

February 2015



Look at the picture to the right. What's the first thing you think of when you see it? Do you think of the artful quality? Do you think about how it would look in full color? Do you think about how much better it would look with fewer headlights? I got bored with putting a different version of each year up here in the corner, so for a while, I'm going to try something different.

MASSIVE POWER: Two weeks ago, I got up at 4:30 in the morning, grabbed my suitcase, and hit the road. By 11:30am, I was traveling at over 600 mph. Not figuratively, and not theoretically. The GPS reading showed I was physically moving at over 600 mph. I wish I could say I have a new 600mph club hat and had left my mark at Bonneville, but in reality I was on a Boeing 757 heading south. I knew planes traveled fast, but I didn't expect 600mph. Rolls-Royce engines pushed us with 36,000+ pounds of thrust (per engine). I'm not really sure what that statistic means other than I absolutely LOVE when a big plane starts down the runway and I feel all that power push me back in the seat.

I was taking this flight so I could go cruising. The boat kind, not the car kind. While I was on the ship, I started thinking about how what kind of power it takes to move a cruise ship. It takes a lot of power to move something that big, so I asked them at the front desk about it. Surprisingly, there are a lot of us motorheads out there, and they had a pre-made stats sheet already printed. The Liberty of the Seas is 338.9 meters long (1111 feet!), stands 14 decks tall, comes in at 154,407 gross tonnage (empty), and floats in only 29 feet of water. The 4 Rolls Royce bow thrusters push just over 4,000hp each. Then there are the 3 main propulsion motors which turn at only 145rpm, but have 19,026hp to do it....each. That's almost 74,000 hp in total engines! The ship also has 6 diesel generators totaling another 102,740hp. Top speed is 26 miles per hour, and if you were to maintain that speed, plan on about 3000 gallons per hour.



Two shows, same date, different locations. You decide. Both will have large turnouts. Both will have autocross courses. Both will have "Miss (insert event name) competitions. Both will have manufacturer representatives. Both will have media coverage from print and video.

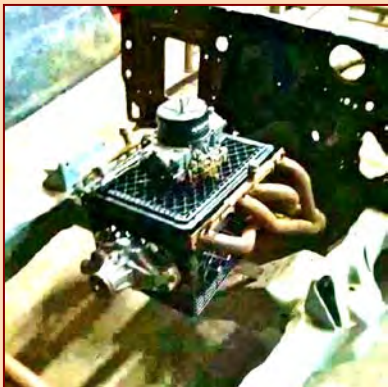
Both will have lots of awards and tons of cool cars.

How do you decide? Most of the local, northern, and western participants will probably stay with St Paul. While Wisconsin, Southern MN, and farther East or South might go to the Wisconsin show. We'll see I guess.



The small block Chev engine..... 60 years old this year. Truth be told, GM's first V8 engine was introduced way back in 1917 and was called the "Series D" engine. Chevrolet was pretty late to the V8 game, but once that original 265 engine debuted, they had an engine that weighed less than the six cylinder it replaced, and put out almost twice the power as the flathead it competed against. Its design was easily machined to create new sizes which created endless opportunities for hot rodders and racers. The original speed parts and accessory companies still going strong, even after this long. As Chevelle (or in general, Chevy) guys, we have taken this engine for granted, but can you name the last vehicle the traditional style Small Block was installed in? With the introduction of the LS series engines in the 1999 Silverado and Sierra pickups, most think the C/K pickup truck chassis was the final home. In fact, the Tahoe/Suburban housed the engine for another year, but that was still not the end. The

- The introduction of the small block V8 in the 1955 Corvette is widely credited with saving the car from cancellation.
- The fuel-injected 283 small block in 1957 was rated at 283 horsepower, or one horsepower for every cubic inch. Today, the Corvette Z06's 427-cubic-inch small block produces 1.18 horsepower per inch, while the Corvette ZR1's 376-cubic-inch supercharged small block produces 1.69 horses per inch.
- The fuel-injected small block was so dominant in NASCAR racing in 1957, it was banned.
- Corvette won its first race at LeMans in 1960 with a small block engine and won its seventh title there in June 2011, again with a small block engine.
- The smallest displacement small block V8 ever produced included a 262-cubic-inch (4.3L) version used in the mid-1970s—the same displacement shared by the current small block-based 4.3L V 6.
- The largest displacement small-block for a production vehicle is the 427-cubic-inch (7.0L) LS7.
- The most powerful small block ever produced is the LS9 engine used in the Corvette ZR1. It is rated at 638 horsepower, making it the most powerful engine ever produced by GM for a regular-production car.
- The lowest-output small block was the 1975-76 262 V8 rated at 110 horsepower. The supercharged LS9 makes 580 percent more horsepower than it with only 43-percent greater displacement.
- The 4.3L V6 used today in some GM trucks and vans is based on the original small-block architecture, but essentially with two fewer cylinders.
- Original-architecture small block engines are still produced as crate engines for Chevrolet Performance and manufactured for marine and industrial applications.
- The small block wasn't known as the small block until Chevrolet introduced the big block engine family in 1965—previously, versions were known simply by their cubic-inch designations, i.e. 283, 327, etc., or simply as the Chevy V8.



Alleged spy photo taken during the original design process of Chevrolet's then-new engine. Rumor has it that this is where the term "Crate Engine" first came about. The rest is history.

final vehicle chassis for the 5.7 Vin code "R" engine (roller cammed SBC with factory installed Vortec heads) was actually the G-chassis vans. Hidden in delivery trucks and panel vans, the SBC engine hung on until 2002. From then on, distributors were a thing of the past, aluminum cylinder heads become standard, and everyone enjoys "just dropping an LS into it." It's already been 15 years of the LS engine and it's still going quite strong.

To go along with celebrating 60 years of the small block engine, let's play a little automotive trivia. 5 questions, multiple choice, and the answers will be revealed and explained on the next page. Some you may know, some you may not.

1: Along with building automobiles, GM was involved in other industries. Which of these did GM engineers invent: a: The mechanical heart, b: seltzer tablets, c: cobra-Shave cream

2: GM President William Durant, then President of GM, had arranged an \$8 Million deal to acquire Ford in 1909, but the bankers nixed the deal and Durant was dismissed. With whom did he partner before again becoming the President of GM in 1918? a: Edward P Allis (Allis Chalmers Company), b: August Anheuser Busch, Sr (the beer guy), c: Harvey Firestone (tires)

3: Most people cannot buy a new car today without taking out a loan. Who was the first car company to extend loans to buyers? a: Ford, b: GM, c: Chrysler.

4: GM played a crucial part in NASA's Apollo moon landing. What did GM engineers contribute? a: impact resistant "windshields", b: design/operation of the Mission control desk panels, c: inertial guidance system for landing craft, d: a bitchin' Delcotronic 8-track system.

5: In 2010, GM executives sent out an internal memo directing employees at its headquarters to not say something. It even instituted a "cuss" jar that the employee would drop a quarter into if it was spoken. What was the word? a: Ford, b: Chevy, c: Challenger, d: "Government Motors"

Answers on the next page.



In 1952, GM engineers developed the first mechanical heart pump. Dr Forest Dodrill had an idea for a blood pumping machine that could temporarily replace the heart while doing surgery. Funded in part by the American Heart Association, GM Research Laboratories created a 10x12x17 pump made from glass, rubber, and stainless steel. It used vacuum pumps and air pressure and resembled a 12 cylinder engine. The machine was first used in 1952 for 50 minutes. The patient lived for another 29 years. It's estimated that more than one million operations are done each year using some sort of bypass machine.



As vehicles are designed, new technology is devised to overcome design challenges. Those challenges in design develop skills that sometimes become necessary to tap into for other projects. When NASA was working on the Apollo moon mission, they had to overcome some challenges like 3400mph speeds and temperatures ranging from -250 degrees to +250 degrees. One of their biggest challenges was figuring out an internal guidance and navigation system that didn't rely on anything external since it would be on the far side of the moon and out of contact with Mission Control. GM's AC Electronics team built the guidance system to the highest standards of accuracy, precision, and reliability that had ever been seen at that time, including components machined to specs measured in millionths of an inch.



On November 3, 1911, William Durant partnered with Louis Chevrolet and started the Chevrolet Motor Car Company. He was able to use that brand's success to gain a controlling stake in GM with a reverse merger on May 2, 1918, and with that he regained the GM Presidency. In 1919, he was dismissed again. In 1921, he established Durant Motors and again absorbed multiple companies. Unfortunately, the third time was not a charm. The Wall Street crash followed by the great Depression were the demise of his company in 1933. He did draw a pension from GM until his death in 1947.

Most everyone has heard of the General Motors Acceptance Corporation (GMAC). It was founded in 1919 to extend credit to its buyers. Ford did not see the benefit, believing that it was detrimental to the economy. They wanted to keep things simple, and resisted as long as they could. Eventually, GMAC expanded into other areas including home mortgages. Ironically back in 2007, Chrysler financial had a 51% share of GMAC until the reorganization of GM.

In 2010, a couple GM executives sent a memo to Chevrolet employees at its Detroit headquarters instructing employees to use only the word Chevrolet when speaking of their brand. Their idea was to present a consistent brand and not fall into a causal nature when talking about it. They actually expected it to work and proceeds from their "cuss jar" were to be spent on a team building activity.



Later, it was explained that they weren't discouraging their customers or fans from using the Chevy name. The amount collected is unknown, along with how well it even worked.