

## 1988 Cadillac Voyage and 1989 Cadillac Solitaire

The 1988 Cadillac Voyage and 1989 Cadillac Solitaire concept cars continued a tradition of innovation at Cadillac. Indeed, of all the automakers that exhibit concept cars at shows worldwide, few have a history approaching that of Cadillac.

As far back as 1905, the tall and stubby experimental Osceola, designed by Cadillac founder Henry Leland, emerged to test the burgeoning company's ability to create a closed coupe. This was at a time when all automobiles went topless. So Cadillac's concept car history can be traced to the marque's origins.

Late in the 1980s, the Cadillac tradition of displaying show cars that make one's eyes glaze over in awe and delight continued, this time with a pair of dramatic renditions of "21st century" motoring.

First came the four-door Cadillac Voyage concept car, in time for the 1988 auto show circuit. A year later, Cadillac sent off a two-door Solitaire concept car that retained many of the Voyage's mechanical and design elements, yet managed to convey a personality all its own.

Both express ideas for the kind of car that might be required in the future, when superhighways allow unimpeded coast-to-coast travel at speeds in the 200 mile-per-hour realm.

The 1989 Cadillac Solitaire was essentially a two-door version of the 1988 Cadillac Voyage.

Anyone stuck in rush-hour traffic or suffering reckless lane-changes on today's "superhighways" might be permitted a moment of scoffing at the thought of speeds far into the triple-digit range. Still, the era of controlled highway travel at velocities rivaling those of airplanes has been a science-fiction staple for decades, and only now are dream cars beginning to make this fiction a reality. Should it become reality, Cadillac stands readier than most to provide suitable vehicles.

Raves greeted the Cadillac Voyage concept car's debut in January 1988 at the GM "Teamwork and Technology" show, held in New York's Waldorf Astoria hotel. Measuring two feet longer than a production 1988 Seville, the massive four-door "bullet style" Voyage carried a V-8 engine under its elongated hood -- but had plenty of space available for the V-12 that would arrive later. Although identical in size to the 4.5-liter V-8 introduced on regular Cadillacs for 1988, the Voyage edition delivered nearly twice the horsepower, capable of cruising at an estimated 180 miles an hour.

### 1988 Cadillac Voyage Concept Car Design

As futuristic as the 1988 Cadillac Voyage concept car design was, fans of 1950s cars could detect more than one styling element in the Voyage skin that harked back to that era.

The tightly-knit tapered-side grille, for one, could have been mounted on a Caddy of earlier vintage without creating a stir. The black exterior paint and the sheer size of the Cadillac Voyage concept car majestically conveyed Cadillac's reputation for bulk and strength.

Matching (removable) front and rear fender skirts had never been seen on regulation Caddies, of course, but almost looked like they might have been. Taking advantage of contemporary technology, the front skirts were designed to move outward automatically when the car had to turn abruptly. They weren't stuck on just for show, but to help create an amazingly low drag coefficient (only 0.28) for such a large vehicle.

### Cadillac's 1988 Voyage concept car was an auto-show star

Voyage's upper greenhouse, from the base of the windshield all the way to the bottom of the tail lamps, was a single, continuous sheet of tinted glass -- that's visibility! High-intensity tail lamps and turn signal indicators weren't plain old bulbs, but then-modern-day Light Emitting Diodes. Forming a continuous strip, the rear lamps were hidden under glass; only the rear-vision video camera was visible, sending views from the back to a screen in the driver's compartment.

High-visibility automatic flashers replaced customary reflectors, to be sure oncoming traffic would see the Cadillac Voyage if it were parked at roadside during the night. After all, even a 200-mph electronically-controlled machine might break down now and then.

Windshield wipers were tucked away beneath a cover at the windshield base, rising on an elevator when needed. Both inside and outside mirrors were created to dim automatically to protect the driver from glare as bright lights approached.

Getting into the car required no keys or locks; only the knowledge of a code for the keyless entry system. Pick the right one and the doors would open, front windows slid down a couple of inches,

and seat and steering column moved aside to allow graceful entry. Back windows also tilted outward.

Shut the door to the Cadillac Voyage concept car and the seat would shift into correct position for the driver who happened to be filling its cushion -- having memorized three different settings. And if that position wasn't quite right, more than 20 pneumatic and mechanical adjustments allowed all the refinements anyone could possibly want. Mirrors adjusted themselves, too, for each driver who'd requested a setting.

### **1988 Cadillac Voyage Concept Car Development**

The 1988 Cadillac Voyage concept car development by no means ignored the big sedan's luxurious cabin. The same attention was lavished on the interior of the 1989 Cadillac Solitaire concept car, too.

For example, once inside the Voyage, cold wintry mornings could quickly be forgotten as the pre-heated seats emitted their warmth to back and backside. And if that weren't enough, a little massage was available to get the blood going before the day got underway; or get rid of those annoying "pins and needles" feelings during a long drive. Business calls could be handled without even touching the built-in phone, since it recognized the driver's voice and dialed numbers automatically.

Unfamiliar with where you're going? Not a problem. The ETAK navigation system was ready to display a present location and destination within a map on a color video screen, even picking out the best route to follow.

Created under the direction of Vice President Charles M. Jordan, the Cadillac Voyage concept car was more than a mere styling exercise from the General Motors Design Staff. It was created as a working prototype that could hold four passengers. Cadillac chief John O. Grettenberger called it "a rolling laboratory designed to evaluate future Cadillac vehicle concepts." An electronic 4-speed transmission delivered power to all four wheels.

If a four-door concept car for the future attracted so many enthusiastic gapers, why not a similarly stimulating two-door coupe? Thus arrived the Cadillac Solitaire concept car, which toured the 1989 show circuit. Both its electronic/mechanical features and form evolved from the prior Voyage. Shifting to a deep maroon color scheme helped disguise the fact that the grille, the front and rear movable skirts, and a host of other details were little more than carryovers.

*The Voyage dashboard continued the theme of elegant, futuristic travel.*

An expansive dome of tinted, safety net glass stretched from the Cadillac Solitaire's windshield base to the rear passenger area, intended to provide not only superior visibility but the feeling of a convertible.

The windshield darkened automatically as soon as the bright sun came out, while the dome was controlled by the driver to block out a portion of the sun's rays. That way, the interior could stay cooler on hot, sunny days, and use the sun's warmth to keep the interior warm on cold days.

### **1989 Cadillac Solitaire Concept Car Design**

The 1988 Cadillac Voyage and 1989 Cadillac Solitaire concept car design shared many traits, but the Solitaire coupe offered some unique elements.

The Cadillac Solitaire's electrically-powered doors, some of the longest in GM's history, demanded the use of an articulated hinge. The Solitaire's doors moved slightly forward as they opened. The keyless entry system could also be used to release the hood or trunk lid.

Seats traveled all the way forward to permit easy entry into the back (unless they happen to be occupied, that is) then return to the pre-selected position as the door shuts; and while the Voyage had 20 seat adjustments, the Solitaire added four more.

Some comfort-minded folks are never quite satisfied, it seems. Once again, both heat and massage were available to soothe chilled or tired muscles. Air bags mounted in the steering wheel, instrument panel, and rear seatbacks were installed for each occupant.

*Surrounded by so much glass, riders could be excused for thinking they were in a convertible.*

Mirrors disappeared completely, with only a set of video cameras providing a view of oncoming traffic from the back, seen on a liquid-crystal color video screen inside the car. Lack of stick-out mirrors made a slight difference in aerodynamics, and a bigger improvement in the Cadillac Solitaire concept car's flush appearance. Body-colored louvers, front and rear, created the illusion

that the car carried neither headlamps nor tail lamps.

*The Solitaire dashboard was a slightly modified version of the one in the Voyage sedan concept*

Under the hood of the Cadillac Solitaire, replacing the Voyage's V-8, lurked a dual-overhead-cam, 48-valve V-12 engine with port fuel injection. Developed in conjunction with Lotus, the 6.6-liter powerplant produced 430 horsepower, along with 470 pounds/feet of torque. Computer-designed tires rode special 20-inch cast aluminum wheels.

*Cadillac developed Solitaire's 48-valve V-12 engine in conjunction with the Lotus company.*

Prepared to carry four passengers in unheard-of swiftness and ease, the Cadillac Solitaire was called "Cadillac's vision of the ultimate in road-car performance, comfort, convenience and style." Like its predecessor, it was created to serve as a test vehicle, not just a showpiece.

Whether highways capable of ultra-fast speeds -- and humans capable of handling them -- would ever emerge was an open question, of course. But a look at either of Cadillac's visions evoked a hope that such a day would arrive soon, and that cars like these would be available for our enjoyment.

### **1988 Cadillac Voyage and 1989 Cadillac Solitaire Concept Car Specifications**

As the 1988 Cadillac Voyage and 1989 Cadillac Solitaire concept car specifications below demonstrate, the cars' excitement was not only in the idea, but in their execution.

Manufacturer: Cadillac Motor Car Division; Detroit, MI

Body design: 4-passenger, 2-door coupe (Solitaire) and 4-passenger, 4-door sedan (Voyage); metal body and frame

Powertrain layout: front-engine, rear-wheel drive

Wheelbase: 119.6 inches

Overall length: 214.2 inches (coupe), 212.6 inches (sedan)

Overall width: 78.2 inches (coupe), 77.8 inches (sedan)

Overall height: 54.3 inches (coupe), 53.4 inches (sedan)

Track, front: not available

Track, rear: not available

Weight: 4100 pounds (coupe), 3800 pounds (sedan)

Approximate price: not available

Engine type: dohc V-12 (Solitaire), ohvV-8 (Voyage); V-12 developed by Cadillac and Lotus

Displacement (liters/cu. in.): 6.6/403 (coupe) 4.5/273 (sedan)

Horsepower: 430 (coupe), 275 (sedan)

Torque (lbs./ft.): 470 (coupe), 330 (sedan)

Fuel delivery: port fuel injection

Transmission: 4-speed automatic (electronic shift)

Suspension, front: independent MacPherson struts, coil springs

Suspension, rear: independent; transverse fiberglass spring

Brakes: front/rear discs, anti-lock

### **1988 Cadillac Voyage and 1989 Cadillac Solitaire Concept Cars Performance**

Top speed: (est) 180-200 mph

0-60 mph: not available

Quarter-mile: not available

mph @ quarter-mile: not available