

Road beat: Power not a problem with Lexus hybrid



The Lexus GS 450h has power and great gas mileage. Photos/Larry Weitzman

By Larry Weitzman

While the electrified Lexus GS450h hybrid has a bit of a disconnected feel, it doesn't lack for power. And we are talking more than just horsepower.

As Lexus's refinement of all its hybrids continues, this new GS450h is the best example the Road Beat has tested.

While it's hard to believe Toyota's first U.S. marketed hybrid was introduced 15 years ago, the technology hit the Japanese market 17 years ago. My, how it has matured. Transitions have become literally imperceptible; braking action is smooth and

the power is breathtaking, never mind the improved fuel economy.

Design of the new GS continues to evolve from the original 1993 Giugiaro penned shape. Most interesting and pronounced is the L'finnesse front end snout. Perhaps it is the most aggressive of all Lexi. Overall the design is smooth and attractive, with excellent proportions and nothing offensive or added on for the sake of complexity.



Specifications

Price \$60,510 to about \$71,000

Engine

3.5L DOHC 24 valve V-6 286 hp @ 6,000 rpm
254 lb.-ft. @ 4,600 rpm

Electric Drive

Motor Max output 200 hp
Battery Type Sealed Nickel Metal Hydride
System voltage 650V
Max output 41 hp
Combined Max power output 327 hp

Transmission

CVT

Configuration

Front engine/rear wheel

drive

Dimensions

Wheelbase 112.2 inches

Length 190.7 inches

Width 72.4 inches

Height 57.3 inches

Track (f/r) 62.0/62.6 inches

Ground clearance 5.5 inches

Trunk capacity 13.0 cubic feet

Fuel Capacity 17.4 gallons

Weight 4,112 pounds

GVWR 5,125 pounds

Weight distribution (f/r)

51/49 percent

Steering lock to lock 2.8 turns

Turning circle 34.8 feet

Wheels 18X8 inch alloys

Tires 235/45RX18

Coefficient of drag 0.27

Performance

0-60 mph 5.31 seconds

50-70 mph 2.96

50-70 mph uphill 3.62 seconds

Top speed Governed at 131 mph

Fuel economy EPA rated 29/34/31 mpg

city/highway/combined Expect 31 mpg overall in mixed

driving. At 70 mph on cruise control two way run 39 mpg

on longer level highway trips at legal speeds expect 37 mpg.

Wheelbase is midsize at 112 inches, length is 191 inches and width is a svelte 72 inches. What's nice is that outside dimensions don't belie the rather large rear seat comfort and legroom remarked on when carrying two rear seat adults to lunch one afternoon. However, the hybrid's trunk is reduced by more than a cubic foot by the hybrid's battery. Notwithstanding, it is still very usable because of its shape.

Powering the GS450h is the same V-6 as found in the conventional GS350 except for some minor modifications to improve efficiency like making it into an ultra high compression (13:1) Atkinson cycle engine. Consequently power drops from 306 hp at 6,400 rpm to 286 hp at 6,000 rpm. Peak torque also falls by 23 pounds to 254 pounds of twist at 4,600 rpm. However, the GS450h makes up for that with an electric motor kicker with a battery output of an extra 41 hp (327 hp combined). While that may not sound like much, it is. This GS450h flat out flies.

It will do the benchmark 0-60 mph run in 5.31 seconds. That is world-class performance. Passing times are also world class with 50-70 mph runs on level ground and up a 6 percent grade averaged 2.96 and 3.62 seconds, respectively. That is getting it done. And throttle response is near perfect and linear. It is impossible to tell this vehicle is a hybrid except for when the green EV light lets you know the engine has quit running. Then you can notice the deafening silence.

OK, hybrids are supposed to be fuel efficient and this one certainly is. The GS350 is rated by the EPA at 19/29/23 mpg city/highway/combined. It is also not as quick as the hybrid, close, but no cigar. The hybrid GS450h however is rated at 29/34/31 mpg. But here is the even better news. On the highway at 70 mph on cruise control the GS450h averaged 39 mpg on a two-way run. Amazing. Overall with little time spent on the freeway it averaged 31.1 mpg. However, in a two-way run from Placerville to South Lake Tahoe and back, the 450h averaged 34 mpg. Speeds were kept at 60 mph and under. The 450h is not

only a bit quicker than its conventional sibling; it's about 8 mpg more economical.

What is even more amazing is the fact that the GS450h weighs 4,112 pounds or nearly 400 pounds more than its sibling GS350.

Now this is where it gets interesting. The GS450h can flat out corner. Its suspenders are state-of-the-art double wishbones up front with a multilink independent system bringing up the rear. Coils and gas filled shocks are in each corner with stabilizer bars at both ends. A vehicle speed sensing electric rack guides the car and it is integrated with the Vehicle Dynamics Integrated Management system. It's also quick at 2.8 turns lock to lock. Standard rubber is 235/45×18 inch tires mount to wide 18×8 inch alloys. As to the 450h's cornering power, it is huge. During hard corners at speed vehicle attitude also remains firm and flat so it has the ingredients of a genuine sporting sedan, but it misses one thing, good feel and feedback from the steering. The GS could be hustled through corners that would have lesser cars crying "uncle," but it takes driver concentration, input and guidance, more so than say Miata or a new Ford Mustang GT. Turning circle is a tight 34.8 feet.

Understanding that, the GS has a marvelous ride quality. It absorbs road punishment perfectly, no harshness or jarring yet the ride is solid and firm with absolutely no float. It's about as good as I have ever encountered. And it is quiet, even outside the car it is hard to hear the engine at idle and it is absolutely dead silent in all driving regimes except full throttle when you can hear a bit of V-6 engine bark. By the way, this is one of the first V-6s that almost has the sound of a V-8 under full throttle acceleration.

During normal driving it is so quiet you cannot tell if the gas engine is running or it is on pure electric power, which the GS450h can do up to about 42 mph under very light throttle pressure. There is no tach so the only indication is the green

EV light is on. The GS450h can travel about a mile or so under continuous pure electric drive.



The Lexus is full of luxury.

Strides have also been made with smooth braking. There is no pulsing during stopping. It is next to impossible to sense any powertrain transitions, especially with the super smooth CVT transmission. Panic stops from 40 mph take 43 feet under absolutely perfect control. Of course every safety acronym known to mankind is present in this vehicle.

Inside is a luxurious interior with extremely comfortable front chairs that are infinity adjustable. There is no tach, but most other gauges are present, but the Lexus Mark Levinson sound system while sounding superb is difficult to control with a flighty mouse used for everything but volume. It is a sore spot that hampers an otherwise outstanding automobile. Trick technology for its own sake doesn't always work. It also causes too much driver inattention. It sets the car back 50 years as in older airplanes when a radioman was required just to work communications.

Rear seat room is astounding.

Pricing starts at \$59,600 but options like the Luxury Package (\$5,255), the HDD navigation (\$1,735) and the Mark Levinson Sound System (\$1,380), plus some other items brought the total price including \$910 for the boat from Japan to \$70,649. That is substantial money to show off your environmental

sensitivity.

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.