

Lexus CT 200h Design

September 12, 2010

CHAPTER 4: DESIGN AND HIGH-TECH FEATURES

- Latest adaptation of the L-finesse design philosophy, attracting a new, younger generation of Lexus customers
- Dynamic, elegant design with superb, hand-crafted quality feel
- High aerodynamic efficiency for the minimization of fuel consumption and wind noise
- Lexus interior dashboard concept with upper Display Zone and lower Operation Zone
- Compact exterior dimensions with a long, 102.4-inch wheelbase for spacious passenger accommodation
- Award winning Remote Touch infotainment and vehicle set-up control
- Audio systems with world-first high-rigidity bamboo charcoal speakers for improved sound quality

DESIGN

Exterior Design

The CT 200h's designers have created a unique combination of elegance and excitement. The new Lexus full hybrid marries refined charm and glamour to dynamic sportiness, creating a premium driver's car that will attract a new, younger generation of customers to the brand.

The front of the CT 200h is the new embodiment of L-finesse, expressing the perfect balance of precision and power.

The grille is pushed forward of the headlamps for greater visual integration with the bumper mid-section below. It incorporates a deeper, more sculpted interpretation of the L-finesse signature arrowhead motif. The upper and lower grilles combine to form a unique 'spindle' shape, bringing both bold simplicity and elegant dynamism to the very apex of the vehicle.

The grille is flanked by headlamp clusters clearly positioned on a higher plane than the grille itself. This is a unique characteristic of Lexus models, focusing the eye at the very apex of the vehicle to give the design a resolute look and strengthen the impression of speed and agility.

To enforce this resolute expression, the headlamps themselves focus on piercing, single halogen or optional twin LED low beam lamps. Newly developed, integral, arrowhead-shaped daytime running lamps feature advanced LED headlight technology, making the CT 200h instantly recognizable at first glance.

The deep front bumper and sharply sculpted front air dam flow into clean, muscular front wings which reinforce a purposeful, wide-tracked stance hinting at excellent agility and high speed stability.

The CT 200h's sweeping lines mimic the natural flow of wind over and around the bodywork, creating a dynamic yet elegant design that combines beauty with aerodynamic efficiency. The resultant drag coefficient of only 0.29 both maximizes fuel efficiency and minimizes wind noise to further enhance the exceptional quietness of the Lexus full hybrid's cabin.

In profile, the steeply raked windscreen, long flowing roofline and unique, Lexus slingshot window graphic combine to create an elegant and highly distinctive silhouette. New, compact and aerodynamic door mirrors with an integral, LED side turn signal lamp feature a two-tone finish for a slimmer appearance. The long roof and

sweeping character lines of the door form a tapered cabin shape which naturally curves in at the rear to follow the movement of air as it flows into the vehicle's wake.

To the rear, a pronounced step in the tailgate section flows from the muscular rear wheel arch shoulders, emphasizing the wraparound rear window design. Anchored by sweeping tail lamps incorporating a Lexus-unique L-shaped motif first introduced in the LS, this step combines with a broad rear bumper design to reinforce the new full hybrid's wide, firmly planted stance.

The flow of air away from the rear of the CT 200h is carefully controlled through the finely honed trailing edge of the deep roof spoiler, aerodynamic fins at the corners of the rear windows and the sharp, near-vertical junction of rear wing and bumper. Careful aerodynamic detailing of the lower bumper and finned rear undercover smoothes airflow from beneath the car, further improving both vehicle stability and fuel consumption.

The CT 200h is equipped with 17 -inch alloy wheels. It is available in a choice of seven colors, of which two – Day Break Yellow Mica and Fire Agate Pearl – are newly developed.

Interior Design, Ergonomics and Packaging

The visual impact of L-finesse is carried into the interior. Once again, a powerful simplicity of form harmonizes with the hand-crafted quality feel of even the smallest details to create a uniquely efficient, elegant and spacious cabin design.

The dashboard is divided into two distinct zones: an upper, Display Zone, with an eight-inch, LCD multi-display screen located at an ideal distance for at-a-glance viewing, and a lower, Operation Zone, which allows access to the uniquely designed shift lever and system controls such as the Remote Touch.

This clear division of zones creates the CT 200h's unique fusion of an airy, spacious cabin and a sporting cockpit which places the emphasis on a snug, highly focused driving environment. Functional driving components are consolidated in the driver's seat surroundings, combining outstanding ergonomics with advanced Human/Machine Interface technologies.

Fully described in the Dynamic Package chapter, the driver benefits from a low, highly focused driving position with a sporty, wide grip steering wheel and high-visibility instrument dials.

The extensive use of metallic finishes and dark, soft touch materials reinforces the premium quality of the environment. The shape and form of each interior component has been carefully designed to express the true form of the materials, such as the brushed finish of door handle bezel and the highly-tactile shift lever, seemingly carved from a single billet, and generously bound leather.

Within the CT 200h's long, 102.4-inch wheelbase, both front and rear seat are placed close to the vehicle's center to reduce the moment of inertia and enhance maneuverability. While the front seats are spaced at a distance of 28.0-inches, the rear seat spacing has been reduced to 24.4-inches and the hip point raised by one-inch, providing rear occupants a feeling of spaciousness and excellent visibility.

Front seat occupants enjoy excellent head clearance and shoulder room. The driver's seat has an eight-way power adjustment and incorporates a memory function, power lumbar support adjustment.

The flattening of the center of the rear seats, the thinning of the front seatbacks and the flat floor of the CT 200h's platform result in a cabin which offers rear seat passenger roominess with spacious leg and headroom.

With the compact hybrid battery located low beneath the loadspace floor and the adoption of a fully independent double wishbone configuration minimizing suspension component intrusion into the luggage compartment, the CT 200h offer a competitive 14.3 cu. ft. luggage capacity.

The CT 200h awards customers unprecedented customization opportunities through the widest diversity of color schemes yet offered in a Lexus model. The interior is available in a choice of Black or Gray leather trim and upholstery, and three NuLuxe finishes –Black, Ecru or Caramel. These finishes are complimented by a choice of Matte Wood, Silver Metallic or Bamboo dashboard accessory inserts installed by the dealer.

HIGH-TECH FEATURES

Remote Touch

Integral to the available Lexus Navigation System, the available innovative Remote Touch multi-function control device is located directly in the operation zone directly behind the shift lever for maximum comfort and ease of operation.

Radically differing from remote devices offered by rival manufacturers, Remote Touch operates on the same fundamental principles as a computer mouse, but has been specifically adapted for use in the driving environment. Via a Remote Touch knob incorporating reaction force feedback for enhanced tactility, it offers simple, fast and intuitive operation, with users able to manipulate the cursor quickly and easily across the 8-inch, full color, LCD multi-display screen to access the new premium compact full hybrid's audio, navigation, climate, phone and vehicle set-up systems.

This state-of-the-art device incorporates numerous, highly sophisticated control systems to help ensure an engaging, yet entirely relaxed, operating technique. For instance, to facilitate the easier selection of icons displayed on the screen, the system automatically 'pulls' the cursor to an icon passed in close proximity. This highly tactile feature makes the system extremely fast and easy to use, helping to minimize driver distraction.

Lexus Navigation System

Accessed via the CT 200h's Remote Touch system, the available Lexus Navigation System benefits from a powerful, 40 GB HDD capacity, making it one of the fastest, and most accurate systems on the market. The system features voice recognition, with two additional languages including Spanish and French, and a menu that can be operated in the same languages and characters.

Lexus Audio Systems with Bamboo Charcoal Speakers

Conceived under the tenet of 'clearer quality through an emphasis on direct sound', the CT 200h builds on the legendary standards already established by Lexus in the field of in-car high fidelity with a choice of two powerful audio systems.

Fitted as standard, the entry level Lexus Audio System features a CD-player, steering wheel mounted audio control switches, and six-speakers. DAB-ready, the system also offers both USB and auxiliary port connectivity for the fully controlled use of select portable music players such as iPods, and Bluetooth mobile phone connectivity with an audio/video streaming function.

Incorporating all of the above features, a 10-speaker Lexus Premium Audio System is also available, integrated with a six-disc, in-dash CD-changer. The system features a high performance, Digital Signal Processing-integrated (DSP) low power consumption, eight-channel, full range class D amplifier, making its first appearance in a Lexus model. The new DSP unit consumes 50 percent less power a conventional, analogue-powered amplifier, and is 26 percent lighter.

Sound distortion has been reduced, and the ten speakers are controlled by uniquely developed sound image control technology, which improves sound localization for each occupant, providing a natural soundscape irrespective of passenger location. New loudness characteristics have also been incorporated within the system; volume tuning developed exclusively for the new full hybrid's notably quiet cabin improving sound quality at low volumes.

A Lexus first, both audio systems are equipped with unique, bamboo charcoal-based resin diaphragm speakers. Constructed using a complex compound combining bamboo charcoal, bamboo fiber and resin, the diaphragms are injection-moulded to a thickness of only 0.008-0.01-inch. They are some 10 to 15 percent lighter than a conventional speaker diaphragm, yet 20 percent stiffer and with a 10 percent greater sonic speed. As a result, the sound is clearer and more natural than that of a conventional resin diaphragm.

Rear View Monitor

A rear view monitor is also available, automatically projecting a full color, camera fed image of the view behind the vehicle onto the CT 200h's navigation system display or the 3.3-inch display on the inner mirror whenever reverse gear is engaged.