

Road beat: Price of Prius hard to justify



The Prius is on its third generation. Photos/Larry Weitzman

By Larry Weitzman

Prius has been with us for 15 years, through three generations and have more than 4 million in sales, a more than remarkable achievement especially considering its high tech complexity. Even more remarkable is the reliability of the Prius, about as bullet-proof as you can buy. Because of their high tech controls, even the hybrid components/battery system while guaranteed for eight years/100,000 miles never seem to fail even well beyond the warranty period. Toyota has cycled test batteries a 150,000 cycles with still no loss of efficiency.

In designing this updated third generation, Prius still

retains the shape of the second generation. But it is crisper and much more refined giving it a more sporting look. But its basic shape hasn't changed as it is so identified as a Prius Hybrid which is important to people who buy them. Drivers of Prius want to maintain their feeling of virtuosity and caring (certainly for their wallets, among other things).

Prius is a compact car with a short length of just 176 inch and a long wheelbase of 106 inches. And it is narrow at 69 inches. If it looks like it can cheat the wind, it does with a very low co-efficient of drag of 0.25.



Specifications

Price About \$21,000 to \$36,000

Engine and Motor

Engine

1.8L Atkinson cycle 16 valve DOHC inline four cylinder 98 hp @ 5,200 rpm

105 lb-ft of torque @ 4,000 rpm

Motor

80 hp permanent magnet synchronous

Power supply 27kWh (36 hp)

nickel metal hydride battery

Combined HP 134 hp

Transmission

CVT

Configuration

Transverse front
engine/front wheel drive

Dimensions

Wheelbase 106.7 inches

Length 176.4 inches

Width 68.7 inches

Height 58.7 inches

Ground clearance 5.3 inches

Track (f/r) 59.6/59.4 inches

Turning circle 36.0 feet

Trunk capacity 21.6 cubic
feet

Fuel Capacity 11.9 gallons

Curb Weight 3,072 pounds

Wheels std/opt 15X6/17X7
inch alloys

Tires std/opt
195/65X15/215/45X17

Coefficient of drag 0.25

Performance

0-60 mph 9.45 seconds

50-70 mph 6.00

50-70 mph uphill 11.01
seconds

Top speed 112 mph (factory
number and governor limited)

Fuel economy EPA rated
51/48/50 mpg
city/highway/combined.

Expect 44 mpg overall and 50
plus mpg on the highway at
legal speeds.

Occupying the engine bay under the short hood is an Atkinson
cycle 1.8L 98 hp engine at a low 5,200 rpm plus peak twist

occurring at 4,000 rpm. Atkinson cycle means a 13:1 compression ratio and a late closing intake valve. This creates a more efficient engine by enlarging the ratio between the expansion cycle and the compression cycle and still allows for the use of regular gas.

In addition there is the electric power system which uses an 80 hp electric motor that produces 153 pounds of twist. But don't get too excited as the Prius is not a 178 hp car. Because battery output is limited to 36 hp, it limits the electric motor's addition of power to the gas engine and the combined output is 134 hp. Still nothing to sneeze at.

Performance is more than adequate. Zero to 60 mph arrives in an average of 9.48 seconds, mid-pack for most compact cars and making it quicker than the conventional mileage champ, the Mitsubishi Mirage. It is also identical to my first test of the Gen III Prius tested six years ago that ran a 0-60 mph time of 9.48 seconds. Passing performance is also mid-pack with 50-70 mph on a level road and up a six percent grade of 6.00 and 11.01 seconds.

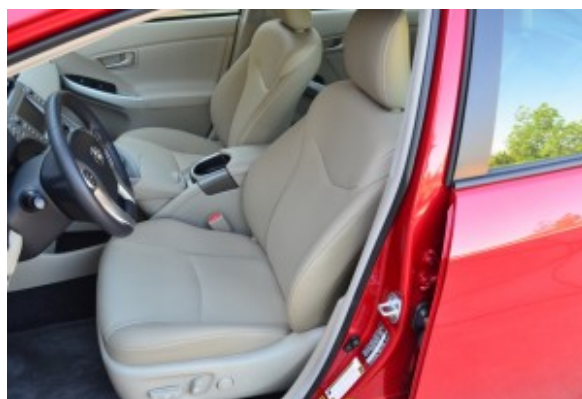
Dividends are paid (or actually not paid) at the pump. While the EPA rates the Prius at 51/48/50 mpg city/highway/combined, it might be a little optimistic as when driven in a moderately aggressive manner while minimizing braking, which is perhaps the most efficient way to drive (look for a Road Beat column soon on maximizing fuel economy) in 200 miles city, country and some highway driving, evenly split, the Prius averaged 43.5 mpg which is about what other Road Beat tests have shown. However, on the highway (level) at 70 mph the Prius averaged 50.7 mpg, better than the EPA's figure of 48 mpg. Those numbers exceed your best conventional compact, the Mazda 3, which averaged about 35 mpg overall and 43 mpg on the highway.

Suspension is compact standard, MacPherson struts up front and a torsion or twist beam in the rear. Steering is an electric power rack with a turning circle of 36 feet with the optional

17 X 7 inch alloy wheels shod with relatively wide (and low profile) 215/45 X 17 all season rubber. Prius also has a wide 60 inch track. Believe it or not the Prius is quite nimble. It handles well. When pushed hard in the twisties, it goes where it's pointed with no vices or mid-corner corrections required, however there is significant body roll. Prius handles just fine, but remember it wasn't designed for Mario Andretti.

Prius, even with its low rolling resistance tires is quiet on all but the coarsest roads. On the highway at 70 plus mph it is very quiet with no wind, engine or road noise. There is no tach as the unique CVT tranny makes it unnecessary. In pure electric mode it is whisper quiet and the engine is so silent sometimes the only way you know it is running is the rumble in the go pedal when it comes on line. Prius handles bumps providing comfort without float or jarring over the worst roads.

While the Prius has only four wheel 10 inch discs with all the acronyms (ABS, etc.) its stopping distances are quite short, just an excellent 41 feet from 40 mph. Seven airbags plus traction control, vehicle stability control, smart stop technology braking and more are all standard equipment. Prius is safe.



The interior of the Prius is nothing special.

Inside is a lot of plastic. While of good quality, it is a

blah interior. Seats are done in Toyota's Softex, their brand of synthetic leather. While comfortable, it reminds one of a good washing machine or refrigerator, not too exciting. Interior room front and back is quite copious, room for five in comfort.

But there are some complaints, starting with the instrument panel which is located in the center of the upper dash, too far from the driver (it is at least two or more feet removed and located much too far to the right) with some of the ancillary info like the trip computer being presented in a size that is much too difficult to read. This needs to be fixed. The center stack is also hard to use with its touch screen, but it's at least legible.

Is the Prius likable, sure it is and it drives well. I like it, but there another huge rub and that is price. The Prius Five model tested by the Road Beat stickers for a whopping \$30,005 which even included a Nav system (why the extra \$5, I just don't know) plus \$825 for the boat from Japan. This tester had the \$4,320 Advanced Technology Package which had an upgraded Nav and JBL sound system, stolen vehicle locator, radar cruise control, lane keep assist, heads up display (a nice feature considering the standard speedo is off to the right) and a bit more. With this package plus a couple of other small options brought the total sticker shock to \$35,824. You are never going to save that much gas.

But the problem is that other very economical cars are much less expensive. A loaded Mitsubishi Mirage is less than half the price or a loaded Mazda 3 with more equipment, a much nicer interior, far superior performance and handling in a similarly sized package is \$8K less money with an average fuel economy that is about 8 mpg less than the Prius. If you drive 15,000 miles a year you will save about 85 gallons of fuel or about \$250 annually. The cost of the capitalization is higher, never mind eating into the purchase price difference. Why do people buy the Prius as 4 million have since its introduction,

it makes them feel good about themselves adding a bit of virtuosity to their lives.

Larry Weitzman has been into cars since he was 5 years old. At 8 he could recite from memory the hp of every car made in the U.S. He has put in thousands of laps on racetracks all over the Western United States.