



QOROS DEBUTS DRIVEABLE FREEVALVE QAMFREE ENGINE AT 2016 GUANGZHOU MOTOR SHOW

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The world's first FreeValve engine intended for mass production will be driven on to the Qoros stage at the Guangzhou Motor Show in November, 2016. The 'Qamfree' engine will be powering a Qoros 3 hatchback that has been modified specifically for the Guangzhou show. The technology was developed by FreeValve AB, based in Ängelholm, Sweden.

Qoros debuted the Qamfree engine with FreeValve technology in a concept car at the Beijing Motor Show, in April 2016.

img_0076 Called 'Qamfree' in the Qoros application, FreeValve uses a pneumatic-hydraulic-electronic actuator to replace the traditional camshaft-based method of controlling valve operation in an internal combustion engine. This results in much more precise and completely customizable control over valve duration and lift, on both the intake and exhaust sides.

The engine on show at Guangzhou is a 1.6 litre turbocharged engine using FreeValve technology to produce 230 horsepower and 320Nm of torque. This represents a 47% increase in power, a 45% increase in torque and a 15% reduction in fuel consumption when compared to a traditional camshaft engine with similar specifications.

The benefits are not confined to significant performance improvements and better fuel economy, however. In implementing FreeValve technology, manufacturers are able to do away with expensive parts such as the throttle body, camshaft, cam drive, timing gear and cover, wastegate, pre-catalytic converter systems and direct injection systems.

The comparative FreeValve engine is 20 kilograms lighter and much more compact, saving 50mm in height and 70mm in depth, which allows manufacturers exciting new vehicle design and packaging options.

"FreeValve technology has taken many years of testing and refinement but the results are extremely satisfying" said Urban Carlson, CEO of FreeValve AB. "This production-intent engine offers Qoros significant savings in emissions, cost and weight. It also offers groundbreaking benefits to vehicle owners in terms of a near 50% increase in both power and torque, while actually reducing fuel consumption."

img_0079-2 Christian von Koenigsegg, CEO of Koenigsegg Automotive AB and Chairman of the Board at FreeValve AB said "This move closer to mass production of FreeValve technology is also a first baby step towards the promise of important reductions in CO2 emissions. This will be boosted with the eventual widespread adoption of FreeValve technology in the automotive industry."

This new display at Guangzhou marks the first driveable FreeValve prototype engine assembled with mass production in mind. Qoros will use a fleet of test engines in conjunction with FreeValve AB to further refine the technology to suit its own vehicles designs prior to mass production in an as-yet unnamed vehicle in the future.

About FreeValve AB

FreeValve AB is a Swedish technology company and sister company to Koenigsegg Automotive AB that develops state of the art, next-generation components and solutions for internal combustion engines. FreeValve began development of its technology in 2000 and its sixth generation actuator technology represents over a decade of testing and development, both in the lab and on test vehicles driven in real world conditions.

About Qoros Auto

Established in December 2007 and headquartered in Changshu, Jiangsu (also its manufacturing base), Qoros Auto has an initial annual capacity of 150,000 vehicles and maximum annual capacity of 300,000. With its operation center in Shanghai, Qoros Auto has established design centers, technical centers and engineering R&D centers in both Munich and Shanghai, which are made up of top designer and engineer teams from all over the world.