

August 1, 2004: Cadillac XLR - An Icon for the New Era of Cadillac

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CADILLAC XLR – AN ICON FOR THE NEW ERA OF CADILLAC

Since it debuted in 2003, the XLR has met with overwhelming response from the press, public and dealers alike. In its first model year XLR has become much sought after by premium car enthusiasts.

The Cadillac XLR's dynamic design and advanced technology has brought a striking new presence to the automotive spectrum. A luxury roadster with performance car roots, XLR underscores its vibrant visual statement with a performance-oriented chassis and structure, and a 4.6L Northstar V-8 VVT (variable valve timing) rear-wheel-drive engine. This combination makes it the lightest, most powerful vehicle in its class.

Under its skin, the XLR's harmonious blend of technologies and materials add pleasure, not complexity, to the driving experience. These include a head-up display, adaptive cruise control, Magnetic Ride Control, StabiliTrak, heated and cooled seats, keyless access with push-button start and DVD navigation and entertainment. For 2005, XLR makes modest enhancements, including new Dark Eucalyptus wood interior, and Blue Steel exterior paint replaces Thunder Gray.

Edgy design

The XLR is a contemporary expression of Cadillac's heritage of landmark design and advanced technology. Inspired by stealth fighter design, XLR takes the ongoing product-driven resurgence of Cadillac – led by Escalade and CTS – to an entirely new level.

Bold and edgy, yet elegant and refined, the XLR's linear, crisp look creates a dramatic presence and modern icon for luxury and performance, yet it pays tribute to the marque's rich history. The XLR's strong grille, for example, harkens back to Cadillac's heritage but expresses itself in a new way. The vertical headlamps, on the other hand, express the division's current design philosophy.

The XLR offers the ultimate convenience of a retractable hard top. By pushing and holding a single button, the XLR can convert from coupe to open roadster in less than 30 seconds. The top is made of aluminum and magnesium with composite exterior panels, a heated glass backlight and glass rear-quarter windows.

The interior design epitomizes contemporary luxury. Unique eucalyptus wood in light or dark

tones, combined with striking aluminum accents, provide a luxurious and inviting environment. The gauges are designed in conjunction with Italian luxury brand Bvlgari.

Powertrain

The XLR's Northstar 4.6L V-8 VVT is a 90-degree, DOHC, four-valves-per-cylinder engine featuring an aluminum block and cylinder heads, and a valvetrain configuration with roller finger followers. It generates 320 horsepower (239 kw) and 310 lb.-ft. (420 Nm) of torque.

The engine also features continuously variable valve timing (VVT); electronically controlled, hydraulically actuated intake and exhaust cam phasers on all four camshafts for extra control; electronic throttle control (ETC); low restriction intake and exhaust manifolds and cylinder head ports; close coupled catalytic converters mounted directly adjacent to the exhaust manifolds; and an air induction system designed for enhanced capacity and noise attenuation.

The V-8 offers smooth, refined performance throughout its entire operating range. It is quiet, yet tuned to give the driver feedback from the environment. It operates cleanly and efficiently, with excellent reliability and durability. The XLR features the first longitudinal application of the 4.6L Northstar V-8.

The V-8 is mated to the Hydra-Matic 5L50-E five-speed automatic transmission. Developed to manage the high torque and horsepower of the engine, it is one of the most technologically advanced transmissions in the industry. It offers three performance features normally found individually on various high-performance luxury sport sedans: driver shift control, performance algorithm shifting and performance algorithm liftfoot.

Another advantage of Cadillac's roadster not shared by the competition is its rear-mounted transmission. This helps give the XLR a virtual 50/50 front-to-rear weight distribution for superior balance, as well as providing occupants unusually roomy footwell space.

Compared to the Mercedes-Benz SL500, Jaguar XK8 and Lexus SC430, the XLR is not only the lightest vehicle at approximately 3,650 pounds (1,656 kg), but it also boasts the longest wheelbase, widest track, lowest height and most horsepower.

Architecture and suspension

The story starts with the XLR's backbone, upon which the car's dynamic capabilities depend. Based on GM's new performance car architecture, this unique and patented structure uses steel hydroformed perimeter frame rails, an enclosed structural "tunnel," an aluminum cockpit structure and balsa-cored composite floors. Providing rigidity without bulk, and with exceptional resistance to torsional and bending forces, this architecture is the basis for the XLR's outstanding ride and handling characteristics.

The suspension system makes the XLR a true luxury roadster with the handling qualities of a performance car. To this end, the design uses double wishbones at each corner, combined with

transverse-mounted, composite leaf springs front and rear. The system is designed to maintain firm control over wheel motion, while delivering a composed and compliant ride quality. The XLR achieves a maximum lateral G-force of more than 0.9. It runs on Michelin ZP tires with advanced run-flat technology that eliminates the need for a spare and provides outstanding overall tire performance.

Magnetic Ride Control

The XLR also is one of the world's first vehicles to be equipped with Magnetic Ride Control – electronically controlled, magnetic-fluid based real-time damping. The system uses four wheel-to-body displacement sensors to measure wheel motion over the road surface and responds by adjusting the shock damping at speeds approaching one millisecond. That's five times faster than previous real time damping systems. The secret is the magneto-rheological fluid contained in its dampers, replacing traditional mechanical valves. Suspended in this fluid are tiny iron particles that respond to an electromagnetic charge.

Adaptive cruise control

The XLR has adaptive cruise control (ACC). While not a substitute for full driver attention, this system greatly expands the convenience of cruise control. ACC uses a radar sensor mounted at the front of the car to detect objects in its path. If the lane ahead is clear, the system will maintain the set speed, just like conventional cruise control. When a vehicle is detected in the same lane in front of the car, the system will adjust vehicle speed to help maintain a constant following distance, set by the driver.

Comfort and convenience

One of the XLR's foremost convenience features is Keyless Access. Keyless Access makes XLR a truly "keyless" car. A driver can simply keep the fob in a pocket or purse to operate the doors, trunk and ignition. The fob communicates with the XLR's computer control system via radio antennas under the car's bodywork. The system is intuitive and hassle free.

The XLR's seats are both heated and cooled in the back and the cushion. A 7-inch (178-mm) color touch screen mounted in the upper center console gives driver and passenger access to DVD navigation; a nine-speaker world-class Bose audio system with a six-CD in-dash changer and digital signal processing modes; XM Satellite Radio (continental U.S. only), and DVD entertainment (available in Park position only). The XLR also is equipped with OnStar and a head-up display that projects key driver information onto the windshield.

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