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Installing the Hotronics PG-3, No Load Flasher for LED taillights.

The PG-3 is a 2 prong, 100% electronic flasher with a built-in relay for switching independent loads and requires only a small electrical path to ground supplied by a small bulb to recognize the circuit has been completed and to turn ON and start flashing LED's.

So if you change the tail lights to LED and still have a small indicator bulb in the dash or a small motorcycle signal light, up front, the PG-3 will sense the small bulb when the signal lever is moved, completing the circuit and will turn ON and start flashing.

Once the PG-3 turns ON, it's internal relay pumps out 5 amps at full system voltage to the LED's and carries current thru the front, rear and dash bulb directional circuits. So LED taillights, light up at full system voltage, bright. (That's always better!)

Install the PG-3 in the flasher socket and connect the PG-3 electronics ground wire to a clean body ground, then start the engine. Place the turn lever to a direction and the PG-3 will begin flashing. (Be sure battery voltage levels are at least 11.6 volts or higher when signal lights are ON.) If not flashing, turn off the key, unplug the PG-3, look at the terminal marked IN of the PG-3. Here is how to check your fuse panel for the correct IN and OUT. Pick up your old 552 flasher, turn it upside down and look at the connectors, there will be an "X" next to one terminal and an "L" next to the other.

The "X" is the 12 volts IN and the "L" is the load to the lights.

This "X" and "L" is the, Dept. of transportation footprint, and dictates the IN and OUT.

Hotronics PG-3 follows the same D.O.T. footprint indicated as our, IN and OUT.

Get a test light and connect the ground clip, touch the probe tip to the IN side of the fuse box flasher socket and turn ON the key, the test light should light. If not, place the test light probe to the OUT side of the fuse box flasher plug, if the test light lights, your fuse box flasher plug is wired backwards. Don't Worry! Here's what's going on.

552 flashers can work in reverse, when used with 1157 bulbs, (as they were intended) due to their thermal bi-metal (heat and cool) contact construction. Now some aftermarket fuse panels have been known to be miss-wired. After all whoever ever conceived of LED's back then? So it's something we need to check!

When LED's are installed in place of 1157 bulbs the bi-metal 552 flashers generally will not trigger from the removal of the 1157 bulbs. Hotronics PG-3 is an electronic flasher, containing no shorting resistors and like a radio cannot work with the power hooked up backwards. Should you find your panel or plug

crossed, remove the connectors from the flasher socket and switch them to the correct positions.

If that cannot be done, simply make 2 jumper wires to connect to the PG-3 and plug the jumpers into the fuse box flasher plug socket in the correct D.O.T. positions.

Turn the engine back ON and place the turn lever in a direction, the PG-3 will start flashing and remain flashing until the turn lever returns to the neutral center position.

**WARNING: NEVER use ANY "Load Equalizer type Shorting Resistors" that connect to each side signal wire and go to ground, they short circuit the electrical system, drag the voltage low, create extreme amounts of heat and have set fires and melted wiring in both automobiles and motorcycles in attempts to load thermal 552 flashers.**

You would not take your jumper cables, connect them to the battery and touch them together, what a spark that would be, that's what those shorting resistors are doing.

Shorting resistor will fatally damage your electrical system; your brake and signal switch contacts and destroy the PG-3 relay contacts. **Be Warned! Be Safe! Be Smart!**

Using the PG-3 with an all LED application or running relays for larger lighting loads;

If you change every turn light to LED and there is no longer a small blinker bulb in the dash or up front, the PG-3 will trigger off a typical Bosch relay. (Completely safe!)

LED's have NO filament; they're not like a bulb! LED's produce an arch that jumps a gap, with a reflector behind and that's what we see glow.

Since the PG-3 looks for a small electrical path, like from a small dash bulb. Removing all bulbs will require installing a relay to each signal side and the PG-3 will sense the electrical path has been completed thru the relay coil, turning ON, and then it begins flashing the LED's.

Follow the easy to read, relay-wiring chart supplied with each PG-3 flasher when using relays for an "ALL LED" application. (No longer any bulbs in the signals circuit)

Using the small relay coil as the established electrical path, instead of by a small filament bulb, triggers the PG-3, which outputs, pulling in the relay coil and carrying even higher amperage loads thru the relay contacts to the rear signals.

This method is 100% safe, creates NO Heat, NO Shorting, No Fires, No Melt downs and carries enough current to light up a Semi tractor/trailer. Safely.

Use only one relay on the left side and one on the right side, place your relays on the rear so we can power up large or multiple LED cards and also carry high amp loads to supply trailer light if needed.

Warning, Never use battery chargers for testing the PG-3 without the charger being connected to a battery, this is absolutely necessary. Battery chargers are NOT filtered DC sources and give off an AC sine wave that will damage semi-

conductors in the electronics or give erratic operation of all DC electronic devices; this includes radios, amplifiers, ECM's and engine management computers. Always have a battery in the circuit, and then if needed to bring voltage up, connect the charger to the battery.

Also be sure battery cable connections are clean and tight.

Note: Relays are NOT shorting resistors and should not be mistaken for them! Always use relays with the PG-3 for an "all LED" application! (No bulbs for signals.)

NEVER use shorting resistors with ANY electronics device, including the PG-3 or any other Hotronics device like the Self Cancel Turn Signals or Taillight Sequencer.

Why step into the present and future with the LED's and then roll back the Neanderthal clock using Load Equalizer, short-circuiting resistors with large heat sinks!

Kind of defeats the purpose of using low current draw LED's, by putting in, power robbing, short-circuiting, heat generating Load Resistors, Right!

Don't become a victim!

Do it right the first time, so your Hotrod or motorcycle won't get burned too.

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