

# **Safety Tips #31**

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## **Lighting**

I'm getting' older (aren't we all?), and my vision ain't what it used to be. Not even close. I find I have to be more alert and pro-active in order to successfully deal with potential hazards when I ride, especially at night.

We all know that many motorists don't see motorcycles in time (or at all), and as the average age of drivers increases, we can assume that, since their vision is getting worse, so is the problem of not being noticed when we ride.

Visibility – it's about both seeing and being seen.

Lately I have been on a quest to improve my visibility when I am on my bikes. I have done some research into cost-effective ways to improve the lighting on my bikes, and I'd like to share that now. The first bike I am working on is

my main ride, a 2003 Harley FLHTI (ElectraGlide). But the make and model doesn't matter much for the purposes of this discussion because most of the improvements I have chosen apply to almost any bike. My parameters are: cost, effectiveness of the lighting changes, electrical load on the charging system, and changes to the look of the bike; I am not looking to make any significant changes to its appearance and have extra lights hanging off the bike. I just want to improve on what is already there. First, I want to improve the headlight. I just bought a PIAA Xtreme White Headlight bulb (mine is type H4, but many other types are available). The factory H4 bulb that came on my bike is rated at 55 watts low beam/60 watts high beam. This PIAA bulb has the same ratings, but is claimed to be twice as bright! So it won't draw any more electrical power than the stock unit. I have not installed the new bulb yet, but I have high hopes that it will be a marked improvement. The cost of the new bulb is about \$50; if the manufacturer's claims are true, I figure that the price is well worth it. I will carefully wrap up the old bulb and carry it in my

saddlebag just in case I need it. This type of improvement can be made on most bikes. The ElectraGlide has a fender tip light on both the front and rear fenders; they seem to be mostly decorative, and I don't think they really make the bike more noticeable to drivers. I just found out about a company called Custom Dynamics. They make lots of LED (light emitting diode) options for bikes. One of their products replaces the wimpy #194 bulb that is used in both front and rear fender tip lights: it is an LED panel with 40 white LEDs on it and it fits underneath the existing lens. I opted to install a clear front lens to replace the stock amber one. I have already done this modification (takes about 2 minutes with a single flat-blade screwdriver, and costs \$38 including the new lens); and it makes a huge improvement! Forty bright LEDs facing forward through a clear lens – I am much more visible now. Another good thing about LEDs – they draw a lot less power than incandescent light bulbs.

For the rear of the bike I tried a 4-LED replacement for the #194 bulb (also from Custom Dynamics). Unfortunately, this mod

was not a success. This new LED unit faces upward, and it turns out that LED light is very directional; so the view of the rear of the bike is not enhanced by this unit at all. The sixteen dollars were not well-spent. They do make a 40-LED panel for the rear fender tip as well, so I may go for that one soon; I know that will make a big difference.

I also bought a PIAA Xtreme White #1157 stop/taillight bulb to replace the stock bulb. It's rated at 27 watts – pretty healthy for a taillight! I haven't installed that one yet, but I have high hopes for it. These are about \$20 for a pair, and they should be well worth it for cost-effectiveness. The extra one will go in the saddlebag, too. This bulb will draw more electrical power than the stock bulb, but not so much that the charging system will be taxed. I will report on the effectiveness of both the headlight and tail/stoplight bulbs in my next article if things go as planned. The only change to the look of the bike from these modifications is that I went from an amber fender tip light to a clear one, otherwise the bike looks stock.

There are many options for improvement to turn signals as well. But be aware that when you change to LED turn signal bulbs you will most likely have to either change your flasher unit or install a load equalizer. Remember, the LED units use less power, and that will fool your stock flasher unit into thinking that you have a burned out bulb. I have not made changes to my turn signals because of this, but I am giving it some thought.

A few other cautions: some LED lighting is not DOT approved (yet), so it comes in packaging that says “for off-road or show use”. Some LED replacement bulbs are red or amber, and may not show well through your red or amber lenses. So either look for a white LED bulb, or change the lenses to clear ones.

Do not handle halogen bulbs with your bare fingers, as it will reduce the longevity of the bulb. Any dirt or oils from your skin or other places are enemies of the bulb.

Amber lights can face any direction. Red faces the rear. White faces the front. You get the drill. So far I have under \$150 invested in improved lighting and I expect it to be money well-spent.

Stay tuned for the report next month.