

9.5 Trailer Wiring

Know the wire color code

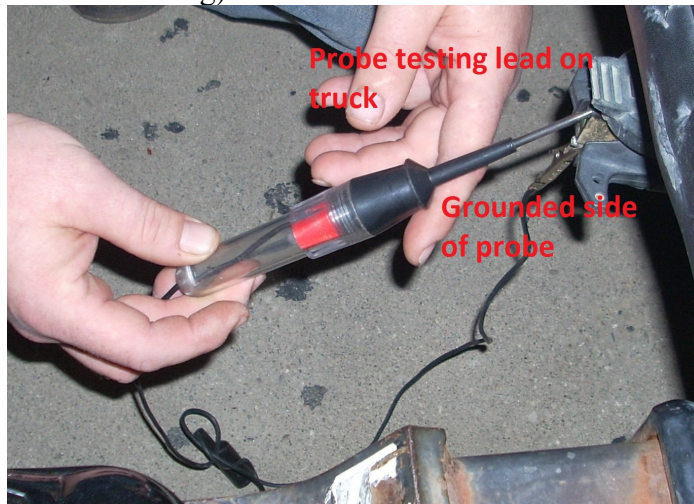
- White - Ground
- Brown - Running (tail) lights
- Yellow - Left turn/brake light
- Green - Right turn/brake light

Equipment needed

- LED circuit tester (probe) with two leads
- Crimping tool
- Butt splice connectors
- Wire cutter
- Extra vehicle fuses
- Screwdriver
- Spare light bulbs
- Extra wire

If you have a problem with the wiring on a trailer, follow these steps.

- 1) Use an electric probe to check the leads from the truck at the pigtail
 - a) Make sure the truck is on, lights are on, and flashers are on
 - b) Put one probe lead grounded to the truck (on bare metal or the pigtail ground if some lights still are working) and check the other 4 leads on the adapter



- c) If any of the leads shows a failure (light on probe does not go on) a fuse has most likely blown. Refer to the manual in your truck for the location of the fuse(s) and replace it (them).



- 2) If all of the leads on the truck are good (probe light comes on) continue to check the wires just after the pigtail
 - a) Make sure that the trailer pigtail is connected to the truck trailer adapter, the truck is running, and that the lights and flashers are on.
 - b) Make sure that the ground wire to the trailer is connected and that it is secured to bare metal.
 - c) Put one lead of the probe through the wire insulation and ground the other to a bare spot on the trailer.
 - d) You may need to scratch through the paint to get a proper ground
 - e) Continue to check the brown, yellow, and green wires to make sure that the electricity is going through.
 - f) A failure (probe light does not come on or blink) indicates that there is a break in the wire.
 - g) Either rewire the trailer (see below) or pinpoint the area where the wire fault occurs and replace that section.

- 3) If all of the leads after the pigtail are good (light on probe comes on) continue to check the wiring at the “Y” where the wires split to the left and right side of the trailer.
 - a) Follow the instructions above to ensure that there aren’t faults in the wire down to this point.
 - b) A failure here (probe light does not come on) most likely means there is a fault in the wire and the wire may need to be replaced/spliced.

- 4) Check the wires at the back of the trailer but before the lights
 - a) Follow the steps above to check for fault(s) in the wire(s).
 - b) A failure here means that there is a fault in the wire between the “Y” and the back of the trailer and means that the entire wire must be replaced.
 - c) If all of the wires are good at this point, you most likely have a bad light/bulb.

- d) For Led lights (which can't be opened or changed), you will need to remove/replace the entire light fixture by removing the placement bolts and wire connections.
- e) For trailers that have light bulbs, you can just replace the individual bulb.

Trailer rewiring

Trailer wires are usually replaced at the beginning of every season at the Seymour shop. Sometimes replacement of the trailer wires is needed before the trailers make it through the season. Follow this guide to replace the wiring on your trailer.

- 1) Disconnect the trailer pigtail from the truck adapter.
- 2) Disconnect wire leads from all turn signal and marker lights
- 3) Cut a length of trailer wire (4 wire) long enough to replace the entire wire in your trailer.
- 4) Cut off the trailer pigtail about a foot or two back from the plug.
- 5) Use a knife to strip the right-side wires from the left side wires and peel them back
- 6) Separate the wires on the new wire the same way.
- 7) Use duct tape or electrical (black) Tape to adjoin the left side wires from the old set to the left side wires on the new set (to act as a fishing line).
- 8) Repeat the step above for the right-side wires.
- 9) Pull the wires from the back through on both sides until the new wire is at the back of the trailer.
- 10) Using wire strippers, create new leads for the lights and attach the leads to the lights.
- 11) Strip the wires at the front of the trailer and re-install the trailer pigtail.
- 12) Use butt splice connectors and the crimping tool to ensure a good connection on the trailer pigtail.
- 13) Plug the pigtail back into the truck adapter and ensure that the lights work.