

## **WASHING AND DRYING YOUR CAR**

This is No.1 topic, in what will be a series of topics on ways to keep your car looking its best at all times. The following information and products recommended are for Off the shelf products only. There are far better products on the market that you can't buy from leading automotive outlets.

### **Recommended Products:-**



Johnson & Johnson baby shampoo  
Meguiars microfibre chamois  
Meguiars genuine sheepskin wash mitt (white one and will the more expensive one of the two)  
Turtle Wax Platinum Series Spray on Wax  
Meguiars Detailing cloths (white ones x 2)  
Meguiars Microfibre Cloths (Blue x 2)  
Meguiars Hot Shine Tire Spray  
5ltr bucket

If there is a single maintenance that offers the biggest benefit to your car's appearance, it's keeping your car clean through regular washing. Washing is the process of removing loose dirt and road film on the top of your car's paint surfaces. That means more than just a good hosing. You have to scrub it with shampoo and a sponge or wash mitt.

Washing can be a double-edge sword, though, as even the mildest soaps can remove the protection from your car's paint, causing oxidation (paint starvation). Detergents can dull your car's finish even faster. For many years, BMW, Jaguar, Mercedes-Benz, Ferrari and many other fine automobile makers recommended using only pure water to wash your car.

I recommend Johnson & Johnsons baby shampoo as it has a neutral Ph level so it will not strip off the wax/polish you have on your car. The high-quality car wash shampoos on the market can often have detergents in them which strip off the waxes/polishes that you spend many hours applying. "Why on earth would you use baby shampoo to wash your car"? I hear you all ask. Well because it's gentle enough not to irritate the eyes of a baby so it's gentle enough to use on your car without it damaging the polishes/waxes you spent hours applying.

### **WASHING TIPS:-**

Here are some tips to make washing easier:

Wash the tires and wheels first. If you wash the car body first, the water will dry and spot your car before you can finish washing the tires and wheels. Do not use the same wash water on your car's paint as you do your tires and wheels. Throw it out and refill your bucket (Wheels and tires will be covered in a seperate topic)

Make sure your car is cool. If possible, work in the shade. A hot surface causes the wash and rinse water to evaporate too quickly, increasing the likelihood of water spotting. One trick is to park on a slight incline. This allows rinse water to run off moldings, trim, and recessed areas better. Start by thoroughly wetting the car's finish with a medium spray of water to remove loose grit and surface dirt.

I prefer sheepskin wash mitt for washing. This has a large number of fine filaments that draw dirt and grime away from the surface being cleaned into their internal structure.

Start washing from the top down and rinse the car often. Frequent rinsing is especially important if you are using a wash containing natural oils. While these oils cushion the paint and minimize abrasion they are heavier than water and can leave a film if allowed to sit on the car. I use a final rinse of

free-flowing water (nozzle off the hose) allowing the water to sheet off the car.

For stubborn problems on your paint, I recommend a tar and bug remover.

If the car has bugs on the grill and bumper area, I pre-treat the bug spots with a paint safe insect remover to safely remove stubborn bug remains (This will be covered in a separate topic).

### **DRYING TIPS:-**

Before drying, your car should be freshly rinsed and free of visible dirt, grease and oil. Here's how:

Using a clean chamois, start at the top of the car and work down, drawing the towel or chamois across the surface in a straight line. If using a natural chamois, use the rough side to dry the car.

Repeat wiping until the surface is mostly dry then finish drying with a dry microfiber towel to remove any remaining droplets or streaks.

Use a terry detailing towel (Meguairs detailing cloths) to dry your tires and wheels. Do not use your chamois or good microfiber towels on the tires and wheels, as it will become soiled.

Open the doors and use your microfiber chamios to dry the door sills and jambs. Wipe under the door and along the door edge, as well.

Open the boot and bonnet and wipe down the jams and seals. On the engine, use your damp towel to remove dust and light oil from the top of the engine and engine compartment surfaces. While the bonnet is open and you have a towel, check your oil. After working in the engine compartment, put the dirty towel in the wash and don't use it on your car again until you wash it.

### **AFTER DRYING:-**

Regardless of when you last waxed your car, driving and pollutants in the air deplete the wax or sealant protection you've applied to your car. For this reason, I like to use a quick detailing spray on my car after washing. A good detailing spray renews the just waxed shine and extends the life of your wax or sealant. A simple quick spray over with Turtle Wax Platinum Series Spray on wax will do this job and leave the car feeling and looking like it's just been waxed. Simply lightly mist the spray wax on, wipe over it with one blue microfibre cloth and buff dry with the other one.

I then recommend weekly simply spray your tires with the Meguairs Hot Shine Tire Shine to keep them looking good and protect the rubber.

## **HOW TO REMOVE BUGS, TREE SAP & TAR**

This is step No.2 in the "step by step" guide using OFF THE SHELF products. Once again there are better products on the market to use but we are only using products that are easily and readily available at automotive outlets.

### **Recommended Products:-**

[www.boostcruising.com](http://www.boostcruising.com)



Autoglym Tar Remover (No.1 choice) (not pictured)  
Meguiars Gold Class Bug & Tar Remover (No.2 choice)  
Meguiars Blue Microfibre Detailing Cloths (not pictured)

Spring and Summer is tar, sap and bug season. In the summer months, bugs are at full population, trees produce more sap, and the heat softens the asphalt, producing tar balls on tires. While tar and tree sap can be difficult to remove, they do not present a threat to your paint's finish. Bug stains, like bird droppings, are very acidic and represent a significant danger to the beauty of your paint and trim. This chapter discusses the proper way to deal with these common detailing problems.

## **ROAD TAR:-**

As you drive, your car is bombarded with small specks of asphalt, tire rubber, grease and oils kicked up by the cars and trucks in front of you. Left on your car's finish, these petroleum based contaminants will firmly affix themselves to every exterior surface. Soap and water washing will do little to remove these ugly black spots.

To remove road tar you need a solvent. Most commercial tar removers contain kerosene, mineral spirits or another petroleum distillate combined with lubricants to surround and buffer the road tar from your paint. I'm not fond of these products, as they are bad for the environment. The petroleum distillates go right down the storm drain. I prefer to use surfactant cleaners where possible. If you have a stubborn tar problem, I recommend Autoglym Tar Remover.

## **TREE SAP:-**

Removing tree sap from a car's finish is a bit more difficult than tar, as hardened sap can easily scratch your paint. I've found that by hand-rubbing the sap spots with mineral spirits, I'm able to easily remove the sap without damaging the finish. Mineral spirits act as a solvent to break up and dissolve the sap.

If there is a large amount of sap on the car, or if the sap has been left on the finish for an extended period of time, it can be a lot of work to remove. For these cases, I discovered that hitting the affected areas with a light-duty buffing compound removes the hardened surface on the sap spots. Then I can go back and use mineral spirits to remove it. The light duty buffing compound softens the sap so the mineral spirits or denatured alcohol can do its job. The goal is to use the least pressure possible to reduce the risk of scratching the paint. After removing heavy sap, I always buff the treated areas with a good polish to clean up any marks created during hand-rubbing with solvent. The treated area must also be re-waxed.

## **INSECTS:-**

What's the last thing that goes through a bug's head when it hits your windshield? His rear end, of course! All joking aside, the head-on collision of that juicy November/December Bug on your car's beautiful paint and trim is far from one-sided. As the bug's exoskeleton explodes, acidic fluids are firmly imbedded in the surface of your car's paint.

Did you know that shellac is a bug byproduct? Think of it, that beautiful, old antique table you love is covered with dried bug juice (yuck!). Bug splats on your car amount to little more than shellac mixed with nasty bug parts. Any

attempt to remove the catalyzed remains without the use of a special cleaning solution could result in scratched paint.

The secret to removing insect remains is to loosen and dissolve them with a solvent that will cut through the shellac. Most surfactant insect removers work best if you spray the insect spots liberally and allow the cleaner to work for a few minutes. For bugs with a little extra grip, use an insect sponge.

If you have a particularly large bug mess, I have discovered a trick that seems to work pretty well. If you use a pre-wax cleaner, such as Sonus Paintwork Cleanser, apply a small dab to the offending bug splat. Next, cover the spot with a wadded-up tissue. Let it sit for a few minutes, then pinch up the mess and give it a soft wipe with the back side of the tissue. Voila! The bug mess is gone.

### **AFTER REMOVING TAR, SAP & BUGS:-**

Most of the chemicals used to remove the aforementioned road stains also remove your wax or sealants. After removing tar, sap or bugs, plan to spot wax or re-wax your vehicle. If you don't have time to wax right away, use a quick detailing spray or a spray wax.

### **SUMMARY:-**

While tar, sap and bugs are not immediately harmful to your paint like bird droppings, if not removed they will deteriorate your car's paint finish. When regular washing does not remove the tar, sap or bugs from your car's paint, use the methods described above. If your paint is damaged from tar, sap and bugs, use a good polish to restore the finish.

## **PAINT CLEANSING WITH CLAY**

This step No.3 in the step by step guide to maintaining your cars appearance, using Off the shelf products only. There are far better products on the market, however they can't be purchased at automotive outlets.

### **Recommended Products:-**



3M Perfect-It III Cleaner Clay\*\*

1 x Hand Held Spray bottle either filled with water (cold) or some Johnson & Johnson Baby Shampoo mixed with water

OR

Meguiars Final Inspection

Please Note:- \*\* 3M Products can be purchased at numerous locations all over Australia. Please check the Yellow Pages in your area for stockists

Every car finish shares a common enemy: pollution. It relentlessly pursues your car from the second it leaves the factory until your car meets its ultimate demise. It's in the air we breathe, it's on the roads we drive, and it attaches to your car's paint, where it bonds and begins a process of oxidation.

When contaminants get a solid grip on your car's paint, washing alone may not be enough to remove them. Pre-wax cleaners also may not be able to exfoliate large particles. In this case, you have two choices: use a polishing compound, which removes a lot of paint material, or use a clay bar. Clay isn't a polish or a compound, it is a surface preparation bar that smoothes the paint and exfoliates contaminants.

### **USES FOR CLAY:-**

Clay is not a cure-all or a replacement for polishing. It's a tool for quickly and easily removing surface contamination.

One of the many reasons for using clay is the removal of brake dust. Brake dust contamination, which attaches to painted rear bumpers and adjoining surfaces, is a metallic surface contaminant that can be removed safely and effectively by using clay.

Clay is also very effective on paint over-spray. If the over-spray is particularly heavy, you may want to seek the assistance of a professional. Tree sap and tar specks can also be safely removed with a clay bar.

Recently, I have also started using clay on my windows (exterior) to remove heavy road film, bug deposits and water spots. It works very well, and seems to outperform even the best window cleaners.

### **EVALUATING YOUR PAINT:-**

How do you know if you need to use a clay bar? After thoroughly hand washing your car, feel the surface of your car's paint. Do you feel bumps and rough spots? These bumps are contaminants attacking the finish of your car. Removing these surface contaminants (road tar, acid rain spots, bug residue, paint over-spray, brake pad dust, hard water spots, etc.) will improve both the look and health of your car's paint. By the way, you can magnify your sense of touch by inserting your fingertips into a sandwich bag or a piece of cellophane.

No matter how well you hand-wash your car, many of the contaminants that have worked their way into your car's paint finish will remain. Have you ever looked at your foam wax applicator pad after applying a coat of wax? What

do you think that black stuff is? It's dirt, and you're waxing over it, sealing it in.

### **CLAY SAFETY:-**

Detailing clay isn't new. Paint and body shops have been using it for years to remove paint overspray. Clay is fairly new to the car detailing market, and is very new to the consumer on retail shelves. In the early days there was always a concern that paint damage might occur if improperly used.

New technology detailing clay bars are made of fine polishing particles in a soft, malleable "clay" medium that allows the bar to be formed and kneaded. Some clay makers add color to make the bar more attractive or to identify bars of differing strength (coarseness).

Many clay products claim to contain no abrasives. This is stretching the truth. The reason clay manufacturers claim their products don't contain an abrasive is because the general public thinks the word "abrasive" refers only to aggressive, paint removing materials. The fact is that the abrasives in most automotive clay products are so fine that you will not see any reduction in paint gloss. After several uses, paint luster may even improve.

Still, I have heard some horror stories about people ruining their cars paint job using a clay bar. I can see how this might be true if an inappropriate product was used or if the clay bar is used incorrectly. It's not hard to use, and feels very much like Blue-Tac or even sticky Playdo.

### **USING CLAY:-**

Using clay is very easy, but you must follow the instructions. Use clay incorrectly and you will create a mess or scuff the surface of your paint.

Before using detailing clay, you must thoroughly clean and dry your car to remove any loose dirt. Direct sunlight should not fall on your car's surface, and it's best if the work area is relatively cool to prevent rapid evaporation of the clay lubricant.

Flatten your detailing clay into a flat waffer that will fit comfortably in your hand.

To use the clay bar, you spray a lubricant on a small area of your car and rub the clay back and forth with light to medium pressure. If the lubricant begins to dry, you'll need to spray more. Clay is fairly sticky and cannot be used dry. Try using clay dry and you'll make a big mess and scuff your paint.

After a few passes with the clay, rub your hand over the area you cleaned to check for areas missed. You should feel a distinct difference between the areas you have clayed and the areas you have not clayed. Keep rubbing until all contamination bumps are gone. Finally, wipe the clay residue off with a soft microfiber towel, and buff to a nice luster. Just like waxing, work in small areas.

When your clay is flattened into a nice wafer, you spray both the clay and the paint with clay lubricant and rub the surface lightly with the clay. Three or four passes over an area is normally enough to do the job.

An alternative to spray detailing lubricant is good old soapy water. Be sure to rinse your wash mitt thoroughly and use a fresh bucket of soapy water, not what's left over from washing.

Check the clay bar frequently for hard particles. When found, pick them off. Make it a habit to occasionally knead and reform the bar so that a fresh portion of the bar contacts your car's paint. If you drop your bar of clay on the ground, it's history. Toss it out. Don't take any chances, discard the clay bar if it becomes impregnated with grit. Read the manufacturers' directions for the number of uses of their clay bar. Do not overuse a clay bar.

When you're finished claying your car, you should wash it to remove the lubricant film, then go over it with a pre-wax cleaner to finish cleaning the paint. Finally, seal your freshly cleaned paint with your choice of wax or sealant.

After claying one or two body panels, your clay will begin to look dirty. Don't be alarmed, that's just the clay doing its job. Flip the clay over and use the other side. When both sides are dirty, remold the clay into a ball again and flatten to reveal a clean surface.

### **OTHER USES FOR CLAY:-**

Clay isn't just for paint. You can use detailing clay on any smooth, hard surface, including glass and chrome. Do not use clay on clear plastic, such as headlight lenses.

When I can no longer remold clay to get a clean surface, I use it on my windows. The dirty clay will not harm glass, and it's amazing how much dirt film clay can remove from your exterior glass windows.

I also use my old clay to clean wheels. Clay will safely remove stubborn, embedded brake dust, tar and road film from all factory wheels. Clay is not recommended on wheels that do not have a factory clearcoat or powder coat finish.

With just a little effort, stubborn brake dust that even the strongest cleaners won't remove comes off with detailing clay.

### **CLAY FACTS:-**

Here are some common questions and answers in regards to clay usage:

Q1. I dropped my clay on the ground. Can I still use it?

A1. The safe answer is no. Clay will pick up small particles of grit from the ground that will scratch your paint.

Q2. If I use clay do I still need to polish my paint?

A3. Yes. Clay will not remove swirl marks, scratches or etching from acid rain or hard water spots. Paint polish is still required to remove these paint defects. If your paint is new or like-new, detailing clay will significantly reduce the amount of polishing required to keep your paint in good condition.

Q3. What is the best clay?

A3. What label do you like? There are only a couple manufactures of clay, and the technology is protected by U.S. patents. Clay is manufactured with different levels of abrasiveness and colors to suite different applications. There are some subtle difference in technology (plastic vs. elastic material) and the firmness of the material. In general, softer clays are safer and easier to use. A firm clay cleans better with a little more risk of scuffing or scratching. I prefer the 3M clay bar as it is very sticky and works easily to remove surface contaminants. I have found the Meguiars and Mothers products simply not sticky enough and require very repetitive going overs to remove foreign objects and still doesn't remove all.

Q4. Is it better to use soapy water or a spray lubricant?

A4. Both work equally well. If you want to do the job fast, use a bucket of soapy water. If you want to work inside or do a thorough job, use a spray lubricant. With a spray lubricant you can wipe down each panel as you go and feel for areas you missed.

Q5. How do I store my clay?

A5. If your clay did not come with a re-usable plastic container, store it in a plastic Ziploc bag.

Q6. Will clay remove my wax?

A6. In most cases, clay will "scrub off" wax protection. Some paint sealants are hard enough to withstand being cleaned with clay, but most are not.

**SUMMARY:-**

Automotive paint cleaning clay offers many advantages in the removal of surface contamination from paint. Even in the hands of a first-time user, clay is safe and easy to use. Sure, if you use a dirty clay bar, scratches can result. However, compared to machine buffing, compounding, or using harsh chemicals, clay is safer, faster and easier.

## **HOW TO REMOVE WATER MARKS AND SWIRLS**

This is topic No.4, in the "step by step" guide using Off the shelf products. Once again there are far better products on the market, however they can't be purchased over the counter at normal automotive outlets

### **Recommended products:-**



Autoglym Paint Renovator  
Meguiars Fine Cut Cleaner  
Meguiars Medium Cut Cleaner  
Meguiars Swirl Remover  
Meguiars Foam applicator Pads (not pictured)  
Meguiars Polishing Towels (not pictured)

The same water we use to bathe our cars can also damage our cars' paint. The spots and damage are caused by the minerals in the water. When water evaporates off of your car's paint, it leaves behind the trace elements it contains. Calcium and metals are the most damaging elements found in your tap water, whereas rainwater may contain damaging acids from air pollutants.

Avoiding water spots is easy if you chase after them. The best solution is to use a quick detailing spray after you wash, or as soon as you discover the spots.

If the spots are allowed to dry and bake on, they will attach to and harden on your paint. If water spots are allowed to stay for more than a week or so, the minerals will etch the paint and they will have etched spots (dimples). In this case, it is necessary to use a medium cut polish (if you have a polisher) or a fine cut polishing compound (for use by hand) to restore the paint surface.

### **SWIRL MARKS:-**

A buffer in the hands of a pro can do wonders on a car that has heavy oxidation or minor scratches. Most body shops can use a buffer to blend touch-ups to perfection. Unfortunately, many detail shops and buffer owners don't know how to use the tool, or they use the wrong buffing pads or compounds.

Swirl marks are nothing more than micro-marring in the paint surface, or more commonly known as "buffing marks". Under a microscope they appear to be a scratch; however, you cannot feel the scratch with your fingers or finger nail.

The reason swirl marks and other micro marring show up so prominently on black and other dark colors is because the sides of the marring reflect light. When you polish, the edges are rounded and reduce reflection. This diagram shows what severe micro marring might look like in a cross section of paint.

Incorrect use of a buffer or polisher is not the only cause of swirl marks. Every time you wash or wipe down your car you create micro-marring. The severity of the micro-marring depends on your tools and the contaminants present. Here are the ten most frequent causes of micro-marring (swirl marks):

- 1.) Polishers/buffers with the incorrect pad or an untrained operator;
- 2.) Harsh polishing compounds and paint cleaners;
- 3.) Towels and applicators containing polyester threads;
- 4.) A dirty chamois or a chamois that has not been properly maintained;
- 5.) Wiping down a dusty or dirty car with a dry towel;
- 6.) A dirty car duster or a car duster used on a car with too much dirt on the surface;
- 7.) Not keeping your wash mitt or sponge properly rinsed;
- 8.) Automated car washes with brushes and other wipers;
- 9.) Not rinsing your car completely before washing, or not washing your car thoroughly before drying; and
- 10.) Using a car cover when the car or the cover is not clean.

The most noticeable area for swirl marks is the bonnet and boot. On dark-colored cars, they might also show up on the doors and fenders. Bright colors do not show swirl marks as well because they reflect more light. That doesn't mean they don't get swirl marks, they just show up more readily on dark colors. Black, of course, is the worst of all colors for displaying swirls and other imperfections.

Swirl marks can be removed by polishing. Polishing out swirl marks without a buffer is a lot of work. I recommend polishing your car one small section at a time so you can see the progress.

To remove swirl marks, use a good medium cut polish. Many polish manufacturers market a special polish for removing swirls. Swirl remover polish formulas typically contain fillers and oils to help hide swirl marks. Over time, with regular polishing, swirl marks will diminish. It's very difficult to completely remove swirl marks. Even the best towels and wash tools cause some micro-marring.

### **POLISHING TO REMOVE SPOTS & SWIRLS:-**

If your water spots or swirl marks are severe, I recommend using Autoglym Paint Renovator. Follow the application of a fine rubbing compound with a good polish, such as Meguiars Deep Crystal Polish. Use a good foam applicator pad to apply polishes by hand. Once again I recommend using the Meguiars foam pad applicators.

### **SUMMARY:-**

To keep water spots to a minimum, try using a detailing spray after you wash. You can also use the detailing spray to wipe away water spots from sprinklers.

To keep swirl marks to a minimum, make sure you have good wash and dry tools. Never wipe, rub or polish in circles (straight line motions only). If you have repair work done on your car, tell the painter you want a warranty against swirl marks. This lets them know you're clued in to a quality job.

Regular polishing is the best way to remove water spots and swirl marks. Choose a good polish, good tools, and be patient.

My last piece of advice is if in doubt, ring a professional and have them do it for you. It might cost a few hundred dollars depending on the severity of the marks etc, but with the right tools such as a rotary polisher (buff) far better results will be hand rather than by hand. There are specifically made products on the market to use with rotary action polishers that achieve far better results than can ever be achieved by hand.

## **HOW TO POLISH YOUR CAR BY HAND**

This step by step guide is No.5 in the step by step guides using Off the shelf products.

Many people assume that waxing and polishing are the same. In fact, they are two different processes. Professional detailers and show-car owners know the secret to an award-winning finish is properly cleaning and polishing the surface prior to waxing.

### **Recommended products:-**

Meguiars Foam Applicators (2 per pack)  
Meguiars Deep Crystal Paint Cleaner\*\*  
Meguiars Polishing Towels (2 per pack)  
Meguiars Microfibre Cloths  
Meguiars Deep Crystal Polish\*\*

Please note:- \*\* means at the present moment in time these products are the best, however when Turtle Wax release their F21 Polish into Australia it will be far superior to the Meguiars ones mentioned above.

All paints age from exposure to ultraviolet light, pollution and acid rain. Beautiful finishes gradually become dull and chalky. Waxing over these surfaces will only create a temporary gloss over dull paint. To reveal the paint's true vitality, vibrancy, and depth, it must be polished.

Polishing deep-cleans the paint. It also removes oxidation, old wax, minor swirl marks and water spots. The result is a rejuvenated top paint layer, which is then ready for waxing or sealing. Polishing creates a uniform, high-gloss shine.

### **EVALUATING YOUR CAR'S PAINT:-**

You can easily evaluate your car's paint every time you wash. To do so, wash and dry your car. With clean hands, run your fingertips across the paint surface. It should feel very smooth, like glass. If it doesn't, you're feeling the contaminants and oxidation on the surface of the paint. This is your indication that it's time to clean and polish your paint using a good polish.

To determine if your paint has enough wax protection, rub a clean, dry detailing towel over the hood or trunk surfaces. If you hear squeaking, it's because the paint is dry and needs polishing and protection. When a car's paint surface has good wax protection, a good buffing towel should glide across the surface. I will cover the use of cutting polishes in a later topic.

### **SELECTING A POLISH:-**

Selecting a polish can be intimidating. There are hundreds from which to choose, each having different abrasive or cut capability. There are polishes for clear coat and non-clear coat finishes.

Polishing a newer car twice a year will maintain the car's showroom appearance for years to come. Newer cars usually have a clear coat finish, so be sure to select a low abrasive polish that is safe for clear coat finishes. For ultra-safe polishing and paint cleaning, use a polish designed to be a fine pre-wax cleaner on new paint and paint in excellent condition.

If your car's finish is dull, cloudy, or chalky, it may require the use of a light rubbing compound. Use caution when polishing with compounds, as they will quickly remove the top layer of dead paint. Check your work often to make sure you don't rub the paint too thin. Follow compounding with a swirl remover polish formula.

### **POLISHING TIPS:-**

Once you've selected a polish, here are some tips to make polishing easier:

- 1.) Work in a shaded area, out of direct sunlight. Never ever polish a car in the sun or when the paint is hot as the polishes will streak
- 2.) Work on one area at a time covering two to four square feet. Buff off the polish residues as you go. This allows you to discover any problems early before polishing the entire car.
- 3.) For best results, use a foam applicator pad to apply polish. If you need a little more polish or cleaning power, use a terry cloth applicator. When the applicator becomes caked with polish, switch to a fresh applicator. I highly recommend Meguiars foam applicators.
- 4.) Use a small amount of polish. With most polishes, a 1-inch size dab is enough to polish a 20cm to 30cm area.
- 5.) If the polishing residue does not buff off easily, switch to a clean buffing towel.
- 6.) Apply polishes in a back and forth motion, not circular (polishes should take out swirls, not create them... don't polish in circles). If you are creating swirls, you are using a polish that is too abrasive or you need to replace your polishing pad or towels.
- 7.) After polishing, your car's paint should be squeaky clean, smooth, and free of streaks and minor swirls. It's now ready for waxing.

## **WAXING & SEALING YOUR CAR**

This is No.6 in the step by step guide using Off the shelf products only. There are far superior products on the market, however we are using the best products you can purchase easily at your local automotive outlet.

### **Recommended Products:-**



- Turtle Wax Platinum Series Carnauba Wax (No.1 choice for Carnauba wax)
- Autoglym Extra Gloss Protection (No.1 choice for synthetic wax)
- Meguiars NXT Generation Wax (No.2 choice for synthetic wax)
- Meguiars Polishing Towels (not pictured)
- Meguiars Blue Microfibre Cloths (not pictured)

It was European coach builders that first applied coatings of animal fats and wax to protect the custom paint on their horse-drawn carriages. This tradition has endured over 100 years and is still a great way to protect the paint on modern-day coaches.

Today, the multilayered finish on your car, from the primer through the top clearcoat, is only .004 to .006 of an inch thick. Regardless of how fine the finish is now, it will deteriorate and dull. Radiant and ultraviolet energy, acid rain, salt, atmospheric pollution, insect fluids and bird droppings wage a constant war on your car's finish. Waxing provides an easily renewable, transparent barrier between the finish and a hostile environment.

Waxing also makes your car, new or old, look better. Quality waxes now combine enriching oils that "wet" the surface with protective formulas of Brazilian carnauba or modern polymers for a high-gloss shine. This brings us to the subject of selecting a wax. Waxes can be made from a natural wax, usually Brazilian carnauba, or synthetically made of polymers and acrylic resins.

Waxes and sealants make the surface of a car reflect more light. As a result, the car looks vibrant. When I saw this Porsche Carrera GT, it was hard to tell which reflected more, the water or the paint. It looked alive. Carnauba-based waxes add an element of depth and warmth to a car. Synthetic wax formulas create brilliance and sparkle.

### **Carnauba Wax:-**

Carnauba comes from the fronds of the "tree of life" (*Copernicia cerifera*) native to Brazil. It is nature's hardest, purest and most transparent wax. Carnauba car waxes tend to produce a deeper, darker, richer shine that is often described as "three-dimensional."

Many enthusiasts and show car owners prefer the shine of carnauba waxes, especially on black, red and other dark colors. Carnauba waxes bead water nicely, absorb the acid content in rain, and hide minor swirls in the paint.

On the minus side, carnauba waxes are not as durable as synthetic waxes or sealants. Depending on your climate, a carnauba wax might last between 30 and 60 days. Additionally, some carnauba waxes can be temperamental, occasionally streaking under certain temperature or humidity conditions.

With the limitations of carnauba wax, you might be asking why it continues to have a loyal following.

### **Synthetic Waxes:-**

While car enthusiasts love carnauba waxes for the way they make highly polished paint look wet, like a calm pool of water, they would appreciate more durability. Simply put, carnauba waxes quickly evaporate when your car is in the hot sun. The average melting temperature of a carnauba wax is about 180 degrees (f).

To make a true wax coating more durable, some chemists have turned to synthetic waxes that mimic the valued properties of natural carnauba, but greatly improve on the limitations. One such wax is Autoglym Extra Gloss Protection, which is easily the most durable wax product I have found. Super Resin Polish is a thin liquid, which allows it to be applied very quickly and with little to no rubbing required. Buffing off is also a breeze, and reveals a bright, shiny, slick surface that will bead water and look great for 4 to 6 months.

I personally prefer acrylic sealants over polymer sealants. The polymer sealants are becoming more and more common due to the low cost of silicone polymers. I like the acrylics because the acrylic resin molecule is heavier than polymer strands, which I feel allows acrylic sealants to do a better job of hiding minor paint flaws. I also find that acrylics have a more natural look and are less likely to cloud the paint.

### **Applying Wax:-**

Once you've selected a wax, here are some tips to make waxing easier:

- 1.) Work in a shaded area out of direct sunlight.
- 2.) Use a foam or terry cloth applicator pad to apply your wax. When the applicator becomes caked with wax, switch to a fresh applicator.
- 3.) Work on one area at a time covering 2 to 4 square feet. Some products may allow you to coat the entire car before buffing off, but most do not.
- 4.) Follow the wax manufacturer's instructions on whether or not to allow the wax to dry (haze) before buffing.
- 5.) Use a small amount of wax at a time, and rub it in well. If you use too much wax, you're wasting the product and your time.
- 6.) If the wax residue does not buff off easily, switch to a clean wipe towel.
- 7.) Apply your wax in a back-and-forth motion, not in circles. If you are creating swirls, you need to replace your applicator or towels.
- 8.) After waxing, your car's paint should feel slick and smooth, and be free of streaks and smudges.

What do you do if, after all this work, you still have streaks and areas that don't want to buff out perfectly? There are several tricks, but the easiest is to park your car in the sun for 10 to 15 minutes. Let it get warm, but not hot, and then take it back inside the garage. Next, using a good spray bottle and distilled water, spritz a small area and buff with a clean terry cloth towel. The warmth of the sun softens the wax, allowing it to buff out to a clear, high gloss. If you don't have distilled water, use a detailing spray. If you're using an enthusiast sealant system, use the quick detailer made for the system.

### **Show Car Tricks:-**

Detailers that prepare show cars will often layer a carnauba wax on top of a synthetic wax. The synthetic wax acts as a gloss layer, while the carnauba wax adds depth and a wet-looking appearance. One combination that works well is an initial coating of Autoglym Extra Gloss followed by one coat of Turtle Wax Platinum Series Carnauba Wax.

Apply and buff the first coat of wax as you would normally, and allow it to cure for 12 to 48 hours. Follow with a second coat. Note that the first coat of wax must have time to cure. If the wax does not cure (harden), the second coat will not improve your car's appearance or protection. With properly applied coats of wax, you will see a noticeable improvement in depth, richness of color and gloss with the second coat of wax. Adding more layers is a subjective matter, although many concours winners use multiple layers to produce the desired depth.

### **SUMMARY:-**

Regular waxing is necessary to protect your car's paint from the elements. In addition to sealing and protecting, waxes and sealants also improve the appearance of freshly washed and polished paint. If you use the right products, you can successfully layer waxes and sealants to make your paint look deeper and almost liquid.

## **HOW TO DETAIL WHEELS & TYRES**

This is step No. 7 in the step by step guide using Off the shelf products. Once again there are far superior products on the market, however they can't be purchased at normal automotive outlets

### **Recommended products:-**



Autoglym Mag Wheel Spray (No.1 choice) (not pictured)  
Meguiars Hot Rims All Wheel Cleaner (No.2 choice)  
Black Knight Tire Cleaner (for tyres only)  
Kenco Tyre Contour Brush  
Kenco Brake Dust & Wheel Cleaner Brush  
Meguiars Hot Shine Tyre Spray.

## **WHEEL CARE CHALLENGE:-**

Your car's wheels can dramatically enhance the appearance and performance of your car. Modern wheels can also present a substantial cleaning challenge as heated dust particles from brake pads bombard the wheel and bake into the finish. If left on the wheel, a phenomenon known as galvanic corrosion sets in, which will eventually destroy your wheel's appearance.

Most modern wheels, in particular aluminum wheels (or "Mags" as they were once called), are painted with the same paint and clear-coat used on the body of your car. While durable, the wheel's clear-coat finish is subject to damage from acid compounds (including acid rain, hydrocarbons, and acidic cleaners). Likewise, polished and anodized aluminum wheels (not protected by a clear-coat) will react (dull or corrode) to both alkaline and acidic conditions.

Unfortunately, typical car wash soaps and household cleaners are not strong enough to break the bond between brake dust, road tar, road grime and the wheel. To properly clean wheels, the car care industry has developed three groups of wheel cleaners:

1.) Acid-based Cleaners:- These are widely used by detailers, car dealers and car washes who need to clean wheels in the shortest possible time or with the least amount of effort. Acid-based cleaners are typically 2% solutions of oxalic, phosphoric, and hydrochloric acid. Eagle One All Finish Wheel Cleaner is an example of an acid-based cleaner. While acid-based cleaners pack the greatest cleaning punch, they can easily etch the surface of your wheel. Care must be taken not to use acid-based cleaners on wheels with pitted or chipped surfaces. The acid will migrate into any fissures and accentuate flaking and peeling of surface coatings.

2.) Acid-free Solvents:- These are mild solutions of alkaline solvent, usually ethylene glycol or butyl ether, with a wetting agent. These solutions creep under the dirt and brake dust, loosening and lifting surface grime. Non-acidic cleaners usually require some surface agitation (wheel brush or sponge) but will not etch the wheel's finish like an acid. The problem with these solutions is that they pose a serious health risk (skin irritation and respiratory distress). I warn everyone to review the contents of their wheel cleaner.

3.) Detergents:- Generally speaking, detergents are safe wheel cleaners, but can be a little tough on tires and other rubber. Of all the active wheel cleaner ingredients, detergents are by far the safest for both car and owner. Detergents also require the most agitation (brushing) to completely clean your wheels. The benefit of a detergent wheel cleaner is that it will not harm delicate wheels and it does not pose a health risk.

## **TYRE CARE CHALLENGE:-**

Like the wheels, your tyres have several formidable enemies, including water, formaldehyde, petroleum distillates, ultraviolet (UV) light and ozone. Water washes away the natural oils and waxes in rubber that keep it elastic. Formaldehyde and petroleum distillates act as solvents, eating rubber on contact. When ozone is combined with UV light, a reaction occurs that attacks the tyre and its polymers.

It's easy to keep tires looking great and in good condition by treating them with a quality dressing at least once a month. Meguiars Hot Shine Tyre Spray is brilliant for this, and even better as it has an adjustable nozzle depending on the size and profile of your tyres. One little tip is to make sure the tyre is free of dirt and silicone first before applying otherwise it will not adhere to the rubber and will subsequently flick up the side of the car when driving. Also where possible leave the tyres to dry over night before driving after application to allow the product to adhere to the rubber properly.

To protect against ozone and UV damage, a stabilizer molecule called a competitive absorber is blended with the tyre polymer. Competitive absorbers work by capturing and absorbing UV radiation and converting it to heat, which is dissipated harmlessly. All tire manufacturers use the same competitive absorber, called carbon black. This is why most tires are black. These absorbers are sacrificial; they expend themselves in performing their function of converting UV light to heat. However, as carbon black loses its ability to perform, it turns gray. This is one reason tyres tend to discolor with age.

To protect tyres from further ozone damage, tyre manufacturers add a wax compound to their formulas. Tyres flex when they are in motion, causing the wax molecules to migrate to the surface. This forms a protective barrier between the air (ozone and oxygen) and the tyre polymer. In the tyre trade this is called blooming. When tyres are parked for extended periods, blooming does not occur, and ozone quickly attacks the tyre polymer. With UV light and ozone working in concert, the degradation is accelerated, resulting in drying, discoloration and cracking.

To combat the negative effects of water, solvents and UV light on tyres, the car care industry makes tyre dressings. Tyre dressings fall into two groups: oil-based and water-based silicones.

1.) Oil-based silicone dressings:- are nonpenetrating coatings that seal rubber and vinyl. They are very good at providing a protective surface barrier. Oil-based silicone dressings create a glossy film that never really dries. I'm not a fan of these products, as most contain petroleum distillates as a cleaning agent. Petroleum distillates are harmful to rubber and vinyl, and will cause cracking.

2.) Water-based dressings:- do not contain oils or petroleum distillates that can harm and dull the surface of rubber and vinyl over time. Most water-based dressings offer a nongreasy, more natural looking satin finish; however, they are not as durable as the oil-based products.

### **PROPER TYRE & WHEEL CLEANING:-**

To properly clean your tyres and wheels, you will need a 3-5 gallon bucket, a soft tire and wheel scrub brush, a sponge or wash cloth, a water hose and nozzle, car shampoo, and a spray wheel cleaner.

Warning: Do not clean your wheels if they are still hot from driving. Let them cool, or thoroughly hose them down. If your brakes are hot, spraying them with cold water may cause severe damage.

I recommend the Kenco Brake Dust & Wheel Cleaner Brush. It's soft enough not to scratch your expensive mag wheels, but hard enough to remove debris from the inside of the rim. To clean the actual tyre itself I recommend the Kenco Tyre Contour Brush. If you use a tyre gel, or if your tyres get heavily soiled, you may want use the Kenco Tyre Contour Brush, which has stiff bristles.

Here are some step-by-step tips to make cleaning easier:

- 1.) Clean one wheel at a time.
- 2.) Clean your tires and wheels first before washing the rest of the car. This prevents the splattering of cleaners, dirt and brake dust on already cleaned panels. Your car is also less likely to get water spots from drying while you wash your wheels.
- 3.) Mix a bucket of soapy water with your favorite car shampoo, using double the recommended strength.
- 4.) Thoroughly rinse the tire and wheel with water using a hose and spray nozzle. If it is exposed, rinse the brake caliper to flush away loose brake dust. Finally, rinse up into the wheel well to wash away road grunge, road kill, mud and other debris.
- 5.) If your tires and wheels have a heavy coating of brake dust or road grime, spray them down with your wheel cleaner. Allow the cleaner to soak for 30 seconds (minimum) to 3 minutes (maximum). For fine wheels, I recommend Sonus, P21S and Autoglym. All of these formulas are non-acid, detergent based cleaners.
- 6.) Use a tire and wheel scrub brush and your soapy water to agitate the tire and wheel surface. Use plenty of soapy water. The soap acts as a lubricant to gently lift dirt and grit away from your wheels. Follow up with your sponge or washcloth to wash the remaining dirt from the tire and wheel. If your wheels have large open areas, use the sponge to get behind these areas. Make sure the tires are scrubbed. Many people put layer upon layer of dressings on

their tires, but never clean them. The result is a brown or yellow discoloration.

7.) Use your wheel brush and soapy water to scrub the accessible areas of the wheel wells, too. This small detail keeps your car looking fresh and new. If your wheel has a lot of small nooks and crannies, use a parts cleaning brush.

8.) Thoroughly rinse the tire, wheel and wheel well. Use plenty of water. You need to ensure that all traces of the wheel cleaner (and your neighbor's cat) are gone.

9.) After washing your car, remember to dry your tires and wheels using a detailing towel.

I do not recommend using tire cleaners containing bleach. Bleach is used in many tire cleaners to brighten whitewall tires, but they can turn tires a dull gray. Bleach will stain your alloy wheels permanently. Read the product contents on the label before you buy. I recommend Black Knight Tyre Cleaner to clean rubber effectively. Simply spray it on (DO NOT GET IT ON THE MAGS), leave it sit for 10mins, scrub the tyre then hose off and dry.

If you have intricate wheels, a round brush, such as this 1 Inch Round Natural Detail Brush is a must.

### **PROPER TYRE & WHEEL CONDITIONING:-**

After you clean your tyres and wheels, you need to protect them. Tyre dressings accent the appearance of your tires and protect against cracking and fading. Likewise, waxing your wheels protects their finish from brake dust, and makes them easier to keep clean.

Your wheels should be waxed, at a minimum, each time you wax your car. You can significantly reduce your wheel cleaning and waxing efforts by coating your wheels with a high quality acrylic. I recommend Autoglym Extra Gloss, as it is heat resistant and will not yellow. Another excellent wheel protection product is Plexus. Plexus works well on wheels with many small openings, as these wheels are difficult to wax.

### **TO APPLY TYRE DRESSING:-**

Simply turn the nozzle on the Meguiars Hot Shine Tyre Spray to the right setting for your tyres. Spray it on in one even light coat DO NOT FLOOD THE TYRE WITH IT. Wipe over the mag to remove any over spray and simply let dry for a few hours (the longer the better).

**SUMMARY:-**

Keeping your tires and wheels clean and detailed makes a big difference in the appearance of your car. If you have invested in upgraded factory or aftermarket tires and wheels, spending a little extra time detailing them helps maintain your investment.

## **HOW TO DETAIL TRIM**

This is No.8 in the step by step guide to using Off the shelf products to detail your car. There are better products on the market, but we are only looking at readily available products from your local automotive outlet.

### **Recommended Products:-**



303 Aerospace Protectant  
Autoglym Bumper Black  
Plexus  
Autosol  
3M Stainless Steel Cleaner (not pictured)  
Meguiars Polishing Towels (not pictured)

Trim is anything the manufacturer or you apply to the car to enhance its style and appearance. It is trim that makes the difference between an otherwise plain-looking car and a sharp automobile. However, due to the time involved in maintaining trim, it is often overlooked.

Over time, trim that is not maintained will become dirty, dull and worn, making the whole car look bad. Well-maintained trim stands out and makes the whole car look better.

Common trim items include chrome bumpers, window molding, chrome light rings, chrome door handles, rubber door and bumper guards, window wipers, emblems and antennas. On classic and antique cars, you might also have horns, leather straps, hood ornaments and exposed exhaust manifolds.

### **Black Trim:-**

Most cars made during the 1980s and 1990s featured some black trim. Most black trim pieces are made of plastic, rubber, anodized aluminum or satin black painted metal.

All black trim should be regularly cleaned with car wash shampoo. If extra scrubbing power is required, use a toothbrush, paintbrush or a soft detailing brush. Do not use a stiff bristle brush on black trim, as it will scratch.

To keep black trim in good condition, it must be treated with a protectant several times a year. There are different treatments for different materials.

On smooth black plastic, you can use any vinyl and rubber dressing. For best long-term results, choose a vinyl and rubber dressing that contains ultraviolet (UV) protection to prevent sun fading. I use and recommend 303 Aerospace Protectant.

On textured black plastic, use a vinyl and rubber dressing. If your textured black plastic is starting to weather, use 303 Aerospace Protectant. This product is not a permanent solution for faded trim, but they last longer, make the trim darker, and add a little more gloss than most vinyl and rubber protectants.

If your textured black plastic is heavily weathered or faded, you can bring it back to life with a product like Forever Black, which is a dye system for black plastic and rubber trim. It's advertised as a permanent solution, but in my experience it will only last a couple of years if the vehicle remains in the sun. Also, don't think that Forever Black is a replacement for vinyl and rubber dressing. It's not. After Forever Black cures, you still need to keep the trim protected and looking good with vinyl and rubber dressing. Personally if the piece of trim is that bad that it needs dyeing, I recommend to replace with a new item.

To maintain black anodized trim, use a noncleaning wax or sealant. Anodized aluminum must be treated with great care. The coating is very thin. Even the mildest abrasives (polish and cleaners) will quickly scuff or remove the

coating. The sun is a problem, too, as exposure to UV rays will fade black anodized trim.

Painted black trim is often difficult to properly maintain. If you wax it, the original satin finish will begin to take on gloss. If you don't treat it, the trim will fade and become flat. The best solution I've found so far is to treat satin black trim (windshield wipers are a good example) with Autoglym Bumper Gloss. Bumper Gloss creates a dark satin look, wipes off to a greaseless finish, and won't soften the black paint. Simply wipe it on, allow it to sit for a while, then thoroughly buff dry after with a detailing towel.

### **Rubber Seals:-**

Rubber seals and moldings around windows, doors, lights, hood, trunk and bumpers are designed to protect the car from water, wind and dirt. These rubber components also trim the car to enhance its appearance. If you do not maintain rubber seals, they will become stiff and brittle, and will eventually crack or tear.

Clean rubber door, trunk and hood seals with soap and water twice a year. Treat the seals with a water-based vinyl and rubber dressing. After coating the seals, allow the dressing to penetrate for 10 to 15 minutes, then dry the seals with a clean towel. I use 303 Aerospace Protector on seals. It dries completely oil-free, and the aerosol spray makes it very easy to apply.

Some car manufacturers, such as Porsche and BMW, recommend using talcum powder on door and hood seals to provide lubrication. This will extend the life of the door seal. Simply sprinkle a small amount of talcum powder on a small piece of T-shirt material and wipe it onto the seal after applying rubber and vinyl dressing.

Rubber seals around windows, lights, door handles and mirrors should also be cleaned twice a year using a brush and soapy water. However, these "exposed" rubber seals should be treated more frequently than door and hood seals, as they get heavy UV radiation from the sun.

I recommend treating window seals with rubber and vinyl protectant once a month. Apply the protectant prior to cleaning your windows. Use a generous amount, and allow it to penetrate before buffing dry. When working in tight areas, use a cotton or foam swab to apply the dressing. Use a quick detailing spray to clean off excess protectant from painted surfaces.

### **Badges:-**

Many cars have badges or emblems sporting the manufacturer's crest or the name of the automobile. These badges are easily cleaned with a soft toothbrush or detailing brush and soapy water.

After cleaning, protect the badge with a coat of wax or sealant. Remove any excess wax with a quick detailing spray and a clean toothbrush or detailing brush.

Car name emblems are often more difficult to clean and wax around than a badge. Most often, the emblem is a script that sits right on the paint. Waxing around these emblems is a challenge, as a polishing cloth won't reach between the letters to remove wax residue. In this case, use cotton swabs, or wrap the head of a tooth brush with a single layer of cotton T-shirt material.

### **Door & Bumper Guards:-**

Many cars include door and bumper molding that serves to protect the car from door dings and soft bumps. Treat these pieces of trim with rubber and vinyl protectant once a month to keep them in good shape. Once again I recommend 303 Aerospace Protectant, which has quickly become one of my favorite products to use on rubber moldings. Works great under the hood, too.

Door and bumper molding should be thoroughly cleaned twice a year with soapy water and a toothbrush or detailing brush. Dirt commonly builds up on the bottom edges, in cracks or around the small caps used to terminate the ends of molding pieces. Use the brush and soapy water to get in the cracks as deeply as possible.

### **Light Covers:-**

Plastic light covers scratch easily. After only a few months on the road, light covers will begin to show signs of wear. To keep light covers looking good, they must be regularly cleaned and polished.

You can clean and polish light covers with the part on the car, but I find it useful to remove the light covers at least twice a year. Doing so allows me to inspect the seal for wear, check for corrosion, and clean the painted area around the light. It also allows me to clean and polish the light cover much better than I could if the part was on the car. Most can be removed with a Phillips screwdriver.

For thorough cleaning and polishing, I use and recommend Plexus.

### **License Plate Frames:-**

License plates and their frames should be removed from the car at least once a year for cleaning, polishing and treating. You'd be amazed at the dirt that collects behind your license plate and behind its frame, too. A good time to do this cleaning is when you renew your tags.

With the license plate removed, you can take it to a deep sink and give it a good scrub. After cleaning, give the plate a quick buff with a paint cleaner or fine polish, and then protect the plate with your wax or sealant. Clean and protect the frame, too.

### **Retractable Antennas:-**

Retractable antennas, manual or electric, require regular maintenance. The antenna mast should be cleaned and lubricated twice a year using a paper towel or rag sprayed with a penetrating lubricant. Wipe off the excess lubricant with a clean towel.

If the antenna mast shows a lot of dirt or signs of corrosion, use an SOS pad before treating with lubricant. Scrub gently, and be sure to rinse all of the SOS pad residue off of the antenna and painted surfaces.

### **POLISHING METAL:-**

Most car fanatics love bright, shiny, polished metal. There's nothing quite like perfect chrome, polished aluminum wheels or bright exhaust tips to improve the good looks of a car. Engine compartments with polished manifolds and other bright work really make a difference, too.

While polished metal is great to look at, it's not always easy to achieve, especially if it has been neglected. This section gives some quick tips on metal polishing. With the right tools and a little work, you can achieve great results.

### **Polishing Chrome:-**

Chrome is by far the most common bright work on an automobile. Chromium, the metal used to chrome-plate steel and other metals, resists tarnishing and holds a shine better than all other metals, including platinum. Chrome has a single enemy: rust. Over time, chrome oxidizes and develops rust spots. The higher quality the chrome plating, the more it will resist rusting, but eventually, it will happen. If you allow chrome to go too long without removing rust, it will become permanently pitted.

Heavy rust on chromed parts requires a decision: polish or rechrome. Replating small parts is pretty easy. Simply remove the part and hand it to your local plating company. A few days later you'll have your part back looking like new. However, what if it's a large part, like a bumper or a window frame? Replating a medium or large part is expensive. Even modest-sized parts, such as hubcaps, can cost \$100 or more. If you think there's even a remote chance the rusted chrome part is salvageable, you should try to save it.

Removing rust and polishing chrome can usually restore chrome to a reasonable-looking condition. If the rust simply coats and is not deeply embedded, the chrome should come back to life. As long as the chrome is not flaking off, you have a chance of saving it.

Most pro detailers use fine grades of steel wool to remove rust from chrome. It's quick and easy. Please use caution if you choose this route, as even fine (#000) or superfine (#0000) steel wool leaves minor scratches that you will need to polish with a metal or chrome polish to remove. Another product that works well is the household steel wool soap pad. The soap acts as both a cleaner and a lubricant to prevent scratching (use plenty of water). Warning: Keep steel wool away from painted surfaces.

If you have rust in cracks and crevices you can't reach, use a toothbrush and household cleanser. Wet the toothbrush, dip it in the cleanser, and start scrubbing. The abrasives in the cleanser remove rust very fast. Rinse well with plenty of fresh water.

The final step for chrome is to polish it with a good chrome or metal polish. Use a polish specifically made for chrome. With most metal polishes, a little goes a long way, so use just a little dab at a time. Also, the best metal-polishing cloth is soft cotton, such as T-shirt material. Cotton fleece, such as from an old sweatshirt, works great, too.

### **Polishing Aluminum:-**

Aluminum is an easy metal to polish. It's soft enough that even the roughest aluminum parts can be quickly polished to a bright shine. A few years ago, in a fit of craziness, I decided to polish all of the aluminum parts on the top side of my 1989 Silver Anniversary 911's engine. I went nuts. Everything was subject to being polished, including the intake manifold and the distributor. It was beautiful!

Polished aluminum has a fault: it tarnishes quickly. Most factory-polished aluminum parts are sprayed with a clear lacquer, acrylic or urethane to seal the part. This is very common on polished wheels.

If you're trying to restore a polished aluminum part that has been anodized or clear coated, you must first remove the coating. Many professional polishing shops use an aircraft-strength stripper for this job. You must use these chemicals with extreme caution, and never let them come near your car.

You can polish aluminum by machine or by hand. When using a machine, such as a buffing wheel or buffing cones, I prefer to use several grades of jeweler's rouge, which generally comes in a bar form. Simply apply a bit of rouge to the wheel (while it is spinning), and begin buffing. Avoid using too much pressure. As the part begins to polish to brightness, use the next finer grade of rouge.

Polishing aluminum by hand, while not as fast as by machine, is pretty easy. Use aluminum or mag polish and a soft cloth. I like Autosol for hand-polishing aluminum. Apply the polish to your cloth, working it into the polishing cloth, and then begin polishing your part. The cloth will turn black; this is normal. Keep polishing. Use a clean, dry, soft towel to buff the polish off of the part and inspect your work. Repeat until you have achieved your desired results.

If you want to polish rough aluminum, such as an intake manifold or a distributor, you will first need to prepare the part by sanding it smooth. To do so, use coarse emery paper, followed by medium, then fine. To make the polishing faster, use 600-grit wet and dry paper (wet) as the final sanding step before polishing.

These polished aluminum Kinesis wheels require polishing every six months to keep their shine. I polish them with a polish wadding, which gets around the small details, including the 40 chrome bolts holding the wheels together.

### **Polishing Stainless Steel:-**

Stainless steel is a wonderful metal. Although it does not polish as brightly as chrome or aluminum, it will take on a good shine. The only problem is that stainless steel is very hard.

A common use for stainless steel is the exhaust system, including the exhaust tip. Many people choose to cover unpolished stainless steel exhaust tips with chrome sleeves, often for as much as \$400. With 3M Stainless Steel spray on cleaner/polish, you can polish that exhaust tip to a bright shine in just a few minutes.

## SUMMARY:-

It's the small details that make the difference between a good-looking car and one that's stunning. Pay attention to your trim and see what a big difference it makes in your car's final appearance.

## **HOW TO CLEAN GLASS & PLASTICS**

This is No. 9 in the step by step guide using OFF THE SHELF products. Once again better products do exist on the market but we are using products that are easily obtained at automotive outlets.

### **Recommended Products:-**



Autoglym Fast Glass Spray  
Autoglym Glass Polish  
Plexus (not pictured)  
Meguiars Blue Microfibre Cloths (not pictured)

Have you ever noticed how much better your car looks when the windows are perfectly clean? Yet many of us ignore the windows when we wash, because it adds a few precious minutes. Forget the time involved in keeping your glass clean for a moment; have you ever thought about how hazy, dirty windows can be a safety hazard? Driving your car with dirty, hazy windows on a rainy night or in heavy traffic, straining to see, is a driving impairment. You should consider this a true danger.

Cleaning your windows is one of the most tedious tasks you will face, but it is definitely worth doing. In addition to being a hazard, the effect of dirty glass can quickly ruin the appearance of your perfectly polished and waxed automobile. After you have completed all other detailing tasks, put the perfect touch on your car by detailing your car's glass.

The impact of this freshly polished and waxed paint would be ruined by dirty windows. After waxing, I use a slightly damp microfiber towel to buff the glass. If I run into stubborn spots or a heavy film, I spray a few shots of glass cleaner and buff dry with a microfiber towel.

### **GLASS CLEANERS:-**

I strongly recommend Autoglym glass products. Whatever you use, the principles are the same: clean, dry and polish.

I highly discourage the use of ammonia-based glass cleaners on your car. While ammonia is a great glass cleaner for the home, ammonia is harmful to many car surfaces, including vinyl, rubber and leather. More importantly, the use of ammonia inside your car is harmful to your health. Use an automotive glass cleaner that specifically states it's safe to use on window-tint film. A glass cleaner that's safe for window-tint film will not harm the plastic and vinyl surfaces on your car.

Glass cleaners in a spray bottle work fine. The only problem is overspray on the dash and upholstery, as it's difficult to direct the spray of glass cleaners. You will have the best luck spraying one side of a clean towel, wiping the glass, and then drying with the other side of the towel.

Many professional detailers use plain water for wiping and cleaning the windows, and dry the glass with newspaper. Unlike paper towels and most cotton towels, newspaper does not leave behind lint, and the ink acts as a glass polish. The only drawback to this method is the newsprint ink on your hands when you're done. Be sure to wash your hands before touching your upholstery.

### **CLEANING CAR WINDOWS:-**

Start your window cleaning with the driver's door and front passenger's door. If your door has a window frame, lower the window approximately 2.5cm to allow access to the top part of the glass. This part should be cleaned and dried first. Spray with glass cleaner and buff dry. Now roll the window back up, and clean the remainder of the window. Pay attention to the corners of the windows, as this is where you will get most smears and streaks. Don't forget your driver's side and passenger's side mirrors.

While you're sitting down in the passenger's seat, clean the inside of the windshield. It is easier to clean from the passenger's side, as your access is not obstructed by the steering wheel. Take your time around the rearview mirror, as it is only glued to your windshield. If you bump into the rearview mirror hard enough or at the right angle, you can break it loose from the glass.

The inside of the rear window is the most difficult to reach and should be done last. The best technique for cleaning your rear window is to use the back side of your hand to guide your towel down into the corners. Trying to use the palm of your hand will force you to be a contortionist and draw strange looks from your neighbors.

### **MICROFIBER CLOTH TOWELS:-**

Once again here I recommend using the Meguiars Blue Microfibre Cloths. When using microfiber on glass, it's best to use two towels. One should be damp with water or your favorite glass cleaner. The second towel should be dry for buffing.

### **CLEANING SPOTTED GLASS:-**

I suspect that the windshield is the most overlooked surface on most cars. At best, you wash it when you wash the car and spray it with a few shots of glass cleaner when you can no longer see through the haze. Did you ever think of polishing your glass?

Normal driving will coat your windshield with a variety of contaminants that normal glass cleaners cannot remove. Plus, your windshield has the greatest vertical forward exposure, which means it gets pelted with road stones and other debris. It's a wonder that windshields hold up as well as they do.

Automotive glass polishes that remove minor water spots and road contamination have been around for quite a while (although they are not always easy to find). I highly recommend using a glass-polishing product to keep glass clean and free of water spots. It's simple to do. Just rub the polish in thoroughly with a terry cloth applicator, and buff dry with a terry cloth or microfiber towel.

Of all the products I've tried, I like Autoglym Glass Polish the best. After using three or four other products, I found that Autoglym was the easiest to use and took care of just about all of the glass-cleaning problems I came across. It has a strong chemical smell, but that goes away fast.

If you have severe water spotting, you can use Autoglym Glass Polish with #000 or #0000 synthetic steel wool (use on exterior only!). The ultrafine

synthetic steel wool provides a bit more cutting power for the really tough jobs. NEVER EVER USE NORMAL HOUSEHOLD STEEL WOOL  
Please be aware that a glass polish cannot fix glass damage from road stones and severe water spot etching. If your glass is badly pitted or etched, it may need to be replaced.

### **WINDSHIELD WIPERS:-**

Windshield wipers are essential for cleaning your windshield and rear window in rain or snow, or when your windows become bug-ridden or dirty from long road trips. Wipers perform best when the rubber is in good shape and the glass is fairly clean. You should make it a habit to clean your front and rear wiper blades at the same time you clean your glass. After cleaning your glass, use a damp cloth to wipe the rubber blades, removing bug residue, wax and other dirt buildup.

Although rubber dressing helps preserve, protect and beautify the rubber and vinyl parts on your car, you should not use dressings on your wiper blades. Rubber dressing on your blades will cause streaking and smearing, impairing your vision. The best overall maintenance of your blades is keeping them clean.

### **CLEANING WINDOW TINT FILM:-**

Tinted window film is often applied to the inside of windows to shade passengers or provide privacy. Tinted window film is a thin sheet of Mylar plastic. Mylar scratches easily and will be destroyed by ammonia. To clean tinted windows, use water or a mild cleaner such as Autoglym Fast Glass.

Tinted window film that has been scratched can be polished with cleaners designed for the vinyl windows often found on convertible tops. The product I recommend for polishing and regular maintenance of tinted window film is Plexus. Plexus comes in an aerosol spray can and is safe for use on plastic, Plexiglas and tinted window film. In addition to polishing your tinted window film, Plexus works great on your taillight and headlight covers.

### **MAINTAINING CLEAR PLASTIC:-**

Maintaining clear plastics and window tinting is tricky. These materials will easily scratch and lose their original clarity. I highly recommend the use of Plexus on plastic. Use Plexus on window tinting, convertible rear windows, headlight lenses, instrument panel lenses, and other clear plastic surfaces. To use Plexus, simply spray and wipe. That's it! There's no buffing, no mess, and no waste.

The headlight lenses on most new cars are plastic. If you don't polish the lenses every few month they will yellow and get hazy. Plexus is a great product to use for regular cleaning and polishing.

SUMMARY:-

I don't know anyone who likes doing windows. If you find the right tools and cleaners, this chore will be much easier. With the advent of microfiber towels, window cleaning has become much easier.

## **HOW TO DETAIL YOUR INTERIOR PART 1**

This is No. 10 and the last in the step by step guide to using Off the shelf products to clean your cars interior. There are far better products on the market, but we are simply using ones that are easy to obtain at automotive outlets.

### **Recommended Products:-**





303 Aerospace Protectant  
Meguiars Leather Cleaner & Protectant  
303 Carpet & Upholstery Cleaner (not pictured)  
Meguiars Blue Microfibre Cloths (not pictured)  
Meguiars Polishing Towels (not pictured)  
Vacuum Cleaner, both wet and dry (not pictured)  
Crevice Tool  
Vacuum brushes

Regular vacuuming and dusting of your car's interior is the best way to keep it looking good. However, surface cleaning alone is not enough. Two to three times a year you will need to detail the upholstery to keep it looking its best. Warning: Before using any product on your car's fabric upholstery, carpet, leather or vinyl, test for color fading (colorfast) by cleaning a small, inconspicuous area. Do not use the product if it adversely changes your fabric's color or texture.

## **A SYSTEMATIC APPROACH:-**

The interior of your car takes a lot of abuse. Unlike the inside of your home, which has many times more square footage, the inside of your car gets repeated, concentrated traffic. Each time you get in your car, you drag in more dirt. Each time you eat or drink in your car, you add a few more crumbs and spills. In fact, just sitting in your car, you drop hair, dead skin, makeup and other contaminants. All of this dirt and junk adds up very fast.

It is not necessary to fully detail the inside of your car each time you wash. Unless you've been to the beach, out in the mud, or tracking in grass and leaves, you can probably get away with vacuuming every three or four weeks. Here's what I recommend for most people:

### **Weekly Interior Cleanup:-**

- 1.) Wipe down all vinyl, leather and plastic surfaces with a damp cloth. A microfiber towel, such as Meguiars Towel, is excellent for this task, as it will leave a lint and dust-free finish.
- 2.) Pull out your floor mats and shake or brush off the dirt and debris.
- 3.) Pick up trash, that old banana peel you tossed into the back seat, and empty the ash tray.
- 4.) Wipe down your door jambs and door sills with a damp towel.
- 5.) Wipe down your interior glass and your rearview mirror with a damp towel. Again, a microfiber towel, such as the Meguiars towel, is great for this job. If your windows are relatively clean, you do not need to use a glass cleaner.

### **Monthly Interior Detailing:-**

- 1.) Follow all of the steps for the Weekly Interior Cleanup.
- 2.) Vacuum the interior carpet, seats, seat crevices, and console.
- 3.) Clean interior glass with a good glass cleaner or a microfiber towel.
- 4.) Apply vinyl protectant with a UV inhibitor to the dash, console, and tops of door panels (areas with the most sun exposure). Good choice once again is 303 Aerospace Protectant.

### **Quarterly Interior Detailing:-**

- 1.) Follow all of the steps for the Monthly Interior Detailing.
- 2.) Clean and protect all leather and vinyl upholstery.
- 3.) Clean and protect all rubber door, trunk and hood seals.

### **VACUUMING:-**

There's no special science to car vacuuming. You need a good vacuum, a few attachments, and 10 to 15 minutes to get in there and get the job done.

The two most important attachments are the crevice attachment and the dust brush attachment. Make sure your crevice attachment is plastic, not metal. A metal attachment or a plastic attachment that's in poor condition may scratch or otherwise damage leather or vinyl upholstery.

Use the crevice tool to reach between and under seats, into tight seams, nooks and crannies, and around seat beads. Vigorous movement on the carpet helps to bring up sand and grit.

The crevice tool is the best way to get behind the pedals, between the seats, and in other tight areas.

Use the round dust brush attachment to vacuum the console, dash and vents. You can assist with the dusting by using an interior detailing brush ahead of the vacuum to get deep into vents and cracks.

Here are the proper steps for vacuuming:-

- 1.) Start your vacuuming job by pulling out the floor mats. Shake out the mats to remove any loose dirt. Use a 4" upholstery attachment or the bare hose end to vigorously vacuum the mats.
- 2.) Work on the rear upholstery and carpet. Push the front seats all the way forward. Use the crevice tool to vacuum the cracks of the seats and between the seats and carpeted areas. If the seat upholstery is fabric, switch to the 4" upholstery attachment and vacuum the rear seat and the deck under the rear window. Vacuum the rear carpet. Use the crevice tool to vacuum around the seat tracks and under the front seats. Use the round dust brush attachment to vacuum the door panels.
- 3.) Push the front seats all the way back to work on the front upholstery. Use the crevice tool to vacuum the cracks of the seats, between the seats and carpeted areas, and around the gas and brake pedals. Now switch to the 4" upholstery attachment to vacuum the carpet in the foot wells and the seats

(if the seats are fabric). Use the round dust brush attachment to vacuum the console, vents and door panels.

4.) If your headliner is fabric, use the round dust brush attachment to vacuum the headliner. Be gentle, though, as this material is not as durable as your seat upholstery.

Tip: When vacuuming carpet, use the palm of your free hand to beat the carpet just in front of your vacuum hose or tool. As you beat the carpet, dirt that is lodged deep into the carpet will come loose for vacuuming.

### **DASHBOARD & CONSOLE:-**

We look at the dashboard and console more than any other area of our car's interior; therefore, it makes sense that we should give it some special attention. The dash and the deck under the rear window also take the brunt of damage from sun exposure. In order to keep your dash from cracking and fading, regular treatment is necessary.

Caring for the dash and console is really pretty easy. Simply wipe them down with a damp towel every time you wash your car, and treat them with a vinyl protectant once a month. To reduce the effects of the sun's UV rays, use 303 Aerospace Protectant which contain strong UV sunscreens.

The easiest way to treat the dash and console is to use a foam applicator pad. Spray your vinyl protectant on the applicator, not on the dash or console, and wipe it in thoroughly. This will prevent over spray on your glass and upholstery. Don't forget to protect the steering wheel, turn signal levers, and the shift boot. Allow the vinyl protectant to soak in for three to five minutes, then buff the dash and console dry with a clean detailing towel.

If you're doing a complete interior detail, you should also dust and clean out the vents and grill work. There are a variety of tools that work in vents and grills. The easiest to use is a vent brush and compressed air. If you don't have compressed air, you can use the blow cycle on your vacuum. Simply brush the vents and grills while blowing with air.

If your vents are disgustingly dirty, use a cotton swab or foam swab (electronics part cleaning swabs from Radio Shack) to clean out the dirt. An interior detailing spray works well on a foam swab to clean and beautify vents and speaker grills.

On consoles with a lot of nooks and crannies, it's best to use an old toothbrush followed by a towel to clean and protect. This same method works well around buttons and controls on the dash.

## **DOOR PANELS AND JAMS:-**

Door panels are often made of several materials, including fabric, vinyl, carpet and leather. Vinyl can be scrubbed to remove shoe scuffs. A spot remover such as 303 Carpet & Upholstery Cleaner can be used to easily remove black scuff marks from these areas. If the lower part of your door panel is leather, it will be treated a little differently, as discussed in the section on leather detailing.

Thoroughly clean around door handles, pulls and window cranks using a tooth brush and soapy wash water. Be sure to clean and dry the speaker grills and wells on arm rests, too. If the door panels have storage pockets, use your sponge or wash mitt to clean in these areas, as they tend to collect a lot of dirt and crud. Next, use your sponge or wash mitt and soapy water to clean all the way around the door frame and the door sill. When you're finished, dry the door completely with a clean towel.

If your door panel is leather or vinyl, be sure to treat it with a leather or vinyl protectant. Fabric door panels can be treated with a fabric protectant to reduce staining and fading.

## **DETAILING VINYL UPHOLSTERY:-**

Vinyl is the most durable upholstery, but it is not the easiest to keep clean. Unlike cloth or leather, the surface of vinyl generates static, which attracts dust. As a result, vinyl can quickly become grimy. The good news is, vinyl is the easiest upholstery to clean.

Do not use regular household soap and water on your vinyl upholstery. Detergent will permanently remove the sheen from the vinyl. Choose a cleaner that's safe on vinyl and plastic. 303 Aerospace Protectant is also great for removing stubborn spots on vinyl, including ink, marker, grease and gum.

Follow these easy steps for the perfect vinyl interior:-

- 1.) Spray vinyl with your favorite cleaner.
- 2.) Work the cleaning solution into seams, edges and seat backs using an upholstery scrub brush. If necessary, use an old toothbrush to get into the small crevices.
- 3.) Rinse the vinyl thoroughly with a bucket of clean water and a terrycloth towel.
- 4.) Dry the upholstery with a clean, dry terrycloth towel.
- 5.) Finally, apply your favorite vinyl dressing to restore the sheen.

A quick word about vinyl dressings: they're not all the same. Choose a dressing that gives you the look you want (flat to shiny). 303 Aerospace Protectant create a satin finish. There are other products available if you want a glossy finish. Another thing to consider is protection from the sun. The 303 and Sonus products offer good ultraviolet light protection.

### **DETAILING LEATHER UPHOLSTERY:-**

There are two cleaning-related factors that can cause your leather to prematurely wear. The first is dirt and the second is oil from your skin. The oil from your skin is actually the most damaging to your leather. This is particularly true if you wear shorts or a tank top, and have recently applied lotion or a sunscreen to your skin. Take this into consideration when determining your cleaning schedule.

Unlike fabric or vinyl upholstery, leather should be cleaned one section at a time. This means that once you have applied your cleaner or conditioner to one area, you should fully wipe down that area then proceed to the next, and so on. Work on an area no larger than 20cm at a time.

There are many different leather cleaners and conditioners available. Be sure to select a leather cleaner and conditioner appropriate for your leather upholstery. Modern leather upholstery is protected with a thin vinyl coating, whereas classic leather interiors are not. Do not use a product designed for uncoated leather on a coated leather finish, as it may quickly ruin the protective coating.

If you have a dark colored leather interior, I recommend cleaning twice a year. Light colored leather will need cleaning more often, even as much as every three months, depending on how easily the dirt is revealed. In between cleaning your leather, use a clean, damp towel to wipe down the surface completely. This removes the dust and light dirt so it won't have a chance to work into your leather.

For classic and coated leather finishes in new or like-new condition, I recommend Autoglym or Meguiars, as both are modern formulas that properly protects both coated and non-coated leather. For leather that is dry, worn or slightly ages, try Meguiars Leather Cleaner and Protector or Autoglym Leather Care Cream and Autoglym Leather Cleaner.

Follow these steps to clean your leather:-

- 1.) Apply the leather cleaner of your choice one section at a time and work the solution into a nice lather with a sponge. If your leather is heavily soiled, use an upholstery (interior detailing) brush.
- 2.) When finished scrubbing, be sure to remove all soap from the surface with a damp towel.

3.) Rinse and wipe several times, then dry the leather with a fresh, dry terrycloth towel.

By the way, water will not hurt your leather. Most leather is actually made (tanned) in water.

After the your car's leather has dried, apply the leather conditioner of your choice. Choose a leather protectant that gives you the look you want (flat to shiny).

Just like cleaning, apply leather conditioner one section at a time using a foam wax applicator. Work the conditioner in thoroughly. Allow the conditioner to soak in for a minute or two, then buff off the excess with a dry terry cloth towel or microfiber towel. It's important to buff off the excess. If you allow the excess to stay, your seats will be slippery. After a few minutes of soak time, your leather has taken in all the moisture it can. The remainder will simply evaporate, leaving that nasty film on the inside of your windows.

## **HOW TO DETAIL YOUR INTERIOR PART 2**

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### **DETAILING FABRIC UPHOLSTERY:-**

Fabric is the most difficult upholstery to detail. Unlike vinyl and leather, fabric upholstery easily soils and stains. You should expect to spend two to three hours detailing a sedan with fabric upholstery, a little less time for a truck or two-seater.

There are two basic methods and product choices to clean fabric:

Spray-On/Wipe-Off Cleaner (foaming or non-foaming) – These cleaners penetrate and lift dirt and stains to the surface where you can wipe them away.

Shampoo – A sudsy soap solution that requires agitation with a brush or sponge and rinsing.

For quick spot cleaning I recommend the spray-on/wipe-off type of cleaner. These cleaners are strong, and get deep into the soil or stain to thoroughly clean. A good example is 303 Carpet & Upholstery Cleaner. Before using any product on your car's fabric upholstery, test for color fading (colorfast) by cleaning a small, inconspicuous area. Do not use the product if it adversely changes your fabric's color or texture.

Rinsing is the key to shampooing your car's upholstery. If you don't rinse, the dirt and soap remain in the upholstery. Rinse water must be removed with a wet-dry vacuum, extractor or plenty of clean towels. Use a shop wet-dry vacuum, a coin-op car wash vacuum, or a carpet wet-dry machine rented from your local grocery store. Make sure you have the vacuum before you get started. Follow these easy steps:

- 1.) Fill a small bucket with a gallon of warm water.
- 2.) Spray spots and heavily soiled areas with a good spot remover. I recommend 303 Carpet & Upholstery Cleaner.
- 3.) If using a non-foaming cleaner, such as 303 Carpet & Upholstery Cleaner to shampoo the interior, mix four to six ounces of the cleaner in the bucket of warm water.
- 4.) Use an upholstery scrub brush and a sponge in a circular motion to agitate the upholstery with the cleaner. Apply as little water as possible.
- 5.) Wipe away the suds with a sponge or a damp terrycloth towel. Rinse the sponge frequently.
- 6.) Empty your bucket of soapy water and refill with clean warm water.

- 7.) Rinse your upholstery with clean water by wiping with a damp terrycloth towel. Rinse the soap from your towel often and wring it out. Use as little water as possible to rinse thoroughly.
- 8.) Vacuum your upholstery to extract the remaining rinse water. If you're not working on a warm, sunny day, use a hair dryer to complete the drying process. Be careful not to scorch the fabric by holding the dryer too close.

Allow the fabric to dry overnight before using. If possible, keep your windows open slightly to allow the moisture to escape.

To keep your fabric upholstery looking factory fresh for many years, consider using a fabric protectant. My favorite is 303 High Tech Fabric Guard. It blocks the Sun's damaging rays and repels water, oil, grease and dirt. Use a fabric guard only on new or just-cleaned upholstery. Your upholstery must be dry. Simply spray it on (two light coats is better than one) and let it dry.

### **SHAMPOOING CARPETS AND MATS:-**

Most automotive carpets are very durable, and will withstand repeated shampooing without signs of damage or wear. Carpet cleaning is not fast or easy. You should expect to spend 2-3 hours shampooing the front and rear carpet and mats in a sedan or SUV, a little less time for a truck or two-seater.

Before shampooing, the carpet and floor mats must be thoroughly vacuumed. To do a complete job, it may be necessary to remove the front seats, which requires the correct size Allen or socket wrench.

Follow these easy steps:

- 1.) Spray spots and heavily soiled areas with a good spot remover. I recommend 303 Carpet & Upholstery Cleaner.
- 2.) Mix 180ml of 303 Carpet & Upholstery Cleaner or another liquid upholstery cleaner in a bucket with 4.5ltrs of warm water.
- 3.) Use an upholstery scrub brush and a sponge in a circular motion to agitate the carpet.
- 4.) Wipe away the suds with a sponge or a damp terrycloth towel.
- 5.) Empty your bucket of soapy water and refill with clean warm water.
- 6.) Rinse your carpet with clean water by wiping with a damp terrycloth towel. Rinse the soap from your towel often and wring it out. Use as little water as possible to rinse thoroughly.
- 7.) Vacuum your carpet to extract the remaining rinse water.

If you're not working on a warm, sunny day, use a hair dryer to complete the drying process. Be careful not to scorch the carpet by holding the dryer too close.

Allow the carpet to dry overnight before using.

After shampooing, use a terry cloth towel, wet-dry vacuum or an extractor to remove as much water and shampoo as possible.

To keep your carpet and floor mats looking great, use a fabric protectant like 303 High Tech Fabric Guard. It's really cheap insurance against spills and stains.

### **SUMMARY:-**

Most of us spend eight to fifteen hours a week inside our cars, so it makes sense that we should keep it neat and tidy. Yet, finding the time to detail the inside of the car is difficult to fit into our busy schedules. If you take just five minutes each time you wash your car to remove the trash, shake out the mats, and wipe down the dash, console and seats, you can stay on top of this detailing chore. Then, when it comes time for a full interior detail, the task will not seem quite so daunting.