## ACCIDENT PREVENTION STEP – REPLACE REAR TAIL LIGHTS WITH LED

Obviously, you can't control other drivers but you can install LED taillights as a precaution to help prevent being hit in the rear. The original taillights and stoplights are not as easily seen as modern LED lights, particularly in low visibility conditions. The following steps detail how to convert your old taillights to more visible LED lights. This is a worthwhile upgrade that might prevent an accident and save life and limb. Here are the steps.

## LED Taillights Connected with Taillight Bulb Base

Purchase LED trailer lights from Harbor Freight or other source. Harbor Freight #93263-9VGA, 4" Submersible LED Stop/Turn Tail Light. \$19.99 (on sale at this writing for \$14.99).

Use updated taillight lenses from Chevrolet or GMC Vans 1985 – 1996.

Remove inner shell of taillight lenses with Dremel Rotary Tool or other appropriate tool.

Secure taillight lenses with screws to wooden board, fastened to drill press bed.

Cut hole using an adjustable circle cutter, such as Harbor Freight #37370-1VGA, which is designed to give a clean cut. Practice on scrap plastic or wood to make sure you have the size set correctly. An interference fit is best. Locate hole in plastic lens so wire connector to the LED light will fit inside taillight recess area. Use small amount of clear silicone caulking and press LED taillight into lens.

Next, remove glass and adhesive from inside a #1157 standard taillight bulb base.

Remove old solder from light bulb connections in metal base of bulb.

Insert LED wiring into base. Solder wires to appropriate locations.

White to ground inside metal base

Red to base bottom connection – solder from outside and round solder for connection Black to base bottom connection - solder from outside and round solder for connection

Bend a short piece of 14-gauge wire into a U-shape, insert and solder into metal base to form a handle.

Pour epoxy into cavity to securely hold soldered wires and 14-gauge wire handle in place.

When epoxy is cured, hold handle and turn the bulb base into the taillight socket just as you would a light bulb.

Pictures are worth a thousand words:



(Ref. picture on right - notice wire handle installed in the metal bulb base)



Installed LED's and finished product

## Additional information:

Because the LED does not draw as much current as the light bulb, if you have installed Rosta electronic cruise control you will probably need to add the following to the electronic circuit. Otherwise, you may not be able to engage the cruise control. This holds true regardless of how you wire the LED taillights.

The violet wire in the Rosta system is either looking for ground or 12 volts. In the added circuit, when the brake switch is engaged a relay is energized. The normally open contact closes and supplies 12 volts to the violet wire of the cruise control. The relay closed contact goes to ground. When the brake switch is deactivated the violet wire of the cruise control goes to ground through the normally closed contact.

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