

Road Beat: Highlander Hybrid, best of both worlds



The 2017 Toyota Highlander Hybrid scores high in all categories. Photos/Larry Weitzman

By Larry Weitzman

Generally speaking, when performance goes up, fuel economy goes down and vice versa. But in the case of the Toyota Highlander Hybrid, it achieves better fuel economy and a gain in performance. And that comes with a 400-pound weight penalty from the hybrid system and battery.

Highlander is based on the Camry platform, albeit with some heavier duty components. In Hybrid form dimensions are 193 x 76 x 70 inches high with the shark fin antenna. Proportions are eye pleasing with a sleek window line hiding its two-box design. It's a great looking ride and the horizontal grille

treatment is massive and powerful as well as a welcome change from the current Toyota theme.

Power comes from three sources, the primary being Toyota's 3.5L DOHC, 24 valve V-6 designed to run an Atkinson, higher efficiency cycle, which uses higher compression and late closing intake valves. The other two sources are two electric motors, one (rated at 167 hp driving the front wheels and a 68 hp motor driving the rear wheels. Both power outputs are limited by the Nickel Metal Hydride battery output of 60 hp. No hp or torque rating is given for the 3.5L V-6, but because it is an Atkinson Cycle it is probably around 250 hp and when you combine that with a maximum battery output of 60 hp, total motive force becomes about 310 hp.

Transmitting the power to the front wheels is a CVT and rear wheel (axle) power comes solely from the rear electric motor. There is no drive shaft from the gas engine to the rear wheels.

Performance is outstanding with 0-60 mph coming up in 6.38 seconds, a bit quicker than the conventional Highlander tested two years ago (6.69 seconds). Passing performance is also improved with 50-70 mph level and uphill simulated passes taking just 3.45 and 4.79 seconds respectively compared to my prior test numbers of 3.65 and 5.28 seconds respectively. This hybrid is extremely responsive but because there is no mechanical rear wheel drive connection torque steer is apparent under strong and full throttle applications.



Specifications

Price \$42,270

3.5L DOHC 24 valve V-6 est
250 hp @ 6,000 rpm
est 245 lb-ft of torque @
4,500 rpm

Electric power

Nickel Metal Hydride Battery
Max output 60 hp (45 kW)

Transmission

CVT automatic

Configuration

Transverse mounted front
engine/FWD/4WD

Dimensions

Wheelbase 109.8 inches

Length 192.5 inches

Width 75.8 inches

Height 68.1 inches (add two
inches for the shark fin
antenna)

Ground clearance 8.0 inches

Track (f/r) 64.4/64.2 inches

Fuel capacity 17.2 gallons

Passenger volume (moon roof)
152.9 cubic feet

Cargo volume behind 1st row/
2nd row/ 3rd row
83.2/42.3/13.8 cubic feet

Weight 4,910
Max Tow 3,500 pounds
Steering lock to lock 2.74
turns
Turning circle 38.7 feet
Co-efficient of drag 0.33

Performance

0-60 mph 6.38 seconds
50-70 mph 3.45 seconds
50-70 mph uphill 4.79
seconds
Top Speed Well into triple
digits
Fuel economy EPA rated
29/27/28 mpg city/highway/
combined. Expect 30 mpg on
the highway at legal speeds
25-26 mpg overall in
suburban driving.

Fuel economy is improved by 10-15 percent. EPA rates the Hybrid at 29/27/28 mpg city/highway/combined. Overall the Hybrid averaged about 25 mpg and as low as 23 mpg when driven extremely aggressively without the benefit of any freeway steady state driving, but mostly suburban stop and go. But on my trip over the Sierra to South Lake Tahoe and back, the Hybrid averaged a solid 26.8 mpg in fairly aggressive driving. All these numbers are slightly below the EPA test cycle numbers except for one and that is highway mileage where the Hybrid averaged 30 mpg at a constant 70 mph on a level highway in a two-way run. Compared to my conventional test of two years ago, the overall improvement is about 10 percent. The fuel tank loses 2 gallons of capacity down to a still acceptable 17.2 gallons.

Highlander has all the ingredients of good handling and it does. Quick steering (2.74 turns lock to lock), MacPherson

struts up front and double wishbones in the rear, 18 x 7.5-inch alloys shod with wide 245/60 series rubber, it's all there and in normal driving it handles well and nimbly. But push it hard and it needs your attention and guidance to go to that higher level of handling. It has the cornering power, it just doesn't come as naturally. Most drivers will never get to that point, anyway. In around town and over the road driving, 99.8 percent will absolutely love this Highlander. If you want an absolute track/fun car see the Toyota 86. You will understand what I am getting at.

Ride and quiet are superb, especially when operating EV. This is a think in a whisper vehicle. That trick suspension does its job on rough roads. Terrific. Smooth roads even better. A magic carpet. No tach so no engine speed at 70 mph, but you can bet it's well below 2,000 rpm.

There is no compromise with Toyota Safety Sense. It has lane departure warning with steering assist and just about every other safety devise. Headlights were terrific with automatic high beam control and the brakes were huge and powerful.

Seating for eight was standard with leather in the first two rows along with heat up front. Very nice. Instrumentation was hybrid complete, but no tach. Trip computer operation was easy and the center stack was touch screen with standard nav. This is an almost luxury SUV (crossover), but if you are going to constantly use it to haul rear seat (third row) passengers, take a pass. Its massive interior makes this a dangerous vehicle for Home Depot/Lowe's lovers as it has over 83 cubes behind the front row seating and over 42 cubes just behind the second row. There are still 14 cubes behind the third row.

Pricing for this Hybrid with everything mentioned is \$41,330 plus \$940 for the train from Princeton, Ind. My tester did come with a factory rear seat DVD set up, good for when hauling kids long distance, that added \$1,810. If you don't haul kids long distance on a regular basis, take a pass. And

it's a Toyota. Pretty amazing a 4,900-pound SUV that gets better than 25 mpg (30 mpg on the highway) and accelerates from 0-60 mph in almost six seconds flat. Need I say more?

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.