Alfa BITS: TECH NOTE

Headlight Cleaning – Milano example
Karl Maxon, AROO, March 2008

Have you had to replace one of your old headlights with a new one, only to find the remaining old one looks foggy, milky or opaque? Or do you have a car that one of the headlights has gotten that foggy/milky look to it over time? There's a simple fix I've done on several cars and motorcycles over the years and that's to simply wash it out.

This was recently the case on our newly acquired Milano. The passenger side headlight was older, and when turned on looked foggy or milky at the lens compared to the newer driver side one.

The first hurdle encountered was how to get the headlight out. I've got an older service manual that has no information as to removal, and neither does the original owners manual. Patrick Iaboni helped me out with some simple instructions:

> Unscrew the grill center support screw (top center of grill) then gently pull forward on each side of the grill which is held in by retaining pins attached to the grill that insert into clips at the headlight mounting bracket.
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> Next, the entire headlight and parking light assembly can quickly be extracted by removing the two bolts just inboard of each headlight (the bolt heads face forward) and then removing the one flange nut on the long stud next to the parking light bulb/connector on the inside of the headlight assembly. Unplug the wiring to the headlight and parking light then pull forward on the headlight assembly to remove it from the car. There's another way to remove the headlight discussed below – but much more difficult to do I believe.

With the bulb out of the headlight (twist the ring and pull bulb out), go to your favorite sink and after rinsing dirt off the outside fill the headlight a bit with warm water then add a few drops of mild liquid soap and then fill with more water to make some suds. On some headlights, in particular those with H4 bulbs, the opening is big enough to fit some small handy sponges with handles that I have but in this case the 9004 bulb opening is too small. So instead of using sponges I simply covered the opening with my hand and shook and sloshed the soapy water for several minutes and then immediately poured it out. I then filled and emptied the headlight with plain warm water until all soap was gone to see the progress, then repeated the soap and rinse process several more times until the headlight looked new inside. The milky/foggy film in the inside of the lens remained longest in the upper corners, but finally come out relatively quickly and completely.

I used an automotive liquid soap for the wash that was "spot free", and I also tried an idea Nancy Gunter suggested – the use of Jet Dry on the some of the last few rinses before ending the rinsing with plenty of plain warm water. This seemed to help as the water did run readily down from the lens and the reflector with little beading compared to prior times I've done this on other headlights. Nancy also suggested carafe cleaner too – but I haven't given that a try yet and would probably test it out on an old plastic or metal reflector first to make sure to watch for potential corrosive damage.

Given the shape of the Milano headlight, water can get trapped in the sill that goes all the way around the outside rim (on the inside of the lens) where the lens and plastic reflector meet. By shaking the headlight and "rolling" it I was able to get the vast majority of water residue out. The rest will come out in the drying process.

Dry off the outside of the lens and backside of the assembly with a cloth or paper towel, and set the headlight on a flat surface with lens facing forward like normal, then set a hair dryer about 18 inches behind the headlight aimed at the bulb hole. Turn on the dryer to the "low" setting and check to see if warm air is going in or at least aimed at the hole. The distance is important, as is frequently checking the back of the headlight as the plastic reflector seems to be really thin

plastic – so keep checking that it's not getting too hot. I know that when in operation the bulb/motor/street heat radiation gets everything hot too, but just to be safe I'd watch the heat from the dryer as it may be more concentrated on a particular spot. From time to time take the dryer by hand and heat up the entire backside of the reflector. You'll notice during the process that any water vapor will condense and pool as droplets to the bottom of the headlight – pour it out. Next set the dryer about 18 inches in front of the lens so it warms up slowly and again periodically use the dryer by hand all around the assembly and lens, pour out any condensation droplets, then let it cool off slowly (watch that the lens doesn't get too hot – just good and warm is all you need!). After lens cools a few minutes set headlight facing lens down on a soft towel and use the dryer all around the backside to warm up the reflector again. This appears to help most of the water vapor escape through bulb hole.

As the headlight cools and it's lifted straight up from the towel (lens facing down) you may see a few drops of water in one corner or another that came down from one of the sills round the outside edge of the lens. Turning the lens/headlight over at this point will probably just put that water back onto the sill rather than it running out through the bulb hole. So while that water's in the corner (roll or tilt headlight to get water into a corner) it can be removed by making a long "stick" out of a sheet of paper towel. The paper towel rolled tightly will retain its shape and can be stuck through the hole all the way to the corner and will suck up the water, then pull it back out. Using a cloth towel won't work as it wont' retain its shape. I only needed to do this twice before any remaining water drops appeared to be out/gone. Repeat the entire heating cycle and positions several times until you're satisfied there's no remaining water vapor or water drops anywhere in the headlight, then let it cool off with bulb hole facing up, possibly overnight if you want. The heating is the important part to getting all the water out as the water needs to be turned into water vapor – it just takes a long time and patience to be careful of not overheating, and ensuring it's dry inside with no condensation or remaining water droplets.

During the process I also noticed the newer drivers side headlight "rattled" in its mount quite a bit. I removed entire bracket assembly like the passenger side above and finally found that the little V clips that hold the headlight at each of the adjustment pins/screws could be pushed onto the clip retainers a bit further. Doing this eliminated the rattle and the headlight was now snug. Patrick later confirmed that the headlight can be removed by just taking off the V clips rather than removing the entire bracket, but that the bottom V clips are nearly impossible to reach with the headlight assembly in the car. I can't imagine trying to put those V clips back on snuggly with the headlight bracket assembly in the car, so I would remove the entire assembly for servicing as Patrick initially recommended to me.

I also took the time to replace the parking light and headlight bulbs and used electric contact cleaner/lube on all the connectors. I kept the parking light bulb holders in place during the wash so no water would get inside the parking lights. Reassembly is easy – just reverse the order of disassembly – no need to readjust headlights as the brackets are aligned as before removal. The only tools needed were a Phillips screwdriver (for the grill center support), a 10mm socket (for forward facing headlight assembly bracket bolts), and a 10mm wrench (for the inside flange nut on the long stud). Now the Milano's "old" headlight looks as new as the "new" headlight.

A final reminder – don't heat any plastic or glass lens too quickly or too hot – try to use just a little heat or warmth and take awhile longer instead. I believe this is a hands-on process, and I do not recommend placing the headlight or assembly in an oven or on a heat outlet/register as the heat cycle would be more difficult to monitor and adjust as needed. Remember that often there are rubber seals between a glass lens and plastic or metal reflector, so caution with heat and corrosive products should be taken.