Headlight restoration kits

Headlight Restoration Kit Buying Guide

Headlight Restoration Kit Buying Guide Let There Be Light April 2016

Headlights with an aged, cloudy, or hazy look are becoming increasingly common, as the average age of all cars on the road continues to rise. Plus, most modern vehicles use replaceable bulbs with plastic lenses that are more prone to discoloration, rather than the more-durable glass sealed-beam units. Fortunately, our tests show that for a modest cost, even junkyard-ready lens covers can be made clear again.

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Getting Started

More than a cosmetic issue, clouded lenses can pose a serious threat to safety, compromising night vision and reducing the effectiveness of your headlights by up to 80 percent, based on our measurements.

Ultraviolet radiation from the sun is the primary culprit in the headlight aging process, compounded by other environmental factors. The problem tends to be most serious in warmer, sunny climates, but we've seen plenty of evidence of it in northern regions, including on employee cars in our own Yonkers, N.Y., parking lot.

In our experience, some makes and models seem to be more

susceptible than others, depending on the size, angle, and composition of the lens, and whether the car is garaged or spends its life on the street. The effects can vary from just a slight haze to making lenses virtually opaque.

Some manufacturers have responded to this trend by offering products to restore damaged lenses. The products vary in price, ease of use, and effectiveness. Some requiring power tools, while others need a fair bit of elbow grease. All take less than an hour of your time. Most require several steps, but the results can be well worth the effort. Our testing has found that they can make a big difference—particularly if you don't rush the job. And they can restore old headlamps for far less money than it would take to replace them.

We tried four products on dozens of headlights, and our tests show that even the poorest performer of the bunch can dramatically improve light output, depending on how badly the lenses are weathered. All cost less than \$25.

A year later, we found many of the tested lenses had begun to haze over again. A local body shop says it is common for them to refinish lenses annually for customers, confirming that restoration is not necessarily a long-term fix.

How We Tested

Using cars with clouded headlights belonging to Consumer Report staff volunteers, we evaluated products for their effectiveness and ease of use. We measured the change in light transmission before and after working on them in one of our labs, with a light meter and with controlled light sources. Mounted on a stand, the light meter was positioned in the brightest part of the light beam, and left in the same position

for the "after-restoration" measurement. After returning the cars to their owners, we brought them back into the lab eight weeks later to re-check the light transmission and see how the products held up over time.

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What We Tested

All four products basically involve sanding away the outer, fogged surface of the headlight lenses using progressively finer abrasives and polishing the lens to a smooth finish. Some also include a sealant. An important note is that some lenses have a hard protective coating that must be sanded off in order to refinish the plastic lens beneath. Only the Sylvania product was able to remove the hard coating with the supplied materials, out of the box. The others require the separate purchase of a sheet of 400-grit sandpaper to remove the coating before using. This type of hard coating was only seen on two of the cars we tested.

Three products are applied by hand and require no special tools. One, the 3M Headlight Lens Restoration System, requires the use of a handheld electric drill fitted with a special applicator pad. We found that with any of the tested products, the harder and more diligently you work, the better the results. All tested products are available online or at auto parts stores.

Sylvania Headlight Restoration Kit (\$21)

The Sylvania Headlight Restoration Kit provided the greatest improvement in illumination and appearance with no noticeable degradation over time. It involves a total of six steps,

including progressively finer grades of emery paper, rinsing, and a final coat of UV-blocking polymer coating that is best applied with rubber gloves and in a well-ventilated area. Applied entirely by hand, it reduces the risk of damage to surrounding paint. The Sylvania sanding papers are larger than those included with some other products, making them easier to use, but the best results do require some effort.

Shop Sylvania Headlight Restoration Kit on Amazon

3M Headlight Lens Restoration System 29008 (\$15)

The 3M Headlight Lens Restoration System worked almost as well as the Sylvania, with greatly improved lighting and appearance, and no noticeable degradation. It requires fewer steps than the Sylvania, for a total of four overall, but more polishing is required. The kit includes sanding disks that attach to an electric drill. While do-it-yourselfers comfortable with power tools might prefer this method of application, it does require a steady hand, some bravery, and masking tape to avoid damaging surrounding paint. Curved lenses can be particularly Tricky.

Shop 3M Headlight Lens Restoration System 29008 on Amazon

Turtle Wax Headlight Lens Restorer (\$9)

The least expensive product we tested, the Turtle Wax Lens Restorer improved our lenses almost as well as the top-performing Sylvania product, but it did not last as long. A total of six steps are required, the last of which is a wipe-on

sealant that wore away quickly. Turtle Wax also scrimps on material, providing very small abrasive pads that make the job of sanding and polishing even harder on your fingers.

Shop Turtle Wax Headlight Lens Restorer on Amazon

Fast Brite Auto Headlight Restorer Kit (\$17)

Sometimes seen in television infomercials, Fast Brite Auto Headlight Restorer Kit was the easiest and fastest to use in our testing. But it made the smallest overall improvement in light transmission and appearance. After use, our headlights still appeared somewhat cloudy in appearance. The included protective coating wore off quickly. Only two steps are required. Sold online, the Fast Brite website offers a buy one, get one free package of two kits for \$10. But it charges an additional \$7.95 for shipping and handling on each kit. For that money, there are better choices.

Shop Fast Brite Auto Headlight Restorer Kit on Amazon

Consumer Reports' Take

All the headlight restoration kits worked to some degree on at least some headlights, but only the Sylvania could be used with all tested lenses. Further, the Sylvania product also provided the best and longest-lasting results. 3M provides similar performance at a lower price, but it carries the risk of scratching painted surfaces abutting headlights and should only be used by those comfortable with using power tools. Turtle Wax is the bargain-basement product of the bunch, at less than

half the cost of the top-performing Sylvania. But neither Turtle Wax nor Fast Brite lasted as long as the others.

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Shopping Tips

- For any of the products, it is a good idea to watch the manufacturer's instructional videos online.
- Examine your lenses closely before purchasing any of these restoration kits. If they appear clear, don't use a lens restoration product. They are abrasive and can easily damage lenses that don't need such severe restoration.
- If your lenses are clear but your lights appear to be dimmer than they used to be, you may need new bulbs. Even without blowing altogether, all bulbs dim over time and should be replaced after a few years.
- Get in the habit of regularly cleaning your lenses with a household glass cleaner. Even a simple cleaning can make a big difference in how well you can see, especially if you live in an

area with a lot of snow, ice, and road salt.

- All these products require buffing out after applying. We have found microfiber rags are a good choice for this, because they don't leave residue. Packages of microfiber rags are readily available at discount stores for a few dollars.
- Sylvania's protective coatings need to be allowed to dry after applying. Don't plan on using the car for an hour or so after use.

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