

2006 Lexus RX 400h: Arrival of Toyota's High Performance Hybrid

2006 Lexus RX400h introduces a new era of enhanced performance dimension to the widely known hybrid advantages of excellent fuel mileage and low emissions. The RX 400h will be rated as a Super Ultra Low Emission Vehicle (SULEV) in California (Tier $2 \hat{A} \square$ Bin 3 in other states), one of the most stringent emissions ratings in the industry.

(PRWEB) March 20, 2005 -- Hybrid Synergy Drive reveals another virtue: Performance. Public viewing of the 2006 Lexus RX400 in early 2005 reveals combined fuel efficiency in the range of the current EPA average rating for a four- cylinder compact sedan. The RX400h will be a SULEV rated vehicle which means driving from Los Angeles to New York and back nine times (54,000 miles) yet produce less- smog forming emissions.

The 2006 Lexus RX400h combines 3.3 liter V6 gasoline engine with two electric drive motors: a strong 120 kW (161 horsepower) motor positioned near the rear wheels. The new Hybrid System will deliver a peak output of 270 horsepower with a 20% increase compared to the non-hybrid RX330 power train. Much more impressive is the 30-50 mph passing acceleration of the high output electric motor that delivers a high burst of torque.

Future Toyota Hybrid Synergy Drives hold the potential to operate even more efficiently using new types of batteries and fuels. According to Fujio Cho, President of Toyota Motor Corporation " Toyota's Hybrid System will make up the heart of our hydrogen fuel cell program of tomorrow".

The advantage of a hybrid driveline is that it eliminates hardships associated with electric cars to provide breakthrough performance, exemplary fuel efficiency, very low exhaust emissions, and a high level of convenience.

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The Lexus RX 400h is defined as a "full hybrid," which means that it is capable of operating in electric-only or gas engine-only mode as well as a mode that combines the power of the gas engine and electric motor. In contrast, other hybrid technologies are not capable of running only on electrical power, but instead require constant gas engine operation.

In making the transition to a hybrid power train, the alternator, power steering pump, water pump and AC compressor are no longer engine belt-driven. This is because the gas engine often shuts downÂ \square a fuel-saving benefit of the hybrid systemÂ \square especially when the vehicle is stopped or driven slowly through traffic. Except for the alternator, which is replaced by motor-generators, all components are now electrically powered which means notably lower parasitic losses to the engine and improved fuel consumption.

The Lexus hybrid technology also allows extended electric-mode operation during low speed or stop-and-go driving conditions. The permanent-magnet front electric drive motor (MG2) produces peak torque from zero-to-1,500 RPM, giving the RX 400h powerful and instantaneous response that will be especially felt and appreciated in low- and mid-speed performance and in merging and passing maneuvers.



A regenerative braking system further boosts system efficiency. When the RX 400h is coasting or the brakes are applied, the electric motors function as generators, capturing kinetic energy that would normally be lost as heat through the brakes and transforming it into useable electricity to recharge the batteries.

With the RX 400h, Lexus also introduces a new generation of vehicle stability control systems known as Vehicle Dynamics Integrated Management (VDIM). A vital component of VDIM is a new Electronically Controlled Braking system (ECB). The ECB system translates brake pedal stroke speed and pressure and generates the precise amount of combined electric regeneration and hydraulic pressure needed for virtually any driving condition.

VDIM allows more optimized operation of the vehicle's dynamic handling systems that employ the brakes: ABS, Brake Assist, Vehicle Stability Control (VSC) and traction control (TRAC). VDIM also interfaces with the Electronic Throttle Control system, allowing it to modify vehicle power when needed, and a new Electronic Power Steering system (EPS) to optimize steering assist for each situation.

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To preserve the 2006 Lexus RX400 amazing performance, a one of a kind online store is here to provide you with super durable parts with equally impressive performance. Simply go to http://www.partstrain.com/ShopByVehicle/TOYOTA and you're on your way to hassle-free online shopping for parts that will make this super car live up to its name.

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