

# THE NEW LEXUS NX 300h



22 SEPTEMBER - 9 OCTOBER 2014





# THE NEW LEXUS NX 300h

## TABLE OF CONTENTS

---

**4**  
LEXUS ENTERS THE PREMIUM  
MID-SIZE SUV SEGMENT

**7**  
DESIGN AND PACKAGING

**11**  
ON BOARD TECHNOLOGY

**13**  
DRIVING DYNAMICS

**16**  
POWERTRAIN

**18**  
SAFETY

**20**  
F SPORT

**22**  
TECHNICAL  
SPECIFICATIONS

# LEXUS ENTERS THE PREMIUM MID-SIZE SUV SEGMENT

'The NX was developed as a premium SUV delivering high performance, packaged with an alluring exterior and interior design which creates a sense of desire. On its practical side, the NX was designed to complement daily life while also being capable of supporting an active lifestyle on the weekend.' Takeaki Kato, NX Chief Engineer

The all-new Lexus NX marks the company's first entry into the mid-size premium SUV segment. It has been conceived under the development concept of "Premium Urban Sports Gear", much like high quality sports watches, bikes and fashion, as an edgy and emotional design to appeal to new customers who lead urban and active lifestyles.

The highly competitive mid-size sports utility vehicle market is one of the fastest growing in the auto industry. Globally, demand for mid-size SUVs has grown almost seven-fold in the last seven years and it is expected to top one million per year in 2015.

Lexus pioneered the premium SUV segment with the launch of the RX in 1998. With the subsequent arrival of both the GX and LX, the company has gone on to established an enviable reputation for setting new benchmarks in quality, design flair and advanced technology in the premium SUV and 4x4 markets.

## **UNIQUE DESIGN, OPTIMAL PACKAGE**

Its styling clearly influenced by the LF-NX concept vehicles revealed at the 2013 Frankfurt and Tokyo Motor Shows, the NX represents the latest and most progressive expression yet of the Lexus design language.

An exterior combining highly individual front grille styling with a low, cab-forward silhouette creates an aggressive, eye-catching SUV with a particularly powerful road presence designed to attract a new generation of younger, style-conscious customers to the Lexus brand.

The NX also delivers practical solutions to space and luggage requirements.

## **CUSTOMER-FOCUSED INNOVATION**

The new heights in innovation scaled by Lexus in the SUV market are widely represented on board the new NX with a comprehensive array of advanced, user-friendly technologies.

These include a Wireless Charging Tray for portable devices such as mobile phones, the first application of a new Lexus Remote Touch Interface with a Touch Pad, a 360 degree Panoramic View Monitor, an enhanced Multi-Information Display which includes turbo-boost meter and Lexus-first G sensor, and a 6.2" Head-Up Display.

## **ENJOYABLE DRIVING DYNAMICS, EFFICIENT POWERTRAINS**

Lexus NX makes extensive use of electronic advancements and chassis dynamics to produce a ride and handling package that is dynamic and enjoyable to drive.

In a market previously dominated by diesel engines, nowhere are the higher levels of refinement and progressive luxury which Lexus has introduced to SUV customers more evident than in the adoption of its sophisticated hybrid powertrain technology, first with the ground-breaking RX 400h in 2005 and RX450h in 2009, and now with the all-new NX 300h.

The NX 300h's highly efficient hybrid powertrain emits 116g CO<sub>2</sub>/km, while delivering a total power output of 197hp.

Each unit may be mated to either front- or all-wheel drive powertrain formats. The NX 300h has been designed to offer an engaging driving experience and outstanding ride comfort in combination with a high level of fuel economy.

The F SPORT version provides more aggressive and bolder design with F SPORT- exclusive styling and trim throughout. Driving dynamics are also enhanced through the adoption of performance dampers.

## **COMPREHENSIVE SAFETY PACKAGE**

Lexus has also redefined standards of safety and driver assistance in the SUV and 4x4 market with the introduction of advanced active, passive and pre-emptive technology.

The new NX benefits from the company's most sophisticated safety systems, including the advanced Pre-Crash Safety system (PCS), Vehicle Stability Control (VSC), All-Speed Adaptive Cruise Control (ACC), Lane Keep Assist (LKA), Blind Spot Monitor (BSM), Automatic High Beam (AHB) and Rear Cross Traffic Alert (RCTA).

## 9 AMAZING FACTS ABOUT THE NEW NX

1. **Door handle design:** no visible key hole – a world-first for a pull handle
2. **Rear Power Seat:** segment-first rear 40:60 power-folding operated via controls accessible from the instrument panel, luggage compartment and each side of the rear seat.
3. **Shimamoku wood:** wood polishing process to create a unique polished steel finish inspired by Yamaha's top grade concert piano. The surface treatment prevents reflections from the stage lights which might distract the performer. Lexus introduced Shimamoku in the GS interior ornamentation and the LS steering wheel.
4. **Wireless Charging Tray:** located in the centre console it allows smart phones to be recharged by being simply placed on the charging tray, with no need for a cable.
5. **360-degree Panoramic View Monitor:** allows to view the NX as if looking down at it from above and accurately check the surroundings before driving off.
6. **Remote Touch Interface with Touch Pad:** placed in the centre console it allows easy access to ancillary controls with minimum driver distraction.
7. **Mark Levinson Premium Surround Sound System with Clari-Fi** - a world-first in automotive sector. The system analyses and improves the audio quality of all types of compressed, digitalized music sources.
8. New generation linear-solenoid type **Adaptive Variable Suspension:** refined adjustment of suspension damping now with an increased number of adjustment levels from 9 to 30.
9. **Advanced Pre-Crash Safety system** combined with All-Speed Adaptive Cruise Control (ACC) detects a possible collision between the NX and an obstacle in front. If the system assumes a collision is imminent, it activates Pre-Crash Brake to either avoid the collision or mitigate its impact by significant deceleration performance.

# DESIGN AND PACKAGING

- Muscular and edgy exterior design demonstrating a strong SUV character
- Bold yet luxurious interior design combining prominent chrome elements with high quality leather and wood
- Driver-focused cockpit with ergonomically structured operation and display zones
- Ample interior space combining SUV functionality with Lexus luxury and comfort

The design of the new Lexus NX was substantially influenced by the 2013 LF-NX concept vehicles that were shown, first as hybrid at the Frankfurt Motor Show, and then at the Tokyo Motor Show powered by an all-new turbo drivetrain.

## EXTERIOR

Chief Exterior Designer Nobuyuki Tomatsu designed the NX to provide a feeling of agility not usually associated with an SUV, while also being suitable for urban use. At a glance, its aggressive styling hints at both functionality and performance.

The NX combines a low roofline with an aggressive, cab-forward silhouette. Powerfully flared front and rear fenders are fused to a diamond-shaped body with lines generated from the spindle grille. The NX has the most individual and aggressive front face in the Lexus line-up, its prominent spindle grille accentuated by new LED headlamps and LED day time running lights (DRL). The sleek side profile is accentuated by a roofline which falls towards the

back of the vehicle. The bold flared wheel arches housing 17 or 18-inch wheels provide a crouching, muscular stance.

The world's first door handle mechanism to feature a hidden key barrel and integrated lighting combines with an aerodynamic door mirror design enhance the premium appearance of the NX's smooth, flowing lines.

Echoing the spindle grille design of the front, the rear of the NX features L-shaped combination lamps with seamless LED lighting.

## Aerodynamics

The NX achieves an ideal balance of aerodynamics and design. Its compact shape proved particularly challenging during the aerodynamic development of the car. The adoption of a rear spoiler proved essential in creating a smooth airflow from the back of the vehicle, and extensive wind tunnel testing led to the trailing edge of the fin being given a slightly upturned lip. This detail not only created a striking design accent but also provided the best Cd value -just 0.32.

The front and rear spats, rear floor cover and HV engine undercover are newly developed for the NX. The shape and composition of the engine undercover offer both heat resistance and enhanced aerodynamics.

### **Lights and lamps**

Lexus-first low energy consumption LED lights play a major role in defining NX's design objectives. LEDs allow for faster illumination while saving energy. The NX incorporates a total of 90 LEDs.

Each headlamp cluster features 6 new, high-brightness LEDs, including 3 L-shape low beam lamps. 23 LEDs are used for the daytime running lamps and another 16 for turning signals on each side. Thick inner lenses give the units an eye-catching, crystal-like shine.

The NX also features adaptive cornering lamps with LEDs. When the turn indicators are activated two LED lamps operate automatically to better illuminate the bend ahead.

A design breakthrough in rear illumination and exacting production accuracy gives the NX a unique rear lamp signature; an uninterrupted flow of light crossing seamlessly from the tailgate to the body. The thick wall moulding technology adopted for the outer lens combines with inner refraction detailing to give the impression of a cut crystal glass lamp.

### **Door handle design**

The newly designed door handle has no visible key hole, a world-first for a pull handle of this type. A structure has been devised that allows the key to be inserted behind the handle if necessary.

A single LED lamp both provides a welcoming silhouette along the top of the handle and a puddle light on the ground below. Reflecting the Lexus tenet of seamless hospitality, the lamp automatically illuminates as the user approaches the NX whilst, simultaneously, the new Remote Touch Interface illuminates within the interior.

### **Door mirrors**

Attaching directly to the door to give an expanded field of vision, newly designed door mirrors optimise rear visibility and reduce wind noise. Metal trim accentuates a stylish design that both reduces sunlight reflection and eliminates dazzle. Airflow between the mirror and the car -a source of wind noise- has been minimised, and the use of a small fixed quarterlight window improves side visibility in front of the mirror.

### **New colours**

The Lexus NX features a new exterior colour, Sonic White. Along with Sonic Silver (introduced on the Lexus GS) and Sonic Titanium (introduced on the IS), Sonic White is one of the Lexus-created Sonic colours designed to produce a metal-like shine. Sonic White is brighter than the brightest conventional white.

Sonic technology separates the paint film into two layers, one cosmetic and the other functional. After drying, the cosmetic layer is condensed to one third of its previous thickness, compacting its mica particles for strong reflectivity and shading. Mica particles are transparent yet luminous, which creates strong reflections and shadows.

Four further colours are neutral - Satin Silver, Mercury Grey, Black and Starlight Black. And three nuance colours -Morello Red, Sienna Brown and Meteor Blue Mica Metallic- are designed to appeal to younger, urban-chic customers.

The NX F SPORT is available in an exclusive Ultrasonic Blue; a highly vivid chromatic colour designed to highlight the model's unique, sporting appeal.

### **Exclusive wheels**

Lexus has created a new range of cast alloy wheels for the NX. They feature a variety of glossy surface finishes, each designed for light weight.

There is a choice of one 17-inch 10-spoke design wheels and two 18-inch cast alloy wheel designs. One of the latter features a three-dimensional centre and a U-shaped graphic element on each of its five axes. The second achieves strong visual depth through a dynamic three-dimensional section combined with highly luminous machined Y-shaped spokes.

The Lexus NX F SPORT offers customers two bespoke wheels. The 225/60R18 wheel makes use of new black paint combined with a highly luminous machine finish to express an aggressive, sporting image. A slightly lower profile 235/55R18 wheel has an exclusive dark premium metallic highly textured finish.

## **INTERIOR**

Chief Interior Designer Tetsuo Miki designed the NX to bring a sense of excitement to the cabin atmosphere that directly evokes 'Premium Urban Sports Gear'. The core idea was to combine the structural beauty of a high-performance machine with materials and textures that provide luxury and functionality.

The new NX's ergonomically designed, driver-focused cockpit enables customers to remain alert and comfortable over long periods of time. Lexus'

Human Machine Interface (HMI) technology offers fast, intuitive operation of all switches and controls to minimise driver distraction.

The interior design of the Lexus NX reflects the bold character of its exterior. It combines the structural beauty and functionality of a performance machine with materials and textures that focus on luxury and comfort.

The prominent silver centre console frame is strongly embedded in the instrument panel to symbolise the NX's rugged, SUV character. It is flanked by soft leather knee pads on both sides which create a strong contrast to the metallic frame whilst firmly supporting the driver and passenger. Wood inserts further underline the natural luxury of the interior.

### **Maximizing space in a mid-size SUV**

The NX provides ample room to all occupants, with segment-best space advantages in critical areas. Its front to rear couple distance is a class-leading 962mm and the high-roof design has resulted in exceptional head clearance. Its rear knee room provides even more space than that of some bigger SUVs.

Luggage room is also spacious and practical. Maximum loadspace width is 1,347mm, enough to store golf bags sideways. Additional storage space is available under the luggage board. This results in a total luggage capacity of up to 555l in hybrid models and 580l in petrol variants .

As befitting a practical SUV, the NX cabin is equipped with a wide variety of storage bins. These include glove and console boxes, a console mid-tray, utility box, sunglasses storage bin, cup holders and front and rear door pockets. The centre cup holders are big enough for two half litre bottles and the door pocket bottle holders can each hold a half litre plastic bottle.

### **Rear Power Seat**

The NX offers customers the option of Lexus-first and segment-first 40:60 rear power-folding seats. Operated via controls mounted on the instrument panel, each side of the rear seat and the luggage compartment, the seats fold fully flat in only 10 seconds.

### **Meters and switches - human interaction**

The analogue clock, speedometer, tachometer and HV system indicator have spin-milling-processed faces to create a sense of unity and a subtle impression of genuine metal.

Hybrid models are equipped with a hybrid system indicator showing power output and regeneration in real time. The hybrid-specific dial changes to a tachometer when the vehicle is in SPORT mode.

The Eco Driving Indicator supports environment-friendly driving by displaying the range of Eco-friendly acceleration and the status of acceleration in real time.

A 4.2-inch Thin Film Transistor (TFT) LCD providing a full-colour Multi Information Display (MID) is positioned at the centre of the instrument cluster. Ambient illumination in the MID is linked to the Drive Mode Select switch and changes colour for each mode. Using the Multimedia Linkage Function, the MID can also display phone and audio information.

For the first time on a Lexus, the NX introduces touch switches in the head lining for the front dome lamp and map lamp switches. A microcomputer detects the proximity of the user's finger to turn the lamps on and off.

Welcoming illumination is an important part of Lexus' appeal to customers. RTI lights up along with the door handles when the owner approaches the NX with the key. It remains illuminated when the owner enters the car.

Foot well lighting, particularly important as a safety assurance and to provide a feeling of luxury, centres on the occupant's seating position. For maximum night-time visibility the rear dome lamp is fitted with an LED lamp.

### **Materials**

The interior of the new NX was developed with the high level of attention-to-detail which characterises every Lexus. For example, the interior surface of the bottle holder in the middle console is finished in a high friction material that allows the driver to open the bottle with just one hand.

### **SHIMAMOKU WOOD - AN INSPIRATION**

The Lexus NX features a wood polishing process to create a unique polished steel finish, inspired by Yamaha's top grade concert piano. Called Shimamoku, the surface treatment prevents reflections from the stage lights which might distract the performer or the conductor.

Lexus introduced Shimamoku in the GS interior ornamentation and the LS steering wheel in 2012, but for the first time it has devised an eight-step process on the new NX, resulting in a distinctive, soft gloss, non-reflective finish.

# ON BOARD TECHNOLOGY

- Wireless Charging Tray for cable free phone charging
- 360° Panoramic View Monitor for greater safety on and off road
- 6.2" Head-Up Display for easy information access
- Remote Touch Interface (RTI) with Touch Pad, Multi-Information Display (MID), etc.
- Top of the range Mark Levinson Surround Sound System with first automotive industry use of music quality-improving Clari-fi

Several innovative on board technologies make their first appearance in the NX, making the ownership experience even more enjoyable.

## WIRELESS CHARGING TRAY

A new wireless charging tray is located in the centre console box. It allows smart phones, or other items compatible with international wireless charging standards (qi protocol), to be recharged by being simply placed on the tray, with no need for a cable.

## PANORAMIC VIEW MONITOR

The new NX is equipped with a Lexus-first, 360-degree Panoramic View Monitor is developed to offer drivers a high degree of reassurance when driving in confined spaces, both on and off road, at speeds up to 20km/h.

A purpose-built ECU mounted behind the C-pillar constantly monitors input from four interconnected cameras placed in the left- and right-front mirrors, the front grille and rear garnish.

The ECU processes the images and plays them back on the audio and navigation display monitor in a selection of seven sequences. It is even possible to view the NX as if looking down at it from above and accurately check its surroundings before driving off.

The new Panoramic View Monitor allows the driver to see obstacles which, using conventional rear- or front-view cameras, would be in blind spots. The system features full-screen imaging, without the 'letterboxing' created by an analogue camera format.

The Panoramic View Monitor is used in conjunction with Lexus Park Assist, and Rear Cross Traffic Alert (RCTA), which detects crossing obstacles in the driver's blind spot when reversing from a parking spot.

## **HEAD-UP DISPLAY**

The Head-Up Display projects a range of information onto the bottom sector of the windscreen, including vehicle speed, engine rpm, navigation guidance and audio settings.

## **REMOTE TOUCH INTERFACE**

A new Remote Touch Interface with Touch Pad is an integral part of the operation zone in the centre console. The RTI's ergonomic structure helps the hand normally locate the on-screen icons. A palm rest is provided for greater ease of operation. The RTI provides fast, intuitive, on-the-move access to ancillary controls with minimum driver distraction. It can also easily be accessed by the front-seat passenger.

## **AUDIO SYSTEMS**

The highly-rigid bodysell of the Lexus NX provides an ideal platform for two high quality audio systems; an 8- or 10-speaker Pioneer Premium Sound system, and a 14-speaker Mark Levinson Premium Surround System.

Pre-programmed sound equalizing in the NX differs to that of other Lexus models due to the difference in interior space and cabin layout. Both audio systems have been purpose-built for the new NX, addressing the increasing popularity of the use of compressed sound as a music source, and enhancing its quality.

The Pioneer system uses a newly developed Digital Signal Processor (DSP) to restore high notes lost through compression. A full digital Class D amplifier powers 16cm speakers in the front doors combined with 6.5cm tweeters mounted in the instrument panel.

The Mark Levinson Premium Surround System uses patented high efficiency technology which more than doubles sound output with the same expenditure of energy. The system employs a 12-channel Class D amplifier, and new Unity technology that places 9cm speakers at each end of the instrument panel. The total system develops 125 watts per channel and 835 watts overall with distortion limited to below 0.1 per cent.

Making its very first appearance in the automotive market, Clari-Fi is available with the Mark Levinson Premium Surround System. It analyses and improves the audio quality of all types of compressed, digitalized music sources.

# DRIVING DYNAMICS

- High rigidity body and suspension characteristics for stability, agility responsive handling and a high level of ride comfort
- Drive Mode Select to adjust vehicle behaviour to road conditions and driving style
- Adaptive Variable Suspension (AVS) combines ride comfort with increased stability when cornering

The new NX has been designed to offer customers an engaging and agile driving experience while also ensuring a high level of ride comfort.

NX chief engineer, Takeaki Kato, said his team benchmarked innovations in Lexus' IS to provide agility and stability. Mechanical assistance such as differential pre-load for better, more precise cornering, have been markedly.

Thanks to enhancements to the Adaptive Variable Suspension system, its control force levels have been increased from 9 to 30.

## HIGH RIGIDITY BODY

Extensive use of hot-stamped high tensile strength sheet steel, combined with aluminium, has resulted in a light weight, highly rigid bodyshell.

Advanced production techniques pioneered during the development of the Lexus IS (particularly body adhesives, laser screw welding and additional spot welds) have been used to strengthen panel joints.

Laser screw welding around the door openings is supplemented by new body adhesive techniques in the door openings, rear wheel housing and rear floor. Reinforcement around suspension members creates a strong platform and the number three cross-member is reinforced to support the drivetrain.

A high rigidity urethane sealant has been used for the windshield glass, effectively making the glass a load-bearing member and increasing resistance to body flex.

Heavy duty damping force has been applied to the NX's rear door struts to ensure consistently snug alignment.

## SUSPENSION

Of all the attributes of the Lexus NX, perhaps the most outstanding is the unique combination of superior ride and highly responsive handling.

The Lexus NX uses MacPherson strut front suspension with high-rigidity upper supports and low-friction strut bearings. The suspension hardware

includes barrel-shaped coil springs, large diameter high-rigidity wheel bearings, high damping bushings for the strut and number two lower arm mounting, and a high rigidity stabilizer bar.

At the rear, a newly devised trailing arm double wishbone rear suspension system optimises agility, stability and ride comfort. Separating the coil springs and damper units also minimises suspension component intrusion into the luggage compartment and allows for the lowest possible load space floor.

Special features include high rigidity lower arm mountings, low friction dampers and an increased consistency in spring movement due to the shape of the trailing arm bushings.

Force control was a priority; minimizing the sound of shake and shudder caused by lateral loads from the road surface which changes the tread width of a tyre as the wheel reacts to an undulation.

The NX has reinforced front lower suspension arm mountings so the tread width does not change with the wheel stroke. This also provides optimum steering feel and input control.

Chassis rigidity is the key to optimum suspension delivery and, hence, agility. Due to the particularly high rigidity of the new NX's bodyshell, it has been

possible to increase the spring rate of the front upper support bushings over that which would have been possible with a softer platform, further optimising the suspension for greater agility.

Even the rigidity of the steering column installation is beyond normal parameters. Friction between the moving parts of the dampers has been minimized to overcome the feeling of road shock during cornering.

The bound and rebound curves of the dampers have been optimized, especially at low piston velocities, to suppress body pitch and roll. Front and rear performance dampers are gas-pressurized and precisely machined to dampen miniscule vibrations in the body.

## **DRIVE MODE SELECT**

Lexus Drive Mode Select provides integrated control of multiple systems to enhance driving pleasure and performance.

Via a centre console dial, Drive Mode Select offers drivers the choice of NORMAL, ECO, SPORT and SPORT+ driving modes. Hybrid models have a button adjacent to the dial to enable an additional EV mode to be selected. Each mode controls throttle action depending on whether economy or performance is required.

Drive Mode Select simultaneously modifies the power steering assistance curve and enables a choice of two suspension damping force settings.

## **ADAPTIVE VARIABLE SUSPENSION**

The NX features new generation linear-solenoid type AVS. Operating in conjunction with Drive Mode Select, it automatically adjusts the suspension damping under all driving conditions to combine the greatest possible straight line ride comfort and high speed stability with suppression of body roll and optimum cornering agility.

The breakthrough use of linear solenoid actuators instead of more conventional AVS step motors more than trebles the number of control force levels, from 9 to 30. The actuator is more compact, so it can be relocated from the top of the damper unit to its lower side, creating a lower bonnet line and resulting in more cargo space. As a result suspension response time has decreased fourfold, from 80 to 20 milliseconds.

AVS operation is governed by nine control inputs:

- Vehicle Speed Sensing Control achieves ride comfort at low speeds and handling stability at higher speeds
- Roll Attitude Control maintains the vehicle's optimum attitude during cornering
- Anti-dive Control moderates the tendency to pitch forward during braking
- Anti-Squat Control acts during acceleration to keep the vehicle level
- Rebound Control works best on rough surfaces to smooth out bumps
- Ruggedness Sensing Control decreases damping force when vibration from irregular road surfaces is sensed
- Unsprung Mass Variation Damping Control increases damping forces when components such as wheels start to resonate on uneven surfaces
- VSC Cooperative Control works with the vehicle stability control systems to provide the best handling options when the vehicle starts to skid, for example, on a damp surface
- Pre-Crash Safety System Cooperative Control provides extra damping force for accident avoidance under heavy braking.

# POWERTRAIN

- NX 300h with kick down for greater acceleration
- 2.5l Atkinson cycle engine and one or two electric motors total system power 197PS,
- fuel consumption 5.0l/100km, CO<sub>2</sub> from 116g/km
- Available in Front-Wheel Drive or All-Wheel Drive format
- Innovative All-Wheel Drive system providing optimum control, agility and cornering stability while increasing fuel economy

The NX 300h introduces the unique driving experience of Lexus Hybrid Drive to the mid-sized premium SUV segment for the first time. The system combines with a proven Lexus 2.5l Atkinson cycle engine, generator, motor and battery with a highly sophisticated HV control unit developed specially for the NX.

The powertrain delivers a total system output of 145kW (197PS), whilst returning an average fuel consumption of only 5.0l/100km and generating CO<sub>2</sub> emissions as low as 116g/km.

Fine-tuning of the 2.5-litre engine have resulted in greater responsiveness and improved fuel efficiency. Enhancements include a water-to-oil cooler for

the electric drive motor for improved motor cooling and a revised front drive reduction ratio, improving fuel economy and hill climbing.

A newly developed HV transaxle provides a kick-down function for greater acceleration. The new transaxle consists of an electric motor generator and an electric drive motor linked by a double set of planetary gears.

The planetary gear set simultaneously fulfils three roles: as a power split device between the generator and the front wheels, as a reduction gear for the electric motor and, when both work together, as an electronically controlled constant velocity transmission (CVT). The transaxle offers sequential shift which allows maximum power to be delivered on call and increases engine braking.

The hybrid power plant can be matched to 2WD or the Lexus E-Four electric motor-powered AWD system.

### **Acceleration feel**

Newly developed HV control software which minimizes engine flare during acceleration increases the sensation of linear acceleration. Engine speed has been increased relative to the accelerator pedal angle, creating a downshift-like feeling. The NX adjusts to the target engine speed and to the G-force applied to the vehicle, providing a more natural acceleration feeling, without excessive adjustment to the engine speed and gear ratio.

The sequential shiftmatic feature meets customer demand for a shifting feel similar to that of a manual gearbox.

### **New features**

The NX has a unique torque control to reduce pitching motion on an uneven road, increasing ride comfort and stability. The Lexus-first pre-loaded front differential, which optimises control when turning, is also adopted with the hybrid version's E-Four AWD system.

### **E-Four AWD**

The NX 300h's Lexus E-Four system uses an additional electric motor to drive the rear axle while the front axle is propelled by petrol or electric power, or a combination of both.

The sophisticated E-Four system varies torque distribution to the rear wheels, depending on driving dynamics and road conditions, providing a level of start-off stability and acceleration on slippery road surfaces appropriate to all-wheel drive models.

E-Four saves energy and fuel because the vehicle only uses all-wheel drive when it is needed. When the system detects a loss of traction to the front wheels, it reduces the electricity supply to the traction motor in the transaxle and increases supply to the rear-axle motor. The rear motor acts as a generator when the vehicle is in regenerative braking mode, increasing the amount of kinetic energy recovered.

The Lexus-first feature of a pre-loaded front differential ensures straight line stability and acceleration performance when the differential is under light loads and when there is a low speed difference between the left and right wheels during cornering.

The differential uses a plate spring between the side gear and side-gear washer to add pre-load which limits torque split between the front wheels. At higher speeds it operates as an open differential.

### **CO<sub>2</sub>**

The NX 300h achieves CO<sub>2</sub> emissions of from only 116g/km with the FWD model. Improvements were made in aerodynamics, minute transmission changes and control system alterations.

### **New engine mounts**

The NX 300h's engine mounts are tuned to suppress start-up vibration from the petrol engine, reducing fuel consumption, and contributing to ride comfort. The mounts allow for only 10% of the conventional deviation from the engine's normal axis away from its centre of gravity - the cause of vibration.

The offset between the axis and the centre of gravity was reduced by a matter of millimetres by adjusting the engine mounts. This detailed work has also had a positive influence on handling.

# SAFETY

- Advanced Pre-Crash Safety system (PCS)
- All-Speed Adaptive Cruise Control
- Lane Keep Assists (LKA) & Blind Spot Monitor (BSM) with Rear Cross Traffic Alert (RCTA)
- 6.2" Head-Up Display (HUD)
- Automatic High Beam
- High rigidity body
- 8 SRS Airbags
- Enhanced Pedestrian Protection

Designed and engineered to meet the highest safety standards, the new Lexus NX is equipped with a comprehensive array of active, passive and driver assistance systems.

The active safety package includes All Speed Adaptive Cruise Control, Lane Keep Assist (LKA), Blind Spot Monitor (BSM), Rear Cross Traffic Alert (RCTA), newly adopted cornering lamps and Head-Up Display (HUD).

The NX is equipped with daytime running lamps (DRL), a rear view camera and front and rear fog lamps as well as numerous electronic safety features.

These include Emergency Brake Signal, Vehicle Stability Control (VSC) plus traction control, ABS with brake assist and electronic brake force distribution, and Hill-start Assist Control (HAC).

## **All-Speed Adaptive Cruise Control**

An improved All-Speed Following Function built into the Adaptive Cruise Control uses a Millimetre Wave Radar sensor and steering sensors to recognize the vehicle travelling ahead and maintain a safe distance from it, even if it comes to a complete stop.

### **Lane Keep Assist**

Lane Keep Assist (LKA) with steering control warns the driver with a buzzer if the system judges the vehicle is about to cross the lane markings without using the turn signals, and assists steering to avoid lane departure.

### **Automatic High Beam**

Automatic High Beam (AHB) uses the same windscreen-mounted camera to detect both on-coming and leading traffic, automatically switching the headlamps to high beam when the road ahead is clear. The system will switch to low beam to prevent dazzling other road users and restore high beam when there are no vehicles ahead.

### **Advanced Pre-Crash Safety system**

The multi-layer-strategy PCS uses a millimeter-wavelength radar sensor in the radiator grille to detect vehicles and other obstacles. The radar sensor provides distance measurement for the all-speed Adaptive Cruise Control (ACC).

PCS detects a possible collision between the vehicle and an obstacle, such as a vehicle ahead. If the system assumes a collision is imminent, it activates Pre-Crash Brake to either avoid the collision or reduce collision impact by significant deceleration performance.

### **Airbags**

The new Lexus NX is equipped with eight SRS airbags, including a dual stage driver's airbag, dual-stage and dual-chamber front passenger airbag, driver knee air bag, front passenger cushion airbag, front-seat side airbags and full length side curtain-shield airbags.

### **Pedestrian Protection**

Pedestrian protection includes an energy-absorbing structure for the hood and the fender mounting bracket as well as an impact-absorbing structure for the cowl. Energy absorbing material has been adopted in front of the bumper and under the radiator support to protect pedestrians' legs.

# LEXUS NX F SPORT

- Unique exterior design elements for even more aggressive and agile look
- Exclusive F SPORT colour and interior features
- Front performance dampers for even greater handling stability

The F SPORT stands out from the rest of the NX model range through unique styling modifications, exclusive colour schemes and dynamic upgrades.

## **F SPORT GRILLE AND EXTERIOR**

The mesh grille of Lexus performance models combines with a metallic coated lower bumper moulding to set the NX F SPORT apart. The large spindle aperture is graded from bottom to top to express the outline of the distinctive F SPORT motif. The unique frontal appearance of the NX F SPORT is further accentuated by the use of a sporting black coating on the door mirrors and the signature F SPORT emblem on the front quarter panel beneath the A-pillar.

A Lexus-first sports wheel offers the choice of two wheel colours and tyre sizes. A 225/60/18 10-spoke alloy combines black paint on the lateral edges with a luminous machine-brushed finish. A second 10-spoke wheel and tyre combination is a lower profile 235/55/18 with an exclusive dark metallic finish.

## **F SPORT-EXCLUSIVE COLOUR AND INTERIOR**

On board, the meter, steering wheel, gear shift, sport seats, pedals, gear shift, leather pad for passenger instrument panel and Dark Rose interior colour are all exclusive to F SPORT models.

Injection-moulded quilted seats hug the occupant's body to give improved support and lateral holding performance. Perforated non-slip aluminium

pedals and a driver's foot brace provide practical assistance to agile driving. And the steering wheel leather is also perforated to provide even greater feel during performance driving.

The wheel carries the F SPORT emblem in its lower quadrant. The brushed metallic gear shift lever and the scuff plate ornamentation beneath the door are also exclusive to F SPORT models.

### **PERFORMANCE DAMPERS**

The NX F SPORT is exclusively equipped with front and rear suspension performance dampers, enhancing rigidity and decreasing vibration to optimise handling stability.

### **G-SENSOR AND BOOST METER**

The NX F SPORT features a Lexus-first 'G-Monitor' in its full-colour Multi Information Display (MID).

On the G-Monitor screen, a G-ball moves in accordance with the vehicle's lateral and longitudinal forces. The MID displays the peak force in each direction. Additional display bars also indicate the steering angle, throttle opening angle and hydraulic brake pressure.

In turbocharged NX F SPORT models, the MID provides a Lexus-first turbo-boost meter with the colour band changing in the high boost pressure range. The analogue displays show oil temperature and pressure.

# TECHNICAL SPECIFICATIONS

## EXTERIOR DIMENSIONS

Wheelbase	2,660mm
Overall Length	4,630mm
Overall Width	1,845mm (mirrors folded)
Overall Height (unloaded)	1,645mm
Tread Width - Front / Rear	1,580mm / 1,580mm
Ground Clearance	185mm
Approach Angle	17.2 deg.
Departure Angle	24.5 deg.

## INTERIOR DIMENSIONS

Seating Capacity	5
Headroom - Front	970.8mm (w/o sunroof) / 950.3mm (w/ sunroof)
- Rear	968.4mm (w/o sunroof) / 967.2mm (w/ sunroof)
Legroom - Front / Rear	1,088mm / 918mm
Shoulder Room - Front / Rear	1,455mm / 1,405mm
Hip Room - Front / Rear	1,400mm/1,370mm
Cargo Volume - Rear seats up and rearmost / folded down	555L / 1,600L (with tyre repair kit)

## WEIGHTS AND CAPACITIES

Kerb Weight	1,715kg (FWD) / 1,785kg(AWD)
GVWR	2,245kg (FWD) / 2,395kg (AWD)
Max Towing Capacity	1,500kg (AWD only, with brake)
Fuel Capacity	56L

## ENGINE

Type, Materials	In-line 4-cylinder aluminum block and heads
Designation	2AR-FXE
Valvetrain	DOHC 16-valve with Atkinson cycle Dual VVT-i
Displacement	2.5 litre in-line 4-cylinder w. Atkinson cycle; 2,494 cm <sup>3</sup>
Bore x Stroke	90.0 mm x 98.0 mm
Compression Ratio	12.5:1
Horsepower	114 kW / 155 DIN hp @ 5,700 rpm
Torque	210 Nm @ 4,200-4,400 rpm
Fuel System	Electronic Fuel Injection
Fuel Requirement	91-octane or higher unleaded
Emission Certification	EURO6

## PERFORMANCE

0-100 km/h Acceleration	9.2 sec. (FWD/AWD)	
80-120 km/h Acceleration	7.0 sec. (FWD) / 7.3 sec. (AWD)	
Max. Speed	180 km/h	
Fuel Consumption	FWD	AWD
- Urban	5.0-5.3 L/100km	5.1-5.4 L/100km
- Extra Urban	5.0-5.2 L/100km	5.0-5.2 L/100km
- Combined	5.0-5.2 L/100km	5.1-5.3 L/100km
CO <sub>2</sub> emissions		
- Urban	117-123 g/km	118-125 g/km
- Extra Urban	115-120 g/km	116-121 g/km
- Combined	116-121 g/km	117-123 g/km
Coefficient of Drag (Cd)	0.32	

<b>HYBRID SYSTEM</b>	<b>Series/parallel system with petrol engine, high-voltage battery and electric motors</b>	<b>CHASSIS AND BODY</b>
Total System Power	145 kW / 197 DIN hp	Body/Frame
Front Motor- Motor Generator 1 (MG1)	Generator, charge the hybrid battery, engine starter Permanent Magnet Motor AC 650V	Suspension
- Function		MacPherson strut, coil springs
- Type		Trailing arm type double wishbone type, coil springs
- Max. voltage	AC 650V	Steering
Front Motor- Motor Generator 2 (MG2)	Drives front wheels, regeneration during braking Permanent Magnet Motor AC 650V 105 kW / 143 DIN hp	- Type
- Function		Electric Power Steering (EPS): Rack and pinion with electronic power assist
- Type		- Overall Ratio
- Max. voltage		2.68:1
- Max. output		- Turns (lock to lock)
Rear Motor	Drives rear wheels, regeneration during braking AC 650V 50 kW / 68 DIN hp	- Turning Circle (wall to wall)
- Function		6.05m
- Max. voltage		Brakes
- output		- Front - type/diameter
<b>POWERTRAIN</b>		- Rear - type/diameter
Layout	Front-engine full-time All-Wheel-Drive (AWD) or front-engine Front-Wheel Drive	Disc with Electrical Parking Brake /16 in.
Transmission Type	Electronically Controlled Continuously Variable Transmission (ECVT); planetary gear unit for gear reduction and power splitting, electronic all-or front-wheel-drive control system	Wheel Size/Type
Designation	P314	17 x 7.0 in. (standard)
Differential Ratio	3.750 (FWD) / 3.542(AWD)	18 x 7.5 in. (stand-alone option, standard on NX 300h Premium)
		Tyre Size/Type
		225/65R17 (standard)
		225/60R18 (optional)
		235/55R18 (F SPORT summer tyre)
		Spare Tyre/Wheel
		T165/80D17 Compact spare

### For editorial use only.

The usage of this USB is strictly limited to editorial use. It shall not be used for any other purpose, not shall it be made available to any third party, without the prior written consent of Toyota Motor Europe NV/SA, Avenue du Bourget, B-1140 Brussels, Belgium.

**USB STICK CONTENTS:**  
NX presskit, NX images, NX movies.





[bit.ly/V1i77u](http://bit.ly/V1i77u)

Lexus newsroom address: <http://newsroom.lexus.eu>  
Twitter: @Lexus\_EU

