

All-New Fourth Generation 2016 Lexus RX Redefines Segment with Style, Ride Comfort and Luxury Utility

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PORTLAND, Ore. (Sept. 8, 2015) – The Lexus RX Luxury Utility Vehicle defined its category when it was introduced more than 17 years ago and continues to be the brand’s top seller. Now, with the introduction of the fourth-generation RX, the 2016 model will continue to impress and coddle passengers while bringing the driver peace of mind with available driver assist features, a new available active safety package Lexus Safety System + and enhanced driving performance. Redesigned inside and out, it is available as front wheel drive and all-weather drive (AWD) for both the RX 350 gas model and RX 450h hybrid. F SPORT is also available for RX 350 AWD and RX 450h AWD.

Exterior and Interior Design

Exterior Design: Elegant and Modern with Expressive, Athletic Lines

From its inception, the Lexus RX has proved immensely popular with those needing the flexibility of a sport-utility vehicle combined with the driving comfort of a luxury sedan, all wrapped in an attractive, elegant package. So when it came time to design the new model, the mission was to create an even bolder and more athletic body style than the previous generation, while keeping its luxurious character intact—with enhanced ergonomics. One look at the new RX and it’s immediately evident that the designers have exceeded their goals. The new RX’s mix of sharp new creases and curves is striking and daring, to say the least, and continues to elaborate on the design language also seen in the exterior sheet metal of other recently-launched models in the Lexus models (IS, NX, and RC in particular).

A Powerful Visual Statement

The front view of the new RX is characterized by an emboldened version of the Lexus brand’s signature spindle grille featuring a chrome-plated border and triple L-shape-LED headlamps. Together with the new front fog light and available LED cornering light clusters, the RX’s face exudes an elegant yet futuristic aura. There are two types of headlights available: a compact Bi-LED headlight (standard) or an L-shaped LED headlight accompanied by 18 individual LEDs (optional). Both headlight designs feature a bold-looking slanted geometric shape. With the available L-shaped LED headlight system, the 18 individual LEDs that surround the headlights act as turn signal indicators. Another available headlight-related technology is Intelligent High Beam (IHB).

The “spindle” design theme of the front of the RX also defines its rear design, providing a high level of aesthetic balance and consistency to the vehicle’s overall demeanor. The LED rear combination L-shaped taillights envelope the tailgate while wrapping forward around the rear fender sections, resulting in a powerful and wide stance that offers enhanced functionality: When illuminated, they are now visible over a wider section rearward of the vehicle. Of particular note are the blacked-out C-pillars, which provide a floating-roof effect never before seen on a Lexus product.

Other new exterior features of the RX are flush-fitting headlight washers, chrome dual exhaust, an available panoramic moonroof, solid aluminum roof rails, redesigned door handles incorporating SmartAccess, and convenient door handle illumination.

Three new exterior colors have been added: Caviar, Autumn Shimmer and Nightfall Mica. All RX models feature a scratch-resistant self-restoring coat in the body paint, which uses a high-performance macromolecular polymer. The high elasticity of the material helps resist scratches, such as from fingernail marks around the door handles. The paint also possesses a high level of gloss retention to help enhance the initial gloss and color of the paint over a long period of time.

Reimagined Dimensions in a Bold, Elegant Package

Since owners of the current-generation RX cite the vehicle’s exterior dimensions as ideal for their everyday commuting needs, Lexus designers made it a priority to improving packaging while keeping the body size

relatively intact. The new RX features a height of 67.7 in., with a slight increase in overall width (up 0.4 in. to 74.6 in.), while overall length has grown by 4.7 in. to 192.5 in. Wheelbase is longer by nearly two inches to 109.8 in., resulting in improved cabin room with larger cargo space. Of note, ground clearance is up 0.79 in. despite the similar height of the previous model.

Changes to the exterior design features give the new RX a wider, more athletic and expressive stance, with wheels positioned more forward, that contributes to the model's more contemporary appearance. Accompanying the new styling are a number of re-proportioned changes to the exterior structure, including the enlargement of the tire and wheel diameters, a longer wheelbase and a slightly lowered bottom edge of the front bumper. Additionally, the front pillars (A-pillars) have been pushed back to further accentuate the curvature of the windshield, while the rear pillars (C-pillars) are now more acutely angled while ensuring more interior space.

Adding some muscular athleticism to the RX's overall stance are the aggressively shaped tapered front and rear fender flares. The diamond-shaped main body that flows from the spindle grille all the way through to the rear tailgate section imparts a high degree of sophistication. The sculpted beltline provides a three-dimensional effect as it makes its way down the sides of the vehicle from just above the rear taillights, passing through the side door/window section and gently bisecting the headlights and spindle grille, to create a sense of dynamic motion for the RX even when sitting still.

Enhanced Aerodynamics: Cheating the Wind

In addition to its breathtaking styling, a number of aerodynamic elements have been incorporated into the new RX's outer skin. These aerodynamic enhancements not only help the vehicle's drag coefficient (Cd) but also help with driving stability and reducing cabin noise.

Among these enhancements are:

- A front under spoiler has been added that directs airflow to the underbody, enhancing control as well as reducing aerodynamic drag.
- New corner sections in the front fascia and in the rear enhance the Cd, correcting airflow from the front and side.
- The front pillars (A-pillars) have been redesigned to help reduce wind noise during high-speed driving.
- New aero stabilizing fins have been added to the taillight's housing. They wrap into the rear fenders for additional aerodynamics at the rear of the vehicle.
- A new rear spoiler design along the roof/tailgate glass section helps reduce lift and adds rear downforce.
- On the hybrid model, the rear diffuser beneath the rear bumper helps to smoothly draw airflow from beneath the vehicle for reduced aerodynamic drag.

A Wide Selection of Sporty Wheels Provides Added Flair

A choice of four different stylish aluminum wheels are now available with the RX, including a standard 18-in. seven-spoke wheel. The three available and distinct 20-in. wheels include:

- Split five-spoke wheels with a machined finish, in a dark silver color;
- F SPORT split 10-spoke design;
- And a sleek-looking thick five-spoke rendition, available with the Luxury Package, includes selectable color trim in either Black, Autumn Shimmer, Silver Lining Metallic or Eminent White Pearl) – a Lexus first.

Interior: Opulent yet Practical While Offering Expansive Accommodations

Like the exterior, the interior of the new RX reflects an impeccable balance of functionality and comfort. The occupants are surrounded in luxury, with all materials inside the cabin exuding a heightened sense of quality in their construction and craftsmanship. The newly reconfigured and redesigned interior balances a sense of capaciousness with intimacy that proves ideal for driver and passenger comfort alike, whether they're seated in the first or second row.

A Rich, Comfortable Cabin

Having been a signature design trait for Lexus since the very beginning, the seats in the new RX are based on an ergonomic design that puts equal emphasis on comfort and accessibility, elegance and richly appointed surfaces. Rounded seat cushions for all the RX occupants not only provide superb comfort, but excellent support. All seating surfaces have been constructed utilizing a vertical stitch pattern for its handsome look and durability. In another stylish touch, the driver and front passenger seat backs feature an aesthetically pleasing quilting that matches the attractive pattern featured on the interior door panel trim.

Like virtually everything else on this exceptionally well-crafted and thoughtful redesign of the RX, there have been a number of enhancements to the door trim. These include ergonomic upgrades to the armrests that now feature supple, rounded surfaces finished with improved soft-touch materials for a higher degree of driver/passenger comfort and a more upscale tactile feel (like the door trim panels and front seat backs, the armrest surfaces now include a quilted pattern). A Lexus first, the interior door handles make use of a knobless door lock for a more harmonious and refined design aesthetic.

The driver is treated to a completely redesigned instrument panel section that has been shaped with a strong horizontal axis—a fundamental element of the Lexus interior—and the lowered dashboard position adds to the RX's interior's wide open and spacious feel. Additionally, with the dashboard/instrument panel's stepped cross-sections, the highly stylized center console looks like a sleek and elegant piece of contemporary furniture. The thoroughly modern look of the center console is further enhanced by the tasteful accent trim and HVAC registers, along with rich-looking textures, colors and materials that further add to the interior's upscale look and feel.

Available interior trims include Matte Bamboo, Espresso Walnut, Matte Linear Dark Mocha Wood, Striated Black Trim or Gray Sapele Wood with Aluminum. The Gray Sapele Wood with Aluminum trim utilizes the latest laser-cutting technology on superior-grade wood that makes visible the layer of aluminum trim beneath it, which produces an attractive natural/industrial look that gives the interior a beautiful contrasting impression. This combination of two seemingly disparate materials creates a distinctly original Lexus ornamentation and emphasizes the new RX's peerless next-level design. Additionally, soft materials have been used throughout the cabin on areas most touched by the RX's occupants, which not only provides a more luxurious feel, but helps express the differentiation of the functions.

More Space All Around

The seating position for the front seats has been lowered (reduced by 0.75 in.), allowing for excellent head clearance for both the driver and the front passenger. On the driver's side, the position of the steering wheel has been repositioned with the angle of the steering column reduced by two degrees while the steering wheel has been positioned closer to the driver. This design change allows for a comfortable yet sportier driving position—an attribute that will surely be greatly appreciated by the enthusiast driver.

With an interior space optimized for five passengers, the new RX's lowered rear floor section helps provide seating comparable to that of the rear-seat passengers in the Lexus LS flagship sedan. An additional design

change to the rear-seat foot well now allows the occupant's toes to be placed in a slightly raised manner for a more comfortable foot position. Rear-seat occupants will find that they still have plenty of head room, as they did in the previous-generation model. What's more, thanks to the new RX's lengthened wheelbase, rear-seat legroom and cargo space have increased.

Comparable in size to the outgoing RX, the new model features ample rear cargo space—larger than competing crossovers within the segment—with room enough to fit bulky items including up to four large suitcases or multiple golf bags. Beneath the rear cargo area floor is a spare tire with jack and tool storage.

For 2016, RX offers an optional Touch-Free Power Back Door, a Lexus first, which allows users to open the rear hatch by placing a hand near the Lexus emblem. This feature can be especially helpful when the user has both hands full. The system can detect an elbow and even a gloved hand when placed over the emblem.

A Highly Functional and Convenient Environment

Lexus designers and engineers have given a great deal of consideration to the layout of the redesigned center stack of the RX, which has led to improvements in the usability of controls on the center console and the accessibility of cup holders and storage areas.

On the center console, both the audio and climate control sections have been clearly separated for ease of use. What's more, the audio system features exquisitely machined aluminum dial knobs that improve tactile feel while looking extremely stylish.

New convenience features incorporated into the center console section include a Micro SD card slot for enhanced functionality of external media; a convenient side console pocket accessible from the passenger seat that is capable of holding tablets and other small computer devices; and a cup holder with a vertical sliding height adjustment mechanism that can be adjusted with the push of a button to accept tall plastic bottles, short-to-go coffee cups, aluminum soda cans, etc.

Even the analog clock located near the top of the center console reflects the RX's stylish redesigned interior while offering excellent functionality. Looking like a timepiece created by a high-end watchmaker, the design of the clock face has been improved to offer better visibility for the driver and the passengers.

At a full 12.3 inches in width (eight-inch display in the base RX model), the system's full-screen display offers outstanding visibility and usability, whether scrolling through menu screens, utilizing maps or accessing the vehicle's multimedia systems.

A feature incorporated into the design of the new-look instrument panel is a color Heads-Up Display (HUD) system, based on the concept of Lexus Human Machine Interface (HMI), which separates the display and operation zones. The HUD is a large color display screen projected onto the windshield that can show posted speed limit, All-Speed Dynamic Radar Cruise Control and master warning indicators, as well as navigation, shift position, compass, Eco drive indicator and tachometer. The system helps the driver concentrate on the road ahead with an easy-to-use and intuitive control interface. The information can also be seen on an available 12.3-in. Electro Multi Vision Display (EMV), a landscape-oriented 1280 x 480 large-sized screen with a 24:9 aspect ratio. The Thin Film Transistor (TFT) liquid-crystal EMV display has high-quality In-Plane-Switching and a hoodless design that gives the interior a sense of spaciousness.

Speaking of excellent functionality, the redesigned instrument cluster offers the driver instantaneous information with a quick glance from its large and easy-to-read gauge faces. The same can be said of the handy multi-information display positioned between the tachometer (an energy display gauge in hybrid-powered RX models)

and the speedometer. What's more, the ambient illumination of the multi-information display changes to invoke a different mood for each mode from the Driver Mode Select system—when operating within the ECO or NORMAL driving modes, the illumination appears predominantly blue to let the driver know that they are driving in more economical settings while in SPORT S and SPORT S+ modes, the light glows red.

A helpful new design feature is an expanded front field of view through the windshield and out over the hood. This not only allows for enhanced forward visibility when driving, but helps provide the driver with a more precise estimation of vehicle width, which can be especially handy when parking the vehicle or maneuvering through tight spaces. Another design change that further enhances outward vision is the placement of the side view mirrors, which have been moved slightly aft from their previous position near the A-pillars to help reduce the blind spot between the pillar and the outside mirror. Furthermore, the A-pillars are thinner to further enhance forward vision and providing a cleaner, more minimalist appearance to both the interior and exterior design.

The rear quarter pillars (C-pillars) are also narrower, resulting in enhanced rearward visibility as well as a reduction in the rear three-quarter blind spot. To further aid rearward visibility, the rear seat belt openings have been repositioned and the rear door trim has been given a concave cross-section to be less intrusive to the driver when looking rearward.

Powertrains and Drivelines

Adding to the versatility and capability of the all-new Lexus RX are two powertrain choices:

- RX 350: a 3.5-liter direct-injected V6 gasoline engine (2GR-FKS) mated to an eight-speed automatic transmission.
- RX 450h hybrid: a 3.5-liter direct-injected V-6 gasoline engine in a hybrid powertrain configuration (2GR-FXS).

3.5-liter Direct-Injected V6 Gasoline Engine

The available 3.5-liter direct-injected gasoline-powered V6 engine (2GR-FKS) brings excellent levels of performance, fuel efficiency and reduced emissions while delivering prodigious power when summoned by the driver, with smooth and highly-refined operating characteristics in normal everyday operation. Power is rated at 295 hp at 6,300 rpm with 267 lb.-ft. torque at 4,700 rpm.

The RX 350 has enhanced Lexus estimated fuel economy ratings over the previous model year using 87-octane unleaded fuel with 19 mpg city / 26 mpg highway / 22 mpg combined for all-weather drive models and 20 mpg city / 28 mpg highway / 23 for front-wheel drive models.

To enhance breathing and fuel efficiency, Lexus engineers rely on an all-new cylinder head design with reshaped intake ports and combustion chambers—which increase the static compression ratio to 11.8—for added efficiency in the engine's combustion process. Also, a new cylinder bore machining method and new resin coating has resulted in reduced friction between the piston and the bore to enhance the engine's efficiency.

This redesigned V6 powerplant features the D-4S fuel injection system with a high pressure fuel system that injects fuel directly into the cylinders, and a low pressure fuel system for injection into the ports. Injection is split between the direct injectors and the port injectors according to the driving situation, enabling driving with optimum combustion at all times. A high-pressure horizontal slit nozzle has been adopted on the direct injection injector, enabling fuel atomization and preventing the accumulation of impurities around the injection port.

To maximize torque throughout the rev range, Variable Valve Timing with intelligence Wide (VVT-iW) has been included on the intake side, while the exhaust side features VVT-i. The inclusion of VVT-iW has enabled

the adoption of the Atkinson cycle to further benefit fuel economy, without sacrificing engine start-up in extremely cold conditions and during Wide Open Throttle (WOT) driving.

The 2GR-FKS V6 possesses a number of new technologies. Among them are:

- An increase in flow velocity, which has been realized by reducing the intake port diameter of the cylinder head, thus improving performance in the high rev ranges and producing a steep and continuous acceleration curve.
- The fitment of a lightweight roller/rocker system, along with a reduced-friction chain and lighter internal parts that result in higher engine speeds and reduction of friction losses in the valvetrain.
- An Exhaust Gas Recirculation System (EGR) that reintroduces cool exhaust gas back into the combustion chamber, keeping the engine operating at optimal temperatures.
- A variable length intake surge tank that prevents torque reduction in the mid-speed range.
- A new oil pump that optimizes the amount of lubricating oil sent to each part.

The V6's excellent power is delivered through a quick-shifting eight-speed automatic transmission, whose close gear ratios have been tuned to provide punch off the line and robust passing power while maintaining excellent fuel economy. A lower first gear (a 19-percent lower ratio than second gear) provides the "punch" when you need to get away from a standstill in a hurry, while a higher eighth gear (a 15-percent higher ratio than seventh gear) helps reduce fuel consumption at cruising speed.

Other advanced technologies that enhance this unit's operation are Linear Driveforce Management (maximizes engine torque for each gear), Downshift Control (matches the driver's accelerator pedal input—smooth or rapid—with the downshifting response accordingly) and a Multi-mode function that allows for rapid manual-like up and downshifts via steering wheel-mounted paddle shifters.

3.5-liter Direct-Injected V6 Hybrid Engine

A paragon of efficiency with plentiful power when needed, the completely reengineered 3.5-liter direct-injected V6 hybrid engine (2GR-FXS) is an evolution of the base six-cylinder drivetrain, now producing a combined system output of 308 hp at 6,000 rpm with 247 lb.-ft. torque at 4,600 rpm.

Using 91-octane unleaded fuel, the RX 450h has Lexus estimated fuel economy ratings of 30 mpg city / 28 mpg highway / 30 mpg combined for all-weather drive and 31 mpg city / 30 mpg highway / 30 mpg combined for front-wheel drive.

The 2GR-FXS features newly-shaped intake ports and combustion chambers that generate a high degree of tumble inside the cylinders and improve combustion.

Lexus Hybrid Drive

The hybrid-powered drivetrain in the all-new Lexus RX is the latest, most advanced iteration of the Lexus Hybrid Drive system. Its key components and control systems have been enhanced and/or re-engineered to offer exceptional fuel economy, minimal emissions and excellent on-road performance that'll satisfy the most demanding driving enthusiast.

The transmission includes a hybrid front transaxle with new features including a transmission oil cooler (water cooled) for enhanced motor/generator cooling performance at low speeds and a pre-loaded differential. The rear transaxle (AWD only), which combines an electric motor with a reduction drive, features a new three-shaft configuration and aluminum case and cover to reduce weight. Thanks to these upgrades, the Lexus Hybrid Drive system offers outstanding driving performance, quietness and fuel economy.

Among other updates to the system are a design evolution of the Power Control Unit (PCU) and HV Engine Control Unit (ECU) that delivers better energy efficiency; more driver-friendly operation and more refined performance; implementation of a lighter, more efficient hybrid system coolant electric water pump; the addition of the aforementioned new transmission oil cooler (water cooled) to the transaxle for improved driving performance; and packaging changes to the hybrid battery that result in a more compact design for improved space utilization. Also, the control functions of the E-Four rear drive electric motor (AWD only) have been improved for better response when accelerating during turns.

AWD Systems

- For RX 350 AWD, Dynamic Torque Control AWD has been adopted, which processes information from a number of sensors, including G. wheel-speed and steering angle sensors, and instantaneously route engine power to the rear wheels to maximize tractability on varying surfaces and road conditions. The torque distribution ranges from 100:0 (pure front-wheel drive) to 50:50 via an electronically-controlled coupling, ensuring the effectiveness of a full-time AWD system, while delivering superior fuel economy.
- RX 450h AWD features the sophisticated Lexus E-Four proactive AWD system. This system also allows for reduced energy and fuel consumption by limiting the use of the all-weather drive only when necessary and allowing the rear motor to act as a generator to charge the battery when the vehicle is in regenerative brake mode.
- Both RX gas and hybrid models display torque distribution levels, at the front and rear of the vehicle, as well as to each individual wheel, on the Multi-Information Display (MID) when the system is in operation, a Lexus first.

Platform Chassis and Driving Dynamics

Suspension

To further improve driving performance as well as feedback to the driver, a number of updates and enhancements have been made throughout the highly-refined platform of the all-new Lexus RX.

Although the new RX utilizes an updated underbody platform of its predecessor, it has been given revamped front engine mounts to the sub-frame structure. The side engine mounts have been relocated to enhance the vehicle's lateral responsiveness, resulting in the engine sitting tighter in the compartment, which provides for sharper steering feel and enhanced cornering reaction of the chassis. And, this newfound agility comes at no sacrifice to the RX's trademark smoothness and quietness.

The RX utilizes a front-strut and rear double-wishbone suspension system designed to provide enhanced steering response and ride comfort.

To simultaneously enhance performance and ride quality, the distribution of the stiffness in the springs and sway bars were changed from the previous model to provide an ideal balance of stiffness and compliance. Along with the changes to the engine mounts, the rigidity of the front sway bar was increased to improve control. By changing the front and rear spring rate balance, the vehicle was able to maintain a flat posture and decrease vertical pitching.

The refinements of various suspension parts enable the car to be more responsive to the driver's steering inputs. By increasing the rigidity of the front axle and hub bearings, as well as retuning all the bushings, steering feedback from the tires to the driver's hands has been significantly enhanced. The grip level and traction of the tires were also improved, helping the RX to respond crisply during turn-in and enhance its overall agility. At the rear suspension, the rigidity of the bushings was modified to help reduce understeer and allow the RX to be more agile without sacrificing comfort.

Brakes

The RX braking system was engineered for braking control and enhanced brake feel, which helps provide the driver with exceptional stopping control and power.

RX 350 features a dual-stage brake servo booster which provides a clear feeling when the brakes are in use, as well as moderate feedback force, realizing excellent brake feel and enhanced control. A new actuator, V3-ACV, was added to decrease stroke when the brake pedal is applied.

RX 450h has a modified version of the ACT ECB2.5 actuator to improve the transition of the braking g-force.

Steering

To match the changes made to the suspension and platform, the steering system was modified to make the car respond more precisely and responsively. The driver's seating position was lowered and the steering wheel was moved closer and more vertical to accommodate long distance driving. The adjustable range of the electronic steering tilt and telescopic steering column was expanded to allow tall drivers to sit in a comfortable driving position.

Although the motor-in-column Electric Power Steering (EPS) structure was maintained, the shaft stiffness between the column and rack gear was increased for enhanced road feedback through the steering wheel. The newest EPS management system was adopted for a wider control range of initial steer, return-steer and cornering in accordance to variable speed ranges and reactive force.

This enables the car to have a light and comfortable steering feel, but at the same time deliver enhanced driver communication with the vehicle. Without changing the outer diameter of the steering wheel, the grip diameter and geometry were finely tuned to enhance handling characteristics for everyday use and sports driving.

Adaptive Variable Suspension (AVS)

The available Adaptive Variable Suspension (AVS) system adjusts the damping force according to road conditions. By adding a linear solenoid with an oil pressure valve to the AVS shock absorber, a shock free-variable suspension system was realized. Actively changing the absorbance level allows the suspension to respond quickly, and helps the RX have a flat riding feel in a broad range of driving environments.

Drive Mode

The available Drive Mode Select system allows the driver to choose between distinct drive settings (depending upon vehicle model/equipment): "ECO," "NORMAL," "SPORT," "SPORT S" and "SPORT S+." These settings regulate the damping force of the suspension system, adjust engine output, re-map the throttle and modify other key parameters of the engine and chassis.

"ECO" mode moderates engine power output, throttle response and the climate control system for increased fuel efficiency.

"NORMAL" provides an even balance between engine performance and fuel economy.

In “SPORT,” the driver is treated to more performance through enhanced throttle response and improved acceleration while sharpening the feel of the Electronic Power Steering system.

The “SPORT S” setting is available on vehicles equipped with Adaptive Variable Suspension (AVS). It offers an even higher level of performance with aggressive throttle mapping, quicker drivetrain response. (For RX 450h, this is accomplished when the hybrid system allows for enhanced accelerator response and feeling of more powerful acceleration.)

The “SPORT S+” setting, available on vehicles equipped with AVS, combines the powertrain enhancements of the “SPORT S” mode while sharpening the feel of EPS and a stiffer suspension setting for flatter cornering.

“CUSTOMIZE” offered for the first time by Lexus, enables F SPORT drivers to combine the modes of the engine, chassis, air conditioning functions, and if equipped the hybrid system, according to preference. The modes of the various control functions can be combined via the navigation screen.

RX 450h also adds an “EV DRIVE” setting that allows the vehicle to be driven purely in electric vehicle (EV) mode, under certain conditions, completely shutting down the gasoline-powered engine.

Rigid Body Structure

A number of cutting-edge technologies have been applied to the RX’s platform to help optimize structural integrity as well as overall rigidity. These include enhancing panel joint strength through the use of high-tech body adhesives and laser screw welding; liberal use of high-tensile strength steel throughout the vehicle including key areas such as the underbody cross members and front (A-pillar) and middle (B-pillar) sections; the implementation of a new process called “annular frame construction” for strengthened frame sections within the vehicle around the front and rear doors; and redesigned body frame sections and additional spot welds around the rear portion of the vehicle for improved strength and handling stability.

In addition to contributing to better handling and a quieter cabin, these design updates can enhance occupant safety thanks to increased structural rigidity throughout the platform.

Quiet Cabin with Reduced Levels of Noise and Vibration

The high-rigidity chassis/body structure of the all-new Lexus RX features a number of design/engineering updates that enhance the already exceptionally quiet cabin of the previous RX.

Among the changes are:

Front section of the vehicle:

- A reduction in wind noise around the front pillar (A-pillar) by redirecting the air flow around the side pillars.
- A urethane shielding plate placed within the inner fender area that reduces engine noise penetrating into the cabin.
- New front wheel housing material for reduced noise from the road and deflected debris.
- A thicker hood insulator offering better sound insulation.
- An increase in the surface area of the cowl insulator.
- Enlarge the apron silencer by 10 to 20 percent to reduce engine noise from entering the passenger compartment.
- Reduced openings/gaps in the sound insulating material in the cowl area for better sound absorption and insulation.

Middle section of the vehicle:

- Acoustic glass, three-lip glass runs in the rail section and other improvements to the front and rear doors help with better sound insulation and reduced noise and vibration.
- Optimally placed and/or positioned foam, sponge and vibration damping materials around the front and rear door section rocker panels, middle pillar (B-pillar) and roof rails sections.
- Reconfigured weather stripping around the front and rear doors, along with full-edge double door seals.
- Optimal placement of sound absorbing and insulating materials throughout the doors, roof and floor sections.
- Highly rigid sound damping coatings throughout the vehicle's floor pan for improved sound insulation with reduced weight.
- Placement of sound absorbing materials beneath the dashboard, glovebox and center console sections.

Rear section of the vehicle:

- A completely redesigned and repositioned rear body frame within the rear pillar (C-pillar) and body sections surrounding the rear hatchback door area that greatly suppress lateral vibrations from within the rear wheel housings.
- Additional foam placed within the rear pillar (C-pillar) area for reduced wind noise.

Environment and Sustainability

In addition to its exceptional quality and performance, the RX platform has been engineered to proactively contribute to environmental conservation and sustainability, thanks to lead- and hexavalent chromium-free engine components (elimination of harmful materials) and the utilization of easily recyclable Super Olefin Polymer (SOP) plastics throughout the bodywork.

Driver Assist

Dynamic Radar Cruise Control System

As part of Lexus Safety System +, the All-Speed Dynamic Radar Cruise Control System works at all speeds and is an available supplemental safety/convenience feature in addition to the standard cruise control system. It makes use of a millimeter-wave radar sensor, camera sensor, yaw rate sensor and steering sensor to provide vehicle-to-vehicle distance control for additional peace of mind. This useful system is especially helpful when driving in congested traffic as it can function in heavy stop-and-go traffic.

Lane Departure Alert (LDA) with Steering Assist

The available Lane Departure Alert (LDA) with Steering Assist system, using a camera mounted to the windshield to detect visible lane markings, is designed to recognize when the vehicle deviates from within its current traffic lane, and warns the driver through a visual warning on the Multi-Information Display (MID) and vibrating the steering wheel or sounding an audible alert in order to inform the driver of a potential lane departure. What's more, when the system recognizes that the vehicle is deviating from its current lane, the Steering Assist system will also apply a gentle touch to the steering wheel to help correct the vehicle's path in addition to the LDA system's audio/visual warning.

A convenient feature is that the alerting method (audible alert or steering wheel vibration) and sensitivity of the warning can be changed on the Multi-Information Display (MID) screen by using the "DISP" button located on the steering wheel. Likewise, the driver may activate or deactivate the Steering Control functionality should they choose to do so.

The available Lane Departure Alert with Steering Assist system adds all of the functionality of Lane Departure Alert while including additional functionality and aid to the driver. For example, when the vehicle's All-Speed

Dynamic Radar Cruise Control is on, the Lane Departure Alert with Steering Assist system will provide steering inputs to help maintain placement within the vehicle's current driving lane.

In a first for Lexus, the LDA with Steering Assist system, working in tandem with the All-Speed Dynamic Radar Cruise Control, can now function while the vehicle is being operated at very low speeds. Like the Lane Departure Alert system, the driver has control over the functionality of the LDA with Steering Assist system through the use of the "DISP" button located on the steering wheel.

Sway Warning System

The Sway Warning System incorporated into LDA with Steering Assist and part of Lexus Safety System +, monitors the vehicle's position within the lane and the driver's steering inputs to detect unintentional vehicle lane departure. If the system detects unintentional lane departure, it will sound an audible alert and display a visual warning (steaming coffee cup) on the Multi-Information Display (MID). Vehicle Sway Warning activation, deactivation and sensitivity can be manually adjusted by the driver.

Intuitive Parking Assist

Integrated seamlessly into the front and rear bumpers of the all-new Lexus RX, the available Intuitive Parking Assist (IPA) sensor system helps ensure obstacle detection in close proximity to the vehicle, thanks to four sensors at the front and four sensors in the rear. The system sounds an audible alert to the driver as the vehicle moves closer to the obstacle.

Panoramic View Monitor

The available Panoramic View Monitor (PVM) displays a helpful bird's eye view that encompasses the surrounding area of vehicle as it utilizes cameras mounted to the front, sides and rear of the RX.

Safety

A plethora of safety features and technologies are included for all RX models including: SRS airbags consisting of dual-stage and dual-chamber driver's and front passenger's airbag, driver's knee airbag, front side airbags, rear side airbags and side curtain airbags for front and rear passengers; Tire Pressure Monitor System with available tire inflation display function; active front headrests; vehicle theft-deterrent and engine immobilizer system. Braking and Traction Control systems that include four-wheel ventilated power-assisted disc brakes, a four-sensor, four-channel Anti-lock Braking System (ABS) with Electronic Brake force Distribution (EBD), Brake Assist (BA), Traction Control (TRAC), Vehicle Stability Control (VSC) and Hill-start Assist Control are also included, as is Smart Stop Technology that automatically reduces engine power when there is simultaneous application of the brake pedal and the accelerator pedal under certain conditions. More options include the Panoramic View Monitor and Blind Spot Monitor (BSM) with Rear Cross Traffic Alert are available as optional equipment.

Lexus Safety System +

The available Lexus Safety System + combines Pre-Collision System with Pedestrian Detection, Lane Departure Alert (LDA) with Steering Assist, Intelligent High Beam (IHB) and All-Speed Dynamic Radar Cruise Control. These safety features are only available with Lexus Safety System + and are not available as standalone options.

Pre-Collision System with Pedestrian Detection

Utilizing both a camera and a millimeter wave radar system, the available Lexus Pre-Collision System with Pedestrian Detection uses sensors to detect other vehicles and/or obstructions in front of the vehicle. If the system determines that there is a chance of a collision, it will warn the driver via an audible warning as well as a visual alert through the Multi-Information Display.

Pre-Collision Brake Assist

If sensors detect an obstruction and the system determines that there is a chance of a collision, the available Pre-Collision Brake Assist system increases the brake force when the driver depresses the brake pedal. The system will add an additional amount of brake pressure in stages according to the level of possibility of a collision.

If the system determines that a collision is potentially unavoidable and the driver does not apply the brakes or steering input, it will automatically activate the brakes, helping to reduce the impact force or avoid the collision altogether.

Auto Brake helps provide the driver additional assistance. The system will also issue an advance warning to the following vehicle by illuminating the vehicle's brake lights before the driver begins to actually apply the brakes to notify the following vehicle that the RX will decelerate.

Intelligent High Beam (IHB)

Intelligent High Beam helps ensure optimal forward visibility during nighttime driving and automatically turns off the high beam headlamps when another vehicle is detected. When no other vehicle is present, the system turns on the high beams.

Adaptive Variable Suspension (AVS) Control

When sensors detect an obstruction and the system determines that there is a high likelihood of a collision, the available Adaptive Variable Suspension (AVS) Control system instantaneously adjusts shock absorber damping within the suspension as an additional driver aid.

Enhanced Body Structure

The body structure of the RX offers enhanced occupant protection thanks to a number of innovative design features that include: new frame components and a high-strength body structure further that helps to suppresses cabin deformation; enhanced energy absorption and dispersion; a large bumper reinforcement at the rear of the vehicle that disperses energy in the event of a collision towards the left and right rear side members; and additional reinforcements within the roof section for better impact resistance and suppression of cabin deformation. Pedestrian protection is enhanced in the event of a collision through a new body structure design at the front of the vehicle that is designed to mitigate head and leg injury to the pedestrian through better energy absorption.

An available Vehicle Proximity Notification System for the RX 450h hybrid model notifies pedestrians and cyclists of the approaching hybrid vehicle by emitting a continuous audible alert from an external speaker mounted near the front bumper.

Blind Spot Monitor (BSM) with Rear Cross Traffic Alert (RCTA)

Employing a quasi-millimeter wave radar installed on the back of the vehicle, the Blind Spot Monitor (BSM) system can detect a vehicle present in adjacent lanes and can also detect an object at the rear of the vehicle while it is backing up.

Working in concert with the Blind Spot Monitor (BSM), the Rear Cross Traffic Alert/Rear Crossing Traffic Alert (RCTA) system alerts the driver to objects approaching at the rear of the vehicle with an audible alert as well as flashing indicators on the vehicle's external side mirrors.

Audio/Multimedia Systems

When it comes to offering premium audio systems, Lexus has few equals. And the RX continues the tradition,

notably with the Human Machine Interface (HMI) that features intuitive controls to deliver ease of operation, such as the computer mouse-like Remote Touch Interface and hands-free functionality.

The standard audio system includes HD Radio™, Bluetooth® audio, micro SD card slot and nine speakers, with frequently-used switches placed closest to the driver. Along with a pair of two-tone alumite silver aluminum knobs, the audio system panel is now finished in a luxurious dark smoked color, its opacity adjusted for an upscale blacked-out aesthetic. An AUX mini jack and two USB ports are located inside the console box for easy access. The voice recognition microphone has been relocated from the overhead console to the ceiling above the driver seat for improved voice-recognition performance.

The available 12-speaker Pioneer audio system includes a 20-cm subwoofer with Coherent Source Transducer (CST) technology that offers extremely realistic and high quality sound reproduction in the mid-to-high range as well as boosting low tones. The crisp, clear sound is broadcast throughout the cabin through speakers along the sides of the instrument panel and the newly-developed 18-cm woofers in the front doors.

Discerning audiophiles will enjoy the available 15-speaker Mark Levinson Premium Surround System (ML), with its advanced Clari-Fi™ compressed music restoration technology that improves the frequency characteristics, dynamic range, low tone tension and detail reproduction of compressed audio sources such as MP3. The Mark Levinson system also features Green Edge™ technology—which uses ultra-high efficiency speakers to more than double the sound output with the same amount of energy consumption compared to conventional systems—and the Unity™ feature that brings the high-range and mid-range cone positions as close together as possible to realize a smooth connection between mid- and high-range sounds.

A Rear Seat Entertainment (RSE) system is also available that includes large 11.6-in. flat-panel LCD displays that offer exceptional high-quality viewing from a range of angles, screen tilt adjustment from 0 to 50 degrees, and a convenient HDMI (High-Definition Multimedia Interface) input port located on the center console rear end panel.

The optional 12.3-in. navigation system with Electro Multi Vision (EMV) display (1280 x 480 pixels with a 24:9 aspect ratio) features a large high-definition Thin Film Transistor (TFT) liquid crystal display that, in addition to its vibrant and crisp-looking graphics, offers remarkable brightness/sharpness/contrast when exposed to direct sunlight thanks to its Light Control Film surface treatment that possesses excellent anti-glare properties while simultaneously suppressing background reflections.

The 12.3-in. display navigation system utilizes a new and improved Lexus Multimedia graphic design that offers new-look graphics as well as a new user interface that can be switched between either a full-screen or eight-inch display map view that incorporates five frequently used functions within a convenient sub-screen (map, audio, phone, Eco, A/C).

RX models equipped with the 12.3-in. display navigation system also include the handy computer mouse-like Remote Touch Interface (RTI) that's located at the base of the center console. It includes up and down arrow keys, "menu," and "map" buttons, along with "enter" keys on both the left and right hand sides of the unit.

A navigation system with an eight-inch high-definition Thin Film Transistor (TFT) liquid crystal display is available that features a high level of contrasting clarity as well as minimal color variation when viewed at different angles from either the driver or the front passenger seat. To suit a range of user preferences, this system's information screen can be set to display a one-panel (full map view), two-panel (half map/half info screen) or a three-panel layout (map/two different info screens). In the multi-panel layout, the screens can be set to display information including navigation, fuel consumption, audio system and air conditioning settings.

RX F SPORT

The 2016 RX F SPORT elevates the image of the RX to an entirely new level. Available for RX 350 AWD and RX 450h AWD, it includes a number of special visual and performance features that set it apart from other versions.

All RX F SPORT models boast excellent handling, thanks in part to the AVS system—which controls the damping force of the shock absorbers at each individual wheel in response to road surface conditions and driver inputs.

The sound generator on RX 350 enhances the F SPORT driving experience, using air intake pulsations to tune the sound of the engine to produce frequencies that are perceived to be pleasant to the ear during acceleration in the mid- to high-rpm range.

Inside, the driver can appreciate an exclusive instrumentation cluster that consists of an eight-inch Liquid Crystal Display (LCD) characterized by a large, easy-to-read circular gauge that artistically combines a tachometer and a digital speed indicator. Highly supportive quilted seats are exclusive to F SPORT, as is an exclusive interior color choice, Rioja Red. The unique perforated leather-wrapped shift lever and three-spoke sport steering wheel with F SPORT badge, and aluminum interior trim accents, drilled non-slip lightweight aluminum accelerator and brake pedals and foot rest add extra flair to this exciting model's invigorating character.

The exterior of the RX F SPORT features an exclusive black-out mesh grille, lower spoiler section and satin-finish chrome-plated lower protector with black side mirrors to match the grille. The vehicle's new front fascia design accentuates a low center of gravity, as does the new satin-finish chrome plated lower bumper section at the rear of the vehicle. Exclusive multi-spoke 20-in. aluminum alloy wheels shod with 235/55R20 tires and subtle but distinctive F SPORT badging round out its expressive exterior. A total of seven exterior colors are available, including an F SPORT exclusive, Ultra White.

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