

Big Healey Reflector to Light Conversion For BN4 Through BJ 8 Phase I

by Charlie Baldwin

Recently the subject of making a light out of the reflectors on big Healeys came up on the Austin-Healey email list. The reason behind this is to add more lighting to the rear of the car, especially brake and turn signal lights. Some suggested mounting aftermarket lights somehow in the holes where the reflectors go, but that would seem to change the appearance of the car too much. One suggestion really caught my eye. Laurie Wilford of the Austin Healey Club of Southern Ontario gave a link to their club's website that described how he had worked out a way to make a light from the existing reflector. The link to his tech article is <http://www.ahcso.com/Tech%20Talk/Lauries%20New%20Brk%20Ltg%20Assembly.htm> where he described finding some low voltage lamps at Home Depot and working out a way to mount them.

Also check out Hendrix Wire Wheel's site where they market a similar conversion for \$109.95:

<http://www.hendrixwirewheel.com/taillights.html>

These conversions make an extra brake and turn signal light out of the reflectors and also allow them to work as originally designed while your car is parked.

A few days later I found myself in Lowes and decided to look for the lamps he referred to. What he used is MR 11, 1 3/8" diameter, 12-volt flood or spot light bulbs that have two very tiny fragile pins coming out the back. To attach his wires to them he used spade connectors.

I didn't care for the spade connector idea, so went searching on the Internet for a socket to plug into the tiny pins to make the assembly less fragile. All I could find were some ceramic sockets, which appeared too large to use; however, I did stumble across the information that the same size MR 11 type bulb comes in a bayonet mount. A bayonet mount is what we are used to seeing on all of our taillight and parking light assemblies. These bulbs have what is called a BA15D bayonet mount for which sockets are available. Here are pictures of the MR 11 with the pin mount and the bayonet mount and socket:



As it turns out the bayonet mount bulb and socket are much more substantial than the pin mount. The reflector is made of aluminum rather than glass and has a plastic cover over it to protect the actual bulb, kind of like a miniature sealed beam unit.

The installation involves removing the reflector unit from the car and then taking it apart. It is installed in the car like a rubber grommet would be, so push the rubber from the inside of the trunk to the rear and it should pop out. Here is what it looks like after it is removed:



Then you need to take it apart by gently prying the rubber out of the chrome ring with a small screwdriver. Be careful not to stick the screwdriver in too far as you could break or chip the plastic lens. If an original Lucas reflector unit, it should have a heavy aluminum foil backing on the lens, which needs to be removed by getting under its edge and pulling it free. Here is what you will have when you get everything apart:



The original reflector for my car, a BT7, is not flat, but has a well in the back that the MR11 fits down into. I've found that Longbridge 100-6s and the Moss aftermarket reflectors do not have this well.

The next step is to glue the reflector to the MR11 with a bead of clear silicone around the perimeter. This material will allow you to cut through it to replace the lamp when it burns out and also forms a cushioned weatherproof seal. Here is what they will look like at this point:



The rubber then needs to have a hole bored through the center of it so that the bulb can go through. I found that a 1" diameter hole is best to allow the cone shape of the bulb to fit. Rubber is a difficult medium to bore a 1" hole in. I tried a spade type wood drill, which doesn't work the best. Then I got a 1" hole saw that did a fairly good job.

All that needs to be done now is to put the assembly back together after making sure that the silicone has had plenty of time to cure. I would recommend overnight.

The rubber from my original 43-year-old reflector assemblies was quite hard and brittle and cracked some when I took them apart, so I decided to use the chrome and rubber from the aftermarket Moss units and the original Lucas lens, since the repro units do not say Lucas on them. This ended up being a bit of a problem since the Moss reflector was flat and the original had a well in it as mentioned above. It can be done, but would have been much easier to just use the Moss lenses. By the way, they did not have the heavy aluminum foil on the back of them. To do it this way, you need to cut the new rubber so that the original lens fits into it properly. Rubber just doesn't lend itself well to being machined and I ended up using a pair of side cutting pliers to snip away what I needed to remove around the perimeter of the new rubber. Perhaps a Dremel grinding bit would do a better job.

Next, after remounting the modified reflectors back in the car, the wiring needs to be connected. The sockets I got came with leads around 18" long, which is plenty long for the ground (black) wire, but not long enough for the hot (white) wire. Put appropriate crimped on ends on the black wires and connect them to a handy ground point. Both white wires need to connect to the snap connectors at the left side of the rear of the trunk. The easiest way to do this is to switch the existing single connectors for double ones and connect the white wires with the original type of bullet connector. Both white wires will need to be lengthened in order to reach the snap connectors. Plug the left hand one into the connector that has the white with purple tracer and the right

hand one into the connector that has the white with brown tracer. That way they will flash with the same side original turn signal and brake lights below.

I ordered my bulbs and sockets over the Internet from Pureland Supply in Unionville, PA. Go to <http://www.purelandsupply.com/item.jhtml?UCIDs=714694%7C1108282&PRID=1133354> and <http://www.purelandsupply.com/item.jhtml?UCIDs=714694%7C1235098&PRID=1434366>. I went with the 20-watt narrow (6 degree) spot, which has the highest candlepower rating. Also available are an 18-degree spot and a flood bulb. The red reflector lens diffuses the light a fair amount, so I wanted the brightest light possible. The stock brake/turn signal relay and flasher relay can handle the extra wattage with just the slightest increase in the flashing rate. Heat, also is not a problem due to the intermittent operation of the lamps.

Price was approximately \$50 with shipping and PA sales tax. I'm sure that with some searching, these parts could be found for less cost.