

# 2013 RX Luxury Utility Vehicle Unveiled at Geneva Motor Show

March 06, 2012

GENEVA – March 6, 2012 – Featuring the new bolder, signature Lexus spindle grille and upgraded interior, the new 2013 RX will continue to be the most popular choice in the luxury crossover segment it created over 10 years ago.

The 2013 RX gets a fresh sportier look at the front with a new bumper, complemented with new headlamp design, LED daytime running lights and distinctive fog lamp bezels. The power back door and USB iPod/mp3 control are now standard. Tail lamps and the rear license plate surround get updated looks.

The luxurious and spacious RX receives numerous interior enhancements. The steering wheel has been redesigned for a more comfortable and relaxing grip. A metallic accent enhances the look of the glove box. The center console has been redesigned for versatility and easy accessibility. In addition to ECO mode, the RX 450h features a Sport mode with revised steering effort, throttle mapping and transmission-shifting priorities to fully exploit the capabilities of the powertrain. In Sport mode, the meter light changes to red.

The cabin of the 2013 RX also gets new Ebony Bird's-Eye Maple wood trim and available Saddle Leather interior. To complement the available interior leather trim, a rich detailed contrast stitching is used on the seats, center console and door-mounted armrests. Four new exterior colors are available for the RX: Silver Lining Metallic, Claret Mica, Deep Sea Mica Fire Agate Pearl and, replacing Tungsten Pearl, Matador Red Mica and Cerulean Blue Metallic.

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

The Lexus RX 350 teams a 3.5-liter V6 engine with a six-speed Electronically Controlled Transmission with intelligence (ECT-i) for an output of 270 horsepower at 6,200 rpm. Dual Variable Valve Timing with intelligence (VVT-i) is used to control both intake and exhaust camshafts independently; optimizing engine performance at many speeds and loads.

The RX 350's six-speed automatic transmission yields quick shifting response with help from miniature high-flow linear solenoids that control transmission fluid line-pressure. The torque converter uses a low-speed lockup damper to enable lock-up from second to sixth gear to help improve the fuel economy.

The Multi-Mode Sequential Shift Automatic Transmission allows the driver to shift manually when desired by first moving the gated shift lever to the "S" slot and then pushing it forward ("+") to up shift and backward ("-") to downshift. An Intelligent Shift Control sets shift patterns based on the vehicle speed and throttle position and estimates road conditions and driver input to automatically control the shift pattern.

The RX 350 AWD model features an electronically controlled Active Torque Control AWD system. Active Torque Control AWD uses an electronically controlled coupling ahead of the rear differential to vary torque distribution anywhere from 100:0 to 50:50 front to rear, depending on driving dynamics and road conditions. When accelerating, or starting off on a low-grip surface, torque is quickly provided to all four wheels. At steady speeds, torque is sent only to the front wheels, enhancing fuel efficiency.

The RX 450h's Lexus Hybrid Drive features a 3.5-liter V6 Atkinson-cycle engine, electric motors, a small and light power-control unit and other fuel-saving innovations. It offers V8-like performance, 295 total system

horsepower and combined fuel economy similar to an average four-cylinder mid-size sedan. The Front Wheel Drive (FWD) model delivers EPA-estimated 32 mpg city and 28 mpg highway (30 mpg combined) fuel economy ratings, while the All-Wheel Drive (AWD) model earned EPA ratings of 30 mpg city, 28 mpg highway, 29 mpg combined.

As a full hybrid, the RX 450h can operate in electric-only or gas-engine-only modes as well as a mode that combines both. Extended electric-mode operation during low-speed or stop-and-go driving conditions helps reduce fuel consumption. Under certain circumstances, a driver-selectable EV mode can allow the vehicle to be driven short distances using only the electric motors. The RX 450h achieves Super Ultra Low Emission Vehicle (SULEV) certification in California (Tier 2-Bin 3 in other states).

A compact 288V DC Nickel Metal Hydride (Ni-MH) battery pack fits neatly under the rear seat. A boost converter efficiently raises voltage to 650V DC, and an inverter converts this to 650V AC for the front-mounted 123-kW electric motor-generator. The boost converter and inverter are enclosed in the power-control unit, which also houses the condenser.

The RX 450h FWD model's hybrid powertrain employs two motor-generators: MG1, the engine-driven generator, is a starter and can charge the battery pack or power other electric motors as needed; MG2 is the front-drive motor. Power from the gas engine and MG2 is distributed to the drive wheels via a planetary gear-type continuously variable transmission. MG1 controls the output speed of the transaxle through the planetary gear set, without clutches or a viscous coupling. MG2 delivers torque over a wide range for better response and smooth performance. When the RX 450h is coasting or braking, the electric motors function as generators, capturing energy that would normally be lost as heat through the brakes and transforming it into electricity to recharge the batteries.

### **All-Wheel Drive**

The RX 450h AWD uses a separate rear electric motor-generator to provide power to the rear wheels when road conditions or throttle response dictates. When accelerating, or starting off on a low-grip surface, torque is quickly provided to all four wheels. At steady speeds, torque is sent only to the front wheels, enhancing fuel efficiency. For handling agility and control, the AWD system increases rear-wheel torque when the vehicle's front tires start to lose traction and decreases rear-wheel torque when the vehicle's rear tires start to lose traction. A SNOW mode slows accelerator-pedal response to help reduce the possibility of wheel spin.

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

Lexus engineers provided the RX with an engaging driving experience, and a quiet and smooth ride. A key factor in the RX models' handling agility is the uniquely designed double-wishbone rear suspension. Another key benefit of the rear suspension is that the packaging yields greater cargo area room. The front suspension geometry was optimized with a thick stabilizer bar. Inversely wound front coil springs compress in opposite directions, preventing the negative effects of suspension compression on steering.

The standard electric power steering system contributes to agility and better steering feel while eliminating the parasitic losses of a hydraulic steering pump. Eliminating hydraulic oil also provides an environmental benefit and reduces maintenance. When driving conditions require minimal steering input, energy consumption is reduced, improving fuel economy by nearly three percent. Steering assist is automatically adjusted in response to vehicle speed, with greater assist at low speeds and greater feel at higher speeds.

Vehicle Dynamics Integrated Management (VDIM) handling technology is standard on the RX 450h. VDIM anticipates loss of vehicle control and governs all of the vehicle's dynamic handling systems – the Anti-lock Braking System (ABS), Brake Assist (BA), Vehicle Stability Control (VSC) and Traction Control (TRAC) – with the electronic throttle control system. The system employs them collectively and seamlessly to help make corrections while allowing higher dynamic capability.

The RX stops with the help of two-piston front caliper brakes. Brake feel is enhanced by optimizing pads, pedal ratio and booster output characteristics.

The system's enhanced VSC function adds steering assist torque to help aid handling on a split-friction surface. The VDIM system also provides a limited slip differential effect. The TRAC and VSC functions can also be turned off, for example, when the driver needs to free the vehicle from mud or snow.

Standard 18-inch aluminum-alloy wheels, which were designed to appear as if carved from a single block, have 235/60R18 tires. Two optional 19-inch aluminum-alloy wheels with 235/55R19 tires are available.

### **Safety/Security**

The RX features Hill-start Assist Control (HAC), which uses brake pressure to help prevent the vehicle from moving backward when starting out on an incline. This system does not wait to detect rollback, however. It can be controlled by the driver and works in both forward and reverse. While the vehicle is stopped and the brake pedal is depressed, pushing it further activates the feature. Brake pressure is then maintained for approximately two seconds after the brake pedal is released and the driver switches to the accelerator pedal.

The optional Pre-Collision System (PCS) with Dynamic Radar Cruise Control uses millimeter-wave radar to measure and help maintain a pre-set following distance from a vehicle traveling directly ahead. The radar sensor can detect certain obstacles in front of the car, and a PCS computer with vehicle speed, steering angle and yaw-rate inputs helps to determine whether a collision is imminent. In such a situation, PCS preemptively retracts front seat belts and pre-initializes BA so that increased braking will be applied the instant the driver depresses the pedal.

A high-strength cabin design and comprehensive Supplemental Restraint Systems (SRS) are designed to help provide a high level of crash-energy management. Approximately 42 percent of the entire structure uses high tensile strength sheet steel. The new structure was engineered to help provide collision compatibility with vehicles of varying heights and weights.

RX models are equipped with a segment-leading 10 standard airbags, including side curtain airbags, front seat-mounted side airbags, rear side airbags (for the outboard seating positions) and knee airbags for the driver and the front passenger. A roll sensor signals the side curtain airbags to inflate if a predetermined threshold of vehicle tip-up is detected.

The front-passenger airbag is a dual stage, twin-chamber design that, when deployed, helps provide optimal protection. Active front headrests help to reduce the severity of a whiplash injury in the event of certain types of lower speed rear collisions.

The RX also features standard Smart Stop Technology as an additional measure of consumer confidence. The braking system enhancement will automatically reduce engine power when the brake pedal and the accelerator pedal are applied simultaneously under certain driving conditions.

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

Lexus luxury begins with how the customer first interacts with his or her vehicle. All RX models are equipped with the SmartAccess keyless entry with push-button start. As the driver approaches the vehicle, interior and exterior courtesy lamps illuminate. Opening the door, the instrument panel lighting gradually fades in. When the engine is started, the instrument gauge needles and markings illuminate, followed by the multi-information display. After the driver exits the vehicle, the lights fade out at different intervals.

All RX models are equipped with a power tilt and telescopic steering column. To ease entry and exit, the seat automatically slides up to two inches rearward and the steering wheel tilts upward and slides forward when the

engine is switched off. Upon pushing the “ON” switch, the seat and steering wheel return to their last position automatically.

The standard 10-way power front seats are shaped to accommodate arm movement when operating the available Remote Touch, while also holding the occupants in place. Both the driver and passenger seats also feature power lumbar adjustment.

The shape and texture of the armrests and switches offer an ideal combination of tactile feel and functionality. The leather-wrapped three-spoke steering wheel features integrated audio controls and a unique cross-section that is designed to provide a more natural grip than a conventional round-section wheel. An optional leather and wood-trimmed wheel is available for added luxury.

Three seat materials include standard fabric, optional leather-trim or even softer semi-aniline leather. In addition to Light Gray, Black, and Saddle Tan, Parchment is available as an interior color for vehicles equipped with optional leather trim. Standard wood trim choices include Ebony Bird’s Eye Maple or Espresso Bird’s-eye Maple.

The quiet climate-control system offers quick cooling and warming. A high-efficiency compressor detects refrigerant flow in order to optimize engine control and fuel economy. An available smog sensor is designed to detect harmful particles (CO, HC, NOx) in other vehicles’ exhaust emissions and automatically switch between fresh air and recirculation modes.

The RX can accommodate a variety of music sources, providing auxiliary and USB inputs, Bluetooth® Audio wireless connectivity and a standard integrated SiriusXM Satellite Radio receiver (complimentary 90-day trial subscription included). Standard voice recognition and Bluetooth® technology allow phone calls to be made and received once paired with a compatible smartphone. When an iPod® is attached via the USB port, information such as artist name, track and album can be displayed on the available navigation or headunit, while the iPod can be controlled through the audio system. The large center console storage box easily accommodates a variety of electronic devices while keeping wires out of sight.

The RX continues the tradition of offering the Lexus Premium Audio system as standard equipment, in this case a powerful nine-speaker system with a six-disc changer. Creative placement and angling of the speakers perfectly cross-channel sound to the occupant on the opposite side of the vehicle to transform the cabin into a clear, crisp acoustic environment.

### **Luxury Options**

A Sport Appearance Package (not available on RX 350 AWD) is new for 2013 and offers an unique front bumper, halogen headlamps and 19-inch wheels with superchrome finish.

The RX offers several additional luxurious amenities. A ventilation function for the front seats helps improve comfort on hot and humid days. A 12-speaker audio system featuring a DVD/CD player and HD radio with iTunes tagging comes with the optional Navigation Package and includes two-rear-door tweeters and a compact, L-shaped subwoofer in the rear-luggage compartment.

The optional 15-speaker Mark Levinson® Surround Sound system allows listeners to enjoy 330 watts at 0.1 percent THD through 7.1-channel surround sound. The Mark Levinson system, a Lexus exclusive, features a center channel coaxial speaker, metal-cone midrange speakers, tweeters and a 100-watt amplified subwoofer. A 2.5-inch speaker built into each D-pillar provides the right and left surround-sound channels. The diffusion of sound provides each occupant the same level of audio quality.

The available Hard Disc Drive (HDD) navigation system eliminates the need for DVD map discs and offers a unique voice recognition system, which accepts casual-language inputs on certain functions. The System includes Lexus Enform® with Safety Connect® (includes complimentary one-year trial subscription), Voice Command casual-language voice recognition and Bluetooth phonebook download. The system is controlled by a new, second generation Remote Touch Interface (RTI) that is more intuitive in its design and use. 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.

The Lexus Enform® with Safety Connect® now comes with 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.

Users will also appreciate the ability to check-in on Facebook places, 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. SiriusXM services offer complimentary a one year trial subscriptions and require separate audio and data subscriptions.

An optional rear-seat entertainment system includes two high-resolution seven-inch screens, one on each of the front seatbacks. Each screen can display video from separate sources. A remote control allows independent control of each screen. Rear-seat occupants can also choose to listen to audio through the wireless headphones instead of the vehicle speakers.

The available back-up camera helps provide the driver with a wider range of visibility while in reverse. The back-up camera displays images on the central control screen.

### **Exterior Design**

The Lexus RX models blend a dynamic version of L-finesse design to create a sleek profile that is accentuated by broad “shoulders” for an athletic yet elegant presence. Bright finish side-window moldings follow a subtly concaved line across the A- and C- pillars, extending at the front and rear ends.

The new distinctive and contemporary front of the RX is highlighted with Lexus' signature spindle grille. The upper edge of the grille is set lower than the upper edge of the headlamp assembly to establish a more aggressive look. The LED daytime running lights reflect the “L” design motif, as do the combination rear lamps. Fog lamps are integrated into the sculpted lower front bumper fascia.

Pronounced front fenders flow into the doors, and integrated rear fender flares neatly sweep around to pull together the taut rear corners of the vehicle. The lower body emphasizes the standard 18-inch wheels. Passenger doors extend below the entry sill, helping keep out dirt and moisture. A distinctive feature of the door handles is that the surface subtly twists outward from the front to the rear to give a comfortable grip. The side mirrors feature integrated LED turn signal lamps.

The rear spoiler's primary function is to help lower the vehicle's Coefficient of drag (Cd), but it also conceals the rear wiper and houses the AM/FM radio antenna and high-mount stop lamp.

### **Interior Design**

Based on Lexus L-finesse philosophy, the dramatically designed interior clearly creates two distinct zones – the “display zone” to provide information, and the “operation zone” for interaction with controls. The shoulder of the door trim comfortably envelops the occupants, the clear line of the trim beginning inside the cabin and

tapering outward toward the exterior. The design imbues a feeling of a continuous line encircling the occupants and defining the controls and displays. Neatly sculpted metallic surfaces, especially on the asymmetrical center stack, showcase a bold contrast of shadow and light.

A high contrast white Organic Light Emitting Diode (OLED) is used for the multi-information display located next to the speedometer. Vibrant white characters are sharply displayed on a high-contrast black background for ease of use and a luxurious appearance.

In addition to an Eco Driving indicator light, RX models feature an Eco driving indicator zone that displays current fuel economy and alerts the driver when they are achieving low fuel efficiency.

To help reduce driver distraction and wasted movement, Lexus engineers strategically placed several features close to the driver including the multi-information switch, the Remote Touch console-mounted navigation controller and the optional Heads-Up Display. The available navigation and Lexus Display Audio screen and standard LCD audio/HVAC display are placed at a higher, more distant position, providing a more natural visual angle. A multi-information switch on the steering wheel allows the driver to access numerous function settings without taking hands off the steering wheel, and reduces the number of individual switches, contributing to a cleaner instrument panel. Vehicle settings can be customized, including personal door-lock preferences, interior/exterior light adjustments, driver's seat easy exit, and window-closure settings.

High-intensity LEDs, on the available Heads Up Display, project high-contrast white figures onto the windshield, which are easier to read – and easier on the eyes. The HUD offers displays for speed, navigation, and audio. A wedge-shaped windshield interlayer for the HUD projection area eliminates the printed grid pattern seen on some other vehicles equipped with HUDs.

### **Warranty**

All new Lexus vehicles come with a 48-month/50,000-mile basic limited warranty with roadside assistance for 48 months/unlimited miles. Powertrain and restraint system coverage is provided for 72 months/70,000 miles. Corrosion perforation protection is covered for 72 months, regardless of mileage.