Revolve Technologies selects MotoHawk control for low carbon demonstrator vehicles

Revolve Technologies Ltd has developed technology to convert existing gasoline engines into bi-fuel for the purposes of reducing CO_2 tailpipe emissions. This allows an engine to use compressed hydrogen gas fuel, yet retain its existing gasoline system without any adverse effects. Several demonstration vehicles have been commissioned to show that hydrogen as a fuel, and the associated equipment, is practical and efficient. The concept is expected to accelerate the availability of CO_2 free, hydrogen-fuelled commercial vehicles operating in Britain.

The conversion features a 2.3 litre four cylinder petrol engine, to which is added a belt-driven supercharger with intercooler. This provides additional combustion air under pressure when the fuel mode switch is selected to hydrogen only. The engine retains its conventional spark ignition system.

A MotoHawk control system is used for the hydrogen fuelled engine control. The hydrogen fuel is stored in three tanks below the vehicle floor. This installation gives an estimated range between 85 miles for the urban cycle and 100 miles for open highway running. Importantly, the location and configuration of the tanks allows the retention of the volume and load height of the base vehicle, with no intrusion or interference within the load space. The advantage of bi-fuel is that the vehicle can run on existing gasoline infrastructure whilst a hydrogen fuel infrastructure is established.

Revolve Technologies Ltd selected MotoHawk control as they had previous experience with the system and wanted production hardware so they could migrate to low volume production without the need for an additional design cycle.

Automotive Mechatronics Ltd supplied MotoHawk control for the bi-fuel demonstrator vehicles partly funded by Cenex and the Technology Strategy Board.

Revolve Technologies Ltd serves a diverse portfolio of multi-tier automotive and non-automotive clients across a broad spectrum of industries including car and commercial vehicle, transportation, infrastructure, agriculture, defence and energy.
www.revolve.co.uk

Automotive Mechatronics Ltd provides products and services for the control and calibration of low carbon and hybrid electric vehicles.
www.automotivemechatronics.com

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