

Lexus CT 200h Offers Sophisticated Ride for Premium Compact Segment

September 10, 2010

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2010 Geneva Motor Show - Lexus CT 200h 010

- Front and rear lateral performance damper system provide reduced vibrations
- All-new fully-independent, double wishbone rear suspension for superior ride comfort and handling
 - Handling and steering feel for a spirited drive

Torrance, Calif. – Sept. 10, 2010 – The new CT 200h introduces Lexus' unique synthesis of unparalleled quality, sophistication and high technology to the premium compact segment for the first time. It combines revolutionary, full hybrid drive with the comfort, convenience, and carefully considered drive interaction that lies at the heart of the Lexus ownership experience.

The CT 200h features a bespoke suspension design which combines a proven MacPherson strut front system with a new, fully-independent, double wishbone rear suspension for comfort and handling stability.

Numerous elements of the front MacPherson strut suspension system have been exclusively developed for the CT 200h, including the coil spring, shock absorber, bump stop, upper support, upper and lower insulators, a lightweight steering knuckle, hub and bearing, and a new anti-sway bar for increased rigidity.

Unsprung weight has been minimized and shock absorber damping response enhanced through the use of aluminum steering knuckles and stabilizer links, and lightweight lower arms, hub bearings and shock absorbers.

The shock absorbers themselves feature low friction valves, seals and oil, further improving damping response. The adoption of lateral force control coil springs also reduces suspension friction, enhancing ride comfort. The steering gearbox mounts are connected directly to the front suspension member, ensuring a linear steering feel and enhancing the CT 200h's straight line stability.

The lightweight, large diameter, front anti-sway bar helps improve control, braking and maneuverability of the CT 200h. It features a ball joint link strut connection for excellent rigidity, and a fluorine resin coating between the bushings and the bar itself reduces friction and further enhances ride quality.

A new, fully-independent, double wishbone rear suspension incorporates a lightweight trailing arm, and positions the coil spring and shock absorber separately to minimize system intrusion into the loadspace floor. Suspension geometry including camber angle, toe angle and arm layout has been optimized to offer excellent handling stability and ride comfort.

Fabricated in stamped steel to combine light weight with high rigidity, the system features numerous exclusively developed components, including the coil spring, shock absorber, upper support, bump stop, hub and bearing, and anti-sway bar.

As with the front suspension, the shock absorbers incorporate low friction valves, seals and oil to improve damping response. Rebound springs have been adopted to optimize lean posture when cornering and urethane bump stops combine excellent rigidity and ride comfort. Low resistance rear axle hub bearings are used to help improve fuel economy, and a resin aerodynamic cover has been fitted to the front of the second lower arm to help direct underbody air flow, enhancing both handling and fuel economy.

The rear anti-sway bar bushings feature resin spacers and optimized rubber characteristics for greater support and stiffness and, as with the front suspension, a fluorine resin coating between the bushings and the bar itself reduces friction and further enhances ride quality.

The CT 200h features a unique, front and rear lateral performance damping system that is a first for Lexus. It's designed to absorb and minimize undesirable body vibrations, offer a more linear steering feel and further contribute to ride comfort.

In lieu of conventional fixed bracing, this system features a front performance damper connecting the left and right front suspension towers, and a rear damper connecting the left and right sides of the rear lower back panel.

With a construction similar to that of a typical monotube suspension damper, the front and rear performance damper assemblies differ according to the variations in body rigidity, noise and vibration of their surroundings, optimizing their ability to absorb body torsion, flexure and fine vibrations. Their installation has reduced vehicle floor vibrations across a wide frequency range, reduced body flex through a 15 percent drop in left and right front suspension tower displacement, and even lowered audio system white noise levels.

In combination, front and rear suspension and performance damping systems complement the new CT 200h's distinct driving modes, resulting in excellent ride comfort essential to everyday driving with the handling agility for a more dynamic driving experience. Lexus will display the CT 200h at the Paris Motor Show.

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Note to Editors: Full press releases, specifications, optional package information and high-resolution images of the entire Lexus line-up are available at www.LexusNewsroom.com.

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