

Second-Generation Lexus GX 460 Luxury SUV Combines Capability and Comfort

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- Powerful 301-hp V8 with Six-Speed Transmission
- Versatile Power Fold-Flat Third Row for Passengers or Cargo
- Standard New Smart Stop Technology

After the introduction of the rugged, second-generation GX 460 last year, the capable and efficient luxury utility vehicle moves into the 2011 model year with standard new Smart Stop Technology as an additional measure of consumer confidence. The braking system enhancement automatically reduces engine power when the brake pedal and the accelerator pedal are applied simultaneously under certain driving conditions.

The seven-passenger, body-on frame GX 460 combines “right sized” mid-size packaging with family-friendly comfort and premium craftsmanship. The GX 460 provides a versatile interior with its three-row seating arrangement. The second row seat slides 4.1 inches fore/aft to maximize passenger and cargo carrying ability. The foldable and reclining second row seats also feature a 60/40 walk-in function to access the standard power fold-flat third row seats. The rear door window has a flip-up glass panel for added convenience.

Luxury is enhanced in the GX 460 by a quiet cabin, as well as a wealth of standard features and options. The GX 460 features standard heated and ventilated front seats for example. Among the luxury features and options are semi-aniline leather, a heated steering wheel, and heated outer second-row seats. Multimedia features – both standard and optional – expand onboard family entertainment choices.

Engine/Transmission/Drivetrain/Performance

The GX 460 takes its model designation from its 4.6-liter V8 engine that produces 301 horsepower at 5,500 rpm and 329 lb.-ft. of peak torque at 3,500 rpm. The 32-valve DOHC engine features aluminum alloy cylinder heads and block with dual Variable Valve Timing with Intelligence (VVT-i), which controls valve timing and overlap on both the intake and exhaust camshafts to optimize power, fuel efficiency and emissions.

The GX 460's fuel economy is better than other V8 luxury utility vehicles and competitive with some six-cylinder models with its EPA-estimated 17 mpg combined, 15 mpg city and 20 mpg highway ratings.

The 4.6-liter V8 is teamed to a six-speed electronically controlled automatic transmission with sequential shift. The responsive powertrain is quiet and helps the GX 460 tow up to 6,500 lbs.

The standard full-time four-wheel drive uses an electronically controlled transfer case and a TORSSEN® torque-sensing limited slip center differential which can be electronically locked for inclement weather. It also offers a low range for off-road driving. The TORSSEN differential distributes power 40:60 under most driving conditions and changes the ratio as needed based on steering input and wheel slip.

The ability to change to a 30:70 ratio during steering maneuvers helps enhance vehicle tracking through curves. If the rear wheels spin, the center differential can change the ratio to 50:50 to help control the slippage. The TORSSEN differential also helps make the GX 460 less prone to slippage caused by sudden changes in road-surface conditions, such as driving through a puddle or over an ice patch.

Chassis/Body/Suspension/Tires/Brakes

The GX 460 is one of the few premium brand luxury utility vehicles that can deliver genuine trail driving capability. Combining that capability with Lexus luxury and on-road performance makes it even more exceptional. Lexus studied vehicle usage of current owners and found that many use their GX for family hauling during the week and vacations and camping trips on weekends. They often tow a boat or watercraft and sometimes drive to areas with unpaved and rugged trails.

The GX 460 has robust body-on-frame construction and does not compromise on- or off-road performance; the high-strength chassis and dynamic suspension control technology support both.

The available Adaptive Variable Suspension (AVS) with three modes: Normal, Sport and Comfort, and independent front suspension delivers a smooth on-road ride without compromising rugged off-road capabilities. The GX 460 rides on standard 18-inch alloy wheels with 265/60 R18 tires.

The power rack-and-pinion steering system helps make it easier to maneuver the GX 460 in tight spaces. Rear Adjustable Height Control (AHC) enhances the vehicle's flexibility in a wide range of driving situations.

By adjusting sway resistance provided by the front and rear stabilizer bars, standard Kinetic Dynamic Suspension System (KDSS) can reduce maximum body-roll angle by as much as 50 percent to help enhance both on-road handling response and off-highway capability.

Using hydraulic cylinders acting on each stabilizer bar and linked by a pressure-sensing valve, KDSS reduces the degree of roll stiffness provided by the stabilizer bars in response to changing road conditions and driver inputs. Because KDSS changes the effectiveness of the stabilizer bars in certain situations like off-road driving, the nominal stiffness of the bars can be notably increased to help reduce body-tilt and improve on-road handling.

During on-road cornering, when both front and rear hydraulic cylinders are in a neutral position no fluid flows in the system and the stabilizer bars work conventionally to help reduce body lean. In off-road driving situations, KDSS allows the wheels on each axle to move with a larger degree of side-to-side independence, helping to minimize any tendency for wheel lift. When the GX 460 encounters an uneven surface, one compressed cylinder causes fluid to flow to the other cylinder, helping the vehicle to keep all four wheels on the ground. That action increases wheel travel and articulation and helps to equalize wheel loading.

The GX 460, like all Lexus models, is equipped with an array of dynamic safety systems. Vehicle Stability Control (VSC) helps keep the GX 460 going on its intended course by detecting front- and rear-wheel slide during cornering and attempting to control either condition with a combination of torque intervention and individual wheel braking. Electronic Brake-force Distribution (EBD) utilizes the anti-lock brake system (ABS) and distributes proper brake force between the front and rear wheels according to driving conditions and wheel-load.

Brake Assist (BA) is designed to determine if the driver is attempting emergency braking, and if the driver has not stepped firmly enough on the brake pedal to engage ABS, the system supplements the applied braking power.

Crawl Control and Downhill Assist Control

In addition to KDSS, the GX 460 offers optional Crawl Control, a technology that helps make driving off-road easier. The Crawl Control feature automatically modulates the throttle and brake, allowing the driver to concentrate on steering. Crawl Control is also useful to help navigate the vehicle through sand, mud or snow.

When the transmission is shifted into low range, Crawl Control regulates engine speed and output, along with braking force, to propel the vehicle forward or in reverse at one of five low-speed settings. This allows the driver to maintain focus while steering over very rough level ground or steep grades, without having to also modulate the throttle and brake pedals. Crawl Control also actuates the front and rear "virtual" locking differentials to help reduce tire slippage and optimize chassis behavior.

Without canceling Crawl Control, the driver can reduce vehicle speed by braking or adjusting the crawling speed with a selector switch. Hill-start Assist Control (HAC) provides additional control for off-road driving by

helping to keep the vehicle from rolling back while starting on a steep incline or slippery surface.

Downhill Assist Control (DAC) is designed to augment the low-speed descending ability of the transmission's low range by helping to hold the vehicle to a target speed with no intervention from the driver. Active traction control (A-TRAC) provides the traction benefits of having locking front and rear differentials, but with lower weight. The system can apply the brake to a slipping wheel, while transferring torque to the wheels with better traction.

A steering angle indicator in the gauge panel shows the driver at a glance which direction the front wheels are pointing – useful for situations where this can be difficult to discern, such as driving off-road or when parking.

Safety/Security Features

The Supplemental Restraint System (SRS) includes standard 10 airbags: dual front airbags; front seat-mounted side airbags; driver and front passenger knee airbags; second-row seat-mounted side airbags, and roll-sensing side curtain airbags covering all three rows. The front airbags are designed to inflate according to collision severity. The roll-sensing side curtain airbags are designed to deploy when a severe tilt angle, roll or lateral G-force is detected. The GX 460 features a roll-sensing side curtain airbag off switch to deactivate these airbags during certain off-road driving situations.

The optional Pre-Collision System (PCS) can help reduce collision damage. The package includes Dynamic Radar Cruise Control, which uses millimeter-wave radar to measure and help maintain a pre-set distance from a vehicle traveling ahead. The multi-information display within the combination meter will show a car icon with the selected following distance. If, based on a variety of inputs, PCS determines that a collision is unavoidable, the system preemptively retracts the front seat belts and pre-initializes BA so that increased braking will be applied the instant the driver depresses the pedal.

In addition, an optional Pre-Collision System with Driver Attention Monitor and Lane Departure Alert (LDA) is available for the GX 460. Using two small cameras mounted at the front of the vehicle that work in conjunction with millimeter-wave radar, the system is sensitive enough to detect certain nonmetallic objects that are in the path of the GX 460. The Driver Attention Monitor System uses a camera, mounted on the steering column, to monitor the orientation of the driver's face.

If the camera detects that it appears the driver is not facing forward when an obstacle is detected ahead, it alerts the driver, first with a warning chime and a warning display. If the driver doesn't respond as the car gets closer to the obstacle, PCS will warn the driver by gently applying the brakes.

To help assist the driver in maneuvering around the obstacle, the system reprograms the steering ratio, amplifying the intensity and quickness of the steering response. At the same time, PCS automatically retracts the front seatbelts and prepares the brake system to respond with full force when activated by the driver in anticipation of a possible impact.

LDA helps alert the driver of a perceived unintentional lane departure by sounding a warning buzzer and displaying an alert. It does not steer the vehicle independently and it requires the driver to maintain active steering control.

Active front headrests move up and forward almost instantly in the event of certain types of rear-end collisions when the force of the occupant's body is applied to the seat back. The available Adaptive Front-lighting System (AFS) illuminates a turn or curve as the driver steers into it and includes High Intensity Discharge (HID) headlights. The available PCS with Driver Attention Monitor Package includes Intelligent High Beam headlamps that automatically switch the high beams to low beams when encountering oncoming vehicles or approaching vehicles from the rear. Standard headlamp cleaners on the Premium model help ensure optimal

headlight performance in almost all weather conditions.

Luxury/Comfort/Convenience

The GX 460 presents a luxurious passenger environment with the fit and finishes expected in a Lexus. Standard features include: ten-way power-adjustable, heated/ventilated front seats; automatic dual-zone climate control; leather trimmed seats and surfaces; steering wheel audio controls; rain-sensing windshield wipers; power moonroof; memory system for the driver's seat, steering wheel and outside mirror positions; and an overhead console with integrated HomeLink® transmitter.

Equipped for family multimedia entertainment, the GX 460 comes standard with a Lexus Premium nine-speaker audio system with iPod®/USB connectivity, Bluetooth® hands free phone capability and music streaming, and an integrated XM Radio receiver (complimentary 90-day trial subscription included). When connected to the USB port, the iPod can be controlled through the audio system or steering wheel controls, while information such as names for the artist, track and album is displayed on the headunit or optional navigation screen.

A rear back-up camera is standard and provides the driver a view of what its lens can detect behind the vehicle when engaged in reverse gear, projecting the image on the standard 4.2-inch multi-information display, or the optional navigation system's LCD display.

Luxury Options

Lexus makes personalizing the GX 460 Base model easy by offering a Convenience Package and a Comfort Plus Package, as well as making many of the packages' features available as stand-alone options. The Convenience Package includes electrochromic exterior mirrors with power retract, and Intuitive Parking Assist. The Comfort Plus Package includes semi-aniline leather; heated second-row outer seats; wood-trimmed steering wheel and shift knob; and three-zone automatic climate control.

The hard disc drive (HDD) navigation system is a standalone option and features Voice Command casual language-based voice recognition system and Bluetooth phonebook download to enhance owner convenience. The available 17-speaker Mark Levinson® Premium Audio system is the platinum standard for OEM mobile audio. The available Rear Seat Entertainment (RSE) system includes two LCD screens, one in each of the front seat backrests. Three-zone automatic climate control for enhanced third-row passenger comfort is also available as a standalone option.

The available Wide-view Front and Side Camera is designed to enhance visibility in tight settings, such as parking garages, and to help the driver view blind spots when pulling out of parking spaces into traffic, and stopped at intersections and T-junctions. The available Intuitive Parking Assist helps the driver detect obstacles at the front, rear or corners of the vehicle and helps guide the GX into street or garage parking spaces.

The Lexus GX 460 also offers a telematics system, Lexus Enform® with Safety Connect®, available by subscription. Complimentary one-year trial subscriptions are included on all purchases of new Lexus vehicles equipped with these features. Safety Connect is standard on all vehicles while Lexus Enform with Safety Connect is on all vehicles equipped with the optional Navigation system. The Lexus Enform and the Safety Connect response centers operate 24 hours a day, 7 days a week—every day of the year.

Lexus Enform vehicles are factory ready for subscriptions to a variety of innovative XM services including XM NavTraffic®, XM NavWeather™ and XM Sports and Stocks services. XM services require separate XM subscriptions. The XM Sports and Stocks service is included with an XM Radio subscription. All XM services offer complimentary 90-day trial subscriptions.

Exterior Design

Lexus designed the GX 460 to combine function and elegance, with unmistakable brand identity rooted in the L-finesse design language. The overall effect conveys the vehicle's full-range capability and luxury credentials. A

key goal of the designers was to have the vehicle create the impression of being sculpted from a single block of metal.

The distinctive grille features three horizontal bars and, upon closer inspection, intricate detail and texture that conveys renowned Lexus attention to detail. Distinctive character lines on the hood and a chrome surround frame the grille. The front bumper features standard integrated fog lamps.

Functional design elements include low-profile roof rails and an acoustic insulation windshield that help reduce wind noise. Tasteful luxury touches abound, including green-tint UV protection front glass, privacy glass on rear windows, and running board courtesy lamps.

Interior Design

The GX 460 provides the luxury appointments and workmanship of a Lexus sedan. Reduced drivetrain noise, especially in the 3,000-4,000 rpm range, combined with sound insulating, dampening and absorbing materials used throughout the frame and body, provide a quiet cabin. The GX 460 uses one-touch power windows with motors that reduce speed near the closure point to minimize the sound of the window closing.

The instrument panel is designed to appear as if formed from a single metal bar and is arranged to place all vital controls within easy reach. Optitron® instrument gauges are a traditional and functional Lexus design element. Leather-trimmed seat facings, headrests, armrests, door trim, shift knob and steering wheel also add to the Lexus touch. Wood trim, instrument panel stitching and soft-touch surfaces enhance the luxury feel.

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.

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