Oakland Tech News

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Deadline: Thursday 5:00 p.m. for the next edition of Monday.

William Springer II, publisher and interim news editor;
Lisa A. Torretta, operations

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Chevy's Spark Great Blend of Mileage and Roominess

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ion battery pack will continue Chevrolet's tradition of offering industry-leading limited warranty protection – eight years or 100,000 miles, whichever comes first.

Spark EV will be the first vehicle on the market to offer, as an available option, the recently approved Society of Automotive Engineers combo charger for DC Fast Charging.

The capability, available shortly after launch, will enable the Spark EV to recharge up to 80 percent of its battery capacity in approximately 20 minutes, which is considered a quick recharge time.

The battery system is capable of handling multiple DC Fast Charges daily. Charging can also be completed in less than seven hours using a dedicated 240V charge.

A 120V charge cord set comes standard. Charging can be managed and monitored remotely using the Spark EV's smartphone application, provided by OnStar, which is standard for three years.

"The Chevrolet Spark EV is a great city car which blends technology, functionality and style in an unexpected package," said Cristi Landy, director of Chevrolet Small and Electrified Vehicle Marketing.

"We built on the success of the Volt and the gas-powered Spark to offer an affordable, fun and efficient minicar our customers will love to drive."

The Chevrolet Spark EV will set an acceleration benchmark for an urban city electric vehicle – 0-60 mph in under eight seconds due to the mating of a permanent magnet electric motor, which produces more than 130 hp, with the coaxial drive unit.

The GM-designed oil-cooled, permanent magnet motor is the heart of the Spark EV's propulsion system.

Putting more than half-a-million road miles on the development versions of the Spark EV, say GM officials, has enabled the company's engineers and developers make the performance of the electric motor the best it could be by using a bar-wound copper stator and unique rotor configuration.

The motor and drive unit are being assembled at General Motor's Baltimore operations facility, which can be found in White Marsh, Md.

2014 Spark EV

Spark EV is efficient with space.

GM Continues Green Efforts

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tor of Sustainability David Tulauskas. "Every day, our 200,000-plus GM employees around the world make progress in our efforts to improve the sustainability of our vehicles and the plants that build them."

Through the Chevrolet Carbon Reduction Initiative, Chevrolet is investing in local, community-based carbon-reduction projects throughout the United States with a goal to reducing up to 8 million metric tons of CO2 emissions, which is equivalent to the estimated CO2 emissions in 2011 from driving the 1.9 million vehicles sold in the U.S. between Nov. 18, 2010 and Dec. 31, 2011.

The initiative will retire carbon credits from a variety of projects, including a National Forest Foundation project to restore 250 acres of the San Juan National Forest in Colorado, as well as the IdleAir project helping long-haul truckers avoid running their engines to power accessories during rest breaks at truck stops.

Visit GM's environmental commitment, -.gm.com/environment and its GMBeyondNow.com environmental blog.

'Pent-Up Demand' for New Vehicles Will Drive Car Sales for Several Years

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smartphone/social media connectivity system, 10 air bags, and taking a look at something a little more upscale like the 2013 Chevrolet Impala, it offers features that would have "blown away" a luxury car buyer from 10 years ago.

The current push toward electric cars as a way to "go green" is more of a political idea than reality, said Gilbert.

This is because the system that builds the cars and charges their batteries depends on the coal, oil and gas to generate the electricity used in most of the electrical power grid across the United States and other parts of North America, he noted.

Although, he said, some of them are very good products that are very driveable vehicles in their own right, as well as offering plenty of power and have a reasonable amount of range.

But to be practical, said Gilbert, the battery recharge time needs to be less than an hour. Drivers are used to filling up their vehicles at gas stations in a matter of minutes.

He added that automakers take the learning they accomplish in making electric cars to apply toward future vehicles.

Despite all the press given lately to experimental autonomous (self-driving) vehicles, Gilbert said he doesn't think they are going to be practical. Regardless of how well the technology is designed, he said, no technology is perfect, and when someone is injured or killed due to failure of an autonomous vehicle, a lawsuit will result.

Gilbert also pointed out that for himself, as it is for a lot of other drivers, when he is marginally tired, the stimulation of driving his automobile helps keep him alert.

But if he were in a self-driving vehicle with features beyond, say, blind spot monitoring, which Gilbert said is his favorite new safety option, he feels drivers become less alert when lulled by use of cruise control, lane departure warning and adaptive cruise control, for example, and can be slow to respond when a quick decision is needed that the safety system is unable to handle without driver input.

For example, Gilbert added, a human driver is needed to determine whether the object ahead is a deer or a child, which in the case of the deer the better choice often is to strike the animal, or if a child whether it's necessary to swerve and possibly end up off the road in a ditch rather than hit the child.

Gilbert added he's got nothing against high-tech systems, but if his iPhone fails, it's no big deal to him, whereas failure of one of these autonomous systems could lead to severe crash injuries or fatalities.

Chrysler-Sponsored Students Earn Success in Robotics Competitions

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representing Assumption College Catholic High School, the Purple Raiders, is also going on to nationals.

"One of the pillars of the Chrysler Foundation is to support education, particularly in science, technology, engineering and math, and this is one of the ways we do it," said Kevin Frazier, head of Communications for the Chrysler Foundation . . . It's outstanding what these students are able to achieve.

"They're very self-motivated, not only to get involved in robotics, but to work on their communication skills and the hard skills such as engineering and mathematics. All these will afford them opportunities throughout their lives, whether they're going into this field or into other fields."

Out of the original 64 Michigan FIRST Robotics teams for 2013, 28 from Michigan are going on to nationals. A total of 400 teams are slated to vie for the national championship in St. Louis.

Pamela Williamson, a Chrysler engineer working in the advanced concepts engineering department, human/machine interface (HMI), is Chrysler's FIRST Robotics team coordinator.

"The Chrysler Foundation has sponsored teams at 22 schools this past year and the teams have done very, very well," she said.

Williamson noted that of 12 teams with Chrysler sponsorship that qualified at the state level, 10 are going on to nationals.

"That's pretty consistent with how Chrysler-sponsored teams have done," she commented. "One of the things almost all of those teams have is Chrysler employees as mentors. They have a lot of knowledge and skill they are able to share with the students."

FIRST (For Inspiration and Recognition of Science and Technology) was founded by inventor Dean Kamen in 1989, to inspire an appreciation of science and technology in youth, and motivate them to pursue opportunities in science, technology and engineering.

The robotics season began Jan. 5, as the Chrysler Foundation awarded grants totaling $147,000 to elementary, middle and high school teams in Michigan, Alabama, Arizona, Indiana and Ontario, Canada.

After building their robots, schools competed in local and regional contests before competing at the state championship.

Williamson has been active coordinating events early on and has gotten close to the action.

"It's been really exciting . . . The teams have really progressed a lot. The competition at the Michigan state championship level is very, very strong."

The schools qualifying for the national championship event will join others in a high-tech version of disc golf, called ULTIMATE ASCENT. During each match, two competing Alliances (comprised of three robotics teams) will attempt to score as many flying discs into their goals as possible in two minutes, 15 seconds.

For information on FIRST Robotics, go to www.usfirst.org.