## JUNE 3, 2013

## SAE States 2014 Stingray Has Most Powerful Corvette Engine Ever

Chevrolet's efforts to make the 2014 Stingray powerful have paid off.

The car's all-new LT1 6.2L V8 engine is SAE-certified at 460 horsepower at 6,000 rpm and 465 lb.-ft. of torque at 4,600 rpm, with the available performance exhaust system, said Chevrolet officials.

The Stingray is SAE-certified at 455 horsepower and 460 lb.-ft. with the standard exhaust system. They are the highest standard power ratings ever for the Corvette, delivered with fuel efficiency that is expected to exceed 26 mpg on the highway.

"The 2014 Corvette Stingray's LT1 engine is a triumph of advanced technology, delivering more power and torque than ever before with greater efficiency," said Jordan Lee, Small Block chief engineer.

"The LT1's performance complements the Corvette's low mass with a tremendous feeling of power that builds as the rpm climbs. Drivers will experience more power and acceleration than ever before with the standard engine – in fact, its power and torque surpass many uplevel engines offered by competitors."

At 74 horsepower per liter, the LT1 has greater power density than the C6 Corvette's LS3 6.2L

## MAHLE Behr Supports Bikers In Diabetes Ride

It ain't exactly Tour de France, but the cyclists are just as eager to complete their ride.

That's probably because the Tour de Cure is the national signature fundraising ride for the American Diabetes Association.

This year, more than 50 employees of the newly formed MAHLE Behr company – MAHLE and Behr auto suppliers recently merged – have signed up, so far, to ride in or volunteer with the Tour de Cure.

Farmington Hills-based MAHLE Behr will be riding as one team in the event slated for Saturday, June 15, in Brighton.

"Community involvement is a global priority for MAHLE Behr," said Scott Ferriman, MAHLE Behr vice president of Sales, North America. "Diabetes impacts the lives of so many of our employees, and the Tour de Cure is a great way to raise awareness and give back to the community.

"Tour de Cure has already brought great benefit to our goal of integrating the two companies by giving a forum to work together."

The MAHLE Behr team is well on their way to raising more than \$10,000.

Tour de Cure participants will spend a day of riding on one of several road routes (10, 25, 62 or 100 miles) or mountain biking routes (5, 9 or 14 miles). The ride starts and finishes at Brighton High School. Amenities for riders include stocked rest stops, on-course medical support, biking support and gear to ensure riders can complete the event, a catered lunch, a complementary massage and entertainment at the finish. A minimum goal of \$200 in fundraising is required per rider, and all funds go to support research, education and advocacy for all types of diabetes. MAHLE Behr is also one of the event's sponsors, along with lead sponsor Nissan, with whom the company works closely. 'Companies like MAHLE and Behr are a driving force behind our success, and the impact that the MAHLE Behr Tour de Cure team is making will be evident on the day of the ride," said Mary Riegle, director of special events at ADA of Michigan.

engine and even the C6 Z06's racing-derived 7.0L LS7.

It also produces comparable torque to the LS7 – up to 4,700 rpm – and its peak torque is within 5 lb.-ft. of the 7.0L engine. According to Chevrolet, that torque is generated early and sustained across the rpm band, with 316 lb.-ft. available at only 1,000 rpm and 90 percent of peak torque available from 3,000 rpm to 5,500 rpm – giving the lightweight Corvette Stingray excellent acceleration at all speeds.

Chevrolet estimates the Corvette will run from 0 to 60 mph in less than four seconds.

According to Chevrolet, the new LT1 engine's high output, and high power density and efficiency are due to several advanced technologies, including direct injection, Active Fuel Management and continuously variable valve timing, which support an advanced combustion system.

Direct injection is a primary contributor to the engine's combustion efficiency, say Chevy officials, ensuring a more complete burn of the fuel in the air-fuel mixture.

That's achieved by precisely controlling the mixture motion and fuel injection spray pattern. Direct injection also keeps the

combustion chamber cooler, which allows for a higher compression ratio.

Emissions are also reduced, particularly cold-start hydrocarbon emissions, which are cut by about 25 percent, Chevy officials stated.

Active Fuel Management, or cylinder deactivation, is a firstever application on Corvette. It helps save fuel, say Chevrolet officials, by imperceptibly shutting down half of the engine's cylinders in light-load driving. Continuously variable valve timing is refined to support the LT1 AFM and direct injection systems to further optimize performance, efficiency and emissions.

A Chevrolet news release says these technologies support the all-new, advanced combustion system, which incorporates a new cylinder-head design and a new, sculpted piston design that is an integral contributor to the high-compression, mixture-motion parameters enabled by direct injection.

The 2014 Corvette Stingray's LT1 engine is the fifth generation of the Small Block engine family, which debuted in the Corvette in 1955. It displaced 4.3L (265 cubic inches) and was rated at 195 horsepower, drawing air and fuel through a four-barrel carburetor. Five years later, Small Block power helped Corvette secure its first victory at the 24 Hours of Le Mans.

In 2012, the Small Block-powered Corvette Racing C6.R beat Ferrari, BMW and Porsche to sweep the drivers', team, and manufacturer championships in production-based American Le Mans Series GT class.

The news release further states that these championships make Corvette Racing the most successful team in ALMS history, with a total of 77 class wins, eight drivers' championships, and nine manufacturer and team championships since 2001.

The 2014 Corvette Stingray coupe goes on sale this fall, with a convertible following by the end of the year – each sharing an all-new aluminum frame structure and enhanced chassis, as well as completely new exterior and interior designs.

