# Turn Signal Relay Replacement

## for 1980 Suzuki GS850GT

by BassCliff (with special thanks to Mr. longgreensilverado)

I was riding to work one day and my blinkers were working fine, until I got on the freeway. I really don't think the freeway had anything to do with their going out. They just happened to pick that time to quit flashing. The front and rear signals would light up on either the right or the left, but they wouldn't blink.

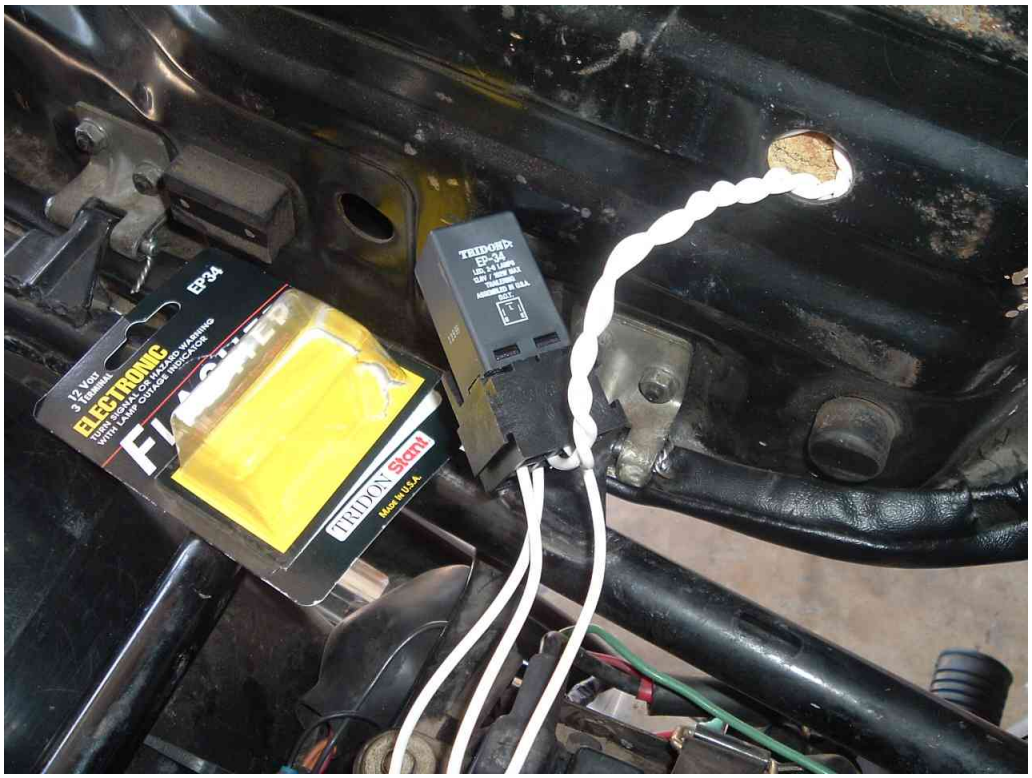
In the Suzuki GS850G manual, section 12-17 (that's page 256 of the PDF file you can download from my site) there is a quick troubleshooting guide for this problem. Simply stated, if you have 12v at terminal B (the Orange/Green wire) of the turn signal relay, but the blinkers are not blinking, then you have a defective turn signal relay. The updated Suzuki OEM part number for the turn signal relay is 38610-49231.

I don't know about you, but it's a little disconcerting to me to ride the Southern California freeways without turn signals. As much as I love BikeBandit.com and Z1Enterprises.com, I just didn't want to pay $40 or more, plus shipping, and wait a week for a new part. So I went to my local Pep Boys Auto, picked up a generic flasher, a socket (which really isn't critical for this repair), and some shrink tubing. Note that this repair will disable the auto-cancelling feature of the turn signals, but it will allow for further upgrades if/when I decide to install high intensity LED running lights and blinkers. (I like products from superbrightleds.com.)

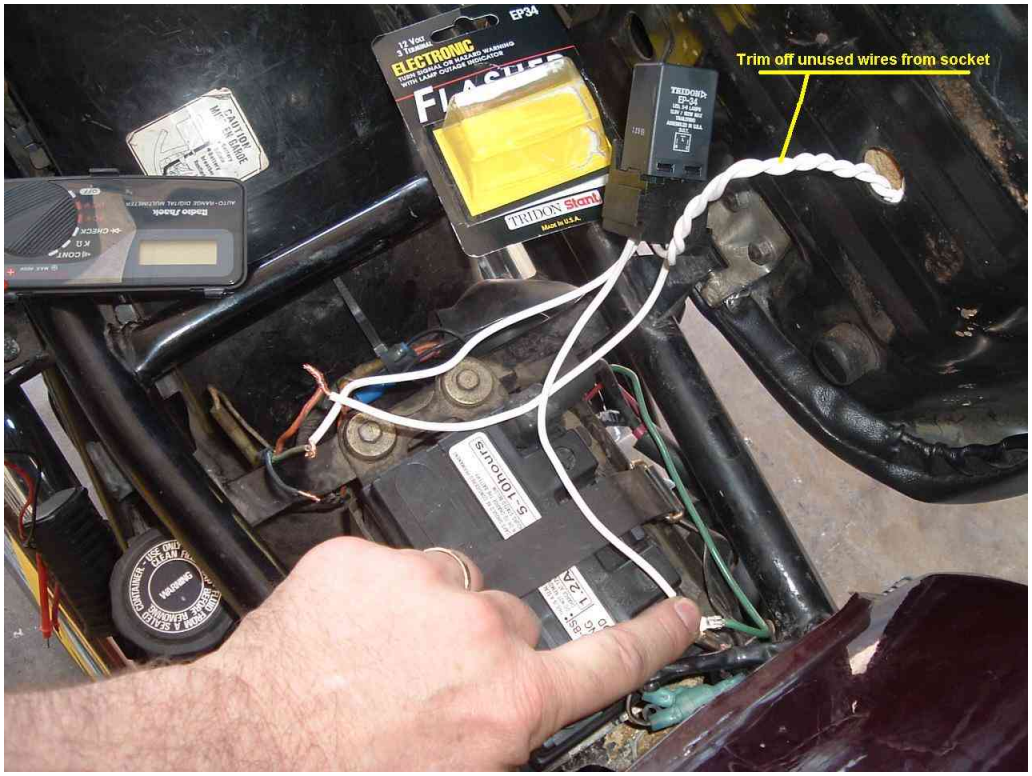
Before I made my trip to the auto parts store, I did a quick search in the **Technical Info** section of the **GS Resources Forum**. There I found Mr. longgreensilverado's post in which he outlined his procedure for replacing the stock Suzuki turn signal relay. I have adapted the information in his post and included some pictures for clarity. Here is the defective unit, on the right side of the battery box, after I had cut the wires from the socket.

Following Mr. longgreensilverado's advice, I purchased a Tridon Stant EP34 electronic flasher ($10 or less). A relay socket is optional, but it came in handy for mounting the relay. The socket I purchased is a Bosch style 4 or 5 terminal socket made by Motormite, part# 85170. If you don't use the relay socket, you will need some female blade connectors to wire up to the blades of your flasher unit.

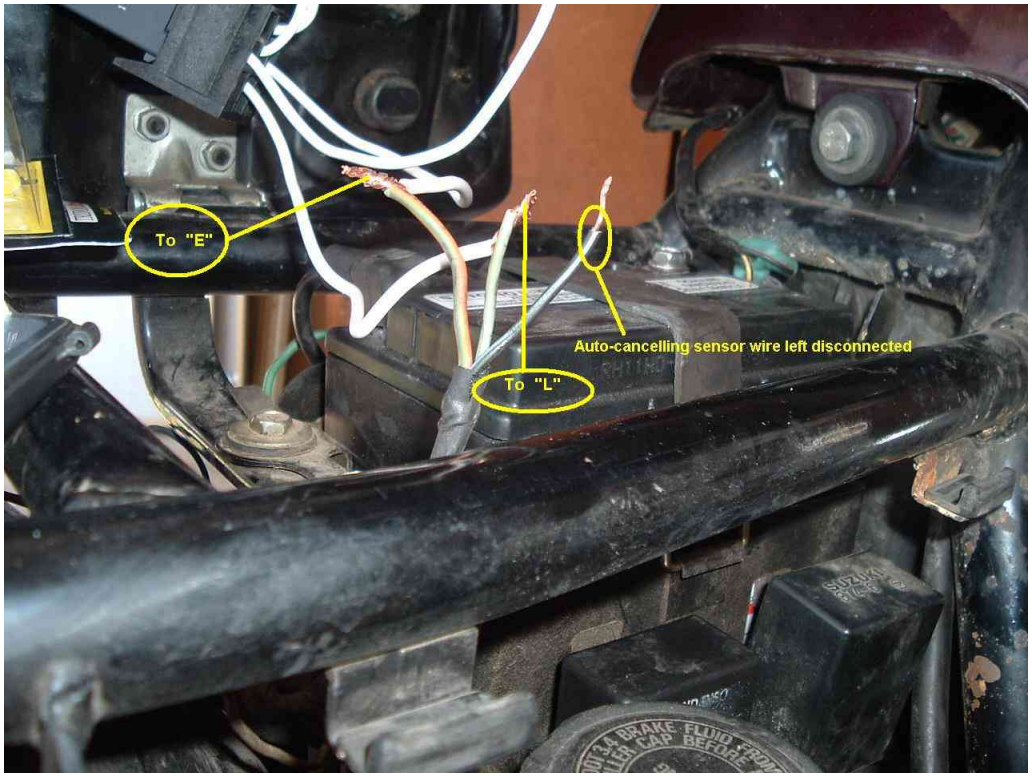
My socket came with a couple of extra wires, which I used to hold the relay in place while I tested, to be sure I had it connected for proper operation. I'll clip off those 2 extra wires later.



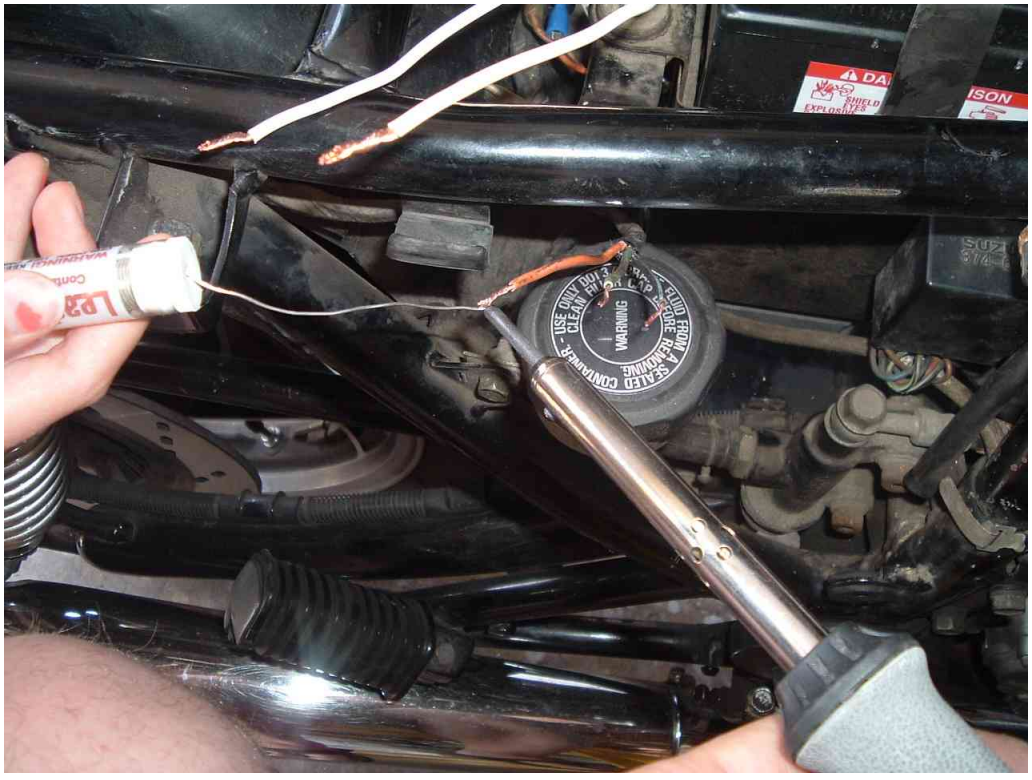

Below, I am testing my connections to make sure the relay will flash the turn signals.



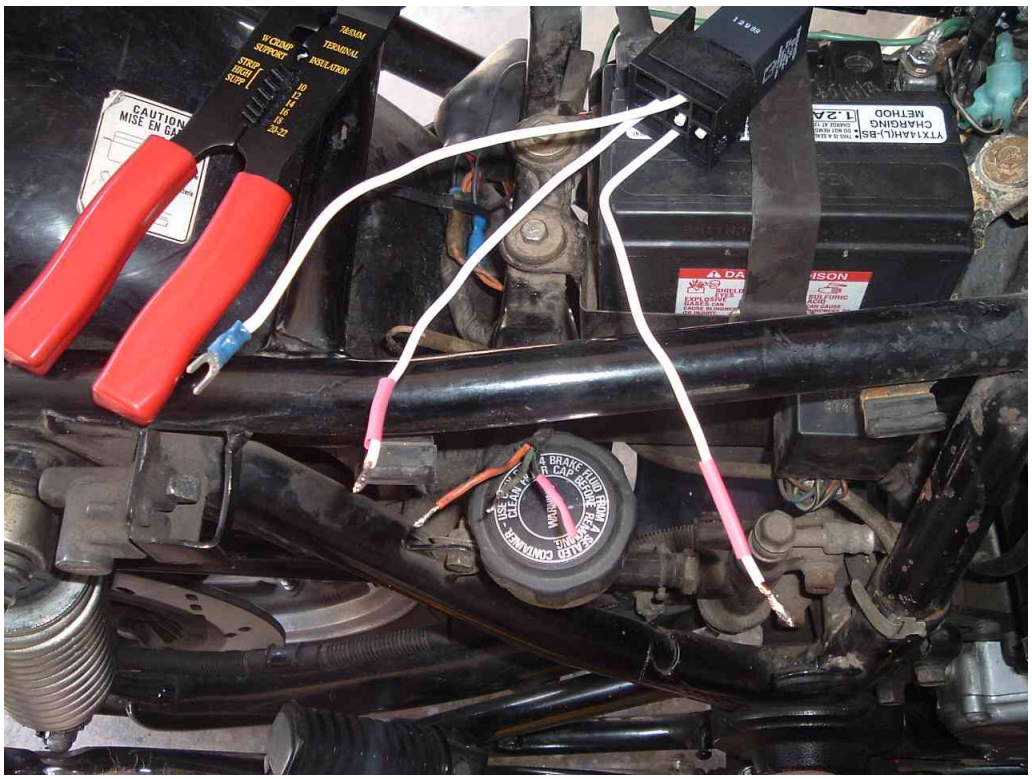
The (switched) 12v Orange/Green wire gets connected to the 'E' terminal on the relay. The light blue (actually it looked more like a faded green color) drive wire to the lamps gets connected to the 'L' terminal of the relay. The 'B' terminal of the relay gets connected to frame ground. Please note that I am leaving the Blue/Black wire disconnected. This will disable the auto-cancelling feature of the turn signals.



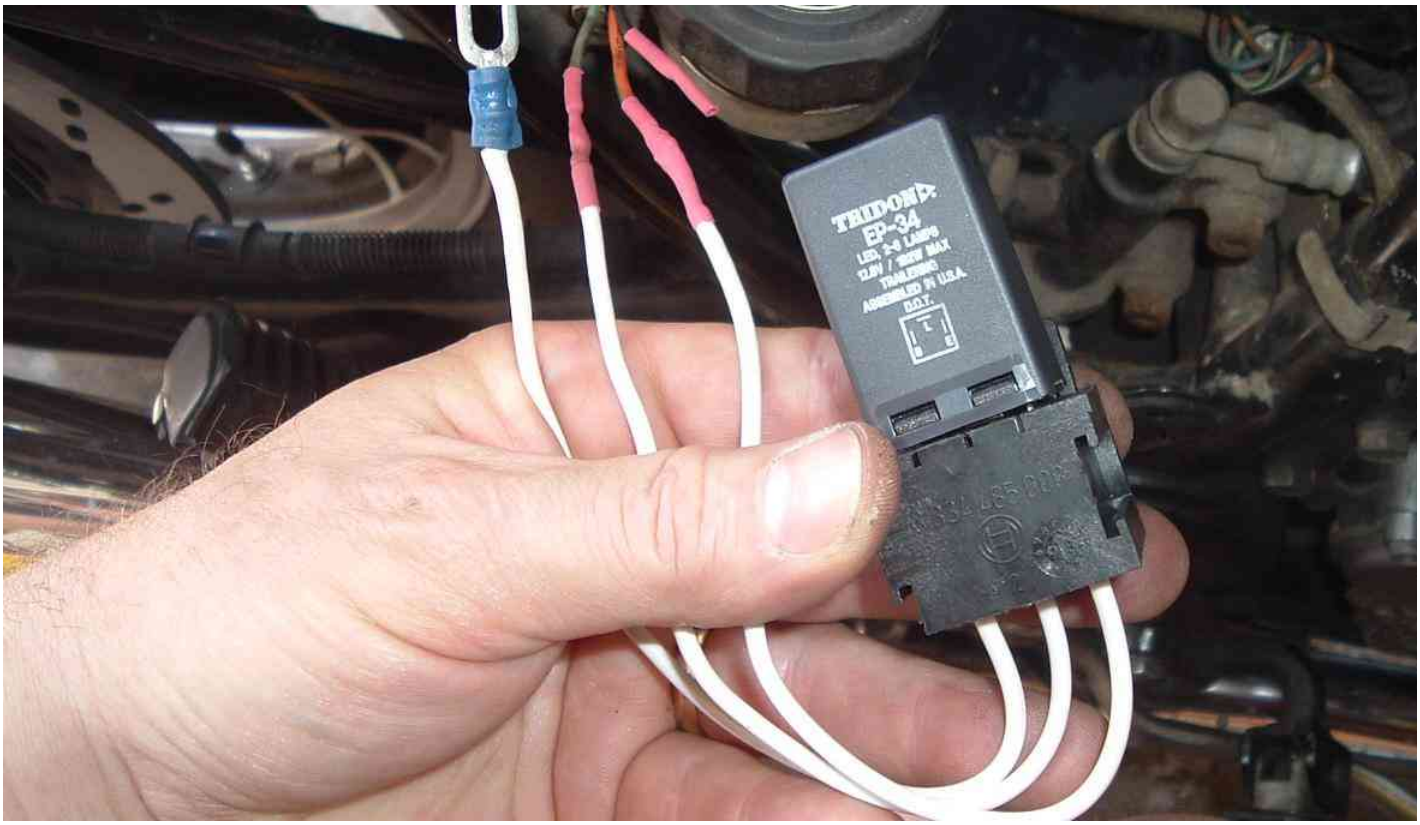

Now that I've tested and ensured proper operation, it's time to make the connections and dress them up. Here I am tinning all the wires, getting them ready to solder together.



After tinning, I have crimped a spade connector on the ground wire and put shrink tubing in place to cover the soldered connections.  I put shrink tubing on the Blue/Black wire just to cover and protect the end.



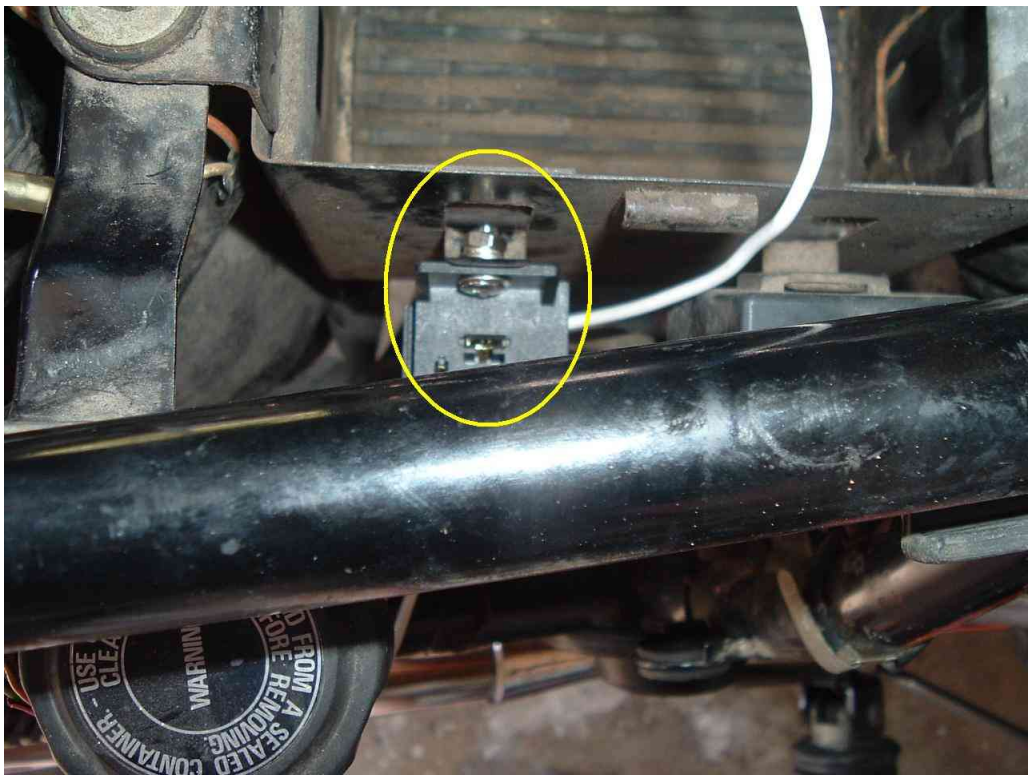
Here is the socket and relay, all dressed up neat and ready to mount.



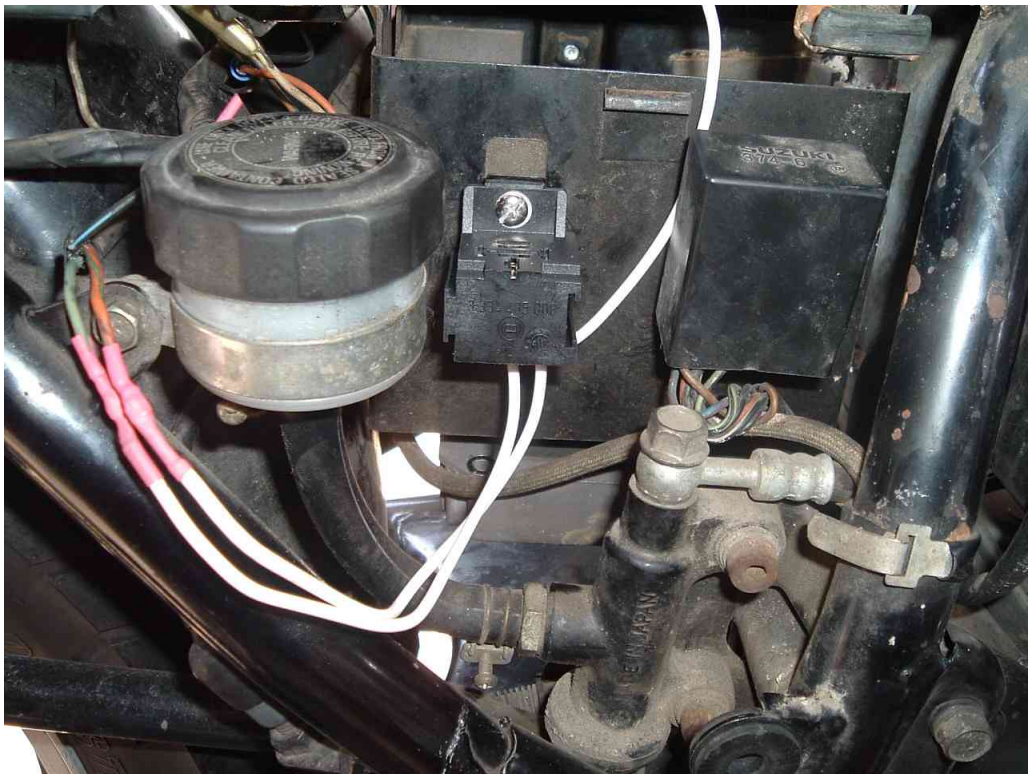
Now.  Where to put this thing?  It wouldn't just clip on the battery box like the old unit.  So I made a slight modification.  Since the socket had a mounting hole, I decided to drill the tab for the old relay to make room to bolt it on the existing tab.


Note to self: Next time you might think about taking out the battery!

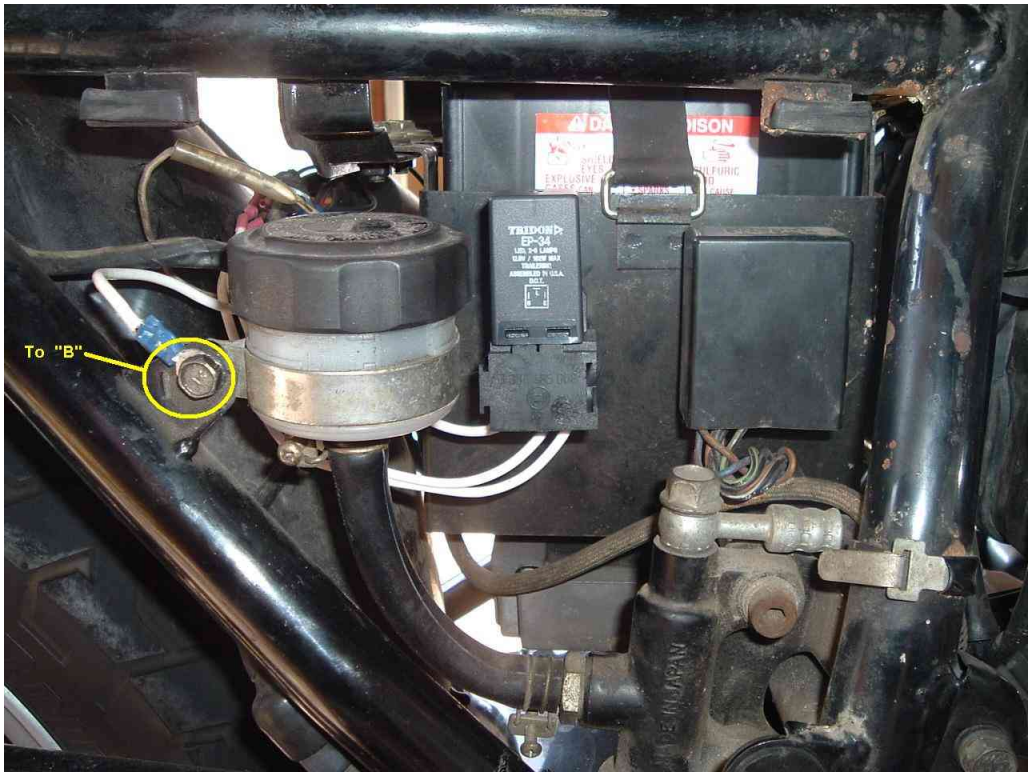
After I drilled the hole in the tab, I did end up taking out the battery so that I could put a bolt, nut, lockwasher, etc, in place to hold the socket.  Here is a view from the top.



Here is a view of the socket from the right side.  One wire is pointing up because I was thinking about connecting the relay's ground wire to the (-) battery, but it wasn't long enough.

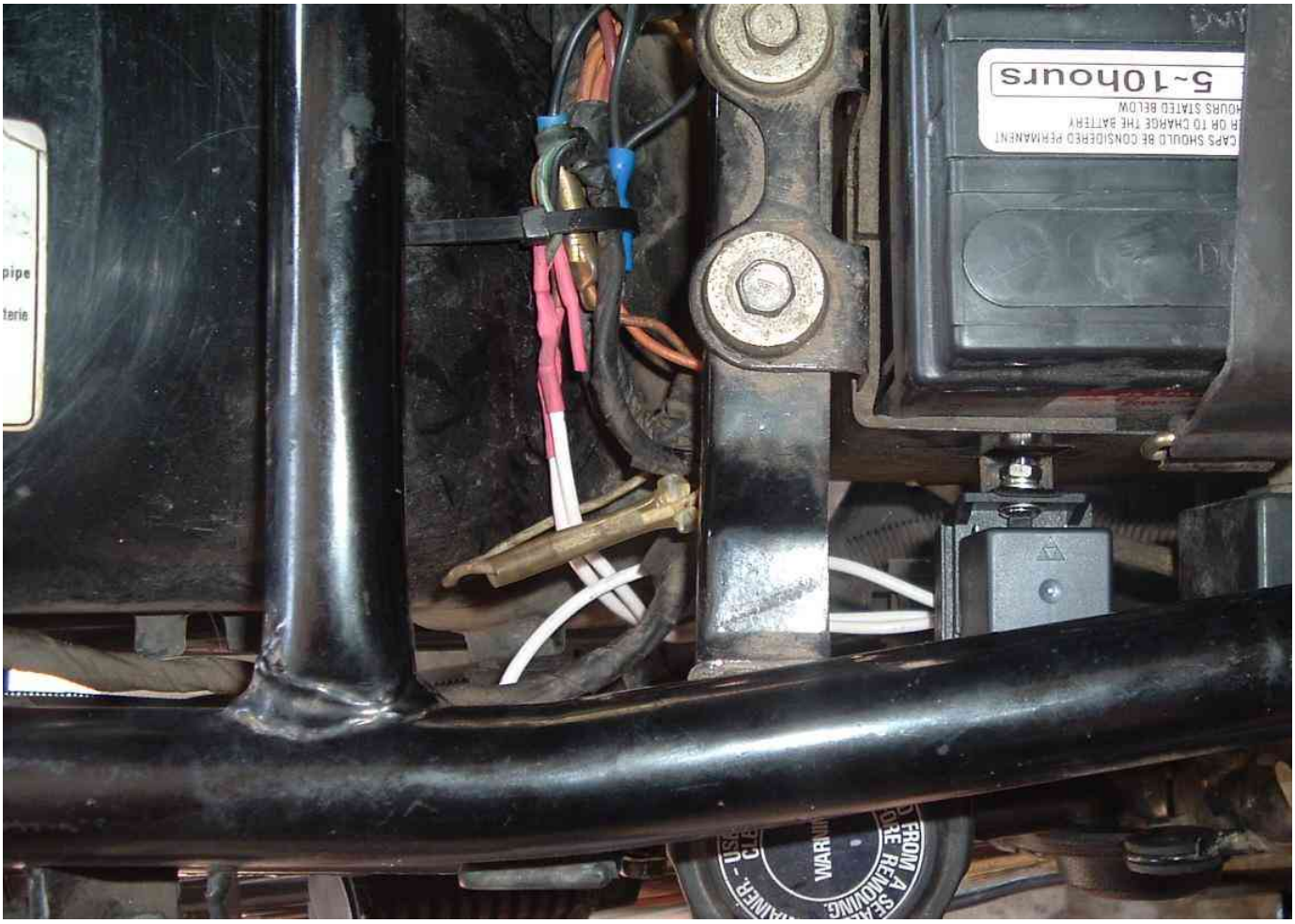


Instead, I connected the relay's ground wire to the frame mounting bolt for the rear brake master cylinder.




I also put a zip tie around the relay and the mounting tab to help hold it in place and guard against vibration.

That's about it.  Here is a top down view of the finished installation.




You may notice that I have placed the extra wire in another loose zip tie, right next to the sense wire of one of Mr. duaneage's Honda r/r units.

This flasher unit blinks at a little faster rate than the stock Suzuki part, which I like.  It will flash very quickly if a bulb is burned out.  It also seemed that the auto-cancelling would cancel the blinker a little too quickly for me sometimes.  Now I'll just have to remember to turn them off myself.  All of this work can be undone at any time.  But I'm hoping it will serve as a path for lighting upgrades like LED running lights and blinkers.

Again, my thanks to Mr. longgreensilverado for doing all of the research and sharing his findings with the GS community.

Thank you for your induglence,

BassCliff

My BikeCliff website can be found at:

http://members.dslextreme.com/users/bikecliff