

# Lexus GS 450h Moves the Benchmark for Luxury Hybrids

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The 2014 Lexus GS 450h presents a striking dichotomy in performance and efficiency. Its Lexus Hybrid Synergy Drive system delivers 338 total system horsepower for dazzling performance, yet this dramatically styled, spacious sedan also delivers EPA fuel economy ratings on par with cars half its power: 29 mpg city, 34 mpg highway and 31 mpg combined.

The fuel economy of the new-generation GS 450h represents an impressive 35 percent improvement over the previous generation GS hybrid model, a testament to the brand's relentless pursuit of luxury hybrid leadership. Lexus was the first luxury brand to introduce a hybrid model nearly 10 years ago and today offers five hybrids, the most of any luxury car brand.

Driving a GS 450h, the driver will be struck by the uncanny smoothness of the powertrain. The Lexus Hybrid Drive system teams the output of an Atkinson cycle 3.5-liter V6 engine with a water-cooled permanent magnet electric motor through a planetary-type continuously variable transmission. Independently or in parallel as needed, the gas engine and electric motor drive the rear wheels. The high performance nickel-metal hydride battery pack uses a stacked design to improve trunk space, which is greater than even the gas-only models of the previous generation GS.

Thanks to high system torque at all speeds, and a zero-to-60 mph acceleration in just 5.6 seconds, the GS 450h will feel more like a V8 to the driver. But it uses fuel like a four-cylinder engine. That's just one element in its performance-oriented persona. Drivers looking for more control and engagement from a hybrid model will find it in the GS 450h, which comes equipped with Lexus Drive Mode selector featuring five modes.

Normal mode offers a balance of efficiency and performance response that's ideal for everyday driving and yields the smoothest driving experience. Two of the modes focus on fuel economy. ECO mode sets throttle mapping, seat heating and climate control systems to prioritize energy conservation. When driving in ECO mode, instrument meter lighting changes to blue. The EV mode allows the vehicle to be driven short distances, under certain circumstances, using only the electric motor.

Driving enthusiasts will welcome the SPORT S and SPORT S+ modes. SPORT mode transforms the car's personality, with sharper throttle response and transmission control that mimics the stepped shifting of an eight-speed automatic transmission (compared to six steps in the 2013 model). Instrument meter lighting changes, appropriately, to red when driving in SPORT S mode.

Selecting SPORT S+ mode also engages a sport setting for the Adaptive Variable Suspension, electric power steering system and Vehicle Dynamic Integrated Management (VDIM). In this mode, the GS 450h drives like no other hybrid sedan, adding a sporting edge to the handling while maintaining the classic Lexus smoothness and comfort.

Long a leader in user technology that's easy to use, Lexus has standard integrated Siri® Eyes Free Mode, with technology licensed from Apple®, in the 2014 GS 450h. Compatible with the iPhone® 4S and iPhone 5 models forward, Siri lets you call contacts, select and play music from iTunes®, get turn-by-turn navigation through Siri and Apple maps, and much more. To help keep eyes on the road and hands on the wheel, Siri can read

notifications, read calendar information and allow you to add reminders, calendar appointments and notes.

### **Subtle but Distinctive Look for Hybrid Model**

Sharing the dramatic new design of the GS 350 gas model, the GS 450h conveys its hybrid identity with elegant subtlety. In front, an available three-lamp design combines high and low beam LED lamps and turn signals in a single horizontal row. At the rear, the GS 450h shares the gas model's L-shaped LED tail lamps and stabilizing fins in the bumper's lower section and also conceals the tailpipes. Discrete blue hybrid badging completes this high-tech, high-efficiency model's distinguishing features.

Even with its sweeping, coupe-like profile, the Lexus GS 450h provides ample headroom for rear-seat passengers. The new-generation GS offers greater rear headroom, knee room, legroom and foot space than in the previous GS, yet in a sleeker package.

### **The Art of Lexus Luxury**

The cabin of the Lexus GS 450h is nothing short of sumptuous. The standard 10-way power front seats, and the rear seats, are trimmed in soft perforated leather. The GS 450h features matte bamboo trim and comes with additional standard luxury features over the GS 350, including heated and ventilated front seats, a heated steering wheel, power rear sunshade and a high-intensity interior heater. Rear seat passengers are treated no less regally, with deeply scalloped seats providing excellent support and generous legroom for long trips.

Lexus puts more personal control in climate control with the GS 450h. A first-in-class technology, the energy-saving S-Flow automatic climate control system detects if there is a front passenger and directs airflow only to the occupied front seat or seats.

New for 2014, the Climate Concierge feature, similar to that in the Lexus LS flagship sedan, personalizes climate control for passengers. In the GS 450h, the system automatically monitors the temperature of three separate climate zones and adjusts not only the fans, but also the temperature of the seats and steering wheel according to preset preferences. Each zone will achieve its pre-set level of comfort as quickly as possible.

### **Advanced Connectivity, Easy Controls Through Touch and Voice**

In the Lexus GS 450h, user technology works for the user, not the other way around. The next-generation Remote Touch with one-push confirmation is standard and enables smooth, intuitive control of climate, audio, phone, the optional navigation system and more. A standard rear back-up camera adds security and convenience.

Located front and center, and central to that technology, a vibrant high-resolution control display provides easy access to a multitude of vehicle features. Equipping the GS 450h with the optional navigation system adds a stunning 12.3-inch multimedia display with split-screen capability. The driver and passenger can view a large map display on the left while also monitoring audio, climate or other vehicle information on the right.

Lexus has expanded connectivity in its vehicles while helping to reduce driver distraction. The foundation of this capability, Lexus Enform, can make a compatible Bluetooth smartphone even smarter. The available Enform service, with Destination Assist, eDestination, and App Suite, comes with the Navigation System/Mark Levinson Audio Package. Lexus Enform provides access to the subscription-free App Suite. These voice-enabled apps let you search the Internet through Bing<sup>™</sup>, make restaurant reservations through OpenTable<sup>®</sup>, get movie tickets via MovieTickets.com<sup>™</sup>, listen to Internet radio, including , Pandora<sup>®</sup>, and iHeartRadio<sup>™</sup>, search business reviews on Yelp<sup>®</sup>, and check in on Facebook Places<sup>™</sup>.

Lexus Enform with Safety Connect<sup>®</sup> is available by subscription. Complimentary one-year trial subscriptions are available on all purchases of new Lexus vehicles equipped with these features. Safety Connect is standard on all

vehicles while Lexus Enform with Safety Connect is on all vehicles equipped with the optional Navigation system. The Lexus Enform and the Safety Connect response centers operate 24 hours a day, 7 days a week—every day of the year.

Lexus Enform vehicles are factory ready for subscriptions to a variety of innovative SiriusXM services including NavTraffic, NavWeather, Sports, Stocks and Fuel Prices. SiriusXM services offer complimentary one-year trial data subscription.

A unique touch in all GS models, and certainly a reflection of Lexus luxury values, the analog clock is carved from a single ingot of aluminum for a smooth consistent look and uses LED indicators.

### **What's New for 2014**

- Siri Eyes Free technology licensed from Apple; compatible with iPhone 4S and iPhone 5 models
- Flush-mounted sensors for Intuitive Parking Assist
- Full-color display added to Head-Up Display
- Climate Concierge feature now included with optional heated/ventilated seats.
- Transmission Sport mode now provides eight steps, rather than six, and also adds a kickdown switch
- Available Blind Spot Monitor adds Rear Cross Traffic Alert and power-folding mirrors
- Luxury Package changes: LED foglamps, Liquid Graphite finish for 18-inch wheels, and the radio station and song title are added to the rear armrest control panel display
- Optional power trunk opener
- Lexus Night View system discontinued

### **Vehicle Details**

#### **Engine/Transmission/Drivetrain/Performance**

- Certified as a Super-Ultra Low Emissions Vehicle (SULEV) which has lower emissions than clean diesels.
- The system's regenerative braking operation range has been expanded, contributing to further improvements over the previous generation in fuel efficiency.
- Improved fuel consumption over the previous generation is achieved through a high compression ratio of 13:1, a new mid-port intake tumble generator and the adoption of a Lexus D-4S fuel injection technology. With one injector installed in the combustion chamber and a second mounted in the intake port, D-4S combines the strengths of both direct and port injection for maximum efficiency and lowest emissions.
- The PCU boosts motor drive voltage to a maximum 650V in Sport mode and limits it to a maximum of 500V in ECO mode under normal driving conditions.

#### **Chassis/Body/Suspension/Tires/Brakes**

- Front and rear aluminum control arms reduce unsprung weight and help endow the GS 350 with enhanced agility, sway damping, ride comfort, body control and steering precision.
- Ventilated disc brakes feature four-piston aluminum front calipers.
- Electronically Controlled Braking system characteristics modified to provide greater responsiveness.
- Standard 17-inch alloy wheels with 225/50R17 tires, and optional 18-inch alloy wheels equipped with 235/45R18 tires.
- The standard Vehicle Dynamics Integrated Management (VDIM) anticipates loss of vehicle control and governs all of the vehicle's dynamic handling systems – the Anti-lock Braking System, Brake Assist (BA), Vehicle Stability Control (VSC) and Traction Control (TRAC) — with the electronic throttle control system. VDIM employs these systems collectively and seamlessly to help make corrections while allowing

higher dynamic capability. The system also provides a limited slip differential effect.

### **Safety/Security Features**

- The GS 450h comes standard with 10 airbags, including a knee airbag for both driver and front passenger, seat-mounted side airbags for outboard rear seats, and side curtain airbags for all four outboard occupant seating positions.
- Whiplash Injury Lessening front seats reduce the space between the occupant's head and headrest, to help limit excessive head movement, and help decrease the severity of whiplash-type injuries in certain types of rear end collisions.
- Available options to help further enhance occupant safety include a Pre-Collision System (PCS), which uses the Dynamic Radar Cruise Control System to provide early warning of upcoming objects that might result in a frontal collision. The system uses an infrared camera with new scanning technology to monitor the direction the driver's eyes are facing. In the event that the driver does not appear to be looking forward when a frontal collision appears imminent, the system will initiate the warning at an earlier threshold. If the driver still does not respond and make the appropriate maneuver, the system will initiate braking intervention up to 1.2 seconds prior to impact, designed to help lessen the severity of the collision. With available Lexus Dynamic Handling, PCS will help further mitigate the occurrence of a collision.

### **Luxury/Comfort/Convenience**

- Standard entertainment and connectivity advancements include enhanced Bluetooth capability with automatic phonebook download and streaming audio.
- Standard DVD audio and video compatibility, MP3 sound enhancement, 5.1 simulated surround-sound from normal two channel sources such as MP3 files and CDs, and a high-resolution eight-inch central control display centrally located high up in the instrument panel.
- HD Radio™ with iTunes tagging and a three-month trial subscription to SiriusXM® Satellite Radio are standard.

### **Luxury Options**

- The Luxury Package includes Bi-LED headlamps with Adaptive Front Lighting System, LED foglamps; unique high gloss espresso wood ornamentation; semi-aniline leather, 18-way power driver and front passenger seats with memory and four-way lumbar; rear HVAC and audio controls; rear manual side sunshades; 18-inch alloy wheels with new Liquid Graphite finish, and a wood and leather-trimmed steering wheel.
- The available 17-speaker Mark Levinson premium surround sound audio system has 7.1 channel surround-sound through 10 channels using a new class D Digital amplifier with a clean 835-watts from 20-20,000 hz at only 0.01 percent total harmonic distortion.
- Other optional equipment includes Heads Up Display, a Blind Spot Monitor that helps detect vehicles in rear/side blind spots and Lane Keep Assist (LKA) with Lane Departure Warning (LDW).

### **Warranty**

- 48-month/50,000-mile basic limited warranty with roadside assistance for 48 months/unlimited miles.
- 72 months/70,000 miles powertrain and restraint system coverage.
- 72 months corrosion perforation protection, regardless of mileage.
- Eight years/100,000 miles hybrid-related components, including the HV battery, battery-control module, hybrid control module and inverter with converter.

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