



The dirt on polishes and waxes

From Volume 32, Issue 2 - February 2008

Detailing

Definitions, techniques and tips for accomplishing the right polish or wax detail.

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The words "wax" and "polish" are often used interchangeably, but they're two distinctly different products. A wax protects. A polish cleans and preps the paint.

Innovations in both automotive paint and detailing have divided waxes and polishes into distinctly different categories, different steps of the detailing process. There are even sub-categories of waxes and polishes. And let's not forget paint sealants, often grouped under "synthetic waxes," but well deserving of their own category.

Yes, the terminology can be confusing to the average consumer, but you can be sure of one thing: a complete detailing arsenal includes waxes, polishes, and sealants. Your job is to choose the right pairing of products for the vehicle and the customer.

Choose the right product for the job

You're looking at a clean, dry vehicle...what next? Well, that depends on the condition of the paint.

Here are some common paint afflictions and the solutions:

- **Heavy Oxidation:** Break out the compound. A compound is the most aggressive type of polish. It has abrasives and cleaners to lift that dull, lifeless paint and smooth out the rough patches. You will have to follow with at least one secondary polish to restore surface gloss.
- **Heavy swirls, obvious even out of direct sunlight:** A heavy grade swirl remover, which is also in the polish family, will level out those swirls and restore the paint's smoothness. Again, a second, less aggressive polish should be used to restore gloss.
- **Moderate to light swirls, lackluster paint:** A mid-grade swirl remover should give you just enough leveling ability to correct the paint but not so much that any exhaustive finishing work is required. A lot of pros can go straight from this step to waxing.
- **Dull paint:** You have two choices: use a finishing polish if you've just used an aggressive polish. It will restore any lost surface gloss. Use a prewax cleaner on good paint that just needs some shine.

Polishing is the most time-consuming part of the paint care process. As a detailer, you have to find the products that give you the best results in the least amount of time. Look for low-dusting, professional grade polishes to reduce clean-up. Stay away from the compounds if possible. Compounds are sometimes the only solution for severe oxidation and scratches, but they don't do anything for gloss and they tend to dust a lot.

Use the least aggressive polish to get the job done, or else you'll spend a lot of time with a finishing polish. Simply put, keep it quick and clean.

Paint protection

Once you've restored the paint's gloss, what paint protection is best?

This is an easy question for a professional detailer. A paint sealant is usually faster to apply, produces a longer lasting finish, and — to the average customer — today's sealants look just as good as a carnauba wax.

The ultimate tiebreaker is, of course, cost effectiveness. An entire gallon of a quality paint sealant may cost anywhere from \$40-\$140. It can be applied in minutes by hand or with a buffer and the finish is going to last for 3-6 months, depending on the specific product. With most sealants, an entire vehicle can be protected with as little as two ounces of product. You're spending less time to apply a product that costs less money to get the virtually the same result.

Carnauba car wax is the standard for paint protection, dating back more than 50 years. It has a warm shine like melting butter, and for a show car, there is no other choice. But carnauba waxes often fall short in terms of cost-effectiveness.

A lower-priced carnauba paste wax may yield a decent shine, but it also contains solvents. Carnauba needs solvents to soften it but the type of solvent and its function within the wax will affect its ease of application. The solvents used by many manufacturers leave a white, chalky residue. This chalk can be tough to remove and it can cake in seams and around emblems, which will have to be tediously removed with a detail brush.

There are more buttery, easier-to-apply waxes on the market today, but these will typically cost more. However, the time saved during application and removal may offset the added expense of the wax. And, as I said before, for some cars and some customers, a carnauba wax is the only choice.

How paint care changed

Clear coats changed everything. If a single stage finish looked dull, you could use a compound and literally remove the top layer of paint to uncover fresh, new paint. Clear coats require more finesse. Clear coats retain gloss well, but they are susceptible to fine, hairline scratches.

Polish manufacturers caught up to the new paint technology quickly with swirl removers. Swirl removers work to level the scratch with progressively smaller abrasives while preserving as much of the clear coat as possible. With clear coats, the least aggressive approach is best to retain more of the clear coat and reduce finishing work.

Paint sealants sought to protect the paint longer than a wax using a completely synthetic formula, mainly relying on polymers. Polymers are nothing new. "Polymer" is a general term for groups of repeated molecules. It was the manipulation of polymers that enabled paint sealants to become a real viable alternative to wax.

Polymers cross-link, meaning the repeating chains of molecules form a web over the entire paint surface. The sealant isn't sitting there on the paint; chemical bonds are formed that increase the sealant's staying power and resistance to contaminants.

But durability wasn't enough to sway consumers towards paint sealants. Shine is and has always been what people want most. It's visible, it's tangible. Once manufacturers incorporated crystalline polymers to get that glassy, glossy look, paint sealants had a firm foothold in the industry. Today detailers and customers recognize the benefits of paint sealants.

Playing by the rules

Not only did paint care change, the rules governing manufacturing changed. The allowed levels of volatile organic compounds were cut drastically by a 2005 ruling by the Environmental Protection Agency. California had led the way with this type of legislation in the late '90s. Once the federal guidelines took effect, manufacturers had to comply or face stiff penalties. Manufacturers had to overhaul their formulas, which meant the disappearance of many tried-and-true products. Fortunately for detailers and their clients, the new formulas perform as well as their older counterparts and they're no more arduous or time-consuming to apply.

Paint technology and paint care are still changing. Automakers are moving towards hard, ceramic clear coats and polish manufacturers are right on their heels with faster cutting, low dusting polishes. Sealants continue to permeate the market and even waxes are taking on sealant-like durability with the additions of resins and polymers.

What all this means for professional detailers is more choices, more efficient products and potentially increased profits.

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