

Cadillac founder Henry Leland brought precision engineering to the auto industry

After GM bought Cadillac, he disagreed with Durant; then left and started Lincoln

By Les Jackson

Henry M. Leland, the founder of Cadillac, was the individual who took precision engineering into the manufacture of automobiles. Gauges were used to ascertain that parts were made to tiny tolerances.

It was an expensive process, but in the long run it saved time and money and aggravation for the customer. The gauges allowed workers to quickly determine if a part was within the acceptable tolerances.

For example gauges for measuring bores were in two sizes, One was marked "5.000 GO" and the other was "5.002 NOT GO". If the part failed the GO gauge it was sent back for sizing. If the bore admitted the NOT GO gauge the part was scrapped.

Leland said: "While this method...is expensive for

us, it is the only correct method. The advantages will be best appreciated by the motorist who on being obliged to replace parts of his car has usually—or always—found it necessary to call upon an expert to fit them."

Founded in 1902

The Cadillac Automobile company was founded in 1902, with the name honoring the French explorer of Detroit. A car was taken to the 1903 auto show in New York and in the first few days 2,200 orders were taken at a price of \$750 per car. The company declared they were sold out for the year's production.

In 1905 the company was renamed the Cadillac Motor Car Company with Leland the general manager at the age of 62.

In London, with supervision of the Royal Automobile Club in 1908, Cadillac mechanics disassembled three cars and scrambled the parts. They then reassembled them and drove the three cars to the amazement of those watching. This earned the company the coveted Dewar Trophy, the first American made car to win it.

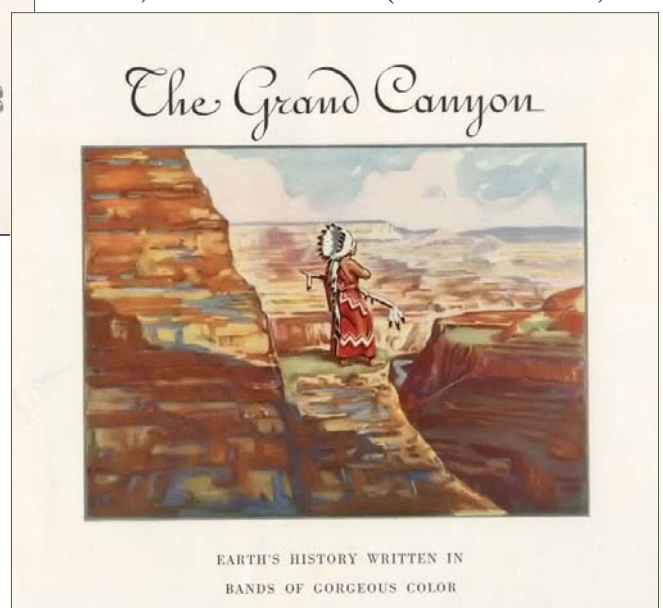
GM buys Cadillac

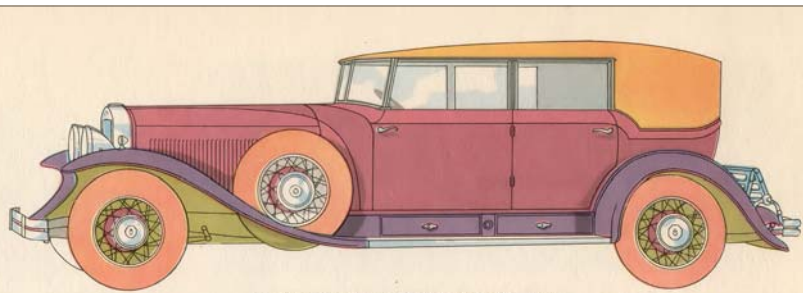
W. C. Durant was head of General Motors when it bought Cadillac in 1909.

Other innovations by Cadillac in the following years were the self starter and electric lights in 1912, and a V8 in 1914 (not the first one,



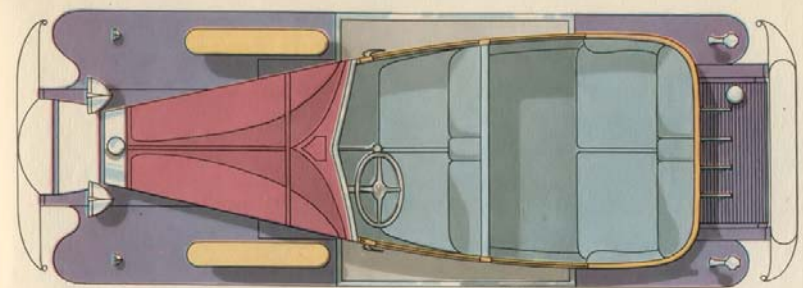
For 1928 Cadillac produced some rich colors for their new models. In their publicity they showed views from nature with similar colors to those used in the cars. This is the Convertible Coupe by Fisher. The colors are Buttress Brown and Afterglow Brown striped with orange. Wheels and brake drums were in Bright Angel Blue. These colors were said to catch the "prevailing spirit" of Grand Canyon coloration. On the right is the illustration from the Cadillac sales literature for 1928. The car's list price was \$3,500.





Cadillac-Fleetway All-Weather Phaeton

Colorfully was the way Cadillac advertised its V8 cars. This is their rendition of a Fleetwood bodied All-Weather Phaeton called the Fleetway. We doubt that any of these cars were actually painted with these colors and certainly the tires were not light orange. This car sold for \$4,700.



Plan Drawing of the All-Weather Phaeton

gine followed later that year with the new V12. Planning for these new engines was done before the stock market crash of 1929 and the subsequent depression. A number of other auto manufacturers also produced new 12 cylinder motors about this time, but the V16 by Cadillac took the industry by surprise. The only other US company to market 16 cylinder cars was Marmon.

(Peerless made a single copy of one before that company folded.)

New in 1932 was ride control, in 1933 no draft ventilation, in 1934 independent front suspension, and in 1935 all steel turret tops (for some models). Gear shift on the steering column was introduced in 1938, the year of the first Sixty Special designed by Bill Mitchell.

Optional Air Conditioning

Air conditioning was an option in 1941, a year after Packard introduced it. Also new to Cadillac in 1941 was the hydramatic transmission which had been used previously by Oldsmobile.

The CCCA recognizes as Full Classics® all V-63 series from 1923, all 1925 through 1935 Cadillacs, and the following series from 1936 to 1948: 63, 65, 67, 70, 72, 75, 80, 85 and 90. Also Sixty Specials from 1938 through 1947 and the Series 62 from 1940 through 1947.

(More on Cadillacs on Pages 12-13.)

however). By 1915 sales reached 20,000 cars, but Leland left the company in a dispute with Durant as World War I loomed.

Leland made Liberty aero engines and then formed the Lincoln Motor Car Company.

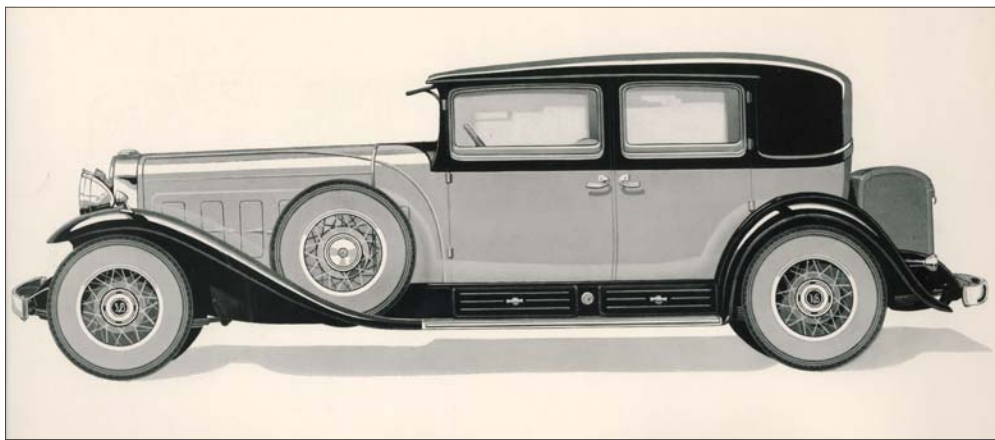
In 1925 Lawrency P. Fisher became president of Cadillac, a position he held for ten years.

The V8 engine introduced in 1925 continued with refinements and improvements until 1936, when a new engine was developed which lasted through 1948.

The 1928 Cadillacs were designed by Harley Earl, and were related to the year earlier LaSalles that were introduced by Cadillac. In 1929 safety glass and synchromesh transmission were introduced.

The New 16

The next big leap forward by Cadillac was in 1930 with the surprise debut of the V16 en-



This is the 1930-31 Cadillac V16 5 passenger club sedan, Style number 4361-S. Weight was 5,740 pounds and price was \$5,950 . That amount adjusted for inflation would be \$76,077 today.



The 5 passenger phaeton for 1933 was available with a V8, V12 or V16 engine. This is the V12 with a dual cowl. Cadillac said about it: "For those who enjoy the unfettered freedom of a true sport car, Cadillac offers this unusually smart open body type by Fisher. The upholstery, of the finest hand-crushed leather tailored over Cadillac's special

comfort-contour cushions, is particularly interesting because of its beauty and utility." This model was also available with a dual windshield or without.

By 1934 the Great Depression was just past what would be its lowest point, but there still was no prosperity. Cadillac redesigned their offerings to reflect the economy and mood of the country, and this is the 5 passenger V8 town coupe with side mounts. The price was \$2,545, equivalent in



today's dollars as \$40,554. The most noticeable changes for the 1935 model Cadillacs was the chrome covering in the front of the bumpers to eliminate the bi-plane appearance in the 1934's.



Available either with a V8 or a V12 engine, this is the Fleetwood Town Cabriolet on the 138" wheelbase. The roof and rear quarters were of English landau leather. The front seat was stationary (so the chauffeur had to be of the right size.) The glass partition could be raised or lowered and the back seat passengers were supplied with a telephone to communicate with the driver. There were two extra forward facing auxiliary seats in the back. The driver roof was a curtain that was stored above the division header. The price was \$5.595 whether the 8 or 12 cylinder engine was chosen.

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Whereas the 1937 Cadillacs were similar in design to those of 1936, for 1938 there was a big change as visible in this V16 convertible sedan model. An imperial division was provided to separate the passengers from the driver.



Available at extra cost were two opera type auxiliary seats. The wheelbase was 141 inches and the cost \$6,000 (more than \$90,800 in today's dollars).



Perhaps the most popular Full Classic® for 1941 Cadillacs is the Series Sixty Special 5 passenger sedan. This was available with options of imperial division or a sun roof. These were on Fleetwood bodies and on a 126 inch wheelbase. All 1941

Cadillacs had the same V8 engine (even the non-classics of that year) with 150 horsepower. The Sixty Special design was introduced in 1938 models and continued for years after World War II.

Region members have 60 Cadillacs; 1,072 in CCCA

Cadillacs are the most common make owned by Arizona Region members with a total of 60 cars, of which 23 are 1941 models. The next most common make owned by members is Packard, with 33 cars.

CCCA reports that Packard is the most common make nationally, with a total of 1,416 cars. Cadillac is second most frequent with 1,072 vehicles.

A few years ago the Arizona Region organized a trip to the Palm Springs, California, area. Of the dozen or so Classics® participating, all were Cadillacs. One of the spectators in the parking lot, upon seeing the CCCA sign and the Arizona license plates remarked that this must be the Classic Cadillac Club of Arizona.

EDITOR'S NOTE: See page 14 of the January/February 2008 *Roadrunner* for pictures of 1942, 1946 and 1947 Cadillacs showing side views of convertibles and views of grilles.

Last of the series covering American built Full Classics®

The March-April 1999 issue of *The Roadrunner* began occasional articles about American made Full Classics. This is the 35th car to be included in the series, and it is the last one: Cadillac.

The most recent March-April 2008 edition covered Chrysler.

The entire series may be viewed on the Region's web site www.arizonacc.com. Click on "Full Classics A-Z" in the menu at the top of the home page.