CAR BRITE

SINCE 1947

COMPLETE DETAIL TRAINING

The Car Brite Complete Training manual is an A-Z list of detailing tips and techniques supported by the industries leading supplier of detailing supplies and the most experienced staff in the industry.

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Introduction

There are nearly as many approaches to reconditioning a vehicle as there are detailers. The key is to follow an established procedure that is safe, effective, efficient, and consistent. You should use appropriate products on each surface in a logical sequence that your detailing personnel understand – all while following the necessary safety precautions. While the procedures contained in this document are not the only methods for detailing a vehicle, they have long been safely and effectively used by reconditioning professionals worldwide. No matter the process you follow, be sure to follow the same sequence on each vehicle. A consistent approach ensures consistent results.

Professional automotive reconditioning involves much more than washing dirt off a car with a bucket of soap. The objective is to safely remove contaminants from all vehicle surfaces, restore those surfaces and protect them from further damage. The surfaces include paint, metal, rubber, plastic, vinyl, glass, fabric and leather – some of which can withstand aggressive cleaning chemicals and techniques, and some of which cannot. The contaminants range from soil to grease to tar to tree sap to coffee to red lipstick – each requiring specific chemistries to remove them. Throw in oxidation, embedded brake dust and protein-based stains and you've got a real detailing challenge. Therefore, you need a variety of reconditioning products – ranging in strength and formulation – and a logical process for safely and effectively applying them.

Since concentrated products are diluted with water, one gallon of concentrate produces multiple gallons of cleaning solution. For example, one gallon of concentrate mixed with four gallons of water (a dilution of 1:4 - one part product, four parts water) will product five gallons of cleaning solution. Therefore, the purchase price of one gallon of concentrated product does not represent the true cost of the cleaning solution it generates.

Usage Cost is the ACTUAL cost of the solution and is based on the number of gallons of solution produced by one gallon of concentrate. The amount of solution generated by one gallon of concentrate is its Product Yield and is determined by adding the numbers in the dilution rate (1:4 = 5). Once the Product Yield is identified, Usage Cost is calculated as follows:

Product Cost Per Gallon ÷ Product Yield = Usage Cost

Therefore, if one gallon of product costs $10.00, and yields five gallons of cleaning solution, its Usage Cost is $2.00 per gallon ($10.00 ÷ 5 = $2.00)

<u>Example 1:</u>

Product Cost/Gallon: $4.00
Dilution Rate: 1:15
Product Yield: 16 (Sum of Dilution Rate)
Usage Cost: $.25 per gallon (A ÷ C)

<u>Example 2:</u>

Product Cost/Gallon: $22.00
Dilution Rate: 1:128
Product Yield: 129 (Sum of Dilution Rate)
Usage Cost: $.17 per gallon (A ÷ C)

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Detailing Safety

Exterior Work – Degrease Vehicle

MATERIALS LIST:

- Heavy Duty Degreaser
- Spray Bottle
- Safety Goggles
- Nitrile Gloves
- Hi-Pressure Washer
- Air-Whip Cleaning Tool

STEP #1: Use microfiber towels or plastic bags as coverings for any sensitive electrical components such as the battery, ignition wires, and engine control unit. If there's an exposed engine air intake under the hood, you'll want to cover that as well. Protecting these electronics will allow you to clean more thoroughly with less risk of causing damage. Be cautious around any items that could be damaged by liquids.

PRO TIP: When you open the hood, if the engine compartment is all plastic coverings, do a cosmetic detail. Use a waterless detail spray, let it dwell, and then wipe down with a clean microfiber. For additional gloss, dress with a water-based dressing.

STEP #2: Wet the entire body area around the engine with cool water to prevent the Cleaner/Degreaser from spotting the paint. Do not wet the engine. Be thorough around the edges of the hood as these areas gather much of the grease, dirt, and grime. Make sure to DO NOT use a zero-degree nozzle on the power washer. Use a fan nozzle at 45-degree angle.

PRO TIP: Avoid spraying any items under the hood like trim and insulating foam. The water pressure will make these items tear and dislodge from its location.

STEP #3: Thoroughly wet any painted surface to which the Cleaner/Degreaser will be applied (areas containing heavy traffic film).

STEP #4: Spray the engine and engine compartment with Cleaner/ Degreaser using a consistent pattern to ensure full coverage.

PRO TIP: Add extra light to the engine compartment. There are many nooks, crannies, and crevices that are difficult to see without additional light. Approach the engine from different angles to give you alternate views to see all of the hard-to-reach areas of the engine.

STEP #5: Apply Cleaner/Degreaser to the inner hood (avoiding the hoodliner), and then the wheel wells...

PRO TIP: It is important to let the cleaner/degreaser dwell on areas that has been treated. This can take a few minutes depending on cleaner strength and level of grease and grime needed to remove. As with most cleaners do not allow it to dry on any surface.

STEP #6: Then spray the door jambs from the latch level down.

STEP #7: Then spray the rocker panels.

STEP #8: Spray the gas cap compartment while making sure to clean the back of the gas cap.

PRO TIP: If the gas cap has a weeping cover, use masking tape to prevent water getting into the gas tank. If needed, wipe it down with a microfiber towel before using tape.

STEP #9: Spray the trunk jambs (if the jambs are dirty enough to warrant degreasing - if not, clean by hand when cleaning the tops of the door jambs during Interior Cleaning using a detail spray).

POR TIP: If cleaning a truck, remember to drop the tailgate to clean the edges and the inside. This area can be easily forgotten. If the truck owner would like the bed liner cleaned, simply pressure wash, apply soapy solution with a long handle scrub brush, and then rinse thoroughly. Do this after cleaning the tonneau cover so that the bed can be left open to dry.

STEP #10: Agitate the grillwork and rocker panels with a pre-soaked Doo All pad to remove road film and residue. You can use a long handle wheel brush to clean wheel wells and rocker panels as well.

PRO TIP: Areas that are overlook are the radiator and grill. Make sure to rinse out any bugs to avoid buildup that blocks airflow to the engine.

STEP #11: Thoroughly pressure rinse all areas degreased, from the top down, holding the spray nozzle 8” to 12” from the surface.

STEP #12: Pressure rinse the door jambs (from the top hinge down) with the nozzle facing downward and slightly outward in order to minimize overspray into the interior.

STEP #13: Ensure all heavy grime is removed from the door latch area. Use caution when rinsing around electronics and weather stripping.

STEP #14: Thoroughly pressure rinse the rocker panels.

PRO TIP: When cleaning rocker panels, make sure to get the lower part of the rocker panel where it starts to wrap underneath car. This area is easily missed and but will be covered in many road contaminants.

STEP #15: And the gas cap compartment

STEP #16: Spray the trunk jambs (if degreased).

PRO TIP: Make sure to maintain the proper distance and use the proper fan tip in the power washer to reduce the risk of tearing sensitive materials like weather stripping.

STEP #17: Pressure rinse the engine compartment last (allowing the Cleaner/Degreaser to dwell on the surface longest). Rinse the hood latch first, then work the top edge first, and then around the edges of the hood, avoiding the liner.

STEP #18: Thoroughly rinse the engine following a consistent pattern. Stand at different angles to ensure hard-to-reach areas are completely clean. Don't saturate engine electronics or hood insulation.

STEP #19: Examine your work. If any dirt or grease remains, re-apply the Cleaner/Degreaser and re-rinse. Finally, remove all plastic coverings installed to protect electrical units.

STEP #20: Start the engine and let run for a couple minutes. The heat of the engine will help with the drying time. Any puddling of water can be removed with high pressure air and a microfiber towel. The engine should be clean and dry if it is to be dressed.

SUGGESTED CAR BRITE PRODUCTS:

- Hot Stuff™ with Cinnamon
  https://carbrite.com/products/hot-stuff-with-cinnamon
- Hot Stuff™
  https://carbrite.com/collections/exterior-care-degreasers-solvents/products/hot-stuff
- SELECT™ Exterior/Interior Cleaner/Degreaser
  https://carbrite.com/products/select-exterior-interior-cleaner-degreaser
- Vortex™ Air Gun
  https://carbrite.com/products/vortex-ii-blow-gun-dry-cleaning-tool?_pos=3&_sid=977c7d56f&_ss=r

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Exterior Work - Clean Wheels & Tires

Because the wheels and tires are in constant contact with the ground, they are often the dirtiest, grimiest part of your car. They become covered and embedded with sand, dirt, mud, tar, and harmful, metallic brake dust. They should be cleaned first. When you make the mistake of washing the rest of the vehicle body before the wheels, you run the risk of overspray by cleaners and contaminants across those freshly washed panels. When it is time to dry the car, those compounds abrade the paint and other surfaces.

When you approach the job of wheel cleaning, take it one at a time. When you attempt to wet all of the wheels at once with wheel cleaner, inevitably the cleaner will dry before you have a chance to rinse it off. That can lead to streaking - and more work. The same principle works for your tires. Tire cleaner or tire bleach need to remain wet for a few minutes to penetrate the dirt embedded in the rubber. If it dries in place, it is of no value and the process must be repeated. Instead, treat each wheel and tire assembly separately from the others.

<u>Consider the Cleaner</u>

- **Acid Wheel Cleaners** – a wheel cleaner formulated to remove inorganic contaminants such as rust, brake dust, etc., in multiple levels of strength to clean and brighten chrome, and mag wheels. Should be safe on Plastic and wheel covers. DO NOT USE on PVD, anodized, or uncoated aluminum wheels.

- **Acid Metal Brightener** – An acid-based metal cleaner formulated to clean and brighten chrome, magnesium, and aluminum wheels and plated accessories. Can be used on diamond plate and other soft metals if tested on an inconspicuous spot first. DO NOT USE on PVD, anodized, or uncoated aluminum wheels.

- **Acid Free Wheel & Tire Cleaners** – Formulated in multiple levels of strength to clean all wheel types and tires. Safe for PVD wheels.

- **Whitewall Cleaner** – A cleaner for whitewalls and raised white letters formulated to remove scuff marks, dirt, grease, and road film.

MATERIALS LIST:

- Hi-pressure Wash Sprayer
- Proper Cleaning Solution based on Wheels/Tires
- Spray Bottle
- Poly Whitewall & Tire Brush

- Nylon Spoke Wheel Brush

- Cotton Candy Wheel Brush

- Lug Nut Brush

STEP #1: While the car is in a cool shaded spot, wet the entire body area around the wheel wells with cool water to dilute the Wheel Cleaner should it come into contact with the paint.

PRO TIP: Really take the time to evaluate the surfaces of subtracts like plastic hub caps, polished aluminum, etc. The materials on the wheels, hub caps, and center pieces will determine the type of wheel cleaner you will use. Be mindful that some cleaners will damage certain types of surfaces. Most newer vehicles will have a clear coated painted on the wheels.

STEP #2: Ensure the wheel is cool to the touch, then test an inconspicuous area of the wheel to confirm that the Cleaner is compatible with the wheel.

STEP #3: Spray the Cleaner directly on the wheel. Do not allow it to dwell for longer than 30 seconds or allow the product to dry on the surface.

PRO TIP: When cleaning with acid, pay close attention to the product foaming on the wheel. This means that the chemical is attacking the surface. On the wrong materials, this will cause significant damage.

Poly Whitewall & Tire Brush

Cotton Candy Wheel Brush

Nylon Spoke Wheel Brush

Lug Nut Brush

STEP #4: If the brake dust is heavy, agitate the various surfaces with the appropriate brushes. Don't apply an acid-based Cleaner to all four wheels at the same time if agitation is necessary (the product will dwell too long on wheel surface).

PRO TIP: Make sure to scrub the barrel or back of the wheel as well. These are easily missed but will show dirt when wheels are turned.

STEP #5: Thoroughly pressure wash the wheel holding the nozzle 8” to 12” from the wheel surface.

STEP #6: Make sure to pressure wash the wheel at different angles to ensure the product is completely rinsed from the surface. Make sure to rinse the backs of the barrels too.

STEP #7: Spray both the wheel and tire with a Tire Cleaner and allow it to dwell for one minute. The alkaline Tire Cleaner will neutralize any traces of acid left from the acid-based Wheel Cleaner.

PRO TIP: Acid will clean inorganic materials off the wheel, rust, metallic fallout, brake dust, etc. It is a good practice to follow that acid cleaner with a non-acid cleaner to remove all of the organic material, plus remove traces of leftover acid cleaner. Wash with a pH balanced soap to neutralize and acids left over.

STEP #8: Agitate the Cleaner on the tire with a stiff bristled tire brush to remove embedded road film.

PRO TIP: Cleaning a tire with raised white letters or white walls, use a cleaner specially designed for remove scuff marks, dirt, grease, ana road film from tire and whitewalls/raised white letters.

STEP #9: Thoroughly pressure rinse both the wheel and tire.

PRO TIP: When cleaning tires, you will notice a brown color liquid run down off the tire. This is caused by the release agent and pigments out of the pores of the tires, which can cause staining. This is good to have as it prepares the tire for the dressing.

STEP #10: Wet the entire body area around the wheel wells with cool water to dilute the Wheel Cleaner should it come into contact with the paint.

STEP #11: Spray both the wheel and tire with a non-acid Wheel Cleaner and allow it to dwell for one minute. On warmer days, pay attention to the cleaner and do not allow it to dry on the wheel surface.

STEP #12: Agitate the wheel with a spoke brush.

STEP #13: Agitate the Cleaner on the tire with a stiff bristled brush to remove embedded road film.

STEP #14: Thoroughly pressure rinse both the wheel and tire.

SUGGESTED CAR BRITE PRODUCTS:

- White Lightning™
  https://carbrite.com/collections/exterior-care-wheel-tire-care/products/white-lightning
- XTR™ Wheel & Tire Cleaner
  https://carbrite.com/collections/exterior-care-wheel-tire-care/products/xtr-wheel-tire-cleaner
- Whamo™
  https://carbrite.com/collections/exterior-care-wheel-tire-care/products/whamo
- SELECT™ Acid Wheel Cleaner
  https://carbrite.com/collections/exterior-care-wheel-tire-care/products/select-acid-wheel-cleaner
- SELECT™ Non-Acid Wheel & Tire Cleaner
  https://carbrite.com/collections/exterior-care-wheel-tire-care/products/select-non-acid-wheel-tire-cleaner

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Exterior Work – Remove Grease, Tar, Wax, Sap, Bird Droppings, & Bugs

Use organic and inorganic contaminants

Tar is that black sticky oil-based substance that smears the lower sections of your car such as behind the wheel wells, and the lower parts of the side doors. In extreme situations, you can find it splashed on the fenders, hood, bumper, grill, headlights and even the windows.

Road tar (also called asphalt or bitumen) is used as a glue or binder to make asphalt concrete that is used in road construction. When you drive over freshly placed tar, your tires pick up and toss tar particles onto the vehicle. Since tar is oil based, cleaning it off is different from bugs and tree sap removal. Though it doesn't rigidly harden on your car finish, it doesn't come out well with ordinary auto wash soap.

Bird droppings are not only gross, but they can cause damage to the paint. The droppings contain uric acid which is corrosive. As your car heats up in the summer sun, the paint expands and then contracts in the evening as it cools down. This process allows the bird droppings to seep deeper into the vehicle's finish. Look closely, if the bird dropping is faded, this one is easier to clean. If it is wrinkled, those droppings can be more difficult to remove as they have seeped into the vehicle's finish. Note that with these types of stains, it is important to use a strong cleaner that is safe for the painted surface and not to scrub on the stain too harshly as it can damage the paint.

When it comes to tar, grease, wax, and bird droppings, your traditional car soaps are not useful in removing these. Your best option are solvent-based cleaners that are non-abrasive and designed to remove these spots without damaging the integrity of the paint coat or weather sealant underneath.

MATERIALS LIST:

- Spray Bottle
- Applicator Pad
- Nitrile Gloves
- Body Prep Solvent
- Doo All Pad
- Bug Remover

STEP #1: Spray Body Prep Solvent on both the cleaning tool (an applicator pad, in this case)

STEP #2: Then spray directly on the surface to be cleaned and let dwell for several minutes. If it starts to dry, reapply. The solvent cleaner should start to break down the stain.

PRO TIP: If removing tar from plastic or fender flares, test the solvent cleaner in an inconspicuous area so to be certain that solvent cleaner will not stain or discolor.

STEP #3: Lightly agitate the Solvent on the surface. (If needed)

STEP #4: If the petroleum-based soils are especially heavy (particularly tar), a more abrasive Doo All Pad may be required for agitation. Gently use on the heavy buildup.

PRO TIP: If using an abrasive Doo All Pad, before using it, slice a 1 thick piece off the Doo All Pad and soak it in warm water so that it is not as hard on the vehicle surface.

STEP #5: Fenders and behind the wheels are prone to heavy tar. Other areas are mud flaps, ground effects, and fender flares (facias).

STEP #6: Thoroughly pressure rinse all areas cleaned.

BUGS

Bug guts are not only an eye sore, but they are also very harmful to your vehicle and car windows. If you remember your high school chemistry class, you probably learned that every liquid solution has a pH level. The pH level is a number system that tells us if a solution is acidic, neutral, or alkaline. The

lower the number the more acidic, the higher the number the more alkaline. For example, lemon juice has a pH level of 2 while your average degreaser is around 12, if you combine those two numbers, you'll find their median average of 7 which is considered neutral on the pH scale. Most bug guts are very low on the pH scale, so they would be considered very acidic. Even the bugs guts that are alkaline or pH natural can become acidic when left in the sun for too long. Because most bug guts are acidic, automotive bug removers are alkaline based. This is because alkaline based cleaners are effective in not only removing bug guts but also neutralizing them in the process.

STEP #1: For bugs, apply a liberal amount of bug remover, let dwell for several minutes. Be mindful to not let the cleaning solution dry on the vehicle. Letting it dwell is important for bug residue that has been baked on by the sun and heat from the engine.

STEP #2: For heavy residue, lightly scrub with a Doo All Pad.

STEP #3: Then rinse thoroughly.

PRO TIP: Protein in the bug is on the car for a long period time, it is possible that extremely heavy buildup can be etched into the paint, or it can lift the paint. This is rare but can happen in environments with heavy amounts of bugs and a warm climate.

SUGGESTED CAR BRITE PRODUCTS:

- Eradicator™
  https://carbrite.com/products/eradicator?_pos=1&_psq=eradicator&_ss=e&_v=1.0
- IPA 70% Alcohol
  https://carbrite.com/products/rubbing-alcohol-ipa-70?_pos=1&_sid=ff5d6796f&_ss=r
- Break Down
  https://carbrite.com/products/break-down?_pos=1&_sid=c2cbd6e86&_ss=r
- Omni Brite™
  https://carbrite.com/products/omni-brite?_pos=1&_sid=9d8a63a6c&_ss=r
- SELECT™ Exterior Bio Solvent
  https://carbrite.com/products/select-exterior-bio-solvent

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Exterior Work – Removing Air-Born Particles

Removing air-born particles such as brake dust, environmental pollution, industrial fall-out and even over-spray that make their way on to your car or truck's paint and embed themselves is crucial to the proper maintenance of any painted surface. They're usually too small to see with the naked eye, and they adhere themselves to your paint and become difficult to remove with just soap & water. This is where claying comes in handy. Due to the sticky nature of the clay material, it's able to grab these embedded particles and lift them away from the surface. This leaves behind an incredibly clean, and very smooth surface that is ready for wax/sealant application or even polishing if it is needed.

Clay comes in a few different grades including heavy cut and light cut. A heavy cut removes more contaminants but has more chance of marring. A light cut clay removes less contaminants but decreases the risk of marring. Using a clay that is too rough will results in a surface that is affected more than needed, a clay that is too gentle will not give the desired effect. It takes experience to judge what clay is needed.

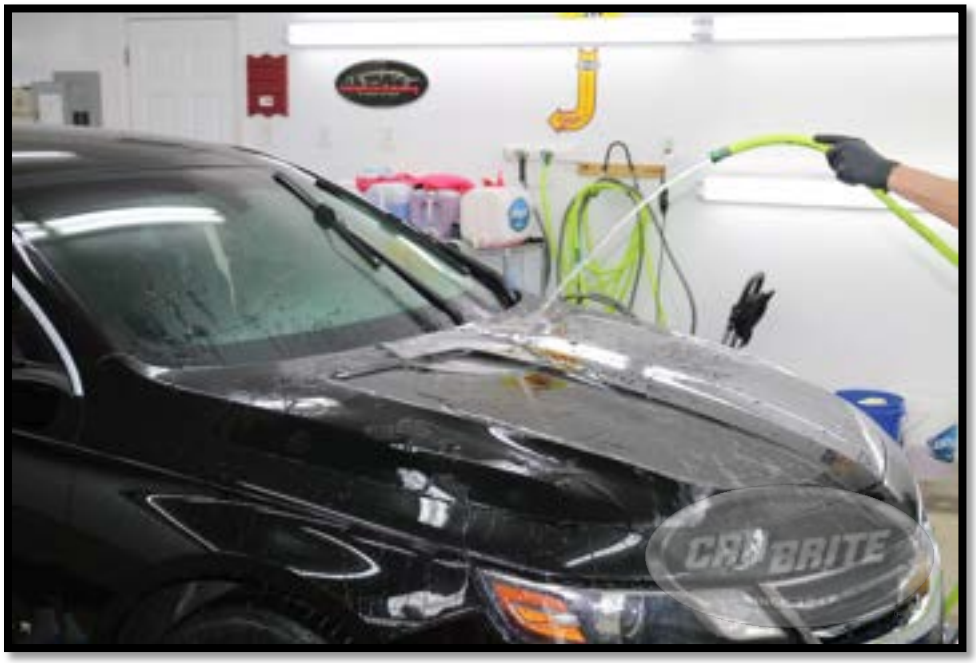
Besides being available in the putty-like form, some manufacturers have found ways to manufacture clay mitts with a surface that acts the same as the bar. There are also clay sponges, towels, and pads. These options are coated with a surface that is very similar to the coating on the clay mitts. These can be coated on both sides or just one side, while some are even coated with 2 different grades of clay. Benefits of these options: if they are dropped on the ground, they can simply be rinsed and reused, these can be reused for more cars than your traditional clay bars, and you won't have to constantly stop and knead the clay, make the job go by much faster.

MATERIALS LIST:

- Clay products: mitt, towel, bar, pad, etc.
- Clay Lubricants
- Soapy Water
- Cellophane or plastic baggie
- Spray Bottle with Trigger
- Drying Cloth

CLAY BAR

STEP #1: Use cellophane or plastic baggie to feel for particles. This can be done before you start, and after you have clayed the vehicle to check for particles that still remain on the vehicle surface.



STEP #2: Rinse the vehicle from the top down, using low pressure.

STEP #3: Examine the Clay Bar to ensure that it's free of contaminants.

STEP #4: Lubricate the surface by generously misting it with a clay lubrication, quick detailer, or even a mild Car Soap solution.

STEP #5: Gently rub the Clay Bar over the lubricated surface, working lengthwise with the panel.

STEP #6: Knead the Clay Bar when its face become “saturated” (there is no longer any resistance as you rub the bar on the paint).

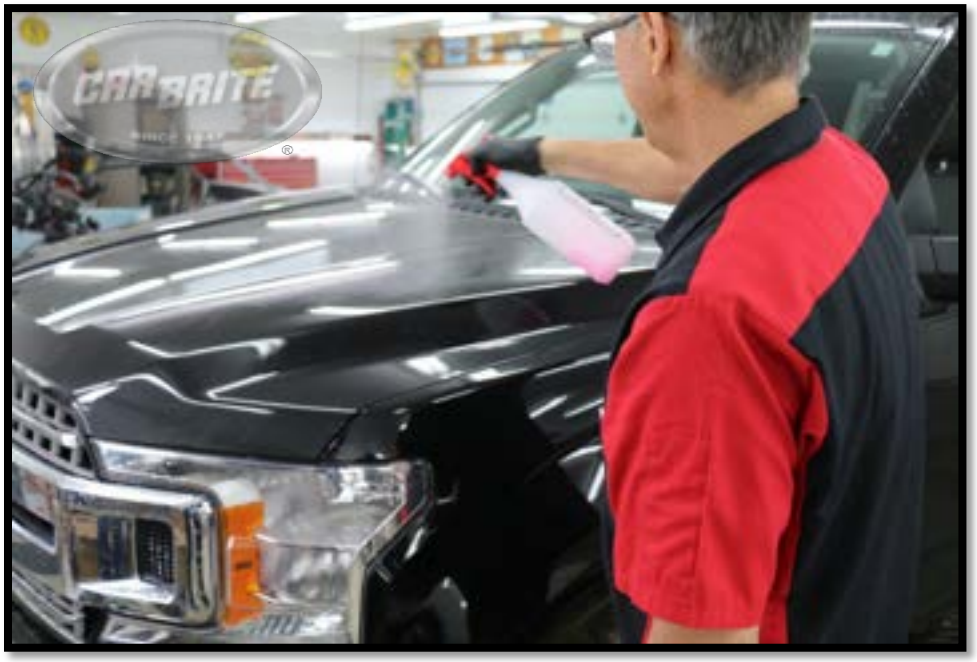
STEP #7: Pressure rinse the areas clayed.

STEP #8: Dry the surface with a drying cloth

CLAY MITT OR TOWEL

STEP #1: As with the clay bar, rinse the vehicle from the top down, using low pressure. However, unlike clay bars, clay mitts and towels are unique as they can be used during the car washing process, when the surface is lubricated with soapy water. If you use the soapy solution, make sure to reload the clay mitt/towel with soapy water frequently. Making sure to use the soft, fabric side to first spread the soapy solutions on the area being clayed.

STEP #2: Then flip the mitt or towel over to the clay side and use on the same section to remove the air-born particles.



STEP #3: Or you can lubricate a dry surface by generously misting it with a clay lubrication or a quick detailer. If using on a dry surface, make sure that the car has been properly washed before starting.

PRO TIP: You can take your choice of fallout eliminator and spray or use a squeeze bottle to apply generously to the wash side (microfiber side) of the clay mitt. Work in a 2-to-3-foot section with crosshatching. Rinse mitt after each section. This method also reduces the odor experienced with most fallout removers.

STEP #4: Gently move the Clay Mitt or Towel back and forth across the paint in a crisscrossing pattern. Dry the panel you've just worked on before moving on to the next panel. Then pressure rinse the areas that have been clayed.

STEP #5: Also rinse out the mitt to rid it of harmful particles picked up. If the clay mitt or towel ever becomes contaminated, just rinse it well and then keep using.

Removing Industrial Fallout –

Industrial fallout is tiny metallic particles which become airborne, then settle on vehicle surfaces. Fallout primarily comes from "rail dust" caused by friction between train wheels and track, but can also originate from factories, manufacturing plants and even vehicle brakes. Due to the heat of these metal particles, they often become embedded in the paint. Paint on cars is very resilient but the heat of the particles literally melts into the topcoat. And once embedded the fallout can easily oxidize and therefore rust. Fallout can be black, or orange which is most noticeable on white, or light color vehicles. However, if you have a dark car, you will be able to feel these metallic particles when you glide a piece cellophane or plastic baggie over the paintwork or bumper.

The longer the fallout sits on the paint, the more corrosive it will become. To correct this situation, you should use products with specially formulated cleaners containing oxalic acid which dissolve these metallic particles, enabling complete removal. Though extremely effective in removing surface contaminants, claying should not be used on medium to heavy industrial fallout. Clay bars won't completely remove particles embedded in the paint, plus they'll become contaminated with fallout and could damage the paint if used further.

It is important to note that most fallout removers will also remove some of the wax coating. It is a good idea to use a fallout remover just prior to your regular wax application to save time in wax repairs. DO NOT APPLY IN DIRECT SUNLIGHT.

MATERIALS LIST:

- Cellophane or plastic baggie
- Body Prep Solvent
- Car Soap and washing supplies

- Spray Bottle
- Fallout Remover

PRO TIP: There are multiple choices for fallout removers. A fallout gel will cling to the side of cars and instead of running down the surface. These are bit more aggressive or acidic. Fallout remover without acid is safer on vehicle surfaces and better for the environment.

STEP #1: Remove all grease, tar, and wax from the area to be treated by applying a body prep solvent, then pressure rinse. The use cellophane or plastic baggie to feel for particles. Before and after. Need to insert in clay sections too.

STEP #2: Wash the area with a Car Soap solution, and then rinse thoroughly.

STEP #3: While the surface is still wet, liberally apply your fallout removal product.

Caution: These products contain very strong mineral and natural acids. Always wear protective gloves, apron and goggles.

STEP #4: Allow product to dwell on surface for 3 - 5 minutes, continually misting it with water if necessary. Do not allow product to dry on surface. Most products will have color changing properties that occur when the product comes into contact with metallic fallout.

STEP #5: Rinse thoroughly, re-apply a pH balanced Car Soap solution, and re-rinse. If all particles are not completely removed, repeat this process. Once all particles are removed, you will need to seal the paint with a wax or paint sealant.

PRO TIP: As mentioned above, it is a good practice to run a piece of cellophane or plastic baggie over surface after you have finished. It is possible for particles to still exist. If particles are still present on the surface of the vehicle, you will need to do the fallout remover and mitt process again.

SUGGESTED CAR BRITE PRODUCTS:

- Car Brite Clay Bars, Mitts, Towels, and Pads.
  https://carbrite.com/collections/exterior-care-clay-bars
- Cherry Bomb Soap
  https://carbrite.com/products/cherry-bomb?_pos=1&_sid=843716583&_ss=r
- SELECT™ Wipe & Shine
  https://carbrite.com/products/select-wipe-shine%E2%84%A2-1-gallon
- Heavy Metal
  https://carbrite.com/products/heavy-metal?_pos=1&_sid=b5cd0f8b9&_ss=r
- Metallic Fallout Remover
  https://carbrite.com/collections/exterior-care-specialty-exterior-cleaners/products/metallic-fallout-remover
- Take Off Body Prep Solvent
  https://carbrite.com/products/take-off?_pos=1&_sid=6298d59f2&_ss=r
- SELECT™ Exterior Bio Solvent
  https://carbrite.com/products/select-exterior-bio-solvent

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Exterior Work – Wash the Vehicle

High Pressure Foam Cannon vs. Low Pressure Foam Gun
The primary difference between a foam gun and a foam cannon, is the method in which the water is delivered to the foam container. Foam guns typically utilize a standard low pressure garden hose fitting, or in some cases rely upon a converter attachment, whereas foam cannons rely upon a hose sprayer or a pressure washer for their water supply. Both are designed to pre-soak a vehicle's exterior with a thick, foamy layer of automotive car soap.

MATERIALS LIST:

- Two Wash Buckets
- Dirt Traps
- Two Wash Mitts
- Preferred Car Soap
- Hi-Pressure or Low-Pressure foaming tool (if desired)

STEP #1: Move the vehicle out of direct sunlight and high-pressure rinse with cool water. This is extremely important with regards to dried on/caked on dirt and mud. Make sure any loose particles are power washed away before washing the vehicle.

STEP #2: Add car soap filling the barrel/cannister with soap to a suggested amount, and then adjusting the water-flow rate. Just be sure to follow the foam gun/cannon manufacturer's instructions, for having the correct ratio of soap to water is going to be vital to your success.

STEP #3: Add water to foam barrel/cannister as both guns and cannons do require the pre-mixing of water and soap in order to safely "prime" the system. DO NOT just add the soap, then spray water straight into the barrel via a garden hose sprayer. This will create extra foam inside the barrel, which in turn, will reduce the quality and effectiveness of the foam produced.

STEP #4: Attach the soap cannister to the housing and affix your water source to the adapter via a quick disconnect or threaded hose coupler. Dial your adjustment knob into its lowest setting (if applicable), and slowly increase foam intensity until the desired level of foam is achieved.

STEP #5: Apply Car Soap foaming solution to the vehicle from the top down.

PRO TIP: More foam is not always better. You do need foam to release the particles from the vehicle surface, but more foam also requires more water to rinse. You need just enough foam to lift and hold contaminants off the surface.

Washing by Bucket

The two-bucket method is a car washing technique used by detailers and professionals, widely considered to be one of the safest ways to clean a vehicle's exterior surface. The two-bucket method revolves around using 2 buckets: one bucket is filled with a soap/water solution and a dirt trap; the other bucket is filled with clean water and a dirt trap. The wash mitt is submerged into the bucket with the water/soap solution and used to wash the surface. After you finish each section of the vehicle, you rinse out the wash mitt in the bucket with clean water, agitating it against the dirt trap. Then submerged the wash mitt in the bucket with water/soap solution, again agitating against the dirt trap. If you skip this step, the wash mitt (after washing the surface) will make the water/shampoo mixture dirty. The dirt it picked up will now be in the water. The next time to put that wash mitt in the bucket, it will contain small particles of dust and dirt. The longer you keep doing this, eventually you will be washing the surface with dirty water, which can cause swirls and other surface imperfections. To minimize the risk of swirls or other surface imperfections, it is important to rinse out the tool you are using.

STEP #1: Take one bucket, insert a dirt trap, and fill with water. Insert another dirt trap into your second bucket along with your preferred soap and water. Vigorously agitate the soap solution with a sponge, wash mitt, or high-pressure water. Since Car Soaps are pH balanced (contain no harsh alkalis), agitation is required to break the bond between the soil and the vehicle surface.

PRO TIP: For an extra dirty vehicle with a sensitive exterior, you can use the three-bucket method. This will give you an extra bucket of water to clean off particles from your wash mitt.

STEP #2: Wash the vehicle starting at the top, working your way down. Make sure to frequently wring the mitt out over the ground away from your vehicle. This will purge the majority of the dirt and debris on the floor, so it doesn't wind up in your rinse bucket and off your car.

STEP #3: Return the soiled wash mitt to the rinse bucket first. Rub the dirty wash mitt against the Dirt Trap to agitate the stuck-on dirt, causing it to fall off the mitt and into the trap below. When all dirt has been dislodged, remove it from the rinse bucket, and wring out. Place clean wash mitt back into the wash bucket to soap it up again. It is important to repeat this process frequently.

PRO TIP: Be sure to "mitt out" the wheel wells (using a separate mitt than the one used to agitate the soap solution on the paint).

STEP #6: Rinse the vehicle from the top down, using low pressure.

PRO TIP: If you rinse the vehicle with high pressure water, the pressure can reagitate the soap, making it more difficult to rinse the vehicle completely. Using low pressure water avoids this.

STEP #7: Dry the surface with a drying cloth or a low volume air gun.

PRO TIP: Be cautiously aware with how much you rub the car i.e., wash mitt, chamois, etc. Any time you create friction on the surface, you create micro marring of the finish. Therefore, using foam guns/cannons for washing and an air dryer helps avoid this issue. Hi volume, low pressure portable blowers are a good choice for blowing water out of cracks and crevices.

SUGGESTED CAR BRITE PRODUCTS:

- Cherry Bomb
  https://carbrite.com/collections/exterior-care-car-soaps/products/cherry-bomb
- Cherry Bomber
  https://carbrite.com/collections/exterior-care-car-soaps/products/cherry-bomber
- SELECT™ Car Soap
  https://carbrite.com/collections/exterior-care-car-soaps/products/select-car-soap

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Exterior Work - Dress Engine and Exterior Rubber, Plastic, & Vinyl Surfaces

Solvent-based and water-based dressings are both products formulated to shine and protect vinyl, plastic and rubber surfaces. They each contain a shine agent (silicone, mineral oil, or glycerin) that is delivered to the surface via a "carrier" which evaporates once applied.

In solvent-based dressings, the "carrier" is a blend of solvents, while in water-based dressings, the "carrier" is water.

Solvent-based dressings are more durable since their solvents open the pores of the rubber, plastic or vinyl, which enables the shine agent to penetrate the surface. They will hold up to rain and water for longer, making them the perfect choice for tires. The shine agents in water-based products remain on the surface and, thus, rinse off more readily.

Additional care must be taken when using solvent-based dressings, however. Repeated applications to surfaces exposed to direct sunlight (like dashboards) can lead to cracking. Also, solvent-based dressings are flammable, and should not be used on engines. Finally, improperly applied solvent-based dressings can stain certain fascia's. Please be careful as solvent-based dressings can lead to slippery surfaces as well.

Plastic fascias can be stained when a mixture of solvent and carbon black is "slung" onto them from freshly dressed tires (late-model, light colored GM vehicles are especially susceptible). Opinions vary on the exact cause of the staining (tire mold release agents, clearcoat flex agents, etc.), and the problem exists industry-wide (all manufacturer's solvent-based dressings can stain if applied incorrectly).

MATERIALS LIST

- Water-Based or Solvent-Based Dressing
- Dressing applicator
- Spray Bottle
- Microfiber Towels
- Hi-Pressure Air Cleaning Tool

ENGINE:

STEP #1: Wipe or blow any standing water that puddles off the engine and all compartments with an air hose. It is vital to have the engine free of puddling or standing water.

STEP #2: Spray the entire engine with a water-based dressing only, using a consistent pattern to ensure even coverage. Make sure to properly apply to all pockets, crevices, and creases. It important to not use solvent-based dressings on engines.

STEP #3: Allow the engine compartment to air dry for several minutes with hood down. You can also wipe down with a cloth, but this will lead to a less gloss and it takes time. You can also use a hi-pressure air-whip tool to blow the dressing into missed areas and to aid in the drying process.

PRO TIP: Just start the engine and close the hood to allow the heat to bake the dressing onto it. Also, most water-based dressing can be diluted 50/50 bringing out the natural color of the engine parts.

TIRES:

STEP #1: Spray the wheel wells with a solvent-based dressing.

PRO TIP: If the vehicle has a fabric, sound deadening, wheel well, do not spray the dressing on them. If you evaluate that the fabric needs color, use a fabric dye or similar.

STEP #2: To ensure evenness, and reduce product “run off”, spray the solvent-based dressing on a tire applicator pad.

PRO TIP: It is good practice to not over saturate the edge of the tread with the dressing. It will puddle in the pockets of the tread and will sling onto the car when it is moved.

STEP #3: Hand apply the dressing to the tires, using smooth, even strokes. Ensure the dressing is completely dry before moving the vehicle.

STEP #4: Hand apply dressing to the cowl or the space located between the hood and windshield.

PRO TIP: With areas of the trim that tend to fade more due to extended UV exposure, you can use an alternate dressing or trim restoration product.

STEP #5: Then apply to all exterior trim.

STEP #6: Once the dressing on the tires is completely dry, move the vehicle and dress the area that was in contact with the floor.

SUGGESTED CAR BRITE PRODUCTS:

- Cherry Shine
  https://carbrite.com/collections/exterior-care-water-based-dressings/products/cherry-shine
- Purple Dressing
  https://carbrite.com/collections/exterior-care-solvent-based-dressing/products/purple-dressing
- Bumper Kote
  https://carbrite.com/collections/exterior-care-solvent-based-dressing/products/bumper-kote
- SELECT™ All Purpose Dressing
  https://carbrite.com/products/select-all-purpose-dressing-1-gallon
- SELECT™ Tire & Trim Dressing
  https://carbrite.com/products/select-tire-trim-dressing-1-gallon

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Exterior Work – Applying Waxes & Express Detailers

Waxing frequency depends on the type of wax or paint sealant you use, the climate you live in and the soap you use to wash your vehicle. Before discussing these variables, we should review the terms "wax" and "paint sealant". Historically, a "wax" was a final finish product which contained natural waxes such as carnauba, while a "paint sealant" was a final finish product containing synthetic polymers such as silicone, glycerin and mineral oil. Waxes tended to generate more gloss, while paint sealants tended to last longer.

Today, however, the distinction between these products is not as pronounced. Many "waxes" contain synthetic polymers, while many "paint sealants" contain natural wax. It's best to review the product label to determine shine and durability. Like polishes, waxes and paint sealants contain resins which bond to the painted surface forming a protective layer against sunlight and the elements. The strength of the bond will vary depending on the number and type of resins present and the condition of the painted surface. Chemically bonding silicones can last up to six months, while physically bonding silicones, mineral oil, glycerin and natural or synthetic waxes last one to four months. It is critical to ensure that the paint is free of dirt, tar, grease, and other surface contaminants before applying your final finish product. Neither wax nor paint sealant will adhere to a dirty surface.

Climate affects the durability of waxes and paint sealants, as well. Harsh weather conditions such as rain, wind, snow (and the accompanying road salts) will break the bond between the resin and the painted surface much more quickly than will dry, mild conditions. Constant exposure to bright sunlight will also accelerate wax and sealant deterioration. When washing a freshly waxed surface, be sure to use pH neutral car soap instead of a highly alkaline dish soap or household cleaner. The alkalis will strip the resins from the painted surface, lessening gloss and exposing the surface to the elements.

MATERIALS LIST:

- Free Spinning Dual Action Polisher
- Spray Bottle
- Wax or Quick Detailer
- Microfiber Towels
- Applicator Pad
- Detailing Brushes

STEP #1: Ensure the buffing pad is free from contaminants by holding a foam pad conditioning brush while the pad rotates.

STEP #2: Depending on the car, pick the worst area on the vehicle and do a test spot. This will help you assess on the least evasive polish and pad needed. Going over this test spot, if it fills you need, then do the rest of the car. If not, use a heavier duty cleaner wax and pad.

PRO TIP: Depending on your experience level, you can use the force rotation dual action polisher or free spinning dual action orbital polisher.

STEP #3: Remove polishing residue with a soft, clean microfiber cloth.

STEP #4: Sparingly apply a thin, even layer of Wax or Paint Sealant to the paint by hand with a clean, soft microfiber applicator pad ...

PRO TIP: Make sure to apply evenly following down the vehicle body lines.

... or with a random orbital polisher (which is excellent for ensuring application evenness).

STEP #5: Be sure to apply wax to clear coated wheels, as well. Avoid any plastics that are non-clear coat, they could stain.

PRO TIP: Being that the wheels deal with extreme heat and carnauba wax does not respond well to extreme heat, we recommend using a polymer coating on the wheels.

STEP #6: Once the product has dried to a haze, remove the residue with a clean, soft microfiber towel.

... or with a dual action random orbital polisher.

STEP #7: Be very thorough when removing waxy residue. A detail brush is effective when cleaning cracks and crevices.

PRO TIP: When using a wax hand applicator, try to avoid the cracks and creases, this will help to eliminate having to remove the waxy residue with the detailing brush. These areas will be tended to after you are wiping off the hazy residue.

PRO TIP: Once you apply the wax, whether by hand or orbital, you need to address the cutout areas. Make sure that wax is evenly applied to all areas like door handles, etc.

SUGGESTED CAR BRITE PRODUCTS:

- XPress-It™
  https://carbrite.com/products/xpress-it-%E2%84%A2?_pos=1&_sid=4c4a7d548&_ss=r
- Black Pearl™ Speed Spray II
  https://carbrite.com/collections/exterior-care-paints-coatings/products/black-pearl%E2%84%A2-speed-spray-ii
- SELECT™ Wipe & Shine
  https://carbrite.com/products/select-wipe-shine%E2%84%A2-1-gallon
- Tropical Gloss Aerosol Wax
  https://carbrite.com/products/tropical-gloss?_pos=1&_sid=8aa461c20&_ss=r
- Final Finish
  https://carbrite.com/products/final-finish?_pos=1&_sid=5dffd929c&_ss=r

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Exterior Work – Ceramic Coatings

True ceramic coating is a long-term nanoscopic exterior automotive paint treatment and protectant that is applied in a liquid form and cures to a hard layer on top of the paint. Ceramic coating is typically composed of silicon dioxide (silica, Si02), which is sourced from natural materials such as quartz and sand. Some types and brands also use titanium dioxide (titania, Ti02) as an additional hardening agent. When applied to a car's paint, the two create a chemical bond with hydrophobic properties.

Ceramic coating protects a car's paint from blemishes and damage while keeping it cleaner for longer. After application, it also makes follow-up car washes easier and shields the car from harmful UV rays. Ceramic coating creates intense water beading and dirt run-off and gives a car an extremely glossy shine. Proper maintenance of an installed coating is key to longevity. The best way to maintain and boost the look and protective qualities of a ceramic coating would be with the right automotive soap, a ceramic-based spray, and a mist-and-wipe spray detailer.

IMPORTANT INSTALLATION TIPS:

Do not apply in direct sunlight. Application should be done in a well-lit area and the vehicle should be cool to the touch.

We recommend using multiple colored microfiber towels for this process to avoid risk of contamination or damage.

- Your choice of color for compound & polish
- We recommend white for the removal of silicone prior to the application as it will reveal any areas needing cleaning attention
- A dedicated color for buffing the ceramic. This cloth must be disposed of after application is complete as tiny glass particles could cause scratching.

Materials List:

1. Wash mitt or preferred tools for washing the vehicle accompanied with your choice of car soap
2. A plastic baggie or a piece of unused cellophane
3. Disposable nitrile gloves
4. Protective eyewear
5. Clay mitt, clay bar or a metallic fallout remover
6. Orbital polisher or rotary polisher accompanied with the proper compounds and polishes
7. IPA 70% (70% Isopropyl Alcohol)
8. A ceramic coating
9. Low-pile microfiber cloths
10. Medium-pile microfiber cloths
11. Applicator pads

STEP 1: With any ceramic coating, it is vitally important to prepare the surface by removing any scratches and surface contaminants. To start, the vehicle should be thoroughly washed and dried.

STEP 2: After washing the vehicle, inspect for scratches and surface contaminants. Surface contaminants can be felt by gently wiping a plastic baggie or piece of cellophane on the vehicle's surface.

STEP 3: Remove surface contaminants with a Surface Prep Mitt, clay bar or a metallic fallout remover. You will also need to remove any wax, silicone or grease using isopropyl alcohol over entire surface to be coated.

STEP 4: Remove scratches and swirl marks by using an orbital polisher or rotary polisher accompanied with the proper compounds and polishes.

PRO TIP: After you are done buffing, wipe down the surface with IPA 70% (70% Isopropyl Alcohol) to remove any leftover residue. In doing this creates capillary action which is the process of a liquid

flowing in a narrow space without the assistance of, or even in opposition to, any external forces like gravity.

STEP 5: Apply a thin line of the ceramic coating on an applicator block or pad.

STEP 6: Apply to vehicle surface using a crosshatch pattern to ensure adequate coverage. Make your initial application to a 2’ x 2’ area to understand dry time that typically takes 1-3 minutes. It’s important to keep the work area manageable and not allowing the product to completely dry on the surface.

STEP 7: When product begins to haze and feels tacky, wipe with black low-pile microfiber. This helps to spread product evenly while removing excess.

STEP 8: Immediately buff area with a clean medium-pile microfiber towel to a lustrous sine. Then, continue this process until entire vehicle has been coated. Once completed, leave the vehicle in a controlled temperature environment for at least 6 hours. This does not mean the coating will be fully cured, coatings can take up to two weeks to be fully cured.

PRO TIP: When you're installing a true ceramic coating, you will want to prepare the finish with extreme care. The finished ceramic coating will show even the most minor of imperfection.

USING A SiO2 CERAMIC SPRAY

After washing the vehicle, repeat the steps of removing scratches, swirl marks, and any surface contaminants.

STEP 1: Lightly spritz the ceramic spray direct to a clean, low-pile microfiber towel or microfiber applicator. This process is best for panels that include creases and crevasses. If you are working with flat surfaces, you can spritz the ceramic spray directly onto the vehicle's surface. Then spread the product evenly over the panel, working with one panel at a time. No larger than ½ hood at a time.

PRO TIP: The size of the area that can be coated will depend on temperature and humidity.

STEP 2: Allow 1-3 minutes to dry to a light haze, then remove with a clean medium-pile microfiber towel. Continue this process until entire vehicle has been coated.

PRO TIP: While the vehicle's coating is curing, it is best to refrain from washing the car. If contaminants to land on the surface, just rinse the vehicle with water.

SUGGESTED CAR BRITE PRODUCTS:

- Black Pearl™ Ceramic Coating Kit
  https://carbrite.com/collections/exterior-care-black-pearl/products/black-pearl%E2%84%A2-sio2-ceramic-coating-kit
- Black Pearl™ Speed Spray
  https://carbrite.com/products/black-pearl%E2%84%A2-sio2-ceramic-coating-speed-spray

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Painted Surface Correction - Inspect Paint: Remove Scratches, Swirl Marks, & Oxidation

Lack of gloss on the painted surface can be caused by several factors:

- Oxidation
- Scratches
- Lack of a Protective Coating

Oxidation is the dulling of the painted surface that occurs when the sun's ultraviolet rays deplete the paint's natural oils and resins. Scratches prevent light from reflecting uniformly, which limits gloss. To restore gloss, the oxidation and scratches must be removed. Once the surface is free of oxidation and scratches and any swirl marks caused by compounding are removed, a wax or paint sealant should be applied. It will protect the paint against further oxidation, level the surface and intensify the reflection of light.

To remove medium to heavy scratches and oxidation, we recommend compounding the surface with a high-speed buffer, cutting pad and compound. If only light scratches and oxidation are present, buff the surface with a mildly abrasive glaze or polish and polishing pad. If the scratches and oxidation warrant compounding, the compound used should be aggressive enough to correct the imperfections but appropriate for the vehicle's paint system (conventional or basecoat/clearcoat).

To identify your vehicle's paint system, hand-apply a medium-duty compound with an applicator pad to an inconspicuous spot on the paint. If color comes off on the pad, you're working with a conventional system. If not, you have a basecoat/clearcoat system. The thickness of the exterior paint layer of conventional systems is 3 - 4 mils (1 mil = 1/1000 of an inch), while the thickness of the clearcoat layer is 1 - 1.5 mils. Therefore, you can use a much more aggressive product on a conventional finish than a basecoat/clearcoat finish.

PRO TIP: If you are working on an older car that has been reconditioned several times, be wary of the coating and paint thickness. Every time an aggressive buffer is used, the coating is diminished. If the clearcoat is very thin, using a polish is the better choice of using a compound. Also note that newer vehicles are coming out with softer layers of paint. All this plays into how you approach buffing the painted surface.

When compounding, set the buffer speed at no higher than 800 - 1800 rpm depending on the severity of the oxidation and swirling, and the hardness of the paint. Use either a wool or foam cutting pad. Wool cutting pads tend to generate more heat than foam pads - increasing the amount of cut - and often leave more swirl marks. If a paint thickness gauge is available, measure the total thickness of the area you plan to compound. Then measure the thickness periodically as you buff, ensuring that you don't remove more than .5 mils of paint (especially from a clearcoat layer).

Swirl marks are light, circular scratches often caused by buffing with a compound. As the compound cuts away the oxidized paint layer and reduces the depth of deep scratches – by abrading away their "ridges" – it can cause light scratches, especially on dark colors. Fear not, for swirl marks can be buffed out with a high-speed buffer, polishing pad and a glaze or polish (as can light scratches and

oxidation not severe enough to compound).

Glazes and polishes are lotions containing mild abrasives and resins (usually silicone) that can be applied with a buffer or by hand. Glazes tend to be more aggressive, while polishes tend to generate more gloss. The abrasives remove swirl marks by abrading away their "ridges" in a manner like compounding, but with much less paint being removed. The resins fill any indentation in the paint too deep to be abraded out, and bond to the surface.

PRO TIP: Most glazes have fillers to hide imperfections, which is a good solution for auction houses or car shows.

By removing the "ridges" and filling any remaining indentations, the painted surface is leveled, which restores its gloss. The newly level surface reflects light in a uniform manner causing the eye to perceive a deep, rich shine. In addition to providing "fill", the resins deflect the sun's ultraviolet rays (minimizing further oxidation) and magnify the gloss created by the newly level surface.

The durability of the bond between the resin and the painted surface will vary depending on the number and type of resins used. Silicone is the most common resin, and certain chemically bonding silicones can last up to six months. Glycerin and mineral oil are also used but aren't nearly as durable.

When polishing, buff at 2400 - 2800 rpm (the resins provide added lubrication which allow for higher buffer speeds), and utilize a lambswool, blended wool or foam polishing pad.

What types of Buffing Pads Exist?

There are three major classifications of pads. There are foam, wool, and microfiber buffing pads. Each of these pads can be used on either Dual Action Orbital or Rotary Polisher as long as the pad is the same, or slightly larger, diameter as the backing plate on your chosen polisher. Within these classifications of pad are several subcategories that determine the amount of aggressiveness (also known as correction or cut) a pad has. More aggressive pads remove paint to remove defects faster but don't leave a perfectly smooth finish. Less aggressive pads remove paint slower but leave a smoother finish behind.

You can start with aggressive pads to remove the worst defects first and then step down to less aggressive pads to remove the marks from the aggressive pads and leave behind a nicer finish.

Foam Pads

Foam pads typically fall into three main categories: Compound, Polish, and Finish. Some manufacturers have more categories between these and that just means they allow a smaller step

down between levels of cut. Generally, the more aggressive a pad is marked as the stiffer the foam is that was used in the construction of the pad.

Compounding

- Most aggressive
- Used with a cutting compound that has a high level of cut or aggressiveness
- First step in removing surface defects

Polishing

- Used with a polishing compound that has a low level of cut or aggressiveness
- Second step in removing surface defects

Finishing

- Used with a last step product like a sealant or all in one product such as a cleaner wax that have low to no cut or aggressiveness
- Last step in restoring and protecting surface finish

You can you mix and match pads and polishes, just remember an aggressive compound on a non-aggressive pad will provide a level of aggressiveness/cut somewhere in between the two.

Flat Pads Vs. Textured Pads (CCS, Hex Logic, Waffle)

Manufacturers generally claim textured pads run cooler and therefore last longer. Some may not notice the difference in performance of flat vs. textured pads. One important thing to note is that some polishers do not play nice with textured pads. Forced rotation buffers such as the Flex 3401 tend to walk around the paint on you when used with a textured pad.

Microfiber Pads

In general, there are two types of pads: cutting/compounding pads and polishing/finishing pads. Microfiber pads are a relatively new addition to the detailing scene. Because of this there aren't any real standards between manufactures for what separates a cutting pad from a polishing pad.

Some manufactures vary the thickness of the foam, some use different microfiber, and some use a combination of both. Stick to one manufacturers system and you'll be fine. Mixing and matching

microfiber pads is not recommended.

Cutting Microfiber Pads

- Used with cutting compounds
- More aggressive
- Removes paint faster but doesn't finish well

Finishing Microfiber Pads

- Used with polishing compounds
- Less Aggressive
- Removes paint slower

Microfiber pads do tend to be more aggressive than foam pads. The fibers themselves are an abrasive. On soft, dark paints it's often possible to still see micro marring from a microfiber finishing pad and polish. Many people like to use a foam finishing pad with polish as the last step on these paints to finish down to a flawless surface.

Wool Pads

Wool Pads are typically used on rotary polishers. They do make wool pads for DA polishers for heavy correction work, but microfiber has all but taken its place.

Wool Pads are graded similarly to microfiber pads with compounding/cutting pads being the most aggressive and polishing/finishing pads being the least aggressive. Just like foam pads, some manufactures have pads that rate between these two classifications so you'll have to reference their system to know more.

On most finishes, wool pads will not finish down to a flawlessly smooth finish. The wool fibers themselves are abrasive. You will want to follow up with a foam finishing pad and a good polish to remove any micro-marring left behind by the wool fibers.

Glass Polishing Pads

These are special pads meant only for use with special polishes, such as cerium oxide, to remove scratches from glass. Every manufacturer has their own system for polishing glass so it's best to stick with their system. I don't recommend mixing and matching when it comes to glass.

Do not use glass polishing pads on any other material. These pads do not have the thickness or construction necessary to safely correct other surfaces.

MATERIALS LIST:

- Preferred Compound
- Nitrile Gloves
- Applicator Pad
- Paint Thickness Gauge (If Available)
- High Speed Buffer and Pads
- Pad Cleaning Tool
- Microfiber Towels

STEP #1: Determine whether the vehicle has a conventional or basecoat/clearcoat paint system by hand applying a compound to an inconspicuous area of the paint. If color appears on the rag, the vehicle has a single stage paint system (which can be compounded aggressively). If not, it has a basecoat/clearcoat system (on which light to moderate buffing products should be used).

STEP #2: (Optional) Measure the thickness of the vehicle's paint with a paint thickness gauge.

STEP #3: Determine the condition of the paint by examining the vehicles horizontal surfaces for scratches, oxidation, and swirl marks.

PRO TIP: Do a test spot on the worst area of the vehicle (normally the hood) to determine your level of aggressiveness. Use the least aggressive approach to remove oxidation and swirl marks to achieve the desired surface result.

STEP #4: If the depth of the scratches and extent of the oxidation warrant it, compound the surface with a orbital polisher and cutting pad. Buff slowly in a 2’ x 2’ area, using a side-to-side motion. Start on speed level 2, do one pass, then increase to speed level 4.

PRO TIP: If you are working on high valued vehicles, it would a good practice to mask the wiper blades and cowling area with a damp towel to simplify residue removal. If you are worried about scuffing edges of areas, use masking tape. Tape is cheaper than paint.

STEP #5: Apply light pressure, keep the pad relatively flat on the surface or on a slight angle with the surface hitting the palm of the pad, not the edge. Start on dial 2, work product into surface, and then do a pass on dial 4, depending on the type of paint and the condition of the paint.

PRO TIP: Depending on your experience level, you can use the high-speed buffer, or the forced action random orbital polisher. You are less likely to burn the painted surface with the forced action random orbital polisher.

STEP #6: Monitor the amount of paint being removed with a paint thickness gauge.

STEP #7: Clean the pad regularly and establish a schedule for pad changes. Check your pad frequently for excessive clearcoat or contaminant in the pad. Exchange pads every two panels to reduce heat and wear on pads.

PRO TIP: Depending on the vehicle, pay special attention to the paint residue and clearcoat product in embedded in the pad. Change frequently to allow for clean and cool pads to be used at all times.

STEP #8: Remove all compounding residue with a soft, clean microfiber cloth.

SUGGESTED CAR BRITE PRODUCTS:

- Select Cutting Compound
  https://carbrite.com/products/select-cutting-compound-32-oz?_pos=5&_sid=5b5c6271c&_ss=r
- 6 ½" Heavy Cut Foam Pad
  https://carbrite.com/products/6-heavy-cut-foam-pad?_pos=19&_sid=5b5c6271c&_ss=r

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Painted Surface Correction – Paint Gloss Enhancement & Stages of Paint Correction

Types of Machine Polishers
There are two primary types of buffers and polishers: Rotary and Orbital. The rotary buffer has a spindle and pad that rotate together in one direction. It doesn't vibrate, oscillate, or orbit. With an orbital polisher the spindle and pad move about different axis causing the pad to vibrate, oscillate, or orbit.

Rotary Buffer
Appearance
- Most resemble an angle grinder because that is what they evolved from
- Some include a fixed or removable handle to one side or another
- Most USA made rotary buffers will have a 5/8″ diameter 11 threads per inch sized male arbor on the spindle that the backing plate screws onto

Function
- Circular rotation with axis at the center of the spindle
- Rotates in single direction
- Directly driven by motor
- Variable Speed
- Outer diameter of pad spins faster than inside diameter

Uses
- Fast removal of moderate to heavy swirls, defects, and sanding marks
- Can be used for spreading wax but not a common practice

Pads
- Used with wool, microfiber, and foam pads though wool and foam
- Larger pads are more aggressive due to increase outer diameter speed
- Pad size doesn't affect machine performance
- Note that some brands have color standards between pads and types

Risks
- Pad friction with paint generates heat
- Heat generated between pad and paint is great at pad edge
- Cutting performance is greater at edge of pad
- Burns, swirls, and holograms are easily created if too much pressure is applied, or edge of pad stays in one place too long
- Faster material removal means it's easier to waste clearcoat and paint

Difficulty
- Learning to use tool properly takes consistent practice
- Chance of damaging paint while learning is high

Orbital Polisher

Appearance

- Similar appearance to dual action sanders
- Some have handles over the top, out the side, or are simply covered in a grippy rubber
- Most use a 5/16″ diameter 24 threads per inch female threaded hole that the backing plate attaches

Function

- Pad and backing plate spin at different axis than the spindle
- Pad and backing plate rotation can be forced, free spinning, or both
- Variable speed

Uses

- Commonly used for light to moderate defect removal. Advances in pads and compounds have made heavy defect and sanding mark removal possible as well.
- Wax application and removal

Pads

- Most are used with foam and microfiber pads
- Bonnets can be placed over pads for removing polishes and wax
- Vibratory motion generates heat between pad and backing plate
- Larger pads reduce machine performance leading to less aggressiveness
- Note that some brands have color standards between pads and types

Risks

- Risk is greatly reduced over rotaries due to pad motion
- Pressure on a free spinning orbital slows pad down so risk from excess pressure and speed is greatly reduced
- Aggressive pads combined with aggressive compounds can leave behind micromaring but it's very hard to do any real damage or to waste any clear coat
- Burning through paint is highly unlikely, especially on flat surfaces

Difficulty

- Learning to use the tool safely only takes a few minutes
- Chance of damaging paint while learning is low

Types of Orbital Polisher

Fixed Orbital Polishers

Orbitals are recognizable by their top mounted motors and most have an almost a bell shape to them. Also known as Random Orbital Polishers, these are typically low amperage, low speed tools. The pad on them is large and oscillates around a fixed axis to mimic the motion of hand waxing rather than spinning like most other orbitals and all rotaries. The pads on these tools aren't usually removable and instead rely on bonnets that are placed over the pad.

While these tools work great for applying and removing waxes and sealants, they aren't great at compounding and polishing. Their low power, speed, and lack of rotation inhibit their ability to remove anything other than superficial defects. The vibration caused from the oscillating pad is also quite uncomfortable for long periods of use.

Dual Action Random Orbital Polisher
DA Polishers, DA Buffers, or Random Orbital Polishers are the most common for compounding and polishing clear coat paints. You can identify a dual action random orbital polisher by their resemblance to DA sanders. The spindle is typically mounted perpendicularly to the motor and is much larger due to the counterweight that is necessary to balance out the action of the polisher.

Why are they called Dual Action?
These polishers are called dual action because the pad spins on an axis that offset from the axis that the spindle spins while the pad is also free spinning. This means the pad only spins because of the whipping action of the backing plate. The motor does not drive the pad directly. You can stop the pad from spinning while the motor is still turning the spindle. This causes a looping pattern in the motion of the pad relative to the paint.

Safety of the Dual Action
The ability to slow or stop the pad by applying pressure to the tool is what makes these tools so safe. Too much pressure simply stops the pad instead of harming your paint. To keep the tool spinning and working the polish effectively you are forced to apply just the right amount of pressure making it an easy tool for novices to learn on without dire consequences to any mistakes.

Effectiveness of the Dual Action
Advances in pad and polish technology have made these tools incredibly effective. It's now possible to buy pads and polishes that start out very aggressive to remove serious defect that then finish down to nearly perfect finishes. Newer DA polishers have also been developed that have greater power and speed than the original DA Sander derivatives. DA polishers also can use many different sizes of backing plates and pads to allow them to be used in tight spaces or over large panels. There are even compact dual action polishers that accept extra small pads for tight detail work.

Long Throw Dual Action Random Orbital Polisher
These polishers are very similar to the traditional DA polishers. What sets them apart is the offset of the mount point for the backing plate and the center of the spindle is greater. A traditional DA has an offset of about 8mm. A long throw polisher can have up to 21mm of offset. This means the orbit of the pad and the whipping motion generated from it are much larger.

Effectiveness of Long Throw DA Polisher
The long throw provides two things, more distance covered by the pad and more power is delivered to the pad, which means you can accomplish higher levels of correction in less time. Now you would think that this larger offset and more powerful whipping motion would make for a more unruly tool. Fortunately, it does not. Most long throw polishers are engineered to run very smooth. The counterweight and motor design in them is much more refined than that of earlier DA tools such as the Porter Cable and GG6.

Short Throw vs Long Throw Dual Action Polisher
The two downsides to a long throw polisher are the size and price. Most long throw polishers are limited to 5″ pads and larger whereas smaller DAs like the PC and GG6 can run smaller backing plates and pads to get into tight areas. Due to the engineering required to make the long throw smooth and reliable the cost is considerably more as well, running as much as three times as expensive as a Porter Cable or GG6.

Dual Action Forced Rotation Polisher
Similar in appearance and function to a Dual Action Random Orbital these polishers have a pad that spins on an offset axis from the spindle's axis. The difference is that the pad on these tools does not spin on its own due to the orbiting motion of the spindle. Instead, it's directly driven using a gear set. This means the pad will not stop when pressure is applied. Since the pad does not stop when pressure it applied it's easier to polish out tight areas and curves that would normally stop a dual action random orbital polisher. This style rotation also allows the use of larger pads without affecting the performance of the machine. The ability to apply more pressure to the pad also allows for more aggressive cutting into the paint to remove defects faster.

Drawbacks of the Forced Rotation
Forced rotation polishers can be more tiring to use due to the tendency of the polisher to walk or jump around on the paint while polishing. Since the polisher rotation is forced, when you hit uneven surfaces, the polisher tries to "pull" itself around, for lack of a better way to explain it, rather than stopping like a typical DA polisher. Because of this you must be more assertive in holding and driving the polisher.

Safety of the Forced Rotation
The pattern that the pad moves against the paint is more of a wobbly rotational pattern than a looping pattern or circular pattern. It's this pattern that makes the forced rotation safer to use. While the margin for error might not be quite as small as the dual action random orbital polishers it's still a lot smaller than the rotary polishers. Advances in dual action random and forced rotation polishers have led to the development of some polishers that can switch between polishing modes giving you the best of both worlds.

Choosing the Correct Backing Plate
First, you should typically use a backing plate that is slightly smaller than the pad you're using to provide a buffer and ensure you never hit the paint with the backing plate. The backing plate should also be larger than the spindle housing so that the tool doesn't overhang the pad, again risking hitting the paint with the tool.

MATERIALS LIST:
- Preferred buffer/polisher
- Safety Glasses
- Compounding Polish
- Microfiber Towels
- Wax Applicator Pad
- Detail Brushes

STEP #1: Polish the painted surface with a high-speed buffer and polishing pad. Follow the same buffing techniques used when compounding. The buffer can be run up to 2800 RPM depending on the hardness and the condition of the paint. Do a 2ft-by-2ft section, cross hatching and then assess your section for desired results. If you are unsure of what level to start with, it is a good idea is to start with the least invasive polisher first.

PRO TIP: Knowing your customer's needs will determine the need for either a gloss enhancement or more substantial like a two-stage compound and polish. It is important to ask questions on client wants and elements the vehicle is exposed to repeatedly.

STEP #2: Remove polishing residue with a soft, clean microfiber cloth.

STEP #3: Sparingly apply a thin, even layer of Wax or Paint Sealant to the paint by hand with a clean, soft applicator pad

... or with a free spinning orbital polisher (which is excellent for ensuring application evenness).

STEP #4: Be sure to apply wax to clear coated wheels, as well.

PRO TIP: Porter Cable type polishers are good for the cut-out areas that you might normally do by hand.

STEP #5: Once the product has dried to a haze, remove the residue with a clean, soft microfiber cloth

Or you can use a handheld orbital polisher for this step as well.

STEP #7: Be very thorough when removing waxy residue. A detail brush is effective when cleaning cracks and crevices.

PRO TIP: To finish any job, the devil is in the details: creases, emblems, grills, door handles etc. Make sure you are using the right brushes with the correct stiffness of bristles in these easily forgotten spots.

SUGGESTED CAR BRITE PRODUCTS:

- SELECT™ Polish
  https://carbrite.com/products/select-polish-32-oz?_pos=1&_sid=f4b3eb4fc&_ss=r
- SELECT™ Sealer Wax
  https://carbrite.com/products/select-sealer-wax-32-oz
- SELECT™ Polymer Sealant
  https://carbrite.com/products/select-polymer-sealant
- Matching Pads for each product
  https://carbrite.com/products/6-medium-polish-foam-pad?_pos=21&_sid=5b5c6271c&_ss=r
  https://carbrite.com/collections/accessories-buffing-pads-backing-plates/products/8-soft-polish-blue-classic-foam-pad

BACK TO THE DIRECTORY

Exterior Work – Rubberized Undercoating

An undercoating is a remarkable solution for vehicle protection. It offers a protective rubberized coating to vehicle areas that experience substantial damage and weathering. Moreover, it acts as a barrier against moisture, rust, and abrasion, salt, and even prevents damage. Undercoating a vehicle also reduces the noise emanating from either the engine or the road. This is mainly applied to the exposed parts of the car like the underbody and the wheels well. The process prevents the contact between debris and metal. Vehicle undercoating is estimated to prevent about 5 dB of loudness.

MATERIALS LIST:

- Undercoating of your choice
- Safety Goggles
- Rubber Glove
- Latex Apron
- Pressure Washer
- Heavy Duty Degreaser
- Grinder/Sander
- IPA 70%

PREP

STEP #1: Before you can start, your first step should be to engage the vehicle's handbrake, to prevent the car from rolling. If needed, elevate the vehicle by use of a jack and leave it resting on the jack stands or use a machine that can lift your vehicle high up, allowing you to do the work while standing. SAFETY IS KEY – make sure the vehicle is secure when elevated.

STEP #2: The next step of preparation is to remove all of the dirt, rust and other contaminants.

Blast- Spray the entire underside of the vehicle with a pressure washer. Be thorough and hit every crevice, crease, and corner.

Degrease – Rinse completely and allow the undercarriage to dry. Then use a professional-grade degreaser to remove any grease, oil, and grime. Allow the degreaser to dwell before scrubbing and rinsing.

Grind – The next step is to grind any large chunks of rust or hardened contaminants, starting with a mild grinding pad, and gradually moving to more abrasive pads as necessary. You can also use a stiff wire brush attachment on a power tool or a paint scraper. It is important to beware of any electronics or hydraulic lines that could be damaged by these tools.

Sand – Start with a 200-grit sheet sandpaper, and after each pass, move to a milder grit. This will remove stubborn rust patches and smooth out the scratches left behind by the coarser forms of scouring media. Make sure to air blow out afterwards to remove all particles.

IPA Time- Use an isopropyl alcohol (IPA) blend and dry rags to wipe-down the surfaces that will be getting undercoated. This final prep process helps ensure that the entire undercarriage is devoid of grease, dust and debris.

PRO TIP: In the wheel well, there is a ledge called a fender lip. Thoroughly rinse that aera to remove all foreign particles. Also take note of the material in the wheel well as some vehicles will have a fabric layer.

APPLICATION

Most undercoating is typically applied using a spray gun. Generally, disposable spray guns are the best since after the undercoating hardens, cleaning the gun becomes quite a challenge even when using a generous amount of thinner.

STEP #3: Product is designed to be applied to exterior surfaces only. Make sure to wear proper protective clothing, gloves, and eyeglasses.

Most of these products involve a two-stage or dual-layer spray-on procedure.

While the first round of undercoating should be relatively thin to serve as a basecoat for the thicker outer coating. An hour or two of downtime on a warm day should provide ample cure time for this first layer. Once it becomes tacky to the touch, it's time to move on to the final outer coating.

This final layer should be applied liberally, and in smooth, slow movements. Rushing will only cause uneven coverage and drips.

STEP #4: Once fully coated, it's time to sit back and let your undercoating cure, which depending upon temps and the product used, may take anywhere from a few hours to a few days.

SUGGESTED CAR BRITE PRODUCTS:

- IPA 70% Alcohol
  https://carbrite.com/products/rubbing-alcohol-ipa-70?_pos=1&_psq=alcohol&_ss=e&_v=1.0
- Rubberized Aerosol Undercoating
  https://carbrite.com/products/rubberized-aerosol-undercoating?_pos=1&_sid=ab7eaa5ce&_ss=r
- Hot Stuff with Cinnamon
  https://carbrite.com/products/hot-stuff-with-cinnamon?_pos=2&_sid=aaca6a665&_ss=r

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Interior Work – Remove Debris & Vacuum

MATERIALS LIST:

- Vacuum
- High-pressure cleaning tool
- Additional Lighting
- Bucket with water and a general-purpose cleaner
- Trash bag

STEP #1: Remove and store personal items in large resealable bags to set aside. Then remove all floor mats.

PRO TIP: Even though this step involves no chemicals it is still wise to wear disposable nitrile gloves while removing items from the vehicle. Also, make sure to check for any dangerous or sharp objects below the seats.

STEP #2: Blow dirt and debris from under the front seat (backwards) with an air-whip cleaning tool. While working on interiors, brighter light results in a greater effectiveness with removing debris and dirt. There are specialty lights available to help illuminate dark interiors.

STEP #3: Blow dust from the vents with an air-whip cleaning tool.

STEP #4: Blow dust and debris that gets trapped in speaker grills. You can also use the vacuum to suck these particles out of those tiny grill holes.

STEP #5: Thoroughly vacuum the floor mats and all fabric surfaces in ...

STEP #6: Vacuum the interior compartment, storage areas like large consoles, and the trunk.

PRO TIP: Much of the dirt is dried onto carpet and upholstery. You will be able to vacuum much more up if you “dry brush” before vacuuming. To do this, work section by section, moving the brush in one direction the surface, and then vacuum that section before moving onto the next section.

STEP #7: Empty the ash trays, removable cup holders, and compartment linings and soak them in a mild General Purpose Cleaner solution. These compartments will be listed in the owner’s manual.

PRO TIP: You can also Google “storage compartments” with the vehicle you are detailing. You will use this as a resource for any compartments that may need cleaning.

SUGGESTED CAR BRITE PRODUCTS:

- Blue Max General-Purpose Cleaner
  https://carbrite.com/products/blue-max?_pos=1&_sid=331fba04a&_ss=r
- Vortex Cleaning Tool
  https://carbrite.com/products/vortex-ii-blow-gun-dry-cleaning-tool?_pos=3&_psq=vortex&_ss=e&_v=1.0
- The Claw Cordless LED Hood/Interior Lamp
  https://carbrite.com/products/the-claw%E2%84%A2-cordless-led-hood-interior-lamp?_pos=1&_sid=4528e29e7&_ss=r
- SELECT™ Exterior/Interior Cleaner/Degreaser
  https://carbrite.com/products/select-exterior-interior-cleaner-degreaser?_pos=1&_sid=2446387b8&_ss=r

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Interior Work - Clean Carpets, Seats & Upholstery

Air-Whip Tool

Using an Air-Whip Cleaning Tool such as the Vortex or Tornador for interior cleaning can be quite efficient and effective. The cone shaped funnel with the whip inside creates a vortex type action when connected to an air compressor. The funnel of compressed air when paired with appropriate interior cleaners will force cleaning solutions into hard-to-reach areas and help remove stubborn stains in floor mats, carpet, and upholstery. There is also the option without the canister which just uses the compressed air to blast away dirt and debris.

Extractors

A carpet extractor is more of an industrial-grade device that lifts and removes hard-to-remove dirt particles in the carpet by simultaneously applying water and suction. By applying hot water with an extractor soap or detergent, dirty particles are dissolved in a stream of hot liquid and sucked up by the wand into a holding tank. Most machines have two different main tanks – one for clean water being pumped out, and one waste tank for the dirty water that has been collected. Most of these also have a smaller tank for holding some sort of cleaning solution formulated for extractors. It also makes sense to pre-treat and stains beforehand to begin breaking down these substances, and then use an extractor.

Basic Cleaning Requirements

Three types of energy are required.

1. Chemical energy- provided by the synthetic cleaner
2. Mechanical energy (agitation) provided by machine or hand
3. Thermal energy -provided by warm or hot water.

Heated water breaks down water-soluble soiling faster as it reduces overall chemical usage because it reduces the surface tension. Heat also acts as a catalyst promoting quicker reactions between chemicals and the soil thereby minimizing remain in place time. Warm or hot water helps dissolve grease and oil in soil, agitation or hand rubbing helps pull the soil free, these types of energy interact and should be in proper balance.

Pre-test Spot Procedures

Diagnosis is the key here. Before using a cleaning product, a detailer needs to know the material they are working on, what they are trying to remove and wither the product chosen is compatible with the material and will not damage it. With all cleaning products, always test a small, inconspicuous area first to ensure it won`t discolor or stain the surface and ensure that the pH of the product is suitable for the material. As can be seen stain removal requires some knowledge of basic chemistry. Always read the product labels and manufacturers safety data sheets (MSDS) to obtain a basic idea of contents, pH levels etc.

Providing the cleaning product selected is suitable, apply several drops of the selected cleaning solution in an inconspicuous area and rub gently with a clean, white microfiber towel. Do not over saturate. Use small amounts of the product and blot frequently. Do not use the product if it adversely changes your fabric`s color or texture.

Classifying stains-

a) Organic stains – these include proteins and fats, body oils, mold yeast, bacteria, bugs, and carbohydrates. Organic soil is cleaned with an alkaline (pH 8+). Most of the stains found in the vehicle interior are of an organic nature and require an alkaline type of cleaner. Some organic stains (i.e., milk, blood, vomit, urine) should be removed with an enzyme type cleaner sometimes accompanied by a deodorizer.
b) Non-Organic stains – mostly brought in from the outside such as road salt, hard water scale (calcium) lime deposits, road tar, grease, and oil film. These require an acid (pH 6 or less) type cleaner.
c) Petroleum soils – substances that do not contain water, nor are they miscible, these soil types include, motor oils, and crease and road tar, and require a petroleum-based solvent type cleaner.

Stain Removal by type:

1. Water Soluble Stains - These stains can be dissolved in cool water or loosened with water based cleaner, coffee; soft drinks, cocoa and chocolate are good examples.
2. Oil soluble stains - These are stains that are comprised of oily or greasy substances, which include cooking, oil from fried foods and suntan oil.
3. Combination Stains - These stains contain both water based and oil-soluble properties. Cleaning these stains require treatment with a petroleum solvent followed by water-based cleaning solution.
4. Road Salt - Use a stiff brush to dislodge any loose road salt and then vacuum, spray the area with a carpet cleaner and let it soak in, and remove excess moisture with a clean microfiber towel.
5. Unidentifiable Stains - Sometimes stains cannot be identified. Treat these stains like a combination stain. Clean with a petroleum solvent followed by water-based cleaner.

MATERIALS LIST:

- Carpet Brush
- Cleaning Products based upon surface and staining
- Spray Bottle
- Applicator Pad
- Nitrile Gloves
- Microfiber Towels
- Air-Whip or Extractor Cleaning Tools (If desired)
- Vacuum

FLOOR MATS

STEP #1: Inspect all fabric surfaces for stains, then dry brush the areas to be treated in order to separate the fibers.

PRO TIP: With treating any stain know, or unknown, wear nitrile gloves when treating these stains due to bacteria, germs, or chemicals that might be active in these stains.

STEP #2: Lightly apply the Spot Remover to the stained areas and allow it to dwell until the fabrics are deep cleaned later in the process. This can be done with a spray bottle or an air whip cleaning tool.

STEP #3: If the vehicle has all weather floor mats, after they are vacuumed, you will want to spray them with a GP cleaner. Then scrub them with a brush and hose them off with water. Scrub them with a dry eraser or a stiff nylon brush to remove all stains, debris, and dirt. You cannot coat these with any kind of dressing as it will make them too slippery.

PRO TIP: If you are using an extractor or air-whip cleaning tool, thoroughly vacuum the fabric after cleaning. Then, point air blowers into the interior to aid in the drying of the fabric. This will alleviate the chances of leaving a moldy or musty smell inside the vehicle.

PRO TIP #2: To deodorize while extracting, add several ounces of an odor eliminator to the extractor reservoir. When cleaning the interior, it is wise to stick to neutral scents or fresh scents unless specific fragrances are agreed upon.

STEP #4: Vigorously clean fabrics with the foam (not solution) using an upholstery brush. If needed, you can mix a General-Purpose Cleaner solution in a bucket and agitate to generate foam.

STEP #5: Use the air-whip cleaning tool on the entire floor mat, going side to side in even motions, slightly overlapping.

PRO TIP: When using an air-whip cleaning tool, you want to clean just to the bottom of the fibers. Do not deeply saturate into the base of the carpet.

STEP #6: Once that is done, wipe the floor mat with a clean microfiber towel. Then one final time with a nylon brush.

CARPET & UPHOLSTERY

STEP #7: Thoroughly vacuum all fabric surfaces cleaned. To deodorize interior, lightly spray air freshener or counteractant under seat.

STEP #8: Either hand apply (if lotion) or spray (if liquid) Leather Cleaner to surface and gently agitate.

STEP #9: Let the cleaner dwell for several minutes, then wipe dry with a clean towel. Hand apply or spray on Leather Conditioner, wipe into surface and let dry. If using Leather Cleaner & Conditioner, the entire process can be done in one step.

STEP #10: Deep clean the carpets, seats, upholstery and trunk compartment with an extractor and properly diluted extraction fluid. Extractors are good for heavily stained floor mats. They work well to remove slat stains.

PRO TIP: Start with the driver' s seat first so it has the most time to dry before you need to move the vehicle.

PRO TIP #2: Avoid using cleaners that are caustic due to the solution can attack the seals in the pump or clog the spray nozzle on the wand due to crystalizing.

STEP #11: To minimize soaking, apply the cleaning solution (pull trigger) on the first pass, then vacuum area twice without applying more solution.

PRO TIP: When using a cleaner with enzymes, it is more effective to spot treat with a sprayer as opposed to adding the enzyme cleaner to an extractor. The heat generated by the extractor will kill most of the stain lifting enzymes.

STEP #12: Generously apply the preferred cleaner with a trigger sprayer, Then, brush the fabric and wipe clean with a microfiber cloth.

STEP #13: You can use an air-whip cleaning tool, using a fabric brush if needed, and then wipe clean with a microfiber towel.

STEP #14: There are effective aerosol cleaners available as well. These work very well for carpet, upholstery, and the headliners. For headliners, spray thoroughly onto a microfiber cloth. Then do a 2-foot by 2-foot section, then crosshatch it. Then immediately wipe dry with a separate, dry microfiber cloth.

PRO TIP: Headliners can be easily oversaturated, causing the glue to become weakened, making the headliner come loose or droop. Aerosols can help avoid this issue.

SUGGESTED CAR BRITE PRODUCTS:

- Omni Brite
  https://carbrite.com/products/omni-brite?_pos=1&_sid=056be0556&_ss=r
- Brite Spot
  https://carbrite.com/products/brite-spot?_pos=1&_sid=51cd72503&_ss=r
- Leather Cleaner & Conditioner
  https://carbrite.com/collections/interior-care-leather-care/products/leather-conditioner-cleaner
- Xtra Duty Aerosol Interior Cleaner
  https://carbrite.com/collections/interior-care-leather-care/products/xtra-duty-18-oz
- EF5 Low Foam
  https://carbrite.com/products/ef5-low-foam?_pos=1&_sid=d96ef9473&_ss=r
- SELECT™ Exterior/Interior Cleaner/Degreaser
  https://carbrite.com/products/select-exterior-interior-cleaner-degreaser

BACK TO THE DIRECTORY

Interior Work - Clean and Dress Rubber, Plastic & Vinyl Surfaces

Today's vehicle interiors are more detailed and complex than ever before. Having the right tools makes any interior detail job easier and quicker. There are many types of brushes to use including hard nylon bristles, boar-hair, horsehair, and synthetic fibers. The difference in brushes is often related to the job they are suitable for.

- Soft, long hairs brushes are suitable for gentle tasks at sensitive surfaces. Removing dust from the dashboard, wiping slight dust from air vents, dusting off polished high-gloss plastic interior panels etc.
- Soft, short hairs are perfect for when scrubbing is required on sensitive surfaces. The shorter hairs are slightly stiffer which allow the user to apply a bit more pressure before the hairs bend, creating a stronger scrubbing effect. Please note, this might also increase the risk of creating marks on very sensitive surfaces.
- Long, stiff/thick hairs are suitable for rough work, like scrubbing tires or cleaning wheel arches. These brushes should be used on surfaces where it is not very likely to cause surface imperfections by applying pressure or rough materials. These might not be suitable for paintwork and black gloss A-pillar covers. With care, these can be used to clean in the small crevice between a glued window and a body panel, or to clean a radiator.
- Short, stiff/thick hairs brushes are mostly designed to scrub and rub. Do not use these on painted surfaces, or surfaces that can be easily damaged by a rough material. They might be used when cleaning wheels and wheel arches or cleaning the underbody of the car. But should still be used with care. They might be very effective but are also very rough.

Some detailing brushes for interior work are listed below:

The Dual End Vent Brush is a professional, high-grade tool for cleaning off dust or applying finishing touches. Its thin, narrow end helps to clean hard-to-reach areas while its broader end is perfect for larger areas.

The Vinyl & Leather Brush an ergonomically designed and equipped with unique, tightly packed

bristles that gently clean interior surfaces including leather and vinyl. When a microfiber towel isn't enough to cut through dirt and body oils, a few passes with the Leather & Vinyl Upholstery Brush will remove stubborn stains. The flexible, polyurethane handle is easy to hold on to, even after hours of interior detailing. The pointed tip enables the Leather & Vinyl Upholstery Brush to get into tight spots.

These car detail brushes are compact but perfect tools for cleaning grouts and dead angles that larger brushes can hardly reach. Corners and edges where dust accumulates can easily be cleaned effortlessly. These detail brushes come with drop-off resistant bristles and soft grip and anti-slip or wood handles that help you clean comfortably and effectively.

This professional brush is ideal for greasy, grime-encrusted auto parts. Innovative, bullet-shaped tip focuses the cleaning power for easy cleanup. Won't mushroom. Long-lasting Trialoy polyester filament can be used with petroleum or water-based degreasers.

Materials List:

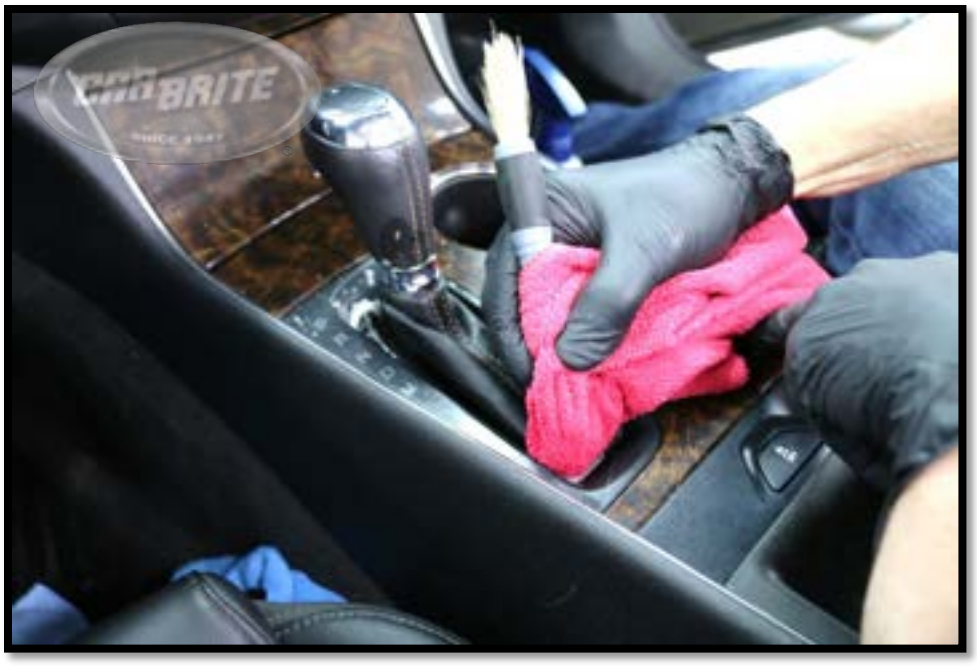
1. Your choice of detail brushes
2. Interior cleaning solution
3. Air-Whip Cleaning Tool
4. Microfiber towels
5. Disposable nitrile gloves
6. Water based dressing and applicator or aerosol dressing

STEP #1: Thoroughly clean interior rubber, plastic & vinyl surfaces with a General-Purpose Cleaner or Interior Cleaner by agitating the cleaning solution with a vinyl and leather brush

PRO TIP: Some dashes are porous and made with water-born dyes. Use cleaner in an inconspicuous spot to check for color fastness.

STEP #2: You can also apply the cleaning solution with detailing brushes and applicators. Do not allow it to dwell for more than one minute or allow the cleaner to dry on the surface.

PRO TIP: Do not spray cleaner directly on the front of the dash as there is a chance of the solution below the gauge cluster or instrument panel. Spray the cleaner directly on your applicator pad or dip your brush or applicator pad.



STEP #4: When dealing creases, crevice, and hard to reach areas, use a soft bristle vent and dust detail brush and dip it into the cleaning solution. Apply solution liberally to the surface to clean with the brush, and let it dwell for several minutes. Agitate area with the brush. Cover brush with a microfiber towel and use that to absorb the cleaner.

STEP #5: At this point, hand wipe down all indoor interior panels with exterior/interior waterless cleaning solution and microfiber towel. Make sure to do the door jambs, scuff plate, hinge area, door striker plate, and door latch area.

STEP #6: Infotainment touchscreens are not meant to get wiped down with strong cleaners. Simply spray some distilled water onto a clean microfiber cloth. Do not spray directly onto the screen. Wipe down the screen with the damp microfiber cloth using either side to side, or up and down motions. Do not wipe in a circular motion. For a stronger yet safe clean, use vinegar diluted equally with water.

Do not push very hard on the screen or pick at debris with your fingernail. Wipe any moisture away with a clean, dry microfiber cloth.

STEP #7: Ensure all dirt is removed from the folds of the weather stripping on both the door jamb ...

... and the door itself.

PRO TIP: Make sure you get down and clean under the pin swells on the lower part of the door. These locations are easily missed but noticeable by vehicle owners.

STEP #8: Spot clean the visors and headliner by hand-applying lightly spraying an Aerosol Interior Cleaner. Do not let cleaner dwell on headliner. Have a clean, dry microfiber towel ready to wipe off excess cleaner or spray cleaner on a towel and use that to clean the headliner instead of spraying product directly onto the material.

PRO TIP: We recommend not using a general-purpose cleaner on visors and the headliner because of possible over saturation that will lead to water spotting. Suggested products are waterless aerosol cleaners.

STEP #9: It is important to not saturate or over-agitate the headliner. Either can loosen the adhesive causing it to sag.

STEP #10: Hand apply a Water-Based Dressing or Aerosol Dressings to all rubber, plastic & vinyl surfaces cleaned (except those areas that shouldn't be slippery). To control over spray, apply dressing with an applicator pad.

PRO TIP: Aerosol Dressings are convenient to use in hard-to-reach spaces with very little wiping involved.

SUGGESTED CAR BRITE PRODUCTS:

- Omni Brite General-Purpose Cleaners
  https://carbrite.com/collections/exterior-care-abrasives-clay-bars-steel-wool/products/omni-brite
- EF5 Low Foam Interior Cleaner
  https://carbrite.com/products/ef5-low-foam
- Cherry Shine
  https://carbrite.com/products/cherry-shine?_pos=1&_sid=e2a489e7f&_ss=r
- Inside-Out Detailer Aerosol Dressing
  https://carbrite.com/products/inside-out-detailer-10-oz?_pos=1&_sid=ff2de8990&_ss=r
- SELECT™ Exterior/Interior Cleaner/Degreaser
- https://carbrite.com/products/select-exterior-interior-cleaner-degreaser
- SELECT™ All Purpose Dressing
  https://carbrite.com/products/select-all-purpose-dressing-1-gallon

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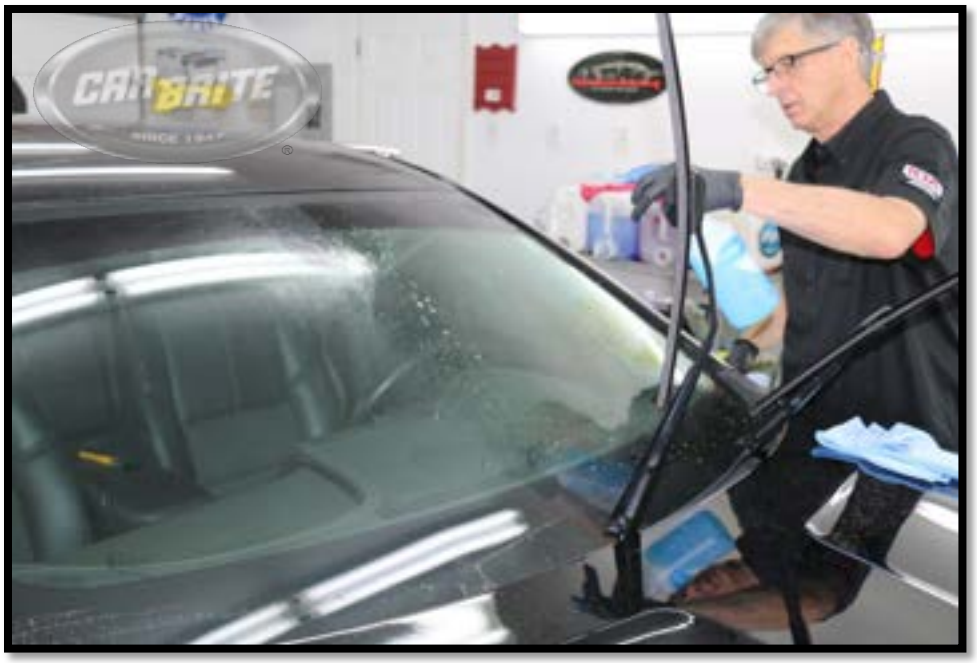
Interior Work - Clean All Glass Surfaces

MATERIALS LIST:

- Microfiber Towels
- Glass Cleaner
- Aerosol Glass Cleaner
- Crevice Cleaning Tool
- Spray Bottle



STEP #1: Lightly mist Glass Cleaner on exterior glass surfaces. While spraying onto glass surface, be careful to spray directly onto glass.

PRO TIP: Aerosol glass cleaners are also available. Sometimes these are more convenient inside the car. Due to the fine spray pattern, these can be sprayed directly onto the glass without the issue of overspray onto the dash.

STEP #2: Agitate the cleaning solution with a lint-free cloth, microfiber towel or paper towel. Make sure to wipe to and follow the edges of the glass.

STEP #3: Wipe the glass clean with a second towel.

STEP #4: Wipe consistently in the same direction … vertically on interior glass and horizontally on exterior glass. This simplifies locating any streaks.

PRO TIP: Wiping the glass in a consistent manner on interior and exterior surfaces allows you to notice streaking and which side it is located.

STEP #6: Clean all exterior mirrors including the sideview and backup camera if available on vehicle. Clean all of the interior glass including rearview & vanity mirrors under both visors.

STEP #7: For the instrument cluster, spray glass cleaner on a clean, soft microfiber towel and gently wipe each section in a side-to-side or up-and-down motion, avoiding circular motions. Do not spray glass cleaner directly onto gauge cluster as product may seep behind the cluster.

STEP #8: Roll down the window and clean both sides on the window top.

PRO TIP: For after market tint, make sure to use a non-ammonia glass cleaner.

STEP #8: Use the Box Method to thoroughly clean the windows. Wipe around the edges of the entire window before finishing the area inside. Use a crevice tool with a microfiber towel to clean corners and edges. Make sure to wipe off residue with a soft, clean towel.

PRO TIP: Make sure the microfiber towel is folded so that you can get multiple surfaces uses out of one towel. A bunched-up towel will decrease the job size out the one towel.

STEP #9: Take two clean microfiber towels and use one with each hand to remove streaks or spots. Make sure to look at the glass from different angles to spot any glass imperfections.

PRO TIP: On extremely hot days, add more water to the glass cleaner so the product does not dry on the glass. Conversely, on cold days, add less water.

SUGGESTED CAR BRITE PRODUCTS:

- 20/20 Perfect Vision Ready to Use Glass Cleaner https://carbrite.com/collections/exterior-care-glass-care/products/20-20-perfect-vision%E2%84%A2-glass-cleaner
- Glass Cleaner – Aerosol https://carbrite.com/collections/exterior-care-glass-care/products/aerosol-glass-cleaner
- SELECT™ Glass Cleaner https://carbrite.com/collections/exterior-care-glass-care/products/select-glass-cleaner-1-gallon

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Interior Work - Dye Deeply Stained Fabrics

Despite using the proper products and techniques, certain stains will not come out of certain fibers. Using a line of aerosol vinyl and fabric dyes which can help return deeply stained fabrics to their original color. It is important to note that proper surface preparation and product application is critical to the overall appearance of the fabric.
The recommended process is as follows:

- Thoroughly vacuum areas to be dyed.
- Spray a light coating of dye on the surface.
- Brush the dye in with an upholstery brush.
- Let the dye dry for several minutes.
- Lightly spray a second coating
- Re-brush surface, blending color with surrounding fabric.

Bear in mind that a dye takes 48 hours to cure fully.

MATERIALS LIST:

- Vacuum
- Nylon carpet brush
- Pet hair removal block or brush
- Fabric dye
- Multi-purpose rag
- Disposable nitrile gloves

STEP #1: Make sure the fabric is thoroughly vacuumed, cleaned and dried before attempting to dye any stains. It is vital that any and all hair is removed.

PRO TIP: It is good practice to try and clean any spots repeatedly before resorting to using a fabric dye. Using fabric dyes should be the last resort.

STEP #2: Spray a light coating of dye directly on the fabric.

STEP #3: Using a nylon brush, brush the dye in, moving the carpet into different directions, softening the fibers allowing the dye to seep in.

STEP #4: Allow the dye to dwell for several minutes.

STEP #5: Lightly spray a second coating and allow the dye to dwell for a few minutes.

STEP #6: Before the second coat dries completely, brush the surface again, blending the color with the surrounding fabric. If you are doing a spot in the middle of the floor mat, blend it out in a circular motion from the treated area.

PRO TIP: Once the fabric is completely dry, to lock in the color, put a couple coats of scotch guard on the treated areas.

STEP #7: Check mat for color inconsistencies and repeat any steps as necessary.

SUGGESTED CAR BRITE PRODUCTS:

- Kolor Kote Aerosol Carpet & Vinyl Dye
  https://carbrite.com/collections/interior-care-vinyl-fabric-dyes/products/kolor-kote-11-25-oz

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Safety

Phosphates are commonly used to enhance the cleaning characteristics of certain reconditioning chemicals. However, concerns have been raised over their potentially harmful effects on rivers, streams, lakes and other bodies of fresh water. The phosphates from the soap can cause excess algae to grow. Algae sometimes looks or smells bad and may be harmful to water quality.

Nonylphenol Ethoxylates, commonly referred to as NPE's, are mixtures of nonionic surfactants used in a variety of different cleaning products. These man-made chemicals can be toxic to wildlife if ingested and have specifically been linked to abnormal conditions in organisms that live in the water. Recognizing the implications that NPE's have for our planet, the Environmental Protection Agency has recently launched new EPA regulations that will manage the potential risks caused by nonylphenol ethoxylates. While the new regulatory actions are primarily voluntary, the goal of these new regulations is to eventually phase-out the use of NPE's altogether.

A number of states have enacted restrictions on the amount of volatile organic compounds (VOCs) allowable in certain automotive care products. VOCs are common chemical ingredients (primarily solvents) found in a variety of consumer products ranging from wood preservatives to underarm deodorants.

When emitted into the atmosphere during storage or use, VOCs can cause adverse health effects and are a major component of ground-level ozone. The health problems include eye, nose and throat irritation; shortness of breath; headaches; loss of coordination; nausea; and damage to the liver, kidneys and central nervous system.

In 1991, California began regulating VOCs by setting emission limits by product and product category and has expanded the number of categories monitored since then. Maryland, Delaware, New York, New Jersey, Pennsylvania, Maine, northern Virginia and the District of Columbia adopted California's restrictions in 2005 and, in 2007, Michigan and New Hampshire did, as well. Additional states (and possibly the entire country) are expected to adopt these restrictions, as well.

The specific automotive product categories now regulated are:

- Air fresheners
- Automotive rubbing or polishing compounds
- Automotive waxes, polishes, sealants & glazes
- Automotive windshield washer fluids
- Bug & tar removers
- Carpet/upholstery cleaners
- Engine degreasers
- Fabric protectants
- General purpose cleaners
- General purpose degreasers
- Glass cleaners
- Metal polishes/cleaners
- Rubber/vinyl protectants (dressings)
- Spot removers

All bio-degradable products are certified per EPA Test Method 405.1. When working with a biodegradable product, it is important to remember that bio-degradability is a measurement of a

substance's ability to decompose by natural processes, not its safety. Some bio-degradable products are corrosive and should only be used while wearing gloves, goggles and an apron. Always consult the product label or material safety data sheet for appropriate safety precautions.

In a body-shop environment, products containing silicone should not be used. When atomized silicone comes in contact with uncured paint, a chemical reaction (commonly referred to as "fish eyeing") occurs. Refer to product labels or Safety Data Sheets to learn if a product is body shop safe.

A Safety Data Sheet (sometimes called Material Safety Data Sheet) is a detailed informational document prepared by the manufacturer or importer of a hazardous chemical. It describes the physical and chemical properties of the product. SDSs contain useful information such as toxicity, flash point, procedures for spills and leaks, storage guidelines, and exposure control.

The federal Hazard Communication Standard, revised in 2012, now requires chemical manufacturers, distributors, and importers to provide new Safety Data Sheets in a uniform format that includes the section numbers, headings, and associated information below.

Section 1 – Identification identifies the chemical on the SDS as well as the recommended uses. It also provides the essential contact information of the supplier.

Section 2 – Hazard(s) identification includes the hazards of the chemical and the appropriate warning information associated with those hazards.

Section 3 – Composition/information on ingredients identifies the ingredient(s) contained in the product indicated on the SDS, including impurities and stabilizing additives. This section includes information on substances, mixtures, and all chemicals where a trade secret is claimed.

Section 4 – First-aid measures describes the initial care that should be given by untrained responders to an individual who has been exposed to the chemical.

Section 5 – Fire-fighting measures lists recommendations for fighting a fire caused by the chemical, including suitable extinguishing techniques, equipment, and chemical hazards from fire.

Section 6 – Accidental release measures provides recommendations on the appropriate response to spills, leaks, or releases, including containment and cleanup practices to prevent or minimize exposure to people, properties, or the environment. It may also include recommendations distinguishing between responses for large and small spills where the spill volume has a significant impact on the hazard.

Section 7 – Handling and storage provides guidance on the safe handling practices and conditions for safe storage of chemicals, including incompatibilities.

Section 8 – Exposure controls/personal protection indicates the exposure limits, engineering controls, and personal protective equipment (PPE) measures that can be used to minimize worker exposure.

Section 9 – Physical and chemical properties identifies physical and chemical properties associated with the substance or mixture.

Section 10 – Stability and reactivity describes the reactivity hazards of the chemical and the chemical stability information. This section is broken into 3 parts: reactivity, chemical stability, and other.

Section 11 – Toxicological information identifies toxicological and health effects information or indicates that such data are not available. This includes routes of exposure, related symptoms, acute and chronic effects, and numerical measures of toxicity.

Section 12 – Ecological information provides information to evaluate the environmental impact of the chemical(s) if it were released to the environment.

Section 13 – Disposal considerations provides guidance on proper disposal practices, recycling or reclamation of the chemical(s) or its container, and safe handling practices. To minimize exposure, this section should also refer the reader to Section 8 (Exposure Controls/Personal Protection) of the SDS.

Section 14 – Transport information includes guidance on classification information for shipping and transporting of hazardous chemical(s) by road, air, rail, or sea.

Section 15 – Regulatory information identifies the safety, health, and environmental regulations specific for the product that is not indicated anywhere else on the SDS.

Section 16 – Other information indicates when the SDS was prepared or when the last known revision was made. The SDS may also state where the changes have been made to the previous version. You may wish to contact the supplier for an explanation of the changes. Other useful information also may be included here.

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