

# 1930 Cadillac



# V-16 Roadster

Super car in black tie

BY JON G. ROBINSON / PHOTOS BY RICHARD TRUESDELL



**AARON WEISS IS IN HIS 50S, BUT HE WISHES HE HAD LIVED IN A TIME WHEN AVERAGE PEOPLE DRESSED UP FOR DINNER. HE WOULD LIKE TO SEE A MAN PUT ON A SUIT AND A LADY PUT ON A DRESS TO GO TO THE MOVIES. OF COURSE, HOLLYWOOD DOESN'T MAKE MOVIES FOR PEOPLE LIKE WEISS ANYMORE.**

They don't make cars for Weiss anymore, either. He can't think of a car made in the last 50 years that will be remembered in the same way we revere the big classics of the 1920s and '30s – cars with formality and class that matched their well-heeled, well-mannered owners. Weiss recaptures that era behind the wheel of his 1930 Cadillac V-16 roadster.

In 1930, Cadillac predicted the musclecar era by calling the new V-16 a "super car."

"In the musclecar era," Weiss said, "there was a horsepower war between the car companies. But, in the early '30s, there was a cylinder war."

Cadillac won that war and produced the most successful 16-cylinder engine in American automotive history. Weiss owns seven Cadillac V-16s, and this roadster is a favorite. A two-year restoration has brought the snazzy automobile a shower of

Concours d'Elegance prizes in the past couple of years – four firsts-in-class, three seconds-in-class, and one best-of-show.

*Automobile Topics* magazine announced Cadillac's intention to introduce a 16-cylinder car in its Oct. 21, 1929 edition – one week before the stock market crash set the Great Depression in motion. More precisely, the crash was a process rather than an event. It took weeks for some mechanisms – and months for others – to take the Depression across the country and around the world. Meanwhile, Cadillac was hopeful its extra-special V-16 would find wealthy, unaffected buyers and that the economic dip would be short.

Cadillac's V-16 automobile had been under development for at least three years by the time the public saw one. Cadillac did not thoughtlessly stuff a giant engine into an average car. First, the company made sure everything would fit, and everything would be serviceable. The engine and its components are not jammed into spaces that are too small for them.

The V-16 was extremely expensive and intended for people of great means. In 1930 and '31, there were at least 29 custom bodies offered – nearly all from Fleetwood. Reviewers of the time happily remarked that Cadillac had created a colossal sedan

that did not "look like a hearse." Some of the sedan bodies were stylistically dignified and conservative, but there was a second family of flashy sedans called the Madame X series.

Weiss' roadster is on the other end of the spectrum. It's a speedy, open-air car meant for weekend drives to the estate, flying over hill and dale, and stopping by a field for a picnic. Heavy sedans had rear axle ratios as low as 4.75:1; even on 19-inch wheels and tall tires, the gearing is low, but reviewers said the big sedans were easy to drive in urban traffic because they smoothly and quietly pulled themselves back up to speed without downshifting after taking corners or being slowed in congestion. Roadsters came with a 4.07:1 rear axle, and Cadillac claimed a credible 95-mph top speed. With an optional, special-order-only, 3.47:1 rearend, a V-16 could top 100 mph.

"It's a massive car," Weiss said. "It has a lot of presence and panache. The starter doesn't crank rapidly, but all 16 cylinders are usually firing within 15 seconds. It's not as quiet as, say, a Packard V-12, but when it's running correctly, a Cadillac V-16 runs very smoothly and has tremendous torque.

"The purpose for all that torque was twofold: someone buying a high-end luxury car did not want to know there was an engine out there running. Also, it takes a lot of torque to pull a 6,000-pound car. That's a lot of car! The suspension is really good, and there's not a whole lot of noise. It has a very nice ride. Turns are interesting because there's no power steering, and it feels kind of like a truck, but it's



**"The Cadillac V-16 represents a standard of living we don't have today," owner Aaron Weiss said. "Wealthy people lived a more formal lifestyle than we do today. Those cars say a lot about our past elegance, a past standard of living, and a different time. There was etiquette then. You dressed for dinner, and you did not go to a play in jeans. The car was conceived before the stock market crash, and in essence, it is an engineering marvel."**



**In 1930, Cadillac would never have asked a chauffeur to do anything as vulgar as pull a dipstick to check the oil. The V-16 has a visual oil level indicator.**



**Aaron Weiss' V-16 roadster visits the Gamble House in Pasadena, California. David Gamble was a descendent of James Gamble, founder of the Proctor & Gamble Co., and he built this fine home in 1908. This is exactly the setting where one would have seen a Cadillac V-16 in 1930.**

commensurate with what a luxury car should be in that era.”

Weiss' longest drive was on the 2009 Pebble Beach Concours d'Elegance tour.

“First gear is not synchronized on these old cars. On the tour, there's an extremely steep hill. We knew to approach that hill in first because you can't downshift into first without coming to a complete stop. The tour is 70 miles, and there were stretches of

Highway 1 right along the Pacific cliffs. It really ran nicely at highway speeds. One thing about them is that they do not get good mileage. I would say eight miles to the gallon is pushing it.”

Some of today's sources extol the Cadillac V-16 as superior to the Marmon V-16 that came out shortly after the Cadillac engine, but Weiss is one of the super-rare individuals who can truly compare the two.

“I happen to own a V-16 Marmon,”

Weiss said. “I'm going to tell you, the Marmon outperforms the Cadillac. It's a stronger, faster engine. The Marmon V-16 is easier to service and maintain, and it's just a better car, but by the time Marmon came out, Cadillac had pretty well sewn up the V-16 market. The Marmon engine displaced 491 cubic inches and produced 200 horsepower. It was an aluminum design with steel cylinders, bigger displacement, and more horsepower.



### **NO MONSTERS HERE**

While not literally the case, the Cadillac V-16 engine resembles two overhead-valve Buick straight-eights hooked together side-by-side and canted 45 degrees away from each other. This shallow angle means the powerplant is not unnecessarily wide. The V-16's crankshaft was 3.5 inches shorter

than the 1930 Pierce-Arrow straight-eight's unit, and it was at least one inch shorter than the Pierce-Arrow V-12 crankshaft that came out a couple of years later. For its size, scope, and ambitions, the Cadillac V-16 engine is quite compact physically and could easily fit into a 1946-'52 Buick Roadmaster. Consequently, Cadillac's creation is not the monstrosity one might first imagine.

Some earlier multi-cylinder engines operated with two distributors – one for each cylinder bank. Cadillac's V-16 has a single distributor right up front on top of the engine, and the spark plugs are on the inboard sides of the cylinder heads with the ignition wires hidden under the valley pan. The ignition system does use

two spark coils, and Cadillac mounted the spark coils in the radiator tank to keep them at a constant temperature for predictable performance.

In the first few years, two vacuum tanks brought fuel to the V-16's carburetors. The engine carries each carburetor down low on the outboard sides of the engine, out of the way of other components and away from heat sources.

**Engine:** V-16  
**Displacement:** 452 cubic inches  
**Compression ratios:** 5.11:1 (4.98:1 and 5.35:1 optional)  
**Horsepower:** 175-185 (depending on compression ratio) at 3,400 rpm  
**Torque:** 300 pounds-foot



“We’re restoring the Marmon right now, and the restorer will agree the Marmon is a superior car to the Cadillac. It’s just a better design – stronger and possibly heavier. The Marmon is silent and smoother with more pickup and better brakes. The Cadillac is a little harder to tune up and adjust. The Marmon V-16 has a single carburetor mounted on top of the engine and a single fuel pump, but the Cadillac V-16 has two carburetors, and the early ones had two vacuum tanks, so if you don’t have proper vacuum, you’re running on eight. One bank will be firing, and one bank will not be. You can drive that way, but you’ll know immediately that half

the engine is not there. The Marmon V-16 is a better engineered car, but that’s probably why they went broke.”

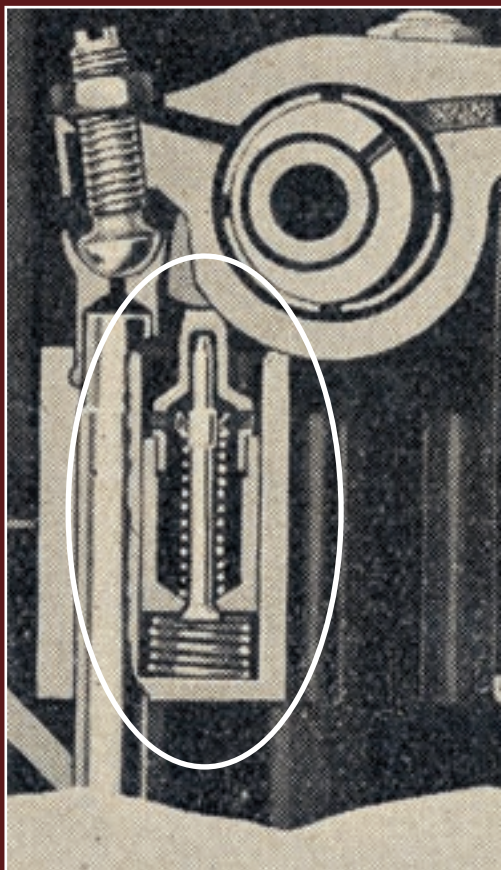
With that, Weiss hits upon Cadillac’s success. Marmon’s V-16 car may have been a little more refined, but General Motors’ production methods were more refined, and the Cadillac V-16 was “production” enough to turn a profit. A buyer could walk into a dealership and order a Cadillac V-16, but with Marmon, it wasn’t that easy.

In the end, Cadillac’s overhead-valve V-16 lasted through 1937 when Cadillac introduced a flathead V-16 with a 135-degree angle that powered its giants from 1938 through 1940.

From 1930 through 1940, Cadillac produced 4,403 V-16s, and nearly two-thirds of them appeared in the first two years. Even before World War II, life in the fast lane had surpassed Sunday drives for America’s wealthiest, and most of them wanted to drive flashy cars themselves rather than direct the chauffeur. As early as 1940, some may have already been forgetting genteel, 19th century finery that lingered into the 1930s. Fortunately, 21st century collectors such as Weiss have remembered.



The black car is the ordinary, dignified sedan. The gold car is the flashy Madame X package. Madame X sedans had suicide doors in front as well as rear, thin A-pillars that raked back stylishly, and sparkling chrome trim around the windows. In Hollywood terms, the ordinary V-16 sedan fit Cosmo Topper (the uptight banker) perfectly, while the Madame X package was for the daring Mae West types.



Thanks to hydraulic lifters, Americans have enjoyed quiet overhead-valve engines since the 1940s. In the pre-war world, unwanted valve noise plagued OHV engines. Many years before hydraulic lifters, Cadillac's V-16 perfected automatic valve lash "compensators." On the V-16, the valvetrain components were solid, with just enough lash to allow the valves to still close all the way when the components were hot. The compensator was a little plunger that applied pressure to the rocker arm in the opposite direction when the valve was closing, so there was always some tension on the valvetrain components. The compensator worked like a shock absorber, and the engine's oiling system applied the pressure to the plunger. This little device is one of the V-16's greatest accomplishments.



The Cadillac V-16 is sporty and lithe in roadster form. It does not look like a 6,000-pound car. All 1930 V-16s ride on a 148-inch wheelbase, and they had an overall length of roughly 222 inches. This was a lot of car to stop with mechanical brakes, but Cadillac improved the brake drum metallurgy in the middle of the first year and greatly reduced brake fade. ■