







Cadillac

Cadillac Motor Car Division



Type	Division of GM
Founded	August 22, 1902
Headquarters	Detroit, Michigan
Key people	Henry M. Leland
Industry	Automobiles
Products	Luxury vehicles
Parent	General Motors (1909–present)
Website	cadillac.com

Cadillac is a luxury vehicle marque owned by General Motors. Cadillac vehicles are sold in over 50 countries and territories, but mainly in North America.

Founded in 1902 as the Cadillac Automobile Company, it was purchased in 1905 by General Motors and over the next thirty years established itself as America's premier luxury car. Cadillac pioneered many accessories in automobiles, including full electrical systems, the clashless manual transmission, and the steel roof. The brand developed three engines, one of which (the V8) set the standard for the American automotive industry

History

Founding

Cadillac was formed from the remnants of the Henry Ford Company when Henry Ford departed along with several of his key partners and the company was dissolved. With the intent of liquidating the firm's assets, Ford's financial backers, William Murphy and Lemuel Bowen called in engineer Henry M. Leland of Leland & Faulconer Manufacturing Company to appraise the plant and equipment prior to selling them. Instead, Leland persuaded them to continue the automobile business using Leland's proven 1-cylinder engine. Henry Ford's departure required a new name, and on August 22, 1902, the company reformed as the Cadillac Automobile Company. Leland & Faulconer Manufacturing and the Cadillac Automobile Company merged in 1905.

The Cadillac automobile was named after the 17th-century French explorer Antoine Laumet de la Mothe, Sieur de Cadillac, who founded Detroit in 1701.

Contributions to the automotive industry

From its earliest years, Cadillac aimed for precision engineering and stylish luxury finish, causing its cars to be ranked amongst the world's finest made. Utilisation of interchangeable parts was an important innovation in 1908. Cadillac was the first volume manufacturer of a fully enclosed cab in 1910 and, in 1912, was first to incorporate an electrical system enabling starting, ignition and lighting.

Advanced engines and transmissions

In 1915 it introduced a 90 degree flathead V8 engine with 70 horsepower at 2400 rpm and 180 pound feet of torque, allowing its cars to attain 65 miles per hour. At that time, 65 miles per hour was faster than most roads could accommodate. Cadillac pioneered the dual-plane V8 crankshaft in 1918. In 1928, Cadillac introduced the first clashless Synchro-Mech manual transmission, utilizing constant mesh gears. In 1930, Cadillac implemented the first V-16 engine, with a 45 degree overhead valve, 452 cubic inches, and 165 horsepower, one of the most powerful and quietest engines in the United States. The development and introduction of the V8, V16, and V-12 helped to make Cadillac the "Standard of the World."

A later model of the V8 engine, known as the overhead valve, set the standard for the entire American automotive industry.

Body design

Cadillac introduced designer-styled bodywork (as opposed to auto-engineered) in 1927. It installed shatter-resistant glass in 1926. Cadillac also introduced the 'turret top', the first all-steel roof on a passenger car. Previously, car roofs were constructed of fabric-covered wood.

Tailfins were added to body shape in 1948. The Eldorado Brougham of 1957 offered a 'memory seat' function, allowing seat positions to be saved and recalled for different drivers. The first fully automatic heater/air conditioning system was introduced in 1964, allowing the driver to set a desired temperature to be maintained by 'climate control'. From the late 1960s, Cadillac offered a fiber-optic warning system to alert the driver to failed light bulbs. Driver airbags were offered on some Cadillac models from 1972 to 1973.

Early vehicles

Their first car was completed in October 1902, the 10 hp (7 kW) Cadillac. It was practically identical to the 1903 Ford Model A. Many sources say the first car rolled out of the factory on October 17; in the book *Henry Leland — Master of Precision*, the date is October 20; another reliable source shows car #3 to have been built on October 16. In any case, the new Cadillac was shown at the New York Auto Show the following January, where it impressed the crowds enough to gather over two thousand firm orders. The Cadillac's biggest selling point was precision manufacturing and, therefore, reliability; it was simply a better-made vehicle than its competition. Cadillac participated in an interchangeability test in the United Kingdom 1908, when it was awarded the Dewar Trophy for the most important advancement of the year in the automobile industry.

General Motors

Cadillac was purchased by the General Motors conglomerate in 1909. Cadillac became General Motors' prestige division, devoted to the production of large luxury vehicles. The Cadillac line was also GM's default marque for "commercial chassis" institutional vehicles, such as limousines, ambulances, hearses, and funeral home flower cars, the latter three of which were custom-built by aftermarket manufacturers. Cadillac does not produce any such vehicles in their factory.

In July 1917, the United States Army needed a dependable staff car and chose the Cadillac Type 55 Touring Model after exhaustive tests on the Mexican border. 2,350 of the cars were supplied for use in France by officers of the American Expeditionary Force during WWI.

Pre-World War II Cadillacs were well-built, powerful, mass-produced luxury cars, aimed at an upper class market. In the 1930s, Cadillac added cars with V12 and V16 engines to their range, many of which were fitted with custom coach-built bodies; these engines were remarkable at the time for their ability to deliver a combination of high power, silky smoothness and quietness.



Automobile stylist Harley Earl, whom Cadillac had recruited in 1926 and who was to head the new Art and Color section starting in January 1928, designed for 1927 a new, smaller "companion" car to the Cadillac which he called the La Salle, after another French explorer, René Robert Cavelier, Sieur de La Salle. That marque remained in production until 1940.

The Great Depression

In 1932, after Cadillac suffered from record low sales and charges of discrimination against black customers, Alfred Sloan created a committee to consider the discontinuation of the Cadillac line. At a fateful board meeting, Cadillac president Nicholas Dreystadt heard that legendary boxer Joe Louis could not go into a dealership to buy a car, because he was black, and resorted to having a white friend make the purchase for him. Dreystadt gave the GM board of directors a ten-minute speech in which he advocated advertising to black consumers so as to increase sales. The board agreed to give Dreystadt 18 months to produce results. Cadillac managed to survive the Great Depression by being part of GM. By 1940, Cadillac sales had risen tenfold compared to 1934.

The year 1934 brought about a revolution in assembly-line technology. Henry F. Phillips introduced the Phillips screw and driver to the market. He entered into talks with General Motors and convinced the Cadillac group that his new screws would speed assembly times and therefore increase profits. Cadillac was the first automaker to use the Phillips technology, which was widely adopted in 1940. For the first time in many years all cars built by the company shared the same basic engine and drivetrain in 1941.

Postwar

Postwar Cadillacs, incorporating the ideas of General Motors styling chief Harley J. Earl, innovated many of the styling features that came to be synonymous with the classic (late-1940s and 1950s) American automobile, including tailfins and wraparound windshields. Cadillac's first tailfins, inspired by the twin rudders of the Lockheed P-38 Lightning aircraft, appeared in 1948; the 1959 Cadillac was the epitome of the tailfin craze, with the most recognizable tailfins of any production automobile.

Cadillac's other distinctive styling attribute was its front-bumper designs which became known as Dagmar bumpers or simply *Dagmars*. What had started out after the war as an artillery shell shaped bumper guard became an increasingly important part of Cadillac's complicated front grille and bumper assembly. As the 1950s wore on, the element was placed higher in the front-end design, negating their purpose as bumper guards. They also became more pronounced and were likened to the bosom of 1950s television personality Dagmar. In 1957 the bumpers gained black rubber tips which only heightened the relationship between the styling element and a stylized, exaggerated bumper design. For 1958 the element was toned down and was completely absent from the 1959 models.

Low points and recovery

Excessive dimensions

Despite record sales in 1973 and again in the late 1970s, Cadillac suffered from the malaise that set in to the American auto industry in the late 1970s to the late 1980s, partly driven by a failure to respond effectively to new government mandates on safety, emissions, and fuel economy. There were many high points, such as the launch of the front-wheel drive Eldorado in 1967 as a personal luxury coupe, with its simple, elegant design — a far cry from the tail-fin and chrome excesses of the 1950s. The 1970s saw vehicles memorable for excesses in dimensions and engine size before the downsizing era set in later in the decade. The new-generation engine that debuted with the 1968 models at a displacement of 472 cu in (7.7 L) was designed for an ultimate capacity potential of 600 cu in (9.8 L). Displacement was increased to 500 cu in (8.2 L) for the 1970 model Eldorado, then adopted across all models for 1975. Performance waned after peaking at 420 hp (313 kW) and over 550 foot-pounds force (750 N·m) of torque in the first year and further declined in 1971 and later years due to reductions in compression ratios necessitated by the advent of low-octane unleaded fuel and increasingly stringent emission requirements.

Seville introduction and downsizing

The compact Seville was introduced in April 1975 as a 1976 model and came standard with the first electronic fuel injection system. The engine was a fuel-injected version of the Oldsmobile 350. The 1977 downsized full-sized cars and the Eldorado were fitted with a downsized 425 cu in (7 L) V8. This engine provided good performance and fuel economy for the downsized RWD models but was underpowered for the large Eldorado. The bore was further reduced for 1980-1981 to provide 368 cu in (6 L), again sharing the stroke of the original 472, as well as the weight and physical bulk.

As with most American brands, Cadillac was forced to downsize its offerings between the 1973 and 1979 fuel crises. Its staple De Ville and Fleetwood lines were downsized for 1977 and again for 1985 when the cars were also changed to a front-drive configuration. A downsized Eldorado debuted in 1979 with a new bustleback Seville sedan introduced on the same platform in 1980. Both the Eldorado and Seville were further downsized in 1986 into the compact-car class, with sales also shrinking.

"Look-alike, drive-alike syndrome"

The "look-alike", "drive-alike" syndrome that affected most General Motors divisions under the administration of Roger Bonham Smith would have a negative effect on Cadillac as it tried to downsize its models. The DeVille, a generally successful model for Cadillac, would receive a complete redesign in 1985 that made the car heavily resemble its platform mates, the Buick Electra and Oldsmobile 98.

Diesel V8

Due to gasoline shortages during 1970s oil embargoes and a desire for better fuel efficiency, Cadillac offered an Oldsmobile V8 engine that used diesel, the 'LF9' 350 cu in (5.7 L) unit, in its full-size cars from 1979 to 1985. A hastily modified version of the long and well-serving Oldsmobile Rocket 350 V8 gasoline engine was used rather than designing a small diesel engine from scratch, as was common in the industry, to quickly respond to customer demand and to keep overall powerplant (and hence overall chassis) weight to a minimum. Two extra main bolts were installed and the main bearing journals were also increased to 3 inches (76 mm) to compensate for the higher operating stresses and pressures that diesel engines exert on their reciprocating parts. This engine quickly gained a reputation for unreliability as a wave of catastrophic engine failures followed, usually of a rotating lower end component or head gasket, pointing to some combination of inadequate design, substandard metallurgy, and substandard machining. GM had recurring quality problems with the latter two deficiencies in a variety of internal parts across multiple engine and transmission lines throughout its mid-'70s-to-mid-'80s decade, so these problems certainly would not have been out of place in the crankcases of Olds 350 diesels. In addition, the fuel system did not have an effective water separating system, and neither the buyers nor the dealer service staff were adequately informed about the products and procedures necessary for the proper maintenance of the engine.

This led to corrosion in the fuel injection pump, leading in turn to incorrect injection cycles, cylinder head lift, stretching or breaking of cylinder head bolts, failure of head gaskets, and hydro-lock from coolant leaking into the cylinder, and the failure of internal engine components and attendant catastrophic engine failure. Ironically, Detroit Diesel, another division of GM, had decades of experience building quality but much larger diesel engines.

Cimarron

In an attempt to appeal to younger buyers, Cadillac launched the compact Cimarron in 1982. The Cimarron shared the J platform with the Chevrolet Cavalier, Buick Skyhawk, Oldsmobile Firenza, Pontiac J2000, Holden Camira, Isuzu Aska, and Opel Ascona, and was expected by GM leadership to rival the BMW 3-series in sales performance.

As the Cimarron was rushed to production about three years ahead of schedule, only the notably low powered GM 122 engine four-cylinder engine was available initially (a V6 arrived in 1985) and, at first, very minimal styling differences were made to distinguish it from the considerably cheaper Chevrolet version. Buyers generally dismissed the Cimarron as a "warmed-over Cavalier" with leather seats. Styling became more in tune with other Cadillacs in its later years, but sales did not significantly improve after its initial rejection and it was discontinued in 1988.



V8-6-4 and HT4100

Another nadir during the early 1980s was the variable displacement engine, branded the L62 V8-6-4 engine. Introduced in 1981, this 6 L (368 cu in) engine selectively activated and deactivated cylinders according to power demand. But it proved unreliable and was dropped the next year in favor of a family of smaller aluminum V8 engines rushed into production. The HT-4100 4.1 L (~250 cu in) engine was used widely in Cadillacs from 1982 through 1987. The majority of HT4100's failed before 60,000 miles (97,000 km) and many of the 1,000,000 HT4100's installed in 1982-1987 Cadillacs were replaced by the factory under warranty although some motors went 200,000 miles (320,000 km) with extremely careful maintenance and no overheating episodes which this aluminum block engine does not tolerate. The HT4100's problems were far more serious and prevalent than those in the one-year only V8-6-4 and cost Cadillac the loyalty of many customers. Cadillac introduced the 4.5 liter aluminum v8 in 1988 which proved to be a very reliable motor, these motors often see well over 250,000 miles (400,000 km). This power plant was bumped up to 4.9 liters in 1991 and ran until 1993. The famous Northstar V8 would power the Eldorado from the 1993 model year through the next decade.

Allanté

1987 saw Cadillac try to rebuild its image, aware that imported European and Japanese performance models were on a rise, and with Honda launching its American luxury division, Acura. Some new design approaches were tried: the Seville, for instance, was downsized to BMW 5 series proportions and had rounded wheel arches with only a hint of chrome. During this period, the greatest challenge to the import sports cars was the Cadillac Allanté, a convertible designed by Pininfarina of Italy, and built on what was touted as the world's longest production line—with the car's bodies fabricated in Italy and flown by Boeing 747 to the United States to meet their transmission and engine.

In the initial two years of production, Cadillac offered no options for the Allanté except for the interior and body color. Like the Cimarron of a few years earlier, the Allanté was introduced with an engine which was below the expectations of its target market. The 170 horsepower (130 kW) HT-4100 engine was insufficient against more powerful competition. This introductory platform turned off many potential customers, who considered the vehicle to be underpowered for its \$55,000 price tag, causing them to conclude that Cadillac was not genuinely committed to building a performance car. In 1989 the powertrain was improved with the 4.5 L engine producing 200 horsepower (150 kW). Finally, in 1993 the powertrain was again upgraded to respectable performance with the 4.6 L Northstar V8 producing 290 horsepower (220 kW). This turned out to be the final year of production, as Allanté sales never reached the volume which Cadillac hoped for.

Downsizing and the Brougham

The Cimarron and Seville models marked a beginning of "smaller" cars for the Cadillac line. Throughout the 1980s, American auto makers downsized most of their models, and Cadillac was no exception. By the late '80s, the Brougham was the only Cadillac model that retained the style and size of the "big" DeVilles and Fleetwoods of the '70s. The Brougham was redesigned in 1993 and renamed the Fleetwood, with an optional Brougham package, towing capacity is up to 7,000 pounds (3,200 kg) with the L05 V8. In 1994 Cadillac replaced the L05 engine with the new more powerful LT1 engine. The Fleetwood was discontinued after the 1996 model year. Following the demise of the Fleetwood, the Lincoln Town Car was left as the sole traditional full-sized luxury car remaining in the U.S. market.

Competition with Lincoln - Escalade

After GM phased out the D platform in 1996, Cadillac was left with a completely front-wheel drive lineup except for the European-based Catera, introduced for 1997. The GMC Yukon Denali-based Escalade, Cadillac's first sport utility vehicle, was introduced in 1998 for the 1999 model year, and featured standard all-wheel drive. It was quickly created to capitalize on the instant market success of the Lincoln Navigator launched as a 1998 model and seemingly destined to propel the Lincoln brand's sales total for the 1998 calendar year well ahead of Cadillac's.

By November 1998, Lincoln's year-to-date lead was a comfortable 6,783 vehicles, but Cadillac's December sales were reported as 23,861 vehicles, more than 10,000 ahead of its November sales. A prominent proportion of this increase was a rise in Escalade sales from 960 in November to 3,642 in December. The result was an overall lead for the Cadillac brand by a slim 222 vehicles. Subsequent audits of sales records during the first quarter of 1999, prompted by the unusual numbers posted in December plus the fact that Escalade sales had dropped to a mere 225 vehicles in January 1999, resulted in the discovery of an "error" of 4,773 units. With this corrected, it meant that Lincoln had in fact passed Cadillac in total sales for the 1998 calendar year (187,121 Lincolns sold vs. 182,570 for Cadillac).

In the first week of May, 1999, a public retraction and apology was issued by GM spokesman Jim Farmer, admitting that "a combination of internal control breakdowns and overzealousness on the part of our team members" was the cause of the overstated figures, and adding that those responsible had been disciplined. However neither brand would have any reason to celebrate any sales success in the U.S. luxury market as their prior number-one and number-two positions had been overtaken by Japanese and German brands.

The Art and Science Era

Cadillac has resisted the trend towards producing "retro" models such as the revived Ford Thunderbird or the VW New Beetle. It has instead pressed ahead with a new design philosophy for the 21st century called "art and science" which it says "incorporates sharp, shear forms and crisp edges — a form vocabulary that expresses bold, high-technology design and invokes the technology used to design it." This new design language spread from the original CTS across the line all the way up to the XLR roadster. In marked contrast to the brand's offerings of ten years earlier, Cadillac's model line-up now includes only rear and all wheel drive sedans, roadsters, crossovers and SUVs. Many of these actively compete with respected high-end luxury cars produced by German and Japanese manufacturers. The flagship of these efforts is the second generation CTS-V, which is a direct competitor to the vaunted M5. An automatic version of this vehicle lapped the Nürburgring in 7:59.32, at the time a record for production sedans.

Hybrid and electric vehicles

A hybrid electric version of the Escalade is now available. New York Giants football player Eli Manning was awarded the keys to the Cadillac Escalade hybrid at the end of the Super Bowl XLII.

The Cadillac Converj Concept was unveiled at the 2009 North American International Auto Show (NAIAS). This plug-in hybrid shares the Voltec platform with the Chevrolet Volt.

Cadillac models

Alphabetical model summary

- 1987-1993 Cadillac Allante
- 1985-1992 Cadillac Brougham
- 1965-1976 Cadillac Calais
- 1975-1976 Cadillac Castilian Station Wagon
- 1997-2001 Cadillac Catera
- 1982-1988 Cadillac Cimarron
- 1935-1983 Cadillac commercial chassis
- 1949-2005 Cadillac DeVille
- 1949-1993 Cadillac Coupe de Ville
- 1953-2002 Cadillac Eldorado
- 1956-1964 Cadillac Eldorado Biarritz
- 1957-1960 Cadillac Eldorado Brougham
- 1956-1960 Cadillac Eldorado Seville
- 1965-2003 Cadillac Fleetwood Eldorado
- 1927-1996 Cadillac Fleetwood
- 1975-2004 Cadillac Seville
- 1938-1993 Cadillac Sixty Special

Current models

- 2005-present Cadillac XLR-V
- 2005-present Cadillac STS-V
- 2004-present Cadillac CTS-V
- 2005-present Cadillac BLS (Europe, Middle East, Asia, Mexico, and South Africa only)
- 2003-present Cadillac CTS
- 2006-present Cadillac DTS
- 1999-present Cadillac Escalade full-sized SUV
- 2003-present Cadillac Escalade ESV top of the line SUV
- 2002-present Cadillac Escalade EXT pickup truck
- 2004-present Cadillac SRX
- 2005-present Cadillac STS
- 2004-present Cadillac XLR





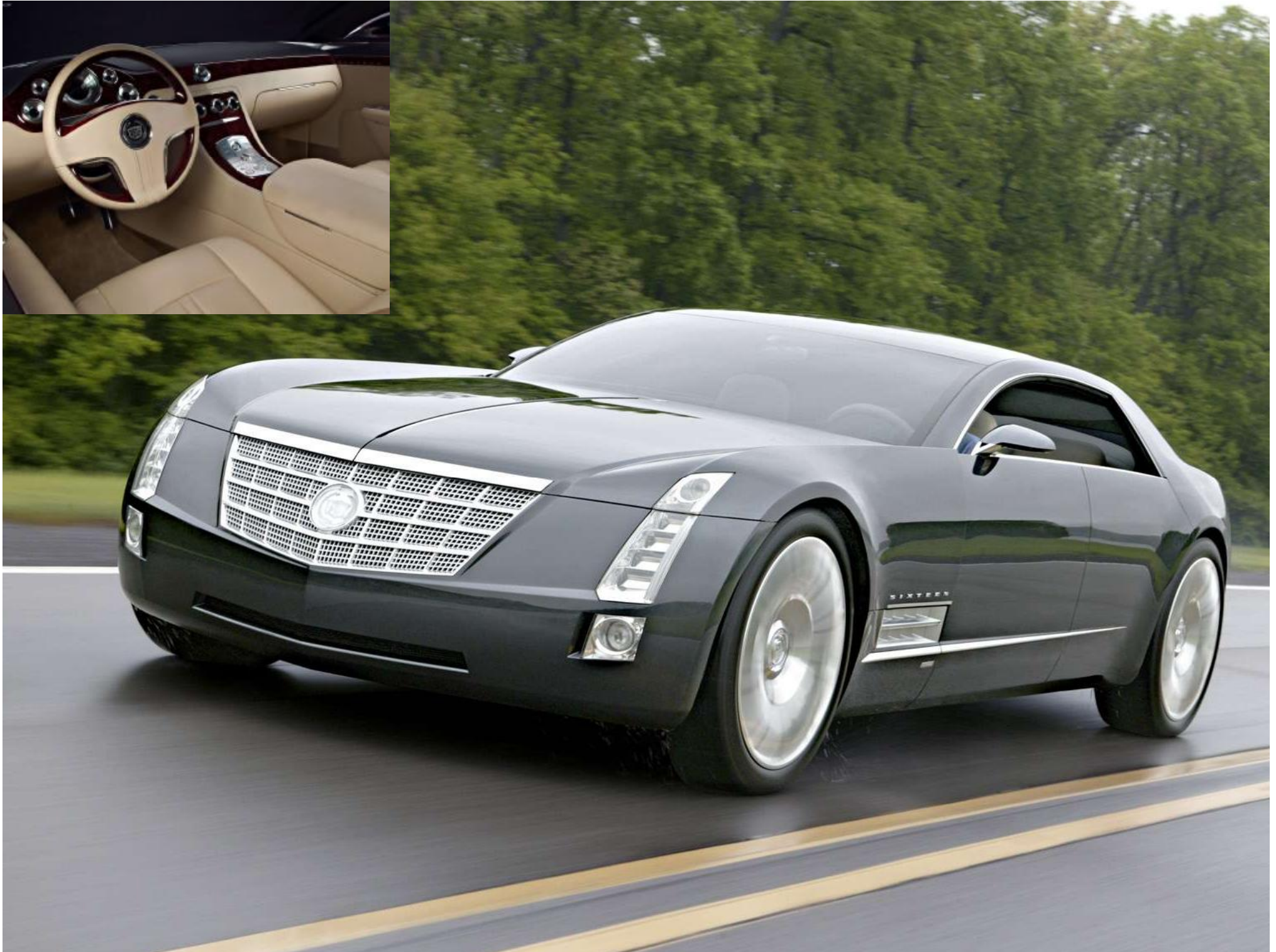
















1995



1999



1902



1905

Cadillac
Standard
of the World

1914



1915



1925



1926



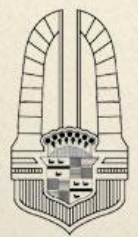
1930



1932



1939



1942



1948



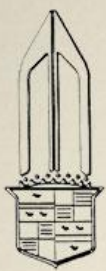
1952



1959



1964



1971



1982