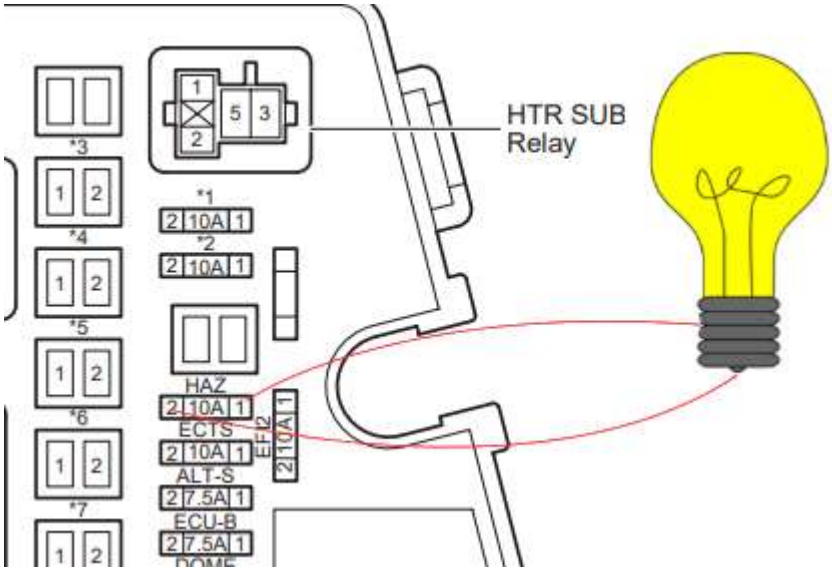
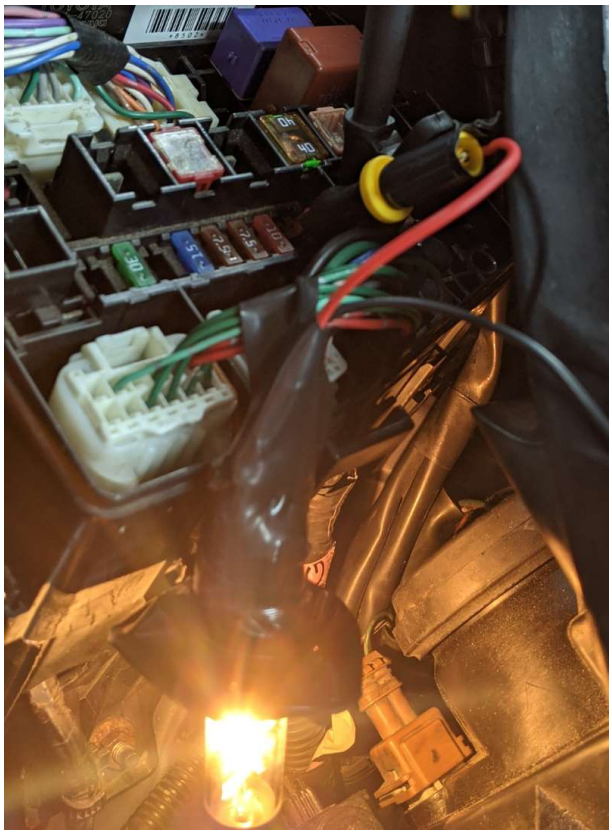
Hi everyone,

I'm hoping someone can help me with an issue I'm having with my 2007 Toyota Yaris Hatchback.

After about a year of ownership, the 10-amp hazard (hazmat) fuse blew one night when I tried to use the indicators. They had worked perfectly until that point. I replaced the blown fuse with a new one, but it immediately blew again when I tested the lights.

After some research, I suspect there's a short to ground in the indicator/hazard circuit. To troubleshoot without wasting more fuses, I connected a 12V headlight bulb in place of the fuse to bridge the connection.





Each side of the car has three blinking lights, for a total of six: the front signal lamp (in the headlight assembly), a side marker lamp mounted on the front fender (right or left), and the rear indicator lamp (in the taillight assembly).

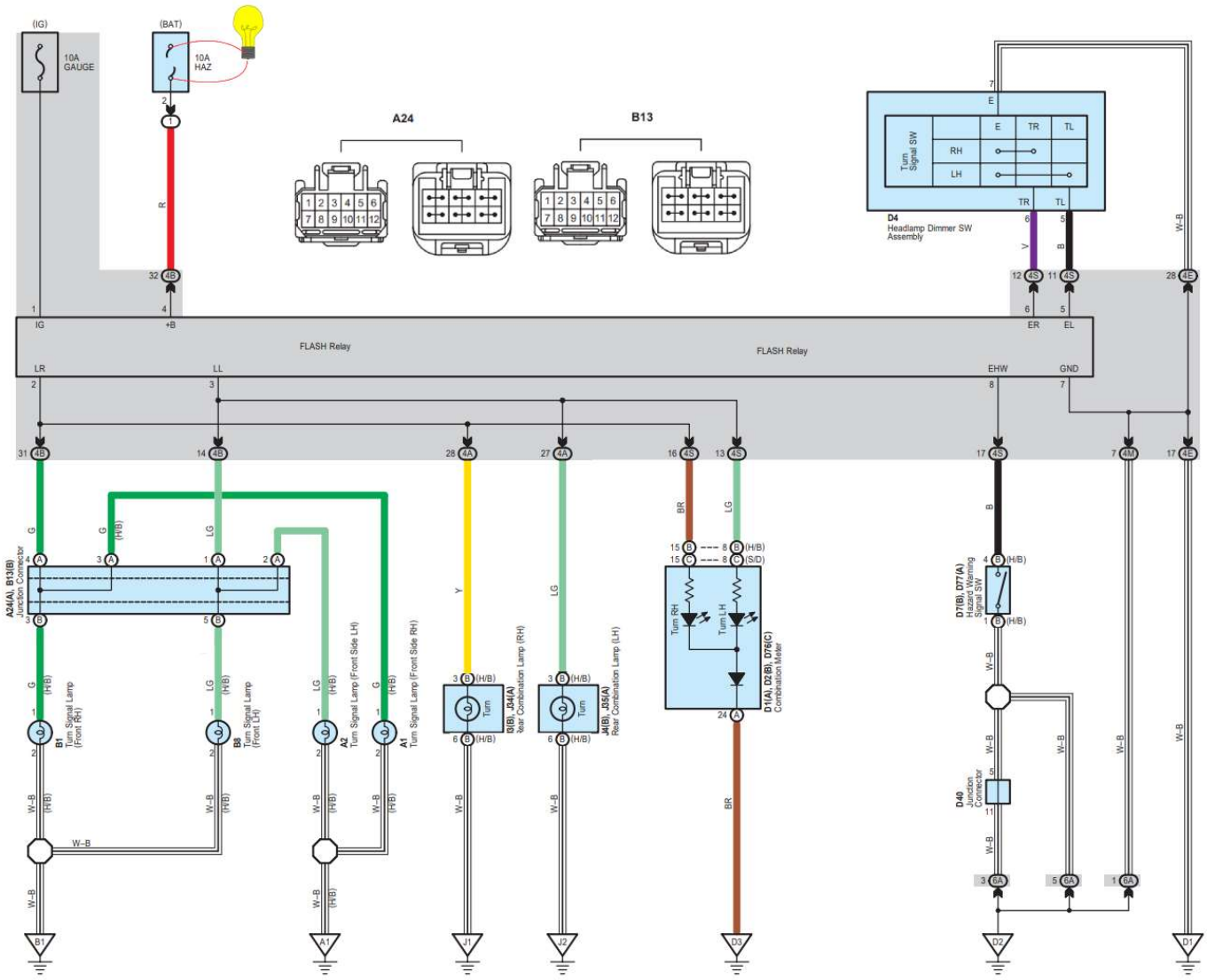
After connecting the “bridged fuse light,” I was able to use the turn signals again. This setup only activated three lights at a time, and the flasher relay functioned normally, with a steady cadence. However, when I pressed the hazard (HAZ) button to flash all six lights simultaneously, the relay began to buzz—clicking so rapidly it sounded like a buzzer—and none of the lights flashed.

I then tried replacing the flasher relay with a known working one, but the new relay exhibited the same behavior. The short was still present, and the problem persisted.

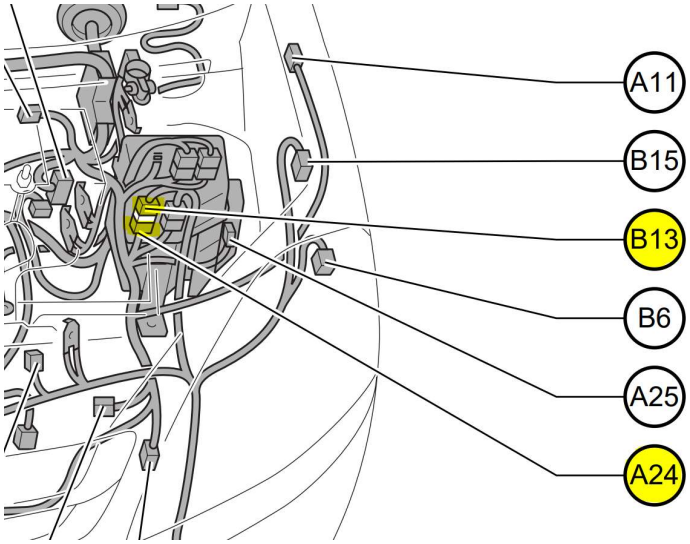
To further investigate, I disconnected the battery and began isolating the individual wires involved in the hazard and indicator circuits.

Here’s the wiring diagram for the turn signal and hazard warning lights. I’ve simplified it by removing extra details specific to the sedan (S/D) and only left the hatchback (H/B) components for clarity.

Turn Signal and Hazard Warning Light

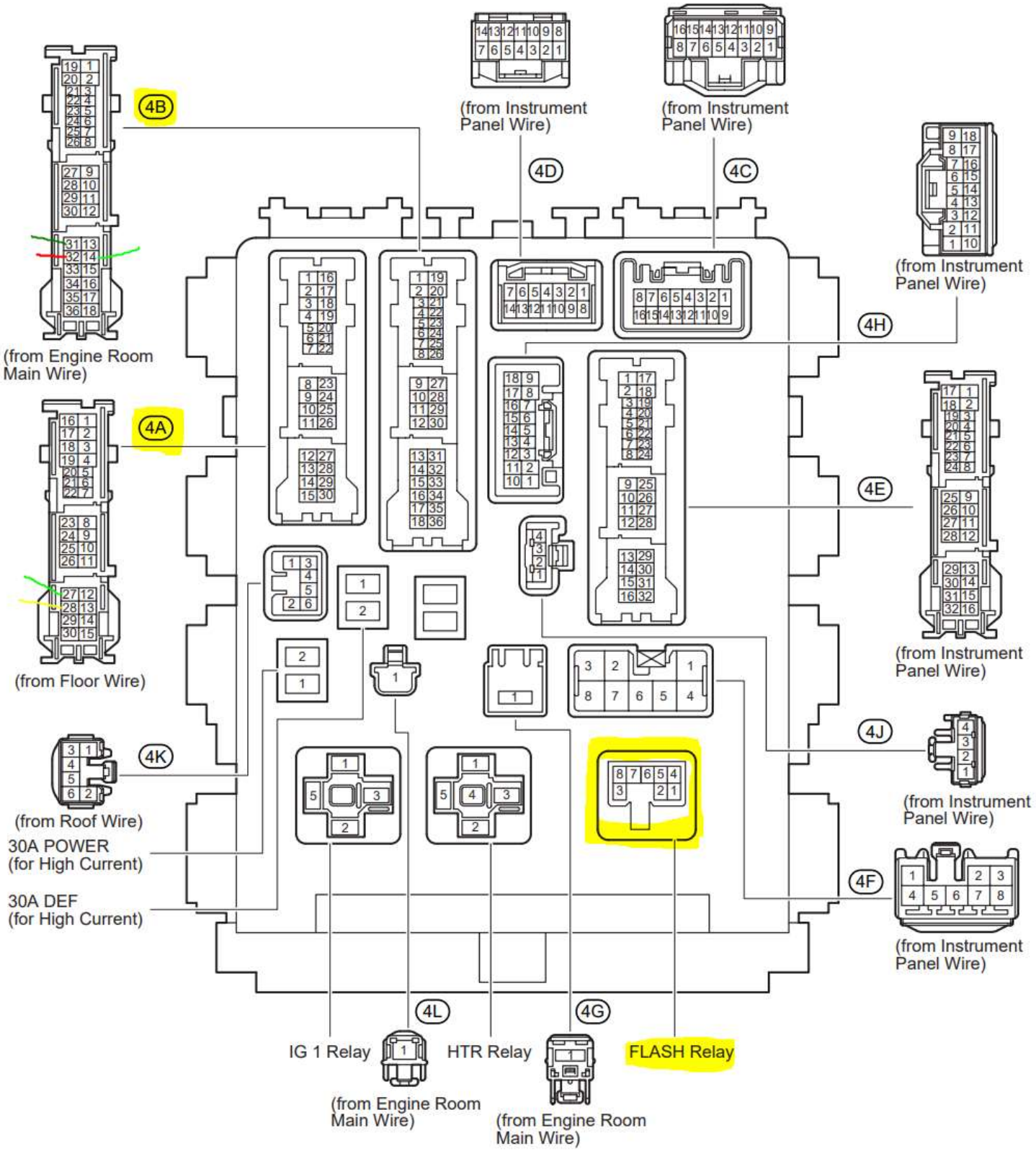


The below diagram is the physical location for the B13 and A24 connections.

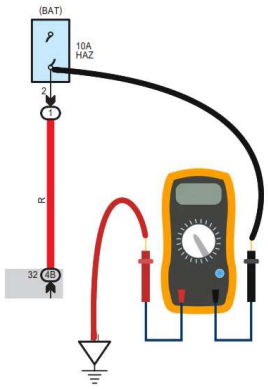


I disconnected B13 from the port in the fuse box. I also disconnected both 4A (Floor wire to the rear indicators) and 4B (Engine Room Main Wire) from the body control module.

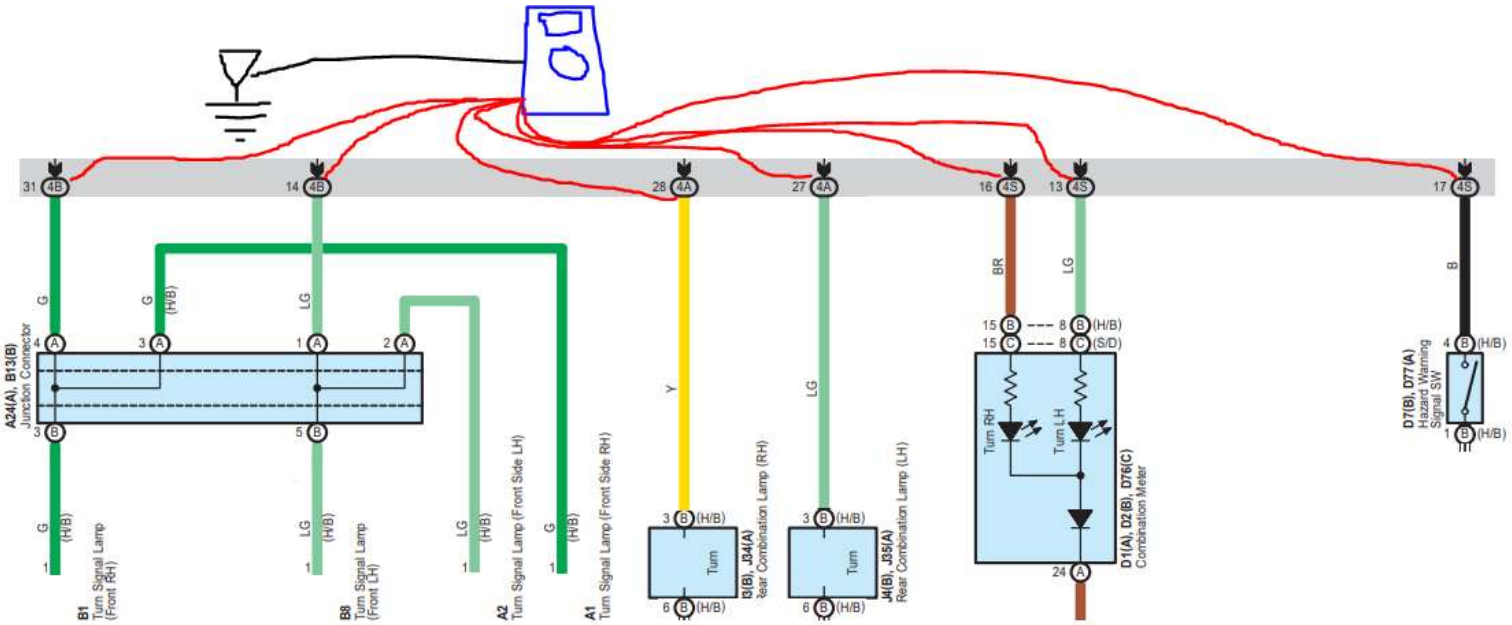
Here is the Body Control Module with some relevant pins and the relay location.



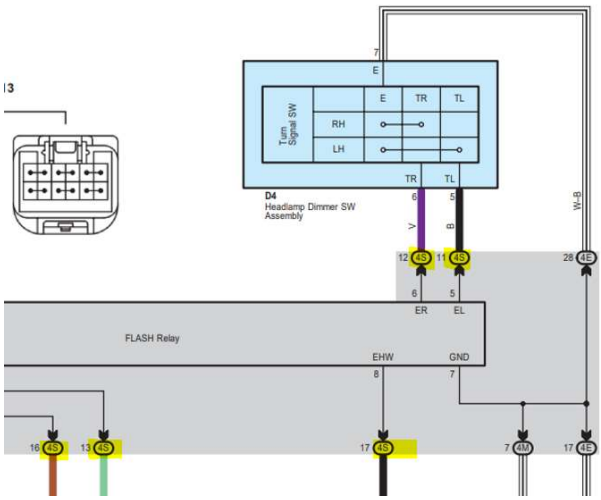
With the battery disconnected and all wires isolated, I began testing for resistance from each wire's end to a known good ground. No resistance was detected. I ensured my multimeter was set to auto-ranging and verified it by checking the other end of the wires for proper resistance readings and to confirm there were no open circuits.

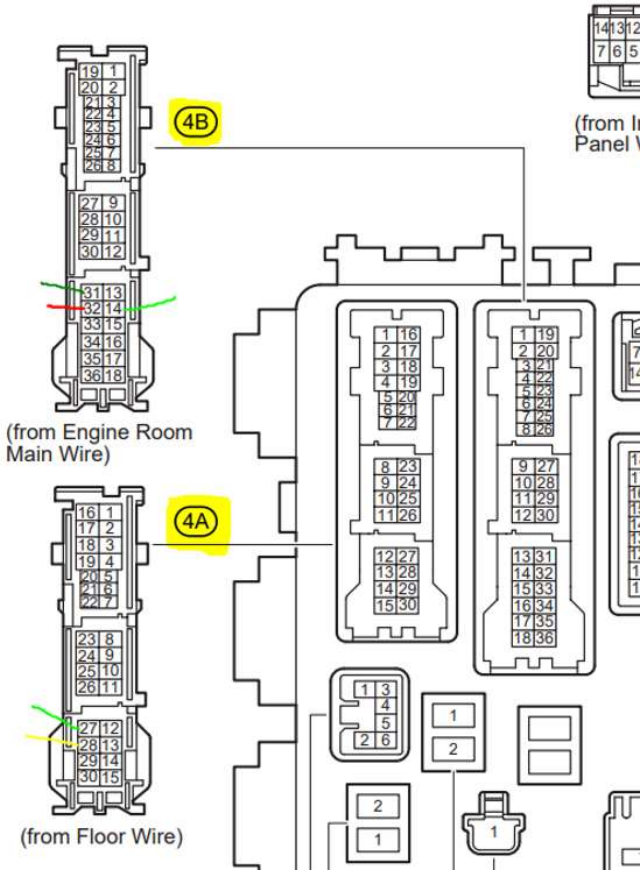


I checked each individual line (with the bulbs removed) for resistance readings to ground and found nothing. All lines appeared to be clear, with no resistance readings to ground. When testing the cables end to end, the resistance readings were fine, measuring less than 1 ohm.

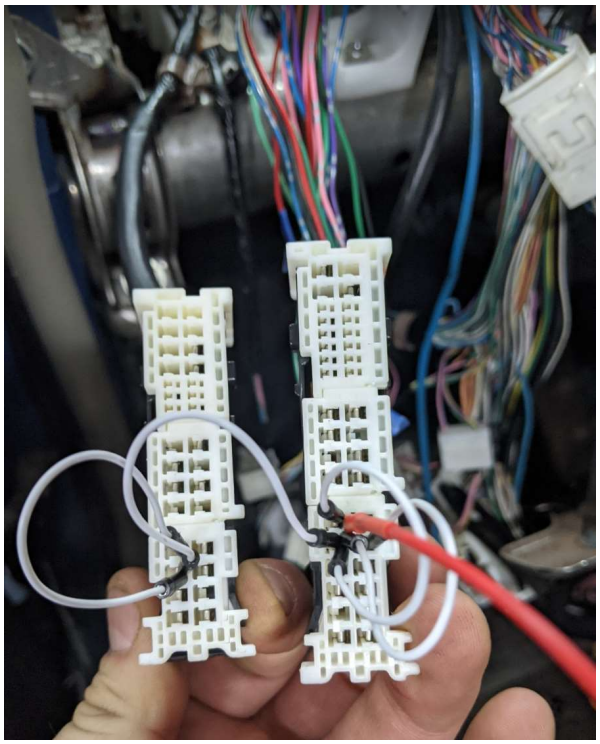


Finding no shorts, I decided to completely bypass the body control module and relay. I reconnected the car battery, reinstalled all the signal bulbs, and then worked with the disconnected 4B connector (on the body control module). I jumped its pin 32 (Battery) to pins 31 (Front RH + Front Side RH) and 14 (Front LH + Front Side LH). On the 4A connector, I jumped pin 27 (Rear LH) and pin 28 (Rear RH) together, then bridged those to 4B pin 32 (Battery). This successfully turned on all six indicator lights simultaneously, bypassing the flasher relay and any other variables.



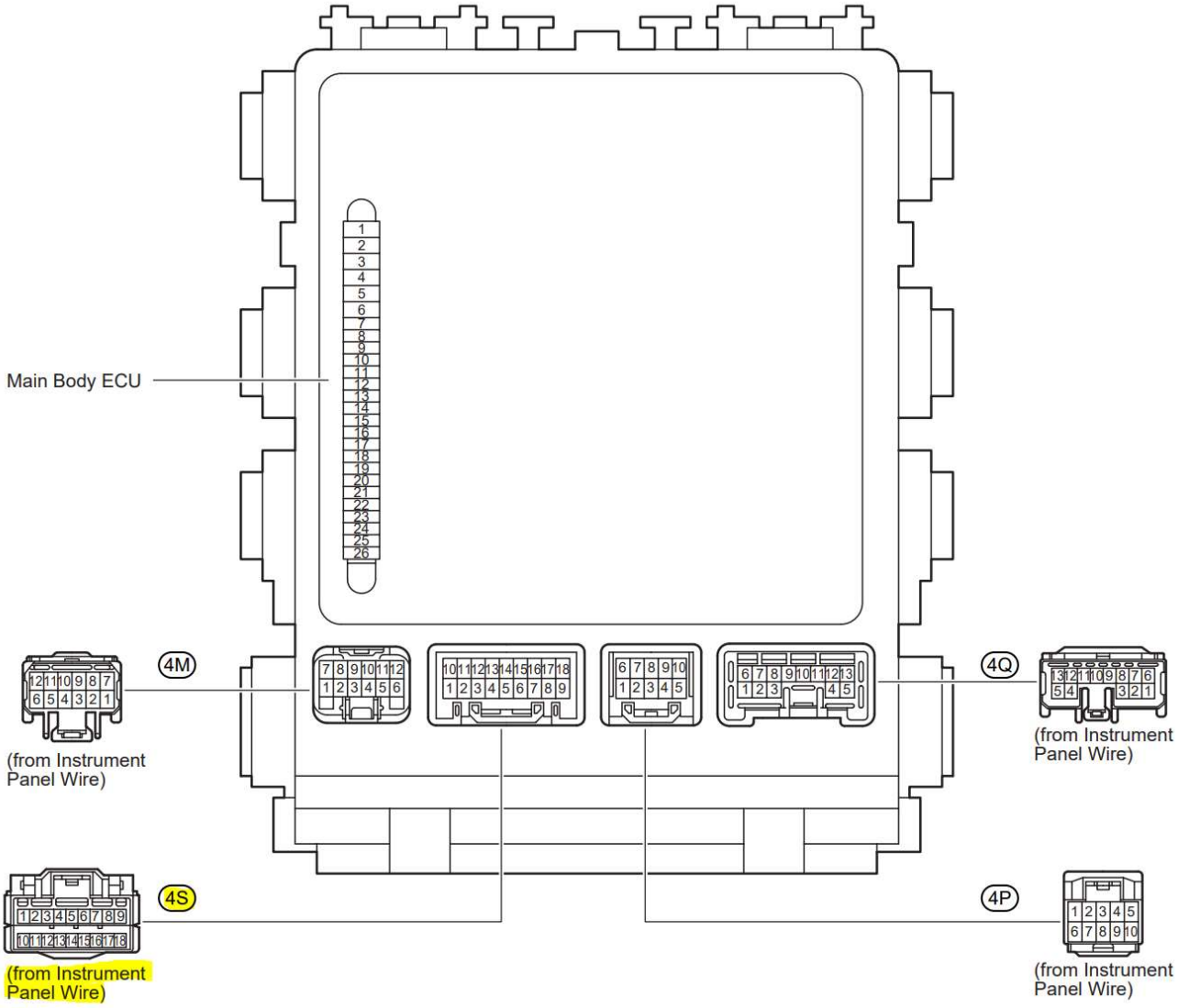


Frustratingly, the short persisted. I disconnected 4A pin 28 from 4B pin 32 (Battery) so that only the front lights remained on, but the short was still present. I could tell because the “bridged fuse light” continued to glow. One by one, I started disconnecting the front indicator bulbs. Each time I disconnected a bulb, the “bridged fuse light” dimmed slightly but never went completely out until I removed the last bulb. I repeated this process in five different orders, and each time the light dimmed incrementally in the same manner, regardless of the order.



I must have checked the 4B connector pin 32 (Battery) to the front fuse over ten times with my multimeter, and I never found any resistance readings to ground. For this testing, the 4S connector was still connected to the body control module, but I had disconnected the headlamp dimmer switch, turn signal switch, combination meter (instrument cluster), and hazard light

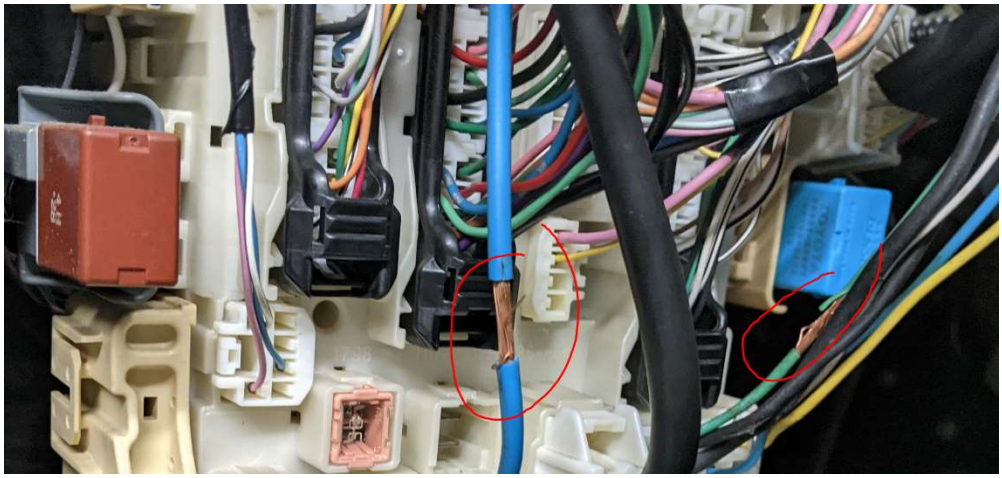
switch—all part of the 4S connection I had bypassed.

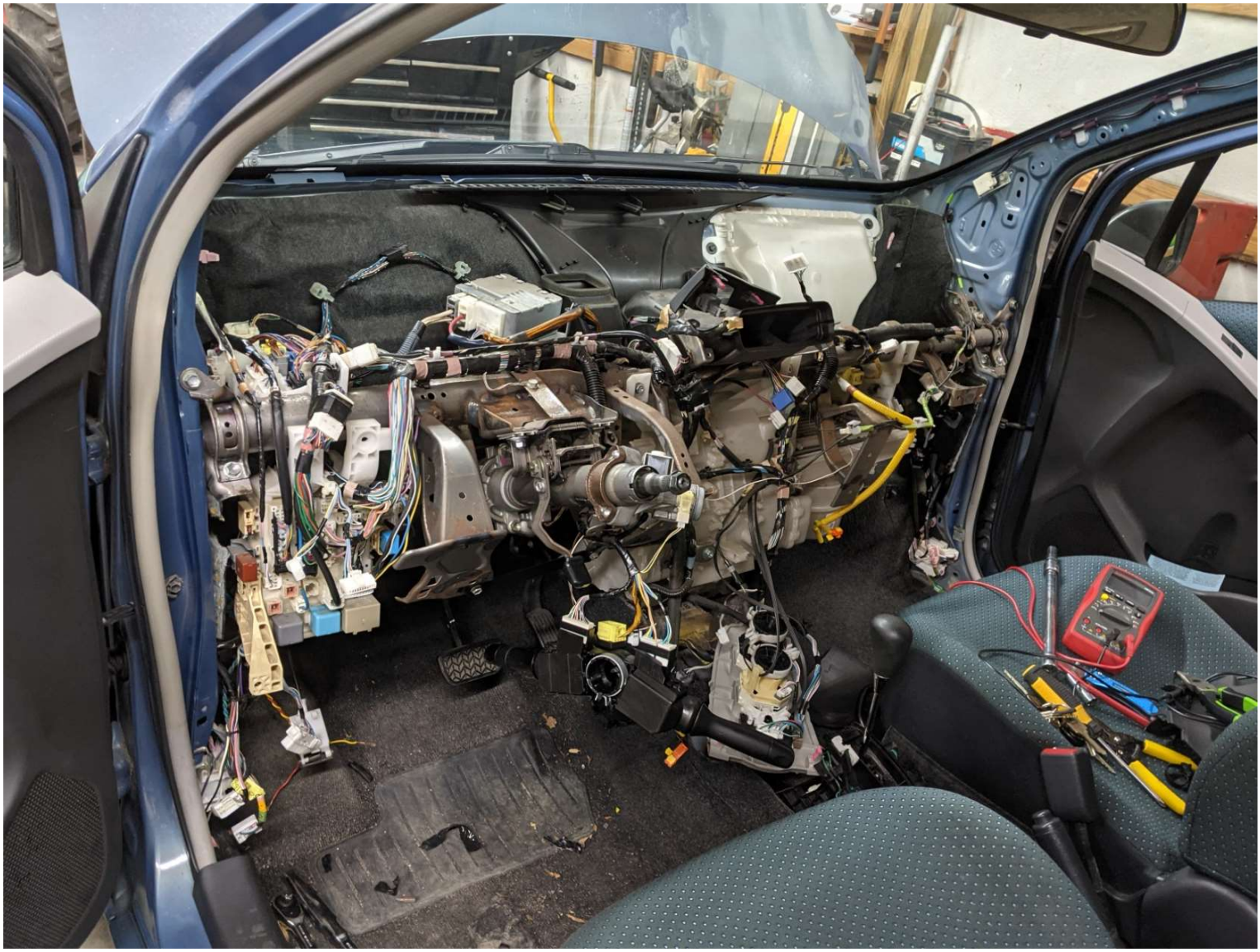


Next, I inspected the engine fuse box by disconnecting everything and opening it up to check for any abnormalities. However, all the wiring inside appeared fine. I decided to tear down the car further, exposing as much wiring as possible in hopes of spotting damaged or shorted wires. I shook cables while watching the “bridged fuse light,” but it never dimmed. I pulled apart wiring harnesses and inspected all the lines, even those wrapped neatly in conduit and electrical tape. I was also on the lookout for any aftermarket modifications.

I did find some issues, including a poorly spliced aftermarket remote door lock system I didn’t know the car had. I also discovered an open circuit in the wiring, which I repaired, resolving an automatic door lock issue. Unfortunately, this wasn’t related to the signal light short.

Found a couple of wires that were spliced for the remote door lock system.





I’ve spent four full days going through the car trying to isolate this issue. I even purchased a Power Probe ECT3000 scanning kit to locate the short, but every time I traced the wire through the firewall, it led me to a known ground.

As a final step, I replaced the 4B pin 32 (Battery) wire with a new wire and jumped it directly to the other end of the “bridged fuse light” to rule out anything my multimeter might have missed. This also didn’t solve the issue.

Thank you for reading this far! If you have any suggestions or ideas I haven’t tried, I’d love to hear them. I’ve become very invested in this problem and have learned a lot since this issue began.