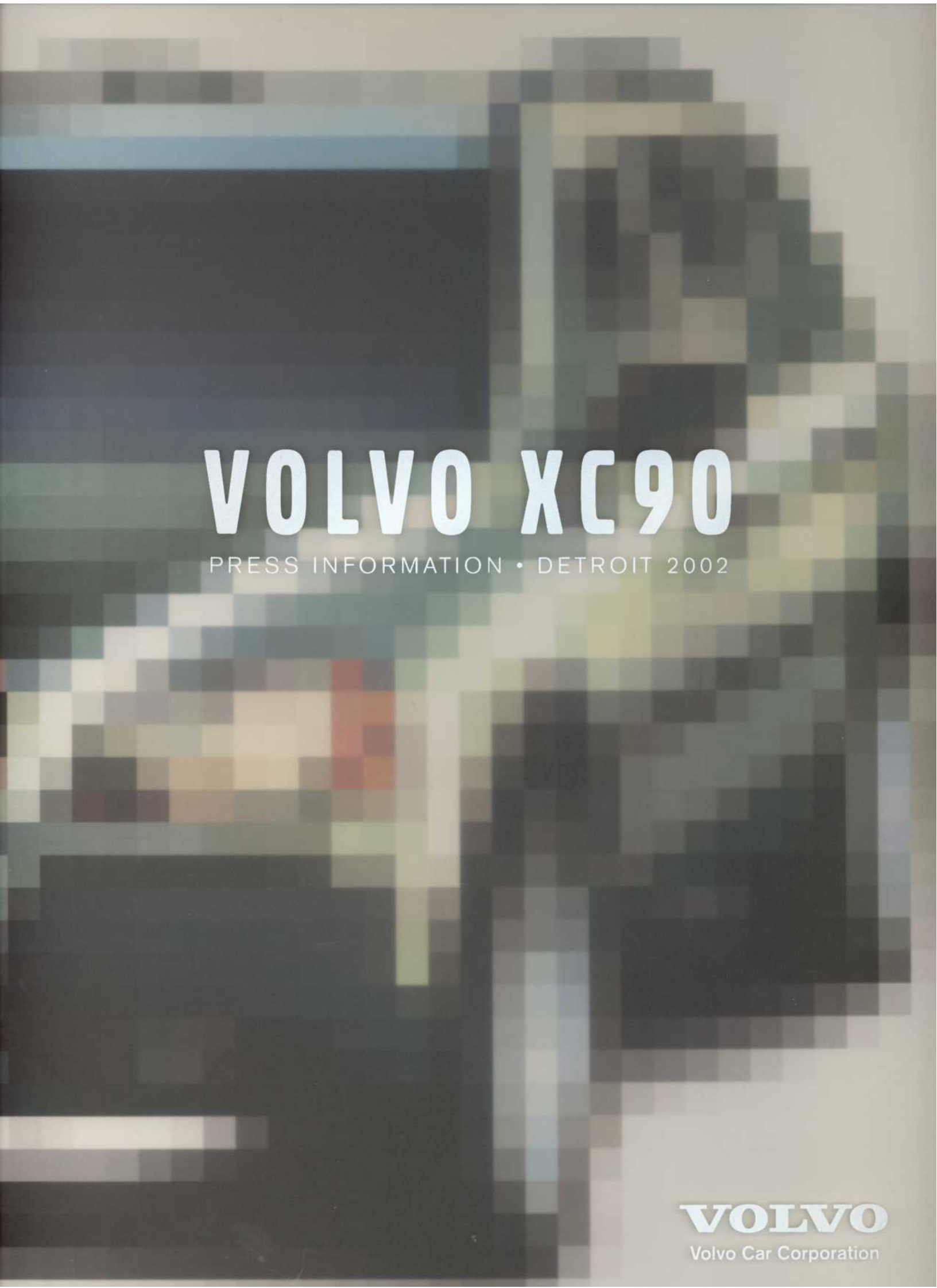

VOLVO XC90

PRESS INFORMATION • DETROIT 2002

VOLVO

Volvo Car Corporation

"The new Volvo XC90 will boost our sales"

- **Milestone on the journey towards 600,000 cars**
- **Target for the first year: 50,000 Volvo XC90**
- **65 percent sold in North America**
- **Redefining the luxury SUV segment**

The launch of the Volvo XC90 is an important part of the Volvo Car Corporation's plans to secure profitable growth year after year.

"The XC90 will boost our sales. It will take us close to 500,000 units per year. A milestone on our daring journey towards the 600,000 mark," says Hans-Olov Olsson, President and CEO of Volvo Cars.

The initial worldwide target for the Volvo XC90 is 50,000 units. Some 65 percent of these vehicles will be sold in North America.

New record year in North America

2001 was the third consecutive record year in North America for Volvo Cars.

"We are aiming for 200,000 cars per year in North America by 2005. Thus far, we have been growing in the right direction. However, we really need a SUV to close the gap to 200,000 and that role will be played by the Volvo XC90," says Dan Werbin, President and CEO of Volvo Cars North America.

The modern premium SUV segment is young. It was born in 1997 with the introduction of the Mercedes ML. Since then, the BMW X5, Lexus RX300 and Acura MDX have made the segment to grow and they are the main competitors for the Volvo XC90.

The segment is also growing rapidly and it is predicted to pass the 250,000 mark by 2005.

"The new XC90 enters this segment with great confidence. Recent clinics show that customers see an SUV as a natural progression for Volvo. It also complements the Cross Country perfectly. They are different vehicles with different buyers in mind, so they won't compete over the same customers," says Dan Werbin.

Unique package - unmatched by its competitors

"The new XC90 is also redefining the luxury SUV segment. It is the first in the next generation of SUVs. It offers a unique package, unmatched by any of our competitors," adds Hans-Olov Olsson.

According to Volvo Cars North America, the Volvo XC90 will:

- Attract customers who traditionally rejected the Volvo brand, by adding SUV excitement and desirability
- Attract customers who have rejected SUVs due to safety concerns
- Attract customers who want seven forward-facing seats in a Volvo
- Retain present Volvo owners considering an SUV
- Conquer Asian brand upgraders and domestic switchers

Growing segment in Europe as well

In Europe, SUVs have traditionally been viewed as niche vehicles, but acceptance of this segment has been growing over the last few years, stimulated initially by the newer small, 'car-like' SUV concepts.

The European SUV segment has a high share of diesel engines and growth is now extending into the large SUV segment.

"We have a golden opportunity in Europe. The segment is growing and we are entering the market with a highly distinctive product - an offer that few others can match," says Hans-Olov Olsson.

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Short version

The new Volvo X90
a next generation SUV

- World premiere at Detroit Motor Show
- Passenger car based, all wheel drive SUV
- Maximum flexibility for up to seven passengers
- New safety solutions for Roll Over and compatibility
- Three engines with outputs ranging from 163 hp to 272 hp
- Night Vision
- Rear Seat Entertainment
- Clean inside and out

The first SUV, Sports Utility Vehicle, from Volvo Car Corporation makes its debut at the Detroit Motor Show, January 7 2002.

The passenger car-based Volvo XC90 is the top of the line model in the Swedish carmaker's new XC-range.

"Our all-wheel drive XC90 is a next-generation SUV, aimed to be one of the safest and most exciting on the market," says Hans Wikman, Project Director.

Muscular design

"Masculine, but not macho; muscular, but not aggressive," is how the new Volvo XC90 is described by Peter Horbury, Vice President and Chief Designer at Volvo Cars.

The muscular stance is the synthesis of a number of traditional yet unique Volvo features:

- the upright front with its dark, egg-crate grille
- the V -shaped hood, further emphasised on the Volvo XC90
- the broad, pronounced shoulders
- the characteristic tail lamps

"Nobody should be in any doubt that this is a modern Volvo," says Peter Horbury. The muscularity of the Volvo XC90 is matched by chamfered corners front and rear, promoting a gentle, non-aggressive impression, helping the vehicle to look more homogenous.

"Cockpit forward design"

Peter Horbury is happy to talk about the "cockpit forward design" in the Volvo XC90, where the passenger compartment has been moved as far forward in the vehicle as possible, and where the sloping windscreen is positioned further forward than in most other SUV's.

This has allowed Volvo to make a seven-seater SUV within compact overall body dimensions. The Volvo XC90 is 4.80 metres (188.9") long, just 87 mm (3.4") longer than a Volvo V70.

The interior of the Volvo XC90 is characterised by airiness, space and quality materials.

Facing the driver is one of the car world's clearest and most ergonomically designed instrument panels.

It is characterised by Scandinavian simplicity of line and functionality: plenty of information from a small number of meticulously designed instruments.

Top level safety

Customers expect Volvo to retain its lead in the field of safety - irrespective of vehicle type. With the launch of its first-ever SUV, Volvo Cars enters an entirely new segment, and the goal is perfectly clear: to lead the way in terms of safety.

With the entry of Volvo Cars into the SUV market, there is increased focus on several new areas. One of them is roll-over accidents, where the vehicle rolls over onto its roof one or more times.

In order to help reduce the risk of a roll-over situation, the Volvo XC90 is equipped with an active stability-enhancing system known as Roll Stability

Control or RSC. The system uses a gyro-sensor to register the vehicle's roll speed and roll angle. Using this information, the terminal angle is instantly calculated and thus also the roll-over risk.

If the calculated angle is so great that there is an obvious risk of rolling over, the DSTC (Dynamic Stability and Traction Control) anti-skid system is activated. DSTC responds by reducing the engine's power and also by braking one or more wheels as necessary until the vehicle understeers and stability is regained.

This help reduce the risk of a roll-over accident initiated by extreme maneuvers. RSC is the only active stability-enhancement system on the market to measure the car's roll angle. It was developed jointly by Volvo and Ford Motor Company.

Special steel in a reinforced roof structure

If the Volvo XC90 experiences a rollover the passive safety systems step in.

The goal is to reduce the risk of the occupants' heads from coming into contact with the vehicle's interior roof panel or sides. Volvo has reinforced parts of the roof structure in the Volvo XC90 with extremely tough Boron steel, which is four to five times stronger than normal steel.

All the seats are equipped with seat belt pretensioners to hold the occupants securely in place.

In order to help prevent the head from striking the car's sides, the Volvo XC90 is equipped with Volvo's IC or Inflatable Curtain. IC also helps prevent the occupants from being ejected in an accident.

In the Volvo XC90, all three rows of seats in the 7-seat version are protected by the IC.

Selfless compatibility

The problem of compatibility - when a tall SUV collides with a car that sits closer to the road surface - was in firm focus throughout the development of the new Volvo XC90. The typical SUV has a high ground clearance and thus often comes with high-positioned bumpers. This may create a greater risk of damage to the oncoming passenger car and more serious injuries to its passengers, since the lower

car's protective beams and crumple zones simply slip below the front of the SUV without being activated.

In order to reduce the risk of this type of injury, the front suspension subframe in the Volvo XC90 is supplemented with a lower cross-member, positioned at the height of the beam in a conventional car. This lower beam is integrated into the XC90's structure and is neatly concealed behind the spoiler.

This construction reduces risk of injuries in frontal collisions as well as in year-end impacts and side impacts. The lower cross-member strikes the oncoming car's protective structure, activating its crumple zone as intended so the occupants can be given the maximum level of protection.

Volvo Cars is the first European carmaker to offer Night Vision as an option. The infra-red technology in the new XC90 allows the driver to see up to 5 times further than is possible with conventional low beam.

The aim is to boost active safety when driving at night, making it possible to see people and animals that much earlier.

Chassis for all challenges

The Volvo XC90 is a vehicle designed for all types of roads, irrespective of the surface beneath the tyres and the weather conditions.

Even though it is not focusing on off-road driving, the combination of electronically controlled four-wheel drive and 218 millimetres (8.6") of ground clearance creates the right preconditions for continued progress when the going gets tough.

The rear suspension of multi-link type is completely insulated, with the dampers and springs attached directly to the subframe. This results in a quieter ride, since road and transmission noise is largely filtered out before it reaches the bodywork.

The front suspension is of MacPherson type and, together with the new ZF steering gear, promotes increased precision and sharp response.

The Volvo XC90 has an extremely wide track (1634 mm (64.3") front, 1624 mm (63.9") rear) and a long wheelbase (2859 mm (112.6") between the front and rear axles). This makes for exceptional stability, with the vehicle behaving very consistently and dependably even on curving, twisting and uneven roads.

Electronically controlled AWD

One important ingredient in the recipe for safe driving pleasure in the Volvo XC90 is its electronic AWD system, developed in close cooperation with one of the foremost experts in this area - Haldex of Sweden.

Just like in previous AWD models from Volvo, the four-wheel drive system in the XC90 operates entirely independently of driver input, that is to say power is distributed automatically between the front and rear wheels for best possible grip on all types of road surfaces.

The electronically controlled AWD system is intelligent. It monitors the vehicle's contact with the underlying road surface and assesses the signals that the driver receives through the steering wheel, brake pedal and accelerator. This information then helps determine whether, and if so how, the system should respond.

In normal driving on dry roads, almost all power is delivered to the front wheels. If the road surface causes the front wheels to slip, power is proportionately diverted to the rear wheels. With electronically activated four-wheel drive, AWD engagement takes place extremely quickly, after just one-seventh of a wheel turn, which eliminates wheelspin and ensures reliable road grip.

Engines for every need

The Volvo XC90 is available with a choice of three engines, all made entirely of aluminium

- An in-line 6-cylinder petrol engine with a displacement of 2.9 litres, equipped with twin turbochargers. It produces 272 bhp (200 kW) and has no less than 380 Nm of torque from just 1800 revs/min (US spec - 268 bhp with 280 ft.lbs of torque).

- An in-line 5-cylinder 2.5 litre petrol engine with a light-pressure turbocharger. It has a power output of 210 bhp (154 kW) and torque of 320 from 1 500 revs/min (US spec - 208 bhp with 236 ft.lbs of torque).

- An in-line 5-cylinder 2.4 litre common rail turbodiesel engine. It produces 163 bhp (120 kW) and offers 340 Nm from 1750 revs/min. (This engine is not available in the US.)

Environmental care

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

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

The Volvo XC90 will take the lead in the SUV segment as regards both fuel economy and emissions. The 6-cylinder petrol engine meets the American ULEV (Ultra Low Emission Vehicle) requirements, while the 5-cylinder petrol engine already meets ULEV II, a standard that does not come into force 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.

In Europe, the petrol engines in the Volvo XC90 already meet the Euro 4 requirements which come into force in the year 2005.

The new Volvo Cars 5-cylinder diesel engine is among the very cleanest on the market today, offering top-class fuel economy.

In the Volvo XC90, considerable importance has been attached to providing comprehensive and innovative infotainment. One result of this focus is that Volvo is the first carmaker in the world to launch Dolby Prologic II in a car audio system. Dolby Pro Logic II creates the conditions for optimum audio perception even for passengers in the rear seat, and the sound profile is both broader and more natural. The Volvo XC90 can be specified with 13 loudspeakers, one of which is an 8-inch 140-watt active subwoofer for better bass quality.

Rear-seat passengers have access to their own control unit for the audio system, located conveniently in the C-post. There they can plug in their headphones and listen to a separate audio source, so they are not limited to what is coming through

the vehicle's loudspeakers. This means that parents and children can each enjoy their different taste in music at the same time - making a long trip in a Volvo XC90 even more enjoyable.

Rear Seat Entertainment

The Volvo XC 90 offers more than audio entertainment - it offers pictures as well. A DVD player with a 7-inch wide screen can be fitted in the roof, where it can be see by passengers in seat rows two and three.

The design is extremely compact and the screen is lowered on powered hinges. The functions are remote-controlled and wireless headphones can be used to avoid disturbing other passengers in the car. The DVD player plays ordinary CDs as well.

Interactive in your XC90

The RTI (Road and Traffic Information) navigation system (option) is an important part of the infotainment unit in the Volvo XC90. The crystal-clear 6.5-inch widescreen display is recessed into the upper face of the instrument panel, from where it pops up at the touch of a button in the steering wheel.

The navigation system's screen also serves as part of the Volvo Interactive functions in the Volvo XC90. Via the integrated GSM telephone, the driver can log onto the Internet and read and send E-mail.

The Volvo Interactive functions also includes a voice recorder, whereby the driver uses the mobile phone's handsfree microphone to record and listen to brief memos.

The Volvo Interactive functions will initially only be available on the European market.

All infotainment communication in the Volvo XC90 takes place in a digital, optical high-speed network, that is to say a network of broadband type.

Påf/020107

Foreword:
Volvo XC90 - the new generation SUV

The new Volvo XC90, the first SUV from Volvo Cars, has its world premiere at the Detroit Motor Show on 7 January 2002.

"SUV buyers are a natural part of Volvo's customer base, not least because a large proportion of these customers are women. We know that many customers have waited for us to make an SUV," says Hans Wikman, Project Director for the Volvo XC90.

The Volvo XC90 is a genuine Volvo down to the smallest detail, developed with a firm focus on the company's core values: safety, environmental consideration and quality.

"We have not tried to copy any of the SUV models already on the market. Rather, the XC90 is one of the first vehicles in a new SUV generation," says Hans Wikman.

Passenger-car base

The Volvo XC90 is therefore built on a passenger-car base, utilising the same technical base as the Volvo S80, V70 and S60. This means that it has the ride and road-holding, safety and, not least, the emissions of a passenger car.

The Volvo XC90 is a vehicle designed for all types of roads, irrespective of the surface beneath the tyres and the weather conditions.

Even though it is not focusing on off-road driving, the combination of electronically controlled four-wheel drive and 218 millimetres (8.6") of ground clearance creates the right preconditions for continued progress when the going gets tough.

Extends the boundaries

This combined with space for up to seven occupants and a high degree of flexibility make the Volvo XC90 the ideal vehicle for those who want to extend the traditional boundaries of their car use.

The Volvo XC90 also features a wealth of innovative solutions to tackle the risk of roll-over accidents.

The car will be manufactured at the Torslanda factory in Göteborg.

Roughly 65 percent of total production will be sold on the North American market.

Påf/020107

Design: masculinity and flexibility the Scandinavian way

- Masculine design - but not macho
- "Cockpit forward design" - compact seven-seater capability
- Innovative flexibility
- Light, space and function
- Exterior Styling Kit

"Masculine, but not macho; muscular, but not aggressive," is how the new Volvo XC90 is described by Peter Horbury, Vice President and Chief Designer at Volvo Cars.

The muscular stance is the synthesis of a number of traditional yet unique Volvo features:

- the upright front with its dark, egg-crate grille
- the V -shaped hood, further emphasised on the Volvo XC90
- the broad, pronounced shoulders
- the characteristic tail lamps

"Nobody should be in any doubt that this is a modern Volvo," says Peter Horbury. The muscularity of the Volvo XC90 is matched by chamfered corners front and rear, promoting a gentle, non-aggressive impression, helping the vehicle to look more homogenous.

"Cockpit forward design"

Peter Horbury is happy to talk about the "cockpit forward design" in the Volvo XC90, where the passenger compartment has been moved as far forward in the vehicle as possible, and where the sloping windscreen is positioned further forward than in most other SUV:s.

This has allowed Volvo to make a seven-seater SUV within compact overall body dimensions. The Volvo XC90 is 4.80 metres (188.9") long, just 87 mm (3.4") longer than a Volvo V70.

The tailgate on the Volvo XC90 has a rather sporty angle. This is one way of announcing that this is no regular estate car, since the vertical tailgate is such a well-known design feature of the Volvo V70 and XC70.

The incline of the tailgate also means that the roofline is truncated, making the vehicle look shorter and giving it a thoroughly modern sporty stance on the road. The tailgate splits into an upper and a lower half. The lower section can be used as a seat or table.

The bumpers of the XC90 seems to embrace the vehicle and the tough, dark coloured, plastic panels provides a protective cradle. This emphasises the vehicle's higher ground clearance and its SUV appeal.

Interior with a Scandinavian flavour

The interior of the Volvo XC90 is characterised by airiness, space and quality materials.

The large glass panels allow plenty of light to enter the passenger compartment, and the cleanness of the layout and interior trim further boosts the feeling of space and elegance.

Facing the driver is one of the car world's clearest and most ergonomically designed instrument panels.

It is characterised by Scandinavian simplicity of line and functionality: plenty of information from a small number of meticulously designed instruments.

Compared with those found in a passenger car, the instruments and controls are angled slightly up towards the driver's eyes. Together with the high seating position, this enhances the feeling of control - the single quality that SUV buyers generally prize most highly.

The seats in the Volvo XC90 are designed to allow it to be easier to climb in and out of the vehicle.

Focus on flexibility

The interior of the Volvo XC90 offers what is perhaps the greatest flexibility in the SUV class. Despite its compact dimensions, the vehicle offers generous interior space. The Volvo XC90 can be ordered either as a five-seater or in seven-seater configuration.

No matter which variant the customer chooses, both the second and third rows of seats can be folded down to create an entirely flat luggage compartment floor no less than 1.89 metres (74.5") long, 1.13 metres (44.5") wide and with a volume of 2404 litres (85 cu ft) (SAE).

The middle row of seats, designed like seats in a regular passenger car, has a three-part backrest to offer maximum flexibility. The middle seat in this row can be equipped with an integrated child booster cushion. In a 7-seater the child seat can slide forwards so that it is positioned partly between the two front seats, thus improving contact between the child and the parents in the front seats.

The third row features two separate seats, offering full comfort for children or for adults of modest build.

"Everyone rides in Business Class in the Volvo XC90, nobody travels economy class. It is true that the third row isn't built for full-size adults, but a modern family rarely needs room for seven grown-ups in the car", concludes Peter Horbury.

Exterior Styling Kit

For owners who want to reinforce the elegant, powerful image of their Volvo XC90 there is an Exterior Styling Kit, which is fitted by the dealer.

It consists of:

- Running Boards. Fitted along the sides and under the doors. The Running Boards, made of aluminium, protect the sills from denting during tough driving. They also become footsteps when climbing into and out of the car.

- Side décor. Colour-coded design kit that covers the front wheel arch, lower part of front and rear door and the rear wheel arch. Increases the sporty image of the car and protects the side of the vehicle.

- Skid plate. Fitted at the rear. Further enhances the rugged image of the Volvo XC90, and highlights the ground clearance of the vehicle.

- "Atlantis" 18-inch wheels Sporty six-spoke aluminium wheels.

- Roof ribs. Seven rubber ribs mounted lengthwise on the roof.

- Mudflaps. Mudflaps shaped to fit the wheel-arches of the vehicle. Effectively protect the sides of the vehicle from gravel thrown up by the wheels.

- Crossbars. Aerofoil-shaped design roof load carriers which are an asset to the car's appearance even when no roof load is being carried. Made of aluminium for an exclusive impression.

Påf/020107

Chassis and powertrain: performance and roadholding at premium level

- **Ride and roadholding on a par with passenger cars**
- **Emergency Brake Assistance**
- **Electronically controlled four-wheel drive**
- **Turbocharged engines from 163 bhp to 272 bhp**
- **Geartronic available with all engines**

The Volvo XC90 is a vehicle designed for all types of roads, irrespective of the surface beneath the tyres and the weather conditions.

Even though it is not basically intended for off-road driving, the combination of electronically controlled four-wheel drive and 218 millimetres/8.6" of ground clearance creates the right preconditions for continued progress when the going gets tough.

The feeling of safety that the high seating position gives the driver is supplemented with the knowledge that he or she can control the car with the help of instant, well-weighted response from the chassis, engine and brakes. Progress is thus more relaxed and comfortable.

The chassis in the Volvo XC90 is designed to give the vehicle the same ride and roadholding as a passenger car. It is based on the chassis of the Volvo S80, S60 and V70, cars that are renowned for their excellent road manners.

In the Volvo XC90, however, the suspension has been beefed up and dimensioned to handle heavier loads and higher ground clearance.

Well-insulated rear suspension for quieter progress

The rear suspension of multi-link type is completely insulated, with the dampers and springs attached directly to the subframe. This results in a quieter ride, since road and transmission noise is largely filtered out before it reaches the bodywork. The front suspension is of MacPherson type and, together with the new ZF steering gear, promotes increased precision and sharp response.

The Volvo XC90 has an extremely wide track (1634 mm/64.3" front, 1624 mm/63.9" rear) and a long wheelbase (2859 mm/112.6" between the front and rear axles). This makes for exceptional stability, with the vehicle behaving very consistently and dependably even on curving, twisting and uneven roads.

The Volvo XC90 can be specified with a range of wheel up to 18 inches.

The braking system in the Volvo XC90 is dimensioned to help stop the vehicle safely, even when it is fully loaded with seven people and their luggage. This is achieved with an optimised brakesystem and EBA (Emergency Brake Assistance). This system monitors how quickly the brake pedal is pressed, and can thus determine if the driver is panic-braking. In such a situation, the brake pressure is boosted to maximum in the shortest possible time, thus reducing the stopping distance.

Electronically controlled AWD

One important ingredient in the recipe for safe driving pleasure in the Volvo XC90 is its electronic AWD system, developed in close cooperation with one of the foremost experts in this area - Haldex of Sweden.

Just like in previous AWD models from Volvo, the four-wheel drive system in the XC90 operates entirely independently of driver input, that is to say power is distributed automatically between the front and rear wheels for best possible grip on all types of road surfaces.

The electronically controlled AWD system is intelligent. It monitors the vehicle's contact with the underlying road surface and assesses the signals that the driver receives through the steering wheel, brake pedal and accelerator. This information then helps determine whether, and if so how, the system should respond.

In normal driving on dry roads, almost all power is delivered to the front wheels. If the road surface causes the front wheels to slip, power is proportionately diverted to the rear wheels. With electronically activated four-wheel drive, AWD engagement takes place extremely quickly, after just one-seventh of a wheel turn, which eliminates wheelspin and ensures reliable road grip.

As a result, the AWD system in the Volvo XC90 has all the benefits of permanent four-wheel drive, without the accompanying disadvantages such as higher fuel consumption and heavier weight.

The electronic AWD system interacts in the Volvo XC90 with the active chassis systems DSTC - Dynamic Stability and Traction Control. This is an anti-skid system that automatically counteracts any initial tendency towards a skid before the driver even has time to notice. The system continuously compares the vehicle's direction of progress with the driver's steering wheel movements. If the vehicle shows any tendency to start skidding, the brakes are instantly applied to one or more wheels as necessary until the vehicle stabilises and the skid is avoided.

DSTC also includes an anti-spin system that automatically brakes the wheel that spins, so that drive is diverted to the wheel with the best grip. It also controls the engine torque.

Engines for every need

The Volvo XC90 is available with a choice of three engines, all made entirely of aluminium

- An in-line 6-cylinder petrol engine with a displacement of 2.9 litres, equipped with twin turbochargers. It produces 272 bhp (200 kW) and has no less than 380 Nm of torque from just 1800 revs/min (US specs - 268 bhp with 280 ft.lbs of torque).

- An in-line 5-cylinder 2.5 litre petrol engine with a light-pressure turbocharger. It has a power output of 210 bhp (154 kW) and torque of 320 from 1500 revs/min (US specs - 208 bhp with 236 ft.lbs of torque).

- An in-line 5-cylinder 2.4 litre common rail turbodiesel engine. It produces 163 bhp (120 kW) and offers 340 Nm from 1 750 revs/min. (This engine is not available in the US.)

All three engines come from Volvo's passenger car range, but they have been re-profiled to suit XC90. In particular, the petrol engines produce far more torque from lower down the rev range.

The 6-cylinder engine is the same unit that powers Volvo's largest sedan, the S80 T6. It has a parallel turbo system - two small and highly efficient turbochargers that are installed alongside each other. They are driven by and feed three cylinders each.

In the Volvo XC90, the T6 engine's displacement has been enlarged from 2.8 to 2.9 litres and it is equipped with variable valve timing or CVVT on both the inlet and exhaust sides. CWT adjusts valve timing to suit the engine's current revs and load, and it thus exploits the engine more effectively, reducing fuel consumption and emissions.

One of the most important results is that maximum torque is available from just 1 800 revs/minute, compared with the 2000 revs/minute of the 2.8-litre version.

Best of two worlds: Geartronic

The Volvo XC90 T6 has 4-speed Geartronic automatic transmission as standard. With Geartronic, the driver gets the best of both worlds: on the one hand, the transmission can be left to take care of gearchanging entirely automatically, or the driver can over-ride the system to change gears manually without a clutch pedal.

The automatic transmission is adaptive, which means that it monitors the driver's driving style and adjusts the gearchanging pattern accordingly. It also features a "W" setting for winter driving on slippery surfaces. Here, the car starts off in a higher gear to avoid wheelspin and loss of control.

The 5-cylinder light-pressure turbo engine now reaches its maximum torque of 320 Nm (236 ft.lbs) from just 1 500 revs/minute, giving the XC90 excellent starting characteristics. This has been achieved with a longer piston stroke, increasing engine displacement from 2.4 to 2.5 litres. This change is matched by a somewhat smaller turbocharger which steps into operation a bit earlier.

In addition, power output has increased from 200 to 210 (US 197 to 208) brake horsepower.

The 5-cylinder light-pressure turbo engine can be specified in combination with a 5-speed Geartronic automatic transmission or a 5-speed manual gearbox. The latter unit is only available on European markets.

2nd generation common rail

The newly developed 5-cylinder 163 bhp diesel engine features second-generation common rail technology. Fuel is injected into the cylinders under extremely high pressure, up to 1600 bar. This ensures an exceptionally finely distributed supply of fuel throughout the injection sequence. The result is remarkably efficient combustion, boosting the engine's efficiency and reducing emissions.

The turbocharger is of the VNT (Variable Nozzle Turbine) type. This means that the turbine features movable vanes on the inlet side, which promotes a high turbine efficiency rating throughout the rev range. This allows a high boost pressure from low revs, resulting in a flat torque curve and higher power output.

The diesel engine transmits its power via a 5-speed Geartronic automatic gearbox.

Påf/020107

Safety: the sights are set on leadership

- **Roll Stability Control**
- **Special steel in a reinforced roof structure**
- **IC (Inflatable Curtain) - for all three rows of seats**
- **Lower cross-member for increased car-to-car compatibility**
- **Night Vision**

Customers expect Volvo to retain its lead in the field of safety - irrespective of vehicle type. With the launch of its first-ever SUV, Volvo Cars enters an entirely new segment, and the goal is perfectly clear: to lead the way in terms of safety.

As in all other Volvo models, safety in the Volvo XC90 is a holistic concern. Safety is never achieved by simply integrating a number of individual stand-alone features into a car: what is important is the interaction between them - it is this interplay that shapes the result.

This holistic approach is - and always has been - one of the cornerstones of Volvo's safety philosophy.

With the entry of Volvo Cars into the SUV market, there is increased focus on several new areas. One of them is roll-over accidents, where the vehicle rolls over onto its roof one or more times.

Roll-over Protection System

Volvo's Roll-over Protection System, ROPS, tackles the problem from two directions:

- a stability-enhancing system, RSC, which minimises the risk of rolling over in the first place
- increased protection for the occupants if the vehicle does roll over

Owing to its higher centre of gravity, an SUV may have a higher risk of rolling over in certain critical situations compared with a conventional passenger car. That is why the centre of gravity in the Volvo XC90 has been kept as low as possible compared to most SUVs. In fact, it is just 89 mm (3.5") higher than that of the Volvo XC70. However, this does not mean that Volvo has compromised on one of the properties that SUV buyers value so highly: a commanding seating position. The front seats are no less than 165 millimetres (6.5") higher than in the Volvo XC70.

Roll Stability Control

In order to help reduce the risk of a roll-over situation, the Volvo XC90 is equipped with an active stability-enhancing system known as Roll Stability Control or RSC. The system uses a gyro-sensor to register the car's roll speed and roll angle. Using this information, the terminal angle is instantly calculated and thus also the roll-over risk.

If the calculated angle is so great that there is an obvious risk of rolling over, the DSTC (Dynamic Stability and Traction Control) anti-skid system is activated. DSTC responds by reducing the engine's power and also by braking one or more wheels as necessary until the car understeers and stability is regained.

This help reduce the risk of a roll-over accident initiated by extreme manouvers. RSC is the only active stability-enhancement system on the market to measure the car's roll angle.

Special steel in a reinforced roof structure

If the Volvo XC90 experiences a rollover the passive safety systems step in.

The goal is to reduce the risk of the occupants' heads from coming into contact with the car's interior roof panel or sides. Volvo has reinforced parts of the roof structure in the Volvo XC90 with extremely tough Boron steel, which is four or five times stronger than normal steel.

All the seats are equipped with seat belt pretensioners to hold the occupants securely in place. In an accident, the pretensioner pulls the seat belt firmly across the occupant's body in order to help provide maximum protection.

In order to help prevent the head from striking the car's sides, the Volvo XC90 is equipped with Volvo's IC or Inflatable Curtain. IC also helps prevent the occupants from being ejected in an accident.

The Volvo XC90 has a version of IC that is specially adapted to deal with roll-over accidents.

This means that it stays fully inflated for longer so as to offer maximum protection in a roll-over scenario. What is more, the curtain is folded in its cassette in such a way that it follows the contour of the window glass as it inflates. If the occupant's head is resting against the window at the moment of inflation, the curtain will thus slip between the glass and the occupant's head to provide enhanced protection.

In the Volvo XC90, all three rows of seats in the 7-seat version are protected by the IC.

Selfless compatibility

The problem of compatibility - when a SUV collides with a car that sits closer to the road surface - was in firm focus throughout the development of the new Volvo XC90. The typical SUV has a high ground clearance and thus often comes with high-positioned bumpers. This may create a greater risk of damage to the oncoming passenger car and more serious injuries to its passengers, since the lower car's protective beams and crumple zones simply slip below the front of the SUV without being activated.

In order to reduce the risk of this type of injury, the front suspension subframe in the Volvo XC90 is supplemented with a lower cross-member, positioned at the height of the beam in a conventional car. This lower beam is integrated into the XC90's structure and is neatly concealed behind the spoiler.

This construction reduces risk of injuries in frontal collisions as well as in year-end impacts and side impacts. The lower cross-member strikes the oncoming car's protective structure, activating its crumple zone as intended so the occupants can be given the maximum level of protection.

During the development of the Volvo XC90, considerable attention was also

paid to the safety of pedestrians, cyclists and other relatively unprotected road-users. The entire front of the car features clean, gentle and smooth lines, and there are no protruding parts which may cause enhanced injuries.

The engine in the Volvo XC90 is installed low in the vehicle. As a result, the bonnet has no less than 80 mm (3.1 ") of deformation space before there is any contact with the engine below it. It thus serves as a soft impact-absorbing "bumper", reducing the risk of serious injury to a pedestrian who may be thrown onto the bonnet.

High safety level in the third row of seats

The Volvo XC90's third row of seats provide a high level of passenger safety. There is generous space behind it, so collision force in a rear-end impact can be effectively absorbed and dissipated.

The occupants of the rearmost seats sit just above the rear axle, which is the optimum position in terms of side-impact safety. These seats also feature belt tensioners, head restraints and, as already mentioned, the Inflatable Curtain or IC.

The front airbags are of the dual-stage type, with a sensor that monitors the incoming collision force and adjusts the airbag's inflation accordingly.

Safety for the car's youngest occupants has always been a high priority at Volvo. That is why the Volvo XC90 can be specified with the standardised attachment system for child seats, ISOFIX, in both the first and second row of seats.

WHIPS, Volvo's award-winning Whiplash Protection System, is fitted in the two front seats of the Volvo XC90. WHIPS is activated in the event of a rear-end collision from speeds as low as 15 km/h (8 mph), helping to reduce trauma on the spine and neck and thus reducing the risk of injury.

Night Vision - I R technology for greater safety

Volvo Cars is the first European carmaker to offer Night Vision as an option. The infra-red technology in the new XC90 allows the driver to see up to 5 times further than is possible with conventional low beam.

The aim is to boost active safety when driving at night, making it possible to see people and animals that much earlier.

Night Vision uses a heat-sensitive camera that is fitted just below the headlamp on the left side, about 70 cm (27.6") above the road surface. The camera registers the infra-red radiation that is given off by the surroundings, generating a video image whereby warm objects such as people and animals are shown as light objects against a dark background.

The images are projected onto a mirror display measuring 70x180 mm (2.8x7.1"), which is positioned directly in the driver's natural field of vision. When the Night Vision function is not being used, the display retracts into the instrument panel.

The IR camera in the car's nose is shielded by a protective glass panel that can be heated to prevent snow and ice from accumulating and obstructing its use.

The extra reaction time that Night Vision gives the driver may spell the difference between being involved in an accident and avoiding one altogether.

Påf/020107

Environmental standards: among the cleanest SUVs on the market

- **Among the cleanest SUVs on the market: ULEV and ULEV II**
- **Interior Air Quality System**
- **Öko-Tex standard 100**
- **Premair® - the ozone-eater**

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

That is why we were faced with an extra-tough challenge when we developed 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.

ULEV and ULEV II

The Volvo XC90 will take the lead in the SUV segment as regards both fuel economy and emissions. The 6-cylinder petrol engine meets the American ULEV (Ultra Low Emission Vehicle) requirements, while the 5-cylinder petrol engine already meets ULEV II, a standard that does not come into force 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.

In Europe, the petrol engines in the Volvo XC90 already meet the Euro 4 requirements which come into force in the year 2005.

The new Volvo Cars 5-cylinder diesel engine is among the very cleanest on the market today, offering top-class fuel economy.

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 aluminium. 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 biturbo engine, just like the 5-cylinder light-pressure turbo 2.5T unit, features CVVT on both the exhaust and inlet sides.

Interior Air Quality System

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

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 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.

Påf/020107

Infotainment: combining in-car business with pleasure

- **Dolby Pro Logic II - the first in the car world**
- **Minidisc**
- **Volvo Interactive**
- **New RTI generation**
- **Voice control**
- **Broadband network**

The vehicle is developing increasingly into an extension of both the home and office. Buyers of cars in the premium segment expect to be able to communicate with the world at large quickly and simply - to exchange information or even to enjoy entertainment while on the move.

The key word is infotainment, a combination of "information" and "entertainment". This concept encompasses the audio system, navigation facility, telephone and mobile office services.

In the Volvo XC90, considerable importance has been attached to providing comprehensive and innovative infotainment. One result of this focus is that Volvo is the first carmaker in the world to launch Dolby Prologic II in a car audio system.

Dolby Pro Logic II - for optimum audio perception

Volvo introduced the Dolby Pro Logic Surround Sound system back in 1997, when it was featured in the Volvo C70. It represented a revolution in mobile audio quality. Dolby Pro Logic II is a further development of the system, tailored specifically for the in-car audio environment.

Dolby Pro Logic II creates the conditions for optimum audio perception even for passengers in the rear seat, and the sound profile is both broader and more natural.

The Volvo XC90 can be specified with 13 loudspeakers, one of which is an 8-inch 140-watt active subwoofer for better bass quality. The Alpine surround

amplifier is rated at 305 watts and it can be ordered with a CD-player for either one or six discs. The CD-player can be supplemented with a Minidisc unit.

Rear-seat passengers have access to their own control unit for the audio system, located conveniently in the C-post. There they can plug in their headphones and listen to a separate audio source, so they are not limited to what is coming through the vehicle's loudspeakers. This means that parents and children can each enjoy their different taste in music at the same time - making a long trip in a Volvo XC90 even more enjoyable.

Rear Seat Entertainment

The Volvo XC 90 offers more than audio entertainment - it offers pictures as well. A DVD player with a 7-inch wide screen can be fitted in the roof, where it can be see by passengers in seat rows two and three.

The design is extremely compact and the screen is lowered on powered hinges. The functions are remote-controlled and wireless headphones can be used to avoid disturbing other passengers in the car. The DVD player plays ordinary CDs as well.

Road and Traffic Information

The RTI (Road and Traffic Information) navigation system (option) is an important part of the infotainment unit in the Volvo XC90. The crystal-clear 6.5-inch widescreen display is recessed into the upper face of the instrument panel, from where it pops up at the touch of a button in the steering wheel.

The Volvo XC90 is equipped with the latest generation of Volvo RTI. This means, for instance, that the system is DVD-based and features new ways of logging in the destination, for example via the postal code. A function whereby the system calculates the estimated time of arrival is also included, along with a map that is accurate down to 50 metres.

A number of functions in the navigation system can be programmed to respond to voice controls.

Interactive in your XC90

The navigation system's screen also serves as part of the Volvo Interactive functions in the Volvo XC90. Via the integrated GSM telephone, the driver can log onto the Internet and read and send E-mail.

The Volvo Interactive functions also includes a voice recorder, whereby the driver uses the mobile phone's handsfree microphone to record and listen to brief memos.

The Volvo Interactive functions will initially only be available on the European market.

All infotainment communication in the Volvo XC90 takes place in a digital, optical high-speed network, that is to say a network of broadband type.

Most of the vehicle's antennas are gathered together in a single module located on the vehicle's roof, securing a good reception and enhancing the design.

Påf/020107

Volvo Car Corporation

PRESS INFORMATION

Product News from Volvo Car Corporation

- Volvo Cars introduces 130 bhp version of its new 5-cylinder diesel engine
- Five-speed automatic transmission now an option with the Volvo diesel engines
- New colour-coordinated exterior styling option for the Volvo S80 16
- Bi-Xenon - for superior headlight performance
- Emergency Brake Assistance for safer stopping
- Volvo Ocean Race Special Editions

Besides the introduction of its new SUV, the XC90, Volvo Car Corporation can reveal a series of other developments and innovations in its car range as the year 2002 gets under way.

The biggest news on the engine front is the introduction of a 130 bhp version of the new 2.4 litre diesel engine.

At its launch last summer, the first diesel engine ever developed by Volvo Cars - the D5 - received an extremely warm welcome in the international motoring press. Developing 163 bhp, the new Volvo diesel was acclaimed for its quietness and low fuel consumption, but especially for its exceptional reserves of power, always on tap even at very low rpm.

The new 130 bhp variant is basically the same engine

- 5 cylinder, in-line, displacement 2.4 litres
- Second-generation common rail technology, with injection pressure of up to 1600 bar

- Advanced turbo technology: Variable Nozzle Turbine
- All-aluminium, weight: 185 kg

In this variant too, the maximum torque of 280 Nm is available right from 1 750 rpm.

Its fuel consumption is similar to that of its more powerful brother, which, in a Volvo S60 means 6.3 to 6.5 litres/100 km, depending on the individual equipment specification. Acceleration from 0-100 km/h takes 11.6 seconds with the manual gearbox, and top speed is 200 km/h.

Automatic transmission is now an option with both of Volvo Car Corporation's own diesel engines. This is a five-speed transmission, electronically controlled to adapt to the driver's personal style of driving. It has a "W" setting for slippery or winter driving conditions, plus a lock-up function which reduces fuel consumption at constant speed.

Fuel consumption in a Volvo S60 with automatic transmission is 7.5-7.6 litres/100 km, depending on individual equipment.

Colour-coordinated S80

Available at the same time as these new equipment alternatives will be a new exterior styling option for the S80 T6. A colour-coordinated version of this, Volvo's top-of-the-range saloon, can now be ordered. The colour-coordinated option means that the waistline moulding and the mouldings above the front and rear bumpers are the same colour as the body paintwork.

Developed especially for the North American and Japanese markets is a special new tricoat paint called White Pearl. Initially at least, this will be available only for the Volvo S80, and will be seen for the first time at the Detroit Motor Show.

Bi-Xenon headlights

For many years now Volvo's headlights have delivered absolutely first-rate illumination for driving. Free-form headlights providing greatly enhanced performance were first introduced five years ago, and soon the entire Volvo car range will have xenon headlamps; single xenon for the S40 and V40, and Bi-Xenon (i.e. xenon lamps for both dipped beam and main beam) for all other models, with free-form reflectors and clear glass in front.

Xenon lamps are high-intensity gas-discharge lamps using the element xenon rather than halogen. Xenon delivers far better illumination than halogen. The light it casts is more like daylight, and xenon lamps have a luminous flux rating twice as high as halogen ones.

Xenon lamps also have a much longer service life than halogen ones: 3,000 hours of use, the equivalent of driving about 250,000 kilometres with the headlights switched on.

The configuration of the light from a xenon lamp is superior too, casting a wider beam. Volvo's Bi-Xenon lights make use of the entire surface of the reflector and have a wide glass opening, which minimises the risk of dazzling other road users (a criticism sometimes levelled at headlights of this type).

Emergency Brake Assistance

The braking system in all Volvos is dimensioned to help stop the vehicle safely, even when it is fully loaded with seven people and their luggage. This is achieved through an optimised braking system and EBA (Emergency Brake Assistance) . This system monitors exactly how sharply the brake pedal is being used, and can thus determine if the driver is braking extra hard. In an emergency braking situation, the brake pressure is boosted to maximum in the shortest possible time, thus reducing the stopping distance.

EBA works in conjunction with Volvo's Dynamic Stability Control System (DSTC) and is standard on all cars equipped with this system.

New-generation RTI system

Now being released is the fourth generation of the Volvo in-car navigation system, RTI. The major advance here is that the new system is DVD-based, which means fewer map discs are needed. The new system lets the user choose to hear directions from either a male or a female voice, and it also shows the estimated journey time left. The menus have been redesigned to make them clearer and easier to use. Innovations on the hardware front are a 6.5 inch widescreen display and a separate remote control which lets passengers operate the system too. As before, owners can upgrade their systems to include a receiver for terrestrial television channels, usable throughout most of Europe.

Special Edition estates in Ocean Blue for the Volvo Ocean Race

Launched to coincide with the start of the Volvo Ocean Race from Southampton on 23 September last year were special editions of the Volvo V70 and the Volvo Cross Country. These will be promoted in about 20 different markets world wide as the round-the-world yacht race unfolds.

They will remain on sale right up until the time when the winning boat crosses the finish line in Kiel on 9 June 2002. Demand is expected to be particularly high in the North American markets, which have been allocated around 500 vehicles.

The special Ocean Blue paint will not be used for any other cars. Other features of the VOR Special Edition cars include a silver waistline moulding, a Volvo Ocean Race badge on the front doors and the race logo on the sill mats. The Volvo Cross Country Special Edition also has skidplates front and rear. All of the VOR cars have leather upholstery.

The Volvo Car Corporation range

Volvo C70 Coupé and Convertible

Although only introduced in 1997, the Volvo C70 Coupé is now the oldest model in the entire Volvo line-up. The Volvo C70 Coupé and Convertible have both played a very important part in forging the new image of the Volvo brand.

Sheer drivability is the most striking overall impression. For the driver of the C70 Coupé, this is enhanced by the car's inherent sportiness and dynamism. In the C70 Convertible, elegance and comfort are accentuated more.

The Volvo C70 offers a choice of 5-cylinder engines from 163 bhp to 240 bhp.

Volvo S80

In May 1998, Volvo Cars presented the Volvo S80 - the first model to be developed from Volvo's larger platform.

A top-class safety level combined with a range of other new features has made the Volvo S80 one of the most attractive and competitive offerings in the market for large saloons. The engine programme is based on two different concepts - six-cylinder engines for total comfort and performance, and five-cylinder versions for fuel economy and smooth driving.

The Volvo S80 is available with 5 and 6-cylinder petrol engines from 140 bhp to 272 bhp. Two 5-cylinder diesels are also available: 130 and 163 bhp.

Volvo V70

Launched in 2000 were three more models derived from Volvo's large platform. Although this platform was first used to develop the S80 saloon, the new V70 is far from being just a modified saloon. It is a new and unique estate, an improvement on the previous Volvo V70 in virtually every respect.

The Volvo V70 is available with 5-cylinder petrol engines from 140 bhp to 250 bhp. Two 5-cylinder diesels are also available: 130 and 163 bhp.

Volvo Cross Country

The AWD Volvo Cross Country is a highly attractive alternative for customers who want a truly flexible car with the right attitude. It can cope with virtually any surface, but it is also safe, convenient, comfortable and fun to drive. Volvo's first Cross Country was introduced in 1997 and became an immediate success. This new model is an advance on its predecessor in practically every way.

The Volvo Cross Country is available with a 5-cylinder petrol, Light Pressure Turbo engine delivering 200 bhp.

Volvo S60

Lively, dynamic styling gives the S60 a definite sporty look. Although it reveals clear inspiration from the coupé, the S60 is a spacious saloon which can accommodate five adults with ease. In this case the same versatile platform previously used for the S80, V70 and Volvo Cross Country produced a somewhat smaller model, with a bolder air. The recently introduced Volvo S60 AWD is equipped with electronically-controlled All Wheel Drive.

The Volvo S60 is available with 5-cylinder petrol engines from 140 bhp to 250 bhp. Two 5-cylinder diesels are also available: 130 and 163 bhp.

Volvo S40 and Volvo V40

The launch of the Volvo S40 and Volvo V40 Phase II models in early 2000 brought more far-reaching changes than may be apparent at first glance. The Phase II versions were redesigned for greater comfort and quieter motoring. Thanks to engine upgrades they are also more powerful than the Phase I models, which were introduced in 1995.

The Volvo S40 and V40 are available with 4-cylinder petrol engines from 109 bhp to 200 bhp. Two 4-cylinder diesels are also available: 102 and 115 bhp.

Volvo Bi-Fuel

Most Volvo car models are now available in a Bi-Fuel version with the latest generation Bi-Fuel gas/petrol engine, offering major benefits for both the environment and the car owner.

Volvo Cars' new Bi-Fuel engines run on gas, using petrol as a reserve fuel. The gas tanks are located under the floor, which means no reduction in load space by comparison with the conventional petrol and diesel versions. Volvo offers Bi-Fuel solutions few - if any - other manufacturers can match:

- The 2.4-litre, five-cylinder Bi-Fuel engine for the Volvo S80, Volvo V70 and Volvo S60 will be available in two variants: one powered by methane (natural gas or biogas) and one that runs on liquefied petroleum gas (LPG). The maximum power is 140 bhp both on gas and petrol.
- The Volvo S40 and V40 are available with a 1.8-litre, four-cylinder Bi-Fuel engine running on LPG. The output is 120 bhp in LPG mode and 122 bhp when driving on petrol.

Påf/Hå/020107

Technical

Specifications

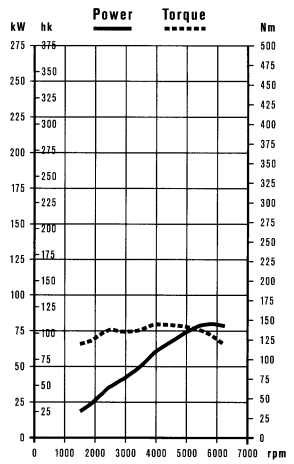
S40 I V40 I S60 I V70 I C70 I Cross Country I S80

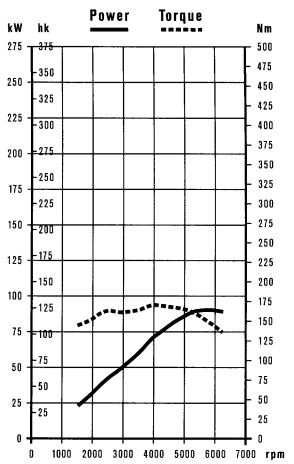
VOLVO
Volvo Car Corporation

Volvo S40

ENGINES

	B4164S2	B4184S2
Type	In-line 4 cyl. naturally aspirated	In-line 4 cyl. naturally aspirated
Configuration	Transverse, front wheel drive	Transverse, front wheel drive
Displacement, cm^3	1587	1783
Engine cylinder block material	Aluminium	Aluminium
Cylinderhead material	Aluminium	Aluminium
Combustion chamber type	Pent-roof	Pent-roof
Compression ratio	10.0	10.3
Valves, no/cylinder	4	4
Camshafts	2	2
Engine management system	Microprocessor controlled fuel and ignition system with self diagnostics	
Ignition sequence	1-3-4-2	1-3-4-2
Engine idling speed	750	750 manual/700 automatic
Fuel, rec. octane	91–98 RON	91–98 RON
Max output, kW (hk)/rpm.	80 (109)/5800	90 (122)/5800
Max torque, Nm/rpm.	145/4000	170/4000





TRANSMISSIONS

5-speed manual gearbox. 5-speed adaptive automatic transmission, electronically controlled, with lock-up and winter mode selection.

Ratio	JB3-306	JC5-227	M56-H1	F5-M42	M56-L2	M56-H2	AW 55-50
First	3.36	3.36	3.07	3.58	3.39	3.07	4.77
Second	1.86	1.86	1.77	1.95	1.91	1.77	2.99
Third	1.32	1.32	1.19	1.27	1.19	1.19	1.96
Fourth	1.03	1.03	0.87	0.97	0.87	0.87	1.32
Fifth	0.82	0.82	0.70	0.82	0.65	0.65	1.02
Reverse	3.55	3.55	2.99	3.36	3.30	3.30	3.23

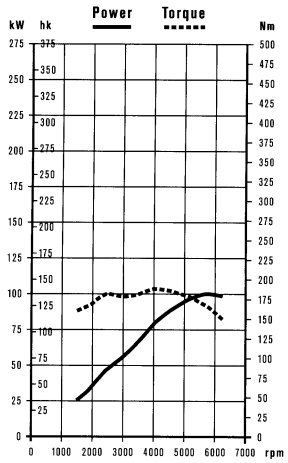
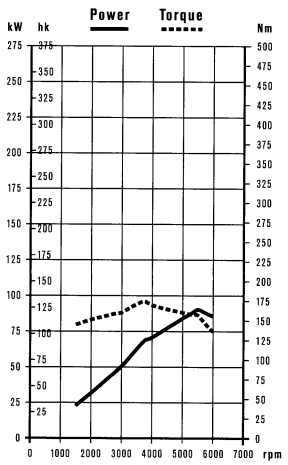
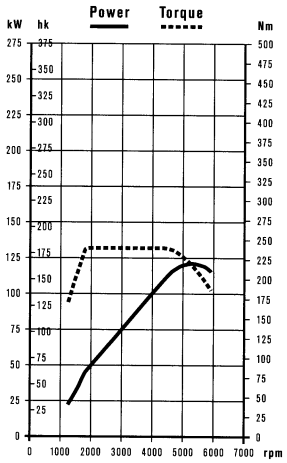
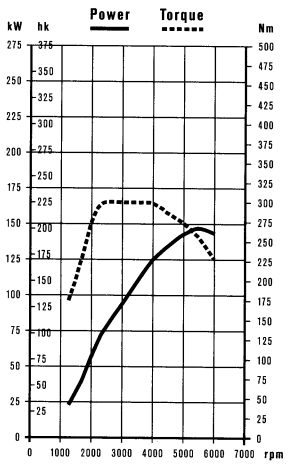
Manual gearbox/final drive	JB3-306/4.07	JC5-227/3.87
Automatic transmission/final drive	–	AW55-50/2.86

PERFORMANCE

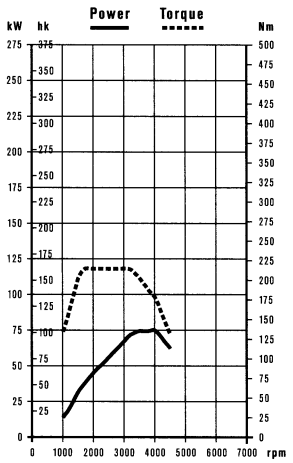
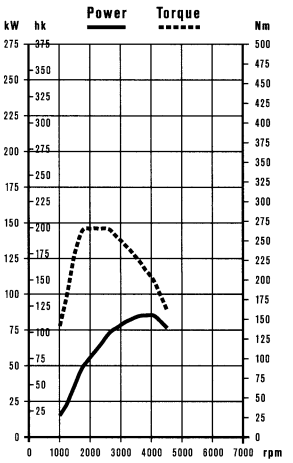
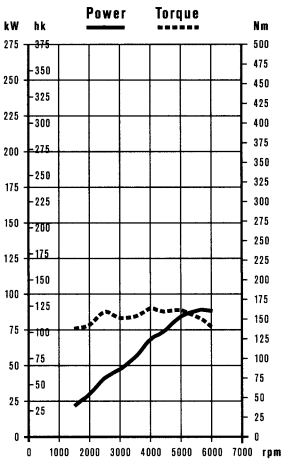
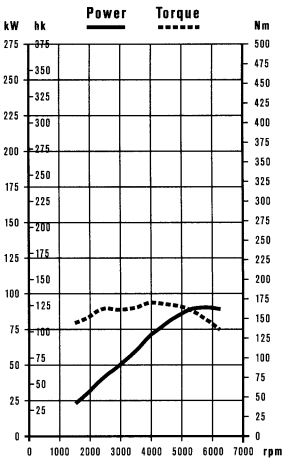
Gearbox	Manual	Automatic	Manual	Automatic
Acceleration, 0–100 km/h (sec)	12.0	–	10.5	11.5
Top speed, km/h	190	–	200	195
Fuel consumption l/100 km (EEC 80/1268 1999/100, combined)	7.9		8.1	8.9
CO_2 g/km, combined	185	–	193	212

CHASSIS

Suspension	front	Spring-strut, lower link, anti-roll bar
	rear	Individual, Multi-Link, with coil springs, anti-roll bar
Steering		Rack and pinion, power assisted
Turning circle		10.6 m
Turns of steering wheel lock to lock		3.1
Braking system		ABS discs all round, ventilated at the front + EBD
Brake disc diameter (front/rear)		256/260
DSA (Dynamic Stability Assistance) S40T4/Others		Standard/Option

B4204S2	B4184SJ	B4204T3	B4204T5
In-line 4 cyl. naturally aspirated	In-line 4 cyl. naturally aspirated	In-line 4 cyl., light press. turbo	In-line 4 cyl., high press. turbo
Transverse, front wheel drive	Transverse, front wheel drive	Transverse, front wheel drive	Transverse, front wheel drive
1948	1834	1948	1948
Aluminium	Cast iron	Aluminium	Aluminium
Aluminium	Aluminium	Aluminium	Aluminium
Pent-roof	Pent-roof	Pent-roof	Pent-roof
10.5	11.6	9.0	8.5
4	4	4	4
2	2	2	2
Microprocessor controlled fuel and ignition system with self diagnostics			
1-3-4-2	1-3-4-2	1-3-4-2	1-3-4-2
750 manual/700 automatic	620	750	750
91–98 RON	95–98 RON	91–98 RON	91–98 RON
100 (136)/5800	90 (122)/5500	120 (163)/5250	147 (200)/5500
190/4000	174/3750	240/1800–4500	300/2500–4000
			
M56H1/4.45	F5M42/3.72	M56H1/4.00	M56H2/4.25
AW55-50/2.86	–	AW55-50/2.44	AW55-50/2.44

Manual	Automatic	Manual	Automatic	Manual	Automatic	Manual	Automatic
9.7	10.7	10.5	–	8.5	9.0	7.3	8.0
205	200	200	–	220	215	235	230
8.3	9.1	6.9	–	8.3	9.2	8.9	9.5
198	216	164	–	198	217	212	227

D4192T4/DI	D4192T3/DI	B4184S9 (LPG mode)	B4184S9 (petrol mode)
In-line 4 cyl., turbo diesel	In-line 4-cyl. turbo diesel	In-line 4 cyl. naturally aspirated, Bi-Fuel	In-line 4 cyl. naturally aspirated, Bi-Fuel
Transverse, front wheel drive	Transverse, front wheel drive	Transverse, front wheel drive	Transverse, front wheel drive
1870	1870	1783	1783
Cast iron	Cast iron	Aluminium	Aluminium
Aluminium	Aluminium	Aluminium	Aluminium
–	–	Pent-roof	Pent-roof
19.0	19.0	10.3	10.3
2	2	4	4
1	1	2	2
Integr. fuel/ignition system	Integr. fuel/ignition system	Microprocessor controlled fuel and ignition system with self diagnostics	
1-3-4-2	1-3-4-2	1-3-4-2	1-3-4-2
750	750	750	750
Diesel min cetane 48	Diesel min cetane 48	LPG	91–98 RON
75 (102)/4000	85 (115)/4000	88 (120)/5800	90 (122)/5800
215/1750–3250	265/1750–2500	167/4000	170/4000
			
M56L2/3.77	M56L2/3.77	JC5-227/3.87	JC5-227/3.87
–	–	–	–

Manual	Automatic	Manual	Automatic	Manual	Automatic	Manual	Automatic
12.0	–	10.5	–	11.0	–	10.5	–
185	–	195	–	200	–	200	–
5.4	–	5.4	–	10.4 LPG	–	8.1	–
142	–	142	–	168	–	193	–

MEASUREMENTS AND VOLUMES

Exterior measurements (cm)	
Length	452
Width	172
Height	142
Wheelbase	256
Track, front	147
Track, rear	147
Ground clearance	15
Load height	67
Weights/Miscellaneous	
Weight/kg min.	1255/1316**
Petrol tank, l	60
LPG tank, l	40
Max. trailer weight, kg	1400/1200*
Drag coefficient	0.31–0.32

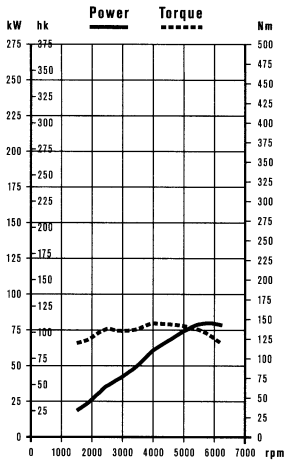
Interior measurements (cm)	
Headroom with sunroof (front/rear)	96/93
Headroom without sunroof (front/rear)	98/95
Passenger compartment width at shoulder height (front/rear)	137/137
Luggage volume, litres (DIN V210)	471/415**
Load length	101/95**
Load length with rear seat folded down	174/169**
Load length with rear seat and front passenger seat folded down	270/264**
Height of luggage compartment	51
Width of luggage compartment between wheel arches	90

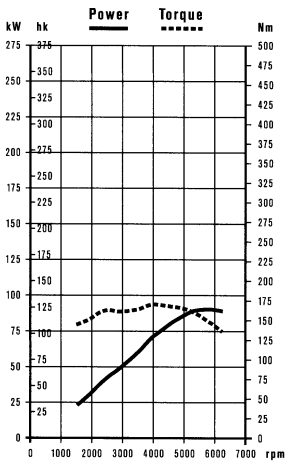
*B4164S2, B4184S2, B4184S9 och B4184SJ **Bi-Fuel

Volvo V40

ENGINES

	B4164S2	B4184S2
Type	In-line 4 cyl. naturally aspirated	In-line 4 cyl. naturally aspirated
Configuration	Transverse, front wheel drive	Transverse, front wheel drive
Displacement, cm^3	1587	1783
Engine cylinder block material	Aluminium	Aluminium
Cylinderhead material	Aluminium	Aluminium
Combustion chamber type	Pent-roof	Pent-roof
Compression ratio	10.0	10.3
Valves, no/cylinder	4	4
Camshafts	2	2
Engine management system	Microprocessor controlled fuel and ignition system with self diagnostics	
Ignition sequence	1-3-4-2	1-3-4-2
Engine idling speed	750	750 manual/700 automatic
Fuel, rec. octane	91–98 RON	91–98 RON
Max output, kW (hk)/rpm.	80 (109)/5800	90 (122)/5800
Max torque, Nm/rpm.	145/4000	170/4000





TRANSMISSIONS

5-speed manual gearbox. 5-speed adaptive automatic transmission, electronically controlled, with lock-up and winter mode selection.

Ratio	JB3-306	JC5-227	M56-H1	F5-M42	M56-L2	M56-H2	AW 55-50
First	3.36	3.36	3.07	3.58	3.39	3.07	4.77
Second	1.86	1.86	1.77	1.95	1.91	1.77	2.99
Third	1.32	1.32	1.19	1.27	1.19	1.19	1.96
Fourth	1.03	1.03	0.87	0.97	0.87	0.87	1.32
Fifth	0.82	0.82	0.70	0.82	0.65	0.65	1.02
Reverse	3.55	3.55	2.99	3.36	3.30	3.30	3.23

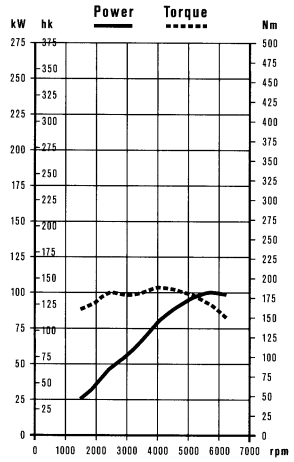
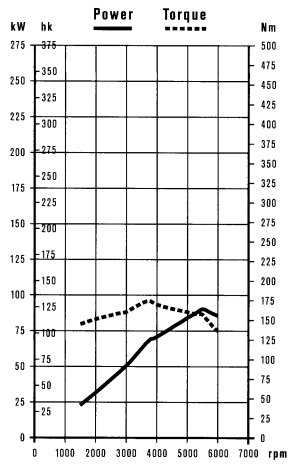
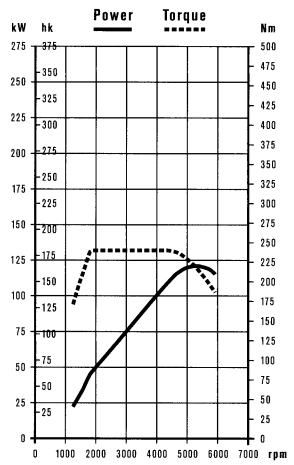
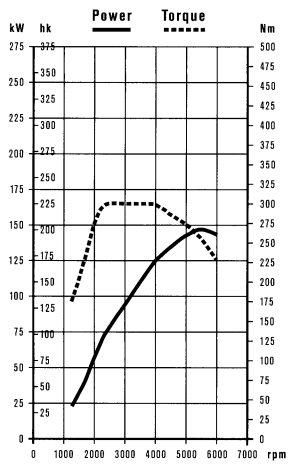
Manual gearbox/final drive	JB3-306/4.07	JC5-227/3.87
Automatic transmission/final drive	–	AW55-50/2.86

PERFORMANCE

Gearbox	Manual	Automatic	Manual	Automatic
Acceleration, 0–100 km/h (sec)	12.0	–	10.5	11.5
Top speed, km/h	190	–	200	195
Fuel consumption l/100 km (EEC 80/1268 1999/100, combined)	7.9		8.1	8.9
CO_2 g/km, combined	185	–	193	212

CHASSIS

Suspension	front	Spring-strut, lower link, anti-roll bar
	rear	Individual, Multi-Link, with coil springs, anti-roll bar
Steering		Rack and pinion, power assisted
Turning circle		10.6 m
Turns of steering wheel lock to lock		3.1
Braking system		ABS discs all round, ventilated at the front + EBD
Brake disc diameter (front/rear)		256/260
DSA (Dynamic Stability Assistance) V40T4/Others		Standard/Option

B4204S2	B4184SJ	B4204T3	B4204T5
In-line 4 cyl. naturally aspirated	In-line 4 cyl. naturally aspirated	In-line 4 cyl., light press. turbo	In-line 4 cyl., high press. turbo
Transverse, front wheel drive	Transverse, front wheel drive	Transverse, front wheel drive	Transverse, front wheel drive
1948	1834	1948	1948
Aluminium	Cast iron	Aluminium	Aluminium
Aluminium	Aluminium	Aluminium	Aluminium
Pent-roof	Pent-roof	Pent-roof	Pent-roof
10.5	11.6	9.0	8.5
4	4	4	4
2	2	2	2
Microprocessor controlled fuel and ignition system with self diagnostics			
1-3-4-2	1-3-4-2	1-3-4-2	1-3-4-2
750 manual/700 automatic	620	750	750
91–98 RON	95–98 RON	91–98 RON	91–98 RON
100 (136)/5800	90 (122)/5500	120 (163)/5250	147 (200)/5500
190/4000	174/3750	240/1800–4500	300/2500–4000
			
M56H1/4.45	F5M42/3.72	M56H1/4.00	M56H2/4.25
AW55-50/2.86	–	AW55-50/2.44	AW55-50/2.44

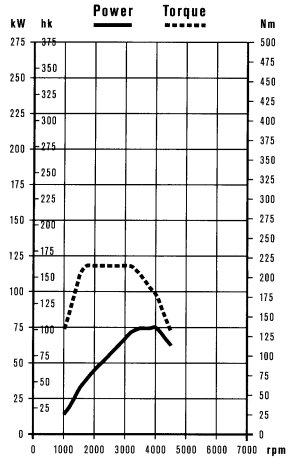
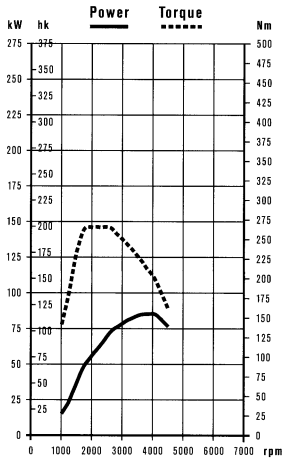
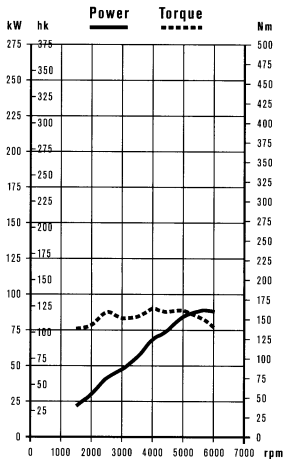
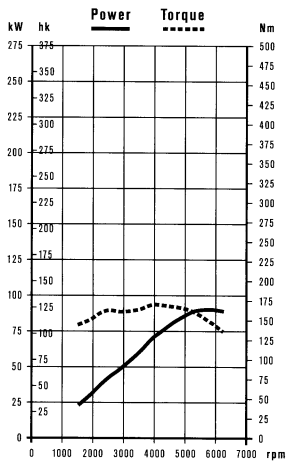
Manual	Automatic	Manual	Automatic	Manual	Automatic	Manual	Automatic
9.7	10.7	10.5	–	8.5	9.0	7.3	8.0
205	200	200	–	220	215	235	230
8.3	9.1	6.9	–	8.3	9.2	8.9	9.5
198	216	164	–	198	217	212	227

MEASUREMENTS AND VOLUMES

Exterior measurements (cm)	
Length	452
Width	172
Height	143
Wheelbase	256
Track, front	147
Track, rear	147
Ground clearance	15
Load height	51/62**
Weights/Miscellaneous	
Weight/kg min.	1280/1341**
Petrol tank, l	60
LPG tank, l	40
Max. trailer weight, kg	1400/1200*
Drag coefficient	0.32–0.33

Interior measurements (cm)	
Headroom with sunroof (front/rear)	96/93
Headroom without sunroof (front/rear)	98/97
Passenger compartment width at shoulder height (front/rear)	137/137
Luggage volume, litres (DIN V211/212/214)	413/751/1421 357/695/1365**
Load length	102/97**
Load length with rear seat folded down	175
Load length with rear seat and front passenger seat folded down	273
Height of luggage compartment	88
Width of luggage compartment between wheel arches	90

*B4164S2, B4184S2, B4184S9 och B4184SJ ** Bi-Fuel

D4192T4/DI	D4192T3/DI	B4184S9 (LPG mode)	B4184S9 (petrol mode)
In-line 4 cyl., turbo diesel	In-line 4-cyl. turbo diesel	In-line 4 cyl. naturally aspirated, Bi-Fuel	In-line 4 cyl. naturally aspirated, Bi-Fuel
Transverse, front wheel drive	Transverse, front wheel drive	Transverse, front wheel drive	Transverse, front wheel drive
1870	1870	1783	1783
Cast iron	Cast iron	Aluminium	Aluminium
Aluminium	Aluminium	Aluminium	Aluminium
–	–	Pent-roof	Pent-roof
19.0	19.0	10.3	10.3
2	2	4	4
1	1	2	2
Integr. fuel/ignition system	Integr. fuel/ignition system	Microprocessor controlled fuel and ignition system with self diagnostics	
1-3-4-2	1-3-4-2	1-3-4-2	1-3-4-2
750	750	750	750
Diesel min cetane 48	Diesel min cetane 48	LPG	91–98 RON
75 (102)/4000	85 (115)/4000	88 (120)/5800	90 (122)/5800
215/1750–3250	265/1750–2500	167/4000	170/4000
			
M56L2/3.77	M56L2/3.77	JC5-227/3.87:1	JC5-227/3.87
–	–	–	–

Manual	Automatic	Manual	Automatic	Manual	Automatic	Manual	Automatic
12.0	–	10.5	–	11.0	–	10.5	–
185	–	195	–	200	–	200	–
5.4	–	5.4	–	10.4 LPG	–	8.1	–
142	–	142	–	168	–	193	–

Volvo S60

ENGINES

	B5244S2	B5244S
Type	In-line 5 cyl. naturally aspirated	In-line 5 cyl. naturally aspirated
Configuration	Transverse, front wheel drive	Transverse, front wheel drive
Displacement, cm^3	2435	2435
Engine cylinder block material	Aluminium	Aluminium
Cylinderhead material	Aluminium	Aluminium
Combustion chamber type	Pent-roof	Pent-roof
Compression ratio	10.3	10.3
Valves, no/cylinder	4	4
Camshafts	2	2
Engine management system	Microprocessor controlled fuel and ignition system with self diagnostics	
Ignition sequence	1-2-4-5-3	1-2-4-5-3
Engine idling speed	750	750
Fuel, rec. octane	91–98 RON	91–98 RON
Max output, kW (hk)/rpm.	103 (140)/4500	125 (170)/5900
Max torque, Nm/rpm.	220/3750	230/4500

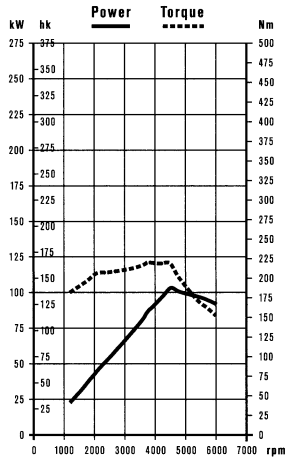
TRANSMISSIONS

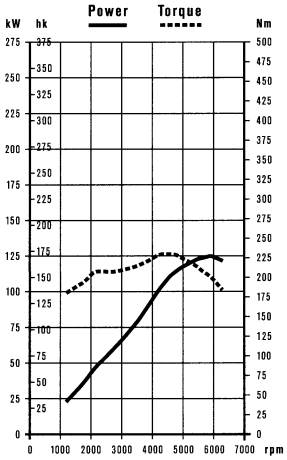
5-speed manual gearbox.

5-speed adaptive automatic transmission, electronically controlled, with lock-up and winter mode selection.

Geartronic available for B5234T3 and B5244T3.

Ratio	M56H	M58 M56LK M56L	M56L2	AW 55-50
First	3.07	3.39	3.39	4.77
Second	1.77	1.91	1.91	2.99
Third	1.19	1.19	1.19	1.96
Fourth	0.87	0.87	0.87	1.32
Fifth	0.70	0.70	0.65	1.02
Reverse	2.99	3.30	3.30	3.23





Manual gearbox/final drive	M56L/4.00	M56H/4.25
Automatic transmission/final drive	AW55-50/2.44	AW55-50/2.44

PERFORMANCE

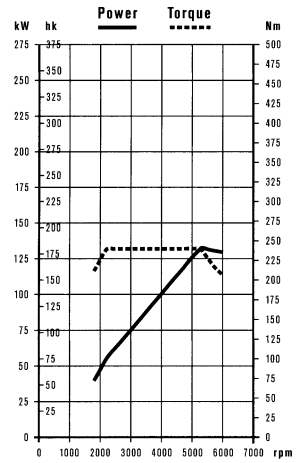
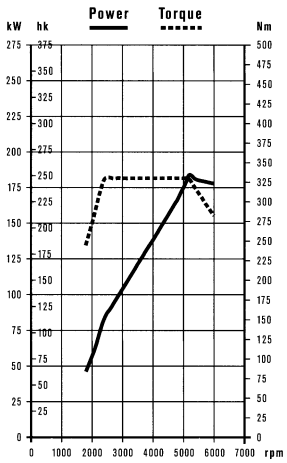
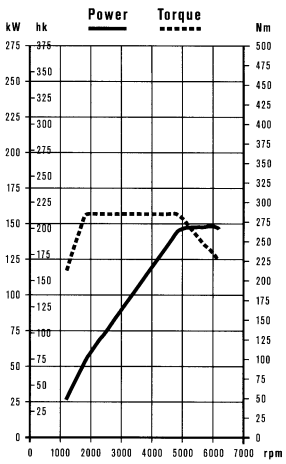
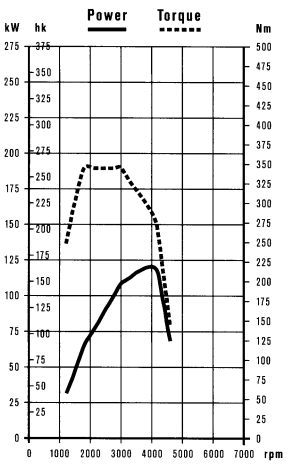
Gearbox	Manual	Automatic	Manual	Automatic
Acceleration, 0–100 km/h (sec)	10.2	11.1	8.7	9.6
Top speed, km/h	210	205	210* (225)	210* (215)
Fuel consumption l/100 km (EC 1999/100, combined) (Figures within brackets valid for lower inertia class)	8.7 (8.6)	9.5 (9.4)	8.9 (8.8)	9.5 (9.4)
CO_2 g/km (Figures within brackets valid for lower inertia class)	207 (204)	228 (225)	214 (211)	228 (225)

* Electronically controlled top speed, values within brackets with the option "no speed limitation".

CHASSIS

Suspension	front	Spring-strut, lower link, anti-roll bar
	rear	Individual, Multi-Link, with coil springs, anti-roll bar
Steering		Rack and pinion, power assisted
Turning circle		10.8 – 11.8 m
Turns of steering wheel lock to lock		3.0 – 2.8
Braking system		ABS system with EBD. Ventilated discs front, discs rear
Brake disc diameter (front/rear)		286/288 (15"), 305/288 (16")

STC	Option (Standard certain markets) Front wheel drive only
DSTC	Option

B5204T5	B5234T3	B5244T3	D5244T
In-line 5 cyl. light press. turbo	In-line 5 cyl., high press. turbo	In-line 5 cyl., light press. turbo	In-line 5 cyl. turbo diesel
Transverse, front wheel drive	Transverse, front wheel drive	Transverse, FWD/AWD	Transverse, front wheel drive
1984	2319	2435	2401
Aluminium	Aluminium	Aluminium	Aluminium
Aluminium	Aluminium	Aluminium	Aluminium
Pent-roof	Pent-roof	Pent-roof	–
9.5	8.5	9.0	18.0
4	4	4	4
2	2	2	2
Microprocessor controlled fuel and ignition system with self diagnostics			Integr. fuel/ignition system
1-2-4-5-3	1-2-4-5-3	1-2-4-5-3	1-2-4-5-3
670	670	670	700
91–98 RON	91–98 RON	91–98 RON	Diesel Min Cetane 48
132 (180)/5300	184 (250)/5200	147 (200)/6000	120 (163)/4000
240/2200–5300	330/2400–5200	285/1800–5000	340/1750–3000
			
M56L/4.25	M56LK/4.00	M56L/4.00 (M58L/4.25**)	M56L2/3.77
AW55-50/2.65	AW55-50/2.44	AW55-50/2.44	AW55-50/2.44

Manual	Automatic	Manual	Automatic	Manual	Automatic	Manual	Automatic
8.8	9.5	6.8	7.1	7.6/8.1**	8.0/8.5**	9.5	9.9
210* (225)	210* (215)	250*	245	210* (230)/210**	210* (225)/210**	210	210
9.2 (9.1)	10.1 (9.9)	9.3 (9.2)	10.2 (10.0)	9.2 (9.1)/10.0 (9.9)**	10.0 (9.9)/10.7 (10.5)**	6.5 (6.3)	7.6 (7.5)
218 (215)	240 (236)	222 (219)	240 (236)	220 (216)/239 (234)**	238 (235)/256 (252)**	171 (166)	201 (199)

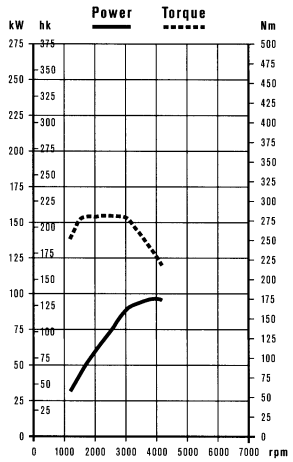
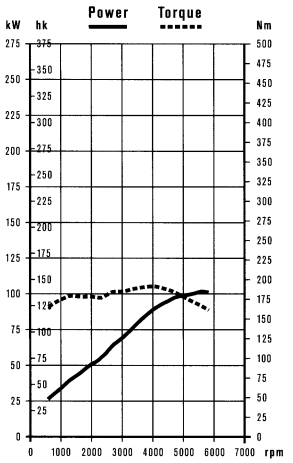
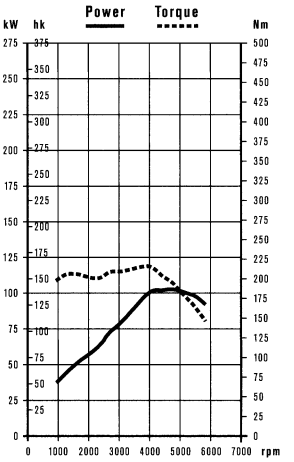
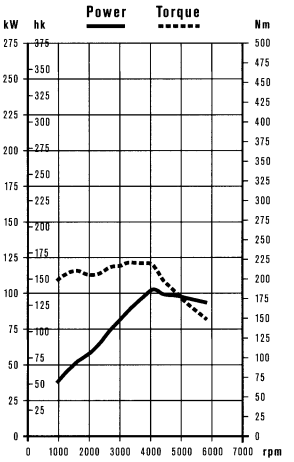
MEASUREMENTS AND VOLUMES

Exterior measurements (cm)	
Length	458
Width	180
Height	143/144*
Wheelbase	272
Track, front	156[1]/155
Track, rear	156[1]/155
Ground clearance	13/12*/15**
Load height	66/68*
Weights/Miscellaneous	
Weight/kg min.	1440
	CNG/LPG 1509/1490

Petrol tank, l	70/29*
CNG tank, Nm³	23
LPG tank, l	50
Max. trailer weight, kg	1600
Drag coefficient	0.28
Interior measurements (cm)	
Headroom with sunroof (front/rear)	99/96
Headroom without sunroof (front/rear)	98/96
Passenger compartment width at shoulder height (front/rear)	143/141
Luggage volume, litres (DIN V210)	424
Load length	105

Load length with rear seat folded down	173
Load length with rear seat and front passenger seat folded down	276
Loading height between cargo floor and parcel shelf	44
Width of luggage compartment between wheel arches	114

*Bi-Fuel **AWD [1]With 15" wheels

D5244T2	B5244SG (CNG mode)	B5244SG2 (LPG mode)	B5244SG/SG2 (petrol mode)
In-line 5 cyl. turbo diesel	In-line 5-cyl., naturally aspirated, Bi-Fuel	In-line 5-cyl., naturally aspirated, Bi-Fuel	In-line 5-cyl., naturally aspirated, Bi-Fuel
Transverse, front wheel drive	Transverse, front wheel drive	Transverse, front wheel drive	Transverse, front wheel drive
2401	2435	2435	2435
Aluminium	Aluminium	Aluminium	Aluminium
Aluminium	Aluminium	Aluminium	Aluminium
–	Pent-roof	Pent-roof	Pent-roof
18.0	10.3	10.3	10.3
4	4	4	4
2	2	2	2
Integr. fuel/ignition system	Microprocessor controlled fuel and ignition system with self diagnostics		
1-2-4-5-3	1-2-4-5-3	1-2-4-5-3	1-2-4-5-3
700	750	750	750
Diesel Min Cetane 48	CNG	LPG	91–98 RON
96 (130)/4000	103 (140)/5800	103 (140)/5100	103 (140)/4500
280/1750–3000	192/4500	214/4500	220/3750
			
M56L2/3.77	M56L/4.00	M56L/4.00	M56L/4.00
AW55-50/2.44	AW55-50/2.44	AW55-50/2.44	AW55-50/2.44

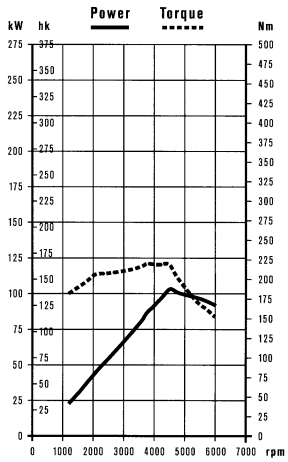
Manual	Automatic	Manual	Automatic	Manual	Automatic	Manual	Automatic
11.6	11.9	10.7	11.6	10.3	11.2	10.2	11.1
200	195	210	205	210	205	210	205
6.5 (6.3)	7.6 (7.5)	7.4 (7.3) Nm^3 CNG	8.2 (8.1) Nm^3 CNG	11.4 (11.2) LPG	12.9 (12.7) LPG	8.8 (8.7)	9.6 (9.5)
171 (167)	201 (199)	161 (159)	178 (176)	185 (182)	209 (206)	211 (206[1]/208[2])	231 (228[1]/227[2])

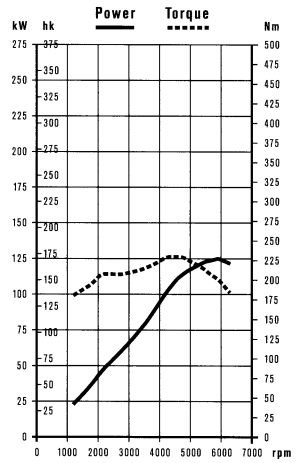
[1]B5244SG [2]B5244SG2

Volvo V70

ENGINES

	B5244S2	B5244S
Type	In-line 5 cyl., naturally aspirated	In-line 5 cyl., naturally aspirated
Configuration	Transverse, front wheel drive	Transverse, front wheel drive
Displacement, cm^3	2435	2435
Engine cylinder block material	Aluminium	Aluminium
Cylinderhead material	Aluminium	Aluminium
Combustion chamber type	Pent-roof	Pent-roof
Compression ratio	10.3	10.3
Valves, no/cylinder	4	4
Camshafts	2	2
Engine management system	Microprocessor controlled fuel and ignition system with self diagnostics	
Ignition sequence	1-2-4-5-3	1-2-4-5-3
Engine idling speed	750	750
Fuel, rec. octane	91–98 RON	91–98 RON
Max output, kW(hk)/rpm.	103 (140)/4500	125 (170)/5900
Max torque, Nm/rpm.	220/3750	230/4500





TRANSMISSIONS

5-speed manual gearbox.
5-speed adaptive automatic transmission, electronically controlled, with lock-up and winter mode selection.
Geartronic available for B5234T3 and B5244T3.

Ratio	M56L M56LK M58L	M56L2	M56H	AW 55-50
First	3.39	3.39	3.07	4.77
Second	1.91	1.91	1.77	3.00
Third	1.19	1.19	1.19	1.96
Fourth	0.87	0.87	0.87	1.32
Fifth	0.70	0.65	0.70	1.02
Reverse	3.30	3.30	2.99	3.23

Manual gearbox/final drive	M56L/4.00	M56H/4.25
Automatic transmission/final drive	AW55-50/2.44	AW55-50/2.44

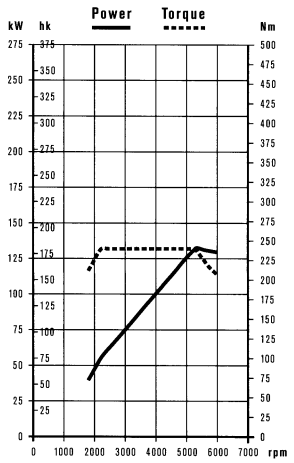
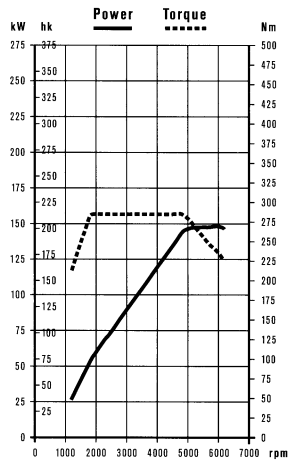
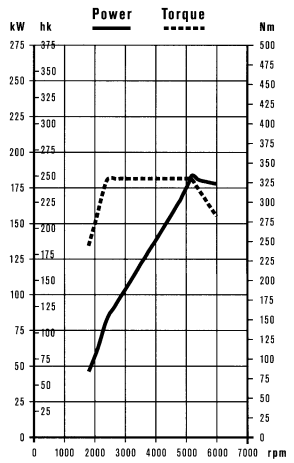
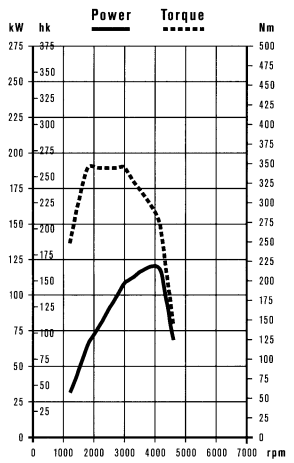
PERFORMANCE

Gearbox	Manual	Automatic	Manual	Automatic
Acceleration, 0–100 km/h (sec)	10.5	11.4	9.0	9.9
Top speed, km/h	205	200	210* (220)	210* (215)
Fuel consumption l/100 km (EU 1999/100, combined) (Figures within brackets valid for lower inertia class)	8.9 (8.8)	9.6 (9.5)	9.1 (9.0)	9.7 (9.6)
CO_2 g/km (Figures within brackets valid for lower inertia class)	214 (211)	229 (226)	219 (216)	231 (228)

* Electronically controlled top speed, values within brackets with the option "no speed limitation".

CHASSIS

Suspension	front	Spring-strut, lower link, anti-roll bar
	rear	Individual Multi-link suspension, anti-roll bar
Steering		Rack and pinion, power assisted
Turning circle		10.9 m (11.9 m with 16" or 17" wheels)
Turns of steering wheel lock to lock		3.0 (2.8 with 16" or 17" wheels)
Braking system		ABS system with EBD. Ventilated discs front, discs rear
Brake disc diameter (front/rear)		286/288 (15"), 305/288 (16")
STC		Option (standard certain markets), front wheel drive only
DSTC		Option

B5204T5	B5244T3	B5234T3	D5244T
In-line 5-cyl., light pressure turbo	In-line 5-cyl., light pressure turbo	In-line 5-cyl., high pressure turbo	In-line 5-cyl. turbo diesel
Transverse, front wheel drive	Transverse, FWD/AWD	Transverse, front wheel drive	Transverse, front wheel drive
1984	2435	2319	2401
Aluminium	Aluminium	Aluminium	Aluminium
Aluminium	Aluminium	Aluminium	Aluminium
Pent-roof	Pent-roof	Pent-roof	–
9.5	9.0	8.5	18.0
4	4	4	4
2	2	2	2
Microprocessor controlled fuel and ignition system with self diagnostics			Integr. fuel/ignition system
1-2-4-5-3	1-2-4-5-3	1-2-4-5-3	1-2-4-5-3
670	670	670	700
91–98 RON	91–98 RON	91–98 RON	Diesel Min Cetane 48
132 (180)/5300	147 (200)/6000	184 (250)/5200	120 (163)/4000
240/2200–5300	285/1800–5000	330/2400 – 5200	340/1750–3000
			
M56L/4.25	M56L/4.00 (AWD M58L/4.25)	M56LK/4.00	M56L2/3.77
AW55-50/2.65	AW55-50/2.44	AW55-50/2.44	AW55-50/2.44

Manual	Automatic	Manual	Automatic	Manual	Automatic	Manual	Automatic
9.1	9.8	7.9/8.6[4]	8.3/9.0[4]	7.1	7.5	9.8	10.2
210* (220)	210	210* (225)/210[4]	210* (220)/210[4]	250*	240	210	210
9.4 (9.2)	10.4 (10.2)	9.3 (9.2)/10.4 (10.2)[4]	10.6 (10.4)/11.0 (10.8)[4]	9.4 (9.3)	10.8 (10.6)	6.7 (6.5)	8.1 (7.9)
223 (219)	247 (243)	222 (219)/249 (245)[4]	252 (248)/263 (259)[4]	225 (221)	258 (254)	177 (171)	215 (209)

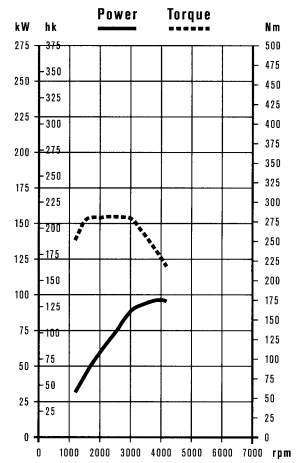
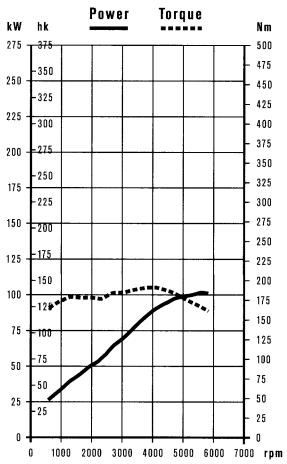
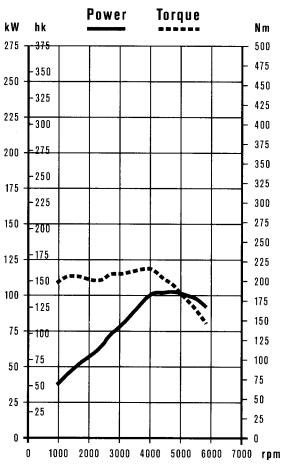
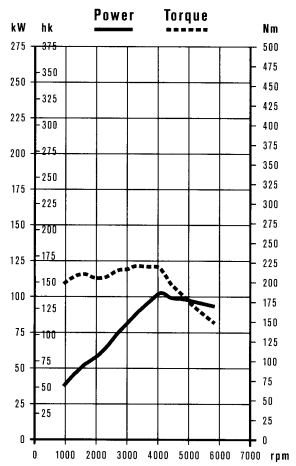
MEASUREMENTS AND VOLUMES

Exterior measurements (cm)	V70
Length	471
Width	180
Height (without rails)	(147) 149/(149) 151[4]
Wheelbase	276
Track, front	156[1]/155
Track, rear	156[1]/155
Ground clearance	13/12[3]/15[4]
Load height	61/64[4]
Weights/Miscellaneous	
Weight/kg min.	1485/1611[4]
CNG/LPG	1569/1550

Petrol tank, l	70/29[3]
CNG tank, Nm[3]	23
LPG tank, l	50
Max. trailer weight, kg	1600[2]/1800
Drag coefficient	0.30
Interior measurements (cm)	
Headroom with sunroof (front/rear)	100/99
Headroom without sunroof (front/rear)	100/99
Passenger compartment width at shoulder height (front/rear)	143/142
Luggage volume, litres (DIN V211/V212/V214)	485/745/1641

Load length	109
Load length with rear seat folded down	185
Load length with rear seat and front passenger seat folded down	282
Height of luggage compartment	81
Width of luggage compartment between wheel arches	113

[1]Track with 15" wheels. [2]B5204T5 automatic. [3]Bi-Fuel [4]AWD [5]B5244SG [6]B5244SG2

D5244T2	B5244SG (CNG mode)	B5244SG2 (LPG mode)	B5244SG/SG2 (petrol mode)
In-line 5 cyl., turbo diesel	In-line 5-cyl., naturally aspirated, Bi-Fuel	In-line 5-cyl., naturally aspirated, Bi-Fuel	In-line 5-cyl., naturally aspirated, Bi-Fuel
Transverse, front wheel drive	Transverse, front wheel drive	Transverse, front wheel drive	Transverse, front wheel drive
2401	2435	2435	2435
Aluminium	Aluminium	Aluminium	Aluminium
Aluminium	Aluminium	Aluminium	Aluminium
–	Pent-roof	Pent-roof	Pent-roof
18.0	10.3	10.3	10.3
4	4	4	4
2	2	2	2
Integr. fuel/ignition system	Microprocessor controlled fuel and ignition system with self diagnostics		
1-2-4-5-3	1-2-4-5-3	1-2-4-5-3	1-2-4-5-3
700	750	750	750
Diesel Min Cetane 48	CNG	LPG	LPG
96 (130)/4000	103 (140)/5800	103 (140)/5100	103 (140)/4500
280/1750–3000	192/4500	214/4500	220/3750
			
M56L2/3.77	M56L/4.00	M56L/4.00	M56L/4.00
AW55-50/2.44	AW55-50/2.44	AW55-50/2.44	AW55-50/2.44

Manual	Automatic	Manual	Automatic	Manual	Automatic	Manual	Automatic
11.9	12.3	11.0	11.9	10.6	11.5	10.5	11.4
200	195	205	200	205	200	205	200
6.7 (6.5)	8.1 (7.9)	7.9 (7.7) Nm^3 CNG	8.5 (8.4) Nm^3 CNG	12.2 (12.0) LPG	13.6 (13.4) LPG	9.1 (9.0)	10.2 (10.0)
177(171)	215 (209)	171 (169)	186 (183)	197 (194)	221 (218)	219 (215[5]/216[6])	244 (240)

Volvo C 70

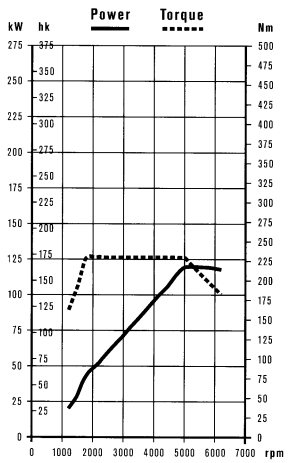
ENGINES

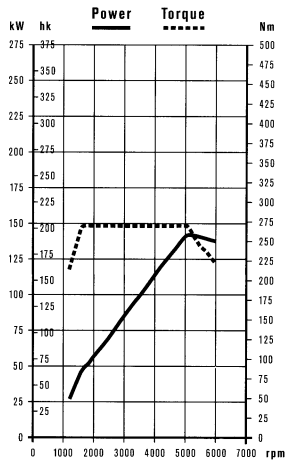
	B5204T4	B5244T	B5234T3
Type	In-line 5 cyl., light press. turbo	In-line 5 cyl., light press. turbo	In-line 5 cyl., turbo
Configuration	Transverse, front wheel drive	Transverse, front wheel drive	Transverse, front wheel drive
Displacement, cm^3	1984	2435	2319
Engine cylinder block material	Aluminium	Aluminium	Aluminium
Cylinderhead material	Aluminium	Aluminium	Aluminium
Combustion chamber type	Pent-roof	Pent-roof	Pent-roof
Compression ratio	9.5	9.0	8.5
Valves, no/cylinder	4	4	4
Camshafts	2	2	2
Engine management system	Microprocessor controlled fuel and ignition system with self diagnostics		
Ignition sequence	1-2-4-5-3	1-2-4-5-3	1-2-4-5-3
Engine idling speed	850	850	850
Fuel, rec. octane	91–98 RON	91–98 RON	91–98 RON
Max output, kW (hk)/rpm.	120 (163)/5100	142 (193)/5100	176 (240)/5400
Max torque, Nm/rpm.	230/1800–5000	270/1600–5000	330/2400–5100

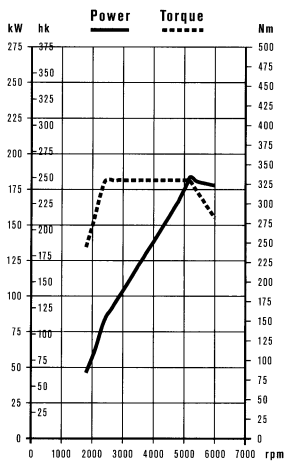
TRANSMISSIONS

5-speed manual gearbox. 5-speed adaptive automatic transmission, electronically controlled, with lock-up and winter mode selection.

Ratio	M56H	M56L2	AW 55-50
First	3.07	3.39	4.77
Second	1.77	1.91	3.00
Third	1.19	1.19	1.96
Fourth	0.87	0.87	1.32
Fifth	0.70	0.65	1.02
Reverse	2.99	3.30	3.23







Manual gearbox/final drive	M56L2/4.25	M56H/4.00	M56H/4.00
Automatic gearbox/final drive	AW55-50/2.65	AW55-50/2.44	AW55-50/2.44

PERFORMANCE

Gearbox	Manual	Automatic	Manual	Automatic	Manual	Automatic
Acceleration, 0–100 km/h (sec)	9.3*/9.9	10.0*/10.7	7.8*/8.5	8.2*/9.0	6.9*/7.5	7.2*/8.0
Top speed, km/h	210*/200	200*/195	225*/210	225*/215	250*/240	240*/230
Fuel consumption l/100 km (EC 199/100, combined)	9.7	10.6	9.5	11.0	9.9	11.2
CO_2 g/km	230	253	226	263	236	268

*coupé

CHASSIS

Suspension	front	Spring-strut, lower link, anti-roll bar
	rear	Semi individual, Delta-Link, coil springs, anti-roll bar
Steering		Rack and pinion, power assisted
Turning circle		11.7 m
Turns of steering wheel lock to lock		3.0
Braking system		ABS system with EBD. Ventilated discs front, discs rear
Brake disc diameter (front/rear)		302/295 mm (16")
		280/295 mm (15")

MEASUREMENTS AND VOLUMES

Exterior measurements (cm)	convertible	coupé
Length	472	472
Width	182	182
Height	143	141
Wheelbase	266	266
Track, front	152	152
Track, rear	152	152
Ground clearance	12	14
Load height	71	71
Weights/Miscellaneous		
Weight, kg	1565	1453
Fuel tank, l	68	68
Max. trailer weight, kg	1600	1600
Drag coefficient	0.34	0.29

Interior measurements (cm)	convertible	coupé
Headroom with sunroof (front/rear)	n.a.	95/93
Headroom without sunroof (front/rear)	99/99	99/93
Passenger compartment width at shoulder height (front/rear)	141/114	141/133
Luggage volume, litres (ISO V210)	262	403
Load length	82	100
Height of luggage compartment	26	50

Volvo Cross Country

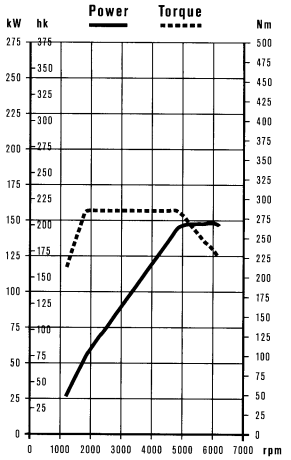
ENGINES

	B5244T3
Type	In-line 5-cyl., light pressure turbo
Configuration	Transverse, all wheel drive
Displacement, cm^3	2435
Engine cylinder block material	Aluminium
Cylinderhead material	Aluminium
Combustion chamber type	Pent-roof
Compression ratio	9.0
Valves, no/cylinder	4
Camshafts	2
Engine management system	Microprocessor controlled...
Ignition sequence	1-2-4-5-3
Engine idling speed	670
Fuel, rec. octane	91–98 RON
Max output, kW (hk)/rpm.	147 (200)/6000
Max torque, Nm/rpm.	285/1800–5000

TRANSMISSIONS

5-speed manual gearbox.
5-speed adaptive automatic transmission, electronically controlled, with lock-up and winter mode selection.
Geartronic available for B5244T3.

Ratio	M58L	AW 55-50
First	3.39	4.77
Second	1.91	3.00
Third	1.19	1.96
Fourth	0.87	1.32
Fifth	0.70	1.02
Reverse	3.30	3.23



Manual gearbox/final drive	M58L/4.45
Automatic transmission/final drive	AW55-50/2.65

PERFORMANCE

Gearbox	Manual	Automatic
Acceleration, 0–100 km/h (sec)	8.6	9.0
Top speed, km/h	210*	200
Fuel consumption l/100 km* (EC 17/1999, combined) (Figures within brackets valid for lower inertia class)	10.5 (10.3)	11.3 (11.1)
CO_2 g/km (Figures within brackets valid for lower inertia class)	251 (248)	270 (266)

* Electronically controlled top speed.

CHASSIS

Suspension	front	Spring-strut, lower link, anti-roll bar
	rear	Individual Multi-link suspension, anti-roll bar
Steering		Rack and pinion, power assisted
Turning circle		11.9 m
Turns of steering wheel end to end		2.8
Braking system		ABS system with EBD. Ventilated discs front, discs rear
Brake disc diameter (front/rear)		305/288 mm

MEASUREMENTS AND VOLUMES

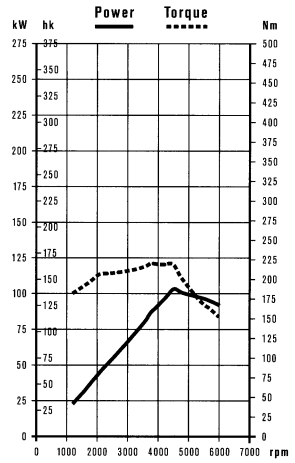
Exterior measurements (cm)	Cross Country
Length	473
Width	186
Height	156
Wheelbase	276
Track, front	161
Track, rear	155
Ground clearance	20
Load height	67
Weights/Miscellaneous	
Weight/kg min.	1630
Fuel tank, l	70
Max. trailer weight, kg	1800
Drag coefficient	0.34

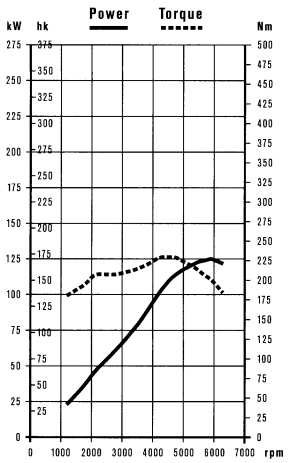
Interior measurements (cm)	
Headroom with sunroof (front/rear)	100/99
Headroom without sunroof (front/rear)	100/99
Passenger compartment width at shoulder height (front/rear)	143/142
Luggage volume, litres (DIN V211/V212/V214)	485/745/1641
Load length	109
Load length with rear seat folded down	185
Load length with rear seat and front passenger seat folded down	282
Height of luggage compartment	81
Width of luggage compartment between wheel arches	113

Volvo S80

ENGINES

	B5244S2	B5244S
Type	In-line 5 cyl., naturally aspirated	In-line 5 cyl., naturally aspirated
Configuration	Transverse, front wheel drive	Transverse, front wheel drive
Displacement, cm^3	2435	2435
Engine cylinder block material	Aluminium	Aluminium
Cylinderhead material	Aluminium	Aluminium
Combustion chamber type	Pent-roof	Pent-roof
Compression ratio	10.3	10.3
Valves, no/cylinder	4	4
Camshafts (overhead)	2	2
Engine management system	Microprocessor controlled fuel and ignition system with self diagnostics	
Ignition sequence	1-2-4-5-3	1-2-4-5-3
Engine idling speed	750	750
Fuel, rec. octane	91–98 RON	91–98 RON
Max output, kW (hk)/rpm.	103 (140)/4500	125 (170)/5900
Max torque, Nm/rpm.	220/3750	230/4500





TRANSMISSIONS

5-speed manual gearbox. 4-speed adaptive automatic transmission, electronically controlled, with lock-up and winter mode selection for B6284T/B6294S. Geartronic manual shiftmode standard for B6284T, option for B6294S. 5-speed adaptive automatic transmission, electronically controlled with lock-up and winter mode selection for all other engines.

Ratio	M56H	M56L	M56L2	AW 55-50	GM4T65-E(97)	GM4T65-E(90)
First	3.07	3.39	3.39	4.77	3.28	2.92
Second	1.77	1.91	1.91	3.00	1.76	1.57
Third	1.19	1.19	1.19	1.96	1.12	1.00
Fourth	0.87	0.87	0.87	1.32	0.79	0.71
Fifth	0.70	0.70	0.65	1.02	–	–
Reverse	2.99	3.30	3.30	3.23	2.67	2.39

Manual gearbox/final drive	M56L/4.00	M56H/4.25
Automatic transmission/final drive	AW55-50/2.44	AW55-50/2.44

PERFORMANCE

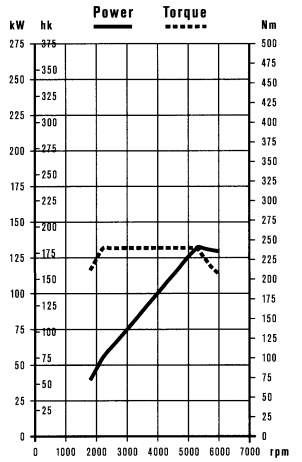
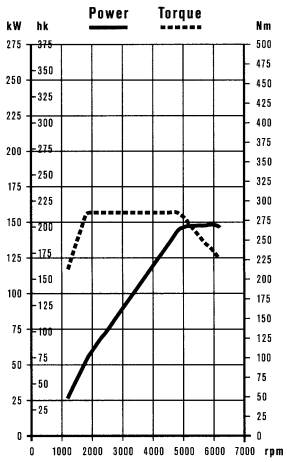
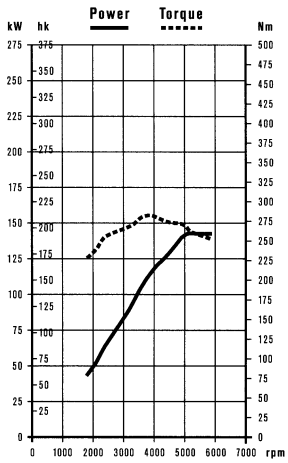
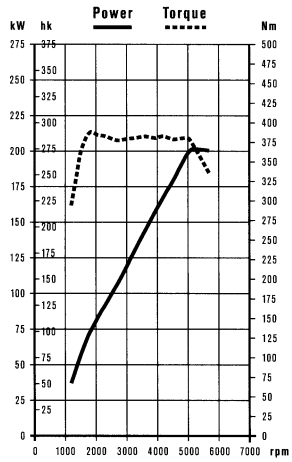
Gearbox	Manual	Automatic	Manual	Automatic
Acceleration, 0–100 km/h (sec)	10.5	11.4	9.0	9.9
Top speed, km/h	205	200	210* (220)	210* (215)
Fuel consumption l/100 km (EU 1999/100, combined) (Figures within brackets valid for lower inertia class)	8.9 (8.8)	9.6 (9.5)	9.0 (8.9)	9.7 (9.6)
CO_2 g/km (Figures within brackets valid for lower inertia class)	211 (208)	229 (226)	215 (212)	231 (228)

* Electronically controlled top speed. Figures within brackets with the option "no speed limitation"

CHASSIS

Suspension	front	Spring-strut, lower link, anti-roll bar	
	rear	Individual Multi-link suspension, anti-roll bar	
Steering		Rack and pinion, power assisted	
Turning circle		10.9 m*, 12.0 m**	
Turns of steering wheel lock to lock		3.2*, 2.9**	
Braking system		ABS system with EBD. Ventilated discs front, discs rear	
Brake disc diameter		15"	16"
(front/rear)		286/288 mm	305/288 mm
STC		Option (Standard certain markets)	
DSTC		Option	

* 15" wheels ** 18" wheels

B5204T5	B5244T3	B6294S2	B6294T
In-line 5 cyl., light press. turbo	In-line 5 cyl., light press. turbo	In-line 6 cyl., naturally aspirated	In-line 6 cyl., biturbo
Transverse, front wheel drive	Transverse, front wheel drive	Transverse, front wheel drive	Transverse, front wheel drive
1984	2435	2922	2922
Aluminium	Aluminium	Aluminium	Aluminium
Aluminium	Aluminium	Aluminium	Aluminium
Pent-roof	Pent-roof	Pent-roof	Pent-roof
9.5	9.0	10.5	8.5
4	4	4	4
2	2	2	2
Microprocessor controlled fuel and ignition system with self diagnostics		Microprocessor controlled fuel and ignition system with self diagnostics	
1-2-4-5-3	1-2-4-5-3	1-5-3-6-2-4	1-5-3-6-2-4
670	670	650	650
91–98 RON	91–98 RON	91–98 RON	91–98 RON
132 (180)/5300	147 (200)/6000	144 (196)/5200	200 (272)/5200
240/2200–5300	285/1800–5000	280/3900	380/1800–5000
			
M56L/4.25	M56L/4.00	–	–
AW55-50/2.65	AW55-50/2.44	GM4T65E(97)/3.69	GM4T65E(90)/3.29

Manual	Automatic	Manual	Automatic	Manual	Automatic	Manual	Automatic
9.1	9.8	7.9	8.5	–	8.9	–	7.2
210 *(225)	210* (215)	210* (230)	210* (220)	–	210* (225)	–	250*
9.4 (9.3)	10.4 (10.2)	9.3 (9.2)	10.2 (10.0)	–	10.8 (10.6)	–	11.3 (11.1)
223 (220)	246 (243)	222 (219)	242 (238)	–	259 (255)	–	272 (268)

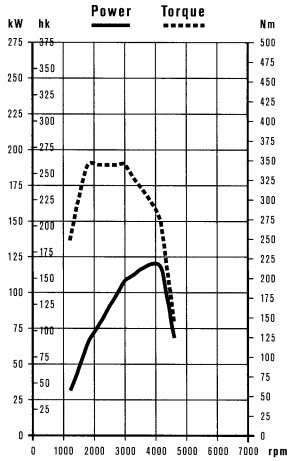
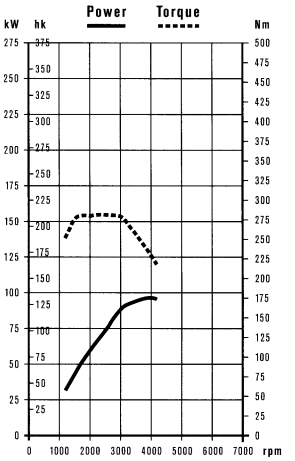
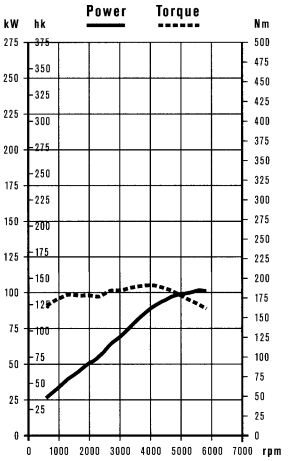
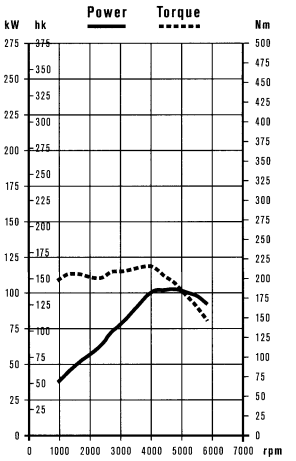
MEASUREMENTS AND VOLUMES

Exterior measurements (cm)	
Length	482
Width	183
Height	145/147*
Wheelbase	279
Track, front	158[1]/157
Track, rear	156[1]/155
Ground clearance	15/12[4]
Load height	66/67*
Weights/Miscellaneous	
Weight, kg	1465 (CNG 1539, LPG 1520)
Petrol tank, l	80[2]/70/29[4]
CNG tank, Nm[3]	23
LPG tank, l	50

Max. trailer weight, kg	1600[3]/1800
Drag coefficient	0.28
Interior measurements (cm)	
Headroom with sunroof (front/rear)	95/96
Headroom without sunroof (front/rear)	99/96
Passenger compartment width at shoulder height (front/rear)	147/145
Luggage volume, litres (ISO V210)	460
Load length	111
Load length with rear seat folded down	192
Load length with rear seat and front passenger seat folded down	292

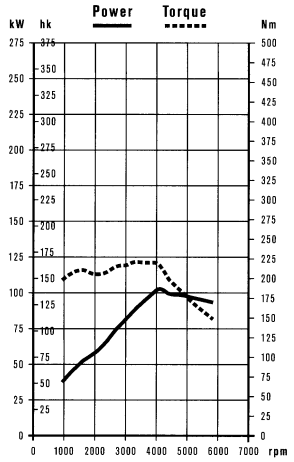
Height of luggage compartment	44
Width of luggage compartment between wheel arches	114

[1]With 15" wheels [2]6-cyl and 5-cyl petrol turbo engines [3]B5204T5 automatic version [4]Bi-Fuel [5]LPG [6]CNG

D5244T	D5244T2	B5244SG (CNG mode)	B5244SG2 (LPG mode)
In-line 5 cyl., turbo diesel	In-line 5 cyl., turbo diesel	In-line 5 cyl., naturally aspirated Bi-Fuel	In-line 5 cyl., naturally aspirated Bi-Fuel
Transverse, front wheel drive	Transverse, front wheel drive	Transverse, front wheel drive	Transverse, front wheel drive
2401	2401	2435	2435
Aluminium	Aluminium	Aluminium	Aluminium
Aluminium	Aluminium	Aluminium	Aluminium
–	–	Pent-roof	Pent-roof
18.0	18.0	10.3	10.3
4	4	4	4
2	2	2	2
Integr. fuel/ignition system	Integr. fuel/ignition system	Microprocessor controlled fuel and ignition system with self diagnostics	
1-2-4-5-3	1-2-4-5-3	1-2-4-5-3	1-2-4-5-3
700	700	750	750
Diesel Min Cetane 48	Diesel Min Cetane 48	CNG	LPG
120 (163)/4000	96 (130)/4000	103 (140)/5800	103 (140)/5400
340/1750–3000	280/1750–3000	192/4500	210/3750
			
M56L2/3.77	M56L2/3.77	M56L/4.00:1	M56L/4.00
AW55-50/2.44	AW55-50/2.44	AW55-50/2.44:1	AW55-50/2.44

Manual	Automatic	Manual	Automatic	Manual	Automatic	Manual	Automatic
9.8	10.2	11.9	12.3	11.0	11.9	10.6	11.5
210	210	200	195	205	200	205	200
6.5	7.8 (7.7)	6.5	7.8 (7.7)	7.5 (7.4) Nm³ CNG	8.6 (8.5) Nm³ CNG	11.6 (11.4) LPG	13.3 (13.1) LPG
172	207 (204)	172	207 (204)	164 (162)	187 (184)	187 (184)	215 (212)

B5244SG/SG2 (petrol mode)
In-line 5 cyl., naturally aspirated Bi-Fuel
Transverse, front wheel drive
2435
Aluminium
Aluminium
Pent-roof
10.3
4
2
Microprocessor controlled...
1-2-4-5-3
750
91–98 RON
103 (140)/4500
220/3750



M56L/4.00
AW55-50/2.44

Manual	Automatic
10.5	11.4
205	200
8.9 (8.8)	10.0[5]/10.1[6] (9.9)
213 (210[5]/211[6])	246[5]/240[6] (242[5]/236[6])

CNG Guide

	S60 CNG man	S60 CNG aut	V70 CNG man	V70 CNG aut	S80 CNG man	S80 CNG aut
Refillable gas volume, Nm3	21	21	21	21	21	21
Refillable weight, kg pure methane	15,1	15,1	15,1	15,1	15,1	15,1
Refillable weight, kg North Sea gas	17,6	17,6	17,6	17,6	17,6	17,6
EU combined – pure methane gas						
Cert. fuel consumption, m3/100 km	9,0	10,0	9,6	10,4	9,2	10,5
Fuel consumption, Nm3/100 km	8,2	9,1	8,7	9,5	8,4	9,5
Fuel consumption, kg/100 km	5,9	6,5	6,3	6,8	6,0	6,9
Range, kms	257	231	241	222	251	220
EU combined – North Sea gas						
Fuel consumption, Nm3/100 km	7,4	8,2	7,9	8,5	7,5	8,6
Fuel consumption, kg/100 km	6,2	6,9	6,6	7,1	6,3	7,2
Range, kms	285	257	267	247	279	245
EU extra urban driving cycle – pure methane gas						
Cert. fuel consumption, m3/100 km	6,7	7,4	7,5	7,8	7,1	7,9
Fuel consumption, Nm3/100 km	6,1	6,7	6,8	7,1	6,5	7,2
Fuel consumption, kg/100 km	4,4	4,8	4,9	5,1	4,6	5,2
Range, kms	345	312	308	296	325	292
EU extra urban driving cycle – North Sea gas						
Fuel consumption, Nm3/100 km	5,5	6,1	6,1	6,4	5,8	6,5
Fuel consumption, kg/100 km	4,6	5,1	5,2	5,4	4,9	5,4
Range, kms	383	347	342	329	362	325
EU urban driving cycle – pure methane gas						
Cert. fuel consumption, m3/100 km	12,9	14,4	13,3	14,9	12,8	15,1
Fuel consumption, Nm3/100 km	11,7	13,1	12,1	13,5	11,6	13,7
Fuel consumption, kg/100 km	8,4	9,4	8,7	9,8	8,4	9,9
Range, kms	179	160	174	155	180	153
EU urban driving cycle – North Sea gas						
Fuel consumption, Nm3/100 km	10,6	11,8	10,9	12,2	10,5	12,3
Fuel consumption, kg/100 km	8,9	9,9	9,1	10,2	8,8	10,4
Range, kms	199	178	193	172	201	170

Explanation of Methane /Natural gas units

1 kg pure methane will last as long as 1.05 kg of Danish natural gas. Official certification values are expressed in m^3 of pure methane, commercially sold natural gas is measured in Nm^3 or kg.

Conversion table	kg	Nm^3 (0°C)	m^3 (15°C)
pure methane	1.00	1.39	1.53
Danish natural gas	1.00	1.19	1.26
pure methane	0.72	1.00	1.10
Danish natural gas	0.84	1.00	1.06

Note!

- Fillable volume and operating range will increase with up to 10% when using slow fill stations
- Values for Danish North Sea Gas shown above to illustrate differences compared with pure methane gas
- There are many different gas qualities, also gas with up to 15% lower energy content and operating range
- Above shown values are valid for cars equipped with all conceivable options. Some cars with less option choices will end up in a lower inertia weight class, resulting in about 1,5% lower fuel consumption, and about 1,5% increased operating range