

Press Release

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Environmental standards: among the cleanest SUV:s on the market

For immediate release

- ULEV and ULEV II
- Interior Air Quality System
- Öko-Tex standard 100
- Premair®- ozone-eater

Environmental care is one of the core values at Volvo Cars.

That is why the engineering team faced an extra-tough challenge when we developing the Volvo XC90, since SUVs are relatively large vehicles with powerful engines.

"We know that many of today's SUV owners are uncomfortable about the fact that their vehicles produce higher emissions and consume more fuel than most passenger cars do," says Hans Wikman, the Project Director behind the development of the Volvo XC90.

The Volvo XC90 will take the lead in the SUV segment as regards both fuel economy and emissions control. The 6-cylinder engine meets the American ULEV (Ultra Low Emission Vehicle) requirements, while the 5-cylinder petrol engine already meets ULEV II, a standard that doesn't apply until model year 2004.

What is more, the Volvo XC90 meets these standards in 50 American states, a clear demonstration that Volvo Cars regards the environment as equally important everywhere.

Adjustable valve timing

The low emissions and the low fuel consumption have been achieved through a number of interacting factors. Here are a few examples:

All the engines are made of aluminum. This material is lightweight, which helps cut fuel consumption and thus emissions.

- The engines are of Volvo's latest low-friction generation. All the moving parts are designed to offer the least possible resistance.
- The cylinders' combustion chambers are designed to rotate the fuel/air mixture effectively and achieve high compression. This contributes to efficient combustion.
- Three-way catalytic converter.
- CVVT (Continuously Variable Valve Timing). This system adjusts valve timing to suit current engine revs and load, thus exploiting the engine more efficiently. This in turn reduces fuel consumption and emissions. The 6-cylinder twin turbo engine, just like the 5-cylinder light-pressure turbo 2.5T unit, features CVVT on both the exhaust and inlet sides.

The Volvo XC90 also takes care of the environment inside the passenger compartment itself. The climate unit can be supplemented with the automatic Interior Air Quality System, IAQS.

IAQS consists of a filter and a sensor. The former features a particle trap and an active carbon filter, removing particles such as pollen and unpleasant odours from the incoming air.

The sensor monitors the presence of substances such as nitrogen oxide, carbon monoxide and hydrocarbons in the air entering the cabin. If concentrations are high, the recirculation function is automatically activated to prevent these pollutants from entering the passenger compartment. The system thus contributes to cleaner air inside the vehicle and reduces the risk of allergy-related problems.

Ökotex and Premair®

All the textiles and leather used in the Volvo XC90 are certified according to Öko-Tex standard 100. Öko-Tex is a European standard used throughout the world, which safeguards that the textiles are free from hazardous and allergenic substances. Furthermore, the leather is tanned using natural plant substances and the interior door handles have a surface treatment that does not allow nickel contact with the skin.

Premair® is the name of Volvo's renowned "ozone-eater", and it is an important part of the overall environmental compatibility of the Volvo XC90. Ground-level ozone is formed through the combination of air pollutants and strong sunlight. It can cause respiratory problems in human beings and it also inhibits plant growth.

Volvo was the first carmaker in the world to tackle the problem of harmful ground-level ozone, with the introduction of Premair® in 1999. The car's radiator is coated with a thin catalytic film that "eats up" 75 percent of the ground-level ozone as it passes through the radiator, converting it into oxygen.

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