

General the speed increased from 80 miles

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General Motors commonly known as a GM, a company that mainly manufactures cars and also engaged in production and distribution of automobile parts throughout the world with headquarters located in Detroit Michigan, the company manufactures cars in nearly 35 countries and gains significant advantage over its competitors. Chevrolet Volt – the first ever extended-range electric vehicle which is built in Michigan at GM's Detroit-Hamtramck Assembly. General Motors introduced Volt concept car in January which was proposed at North American International Auto show, paving the way for plug in Hybrid concept car. when compared to Volt vehicle which is four seated with a rear left gate, the EV1's manufacture in early 1990's used to have two seated capacity to reduce weight and to allow necessary room for installing the lead acid battery pack with the speed increased from 80 miles to 100 miles per hour. The size of the battery pack was reduced, from about 10.6 cu ft. in volume to 3.5 cu ft.

The Production Design model of Volt was officially announced on 16 September 2008 at the Winter Garden headquarters in Detroit. But this production model differed significantly when to compare to the original Volt Design once the lithium-ion battery pack design was finalized and ready for production, the company looked for partners to develop the design and for manufacturing. The car manufacturers division from GM evaluated battery cell chemistries from around 25 different battery makers and selected 2 dozen lithium battery makers. Among them, two companies were selected in June 2007 having most beneficial cell technologies, Compact Power, which uses a lithium manganese oxide cell made by its parent company, LG Chemical, and Continental Automotive Systems, which

uses lithium iron phosphate-based cylindrical cells made by A123 Systems. The Compact Power (LG Chem) delivered their finished battery pack prototypes by the end of October 2007 and A123 delivered theirs by January 2008.

The T-shaped battery pack contains 288 of LG Chem's lithium polymer cells, these cells are categorized into three primary modules, one forming in the T bar and the other two running down the center tunnel of the car and the battery was 400 pounds. The gap between the two central modules provides clearance for the main under-floor cross-member of the Volt structure. The monitoring systems are included in battery packs in order to keep the batteries cool and operating at optimum capacity despite a wide range of ambient temperatures.

The volt manufactures decided to use only half of the 16 KWH capacity to reduce capacity degradation and limiting the state of charge up to 80% of capacity which makes the battery pack last ten years and run for 150, 000 miles. Another key component used in Volt vehicle is Voltec drive system which has the potential to make vehicles adapt to pure battery electric, to fuel cell-powered or to other sources of energy to create electricity on board, such as engine-generator sets fueled by gasoline, diesel, biodiesel or ethanol fuel. Regenerative braking would also contribute to the on-board electricity generation. Also, the volt concept featured a 12 gal fuel capacity providing the vehicle a driving range of 640miles total. The Testing process was conducted at the laboratory where the General Motor EV1 program was created.

The first pre-production test car based on the final Volt design was built in June 2009, in Warren, Michigan and by October 2009, 80 Volts had been built and were tested under various conditions. GM introduced its first factory built Volt on March 31st 2010 at Detroit Hamtramck Assembly plant, the company began its regular production after the Volt going through the quality control purposes and production line.