

3M HEADLIGHT LENS RESTORATION SYSTEM

For Use with a Household Drill (1200-1600rpm)

Kit Includes:

- 1 - Disc Pad Holder
 - 1 - 3M™ Soft Interface Pad
 - 6 - 3M™ Sanding Discs
 - 4 - 3M™ Finishing Discs
 - 1 - 3M™ Trizact™ Disc
 - 1 - 3M™ Headlight Lens Polish, 1 oz
 - 1 - Buffing Pad
- Step by step directions

You Supply:

- 1 - Standard household drill (1200-1600 rpm)
- 3M™ Automotive Masking Tape
- Spray bottle and water

⚠ WARNING



For applications that could create airborne dust, provide appropriate exhaust or dust capture. Wear an appropriate Government-approved respirator to help reduce contaminant exposures. Excessive inhalation of certain dust particles can cause serious injury.

WARNING! COMBUSTIBLE LIQUID AND VAPOR.

Read carefully other cautions and first aid on 3M™ Headlight Lens Polish (PN 39005) packet.

Before



After



The 3M™ Headlight Lens Restoration System is designed to restore clarity to headlight lenses that have become yellowed, cloudy, or hazed over time. By restoring clarity to the lens you improve the performance of the headlight and enhance the appearance of the vehicle.

Headlight lenses have either a hard surface layer or a UV resistant coating on the outer surface of the lens. Once a lens has been degraded by sun or UV light and becomes yellowed or cloudy, it is necessary to remove that yellowed layer in order to restore clarity to the lens. The effort required to refurbish headlight lenses will vary greatly by vehicle manufacturer, year, make, model, and headlight design. **Large or extremely hazed lenses may require more than one kit.**

With the 3M™ Headlight Lens Restoration System, you will use a 1200-1600 rpm drill equipped with a backup pad and sanding discs to remove the yellowed layer from the headlight lens surface. A higher rpm drill could generate excessive heat and can cause damage to the headlight lens that is difficult to remove. A lower rpm drill does not work efficiently for this process. Two sanding steps will follow to refine or reduce the sand scratches that are made when removing the yellowed layer. Finally, 3M™ Headlight Lens Polish and a foam pad will remove the fine scratches and put the final clarity on the headlight lens.

Consider the condition of your headlight lenses:

- If lenses are 3-5 years old and do not have any yellowing or do not appear cloudy, do not proceed with the 3M™ Headlight Lens Restoration System.
- This process will not repair moisture, damage, or defects on the inside of the headlight lens.
- If lenses are yellowed and/or cloudy due to age and weathering, proceed with this process.
- Larger or extremely hazed lenses may require more than one kit.

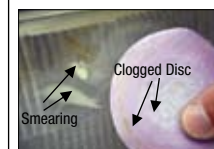
PREPARING THE LENS AND THE DRILL



1. Clean the lens with soap and water.
2. Protect trim and painted surfaces around the headlight lens with 3M masking tape. Two layers of masking tape are recommended for added protection. Damage will occur if these surfaces are not protected.
3. With the power disconnected, mount the back-up pad into the 1200-1600rpm drill. Follow the drill manufacturer instructions to properly attach the back-up pad securely into the drill.
 - For taillight lenses, start at Step 10.

REMOVAL OF THE YELLOWED LAYER AND DEFECT

4. Attach and center the P500 grit gold-colored abrasive disc to the back-up pad.



Important Sanding Tips:

Hold the drill flat or at a very slight angle when sanding on the lens. This will help control the tool and allow for smooth and even sanding.

Do **not** use excessive pressure down on the drill or headlight lens. Do not hold the drill in one place while sanding. This can cause the lens surface to heat up and smear, becoming difficult to remove.

Control the drill by moving at a slow, steady, even speed at all times across the headlight lens. Do not move the drill at a fast, erratic speed on the headlight lens.

If abrasive disc becomes clogged or is no longer removing material, change to a new disc. Wiping the abrasive disc and lens frequently with a paper towel will reduce clogging and extend the life of the disc.



5. Using medium to light pressure, begin sanding to remove the yellowing and surface defects from the lens. A slow and steady back and fourth action will be most effective. When the disc is clogged or no longer sanding effectively, replace with a new P500 grit disc.

6. Wipe off the lens and inspect to ensure all the yellowing and defects have been completely removed. If yellowing, defects, or portions of the surface coating still exist, continue sanding with P500 grit discs until they are completely removed.

Before proceeding to step 7:



Continue Sanding



Proceed to Step 7

Important: The lens should have a white, evenly sanded surface that appears to look “frosted.” If any portion of the lens looks clear or glossy, continue sanding before moving to the next step.



REDUCING SAND SCRATCHES

7. Remove the P500 disc. Attach and center a P800 grit abrasive disc to the back-up pad. These are the white sanding discs with purple printing on the back.



8. Using medium to light pressure, begin sanding to reduce the sand scratches from a P500 to a P800 grit scratch. When the disc is clogged or no longer sanding effectively, replace with a new P800 grit disc. Make several passes

over the entire lens to be sure the P500 grit scratches from the previous step are reduced to P800 grit scratches.

9. Wipe the lens, notice the scratches are finer. If any coarse scratches are visible, continue sanding that area with the P800 disc until the coarse scratches are reduced.

10. Remove the P800 disc. Attach and center a 3M™ P3000 Trizact™ Foam Disc. This is the thin, foam disc that looks green/grey in color.



11. Using a spray bottle, apply enough water to dampen the 3M™ P3000 Trizact™ Foam Disc and the lens surface before sanding. The foam abrasive disc can be used flat against the lens. Using medium to light pressure, begin sanding to reduce the P800 grit scratches to P3000 grit scratches. Add a mist of water to the surface if it becomes dry while sanding.



12. On many lenses, a white residual or slurry will build up on the lens indicating you are reducing the sand scratches. Continue with 4-6 passes over the lens **after** you start seeing the white residual or slurry on the lens surface. If the lens does not produce a white slurry, make 10-12 passes on the lens.

- Extra sanding on this step will make the next step easier and improve the final clarity of the headlight lens.
- Avoid sharp edges or alignment pins on the lens to extend the life of the discs as this one disc will be used for any additional lenses.

13. Wipe the lens, you will notice the scratches are much finer and the lens appears somewhat clear. If any coarse scratches are visible, mist the area with water and continue sanding with the P3000 disc.



14



15



16



17

POLISHING THE LENS

14. Remove the P3000 foam disc. Attach and center the orange foam compounding pad.

15. Dispense a dime-sized amount of 3M™ Headlight Lens Polish to the orange foam compounding pad. Before turning the drill on, smear the polish with the orange foam pad around the lens. This will reduce spatter. Too much 3M™ Headlight Lens Polish will result in excessive splatter and added clean up. Do not run the foam pad dry.

16. Holding the pad flat on the lens, polish the lens until the cloudy haze is gone and the clarity is significantly improved. If additional clarity is needed or desired, add another dime-size amount of 3M™ Headlight Lens Polish and continue buffing.

- If sanding scratches are still visible on lens, repeat steps 10-16.

17. Remove the masking tape and wipe the lens using clean 3M™ Microfiber Detail Cloth (PN 39016). Wash any residual spatter from the vehicle using car wash soap and a soft, clean cloth.

To maintain the clarity of the headlight lens over time, consider occasionally using 3M™ Plastic Cleaner and 3M™ Plastic Polish.

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Additional Product Safety and Health Information Source:

Material Safety Data Sheet or

3M Automotive Aftermarket Division

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