

CAR TALK

SINKHOLE UPDATE

It's been over 17 months since eight significant Corvettes fell into a sinkhole at the National Corvette Museum in Bowling Green, Kentucky. The first of the cars to be refurbished was the 2009 "Blue Devil" ZR1. It had received only minor damage and was repaired last fall. The second is the white 1992 one-millionth Corvette. Unlike the Blue Devil, this one suffered considerable damage in its plunge to the bottom of the 30-foot museum chasm, including a smashed windshield frame, a partially dislodged front bumper and an extended basting in gloppy, red-brown Kentucky mud. The fully-restored one-millionth Corvette was supposed to debut at the annual Labor Day event at the museum. I've not been able to determine if they were able to meet that target or not.

The third sinkhole 'Vette to be brought back to life, a '62 roadster, is slated to be restored under the supervision of the NCM, with financial support from GM.

The white 1992 one-millionth Corvette has been lovingly repaired at the Design Center's Mechanical Assembly facility in Warren, Michigan. David Bolognino is GM Director of Design Fabrication and Operation. He was interviewed by Corvette Magazine and asked to talk about the restoration. First, he was asked what kind of work the Mechanical Assembly group normally does, when not fixing up sinkhole-damaged Corvettes. David explained, "We create most of the SEMA show vehicles, concept cars and pace cars, doing everything except the outer clay work. We also have the company's largest concentration of rapid-prototyping machines." (That really piqued my interest; I've always wondered where those specialty Corvettes come from.)

Next they asked him how he determined which of the sinkhole cars to restore. His answer was, "One of our other functions is to look after the GM Heritage Center cars. We took a trip to the museum shortly after the sinkhole occurred. We evaluated the cars, looking for practicality, value and feasibility of repairs. The '93 ZR-1 Spyder, for example, was annihilated—it could have been recreated, but it wouldn't have been the same car. The millionth car was compelling because it's one of a kind and it wasn't hurt that bad. We think it probably hit nose first, then rolled gently onto the roof, crushing the windshield pillar. We took it apart and sent it to GM Engineering to do crash analysis. They were able to straighten out the frame to within specifications pretty easily. One thing that was surprising was how many signature [of assembly-plant workers] were on the car.

"We next looked at the drivetrain. We first changed all the fluids and the battery, since they were old. But after that, we fired it up and it ran just fine."

Question: Many of the required C4 parts have been out of production for years. How did you overcome this challenge?

Answer: "Our first stop was the GM warehouse. Some of the original-equipment suppliers also have stashes of parts, and we were able to buy some good NOS items. Our list of needs was fairly short, which was helpful. And of course we want to make sure that we hold on to all those signed parts, given their historical importance."

Question: Is this the first time you've been tasked with restoring such a heavily damaged vehicle?

Answer: "Yes. Now, occasionally one of our cars has an "event" in a truck while being transported, but nothing this significant. Fortunately, we were able to leverage the GM Engineering team, whose members have experience with this kind of work. It took them all of two seconds to agree to be involved with this project."

By the way, the October 2015 edition of *Corvette Magazine* is their 100th issue. Their first issue came out in 2002 and it's been an interesting 14 years for them. If you get a chance, look over the 100th issue and read about what it took to get it started and keep it going this long.

2015 LIGHTNING LAP

Many of you enthusiasts probably know that every year, for the last eight years at least, *Car and Driver Magazine* takes the hottest new performance cars, groups them by base price including performance-enhancing options rather than size or power, and then spends a few days comparing lap times around Virginia International Raceway. Why VIR? It's a 4.1 mile winding, hilly track carved into a lush southern Virginia forest with 24 corners and countless ways to mess up. (By the way. You've probably heard over the years that many car manufacturers have tested their new cars in Germany on the Nurburgring race course. But lately, the Germans have placed speed limits on certain parts of the track, for safety reasons, which has caused most American car companies to also move their testing over here to Virginia International Raceway.)

So Car and Driver tries to obtain 20 vehicles from the various car makers, which is about as many as they can handle at one time. This year they ended up with 18. For some reason Dodge backed out of providing one of its Challenger SRT Hellcats for the testing and Ferrari declined to provide one of its new LaFerraris (can't imagine why). On the low end, price-wise, they tested a \$33,000 Mazda MX-5 Miata. On the high end, they got their hands on a \$353,000 McLaren 650S Spider and a \$274,000 Lamborghini Huracan LP610-4. Which car do you suppose posted the best performance numbers? Right, the Corvette Z06.

This is how they described their experience on the track with the Z06:

Seconds before the Corvette crosses the starting line to begin its hot lap, you're subjected to 1.20 g's of lateral acceleration for a full six seconds through the final turn. A silence falls over the switchboard in your head. Every neuron lines up to get the Z06 moving through space as quickly as possible. Gone are the employment doubts, the mortgage payment anxieties, and the hair-thinning concerns that clutter up your daily thoughts—domestic worry is not possible at 1.20 g's.

This isn't a peaceful, monk-on-a-mountain experience, though. It's like being caught inside your own personal earthquake. And of course, it's hot in there because we don't run the A/C on the race course. Did we mention that you have one chance to perfectly execute a quick lap before the fresh \$2200 set of Michelin Pilot Sport Cup 2 tires lose their maximum potential?

It's not until the lap ends that you realize that you've sweat through your antiperspirant. This Corvette is exactly right. There's simply no understeer anywhere, with grip of 1.2 g's or more in several corners. Carbon fiber feathers cover the body—not for flying, but to keep the car on the ground. Gurney flaps, spoilers and splitters push the car into the tarmac and make the impossible possible. You can, for example, accelerate through the last half of the Climbing Esses, which eats the speed of lesser cars. In the Z06 you enter at 134.8 mph, average 128.4 mph, and leave going 122.6 mph while cornering at 1.47 g's. That's a drop of just 12 mph while the McLaren loses 34 mph. Imagine tripling the speed most people drive on a freeway on-ramp and you'll have an idea of what it's like to drive a Z06 through the esses. Even a supercar like the Lamborghini Huracan can't hang with the Vette there; one of us tried it and ended up mowing a Lamborghini-wide fairway through the grass.

Jim Mero is a Corvette ride-and-handling engineer and has turned thousands of laps on tracks all over the world. Chevrolet Public Relations sent Jim to babysit the Z06 while the Car and Driver drivers were performing their tests. So Jim was asked if a front-engine car get any better than this Z06. He simply stated that the front-engine car can always get better. Then the inevitable question was asked, "How much better will the mid-engine Vette be?" To that Jim answered, "[You are some funny dudes.](#)"

UP TO DATE ON RECALLS?

If you're not sure where to go to see if there are any outstanding recalls for your Corvette (or any other GM vehicle), here's some good news for you. You don't have to trust in what some Service Writer tells you, not that they would ever fib to you.

GM has a website that provides information on recalls announced after August 20, 1999. This info is available for vehicles in which repairs have not been completed. You simply need your VIN number. Any recall repairs that have not been completed on your vehicle will be displayed. The internet address is: <https://recalls.gm.com/#/>

In addition, the National Highway Traffic Safety Administration also has a website you can check for all recalls and service bulletins issued for your model vehicle. You will need to input the vehicle year, manufacturer and model. The internet address is: <http://www-odi.nhtsa.dot.gov/owners/SearchSafetyIssues>.