

## Press Release

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### The All New Volvo S80 - Chassis:

#### **Advanced technology provides a premium driving experience**

The second generation Volvo S80 has been designed to provide a superior experience behind the wheel. To help meet that objective, the engineers and designers combined exceptional torsional rigidity, an electronically controlled 'active suspension', adjustable power steering, all-wheel-drive power delivery and a host of refinements into the flagship S80.

Volvo takes a holistic approach to Safety, and the Swedish automaker has applied a similarly intelligent integration of new technologies in making the new S80 such a joy to drive.

The prescription for the outstanding ride, handling and comfort of the 2007 Volvo S80 begins with its completely new structure, featuring a patented design that serves double duty delivering both safety and performance. The highly rigid structure provides the solid base from which the S80 suspension works. That same structure is integral to deliver an advanced crash energy management, which includes four types of steel working in a sophisticated interplay to help control the forces of a collision.

The chassis design has been developed to ensure even more stability, predictability and controlled characteristics on the road than its predecessor.

Next, the new S80 gets an enhanced version of the Volvo Four C (Continuously Controlled Chassis Concept) 'active' suspension. This is an advanced self-adjusting system that uses sensors to continuously monitor the car's behavior. The shock absorbers can adjust to a given driving situation in a mere fraction of a second. Four-C modifies the chassis setting to suit the car's speed (the higher the speed - the greater the damping). As a result, the car remains controllable even at higher speeds.

This technology also reduces the car's tendency to squat, dip or roll under firm acceleration, hard braking or quick steering maneuvers.

"The active chassis adds an extra dimension to the driving pleasure," says Silvia Güllsdorf, S80 Project Director at Volvo Cars. "The driving properties improve whatever the situation. Progress is both safer and more entertaining."

The newest Four-C system ups the ante from the previous S80 model and now offers three alternative chassis settings instead of the previous two. The driver simply presses a button to alter the car's personality to suit his or her personal tastes.

- COMFORT makes for sedate progress with gentle, harmonious body movements
- SPORT provides more controlled body movements, faster steering response and added road contact
- ADVANCED minimizes damper movement and maximizes contact between the tires and the surface of the road – a setting for enthusiastic driving on smooth tarmac.

All-Wheel-Drive also contributes to the S80 driving experience. The second generation of the latest Volvo all-wheel drive system with Instant Traction uses sophisticated electronic controls to distribute power between the front and rear wheels for optimum traction, road-holding and performance.

Speed-dependent power steering is also an option in the new Volvo S80. The system provides more power assistance at low speeds, for example, to make parking easier. The power assistance gradually declines as road speed increases, disappearing entirely at high cruising speeds.

In order to give all drivers an optimum feeling for the road, the steering servo assistance can now be adjusted by way of the car's information and set-up system. Power steering assistance can be set at one of three levels.

DSTC (Dynamic Safety and Traction Control) is fitted as standard in the all new Volvo S80 versions. DSTC is an electronic stability system, first introduced on the original S80, which reduces the engine's torque and applies suitable braking force to help reduce the risk of a skid, when necessary.

To assist from a standing start on an uphill gradient, V8 versions of the all new Volvo S80 are equipped with an intelligent electronically operated Power Parking Brake. This makes takeoffs far easier for the driver. If the parking brake is engaged at a stop light, for instance, it is automatically released as the car moves off. S80 cars without Power Parking Brake have a pedal-operated parking brake.

The entire car, not just the driveline, has been refined and honed to provide a driving experience of absolute premium calibre. "Each one of these systems contributes to both safer driving and greater driving pleasure," says project director Güllsdorf. "The systems working in concert in the all new Volvo S80 offer a particularly refined driving experience, whatever the driving conditions."

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