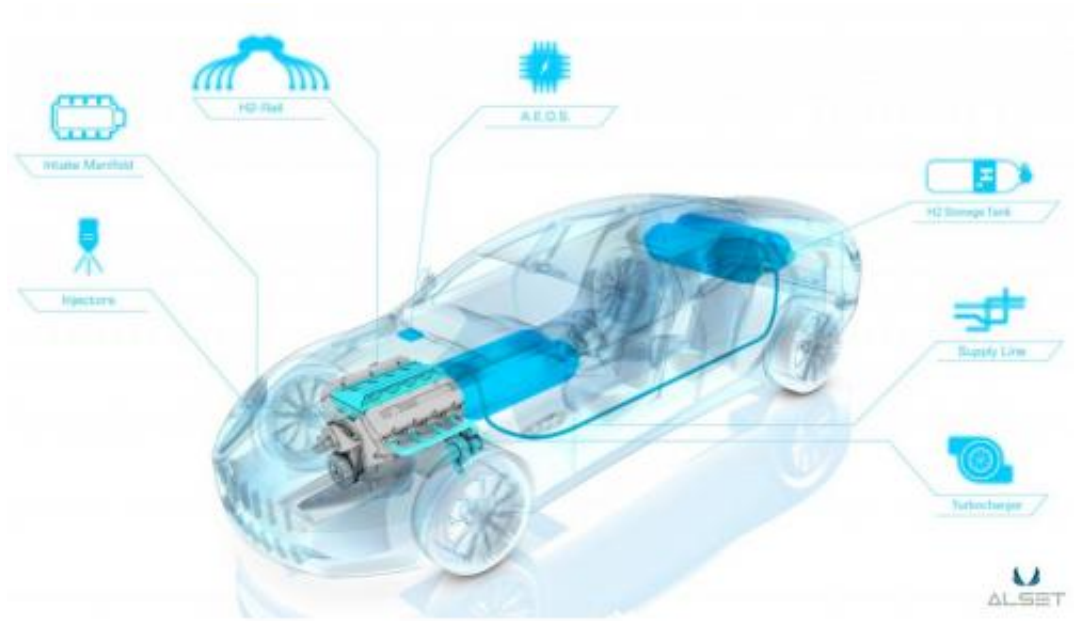
Aston Martin's hybrid hydrogen car set for 24-hour race

April 15 2013, by Nancy Owano

(Phys.org) —Aston Martin is to race a hybrid hydrogen car next month at the ADAC Zurich 24 Hours of Nürburgring. This makes Aston Martin a standout, in attempting to race a car of this kind at a grueling international racing event. The Hybrid Hydrogen Rapide S is powered by a twin turbocharged 6.0 liter V12 engine. Aston Martin engineered the car to run on gasoline, pure gaseous hydrogen, or a mix of both. The hybrid car's features include a hydrogen fuel rail, storage tanks and engine-management system. Specifically, this system includes four

carbon fiber tanks holding a total of 3.5kg of hydrogen stored at a pressure of 350 bar. Two of the tanks are next to the driver and two are in the boot.

The car's system was developed in partnership with Austria-based Alset Global, a technology and engineering company.



The car is to run one full lap in hydrogen mode, to prove that it can do so. "In pure hydrogen mode, Aston Martin and Alset Global aim to show that a zero CO2emissions lap of the Nordschleife is possible while emitting virtually only water from the exhaust," said an Aston-Martin statement on the coming event. Also commenting on the hybrid, Jose Ignacio Galindo, CEO of Alset Global, said, "Our system offers the highest power density of all built and existing hydrogen cars and, because it is compatible with nearly all current internal combustion

engines, it is the most affordable and simplest to implement."

The new Rapide S can hit 62 mph in 4.9 seconds and is capable of a top speed of 190 mph. The hybrid is based on Aston Martin's new four-door, four-seat sports car.

The Hybrid Hydrogen Rapide S will make its debut in the Nürburgring 24 hour race from May 19 to May 20, signifying considerable confidence in its engineering, considering that the Nürburgring run is considered one of the toughest circuits in the world. The ADAC Zurich race involves drivers on the go for one day and night around a racetrack. More than 150 cars will start the 24-hour race. Alset Global noted that the race takes place on a 25 km-long Nordschleife track in the Eiffel region of Germany. The setting is significant not just as a challenge for racing events. According to Alset Global, "The world's longest circuit is not just a stage for spectacular racing; it is used year-round by motor manufacturers and tire companies for automotive development. The Hybrid Hydrogen Aston Martin Rapide S will make history when it becomes the first hydrogen car to complete a lap of an internationally-sanctioned motor race."

More information: www.astonmartin.com/news
www.alsetglobal.com/hydrogen-e … ?pg=20&news_id=28#28

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