

Prius

Headlight Height Control Sensor

My 2004 Prius has the auto leveling HID (high intensity discharge) headlights. Ever since I bought the Prius the headlights have always been very low. So low that they only illuminated about 20 feet of road in front of the car.

I thought it was something that could be manually adjusted. I suppose if I was headstrong I could have bent the mounting bracket for the height control sensor. Fortunately I read up on the problem at PriusChat.com and discovered in the 04 and 05 models have this problem.

The Problem

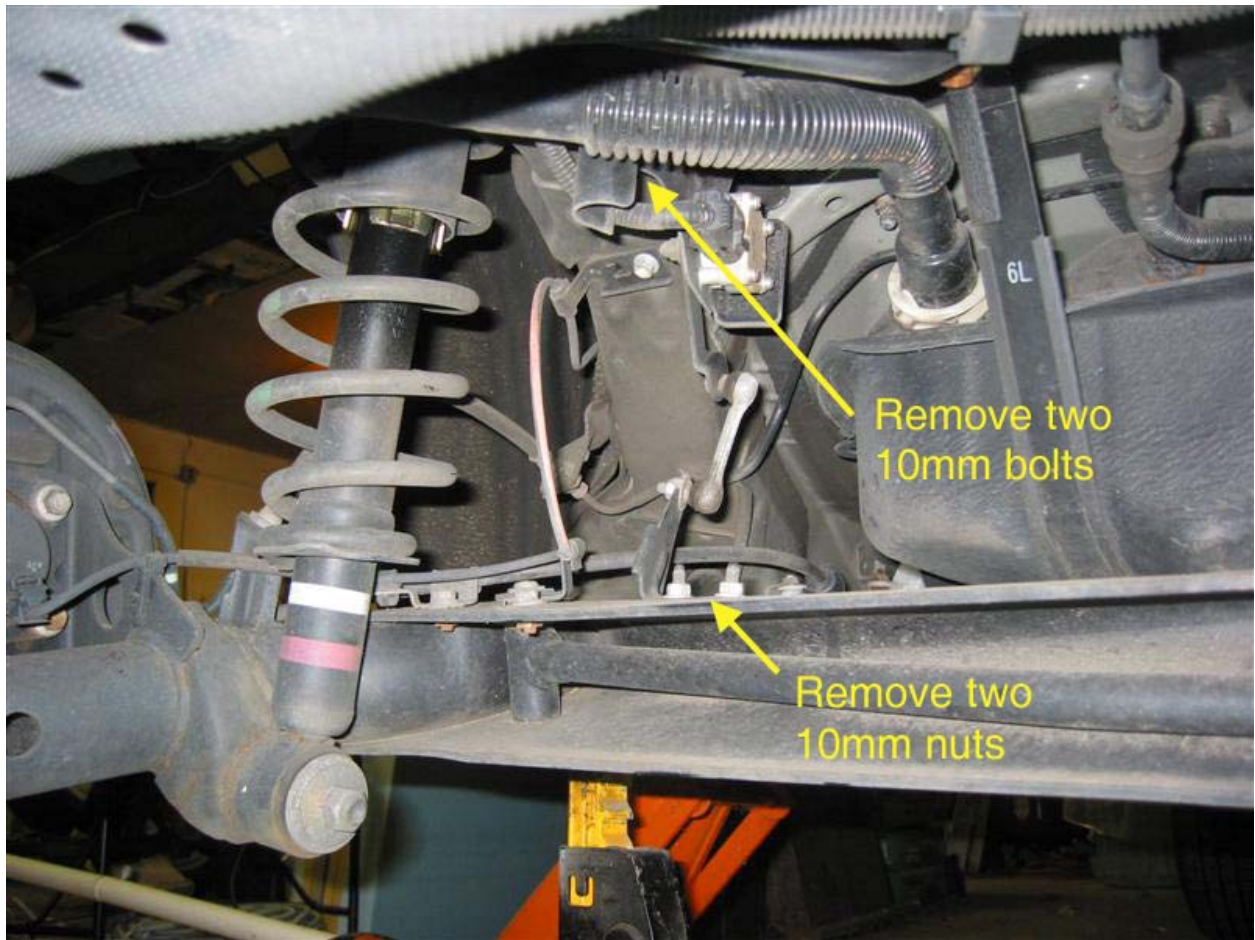
The sensor isn't completely weathertight. Thus the electrical contacts inside corrode and lose conductivity. This allows the sensor to fail with (and sometimes without) a warning light on the dashboard. Mine failed without a warning light.

The Solution

The best solution is to replace the sensor with the new version which has better weather proofing. The alternative solution is to repair the malfunctioning unit.

The Repair

The sensor is located behind the left rear tire. The whole apparatus, including link arms, is held onto the car with four bolts. Using a 10mm wrench you can remove the four connectors and take the sensor apparatus out of the car.



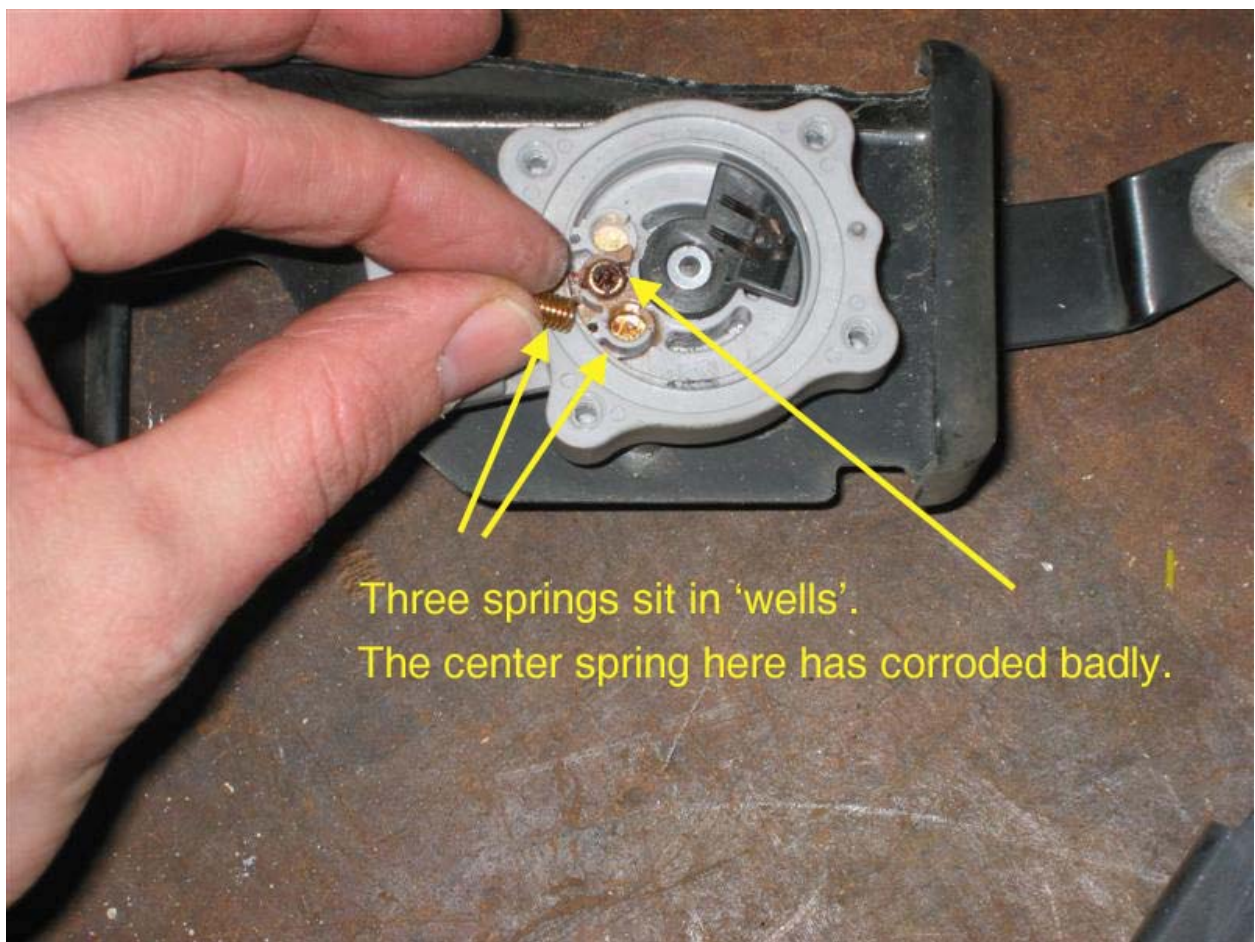
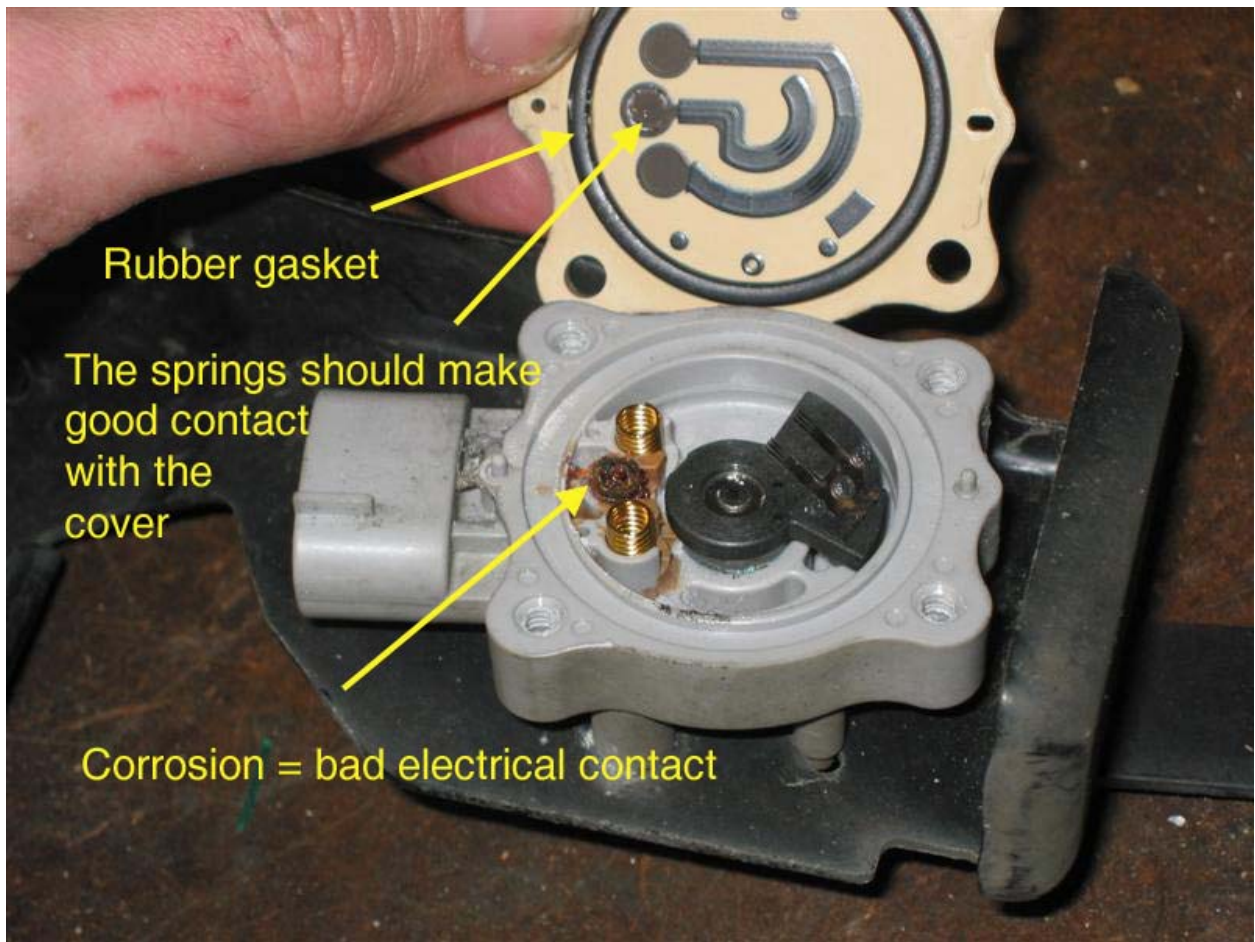
With the sensor out of the car you can easily open it up by removing four screws. Take care when opening the sensor. There are three brass springs inside that could fall out. These brass springs make contact with the cover you just removed and the inside of the sensor on brass plates.



The sensor with all the apparatus still attached



Carefully pry the cover off the sensor





In my unit the center brass spring had completely corroded. My solution was to remove the spring. It came out in pieces so I had to come up with a replacement. I made a new "spring" by coiling up some solid core copper wire. I'm a little concerned about some electro-galvanic action causing the copper-brass connection to tarnish. In retrospect I think a spring from a click style ball-point pen would be a perfect solution. Next time.



Before putting the sensor back together you should try and improve the weather tightness. In my case I added some silicone grease to the rubber gasket. I hope it helps. I also smeared some orange RTV silicone on the outside of the seam. Time will tell.

If you have a multimeter you can test the continuity between the spring and the plug contacts. That's how I tested the unit before reassembling it.

Once you're certain the sensor has been repaired put it back together and install it back into the car.

The Outcome

I've only driven the car 1/4 mile at the time of this writing. But so far it's a whole new experience driving at night.