
Classic Driver at the Geneva Show: Aston Martin One-77

05 March 2009 | Classic Driver



Aston Martin surprised visitors to this year's Geneva show with not only an uncovered One-77 but also Chassis no. 1, without its bodywork and displaying the amazing carbonfibre and racing-specification chassis unique to the car.

Much influence has come from one of the world's premier racing series: the DTM (the German racing series for 'silhouette', highly modified saloon cars). Chris Porritt, One-77 Programme Manager said, "We wanted to create something that wows you as much when you see what's under the skin as the exterior styling itself. We started by identifying the most technologically exciting front-engined, rear-wheel drive cars in the world: those from the DTM race series.

"We then applied the principles and technology that feature heavily in their design and translated it to a road-car application."

Designed at Aston Martin's Gaydon HQ, the monocoque has been built in partnership with Multimatic (MTC). The chassis features double-wishbone suspension all round, with inboard shock absorbers

front and rear. At the back, pushrods are employed – as in racing practice – to transfer vertical suspension movements to the horizontally mounted spring/damper units.

The fully adjustable dampers need not be removed from the car for adjustment as they feature advanced Dynamic Suspension Spool Valve (DSSV) technology; a world-first for a road-car application.



The car is powered by a heavily developed – by engine specialist Cosworth - 7.3-litre, naturally aspirated V12. Dry-sumped, as are the company's Le Mans cars, the motor is installed 100mm lower than in any previous V12-engined Aston Martin road car and 257mm aft relative to the front wheel centreline. This should produce the best front-mid-engined set-up ever achieved in a road car.

The Aston Martin and Cosworth engineers have already reduced the weight of the V12 by 25% and are well on the way to achieving power in excess of 700bhp. Chris Porritt again:

“Our brief to the engine team was for them to take the 6.0-litre V12 as far as it could go, both in terms of output and weight reduction... It's an awesome accomplishment, but one that's typical of the One-77 project, for it has consistently brought out the very best in everyone involved.”



The car is likely to weigh in at 1500kg, will wear unique-to-the-car Pirelli P Zero Corsa tyres (255/35 ZR20 front, 335/30 ZR20 rear), and will transmit its 700+bhp to the road through the rear wheels, via a new six-speed gearbox. The gearbox uses the principles of the company's Sportshift transmission, but is heavily uprated to cope with the extra power and torque. CCM brakes are standard.

Aston Martin is confident of a 200+mph capability and a 0-60mph time of 3.5 seconds.

A maximum of 77 individually numbered examples are planned for production, with deliveries expected to commence in the fourth quarter of 2009.

Text: Steve Wakefield

Photos: headlineauto / Classic Driver

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