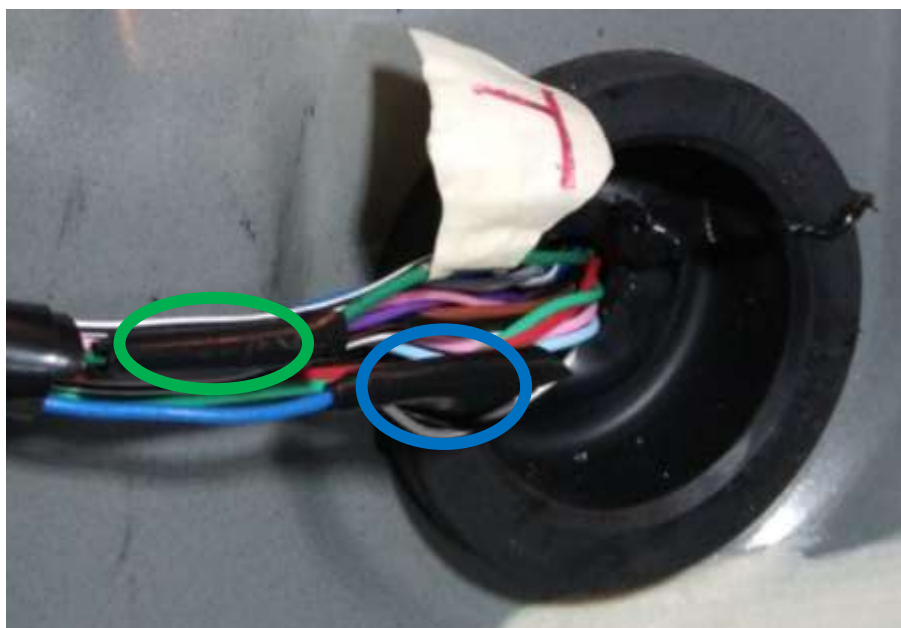


I purchased the CURT 56353 from a major on-line trailer accessory dealer because their website states that it is guaranteed to work with the 2021 Prius. This was not the case with my 2021 Prius LE FWD.

I installed the 56353 per instructions, connected it to my correctly-wired trailer, and found that the turn signals worked, but the running lights and brake lights did not. To trouble shoot, I opened the 56353 T-connector for tail and brake lights and compared it with the pins on the Prius side: The 56353 splices into wires that connect to missing pins on the Prius connector (documented below). I contacted dealer and was advised to cut the CURT splices and move them to correct wires on T-connector. I did not do this because the T-connector would be outside the car and my new splices would not be waterproof. Instead, I removed the CURT T-connector and used T-Tap connectors to splice the red and brown 56353 wires to the wires on the interior side the grommet in the Prius spare tire well (Prius dark green: CURT brownTail light, Prius blue: CURT blue Brake light).



I made one other modification: Since I did not have a lift to fish the power wire under the car to the battery in the engine compartment, I connected it to a plug I could insert into the cigarette lighter socket in the console. I connected the trailer and tested: All lights worked correctly.

However, when I drove the Prius without the trailer, without the power wire plugged into the cigarette lighter socket, and with the headlights on; the Prius immediately threw numerous and varied malfunction alerts and disabled the corresponding systems:

PKSB malfunction

Precollision malfunction

Cruise control malfunction

LTA malfunction

ABS malfunction

Low Braking Power

Check Engine Light

These only occurred when I turned the Prius headlights on. They remained in effect (e.g., cruise control disabled) until after the car was turned off and left to sit for about an hour. Toyota service found the following codes:

DTC Codes P057113, P157800, C142571

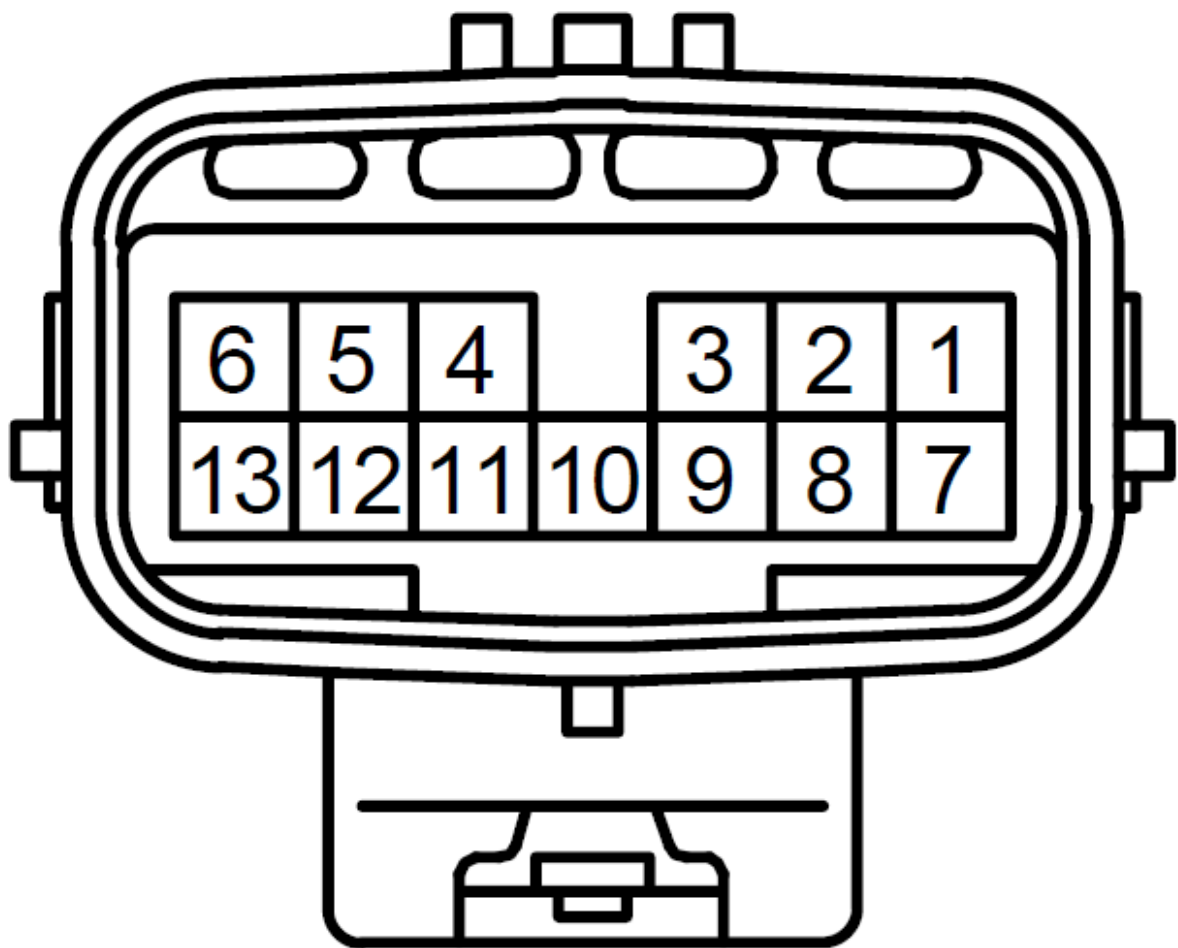
Brake light circuit failure and stop lamp relay malfunction

The Toyota service rep stated that these indicate an incompatibility of the CURT 56353 with the Prius pre-collision system, which is, in his words, “extremely sensitive to changes.”

I gave up and pulled the 56353 from my car and returned it to the dealer. So far the Prius runs correctly, with/without headlights on, and no permanent damage. I regret that I did not test the 56353 with the Prius headlights on and the module power line plugged into the cigarette lighter socket (The CURT instructions would have it directly connected to the battery 24/7 regardless of the Prius Power button status). However, I operated the Prius for several weeks between connection of the turn signals and connection of the head/brake lights (waiting for the T-Tap splices to arrive). During this time I did not connect the 56353 power line to the cigarette lighter socket. Using the turn signals with/without headlights on did not generate any alerts, so I assumed that the unpowered 56353 could be treated as a passive device (i.e., open circuit). This does not seem to be true for the headlights. I simply ran out of time and energy to continue.

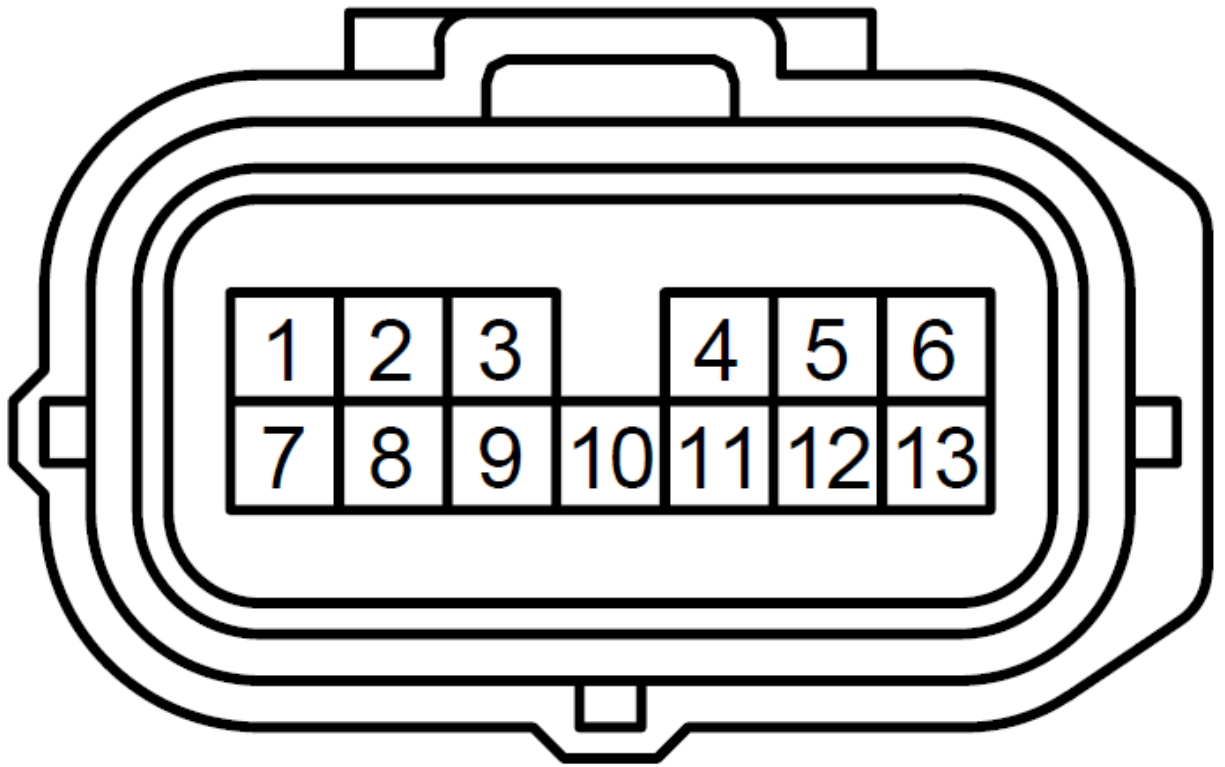
<MALE> 13P Waterproof Type

90980-12716



<FEMALE> 13P Waterproof Type

90980-12326



2021 Prius LE FWD

Toyota Connector Pin Assignments (Missing pins grayed out.)

6 Tail	5	4		3	2	1
13 Brake	12	11	10	9	8	7

CURT 56353 Connector Pin Assignments (Brown-stripe wire to CURT adapter module is Tail, Red/Orange stripe wire is Brake.)

6	5 Tail	4		3	2	1
13	12 Brake	11	10	9	8	7



Tail Brake

CURT wire color scheme

