

# All-New 2013 GS Illustrates Fresh and Exciting Brand Identity

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TORRANCE, Calif., Nov. 23, 2011 – Lexus raised anticipations when the all-new GS debuted at the 2011 Pebble Beach Concours d’Elegance. The new 2013 GS combines bold, dynamic styling, precise handling, innovative technology, and a spacious interior. In addition to the GS 350 that will be at dealerships early next year, Lexus completes the line-up with the GS 450h hybrid which goes on sale in spring 2012.

“The 2013 GS is the new Lexus,” said Mark Templin, Lexus group vice president and general manager. “The whole package comes together in one great looking sports sedan and shows the GS offers the best of all worlds with its performance, connectivity and available options that will suit the needs of many drivers.”

The new GS conveys an enhanced sense of confidence to the driver, with a redesigned chassis and a wide, strong stance that inspires and rewards driver participation with crisp and precise handling. Engineers developed a more spacious interior environment while leaving exterior dimensions virtually unchanged to ensure excellent maneuverability. Richly endowed with world-class features and premium details, the new GS is supported by advanced, performance-enhancing technology that makes it more than just a luxury car. The 2013 Lexus GS 350 is available in rear-wheel drive (RWD) or all-wheel drive (AWD) configurations, and can be equipped with the available Premium, Luxury or F SPORT packages for greater personalization.

The GS 450h was the first hybrid-powered luxury sport sedan to enter the market when it was originally introduced for the 2007 model year. Today, it is part of Lexus’ five-vehicle hybrid line-up, more than any other luxury brand.

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

The new GS powertrains have been enhanced for 2013 to provide better fuel economy and more responsive performance. The GS 350 is powered by an advanced 3.5-liter V6, four cams, and four valves per cylinder engine with dual Variable Valve Timing with intelligence (VVT-i). At 306 horsepower, it is one of the most powerful base engines in the segment, as well as the only one with both port and direct injection. It propels the GS 350 from 0-60 mph in 5.7 seconds and at the same time, boosts its fuel economy to projected EPA-estimated ratings of 19 mpg city, 28 mpg highway and 23 mpg combined.

Acceleration from 30 to 50 mph can take just 3.0 seconds, and improved intake and exhaust sound characteristics via an intake sound generator and optimized muffler chamber complement the bolder, more energetic personality of the new GS. The six-speed sequential shift automatic transmission comes with paddle shifters and sport driving functions for enhanced driving pleasure.

The transmission incorporates many features adopted from the Lexus IS F high-performance sedan — including faster shifts, earlier torque converter lockup and downshift throttle blips — to support four driving modes that can be operated by toggling the new Lexus Drive Mode selector. In addition to the Normal mode, the following settings let the driver customize the driving experience:

- ECO mode revises throttle mapping, seat heating, and climate control systems for better fuel economy. In ECO mode, meter lighting changes to blue.

- SPORT S mode revises throttle mapping and transmission shifting priorities to fully exploit the capabilities of the powertrain. In SPORT S mode, meter lighting changes to red.
- SPORT S+ mode (available with F SPORT and Luxury packages) engages handling enhancements via a sport setting of the adaptive variable suspension, steering system, and Vehicle Dynamic Integrated Management (VDIM) together with the powertrain enhancements of SPORT S mode.

An optional electronically controlled all-wheel-drive system can vary front-to-rear torque balance from 50/50 to as much as 30/70, depending on driving conditions, for exceptional control.

The 2013 GS 450h incorporates improvements to its hybrid powertrain and is equipped with a second generation Lexus Hybrid Drive system.

With a total system power output of 338 horsepower, the GS 450h will accelerate effortlessly from 0-60 mph in 5.6 seconds. Conversely, fuel consumption is expected to be improved by more than 35 percent versus the previous version with projected EPA-estimated ratings of 29 mpg city, 34 mpg highway and 31 mpg combined. The GS 450h is expected to be certified as a Super-Ultra Low Emissions Vehicle (SULEV) which has lower emissions than clean diesels. For enhanced driving dynamics, the new GS hybrid also features a Drive Mode selector with Normal, Eco, Sport S, Sport S+ and EV modes.

As with all Lexus hybrid vehicles, the new GS 450h is a full hybrid capable of operating in gas-only or electric-only modes, as well as a combination of both. Its Lexus Hybrid Drive system features an ultra-smooth running, next generation D-4S direct and port fuel injection system with an Atkinson cycle 3.5-liter V6 engine mated to a compact, high-output, water-cooled permanent magnet electric motor powered by a high performance nickel-metal hydride battery pack. The two powerplants drive the rear wheels both independently and in tandem, as needed.

Improved fuel consumption is achieved through a high compression ratio of 13:1, a new mid-port intake tumble generator and the adoption of a Lexus four-stroke, direct injection technology, D-4S.

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, realizing optimum engine efficiency throughout the power band and improving torque across the rev range, while minimizing fuel consumption and emissions.

The D-4S system features new slit-type injector nozzles with a modified port shape, a higher fuel pressure for more efficient combustion, and idle port injection for improved NVH characteristics.

The cooling performance of the hybrid system's Power Control Unit (PCU) helps reduce fuel consumption and has been improved through the adoption of dual cooling paths and a single-piece, integrated DC/DC converter.

System control has also been enhanced. 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 where maximum output is not required. The motor is driven at lower voltage to provide a more environmentally-advanced driving performance to help enhance fuel efficiency.

Engine noise, vibration and friction have been lowered through the adoption of lightweight timing chain technology. The electric motor features lighter mounts and reduced friction. The system's regenerative braking operation range has been expanded, contributing to further improvements in fuel efficiency. In addition, the battery layout has been redesigned. A new stacked configuration maximizing luggage space allows the 2013 GS 450h to have more cargo area than the previous generation GS 350.

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

Designing the new GS 350 and GS 450h to be both strong and agile was a key focus of the engineering team. They looked to the Lexus LFA supercar for design and dynamic inspiration.

The new platform is more rigid. Engineers conducted extensive testing, ultimately increasing the number of spot welds and adding laser welds in very specific locations. The track, wider by almost two inches, works in combination with a revised suspension design to help ensure a more solid stance and superior cornering performance.

In the front, upper and lower control arms are made from aluminum and employ larger bushings. The rear subframe has been completely redesigned to accommodate an all-new multi-link rear suspension, using improved suspension geometry that helps retain tire cornering force and enhances rear control. With the stiffer platform and lighter components, the shocks can use lighter-viscosity oil, so they move easily and respond to small inputs more quickly.

The use of front and rear aluminum control arms helps reduce unsprung weight and results in significant improvements in agility, roll damping, ride comfort, body control and steering precision. Overall, the suspension is lighter and stronger, allowing it to react to driver input readily, and ride quietly without harshness. Ventilated disc brakes featuring four-piston aluminum front calipers are endowed with the latest electronic enhancements to help provide braking balance and control. In addition, the GS 450h's Electronically Controlled Braking system characteristics have been modified to provide greater responsiveness from the first touch of the pedal. The GS 350 and GS 450h feature standard 17-inch alloy wheels paired with 225/50R17 tires, and optional 18-inch alloy wheels equipped with 235/45R18 tires.

For those seeking even more agility, Lexus offers an optional F SPORT package. This new package features a retuned suspension with firmer springs, an adaptive variable damping system, thicker anti-roll bars, a variable gear ratio steering system, bushing changes, and larger front brakes with high friction brake pads.

The GS 350 with F SPORT package will offer an optional Lexus Dynamic Handling (LDH) system with Dynamic Rear Steering (DRS). This newly developed, leading edge platform technology offers Lexus' first integration of DRS; Electric Power Steering; and Variable Gear Ratio Steering (VGRS). Monitoring vehicle speed, steering direction and driver inputs, the system calculates the optimum angle for all four wheels. Using VGRS in the front and DRS in the rear, the system can independently manage both front and rear wheel steering angles to help improve turn-in response, rear grip, vehicle control and overall agility when cornering.

The latest generation of Lexus' unique Vehicle Dynamics Integrated Management system coordinates Lexus Dynamic Handling; the Anti-lock Braking System; Traction Control; Vehicle Stability Control; and Adaptive Variable Suspension (AVS). AVS helps front and rear wheel control and provides agile, sharp and confident driving behavior with a more direct response to the driver's actions. The LDH system monitors vehicle speed and yaw rate, steering angle and speed, and lateral G to calculate the required rear wheel steering input, to a maximum rear wheel angle of 2.0 degrees. At most speeds below 50 mph the GS front and rear wheels turn in opposite directions. In certain conditions at speeds over 50 mph the GS front and rear wheels turn in the same direction.

The Lexus Dynamic Handling system coordinates all of the above and optimizes dynamic and safety systems to suit vehicle speed and driving style.

The GS 350 with F SPORT package will be exclusively equipped with 19-inch staggered width wheels paired with 235/40/19 front and 265/35/19 rear summer compound tires for RWD models, while AWD models will have 235/40/19 all-season tires in the front and rear. The wider width rear wheels allow for a sportier look, and also help provide added grip and control on the road.

## **Safety/Security Features**

In addition to enhanced braking systems and an impact-absorbing body structure, the new GS features significant advances in both passive and active safety systems as standard equipment.

The GS is equipped with 10 airbags, including a knee airbag for both driver and front passenger. Outboard rear seats have seat-mounted side airbags, and all four outboard occupant seating positions are equipped with side curtain airbags.

New 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 collision. The system also uses an infrared camera with new scanning technology to monitor the driver's eyes. In the event that the driver does not appear to be looking forward when a 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.

Other optional safety systems include a Night Vision System that enhances driver visibility at night; 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). LKA provides a small amount of active steering torque to help maintain course, while the LDW feature alerts the driver if the system detects that the vehicle is beginning to drift out of the lane.

## **Exterior Design**

The GS fuses distinctive style with engineering functionality. The signature spindle grille with its trapezoidal contours fully integrates into the aggressive front bumper allowing for efficient airflow. Air inlets located on the outer edges of the lower grille serve as cooling ducts. This distinctive Lexus design feature combined with deep-set, high-tech headlamps with a projector beam design and L-shaped LED daytime running lamps further express the vehicle's dynamic character.

Exclusive to the hybrid model is an available three-lamp design that combines high and low beam LED lamps and turn signals in a single horizontal row. The improved illumination and beam range provided by LED lamps offers better visibility even under low beam driving conditions.

The GS 350 with F SPORT package will be outfitted with a unique front bumper and rear lower valence, rear lip spoiler and F SPORT mesh grille inserts.

The rear bumper of the GS 350 features a distinctive integrated exhaust diffuser and centered aero fins to help control underbody airflow. Like the GS 350 model, the GS 450h adopts L-shaped LED tail lamps and stabilizing fins in the bumper lower section. The GS 450h can also be distinguished by concealed tailpipes for a clean, hybrid look and Lexus' signature blue hybrid badging.

The design of the GS 350 and GS 450h are enhanced by rich and luxurious exterior colors. Lexus engineers developed a new advanced coating process that applies multiple coats of paint and bake processes, and will be first utilized on the GS' Liquid Platinum exterior. This paint process will appear more radiant as an additional metallic texture gives both strong shading and defined, sharp highlights. This metallic effect makes subtle and defined bodylines more noticeable and the surface appear finely polished.

## **Interior Design**

Designers created an interior that can easily transport passengers and their luggage in luxury and style regardless of distance. The entire cabin was created around the driver and the driving experience. A horizontal-themed instrument panel emphasizes the spaciousness through its wide layout. Attention to details such as changing the steering column angle from 23 to 21 degrees and redesigning the seat frame, enabled engineers to improve the driver's seating position for increased comfort, better forward visibility and overall command of the road. Designers also modified the roof shape by employing techniques on the front pillars to help increase the driver's field of vision. These changes allow the driver to concentrate more on driving while reducing stress and fatigue. Equal attention has been paid to maximizing space for rear passengers. The new GS has more headroom, knee room, legroom and foot space than the current generation GS.

Front and rear door openings have also been revised for easier ingress and egress. Trunk space has been increased by almost 25 percent and can easily accommodate four golf bags, and trunk access is improved with a six and a half inch wider opening.

Standard equipment includes a new energy-saving auto climate control system called S-Flow that uses the occupant-detection system to focus airflow only to the front area where passengers are actually seated, a first-in-class technology. A next-generation Remote Touch with one-push confirmation is standard on all models and enables smooth, intuitive operations control.

The Remote Touch allows the user to operate the climate, audio, phone controls, optional navigation system and more. The screen menus are selected with a controller conveniently located within easy reach on the center console. Remote Touch also reduces eye movement and helps users operate functions with reduced effort and distraction. A standard rear back-up camera helps add security and convenience.

The finely crafted cabin detail is complemented further by ambient lighting that unobtrusively welcomes and guides the user into the vehicle, providing a carefully designed experience. New white LED lights are sequentially lit to illuminate the areas around the doors, center console and footwells. The driver and front passenger will enjoy the clean appearance of the new high-resolution central control display. A new analog clock with LED indicators, carved from a single ingot of aluminum for a smooth consistent look, adds a unique touch, at once both modern and traditional. A few notable differences between the gas and hybrid model include a bamboo steering rim, and bamboo interior accents, which reinforces the sustainability of the GS 450h, and the hybrid driving monitor.

Cabin materials include three types of wood specially chosen to highlight the unique flavors of the model variations. Meticulously detailed contrast stitching is used as a visual accent on the instrument panel, door trim, center console, shift knob and steering wheel to create a rich, tailored interior space.

To complement the aggressive-looking exterior of the F SPORT package, the interior will feature an exclusive design treatment with smooth, striated aluminum trim, unique perforated leather trim, black roof headliner and aluminum pedals. Distinctive F SPORT badging will be showcased on the three-spoke steering wheel. The F SPORT package also features driver and front passenger sport seats with increased lateral support. The 16-way power driver's seat includes a Lexus-first power adjustable side bolsters and four-way lumbar. To complete the exclusivity of the F SPORT package a striking Cabernet Red leather interior will also be available.

## **Luxury/Comfort/Convenience**

Next-generation Lexus multimedia brings a host of standard entertainment and connectivity advancements, including enhanced Bluetooth® capability with automatic phonebook download and streaming audio.

GS owners will enjoy 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. An SMS text-to-speech feature allows the driver to be read text messages and send preset responses with a compatible smart phone. HD Radio™ with iTunes tagging and a three-month trial subscription to SiriusXM™ Satellite Radio are standard. The Gracenote Media management system creates dynamic music playlists and a voice recognition solution recognizes nicknames for music artists and even some mispronunciations.

### **Luxury Options**

Lexus offers several GS option packages. The Premium Package includes rain-sensing wipers, heated and ventilated front seats and power rear sunshade. The Luxury Package includes those features plus Adaptive Variable Suspension; an Adaptive Front Lighting System; unique high gloss espresso wood ornamentation; semi-aniline leather, 18-way power front driver and passenger seats with articulated back, side bolster and thigh support controls; four-way lumbar; butterfly headrests; passenger seat memory; rear HVAC and audio controls; rear manual side sunshades; 18-inch alloy wheels; and wood and leather-wrapped (or trimmed) steering wheel.

By adding the optional navigation system, GS owners can enjoy an industry-first 12.3-inch, split-screen, high-resolution multi-media display. The split-screen ultra-large display enhances visibility through the use of advanced, high-definition graphics that are easy to read and easy to use. The 12.3-inch screen is large enough to support simultaneous, split-screen viewing of a large map display, plus audio, climate or other vehicle information.

GS models equipped with the optional navigation system will also have access to the next-generation Lexus Enform® Application Suite, the system that leverages the customers' mobile phone technology to provide a new level of connectivity and information management. Users can conduct local searches through Bing, or utilize voice-enabled apps to make restaurant reservations through OpenTable, get movie tickets via MovieTickets.com or tap into internet radio, including Pandora® or iHeartRadio.

They will also appreciate the ability to check-in on Facebook, and search for various business reviews including restaurants on Yelp. SiriusXM data services offer information on stocks, traffic, weather, sports and fuel prices. Enform® is supported on iPhone, Android and Blackberry.

For audiophiles who insist on the ultimate in audio performance, a 17-speaker Mark Levinson premium surround sound audio system is available. The system provides 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. Lexus-first Green Edge™ speakers are lighter, more energy-efficient and have less distortion. The new system produces almost three times as many watts per channel over the previous generation.

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