Gen 2 Prius Water Leak (Cargo Area)

I am the second owner of the 2008 Prius (Gen 2). I completely went 'through' the vehicle when I received it and added WeatherTech mats, ham radio, battery 'drive mode' switch and other amenities. I'd been in the spare tire area when I detailed the vehicle (it was dry and clean). Fast forward to about 2 weeks ago...it actually started raining in California (shocker)...my car had been through at least a dozen wet days over the past year with no problems. However, it 'developed' a new leak in the cargo area...oddly enough the water was dripping out of the cargo light fixture and pooling on my rubberized cargo mat. Since I had some gear and other items in the back at the time, I immediately assumed (never assume) that it was from the hatch seal or the rear window...since the pool of water had flowed outward on the mat. See photo #1 below.



Photo #1 – water drip location

Miraculously, all the water channeled to my light...not a drip made it down the panels into the lower storage spaces. I can completely understand how the water could take a different path and not show itself until the spare tire compartment (or the battery area) is flooded and spilling forward into the HV battery or rear passenger area as others have experience. In my case, I had resealed the weather stripping by pulling it off, cleaning it and applying silicone to suspect locations. Then...a week later with the next rain storm, my cargo light was crying like a baby again and I'd been paying attention to the location. However, the source of the leak was a mystery...by popping out the light, I could feel the body padding was damp behind the panel above the light fixture socket. The Priuschat forum gave me a few tips to check...

So I popped off the roof gutter covers to check for the infamous "body cracks" that were described in this forum. I carefully cleaned the location and even wiped it down with some rubbing alcohol to reveal what appeared to be a very small hairline crack...almost invisible to the naked eye. See photos below. I used some scotch tape to help highlight the paint separation. No way a cup of water would leak here, right?!



CLOSE UP VIEW OF CRACKS...WITH TAPE TO HIGHLIGHT THE LOCATION

Photos #2 and #3 showing 'possible' crack and how SMALL the crack is...

So I used some Flowable Silicone (windshield sealant) to be sure that the crack filled in. I used a hair dryer to warm and dry out the crack before I applied the sealant. See photo below.



Photo #4 Close-up of the rear driver side roof gutter where suspect crack was

Just to be cover ALL the bases...I also wanted to be sure that there were no other rear body, driver-side sources of water leakage. So...after observing some poor paint coverage a 'lack' of body sealant around one of the hatch hinges...I also applied some sealant there. See photo below.



Photo #5 Rear hatch hinge mount on drivers side



Photo #6 showing sealed hinge base where water could pool...note the checkered paint here...

RESULTS!

First, I have to say that I was very skeptical that I'd found the leak. I figured it MUST be something more dramatic considering how much water would pool up after a 30-minute drive to work in a mild rain. As I indicated earlier...it was almost a cup of water after about 6-hours of mild rain, and a drive to work. No way that small, hairline crack would allow that much water in...no way! Well, I don't know if crow tastes any good...but I'm eating it. We had a HEAVY (for California) rainstorm yesterday. The car was used to drive to/from work in the rain and to run errands. I was too busy to check the leak (besides it was pouring rain) until the end of the day. The rain had stopped, and I popped out the cargo light AND the tail-light access cover (where I'd stuffed some paper towel in case the leak chose to outsmart me and take a different path). The paper towel was dry, the cargo light was dry...and the matting up above the cargo light was dry. So...for any other skeptics out there...the body panel crack can be microscopic and suck in a ton of water. I can only guess that the water is forced (or sucked) into the interior when driving...I can't see gravity flow moving that much water through the crack I found. Regardless, preliminary results show that the crack WAS THE SOURCE. Yes, I sealed the hinge too...but if you were to look under the headliner...that is exposed and would have dripped down the headliner.

Next step is to get a good, long lasting weather sealant and lay it into the entire length of the rain gutter; something that will last and weather well...and expand/shrink with the vehicle body. I will likely use a bead of sealant and make a spatula out of an old credit card and spread it evenly down the gutter. Hope this helps!