidized paint. When using these products you may see minute scratches in the paint caused from the granules of abrasive. This is normal.

Remember, to remove a scratch, you have to get down to the bottom of the scratch, and that means removing paint (microns at a time) in the surrounding area. Too much polishing will eventually remove clear coats and/or base coats so watch what you’re doing, especially with Machine Polishes 1 and 2. After polishing with Machine Polish 1 or 2, always work in succession, finishing with either Machine Polish 3 or 4. For example, if you polish with Machine Polish 1, follow up with Machine Polish 2, then Machine Polish 3.

For new car finishes, or show cars that have toweling marks and light swirls, Machine Polish 4 is the polish to use. Machine Polish 4 has ultra-fine polish granules encapsulated into a formula with more lubricity to polish any type of paint. Machine Polish 4 is the safest polish on the planet and was specifically designed for near flawless paint. You may also use it after Machine Polish 3, but in most cases it is really not necessary.

After polishing, it is always necessary to follow up with a wax or sealant. Polishing will perfect your finish, but will not protect it from the future scratches or harmful elements. I prefer our Best of Show Wax® or our Carnauba Wax Stick for incredible depth, color and clarity and our Paint Sealant for long lasting protection. Continue on to the next section on Waxing to learn more about these products and their application.

Our Orange Foam Polish Pad is dense enough to hold the polish close to the paint surface while still being gentle enough to not damage the paint.

Our Orange Foam Polish Pad is dense enough to hold the polish close to the paint surface while still being gentle enough to not damage the paint.

Watch That Cord
When using a machine orbital polisher, drape the cord over your shoulder so as not to drag it over your vehicle’s paint. Keep both hands on the machine at all times and always start & stop the machine with the pad on the paint surface.
**Machine Buffing**

For years you’ve been asking me for a way to buff polish from your paint’s surface by machine. I’m happy to say this bonnet system using our Blue Support Pad and micro fiber Polish Removal Bonnets works great. This system buffs the excess polish from your surface easily, leaving your arm fresh for other things.

Begin by placing the Blue Support Pad onto your machines backing plate and wrap a Polish Removal Bonnet over the pad. Place the machine onto your paint, set it to speed 4 and turn it on. Work the bonnet across area to remove about 95% of the polish from the surface. For a final detail and to remove that last 5%, lightly mist Pre-Wax Cleanser or Speed Shine® and buff with a Micro Fiber Polish Removal Cloth. This will leave your paint clean and ready for wax or sealant.

Your Polish and Wax Removal Bonnets can be machine washed and cared for just like all of your micro fiber towels. See the care instructions on page 60 of this Handbook.
If you are still concerned about using an orbital and you choose to hand polish the entire car, the process is the same. Use our Orange Foam Polish Pads for normal polishing or our Cotton Polish Pad for more aggressive polishing along with our Fine Hand Polish. If you are working on softer paint or a darker colored car, I always recommend using foam since cotton can be a bit too aggressive and may leave behind micro scratches.

Again, use the polish sparingly, work in small areas and use the cross-hatch method. If you have a deep scratch, the best way to remove it is to polish it out using perpendicular strokes over the length of the scratch. The challenge with hand polishing is to keep the pressure even and the coverage thorough. As with machine polishing, be careful around trim to avoid getting the polish in cracks, on rubber or in seals. As you work, the polish should almost disappear. If you're wiping off a lot, you are wasting product and making the job much too hard.

Take your time when working by hand. It's hard work and easy to get a bit tired, thus missing areas. Work in small sections. If you're working on heavily oxidized paint, keep several clean polishing pads handy and keep turning your cloths, working with clean areas. Always remove polish before it dries. Unlike wax, there is no reason to allow polish to dry. The rubbing is what does the work. Dry polish is very hard to remove. If it does dry, a light misting of Pre-Wax Cleanser or Speed Shine® will soften it up to aid in removal. You can get excellent results by hand, but don't think you will remove every swirl mark. The time involved and the effort, is just too great. There is still no better way to a perfect finish than with our Machine Polishing System.
**Special Care For Clear Coat Paint**

Most new cars and many restored older cars are finished with a clear coat paint. In the past, the final layer on cars was a pigmented, single stage, oil based paint. When polishing this kind of paint you were working on the pigment and saw it come off on your pads and polishing cloths. It gave you some working room and you could see exactly what effect your polish was having on your paint's finish.

Newer technology paints are water based for environmental reasons and are much harder. This is normally referred to as two stage paint. The first coat (on top of a primer, of course), is the color coat. This is protected by a thicker layer of clear polyurethane or urethane paint, providing protection and gloss. The color layer is very thin while the clear coat is much thicker to provide the protection while giving your vehicle a glossy look. Many clear coats contain a UV protection to stop fading. While clear coats provide a great look, they show scratches more than a single stage finish. Why? Think of it like scratching a piece of glass. Every pit and scratch is noticeable, especially in black.

If you don't know if your vehicle has clear coat or single stage paint you can test by rubbing with a white cloth and polish on an out-of-the-way area. If color comes off, it's not clear coated. The most important thing to remember with clear coats is to avoid strong abrasives. This includes strong paint cleaners and absolutely no rubbing compounds!

**Paint Glaze**

Glazes are a product I avoided for a long time because I'm of the mind-set that it is better to remove the imperfection than to cover it up. And, frankly, I couldn't find a glaze I liked. However, I finally developed a glaze that works great and fills the void in your detailing arsenal for older paints where you don't want to remove any more paint, even if it is microns, or for times when removing scratches may take more time than you have. Paint Glaze can be applied with our Random Orbitals or by hand using our Orange Foam Polish Pads and buffed with our Micro Fiber Polish Removal Cloths. The application process is similar to polishing. Apply it sparingly, but you can layer it in multiple coats to hide more imperfections. Also, a glaze can be applied before or after waxing or sealing. Just remember, glazes will wear away after a few washes, so only use glaze when polishing isn't possible or as a final prep before a show.

Get your car care arsenal all lined up and ready to have some fun. No matter how old or new your vehicle is, you can keep it in perfect condition and have a ton of fun in the process.

**Car Care for the Perfectionist!**

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**Color Coat 1-2 mil**
**Primer 2 mil**
**Metal 20 mil**

**Clear Coat 2-3 mil**
**Color Coat 1-2 mil**
**Primer 2 mil**
**Metal 20 mil**

Clear coat protects the color coat. Careful polishing is required so damage does not occur to the clear coat.

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Paint Glaze is designed to hide deeper scratches and swirl marks and is especially helpful for single-stage paint.

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Polishing
**PROTECTING YOUR PAINT**

Waxing or sealing your vehicle is an important part of preserving its appearance. With proper care, there is no reason why original factory paint can’t last the entire life of your vehicle. The goal is to protect the paint’s surface while providing color, depth and clarity so the paint looks stunning.

A carnauba based wax is still the best choice. But, if you only have time to wax your vehicle once a year, a sealant is the better choice. Carnauba wax comes from the Brazilian plant, Copernica Cerifera, which is farmed for its vegetable fat type of wax. This wax coats the leaves and actually swells when it gets wet. This allows any moisture to roll off the leaf and be directed down into the plant’s root system. It also preserves any moisture within the leaf from evaporating. In its raw form, carnauba is as hard as a rock and needs naphtha, petroleum distillates and other oils to make it into a workable liquid or paste form. Those that advertise “100% Carnauba Wax” are being less than truthful as that would either come in the form of a brick (and as hard as one, too) or in the flake form. (The flakes are still rock hard and unable to be applied to paint.)

The barrier created by a carnauba based wax naturally protects your paint from the harmful UV rays from the sun, which is probably the most harmful element out there. Though nothing can create a shield against acid rain and toxic bird droppings, our carnauba based waxes do provide enough of a barrier for you to remove these unwanted foreign deposits quickly before they cause damage to your paint. With its dense properties, the maximum amount of carnauba you can put into a wax is about 50%. Any more and the product becomes too hard to apply and buff once it has dried. Our waxes contain the maximum amount of carnauba possible while providing excellent buffing characteristics.

Carnauba wax is one of nature’s most complicated compounds. Its elements are so complex that man, in his infinite wisdom, still has not been able to duplicate it. However, not all of us have time to wax our cars 3 to 4 times per year as recommended for wax, so I developed a couple synthetic, polymer-based sealants that go on easy, look great and last up to a full year without needing to be reapplied. These are great for daily drivers, trucks and SUVs or even boats, since the sealant will withstand the harsh weathering much better than a carnauba wax.

All of our waxes and sealants are compatible with each other, so you can layer one on top of the other and do not need to worry about stripping the surface should you decide to use wax during the Spring and Summer and sealant during the Fall and Winter.
**Wax Or Sealant?**

Which product should I select to protect my vehicles? Start by asking yourself some of these questions: Is this my beloved weekend driver, show car, crazy-in-love-with car, or is it my daily driver that takes a lot of abuse? Do I have time every quarter to wax my car, or do I only have just enough time to wash and dry it once or twice a month? Do I park outside most of the time, or is the car parked indoors at work and at home? Do I cheat and go through a car wash every once in a while, or do I hand wash my vehicles all the time? Do I expect the finish to be perfect, swirl-free with incredible depth, color and clarity, or am I willing to have a glossy finish with the majority of the swirl marks removed? Once you've answered these questions for your car, evaluate our different wax and sealant options to see which option fits your goals given the finish you want to achieve and the time you can commit.

**Carnauba Waxes**

Carnauba waxes are ideal if you want to achieve the best finish for your paint and have time to apply wax 3 or 4 times a year, park the car indoors at home, use a car cover at work, and you never run it through an automatic car wash. Best of Show Wax® has incredible depth, color, and clarity. In addition, it also has a better filling capability to hide any imperfections you may have not been able to remove while polishing. It continues to be the premier wax on the concours lawn. Our Carnauba Wax Stick provides a bright shine and maximum protection while being very easy to apply and buff. Excellent for a car you love that gets driven often since it has a lasting finish. Plus, the stick-style container allows for application on any size pad. Our Premium Carnauba Paste Wax has similar characteristics of the stick in terms of brightness and protection, but its hydrophobic technology is what really sets it apart. The water beads actually curve into themselves reducing surface contact and forming a "non-wettable" surface the water glides right off of. Each of our waxes has unique characteristics to allow you to use the ideal product for application, but all will give you excellent shine and protection for your beloved automobile.

**Paint Sealants**

Our sealants focus on lasting protection, yet still provide a high gloss finish you'll only have to apply once or twice a year. Perfect for cars that take a beating from daily driving, being parked outside, the occasional trip through a drive trough car wash, or when you simply don't have time to wax your car often. Our Paint Sealant can be applied by hand or machine; just like our waxes. It goes on easy and is a breeze to buff. One-Step Sealant is similar to our Paint Sealant but has a small amount of...
**STEP SIX CONTINUED**

**WAXING & SEALING...**

Polish to clean the paint and help remove swirl marks, so it is applied like our polishes. Both sealants provide comparable protection, but One-Step Sealant should be used if you skipped the polishing stage and want to remove some light swirl marks while you apply the sealant. Plus, if you follow up with Spray-On Wax after each wash you can relax, knowing that you’re doing the right thing in terms of protecting your paint for those daily driven cars and SUVs instead of ignoring them.

**Pre-Wax Cleanser**

Professional detailers have known for years that you should clean and condition the paint after polishing and before applying wax or sealant. Minute polish residue can remain on the paint surface and may be difficult to remove. I developed this Pre-Wax Cleanser so you can safely, quickly and easily prepare the paint surface to accept wax or sealant. Made from a carefully blended combination of citrus oil and surfactants, so it won’t harm the paint and is fast and easy to use. Simply spray and wipe dry with our Micro Fiber Polish Removal Cloths.

**Waxing With A Random Orbital**

There is no better way to apply our waxes and sealants than with our Random Orbitals. The added depth and evenness of color and clarity are unsurpassed. Imagine being able to go over a particular area about one hundred times more than doing it by hand. Applying wax by machine allows you to “burnish” the wax into every paint pore, so your wax protection will last at least twice as long.

Start by centering a Red Foam Wax Pad on the machine’s backing plate and pressing it into place. Pour a nickel size amount of wax or sealant on the center of the pad (you don’t need much). If you are using our Carnauba Wax Stick or Premium Carnauba Paste Wax, spread a thin coat of wax across the bottom of the pad. If you apply too much product into your pad it will be difficult to thin out during application resulting in uneven application and difficulty when buffing. Place the pad onto the paint surface, set the speed to 2 and turn on the machine. Since you want your wax to dry, you can work in larger sections than you did when polishing. Normally, I start with half of a hood. Start in the upper left hand corner and work your way across the area in a cross-hatch pattern. Working in this pattern ensures you get complete coverage. Overlap the areas you are waxing so the results are even.
Micro Fiber Wax Removal Cloths or 100% Cotton Buffing Cloths work perfectly to buff wax.

You can eliminate a lot of work by taking off the wax with our Wax Removal Bonnet and our Random Orbital. Use two or three bonnets during the process so not to allow too much wax to build up on the bonnet.

Your first pass is primarily to begin spreading the wax across the area. From there, I increase the speed to 3 and continue working across the area in the cross-hatch pattern until the wax has been spread so thin you can barely see it. As you work use a light amount of pressure allowing the weight and motion of the machine do the work. If you are having difficulty thinning the wax out, gradually increase the area you are working in until you are able to properly thin out the wax. Once you are finished, turn off the machine while it is still on the paint and lift it off the paint. Don't lift the machine off the paint without turning it off or you may spray product all over the place or your foam pad may fly off the backing plate. Once you've finished applying wax with your Random Orbital, you may still need to hand wax some tight areas where our 6” and 3” Random Orbitals cannot reach—like bumpers, grills, spoilers and around trim. When doing this, be sure to overlap the areas so you get complete coverage.

By working the product into the panel and thinning it out, you won't be taking off as much with your towel and your elbow grease will be reduced substantially. Allow the wax to completely cure and buff the excess with our Micro Fiber Wax Removal Cloth. Cure time varies based on the product and environment. With our Best of Show Wax® and Carnauba Wax Stick, it is usually about a few hours. Our Premium Carnauba Paste Wax can cure in as little as 10 to 15 minutes. If there are spots that are difficult to buff, don't rub hard. Instead, with Best of Show Wax® or the Carnauba Wax Stick, mist a little Spray-On Wax or distilled water on the area to help soften the dried wax and make removal easier. With Premium Carnauba Paste Wax simply apply a quick coat of wax right onto the dried wax and buff immediately.

**MACHINE BUFFING**

You can also use your orbital to buff wax! Our Wax Removal Bonnets are made with a high-loft micro fiber and work like attaching one of our Micro Fiber Wax Removal Cloths to your orbital (seed page 39). Center a clean Blue Support Pad on the orbital's backing plate and firmly press into place. Wrap the Wax Removal Bonnet over the pad, set the orbital to speed 4, place the machine on the paint and turn on the machine. Work the machine back and forth and...
allow the machine to remove nearly 90% of the wax residue from your paint. You'll still need to follow up with a light buffing by hand, but it will significantly reduce the amount of work. Also, it is best to have a bottle of Spray-On Wax or distilled water close at hand since much of what is left over is dried wax. A light mist and a quick buff with your Micro Fiber Wax Removal Cloth will remove those spots with ease.

**HAND WAXING**

Again, preparation is key to waxing. You want to be sure that you're applying wax to a clean surface. If you see anything other than wax on your pad during application, you haven't cleaned properly. Wash, clay and wax. In that order. If you need to remove swirl marks, then polish between the clay and wax steps.

For hand waxing with Best of Show Wax®, Carnauba Wax Stick, Premium Carnauba Paste Wax and Paint Sealant, apply with a Red Foam Wax Pad. Cotton pads or cotton cloths work but these are more aggressive, soak up more product (creating waste) and may actually induce small micro scratches. Be sure your paint surface is dry and cool. Apply a small amount of wax to your pad and wipe it on in a thin coat using the cross-hatch pattern. A little goes a long way, so use sparingly. As you apply the wax, it should begin to disappear. If you are having difficulty thinning it out, gradually increase the section you are working on. Normally, each section should be about half of a hood. As with Random Orbital application, allow the wax to setup and cure, then buff using a clean Micro Fiber Wax Removal Cloth.

**WAXING TIPS & TRICKS**

If you are having a problem with hazing, smearing or a dull look after removing excess wax, here are some tips to help. Hazing usually happens when you've applied too much wax under a high humidity condition and the moisture is caught underneath the fast drying carnauba wax. The paint's temperature, being cooler than the outside air, speeds up this process by allowing the top of the wax to harden quicker. If this happens to you, you should let
Before

After

Another way to deal with it is to keep a bottle of Spray-On Wax or Speed Shine® handy. Spritz the surface and wipe it with a dry, clean Micro Fiber Wax Removal Cloth. The excess wax will adhere to the droplets and be carried away with the cloth. If neither of these tips work, it has been my experience that the paint has a paint sealant or a silicone-based synthetic wax on it that is causing a reaction with the natural carnauba-based waxes. If this occurs, you must strip off the old paint sealant or silicone based synthetic wax with Paint Prep before applying one of our waxes or sealants. See the section on Paint Prep on page 13 of this Handbook.

If you want to enhance the depth and clarity, apply several coats of wax. Allow each coat to cure for at least 12 hours. In preparation for a concours event, I once put six coats of our Best of Show Wax® on a finish. Another trick is to put a very thin layer of wax on and let it set up for 3 hours. Then, without wiping it off, go back over the dry wax with another layer of wet wax by hand or with our Random Orbital. Allow it to haze, then buff. While this makes for a lot of work, the finish will be thick and rock hard.

One of the most frequently asked questions we get here at Griot’s Garage is, ‘How do I remove dried on wax from my trim?’ While it is best to avoid this problem all together and mask your trim with painter's masking tape before you start detailing, our Dried-On Wax Remover is specially formulated to dissolve dried wax so you can easily wipe it away. Apply the product directly to the trim using a cloth or sponge and wipe away with a clean, dry cloth. Heavy amounts of dried wax may require multiple applications.

**Spray-On Wax**

Spray-On Wax is just that. It is meant to get you from wash to wash with some additional protection and gloss. It is not meant to replace your normal wax or sealant. Think of it as a base wax enhancer. When used on a regular basis after each wash, you will be able to extend the life of your natural waxes and sealants. Apply it to a damp car that has just been washed. Mist Spray-On Wax across the surface (the water droplets on the car will help carry it into all the corners), then as you towle dry the car, the wax will be worked into the surface creating an additional layer of protection.

**A slick wax removal trick!**

After using Best of Show Wax® on your vehicle's paint, let it set up. Then, once it's dry, spray a little Spray-On Wax onto the dried wax and easily wipe off the excess.

**Use our Palm Grip 3” Pad Holder for compound curves and harder-to-reach areas when waxing.**

**Before After**

**Spray-on Wax** is just that. It is meant to get you from wash to wash with some additional protection and gloss. It is not meant to replace your normal wax or sealant. Think of it as a base wax enhancer. When used on a regular basis after each wash, you will be able to extend the life of your natural waxes and sealants. Apply it to a damp car that has just been washed. Mist Spray-On Wax across the surface (the water droplets on the car will help carry it into all the corners), then as you towle dry the car, the wax will be worked into the surface creating an additional layer of protection.
STEP SEVEN
DRESSING & DETAILS...

Once you’re done waxing, the next step is to dress the vinyl, rubber, and plastic trim and make sure you haven’t missed any of the easily forgotten spots like the grooves in your grill or chrome trim. These tips will set you apart from the rest and put that final touch on your vehicle.

VINYL AND RUBBER DRESSING

The rubber seals around windows, doors, door handles, and mirrors are exposed to the environment and will be the first thing to deteriorate—long before your paint. The chalky white appearance or brown dulling of rubber indicates lack of care and attention. Our Vinyl & Rubber Dressing remains dry to the touch just minutes after application. Most other dressings will remain greasy and attract dust and dirt for up to 24 hours! Our product is water-based and safe for all rubber and plastic trim. Since most of these places were cleaned during your car washing step, I’ll talk specifically about dressing techniques. When applying any dressing, always apply the product onto the applicator then use that to apply it onto the trim. Never spray dressings directly on the vehicle as this will result in uneven application and the dressing getting into unwanted areas.

For large areas of hard plastic molding, trim, bumpers or grillwork, apply Vinyl & Rubber Dressing with a Blue Detail Sponge. These sponges hold the product on the surface to reduce waste and allow for perfect application. They’ve been sliced on the sides for better grip and control and keep dressing off your fingers, too! Tighter spaces require additional creativity. A good option is our Detailing Stick System to use with our detailing socks. Our pre-saturated Vinyl & Rubber Dressing Wipes are a great alternative if you want to avoid using your good cloths for applying dressing. If those options are still too big for some of the nooks and crannies on your car, our Foam Swabs make a perfect applicator. Dip the swab directly into the Vinyl & Rubber Dressing and apply.

PLASTIC BUMPERS AND TRIM

Many cars since the early 1980s have porous plastic bumpers and trim which dry out over time and can turn gray or chalky due to sun exposure, dirt, oils, silicone laden dressings, and/or grime. If Vinyl & Rubber Dressing doesn’t help, try our Bumper & Trim Reconditioner.
This is a great product for making these areas look new again. It works as a paint to darken the plastic. Clean the area to be reconditioned with our Paint Prep, dry and apply. The shoe polish applicator makes it mess-free. Allow it to dry and you're done. With severe conditions, you may need to apply a second coat for a dark, even look. Maintain your reconditioned bumper with Vinyl & Rubber Dressing.

When chrome comes back from the platers there are absolutely no swirl marks in it. Yet, it's easy to put swirl marks in it with polishes that are too abrasive. If your chrome is swirl-free and does not have any rust pits or corrosion setting in, use Metal Polish. Its abrasive-free formula cleans chemically to provide the safest way to remove stubborn residue that a car washing can't. Using a metal polish with abrasive will leave swirl and buffing marks in otherwise perfect chrome. Our Metal Polish also works to restore pitted chrome, remove rust specks and to restore chrome that has been neglected. To apply, clean the surface first with Car Wash. Use a White Foam Metal Polishing Pad, 100% Cotton Cloth or 100% Cotton Disposable Wipes. Apply Metal Polish and wipe gently, frequently turning your cloth. Don't allow the polish to dry. Use a clean, dry cloth to remove any excess polish. Work in small areas. Use a horse-hair brush to remove excess polish from cracks and seams. Follow up with Best of Show Wax®, Carnauba Wax or Paint Sealant to protect the surface.

Need to clean a very dirty metal surface? Use our Metal Cleaner. Simply spray onto the surface, allow it to foam and wipe off with a clean cloth. Perfect for all metal surfaces on your vehicle like exhaust tips and engine parts. In addition to cleaning, Metal Cleaner also leaves behind a non-sticky coating that protects the surface from fingerprints.
STEP EIGHT

GLASS CLEANING...

Clean glass is something I've dedicated a lifetime of research and testing to find the right products and process to make this chore easy while ensuring perfect clarity. In this section I'll give you some tips and tricks for cleaning as well as some great ways to remove water spots and other contaminants from your windows leaving you with clear, haze-free glass.

CLEANING GLASS

Dirty, grimy, smudgy glass; it is a pet peeve of mine and, judging by many of the letters I receive, it's your concern, too. Many of the plastics used in today's interior vent a stubborn chemical film which, combined with oils and dirt in the air, create a haze on the inside of glass. Besides being a driving hazard, it's just no fun looking through dirty glass.

For crystal clear glass, start by spraying Window Cleaner or Foaming Glass Cleaner on our Micro Fiber Window Cleaning Cloth or Lint Free Towel and saturating it well. By spraying it on the towel, instead of the window, you'll conserve product and the mist won't fall on your newly dressed dash, doors and seats. Wipe the window with the saturated towel to remove all the dirt, haze and other contaminants. Then, using a second, dry window cloth, wipe the window dry removing any remaining window cleaner.

The exterior windows should be the last thing you clean on the car. Spray Window Cleaner or Foaming Glass Cleaner onto your window cloth, saturating it well. This will conserve product and keep the cleaner off your paint and trim. Wipe the window clean and follow up with a second, dry cloth just as you did on the inside. When you are done cleaning your windows, use the damp cloth, give it a squirt of Window Cleaner, and wipe the edges of your wiper blades. The rubber they are made of is porous and traps oils, dirt, and grime; smearing them on your windshield. The Window Cleaner will remove this from your blades allowing them to work better the next time it rains. This little tip will help keep your windshield cleaner, keep your wipers clean and increase their life. I continue to test other formulas and methods, but there is still nothing better than our Window Cleaner combined with our Micro Fiber Window Cleaning Cloths and Lint Free Towels.

Our Window Cleaner has no dye or cover-up scent that gets left behind on the glass like other...
window products. In addition, it does not contain ammonia, so it won't damage your tinted windows. Being alcohol-based it cleans effectively and evaporates residue helping to prevent hazing and streaks. And our Lint Free Towels? They are spun and woven from polypropylene, creating an ideal window cloth that holds moisture and won't break down or rip. You already know the advantages of micro fiber, but with our Micro Fiber Window Cloths I've used an ultra tight weave to make it easy to remove all the window cleaner, dirt and haze without leaving streaks behind. Neither of our towels will leave lint behind. Paper towels and newspaper (grandfather's old way) are made with glues which break down with cleaners and leave behind glue residue and paper "lint". (Not to mention the ink from newspaper gets all over your hands.) If ink is getting on your hands you can bet it's leaving behind a film on the glass as well. Make sure you use proper window cloths when cleaning your glass. It will give you better results, faster and easier.

**Cleaning Tinted Glass**

If your windows are tinted with film (on the inside), use our Plastic Cleaner and a 100% Cotton Buffing Cloth. Even though our Window Cleaner is ammonia-free and safe for tint, our Plastic Cleaner is better because aftermarket tint film is made of Mylar, a plastic material. When cleaning tint, always wipe gently as the Mylar film will scratch easily. Don't use any abrasive products, like polish on your tint as it may damage it.

**Window Cleaning Tools**

You and I both know window cleaning can be a chore, so I developed a couple tools to make this job easier for all of us. Start by cleaning your windshield and rear window with our Window Cleaner Set. This tool was designed with

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**Streaks Inside Or Outside?**

When cleaning your windows, wipe in a different direction on the inside than you do on the outside. I like to use side-to-side inside and up-and-down outside. That way, if there are any streaks left behind, you'll know which side of the glass they are on.

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*Car Care for the Perfectionist!*
a spade shaped head on the end of a handle to allow you to get all the "unreachable" areas of your windows. Those of us with tiny sports cars can finally clean our rear windows with ease! The spade shaped head accepts micro fiber bonnets for application and removal of Window Cleaner using the same process as previously recommended. Once all the hard to reach areas are clean, finish cleaning the rest of your windows with Lint Free Towels and our Window Buddy.

Consistent, even pressure when wiping your windows is key to streak free glass. However, this is something our hands just can’t do. Wrap your towel around this useful tool and wipe your windows clean. The soft, pliable backing will form to the curves in your windows applying consistent pressure with every wipe. Two simple tools that will end your dirty window frustrations.

**Glass Cleaning Clay**

Clay works great for cleaning any smooth surface, so using clay to remove water spots and other buildup from your windows is a no-brainer. Use our Glass Cleaning Clay along with Speed Shine® just like you would on your paint. In addition to removing road films and water spotting before it etches your glass, having perfectly smooth glass will help your windshield wipers last longer. After claying your glass, always follow up by cleaning it with Window Cleaner to make sure all residue is removed.

What's that film?

That smudgy film on the inside of your windows is from all the plastics used by automobile manufacturers inside your vehicle. Your body oils, over-application of interior cleaners and dressings, food and smoke all evaporate and stick to the glass. Heat adds to the problem. Try keeping your windows cracked often to reduce this annoying problem.
**Polishing Glass**

If your windows have water spots on them, it is probably due to trace elements of calcium and other minerals left behind after water evaporates. If left untreated too long these elements can actually etch the glass permanently. I have a couple of solutions for you. Glass Cleaning Clay will remove mild water spots and pick-up the same contaminants that attach themselves to your paint. If the clay didn't remove them completely our Glass Polish or Fine Glass Polish will do the trick.

You may apply either polish with a damp Terry Cotton Polishing Pad or, ideally, using our Random Orbital and Glass Polishing Pads. Work in small areas and wipe the majority of the polish off with a damp cloth, then use a dry cloth for final buffing. A final pass with Window Cleaner should remove any remaining residue. The Glass Polishes work best when your applicator pad is damp, as it is water-based. If your glass is pitted or has deep scratches, these cannot be removed with polish. I've yet to find a product which removes scratches in glass. Glass Polishes are safe for glass but should not be used on tinting film which is applied to the inside of windows. Always test a small area first before polishing the glass entirely. There are some windshields and mirrors that have a thin plastic coating or a blue tinting that will come off or scratch.

**Glass Sealant**

Why should your paint get all the protection? Our Glass Sealant creates a crystal-clear barrier on the exterior of your glass to repel water and increase wet weather visibility. It also makes the glass easier to clean! Once the glass is clean, apply Glass Sealant to a clean cotton or micro fiber cloth, and apply to the glass cross-hatch pattern using firm pressure. Allow the first coat to haze and apply a second coat right on top using the same method. Once the second coat has dried to a haze, buff off the excess with a clean cloth. Great for use on all exterior windows; not just your windshield!
**STEP NINE**

**INTERIORS...**

Once you’ve finished the exterior, it’s time to move inside. The first step is a complete vacuuming. Start with the headliner if it’s a felt or fabric material. I don’t vacuum the headliner every time, but it’s worth doing a couple times a year, if only to remove the head lice. Use a brush attachment to lightly pull out the dust and dirt. Too much suction could cause the fabric to pull or stretch. Don’t forget to clean vents, dashes, consoles, and other nooks and crannies. The wood and plastic trim in most vehicles is covered with clear coat, lacquer or polyurethane, which is very easy to scratch. Our Boar’s Hair Detail Brushes will help loosen the dust from these areas before vacuuming. Working down, attack the seats next. If the seats are leather or vinyl, use our soft Boar’s Hair Detail Brush here as well to loosen the dirt and crumbs that are trapped in the seams. For cloth seats, it’s best to use the Nylon Carpet Brush to get the fibers raised so the vacuum can pull out more dirt and dust. The floor mats should be removed, shaken, and then the fibers roughed up a bit with the Nylon Carpet Brush so the vacuum can pull up debris deep down. If any stains or grease spots exist, spray some Carpet Cleaner on them and scrub with the Nylon Carpet Brush or Yellow Scrubbing Pads. Wipe the spot with a damp towel to remove as much of the cleaner and foreign residue as you can. Continue to clean and dry the spot with a different, dry towel. I prefer to use our 100% Cotton Buffing Cloths since they are white so I can see how much of the dirt I am pulling up. Allow the floor mats and carpet to air dry before returning the mats to the vehicle.

At this point use our Micro Fiber Interior Cloths or Micro Fiber Cleaning Pads to completely wipe down the rest of the interior. The Micro Fiber Cloths work great for dashes, seat backs and doors, as they won’t leave behind any lint. The Sheepskin Wash Mitt also makes an excellent duster. The mitt doesn’t just push dust and dirt around but grabs and holds onto it. Perfect for the dash or rear window shelf where it’s hard to access the areas closest to the windows.

**CLEANING AND CARING**

**FOR VINYL AND PLASTICS**

Most vehicles have some sort of vinyl and plastic in them. New vehicles have all sorts of different kinds of materials being used in the...
interior. While being very durable, these surfaces attract dust and dirt and hold on to oils from your skin and the environment. Thankfully, they are very easy to clean. Always test a small area first as some of these new materials can react to cleaners. For example, the Nissan 350Z has a colorized vinyl headliner, which, according to the owner's manual, cannot be cleaned. Always refer to your owner's manual regarding cleaning interior surfaces.

Saturate a clean cotton cloth with our Interior Cleaner or better yet, use our pre-saturated Interior Cleaner Wipes. Wipe the surface, turning the cloth frequently as you see the cloth getting soiled. Remove the remaining Interior Cleaner with a clean, damp cloth. Let the surface air dry or wipe up the remaining moisture with a dry towel. Follow up by applying Vinyl & Rubber Dressing to all vinyl and plastic surfaces including the dash (on hard plastics, just clean and do not dress or dress very sparingly as these surfaces do not allow the dressing to penetrate). Use it sparingly and work into the surface so it has a nice satin finish. You don't want the vinyl to appear wet or shiny. Especially on the dash as it will reflect light onto the windshield, reducing visibility. If you are slipping around on your seats, you've put too much dressing on. Avoid using dressing on pedals as they can become slippery and create a hazardous condition. Simply clean rubber pedal covers with Interior Cleaner and allow them to dry.

**Caring for Leather**

There are two types of leather: vat-dyed and spray-on dyed leather. With vat-dyed leather, the color is obtained by immersing the hide in dye. With this process, the color penetrates completely through the leather. With spray-on dyed leather, the color is "painted" on. While this produces a more even color, some of the natural grain of the hide is lost and the overall life of the leather is diminished. Normally a spray-on dye will wear off at the stress points. (You may think this is just dirt buildup, but on close inspection, the painted-on dye will be gone!) No matter how hard you try to clean these cracked areas, you can't clean the area where the dye has cracked off. If you own a European car most likely the leather is vat-dyed (yeah!). U.S. and Japanese manufacturers tend to use the spray-on dyed leathers (boo!).

Before treating any leather with Leather Care or Leather Rejuvenator, use Interior Cleaner on the leather the same way you would on vinyl. In fact, Interior Cleaner is safe for all the surfaces inside your car. After you've cleaned the leather, examine it closely. If the leather is old, stiff, dry or cracking, our Leather Rejuvenator is your best solution. While it may temporarily darken the color, its penetrating formula will rejuvenate and soften the pores deep down in the

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**Warm It Up**

Our leather care products will work better if put in the microwave until warm. Likewise, warm the leather up, too. This opens the pores in the leather and allows more product to penetrate deeper. Let the heater run for a bit or park the car outside to warm the leather.
Micro Fiber Interior Cloths are gentle on leather and fabric.

leather. After a few days the treated area will lighten a bit. Test a small area first to ensure you are OK with the look. If the leather is newer, use our Leather Care. Both products are applied the same way. These products are different than the lanolin based leather products. First, our oils can penetrate deeper than the lanolin-based leather products, and if you have any perforated leather our leather products won't leave behind the white residue in all of the perforations. And don't worry about water getting on your leather interior. It won't hurt it as most leather is tanned in water. Apply Leather Care using a Blue Detail Sponge. Apply the product to your applicator and wipe the surface, rubbing the product into the leather. Another simple way to apply Leather Care is using our pre-saturated Leather Care Wipes. They apply a nice amount of product in a controlled manner. Wear our Vinyl Aloe Gloves so the product doesn't get on your skin. As with all our car care products, don't use very much; a little goes a long way. Allow the product to sit on the surface for several minutes. Using a clean cloth, wipe off the excess product. For a deep feeding of Leather Rejuvenator, apply a liberal amount to the leather and let the product soak in overnight, if possible. (Sometimes I've found my hands work better as they keep the product warm and I can massage it into the leather as well.) If you're not going to be driving the car soon, repeat the application of Leather Rejuvenator, if possible. You'll notice the leather getting softer and softer with each application. Keep the windows cracked so any excess evaporating product can escape.

Cleaning Fabric

Use our Interior Cleaner on upholstery the same way you would on vinyl and leather. It's safe to saturate the cloth.

Available in a wipe-on or spray-on formula.
Interiors

Leather Care Wipes are a convenient way to care for your leather. They are pre-saturated with just the right amount of product and they’re easy to use.

and dab with a clean cotton towel. Avoid wiping back and forth. For more aggressive cleaning our Nylon Carpet & Upholstery Brush should be used. Or, if you have our 3" Random Orbital, our Yellow Scrubbing Pads can be used. Use on a low speed setting, like 3-4, to avoid creating uneven wear. You may use a wet-dry vacuum, a hair dryer or a heat gun on low setting to remove any excess moisture. Don’t allow the fabric to get too hot. A final air drying is best. Keep the windows down allowing the moisture to evaporate.

Oh, That Smell!

If you like the smell of leather, try a few squirts of our Interior Car Scent. Spray it under the seats after cleaning. Just a few squirts a week will keep your car smelling like new. I like to saturate a small sponge or a piece of soft leather and place it under the seats near the rear heater vents. Or, pour some Leather Interior Car Scent into a small plastic container and let it sit in the car overnight. The next morning you’ll think Santa has left you a new car. If your interior is suffering from being a rolling fast food cafeteria and there is always a lingering odor from french fries, spilled milk, misplaced diapers and wet pets, use Odor Exterminator®. This product eliminates odors and eliminates musty, stale air. It even reduces noxious oil and gasoline fumes! It’s non-toxic and environmentally safe. To keep odors down during every day use, place one of our Stinky-Be-Gone® bags under a seat. The granules in the bag soak up smells keeping your interior odor free. The granules in the bag soak up smells keeping your interior odor free.

Wipe out any smell with easy-to-use Odor Exterminator®.

Stinky-Be-Gone® will absorb any type of odor.
Even if your vehicle is a 1970 jeep, the engine can still look spotless.

A clean and tidy engine lets you spot developing oil and coolant leaks, allows your engine to run cooler and impresses the heck out of your mechanic. We have a great assortment of cleaning products and tools for the many different finishes under your hood. I can tell you that a clean engine bay will ensure your mechanic will take extra care when servicing your vehicle. Additionally, a vehicle you're trying to sell will sell faster and get you more money if the engine is spotless. With some regular attention, this needn't be a dirty, messy and time-consuming task.

If you plan on doing an entire cleaning of the car, do the engine first and you won't have to worry about overspray onto your freshly detailed exterior. Our Engine Cleaner will remove wax from the vehicle's paint so protect those areas you don't want affected or plan on re waxing. If the car is already clean, use painter's plastic to cover fenders, bumpers and the windshield.

**Cleaning The Engine**

Start by cleaning away any debris, leaves, pine needles or stray rodents. Use compressed air if you have it or a brush. Protect sensitive parts in your engine from moisture by covering electrical connections, distributors or carburetors with plastic, using elastic bands to hold them in place. Clear plastic wrap works well, too, as it sticks to itself. Having the engine compartment warm makes the greases and oils softer and easier to remove during cleaning. If Engine Cleaner steams up when applied, the engine is too hot. If it's too hot, cleaners and water will evaporate too quickly and may stain sensitive plastics and painted metal parts. Not to mention you can burn yourself. If the underside of your hood is uncovered painted metal, you may use Car Wash or Engine Cleaner to clean it. Just remember to thoroughly rinse it well with water when finished. If it has a sound deadening cover, brush the area off and wipe with a damp towel. Some under-hood coverings are almost felt-like and attract dust. Use a vacuum brush attachment and vacuum the surface.

Spray the entire engine with Engine Cleaner and agitate the different surfaces with an appropriate brush for that surface. Use a soft-bristle-brush for painted areas and nylon for plastic parts. For areas that are really grimy, try our Oil & Grease Cleaner. It works wonders for removing years-old gunk. Spray it on, let it sit, agitate and rinse. After the engine bay has been cleaned, gently flush with water. Do not use high pressure when rinsing as this can force water into areas where it doesn't belong. I remove my hose nozzle and allow the water to gently flow. Once rinsed, blow dry with compressed air or a blower. If you don't have compressed air or a blower, remove the plastic coverings you put on and dry all the accessible parts with a clean towel. Start the engine and allow the heat to aid in drying.
**Dressing The Engine**

Your car looks impeccably maintained on the outside—why not do the same under the hood? When the engine is totally dry, and free of grease, spray Engine Bay Dressing on all plastic and rubber parts. It will leave a clear, thin, semi-permanent coating without yellowing that will give all of your hoses and wiring a “factory new” look and restore tired looking black plastic parts instantly. It makes multi-colored wiring look incredibly vibrant! Engine Bay Dressing will repel dust and make "engine wipe downs" a breeze. If you show your car, let this be your secret for a fabulous engine compartment.

Vinyl & Rubber Dressing may also be used on all rubber hoses, connectors and parts to enhance their appearance. However the look is not as permanent as Engine Bay Dressing. Use the same application method as the interior, spray a cotton cloth or Blue Detail Sponge and wipe. Our pre-saturated Vinyl & Rubber Dressing Wipes are a favorite of mine in the engine bay because they make dressing all of the various surfaces a breeze. You may opt to use only omit the Engine Bay Dressing application, using only Vinyl & Rubber Dressing, however, the Engine Bay Dressing will really make your old faded plastic parts and wires stand out.

Cotton & Foam Detailing Swabs work incredibly well when detailing those hard-to-reach areas.

Wipes are ideal for precise, controlled application for cleaning and dressing.

Our Engine Detailing Kit will help you achieve fantastic results in your engine bay.
**After the Detail**

**Clean Up...**

Once you have finished cleaning up your car, you are usually left with a pile of dirty towels, pads saturated with product, and overall dirtiness around the garage from all the crud you just cleaned off your car. Proper care and clean up of your detailing supplies will help your products last longer and leave everything ready for your next detail therapy session.

**Towel Cleaning**

Due to their unique properties, micro fiber towels require special care. Machine wash your micro fiber towels with liquid detergent. Do not include any bleach or fabric softeners. Add in 2 to 4 ounces of Micro Fiber & Foam Pad Cleaner (for a 5 gallon load) to help break down the polish and wax buildup. Do not wash micro fiber with any other fabrics; wash micro fiber only with micro fiber. After washing, tumble dry on a high heat setting without any dryer sheets. Following this process will ensure your towels are properly cleaned and stay free of any buildup from other non-micro fiber towels or cleaning agents.

**Pad Cleaning**

Thoroughly cleaning your pads after each use is very important. Old, dried polish, wax, or sealant buildup will decrease the life of your pads and may also become abrasive and could scratch your paint if not removed from the pad before its next use. It is always best to wash your pads shortly after use; this will make the cleaning process much easier. If you aren't able to clean them right away, soak them in a bucket of warm water mixed with a few ounces of Micro Fiber & Foam Pad Cleaner. Cleaning is simple, spray Micro Fiber & Foam Pad Cleaner directly onto the surface of the pad and massage it in with your hands. (I like to wear nitrile gloves to keep my hands clean and dry.) Rinse thoroughly under warm water wringing the pad out until the water runs clear. Dry the pad by standing it on its side. Don't store a wet pad in a sealed bag as it will mold.

**Garage Cleanup**

Detailing your car can create quite a mess around the garage, and having a clean garage creates a nicer environment; it is also a lot safer. A mess on the floor can make for some interesting falls! I always start by putting everything away. All your towels and pads on drying racks or in the cabinet, tools back in their drawers, garbage in the garbage can, etc. From there I move to wiping down all my cabinets and work surfaces with Surface Cleaner and our Micro Fiber Value Cloths. Finish with the floor. Begin by sweeping the floor to rid it of any loose dirt and dust. In most cases you won't need to do a full mopping, but our Micro Fiber Mopping System along with Surface Cleaner and Oil & Grease Cleaner (for any oil spots) is perfect for cleaning up any spots on your floor. A clean garage ensures you always... *Have fun in your garage!*

Perfectly suited for all types of jobs around the garage, shop, and home.

Increase the life and revitalize your Micro Fiber Cloths and Foam Polish and Wax Pads.
Whether you have a small coupe, a motorcycle, or even a massive land-yacht, you’ll enjoy them all better if they look great... so get out there and have some fun detailing!
**KEEPING UP MAINTENANCE...**

To keep your car looking its best, it's important to maintain its exterior regularly. Washing and waxing your car shouldn't stop after the initial cleaning. In fact, you can reduce the frequency of your washes and waxes by removing dust, bird droppings, and tree sap on a daily basis. I carry a small, 8 ounce bottle of Speed Shine® and a Micro Fiber Speed Shine® Cloth or 100% Cotton Buffer Cloth in my trunk for emergency clean-ups. Bird droppings can etch your paint in a matter of minutes, so remove them fast. Spray some Speed Shine® (or water if you don't have anything else) on the drop-ping and allow it to loosen it up. Very gently, wipe away the mess. Birds eat seeds, sand, and who knows what, which may be great for their bowel system, but these elements will scratch your paint. I also carry a small bottle of Window Cleaner and some Lint Free Towels for fast, on-the-road window care. Both Speed Shine® and Window Cleaner come in convenient pop-up wipe containers as well and are perfect for on-the-road cleaning.

**REPAIRING ROCK CHIPS**

You can repair those annoying rock chips and deep scratches that have gone down to the primer. Here's how. Start by purchasing the correct factory touch up paint from your car dealer. Most cars have a paint code inside the engine compartment. Your dealer's parts department can help you with this. Most touch-up paints come with a built in applicator brush. The problem is these brushes are more suited to painting your toenails than applying the proper amount of paint to a small chip or scratch. Again, preparation is key.

Clean the area, removing any oil, grease, dirt and old polish and wax. Use Paint Prep to strip away old wax and grime. To fill in paint chips and enjoy pinpoint accuracy and great paint flow, use our Touch-Up Paint Applicators. You can bend the plastic handle for hard to reach spots, or give you a better angle to apply paint to the chip. You'll even be able to soak up paint with the tips if you've over-filled your chip. Dip the end into your touch-up paint and touch the chip gently with the Applicator. If you over-fill the chip, use a clean Applicator to dab up the excess paint. If you have clear-coat paint, apply the pigment (color coat) first, let it dry and fol-
low up with the clear coat. Try to avoid driving your vehicle for at least 24 hours after making a repair and wait about two weeks before applying wax or polish. Want to go to the next level of repair and create a smooth and almost invisible repair, read on.

**Scratch Repair**

Deep chips, nicks and scratches or to smooth out the above chip repair, requires a little more work. Prepare the surface as described in the previous section on chip repair. Fill the area well with paint so the repaired area is above the surface of the good paint. Allow the paint to cure for 48 hours or more so it is completely dry. Don't hurry up the process with a hair dryer or heat gun. Now you'll want to level off the paint surface.

Purchase some 2500 grit wet/dry sanding paper. Soak it in water overnight. Find an eraser. (The pink kind that is slanted on each end and is about ¾” x 2” long.) Place the sanding paper around the eraser. Now wet the area to be worked with clean water. You can also use a bit of Car Wash for extra lubrication. Keep the area well lubricated by flushing with clean water during the entire process. Start by gently going back and forth. What you are trying to do is bring the raised level of the chip repair down to the level of the paint. Go slowly. Some of the surrounding paint will begin to look dull. Don't worry, you'll be able to correct this later. Try to work only on the area you've touched up. Dry the area and feel it with your finger tip. If it's still raised, work some more until it's flush.

Finally, use our Fine Hand Polish or Machine Polish 3 to bring back the paint's luster. Follow up with wax and your finish will look new again.

**Chip and Scratch Prevention**

This clear, protective shield works excellent at protecting painted areas that are more prone to chips and scratches. I cringe every time I hear a rock glancing off my hood. I've had this protective shield on the front of my car for years now, and I could peel it off at any time and the paint would still look brand new. Use it on front ends, air dams, around tire wells, inside door jams, along door sills and on painted bumpers. We also sell a clear protective shield for headlights and fog lights.

Simply clean and prepare the area to be protected with Paint Cleaning Clay and Fine Hand Polish. Cut the material to the length required and warm it up with a hair dryer or the Griot's Garage Heat Gun. This makes it more pliable and easy to work with. Spray the surface to be protected with the Positioning Spray. This allows you to move the material into place. Avoid touching the adhesive backing as it is extremely sticky and the oils on your fingers will make an imprint on the backing. Use the squeegee which comes with the spray and smooth out the surface. Any remaining bubbles or spray will disappear after 24 to 48 hours. It's available in 2” or 4” widths, 12 mils thick. Now you can at least enjoy your next ski trip without worrying that every little rock you hear is damaging your paint.
KEEPING UP CONTINUED

MAINTENANCE...

WINDOW CHIP REPAIR

There's nothing like driving down the road when... "PANG!"... Followed by a few words you wish your children didn't hear you say. The dreaded rock chip in the windshield. To keep rock chips from becoming large cracks across your windshield, they must be dealt with immediately. Even waiting a few days can be too long. Having a professional repair your chip can be expensive, and it is a very simple process that you can do yourself. We sell an excellent Windshield Repair Kit that includes some simple, step-by-step instructions. Keep one in your glove box or garage so you can repair chips immediately.

FUEL SYSTEM CARE

Generally there are two schools of thought when it comes to preparing your vehicle's fuel system for storage: 1) Fill the tank with fresh gas, or 2) Run the car until the tank is nearly empty. The problem with both of these lines of thinking is they don't take into account your fuel lines. Fuel sitting in your system for longer than two months starts an oxidation process that will eventually turn into varnish and clog your fuel system. Griot's Garage Fuel Preservative will chemically isolate the oxygen, preventing the oxidation process, and will also neutralize corrosive compounds that can cause rust to form in your fuel system.

COOLING SYSTEM CARE

The prime ingredient in antifreeze is ethylene glycol, which chemically breaks down over time and eats away at cooling system components. If old coolant is left sitting, the acids can damage your cooling system and increase the chances of leaks. Since many vehicles that aren't driven often don't see too many miles it isn't always necessary to flush your entire cooling system. Instead, you can add Corrosion Inhibitor to your coolant to neutralize existing acids and stabilize your antifreeze.

BATTERY CARE

Some of us have cars that don't get driven too often and the last thing we want to hear when firing up your engine is the dreaded click-click, but we've all found ourselves in that position. Ensuring that your battery stays charged during the storage will prolong the life of your vehicle's battery. Battery management is especially important in modern vehicles that have sophisticated electronics (like navigation or alarm systems) that are constantly draining the juice. But any car will benefit from keeping a charged battery. I skipped this step once and ended up needing to replace my battery. Make sure you choose a battery management system that monitors the level of charge (to avoid over-
charging), which is something traditional trickle chargers don’t do. The Griot's Garage Battery Manager IV works with 6 volt and 12 volt gel-cell (AGM) and standard (STD) lead-acid batteries and has a simple "set it and forget it" design.

**Tire Care During Storage**

Flat spots can develop in your tires quickly, and expensive rubber is not something anyone wants to replace more than necessary. Avoiding the tha-dunk tha-dunk of flat spotted tires is easy. The traditional method of putting your car up on jack stands still works really well but can be a bit of a hassle if you ever need to move the car. This is why our Flat Spot Stopper ramps were created. These ramps were developed to cradle your tires and distribute the vehicle's weight evenly when parked. Need to move the vehicle? Just drive right off! Well worth the investment if you have a tight storage space or store your car often.

**Dealing With Rust**

There are two ways you can approach rust; remove it or neutralize it. If possible, it is always best to remove the rust completely, and our Rust Remover is perfect for that. It can remove rust from any metal surface. Immerse the rusty part, let it sit and rinse clean. Won’t harm copper, brass, aluminum, rubber, plastic or vinyl. Fast, simple and effective. If the rust is in an unnoticeable area that will either be covered up or painted (like the underside of your vehicle) over and you cannot remove the part to soak it in Rust Remover, neutralizing it is your best option.

Rust Remover Gel is effective for removing rust from all types of metals including steel, iron and copper. Coat any rusty item, let it sit and rinse it clean. Best of all it's non-corrosive, contains no acids or petroleum solvents and is biodegradable. It’s non-flammable too. Fast, easy, effective and safe. This product will not harm plastic, rubber or vinyl, plus it brightens copper and brass.
Motorcycles are fun to ride and a challenge to detail. They require an extensive line of cleaners, degreasers, bug and tar removers, polishes and waxes as well as specialized (and not so specialized) cleaning tools. Serious motorcyclists know the importance of properly maintaining their bikes. Once a year, during the winter I go out to the garage and spend a couple of days cleaning and detailing my motorcycle from top to bottom. The levels of commitment can vary depending on the willingness and ability of the detailer. For me, cleaning my motorcycle also provides an opportunity to look for signs of wear and potential problems. It’s a lot easier to check for leaks on a clean surface than a dirty one.

I’ve broken down the different areas of cleaning:
- Engine and Drive Chain
- Tires, Wheels and Brakes
- Frame, Suspension and Gauges
- Seat and Bodywork

WHERE TO START

For this discussion our subject will be a modern sport bike. Most sport bikes use aerodynamically designed body panels to help cut through the wind by covering the engine and frame. To start I like to remove all the body panels including the gas tank and seat. Never attempt to perform service-related work on your bike unless you have the knowledge and ability to do it safely and properly. If you do not feel comfortable removing your bodywork, you may choose to skip this step. Because body panels are painted surfaces, care must be taken to ensure that these pieces don’t get scratched or damaged during removal or cleaning. If removed, these panels should be placed in a safe area away from the bike during cleaning. I prefer to lay the panels on a shelf using a Micro Fiber Drying Towel to keep them from getting scratched. Make sure all the fasteners are properly stored in a spill-proof container to keep them from getting lost. I like using zip-lock bags or magnetic trays. If needed, make notes or a small drawing on fastener location.

ENGINE AND DRIVE CHAIN

Typically the engine and drive chain get the dirtiest. Oil leaks can easily spread to nooks and crannies. Chain lube can spread to the engine, frame and bodywork. A clean and tidy engine lets you spot developing fluid leaks, allow your engine to run cooler and impress the heck out of your mechanic. I found that when you take your motorcycle in for service and the engine is spotless, the mechanic takes extra care during their service.

It is best to clean your engine when it is warm to the touch. This makes the greases and oils softer and easier to remove during cleaning. If the cleaner steams up when applied, the engine is too hot. I start by spraying Engine Cleaner all over it and let it sit for a bit. Griot’s Garage has products to help you detail all the various, intricate surfaces on your motorcycle.
Apply Engine Cleaner when the engine is warm to the touch. This makes the greases and oils softer and easier to remove during cleaning. For heavy build up use Oil & Grease Cleaner.

Lube That Chain
Most people improperly lubricate the drive chain by spraying the back of the sprocket down the middle in the area of the rollers. The chain rollers actually need very little lubrication. Chain wear is the greatest at the area where the pins hold the inner & outer side plates together. It's "pin" wear that causes a chain to stretch! The correct way to lubricate a chain is to spray just above the chain at the bottom of the sprocket. This allows the lube to flow between the side plates and into the shaft of the pins. Make sure you spray both the inner and outer sides of the chain. It's best to apply chain lube on the night before a ride to allow enough time for the grease to penetrate into the roller. Excess chain lube should always be cleaned to prevent greasing up your motorcycle.

crusted areas with additional Engine Cleaner or Oil & Grease Cleaner for really tough spots like dried chain lube or asphalt residue. Take care to avoid prolonged rinsing of electrical components such as engine sensors and control modules as this could cause an electrical short circuit. Many bikes use weather resistant connections with special seals, however, it may be necessary to unplug connectors to help dry the contacts. Avoid using pressure washers or high-pressure sprayers as they can force dirt and water into seals, causing premature bearing wear or engine damage. Take care when spraying water around the air filter or air box. Once the engine is cleaned, I like to use our Air Blowers to remove large areas of water. Compressed air works well, however, you need to be careful not to force too much pressure around seals and gaskets. After air drying I like to finish by using our Micro Fiber Cloths and Foam Swabs. For me this is where the fun really begins. I can spend hours carefully cleaning every nook and cranny, making sure every spec of dirt and grease is carefully removed from the engine. It's amazing how much surface area can be found on such a small engine. Your level of commitment may differ. Many of the newer motorcycles today have lots of plastic covers over engine parts. After you've cleaned and dried them, wipe the plastic with a light coat of our Vinyl & Rubber Dressing. They'll
Proper Rinsing

Avoid using pressure washers or high-pressure sprayers to clean your motorcycle. They can force dirt and water into seals, causing premature bearing wear or engine damage. Take care to avoid prolonged rinsing of electrical components such as engine sensors and control modules as this could cause an electrical short circuit. Many bikes use weather resistant connections with special seals however it may be necessary to unplug connectors to help dry the contacts.

More Fun In Your Garage With Motorcycle Detailing...

look new and be easier to clean next time.

During a ride it's not uncommon for some chain lube to fling out and stick to various parts of your motorcycle. This greasy substance can be difficult to remove. Our Oil & Grease Cleaner works great for cleaning this from all these areas like around the sprockets, engine case, swing arm, exhaust or bodywork. This is also a good time to clean and service the chain. Avoid using harsh chemicals like brake cleaner or carburetor cleaner as these products could damage the O-ring. I use an old toothbrush along with a 100% Cotton Buffing Cloth to clean the chain, however, there are other aftermarket cleaning tools designed specifically for this task. Once the chain is cleaned it's a good opportunity to check the tension and adjust if needed. It's interesting to note that chains have a surprising number of parts. The roller turns freely on a bushing, which is attached on each end to the side plate. A pin passes through the bushing, and is attached at each end to the side plate. A quality street bike chain uses O-rings between the plate and roller to help seal out moisture and contaminants. Your typical chain lube comes in aerosol form. Solvents are mixed with special greases to help penetrate the O-ring and bushing. These solvents evaporate, leaving behind the grease that lubricates the inside of the pin and roller. Properly applied, chain lube helps maintain the service life of your chain. Excess chain lube should always be cleaned to prevent greasing up your motorcycle. I prefer applying chain lube on the night before a ride to allow enough time for the grease to penetrate into the roller. Most people improperly lubricate the chain by spraying the back of the sprocket down the middle of the chain in the area of the rollers. The chain rollers actually need very little lubrication. Chain wear is the greatest at the area where the pins hold the inner and outer side plates together. It's "pin" wear that causes the chain to stretch! The correct way to get the lubrication to the pins is to spray just above the chain at the bottom of the sprocket. This allows the lube to flow between the side plates to get to the shaft of the pins. Make sure you spray both the inner and outer sides of the chain. I also take a good look at the sprockets, especially the rear sprocket. I look at the teeth and check to see if the crown of the tooth is starting to get sharp, indicating wear from a loose chain. If the root of the sprocket tooth appears elongated, this indicates a chain that's too tight. Always follow the manufacturer recommendation on proper chain tension found in the owner's manual.
**Wheel Scrubbing Brushes** make great cleaning tools for your bike.

**Tires, Wheels And Brakes**

Tires and wheels come in close contact with the road helping to pick up oil and debris, spreading it to your bike. In addition, the brakes give off dust that collects on tires and wheels. If left unattended, brake dust can etch the painted or polished surface of your wheels and turn your tires brown. Specialized cleaners are necessary to remove dirt and road grime along with brake dust. I may be going a little over the top, but I prefer to remove the wheels to properly clean them. A sturdy front and rear wheel stand is a must if you remove your wheels for cleaning. Even if you keep your wheels attached to the bike, a proper wheel stand can be used to help rotate the tires to gain access to all areas of the wheel. Start by rinsing the wheel and tire with water. This helps to float dirt and contaminants from the surface in preparation for cleaners. I use Wheel Cleaner, Chrome Wheel Cleaner, or Heavy-Duty Wheel Cleaner to help remove brake dust and road grime from wheels. On painted alloy wheels I use a combination of cleaning tools. For large areas I prefer our Three-Finger Detail Mitt. For tighter areas around brake rotors and valve stems I use our Wheel Scrubbing Brushes. Rinse with plenty of water and dry with a Tim’s Dirty Spots Micro Fiber Wipe Down Towel. On painted wheels I use Fine Hand Polish to help remove scratches and Paint Sealant to protect the finish.

To clean the tires I found our Rubber Cleaner and our Yellow Scrubbing Pads work well together. I go so far as to clean the tread. It’s not uncommon to find bubble gum or cigarette filter material stuck to your tires. Soapy cleaners also help you spot air leaks from nails or screws. Make sure to flush the tires with plenty of water to remove any cleaner residue. Once dry, use our Rubber Prep to remove any silicones, oils or greases that have built up in the rubber. If not removed, these can be dangerous when leaning into a corner. I know the cruiser crowd likes to use rubber dressing on the sidewall. That’s fine if you seldom lean the bike over when cornering. On a sport bike it’s best to avoid tire dressing as it can lead to adhesion issues followed by crashing!

Brake calipers require careful attention. Avoid using harsh chemicals like brake cleaner as it can stain or remove paint from forks and wheels. I use our Wheel Cleaner and a Wheel Scrubbing Brush with plenty of water to help clean and rinse. I even go so far as to remove the brake pads and calipers so I can clean and detail every part for a show room finish. This also allows me to check the pad thickness for

*Lambskin Four-Finger Mitts are soft, yet do an excellent job of removing brake dust and heavy road grime... Perfect for motorcycle wheels.*

*Car Care for the Perfectionist!*
uneven wear. Again, your level of commitment and mechanical ability may differ from mine. After cleaning and reinstalling the brakes, always pump the brake lever to insure the pads are properly seated.

**FRAME, SUSPENSION AND GAUGES**

Most motorcycle frames are made from steel tubing that's painted or aluminum extrusions that can be a brushed finish, polished finish or painted surface. Some exotic frames use carbon fiber and titanium. Heavy concentrations of oil and grease can be found on the lower portion of the frame and typically the upper portion receives a light coating of dirt or road dust. I recommend using Oil & Grease Cleaner on the lower sections of the frame along with an old toothbrush. This can be done at the same time you're cleaning the engine. Use your old toothbrush to clean the areas around the foot pegs and levers as well. This is a good opportunity to check your brake and shift linkage for wear and excessive play. Once the linkage is cleaned and dry it should be lubricated to help maintain free and easy operation. Pay close attention to the wiring harness. Dirt and grime collects between the harness and frame. Make sure these areas are cleaned and the wiring insulation is intact. Often time's motorcycle manufacturers use either tape, shrink tubing or a vinyl sleeve to protect the wiring. If the tape is unraveling it's a good time to inspect and repair the wiring and insulation. I use our Vinyl & Rubber Dressing with our Cotton Towels and our Set of Swabs to clean and detail the insulation wrap. Make sure you complete your wiring repairs before using the Vinyl & Rubber Dressing otherwise the tape will not stick.

Shocks and forks use hardened steel shafts that operate in steel or aluminum housings. Shafts need to be kept clean for proper movement and maintenance. Coil springs have a large surface area and can be difficult to clean. Many mono-shocks found on today's motorcycles are located in hard-to-reach places. Twin shocks are placed on the side of the swing arm making access to cleaning much easier. It's important to pay special attention to threaded adjusters for spring pre-load setting. Keeping these threads clean help ease adjustments that would otherwise be difficult. For heavy road grime I use Oil & Grease Cleaner along with an old toothbrush. For light dust or dirt I use Wheel Cleaner. Use plenty of water to help rinse the parts clean. Tim's Dirty Spots Towel or Micro Fiber Wipe Down Towels can be used to dry the shock and spring.

**Check Your Teeth**

When cleaning the sprockets check the teeth for wear. Look to see if the crown of the tooth is starting to get sharp, indicating wear from a loose chain. If the root of the sprocket tooth appears elongated, this indicates a chain that's too tight. Always follow the manufacturer recommendation on proper chain tension found in the owner's manual.
Forks are more accessible however the area between the brake caliper mounts and axle can be difficult to access. I found that these areas tend to receive more brake dust buildup than road grime. For this reason I use Wheel Cleaner and a Wheel Scrubbing Brush with plenty of water to help clean and rinse the dirt away. For bug stains and baked on bits I use 3M Adhesive Remover on a towel or cloth. Metal Polish and our 100% Cotton Disposable Wipes can be used on standard (non-coated) fork tubes. For coated fork tubes (titanium nitride, etc.) I recommend only using a clean dry cloth.

The area around the handlebars and gauges tend to collect a fine film of dirt and road dust. I start by using Speed Shine® along with Micro Fiber Speed Shine® Cloths to clean large areas of dust and dirt. Our Boar's Hair Detail Brushes work great for the levers, switches, around the wiring harness, headlight area and hard-to-reach places behind the gauges. It's best to use the Boars Hair Brush dry because it helps to keep the bristles clean and prevents scratching. Once the dust is removed Plastic Cleaner is used on windscreen and plastic gauge faces. I follow up with some Plastic Polish to help remove swirl marks and fine scratches. Window Cleaner works great on glass gauge faces. Vinyl & Rubber Dressing works great on black or natural plastic and rubber bits, but avoid using it on the grips. I prefer cleaning the grips with Interior Cleaner.

Many motorcycle seats are made from vinyl or leather. I start by using Interior Cleaner. You'll be amazed at the dirt you remove. Interior Cleaner can remove aftermarket dyes, so test a small, out of the way area to make sure it doesn't discolor your seat.

For leather I like using Leather Care because it's a highly concentrated liquid that penetrates deep to replenish the natural oils of the leather fibers. It works much better than the other greasy, lanolin-based products on the market. It's easy to use, and essential for a long, supple life for your fine leather. Use sparingly as a little goes a long way. Leather Care does contain a cleaner that can remove aftermarket dyes.

Brake Fluid Change
Most motorcycle manufacturers recommend having your brake fluid replaced about every two years and more often in severe riding conditions. Draining and replacing your brake fluid helps to remove contaminants such as water and rust. It also helps to lubricate the metal and rubber parts in your brake system. Helping them last longer and working properly.
MORE FUN IN YOUR GARAGE WITH

MOTORCYCLE DETAILING...

Test a small out of the way area to make sure it doesn’t discolor your seat. For stock vinyl seats Vinyl & Rubber Dressing is superior when judged against other vinyl protectants. It’s water based, so it won’t harm or dull the surface of rubber and vinyl over time. It cleans and protects in one step while leaving behind a non-greasy satin finish. If a raw natural finish is desired or extra grip is needed, avoid the use of dressings all together.

Bodywork is most often painted and in many cases vinyl decals are used to add color. These decals are often applied over the finished surface so care is needed when polishing or waxing to keep them from lifting. Motorcycle surfaces require the same attention to detail as an automotive finish. Painted surfaces use either a single stage paint system (non-clear coat) or a multi-stage paint system (clear coat). Other surfaces have the color molded into the plastic. For really dirty paint I like to start by using our Car Wash soap with our Lambskin Four-Finger Mitt. The first thing you’ll notice is how slippery the Car Wash acts between your wash mitt and the paint. This is an important characteristic of our Car Wash and contributes to its ability to lift away contaminants while protecting the finish during your “washing therapy”. Many of the mild scratching you see in your finish is from aggressive cleaning. The dirt acts like sandpaper, scratching the finish while you’re rubbing the surface of your paint. Be gentle while washing and frequently rinse out your mitt during the cleaning process. Car Wash is gentle on your wax, yet removes more dirt and road grime than any other product we’ve tested. If your body panels have been removed, make sure you clean the inside as well as the outside. Often times the inside of the panel gets much dirtier and requires additional attention. On body panels I prefer to work from the clean area to the dirty area so start on the outside and finish on the inside. This keeps the dirt on the inside from scratching your paint. For stubborn stains you may need to use some Adhesive Remover on a towel or cloth. Make sure you go back over the area with Car Wash and remember to use plenty of water to rinse the panels clean. To dry the panels I use our Micro Fiber Dry Towel. This unique weave lessens the friction on your paint so it’s kind and gentle, but still retains all the benefits of absorbing water. Take care when wiping around decals to avoid lifting them.

Once the panels are clean and dry, you’re ready for polish and wax. I prefer to do the majority of the polishing and waxing with the panels installed on the bike. This helps to hold the bodywork safely in place and reduces the chance of scratching. For this reason I save the polish and wax step for the very end. Some areas are not easily accessible when the panels are in place so it’s best to work on those before installing the bodywork. I give the bike one final check to make sure everything has been cleaned, detailed, serviced and put back into place. If the coolant or oil lines were removed you should run the engine up to operating temperature and make sure there are no leaks. Once the panels are in place it can be difficult to spot a problem. If your bike doesn’t have a center stand, a good rear wheel stand helps access the lower parts of the bodywork. For polishing I like to start with...
the gas tank. I find the back of the tank tends to get scuffed from contact with my leather jacket. Often time these scratches can be removed with Machine Polish 3 but sometimes I need to use Machine Polish 2. Our 3" Random Orbital works great for this! If there are vinyl decals on your bike, be careful when polishing around the edges of the decal. I prefer to polish in the same direction as the edge of the decal. If it ends at a point, polish towards the point to keep from accidentally lifting the decal. To buff the polish residue I use our Micro Fiber Polish Removal Cloths. The non-abrasive, wedge shaped micro fibers, lift and trap polish, getting the used polish away from the paint. Next, I move to the tail section and front fairing, finishing with the side panels and fenders. Once polished, I go back over the bodywork with Pre-Wax Cleanser and a Micro Fiber Polish Removal Cloth to make sure all of the polish residue has been removed.

Waxing your motorcycle is an important part of preserving its appearance. With proper care there is no reason why original factory paint can't last the entire life of your bike. The goal is to protect the paint's surface while providing color, depth and clarity so the paint work looks stunning. See the Waxing & Sealing section of this Handbook on page 43 to choose the right product for protecting your motorcycles finish. Our Best of Show Wax® is my first choice for show bikes, and Paint Sealant is great for those of us that ride more often. Be sure the paint surface is cool and dry before waxing. Apply wax to your pad and apply it using the cross-hatch method, just as you did with your polish. When you apply wax to your pad, spread it evenly over the entire pad. Remember a little goes a long way. The wax should almost begin to disappear as you wipe it on. If you have to remove a lot of product when you wipe it off (look at your cloth) you are using too much wax. Work in small areas one panel at a time. To buff the wax residue I use our Micro Fiber Wax Removal Cloths. Once the body panels are completed I go to the windshield.

For this I start with our Plastic Cleaner to remove road film followed by Plastic Polish and a Cotton Polish Pad to remove light scratches. To buff the polish residue I use our Micro Fiber Polish Removal Cloths. Plastic Polish also works well on polycarbonate headlight lenses as well as turn signal and brake light lenses. For the mirror glass I like using our Window Cleaner Wipes. This helps to avoid spray fall out and allows me to concentrate my cleaner directly onto the glass. Once finished I go around the bike checking to see any areas I may have missed or for any wax residue left. A light misting of Speed Shine® on a Micro Fiber Speed Shine® Cloth helps to remove stubborn wax residue.
A fellow automotive enthusiast, Susan, tells me she's constantly borrowing her husband's Griot's Garage Car Care products and using them around the house. She cleans everything from windows to mirrors, carpets, leather furniture, counter tops, floors, clothes, bathrooms, kitchens... virtually every room in her house gets the Griot's Garage treatment. "Why don't you market to the homemaker?" she asked me. "I like quality cleaning products as much as my husband does for his cars!" Well Susan, you're right. I've been using them in the house, too, and it's time I came in from the garage to the house. I want to share with you the many products I use around the house. As with any cleaning product, always test a small, discreet area first to be sure it won't discolor or stain the surface. Now when our Handbook shows up in the mailbox, your spouse will smile like you do!

<table>
<thead>
<tr>
<th>Product</th>
<th>Size</th>
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<tbody>
<tr>
<td>Hand Cleaner</td>
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<td>Glass Polish</td>
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<td>Fine Glass Polish</td>
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<tr>
<td>Leather Care</td>
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<td>Window Cleaner Wipes</td>
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<td>Carpet Cleaner</td>
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<td>Surface Cleaner</td>
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<td>Window Cleaner</td>
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<tr>
<td>Metal Cleaner</td>
<td>17oz.</td>
</tr>
<tr>
<td>Foaming Glass Cleaner</td>
<td>19oz.</td>
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</tbody>
</table>
**We Make It.**
Some companies buy car care products from mass producers, slap their label on the bottles, and call them their own. Not at Griot's Garage! We develop, manufacture and bottle our Car Care products right here in the U.S.A. to ensure everything you put on your treasured vehicles is of the finest quality.

**We Teach It.**
Our job doesn't end when you receive your order. Proper application is just as important as quality products, so education is a Griot's Garage priority. Our customer service associates are friendly and extensively-trained. When you call or email with a question, we'll be able to help! There are also free resources available on our website and blog; videos, articles, tech sheets... all at your fingertips!

**We Guarantee It.**
Because we know it's stressful to have tools or products fail, we've taken to heart the words of Sir Henry Royce (shown on title page) and created the finest line of Car Care and garage products available. Because of our strict standards and extensive knowledge, we cover everything we sell with a 100% Satisfaction Guarantee and Lifetime Guarantee against defect. With our products you can rest easy and always...

*Have fun in your garage!*  

**Our Car Care Products & The Environment.**
Ever since I introduced the first Griot's Garage car care products I've developed, tested and bottled our products to ensure quality and care is taken from the start. Protection of the environment is important to all of us at Griot's Garage. That's why many of our products are environmentally thoughtful, toxic-free and biodegradable. Plus, to reduce waste, we use quality sprayers and bottles that are not only recyclable, but also reusable. Enjoy the best!
Working on cars is meant to be fun and relaxing. For me, it lets me escape from life's daily demands, focus entirely on the task at hand, and bring tranquility back to an otherwise demanding world. Should you read this Handbook and still have questions, remember we're here to help. I want to make sure when you're using any of our products, that you always have fun in your garage. Keep sending me your thoughts, ideas, and comments so I can continue to improve our products. Now, go and enjoy your precious free time and...

Have Fun in Your Garage!*  

Richard Griot
Keep it handy!
If you have our Instructional Random Orbital DVD, store it in this handy sleeve so you'll always know where it is. If you don't have it, get one and keep it here!