

**Toyota Prius Plug In Upgrade, Fuel Economy Data. Updated On 04-14-15**

<u>Date</u>	<u>Mileage</u>	<u>Gallons</u>	<u>MPG</u>	<u>Comments</u>
02-12-13	273.4	5.327	51.32	Warmer weather, prior fuel was premium
02-17-13	255	5.572	45.76	
02-22-13	259.4	6.289	41.24	Colder weather, longer trips, battery low
02-28-13	310.9	6.450	48.2	
03-03-13	242.9	5.194	46.76	
03-06-13	220.2	4.518	48.73	
03-19-13	287	5.904	48.61	3.229 E85, 2.675 Reg, 6 oz. oil, lower KWH output
03-24-13	200.6	5.2	38.57	2.635 E85, 2.565 Reg, 4 oz. oil, Cold Weather, High Speeds
03-30-13	275.3	6.28	43.83	4.047 E-85, 2.233 Reg, 4 oz. oil, Slightly Warmer Weather
04-04-13	265	6.555	40.42	3.692 E-85, 2.196 Reg, .667 K1, 6 oz. oil
04-08-13	142.5	3.979	46.97	3.979 Reg.
04-18-13	445	9.597	46.36	5.514 E-85, 4.083 Reg.
04-25-13	271	6.623	40.92	6.623 Shell Reg.
04-29-12	286.9	5.395	53.17	5.395 E-85, NiMH Charging Daily, Warmer Weather
05-06-13	324.6	6.641	48.87	6.641 Reg.
05-13-13	270.8	5.248	51.60	5.248 Reg
05-26-13	370.6	6.016	61.60	6.016 E85
<b>06-06-13</b>	<b>420.4</b>	<b>7.745</b>	<b>54.28</b>	<b>7.745 Reg.</b>
<b>06-20-13</b>	<b>445.2</b>	<b>8.378</b>	<b>53.13</b>	<b>8.378 Reg.</b>
<b>07-03-13</b>	<b>339.2</b>	<b>5.436</b>	<b>62.39</b>	<b>5.436 Reg.</b>
07-13-13	364.2	6.557	55.54	6.557 E85
08-04-13	254.5	4.987	51.12	4.987 E85
08-12-13	300.4	6.142	48.91	6.142 Reg
<b>Totals</b>	<b>6825</b>	<b>140.022</b>	<b>48.74</b>	<b>42.072 E85, 77.59 Reg.</b>
08-25-13	344.6	6.063	56.83	6.063 E85
09-15-13	343.1	6.207	55.27	6.207 E85
09-16-13	72.8	2.237	34.95	2.237 Reg, <u>LiFePO Pack Removed</u>
09-23-13	356.4	8.447	42.19	8.447 Reg, P0171 OBD Code triggered due to E85 & no battery
10-04-13	330.0	6.694	49.29	6.694 Reg
10-16-13	260.0	5.446	47.74	5.446 VPWR(89 octane)
10-30-13	352.6	7.557	46.66	7.557 VPWR(89 Octane)
11-06-13	427.7	8.644	49.47	8.644 Reg
11-16-13	325.9	8.094	44.46	8.094 Reg
11-25-13	273.6	6.526	41.92	6.526 VPWR(89 Octane)
12-06-13	298.1	6.699	44.49	6.699 Premium (93 Octane)
12-18-13	237.5	5.787	41.04	5.787 E85
12-29-13	298.5	8.400	35.53	8.40 Prem
01-20-14	134.2	3.950	33.97	3.950 Reg
01-24-14	176.0	4.694	37.49	4.694 Reg
02-11-14	229.3	6.571	34.89	6.571 Reg
02-27-14	339.5	8.088	41.97	8.088 Premium
03-07-14	343.1	7.703	44.54	7.703 Premium, 16 oz. used oil
03-13-14	193.8	4.170	46.38	2.779 Reg., 1.399 Premium
03-24-14	338.7	7.029	48.18	7.029 Reg
04-03-14	331.5	7.385	45.05	7.385 Reg.
04-09-14	378.3	8.634	43.815	8.634 Reg.
04-18-14	416.5	8.765	47.51	8.765 Reg.
04-25-14	390.7	7.840	49.83	7.840 Reg.
<b>Totals</b>	<b>7283.1</b>	<b>162.14</b>	<b>44.92</b>	<b>18.057 E85, 91.763 Reg., 19.529 89 Octane, 32.259 Premium</b>

<u>Date</u>	<u>Mileage</u>	<u>Gallons</u>	<u>MPG</u>	<u>Comments</u>
05-10-14	416.7	8.173	50.98	8.173 Reg.
05-22-14	341.8	6.46	52.91	6.46 89 Octane
05-31-14	400.7	8.347	48.0	8.347 Reg
06-12-14	464.0	8.774	52.88	8.774 Reg.
06-20-14	437.5	8.829	49.55	8.829 Reg.
07-02-14	437.3	8.618	50.74	8.618 Reg.
07-15-14	403.9	8.553	47.22	8.553 reg.
07-23-14	414.10	8.353	49.57	8.353 Reg
07-29-14	390.2	7.795	50.05	7.795 Reg.
08-08-14	421.6	8.824	47.77	8.824 Reg.
<b>Totals</b>	<b>4127.8</b>	<b>82.726</b>	<b>49.897</b>	
<b>09-04-14</b>	<b>498.3</b>	<b>9.016</b>	<b>55.26</b>	<b>9.016 Reg.</b>
<b>09-11-14</b>	<b>427.3</b>	<b>6.874</b>	<b>62.16</b>	<b>6.874 E85</b>
<b>09-22-14</b>	<b>374.3</b>	<b>6.601</b>	<b>56.70</b>	<b>6.601 Reg.</b>
<b>09-30-14</b>	<b>394.9</b>	<b>7.939</b>	<b>49.74</b>	<b>7.939 Reg</b>
<b>10-13-14</b>	<b>501.5</b>	<b>9.323</b>	<b>53.79</b>	<b>9.323 Reg.</b>
<b>10-23-14</b>	<b>402.1</b>	<b>5.796</b>	<b>69.37</b>	<b>5.796 E85</b>
<b>11-03-14</b>	<b>426.7</b>	<b>8.522</b>	<b>50.07</b>	<b>8.522 Reg.</b>
<b>11-14-14</b>	<b>426.4</b>	<b>7.632</b>	<b>55.87</b>	<b>7.632 Req.</b>
<b>Totals</b>	<b>3451.5</b>	<b>61.703</b>	<b>55.93</b>	<b>49.033 REG., 12.67 E85</b>

<b>11-24-14</b>	<b>8.00</b>			<b>Plus 89</b>
<b>12-18-14</b>	<b>7.384</b>			<b>Plus 89</b>
<b>12-29-14</b>	<b>7.000</b>			<b>Plus 89</b>
<b>01-12-15</b>	<b>8.000</b>			<b>Plus 89</b>
<b>01-14-15</b>	<b>2.44</b>			<b>Reg.</b>
<b>01-16-15</b>	<b>2.095</b>			<b>E85</b>
<b>01-19-15</b>	<b>2.014</b>			<b>E85</b>
<b>01-21-15</b>	<b>2.187</b>			<b>Reg</b>
<b>01-23-15</b>	<b>1.512</b>			<b>E85</b>
<b>01-26-15</b>	<b>1.796</b>			<b>Reg.</b>
<b>02-06-15</b>	<b>8.000</b>			<b>Reg.</b>
<b>02-07-15</b>	<b>1.940</b>			<b>Reg.</b>
<b>02-15-15</b>	<b>8.273</b>			<b>Reg.</b>
<b>02-19-15</b>	<b>8.337</b>			<b>Reg.</b>
<b>03-03-15</b>	<b>8.000</b>			<b>Reg.</b>
<b>03-09-15</b>	<b>7.077</b>			<b>Reg.</b>
<b>03-20-15</b>	<b>8.000</b>			<b>Reg.</b>
<b>04-04-15</b>	<b>7.034</b>			<b>E85</b>
<b>04-05-15</b>	<b>3.226</b>			<b>Reg.</b>
<b>04-13-15</b>	<b>2.010</b>			<b>Reg.</b>
<b>Totals</b>	<b>5220.2</b>	<b>104.325</b>	<b>50.03</b>	<b>61.286 Reg., 30.384 Plus 89, 12.655 E85</b>

### Battery life cycle

As the Prius reached ten years of being available in the U.S. market, in February 2011 *Consumer Reports* decided to look at the lifetime of the Prius battery and the cost to replace it. The magazine tested a 2002 Toyota Prius with over 200,000 miles on it, and compared the results to the nearly identical 2001 Prius with 2,000 miles tested by *Consumer Reports* 10 years before. The comparison showed little difference in performance when tested for fuel economy and acceleration. Overall fuel economy of the 2001 model was 40.6 miles per US gallon (5.79 L/100 km; 48.8 mpg<sub>imp</sub>) while the 2002 Prius with high mileage delivered 40.4 miles per US gallon (5.82 L/100 km; 48.5 mpg<sub>imp</sub>). The magazine concluded that the effectiveness of the battery has not degraded over the long run.<sup>[123]</sup> The cost of replacing the battery varies between US\$2,200 and US\$2,600 from a Toyota dealer, but low-use units from salvage yards are available for around US\$500.<sup>[123]</sup> One piece of research indicates it may be worthwhile to rebuild batteries using good blades from defective used batteries.<sup>[124]</sup>

### **Fuel Economy Improvement with plug in pack, NiMH Charging & Engine Flushes: 20.3%**

#### Additional Planned Upgrades

- **Additional 4KWH to 8KWH Battery Pack, Total KWH = 6 to 10**
- **NiMH Charger, Heavy Duty Springs & Shocks**
- **Engine Flush & Oil Change Every 3000 Miles**

#### Expectations

- **15% to 20% additional Fuel Economy Improvement (up to 100 miles range a day)**
- **Extended NiMH Battery Life & Gasoline Engine Life**
- **70+ MPG City & Traffic Jam Driving is possible, 45 to 50 MPG Highway is possible**
- **Lower cost than buying a new plug in hybrid car; extends the life of the car**

#### Results

- **20% Fuel Economy Improvement; Up to 140 Mile Range**
- **Up To 80 MPG City & Traffic Jam MPG**

