

# **VOLVO C70 CONVERTIBLE**

## **FEATURES & BENEFITS**



# CONTENTS

Introduction .....	3
Marketing message .....	5
Design .....	6
Driving pleasure .....	8
Pleasure to own .....	12
Safety .....	16
Quality .....	22
Environment .....	23
Technical description .....	24
Six position demonstration .....	31
Specifications .....	34

# INTRODUCTION

## FEATURES AND BENEFITS

*Features and Benefits* is a study and reference source which, in a simple and easily accessible manner, relates the technical characteristics of Volvo cars to the benefits which they afford our customers. This publication describes the unique engineering and customer benefits of the *Volvo C70* Convertible.

A convertible is an unusual model for Volvo and, since it is aimed at target groups which are new to some extent, a high level of product knowhow is essential to sell it successfully.

The booklet is divided into the main headings - Design, Driving pleasure, Pleasure to own, Safety, Quality and Environment. These are followed by a section containing a technical description and specifications. The Features and Benefits marked **I** are further described in the technical description.

Take the time to go through the car itself and its functions with *Features and Benefits* as your guide.

## MORE INFORMATION

This publication deals with characteristics which are unique to the *Volvo C70* Convertible, but also characteristics in Volvo cars in general. Other valuable information is available in the *Volvo S70/V70* Features and Benefits, the owner's manual, customer brochures and CD-I disc.



# **VOLVO C70 CONVERTIBLE**



# MARKETING MESSAGE

## ROLE AND POSITIONING

The introduction of the Volvo C70 Convertible emphasizes Volvo's aim to develop niche cars combining attractive styling, a high level of comfort and driving pleasure with traditional values such as quality, safety and environmental care.

The Volvo C70 Convertible is intended to be perceived as a most desirable product by the buyers of prestige convertibles. These buyers are strongly influenced by emotional factors when choosing a new car and they often take the decision to buy quickly. We expect the convertible to attract more female buyers than the coupe model.

In this context, the special image and feel of the model is very important. The visual impression, comfort and driving pleasure are, in general, more important to the convertible buyer than high engine power. Volvos strong image when it comes to safety will also create an interest for the safety features among the buyers.

## COMMUNICATION

Since we are aiming for buyers who don't hesitate to express and live their passions, you must communicate the Volvo C70 Convertible using emotionally charged arguments. Stress that the model offers an opportunity to enjoy open top driving to the full by having the best of two worlds. Style, comfort and driving pleasure combined with Volvo's practical qualities like safety and quality.

The Volvo C70 Convertible stands for individuality and freedom of the highest order. Design, comfort and driving pleasure are the most important messages.







# DESIGN

Design will be one of your strongest arguments. The Volvo C70 Convertible combines modern Scandinavian design with a sophisticated, sporty elegance of an extremely high order. The Volvo C70 is a unique model incorporating elements of Volvo's award-winning design philosophy. Externally, a choice of 13 colours, combined with a Volvo-designed series of wheels, contribute to the exclusive appearance of the model. The top comes in four alternative colours, which takes the concept of a customized car even further.

The interior is also distinguished by top-class, up-to-the-minute elegance. Colour-coordinated components, such as the instrument panel, seat belts and soft textile carpets, together with a choice of four interior trim combinations, provide the owner with the means of customizing the interior to his or her own standards of individuality and taste.

## COLOURS

The Volvo C70 convertible is available in 13 colours: solid, metallic and pearl. See the customer brochure and CD-I disc for detailed information.



## WHEELS

A wide choice of wheels is available. 16" and 17" wheels are standard. 18" wheels are accessories.



#### FOLDABLE TOP

The foldable top is available in four alternative exterior colours: black, blue, red and beige. Black top is standard. The top interior is black.



#### COLOUR COORDINATION

Different colour-coordinated components, such as the instrument panel, steering wheel and seat belts, increase the range of individual customization options.

#### INTERIOR THEME

The interior theme permits four colour-coordinated interior trim options, oak, granite, dark grey and light beige.

#### UPHOLSTERY

Different upholstery options will be available, including soft leather for the seats.

#### CARPETS

Soft textile carpets are standard.

#### WOOD TRIM

Red walnut wood trim is an option.





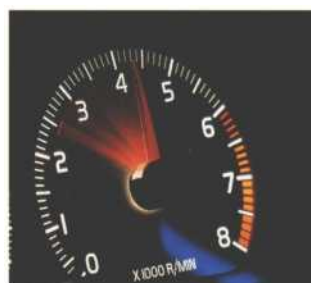
# DRIVING PLEASURE

Although style and comfort are on top of the convertible owners priority list, he or she also demands excellent handling properties and a high level of driving pleasure.

The Volvo C70 Convertible has been designed to live up to these demands. The sporty, ergonomically designed driver environment, chassis with extraordinary characteristics and the turbo engines are all contributing to the driving pleasure which will be appreciated by most convertible owners.

## ENGINES

The smooth running of the engines in all manual variants has been enhanced by the provision of a double-mass flywheel.



## DRIVEABILITY, POWER AND TORQUE



Excellent driveability, power and torque are available over a wide speed range.

The double overhead camshafts, four valves per cylinder, and a turbo with intercooler afford high engine output for rapid acceleration and quick engine response.





## DRIVING PLEASURE ENGINES

### LIGHT, COMPACT ENGINE

The extremely light and compact five-cylinder, transversely mounted engines afford high power, smooth, vibration-free running and good weight distribution.



### TURBO ENGINES

The turbo engines provide for high performance combined with high torque at low engine speeds from a compact engine unit.



### STARTING SAFETY IN AUTOMATICS

For greater safety when getting started with an automatic, the brake pedal must be pressed down when changing the gear selector lever from the 'P' position.

If a problem is encountered, the shift lock can be disabled using the 'Shiftlock override' button.

## DRIVING PLEASURE TRANSMISSION

### MANUAL TRANSMISSION



The manual transmission enables the driver to drive in a active manner.

### AUTOMATIC TRANSMISSION DRIVING MODES

Driving of the Volvo C70 is simplified by automatic selection of the driving mode to suit individual driving styles, in what is known as adaptive control. The 'W' mode for starting and driving in icy conditions is retained and is located beside the gear selector lever.



#### ADJUSTABLE STEERING WHEEL

To provide the driver with a perfect driving position, the steering-wheel is adjustable for both reach and height.

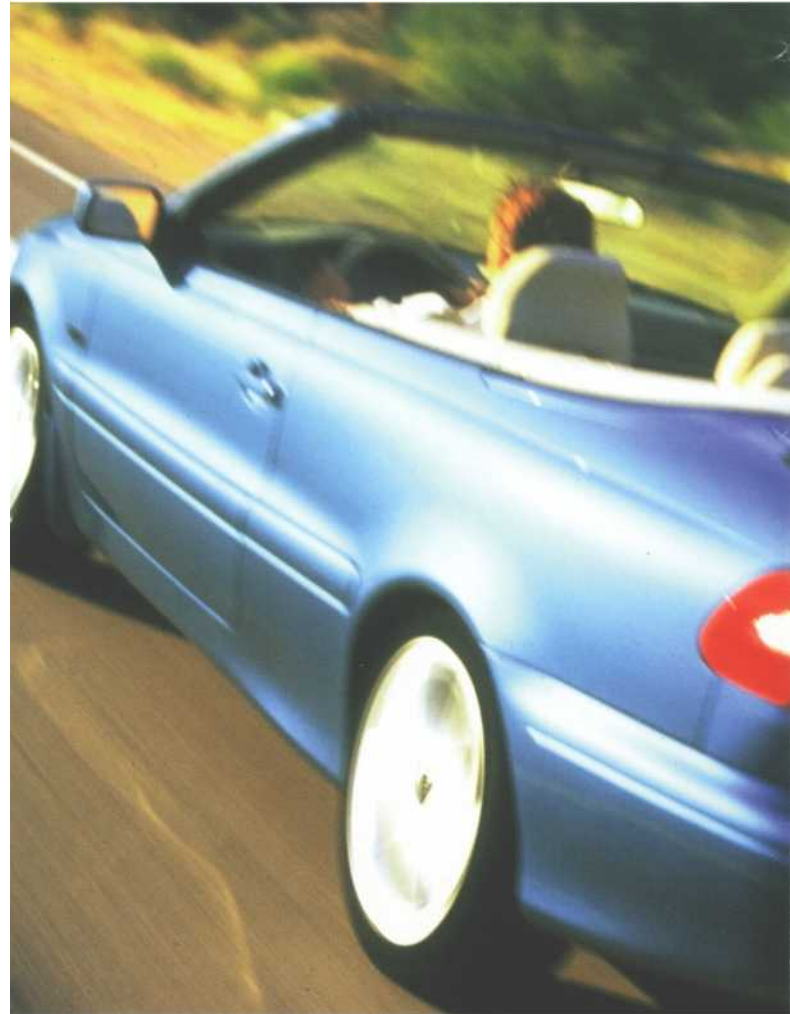
#### STEERING

A quick steering response is contributing to driving pleasure. The rack-and-pinion steering system is designed to produce precise steering with good feeling.

The Delta-link rear wheel suspension is equipped with steering-links, which also enhance the steering response and at the same time contributes to maintain stability.



#### DRIVING PLEASURE CHASSIS



#### CHASSIS



The driving behavior and also the riding comfort is to a great extent dependent of the stiffness and softness of the chassis.

The softer Comfort chassis gives the Volvo C70 Convertible a high degree of riding comfort. The stiffer Dynamic and Low Dynamic chassis gives a more sporty and distinct roadholding. Comfort is standard with the LPT engine and Dynamic is standard with the HPT engine. Low Dynamic is the stiffest chassis, available only as an option.



#### TIRES AND WHEELS

The excellent handling is assisted by tires which afford maximum roadholding. Aluminium wheels are standard. The standard tire size is 225/50x16 or 225/45x17.

225/40x18 tires are available as accessories.





#### TORSIONAL STIFFNESS

An important part of the excellent handling properties is the stiff body. The reinforced body combined with V-shaped reinforcements in the sub-frame provides high torsional stiffness, which also increases the driving safety.

## DRIVING PLEASURE INTERIOR

#### SPORTY SEATS

The seats, which have been designed especially for the Volvo C70, contribute to active driving, a distinct sense of road feel and a stable seating position, even during hard cornering.

#### WIDE TRACK

A wide rear track, together with front and rear anti-roll bars, ensure superb road holding, a more sporty character and reduced roll,

#### WINDBLOCKER

For reduced draft for the occupants in the front seat a windblocker can be mounted. This is accessory and is mounted behind the front seats. It will also give the convertible a distinctive two-seater-look.





# PLEASURE TO OWN

Customer satisfaction is a concept which is difficult to define. It is based on a number of factors which interact to create the agreeable feeling that one has chosen the right car.

The Volvo C70 Convertible comes with a range of features which make the models pure pleasure to own: Up-to-the-minute design, excellent handling, comfort, convenience and, last but not least, unique audio systems.

It is important that you are familiar with these features since they are of major significance in ensuring that the Volvo C70 Convertible meets the high expectations of convertible buyers.



## CLIMATE COMFORT

A pleasant interior climate contributes not only to driving and riding comfort but also makes driving safer. For convenience and for saving fuel, the fully automatic ECC (Electronic Climate Control) switches automatically to a manual AC function when the top is down.



## AUTO-DOWN WINDOWS

All four windows are equipped with the convenient auto-down function. A single touch of the button winds all four side-windows all the way down.





## PLEASURE TO OWN INTERIOR



### INTERIOR LIGHTING

To provide convenient lighting for all occupants in the car the main interior lights are integrated in the center rear-view mirror and rear reading lamps in the loudspeaker grills. There are also door step courtesy lights under the dashboard and lamps over the vanity mirrors.



### FRONT SEATS

The front seats are provided with a wide range of adjustments to ensure a perfect seating position. The cushion angle can be adjusted individually at the front and rear using a convenient control on the side of the seat. The lumbar supports are also adjustable and electrically heated seats are available as an option.

All seats are the product of many years of collaboration with medical experts. Power-operated front seats with 3 position memory are available for driver/passenger seats. (Mechanical seats are standard.)



### REAR SEAT

The C70 convertible is a genuine four-seater. The rear seat has two individual seats, offering ample space for two adults. The seats are placed towards the center of the car to provide improved forward visibility for the passengers.



### REAR SEAT COMFORT

To increase the comfort for the back seat passengers, the optional sub-woofers behind the rear seat can be turned off by pushing a button on the center console. The console also includes push-buttons for operating the rear windows and a 12V connector.



### REAR SEAT ENTRY



Entry to the rear seat is easy with a function that moves the front seat forward when the backrest is folded. The folding function of the electrically operated seat differs from the function of the manually operated seat.

## PLEASURE TO OWN INTERIOR

### AUTOMATIC ANTI-GLARE MIRROR

The interior rear-view mirror is provided with a fast, automatic electrochromatic anti-glare function (option) which prevents the driver from being disturbed by glare of headlights from behind.



### LUGGAGE RACK

For extra luggage there is an accessory rack, that can be mounted on the trunk lid.



### CARRYING LONG ITEMS

The rear centre armrest is removable to allow the optimum utilization of the opening. For protection of the upholstery there is a protective bag behind the removable rear armrest.

## PLEASURE TO OWN TOP



### AUTOMATIC TOP



The top is easily folded and unfolded by pushing a single button on the dashboard. There are no manual levers or handles to operate. For safety reasons the car must be standing still and the parking brake must be applied when operating the top.

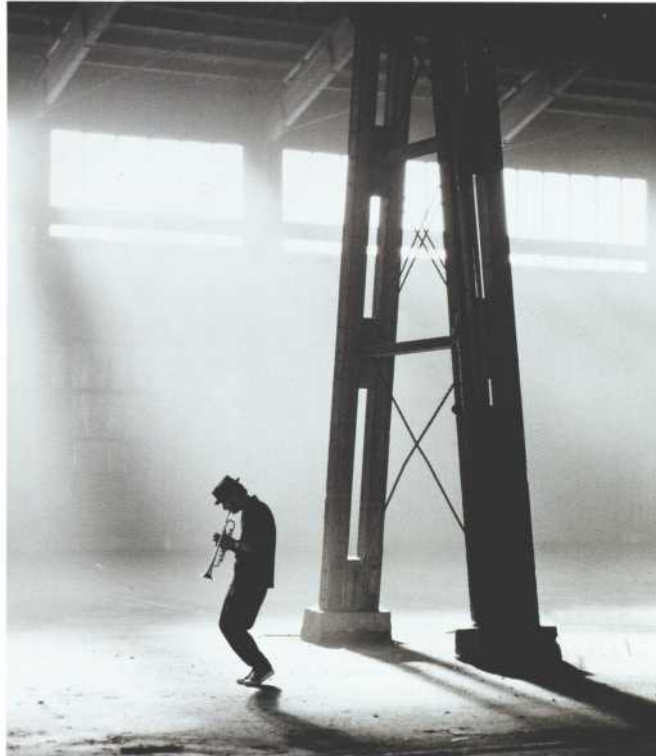




## PLEASURE TO OWN AUDIO

### WORLD-CLASS COLLABORATION

The car boasts the best conceivable sound quality thanks to factory-fitted equipment of the highest quality. The speakers were developed by Dynaudio of Denmark, one of the world's top loudspeaker manufacturers. You can choose between 10, 12 or 13 speakers.



### LOW NOISE LEVEL

Low noise level when driving is provided by the two-layer foldable top combined with a tight fit between the top and the car body. The car is also equipped with other sound-proofing features in the body and the chassis.

The two layers of the top also add to the climate comfort as they provide an insulation effect.



### AMPLIFIERS AND LOUDSPEAKERS

A choice of high performance audio systems are available. The SC-901 with a three-disc CD changer is complemented by a 4x100 W amplifier. This option can include the Dolby Surround Pro Logic System.

The addition of the Pro Logic option brings the convertible to 13 speakers including the coaxial centre speaker in the center dash position and two 9" subwoofers behind the rear seat backrest.

The C70 is also pre-wired for a six-disc CD changer - one of the smallest units of its type in the world - in the boot. The CD changer is available as option.

### AUTOMATIC VOLUME CONTROL

The audio system features volume control which adjusts automatically to the speed of the car.



### BEST SOUND QUALITY ON THE MARKET

The Volvo C70 was the first car in the world to be available with the Dolby Surround ProLogic System. The system delivers a 'wrap around' sound which transforms the car into a concert hall!



### DIVERSITY

The Volvo C70 Convertible is equipped with two antennas, one electrical operated at the rear and one concealed in the rear bumper, which interact to provide the best possible reception, avoiding "dead spots".

STANDARD EQUIPMENT



# SAFETY

The reputation of Volvo cars being among the safest in the world has been recognized by a series of international awards, reports and tests.

It goes without saying that the Volvo C70 Convertible has been designed to provide all occupants with a high level of safety.

The Volvo C70 Convertible is equipped with a series of features and systems which help the driver to avoid accidents (driving safety) and others which protects all occupants if an accident is unavoidable (crash safety).

The special challenge for a convertible is to protect the occupants in a roll-over situation. The Volvo C70 Convertible therefore has a sophisticated, tailor-made Roll Over Protection System (ROPS).

## CRUMPLE ZONES

The Volvo C70 Convertible is equipped with well-dimensioned energy absorption zones at the front and rear to limit the forces on the occupants in the event of a collision. These ensure that the car deforms in a controlled, predetermined manner.



## DOORS

As part of the impact protection system, the doors are reinforced by two strong members. The one in the middle of the door is made of hardened boron alloy steel.



## STEERING WHEEL AND COLUMN

Increased driver safety with a energy absorbing steering-wheel and collapsible steering-column, which doesn't intrude in the compartment in case of an accident.

## TWIN LONGITUDINAL MEMBERS

Twin longitudinal members on each side increase the energy-absorbing capacity and reduce the load on the occupants in the event of a collision. The lower members are curved outward behind the front wheels and are connected to the door sills to guide the front wheels outward, away from the passenger compartment.







#### ANTI-SUBMARINING PROTECTION

Improved safety against submarining is provided by the raised front edge of both the front and rear seat cushions. Combined with the low position of the seat belt lock, this prevents the occupant from sliding underneath the belt.



#### SIPS



The Side Impact Protection System (SIPS) has been modified to suit the convertible. The structure around the passenger compartment is shaped like a horseshoe, which absorbs and dissipates the collision energy very efficiently in case of a side or rear impact.



#### ROLL-OVER PROTECTION

The Roll Over Protection System (ROPS) protects the occupants should the convertible roll over. The reinforced windscreen pillar and windscreen frame combined with automatic roll-over bars at the rear, are designed to provide top-class protection.



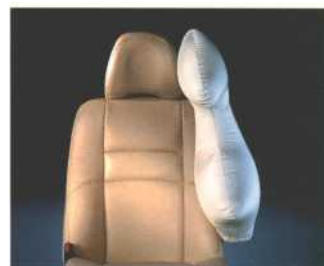
#### AIRBAGS

Protection against impact with the steering wheel is provided by a driver's airbag combined with a seat belt and belt pretensioner. The passenger airbag protects the passenger from injury by being thrown against the dashboard. The passenger airbag is an option. Note: if the passenger seat has an airbag, a child seat must never be used in the front passenger seat. The airbags are equipped with a two-level control logic based on the use of the seat belts. When the driver/passenger is using his or her belt, the airbag is deployed only at the upper level.

#### SIDE IMPACT AIRBAGS



The risk of serious injury in a side collision is reduced by about 35% by the Volvo side airbag (SIPs bag) combined with the SIPS system. The bag is deployed in around a hundredth of a second in the event of a side impact. The SIPsbags in the Volvo C70 are now bigger, affording improved head protection in side collisions.



#### WHIPS



Volvo's new Whiplash Protection system (WHIPS) provides markedly better protection from neck and back injuries in a rear impact at low speed. In a rear end collision, the front seat backrest moves backwards and the head and upper part of the body are well supported in a uniform manner. The backrest then tips backwards to prevent the forward catapult-like movement.



#### SEAT BELT PRETENSIONERS

The new control logic activates the seat belt pretensioners at the lower crash level, affording the occupant optimum belt protection. In cars equipped with both driver and passenger airbags, the seat belt pretensioners are also of the force-limiting type.



#### FOUR PRETENSIONERS

The ROPS system also includes three-point safety belts and pretensioners on all four seats. The pretensioner automatically tightens the belt in the event of an accident. All four seats have head restraints.



## BRAKES

Ventilated brake discs and sliding callipers in front ensure smooth, efficient braking under hard braking conditions. Anti-lock brakes (ABS), which help the driver to apply maximum braking while maintaining steering ability, are standard equipment



## BRAKING SYSTEM

The new diagonally split braking system provides better braking than a front/rear axle-split system in the event of a fault in one of the braking circuits. Unlike the earlier system, the diagonal configuration ensures that braking of one front wheel is always maintained under these conditions.



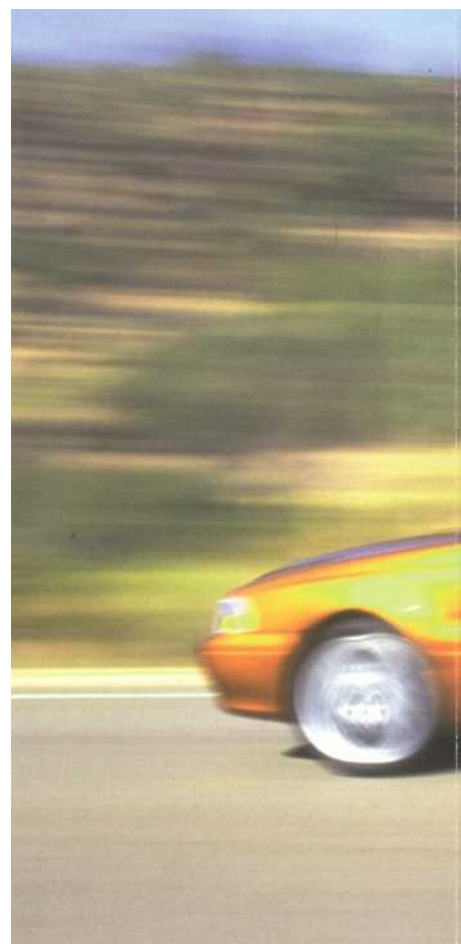
## BRAKING FORCE DISTRIBUTION

Most efficient possible braking, regardless of the conditions or load is achieved by electronic control of the braking forces between the front and rear wheels by means of the Electronic Brake Distribution (EBD) system.



## TORSIONAL STIFFNESS

To ensure safe driving characteristics and good support for the wheel suspension the body is made very stiff for being a convertible. This is achieved by a member connecting the SIPS box with the transverse member under the rear seat. Another reinforcement is the V-shaped member on the sub-frame under the engine and its connection with the body.





#### CRUISE CONTROL

Relaxed highway driving is afforded by the cruise control. OPTION



#### ELECTRONIC ACCELERATOR

For smoother reaction and reduced fuel consumption the Volvo C70s with turbo engines are equipped with an 'electronic accelerator' known as ETS (Electronic Throttle System).

A warning lamp in the instrument panel lights up in the event of an ETS fault.

#### ANTI-SPIN SYSTEM



Cars with turbo engines are available with the STC anti-spin system.

The system improves stability and driving safety, and also facilitates take-off on slippery surfaces. STC is active up to the car's top speed.

The system can be deactivated by a pushbutton.

#### PREDICTABLE HANDLING



Excellent roadholding and a high level of comfort is achieved by the Delta-link semi-individual rear-wheel suspension. The rear track is 50 mm wider than on the Volvo S70/V70, which improves the handling of the car. Neutral steering characteristics is a feature of the wheel suspension.







#### BOOT AND FUEL TANK OPENER

For easy and secure operation the boot lid and the fuel tank flap are opened with buttons on the inside of the drivers door.



#### 'HOME-SAFE' LIGHTING

Locking the car and walking to one's front door in the dark is made easier by enabling the headlamps and parking lights to be used to illuminate the surrounding area. This function is operated by 'flashing' the high-beams, which switches the lights on for 30 seconds.



#### AUTOMATIC CODE CHANGING (IMMOBILISER)

Car theft is made even more difficult by the fact that the start inhibitor code (immobiliser) is changed each time the car is started with the original key.



#### ALARM SWITCH-OFF

For safety the alarm can be switched off with the ignition key if the battery in the remote control is exhausted. (If the alarm is activated, it will operate when the door is opened with the key.)

#### LOCK AND ALARM SYSTEM

Central locking is standard. It can be supplemented by different alarm levels to offer a high level of theft protection. An electronic immobilizer makes it virtually impossible to start the car without the original key, which has a built-in transponder.



#### DOOR LOCKS/AIRBAGS

To facilitate the task of rescue personnel in freeing the occupants following an accident, the doors are automatically unlocked in a collision sufficiently severe to deploy the airbags.





#### DUAL REFLECTORS

Improved vision and visibility with dual reflectors on both headlights.



#### TWIN BULBS TAIL-LIGHT

Extra security in the form of tail-lights with twin bulbs on each side. The light is still there, even if one bulb fails.

#### REAR VIEW

The rear window is made of glass and heated to improve the visibility to the rear in poor weather conditions. Glass also offers improved insulation from external climate and noise - as well as durability as plastic tends to scratch and yellow over time.



#### CENTRE BRAKE LIGHT

The centre LED brake light gives more time for the drivers behind to react in a rapid braking situation by lighting up in only 1 ms.

#### INTERIOR DESIGN

The interior is designed to protect the occupants in a collision. A couple of examples: The upper part of the dashboard is energy-absorbing and there is extra padding to protect the knees.



#### AUTOMATIC ANTI-GLARE MIRROR

The interior rear-view mirror is provided with a fast, automatic electrochromatic anti-glare function (option) which prevents the driver from being disturbed by glare of headlights from behind.

#### HEAD RESTRAINTS

A new, improved design of head restraint affords improved visibility to the sides and rear.





# QUALITY

The Volvo C70 Convertible represents Volvo quality at its very best.

The Convertible model is built in a new plant at Uddevalla in Sweden. Since the model is an exclusive car built in small numbers, handcraft and flexibility are the hallmarks of the production operation. The concept of quality is built in at every stage, from the specification of materials to the state-of-the-art production technology and meticulous assembly.



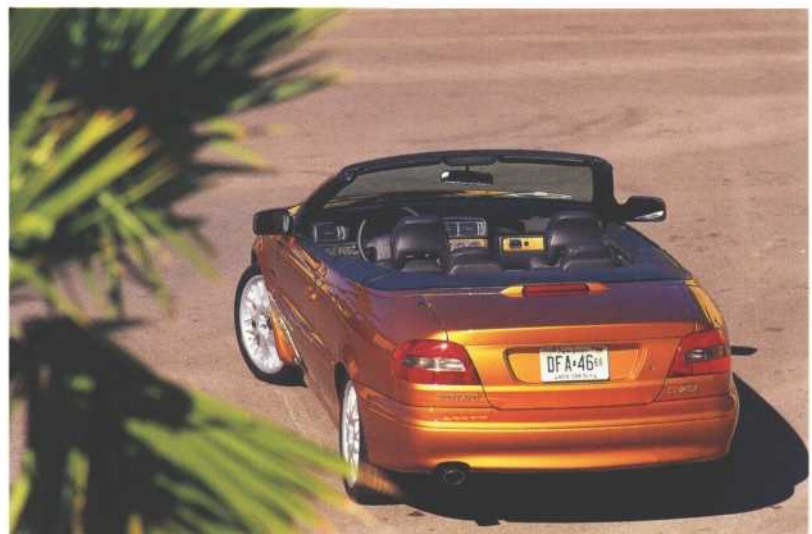
## HIGH-STRENGTH STEEL

Higher quality, lower weight and increased strength are achieved by manufacturing large parts of the body from high-strength steel (HSS). The windscreen is bonded in place using extra high-strength PUR adhesive. Some parts are made of hardened boron alloyed steel.

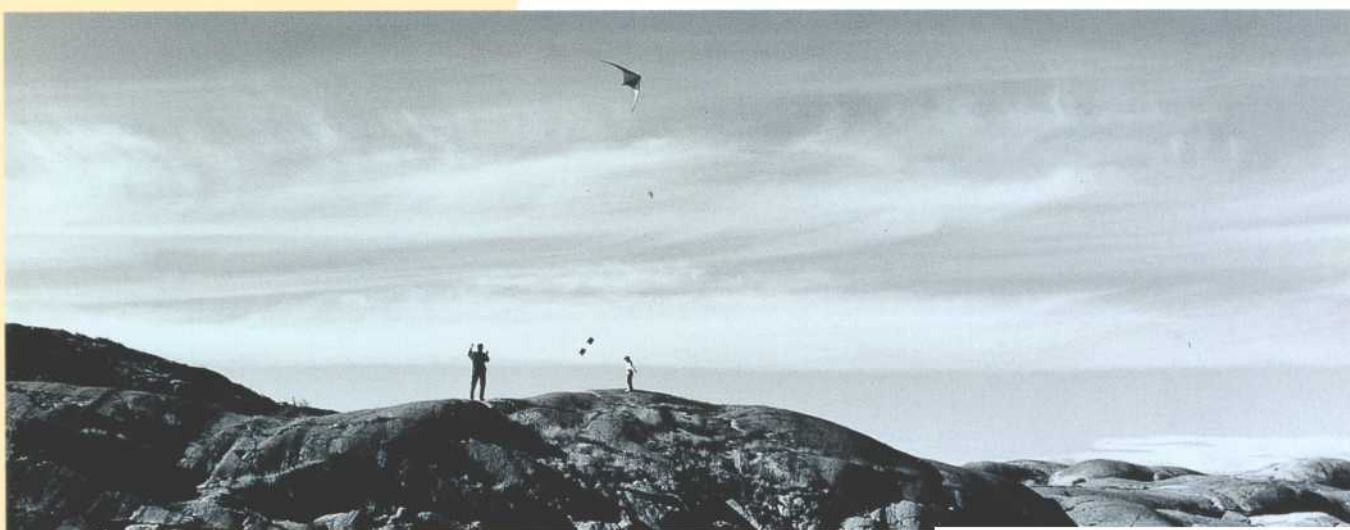


## EFFICIENT RUSTPROOFING

Plastic fender liners, a high content (approx, 80 %) of galvanised material and a meticulous painting process combine to create the Volvo C70 Convertible's excellent rustproofing.







# ENVIRONMENT

Environment is an area of priority to Volvo. Building environmentally compatible cars is primarily a matter of care and responsibility. However, since more and more customers are demanding products with environmental qualities, this is also an important commercial consideration.

The Volvo C70 Convertible has not only been developed and built in a new plant designed to protect the environment to the maximum possible extent; it also features world-class combustion and emission control technology, and an high content of recyclable materials.



## HIGH RECYCLING CONTENT

A high percent of the weight of the car can be recycled. All plastic components weighing more than 50 grams are marked with international symbols to facilitate sorting and recovery.

## CATALYTIC CONVERTER TECHNOLOGY

Volvo's refined catalytic converter technology, the most efficient on the market, minimizes exhaust gas emissions.

## LOWER ENVIRONMENTAL IMPACT

The environmental impact of the car has been reduced by the systematic elimination of hazardous chemicals and environmentally harmful substances, such as asbestos, cadmium and mercury. The Volvo C70 is also free of CFC materials, such as freons, while emissions of hydrocarbons from the production plant are low thanks to the use of water-born paints and an effective cleaning system.

## RECYCLED MATERIALS

The Volvo C70 contains a certain proportion of recycled materials. The cylinder block is made of recycled aluminium, while about 5 kg. of the plastics used are also made of recycled material.

## EXHAUST GAS PURIFICATION

Variants complying with the most stringent exhaust emission control standards are subject to lower taxes in certain markets.





# TECHNICAL DESCRIPTION

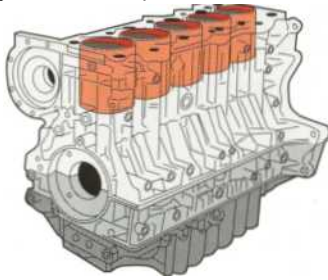
## ENGINES

### CYLINDER BLOCK

The cast iron cylinder liners are cast into the block, providing a total contact area which affords maximum heat dissipation between liner and block.

For maximum strength and rigidity, the block is provided with cast iron reinforcing elements under the crankshaft, where the stresses are highest.

The engines are extremely compact thanks to the small bore of the cylinders and the minimum space between them.



### CYLINDER HEAD

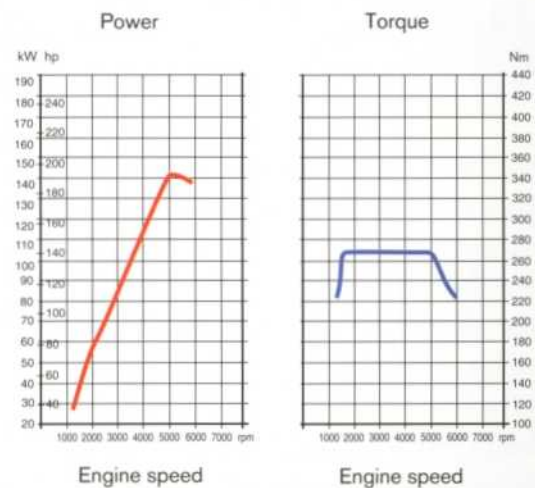
The camshafts are driven by a belt, the tension of which is maintained by a self-adjusting belt tensioner. The camshafts operate self-adjusting hydraulic tappets (valve lifters), making the valves quiet in operation and maintenance-free.

### TURBO ENGINES

The turbo engines are designed to deliver high torque at low revs. In this case, the turbo 'comes in' at a low speed and gives good take-off characteristics.

The turbo engines are equipped with a charge-air cooler, or intercooler.

Power and torque diagrams for the **B5244T** engine:



### EXHAUST EMISSION PURIFICATION

While a heated catalytic converter removes almost 100% of unburned hydrocarbons, measures must be taken to purify engine exhaust emissions during the converter heating phase; in other words, during the first 100 seconds after starting from cold.

The MY 00 Volvo C70 have been improved in four respects to further improve fuel combustion and reduce the levels of hazardous exhaust emissions:

- The turbo engines are equipped with variable valve control, a function used to control the opening and closure of the exhaust valves. The technology is used to reduce the formation of unburned hydrocarbons, making the exhaust gases from the engine up to 30% cleaner.
- A new catalytic converter technology, in which the active noble metals are arranged in a number of layers, has been introduced. This improves the cleaning efficiency of the unit.
- Control of the air/fuel mixture has been improved by installing a linear oxygen sensor (lambda sensor) upstream of the catalytic converter and a step-control type downstream. The second sensor monitors the function of the first, contributing to faster control.
- The accuracy of control has been improved substantially by installing an engine management module which is ten times more powerful.



# TRANSMISSION

## AUTOMATIC TRANSMISSION

Driving is made simpler by the adaptive function of the automatic transmission, depending on the driving style. For take-off and driving in slippery conditions, the "W" programme is manually selected by the driver.

In the winter mode, the car takes off in third gear to avoid wheel spin. Engagement of this mode is indicated by a lamp with an arrow on the instrument panel.



All modes are provided with a kickdown function for safer overtaking. This means that the transmission changes down as required when the accelerator is pressed to the floor.

The lock-up function mechanically locks the torque converter so that the drive is transmitted directly from the engine to the transmission. This reduces engine speed and fuel consumption.

# CHASSIS

## BRAKING SYSTEM

The Volvo C70 is equipped with a new diagonally split braking system instead of the earlier axle-split type.

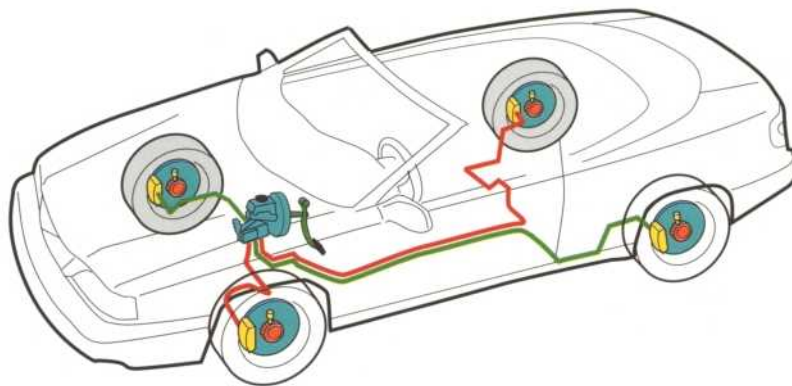
The system affords safer braking than the earlier system since braking is available at all times on one of the front wheels even if one circuit fails. In an axle-split system, on the other hand, only rear-wheel braking will be available if the front circuit should fail.

The negative offset of the front-wheel geometry contributes to high stability, even if most of the braking is performed by only one of the front wheels.

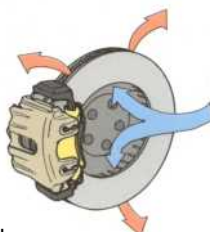
The ABS/EBD system is of a new type featuring larger fluid-flow passages and faster control pulses.

Overall, the pulsations from the new system are less noticeable and braking pressure is established more quickly.

These improvements are most likely to be appreciated by drivers who were concerned about the relatively strong pulsations typical of the earlier system and, as a result, were inhibited from utilising the brakes to full effect.



Ventilated front brake discs are installed to ensure efficient cooling and prevent loss of braking power due to overheating. The sliding brake callipers minimise the risk of overheating of the brake fluid.



An electronic brake distribution (EBD) valve regulates the braking force to the rear wheels and ensures that the rear brakes are used to maximum effect.

## DELTA LINK REAR SUSPENSION

The Volvo C70 Convertible is equipped with a semi-independent rear suspension known as Delta Link.

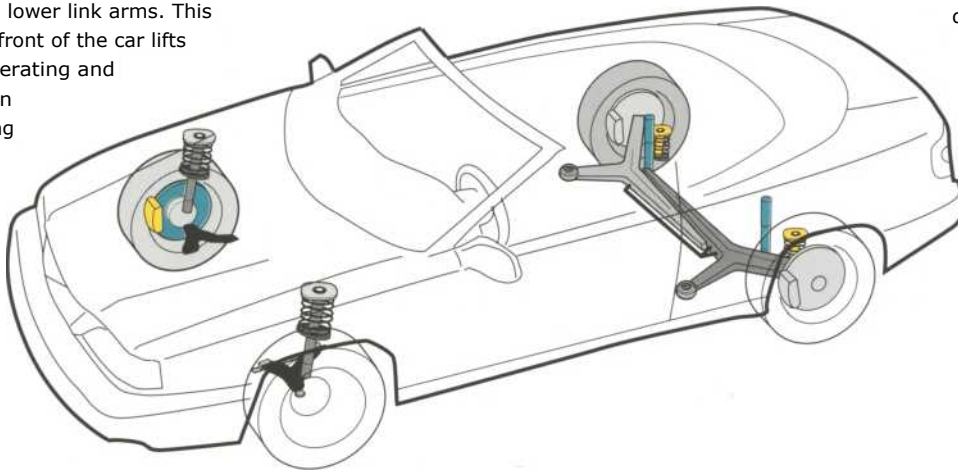
The suspension is attached to the car by means of two 'steering links' and two special rubber bushings. When cornering, the rubber bushings are the first elements to 'give', ensuring that the car steers into the corner rather than tending to continue straight ahead as is usual with front-wheel drive cars. This function also ensures excellent steering response to changes in direction. To prevent oversteer, the links then return the wheels to steer in more or less the same

direction as the front wheels, ensuring safe, neutral cornering. The rubber bushings also permit a degree of rearward spring movement of the complete rear axle assembly as the wheels pass over bumps in the road surface.

## FRONT SUSPENSION

The front suspension consists of a MacPherson strut and a lower link arm on each side. The strut angle creates a negative offset, contributing to more stable braking even if one wheel has a poor grip.

The anti-lift and anti-dive functions are provided by the geometry of the lower link arms. This means that the front of the car lifts less when accelerating and 'dives' less when braking, affording a more stable and a more comfortable ride.



## CHASSIS VARIANTS

The Volvo C70 Convertible with low pressure turbo (LPT) engine is equipped as standard with the Comfort chassis. The high pressure turbo (HPT) engine has the stiffer Dynamic chassis as standard. The Dynamic Low chassis is the stiffest chassis for sporty driving and is an option for both models. All chassis variants are equipped with front and rear anti-roll bars.



## ANTI-SPIN CONTROL SYSTEM (STC)

Known as STC (Stability Traction Control), Volvo's anti-spin system controls the drive wheels all the way from take-off to maximum speed.

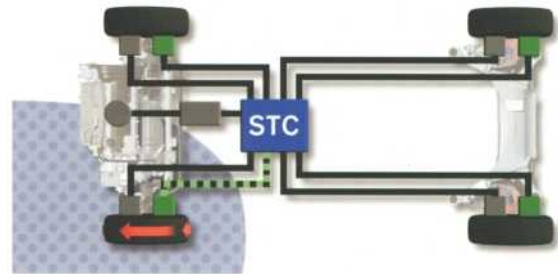
Spinning of either drive wheel on take-off is detected by the ABS sensors, which transmit signals to the braking system to brake the wheel in question. Power is thereby transferred to the other drive wheel until the rotational speed of both is the same. Thus, the system functions more or less as a type of differential brake.

Slippage of the drive wheels when driving at high speeds is also detected by the ABS sensors. In this case, the sensor signals are transmitted to the engine management system, which reduces the engine torque by throttling the fuel supply. The system reacts very quickly, the reaction time of approx. 15 ms being equivalent to a distance of about 0.5 m when driving at 100 km/h.

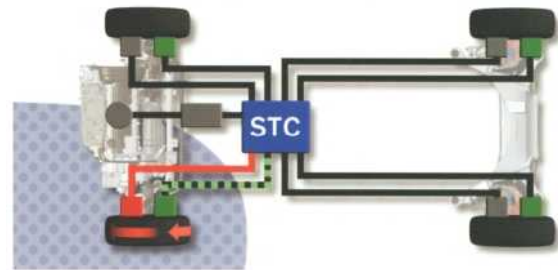
Overall, STC affords excellent driving stability on slippery surfaces.

### STC WHEN STARTING:

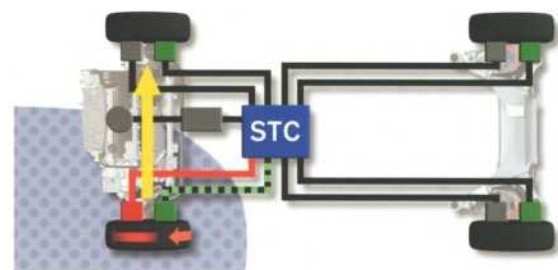
1. When the car pulls away from stationary.



2. The ABS sensors sense the rotation of each wheel and send a signal to the STC unit. If one of the driving wheels is beginning to spin, a signal is sent to the ABS unit which brakes the spinning wheel.

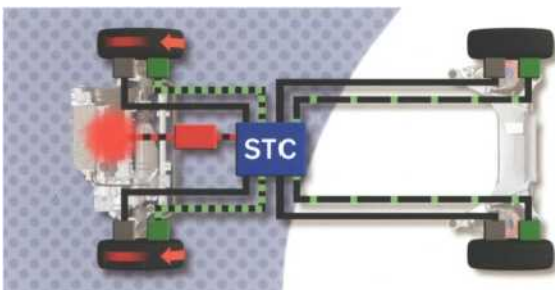


3. This causes power to be transferred to the other driving wheel, which has a better grip on the road to enable the car to pull away - which explains the term "Traction Control".

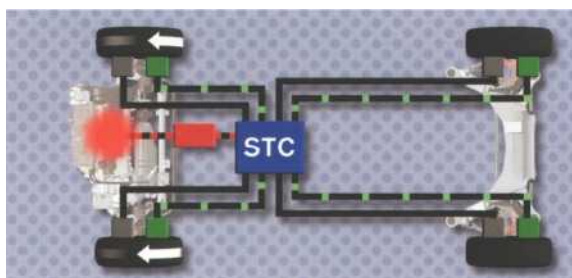


### STC WHILE DRIVING

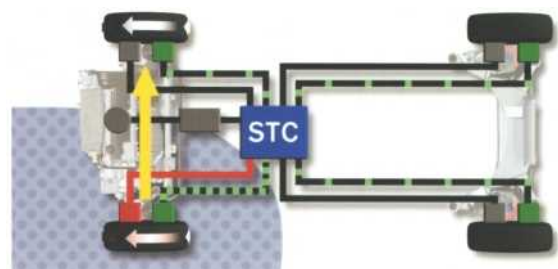
1. The car loses grip on the road. A signal is sent to the engine management unit.



2. The engine management unit reduces the amount of fuel that is injected. This is done in stages until road grip is recovered.



4. Both wheels have the same speed, and the car can start.





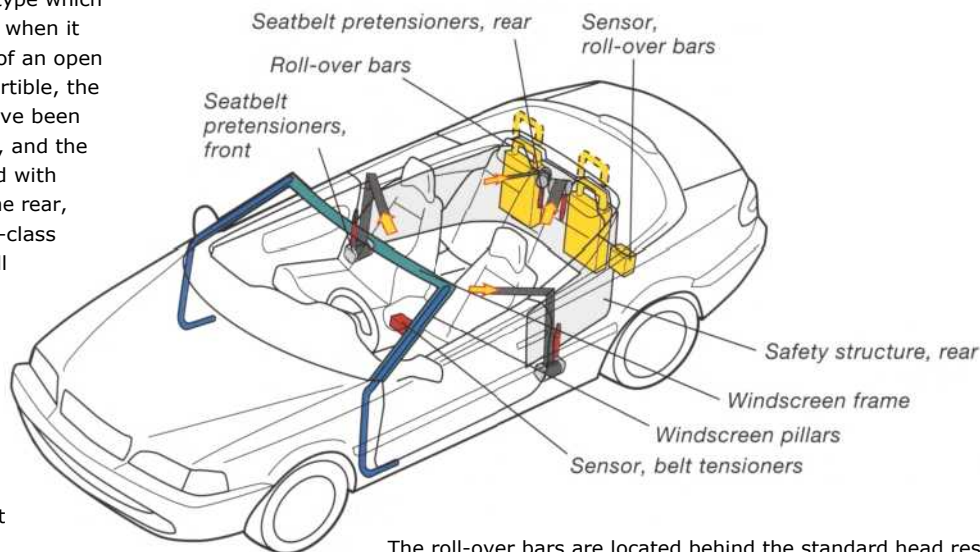
# BODY

## ROLL-OVER SAFETY

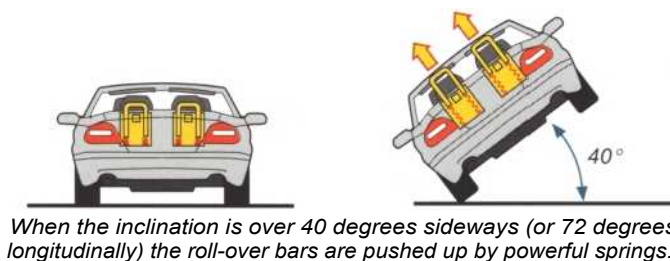
Roll-overs are the accident type which pose the greatest challenge when it comes to the safety design of an open car. In the Volvo C70 Convertible, the windscreen pillars, which have been reinforced with special steel, and the windscreen frame, combined with automatic roll-over bars at the rear, are designed to provide top-class protection should the car roll over. Volvo calls this system ROPS, Roll Over Protection System.

ROPS system also includes four seatbelt pretensioners which automatically tighten the belt in the event of an accident.

These pretensioners are activated by the same sensor which triggers the front airbags. All the belt pretensioners are pyrotechnical. A powder charge pulls a wire which then tightens the belt on the reel. The pretensioner is located next to the reel.



The roll-over bars are located behind the standard head restraints. They are activated by a sensor monitoring the angle of the body. When the inclination angle is over 40 degrees sideways or 72 degrees longitudinally the bars are pushed up to above head height by powerful springs in 0,2 sec. At the front, the strong pillars and windscreen frame function as a roll-over bar.



## CRASH SAFETY

The Volvo C70 Convertible has a structure which is based on the Volvo S70 sedan and has basically the same safety systems and features, with the same high level of crash safety at the front, rear and sides. ROPS is part of the Volvo C70 Convertible's total protection system, which also includes a strong basic structure, one or two frontal airbags and the SIPS side impact protection system with its associated SIPS bags or side airbags. In a frontal collision, several systems are activated - the airbags and the pretensioners. If the car rolls over, only the pre-tensioners and roll-over bars are activated.

The SIPS system functions in the same way as it does in other models, but its appearance differs. As the roof is included in the SIPS system in other Volvo cars, different design solutions have to be used to do the corresponding work in the convertible. As a result, the structure around the passenger compartment is shaped like a horseshoe and absorbs and dissipates the collision energy very effectively. The SIPS bags or side airbags, which are fitted in the front seat backrests, are inflated in one-hundredth of a second by their own sensors in a side impact.

## FOLDABLE TOP

Five electric motors take care of the raising or lowering of the convertible top. When the top is to be lowered or raised the car must be at standstill and the parking brake must be ON. In automatics the gear selector lever must be in the "P" position. In manuals the gear lever must be in neutral. The boot must always be closed. Press and hold the lower part (for down) or upper part (for raising) of the control switch until the top is properly in position. A chime will confirm.

During the lowering/raising of the convertible top:

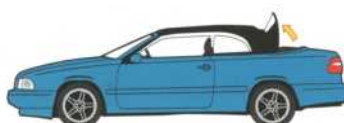
- the heating of the rear windscreen can't be activated
- if the side windows are up they are slightly lowered.
- if the car has an ECC climate system, this is turned to manual control mode to help save energy.

The whole operation takes place in six steps:

(Raising the top follows the reversed procedure)



1 The rear lock arms release the tension frame and the windows lower slightly. The boot is prevented from being opened.



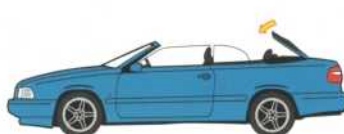
2 The tension frame is raised and the top cover lock is opened.



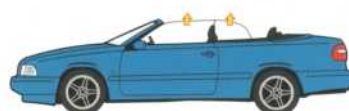
3 The front locks are opened and the top cover is raised.



4 The top is lowered



5 The top cover is lowered

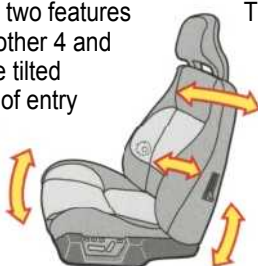


6 The top cover is closed and the trunk lid catch is unlocked. The side windows are raised

## INTERIOR

### FRONT SEATS

The front seats in the Volvo C70 Convertible are two features which distinguish the C70 models from Volvo's other 4 and 5-door models. The front seat backrests must be tilted forward to afford the rear-seat passengers ease of entry and to enable items of luggage (such as briefcases) to be stored behind the seats.



The controls on the side of the seat are ergonomically designed and the seat positions are easy to adjust. This also applies to the adjustable lumbar support, which is often forgotten! Remember that satisfactory support for the lumbar region is very important on long journeys. The electrical operated seats also incorporate a memory function which can store three different settings.

### ELECTRICALLY OPERATED FRONT SEATS



The electrically operated front seat is moved forward with motor assistance. The function is operated with the lever on the side of the backrest (or the handle if you are in the back seat).



### MANUALLY OPERATED FRONT SEATS



The manually operated front seat can be moved forward when the lever is raised and the seat is pushed forward (or with the handle if you are in the back seat).



# INTERIOR

## WHIPLASH PROTECTION SYSTEM - WHIPS

Rear-end collisions often produce serious neck injuries, otherwise known as whiplash injuries. Volvo's pioneering research has shown that the effects of whiplash injuries can be significantly reduced if the collision forces and neck movements are reduced. The injuries are caused by the catapult effect - when the passenger or driver is thrown forwards after the first impact.

WHIPS is designed to provide protection at speeds of up to 30 km/h, precisely the low speeds at which most whiplash injuries occur. WHIPS is a mechanical system which is built into the front seats. It consists of a spring-suspended wire frame in the backrest and a special mechanism which holds the backrest and seat together.



*1 Most whiplash injuries occur in rear-end collisions at low speeds. The WHIPS system is designed to provide protection in these situations.*



*2 The front-seat backrest moves backwards and the head and upper part of the body are well supported in the WHIPS backrest.*



*3 The backrest then tips backwards to prevent the forward catapult-like effect.*

### FORCE-LIMITING SEAT BELT PRETENSIONERS

All airbags are supplemented by force-limiting seat belt pretensioners.

A rod-shaped element, which is deformed when the occupant exerts a force on the belt in a crash, is installed between the inner and outer sections of the belt reel.

This reduces the risk of injury due to high belt forces and, together with the action of the airbag, ensures smooth deceleration of the occupant.

### TWO-LEVEL DEPLOYMENT OF AIRBAG

The design of the seat belt/airbag combination has now been optimised by making airbag deployment dependent on the use of the belt. If the occupant is wearing his or her belt, deployment will take place only at a high level of crash violence. This eliminates what may be unnecessary airbag deployment, which inevitably causes damage to the dashboard etc. As before, however, the belt pretensioner is always activated at the lower level.

If the occupant is not wearing a belt, the airbag will be deployed at the lower level. This also applies if the passenger seat is unoccupied.

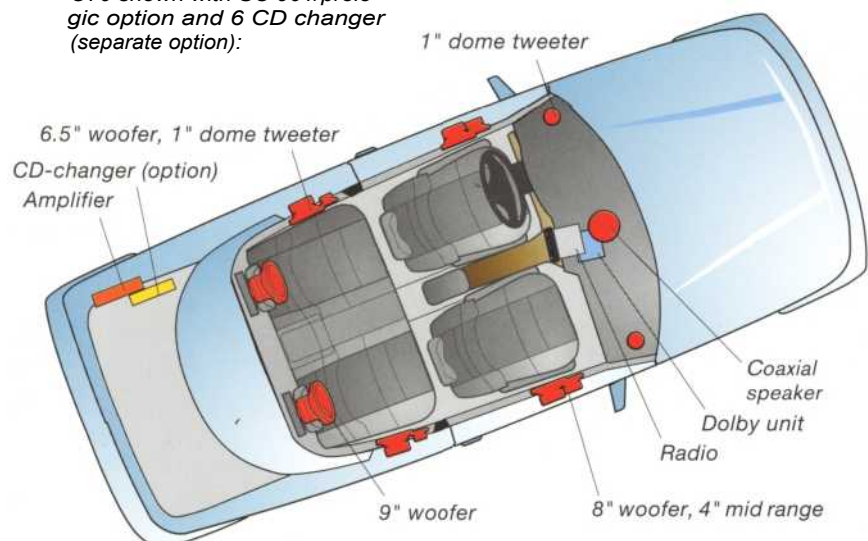
## AUDIO

Dolby Surround ProLogic System\* is a system which converts the standard left-right stereo signals to four surround channels left, center, right and left, right rear or surround. This is primarily intended for use in home movie applications but Volvo has, in cooperation with Dolby Laboratories and Alpine, developed the system for in-car use. Dolby Surround ProLogic System\* give the car's audio system a feeling of space, which is experienced as a larger listening environment, and a dynamic sound experience.

Dolby Surround ProLogic System\* is available as a factory fitted option along with the SC 901 radio head.

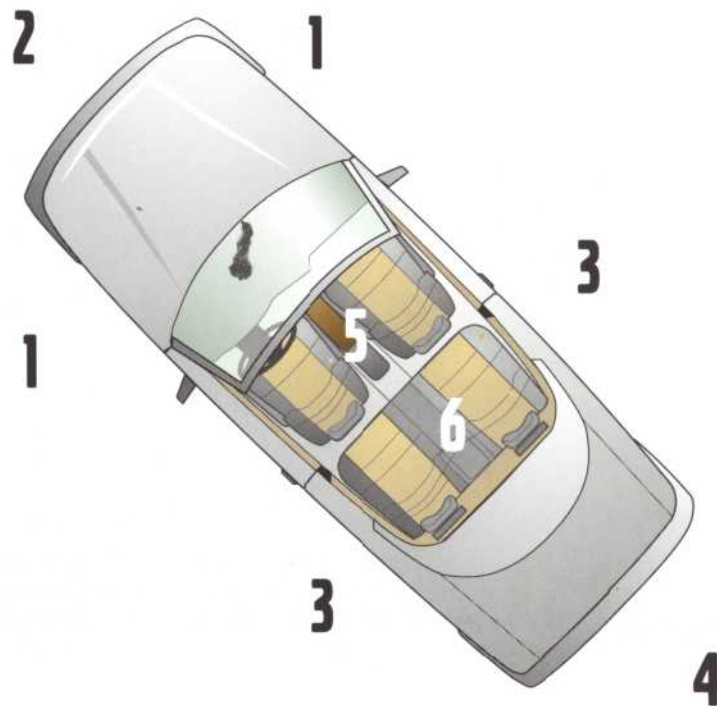
Dolby Surround ProLogic System\* cannot be combined with RTI. The Coaxial speaker and the RTI screen is located in the same place on the dashboard top.

*C70 shown with SC 901/prologic option and 6 CD changer (separate option):*





# NEW CARS SALES AND DELIVERY



## DEMONSTRATION IN SIX POSITIONS

Perhaps the most decisive link in the communication chain is the demonstration of the car. You, the salesman, should base your demonstration on the New Car Sales and Delivery process Volvo is applying on an increasing number of markets. It comprises six positions or steps. The following points are presented in these six positions:

- 1 Quality, design and environmental concern
- 2 Performance, fuel consumption and emission control
- 3 Active and passive safety
- 4 Rear design, luggage and versatility
- 5 Interior and comfort
- 6 Test drive, reinforced by needs-related argumentation

It goes without saying that the demonstration does NOT have to take place in this order. The customer's interests should determine the order in which you demonstrate the points.

# DEMONSTRATION

	SAFETY	QUALITY	ENVIRONMENT
1 		80% of body galvanised High strength steel – strain capacity Large metal sections – few joints Stone-chip paint/plastic-covered sills Plastic wing liners	High strength steel – lower weight 10% recycled plastic 85% recyclable Waterborne paint
2 	<b>CRASH SAFETY/PASSIVE SAFETY</b> Reinforced windscreen frame Reinforced structure for rear seat Safety cage/crumple zones Collapsing steering column Adapted airbag system/two levels Belt pretensioners on all seats Anti-submarining guard on all seats Force limiters on front seatbelts SIPS with large side airbags ROPS – Roll Over Protection System WHIPS – Whiplash Protection System	Electronic management system Troubleshooting and analysis function Efficient cooling system Cast-iron reinforcements in engine Self-adjusting functions	New engine generation Electronic management system Combustion further developed Variable camshaft control – exhaust side (turbo engines) Aluminium engines Free from cadmium EVAP reduces HC evaporation
3 	<b>DRIVING SAFETY/ACTIVE SAFETY</b> Torsionally-stiff body Well-balanced chassis ABS brakes with EBD Ventilated brake discs at front Sliding brake calipers front STC – stabilising system Wide-angle exterior rearview mirror		
4 	<b>PERSONAL/PROPERTY PROTECTION</b> Central locking – lockable from inside Remote control with rolling code Automatic re-locking within two minutes Electronic immobiliser Rotating lock cylinders Alarm with optional functions Home safe lighting		
	Ergonomic driving position Functional controls Rearview mirror – automatic anti-dazzle Efficient climate unit		Free from CFC Free from mercury Low PVC content ÖKO-TEX-certified material Labelling facilitates recycling
6 	Reinforcement of the features and benefits in which the customer is interested	Reinforcement of the features and benefits in which the customer is interested	Reinforcement of the features and benefits in which the customer is interested

# IN SIX POSITIONS:

DESIGN	DRIVING PLEASURE	PLEASURE TO OWN	
Gentle rounded front V-shaped bonnet Aluminium wheels – wide choice New exterior colours		Cabriolet, individually and freedom Visual impression of comfort and driving pleasure	1 
Grille with Volvo identity Double headlights	5-cyl high-/light-pressure turbo Four-valve technology Variable camshaft control – intake side DOHC Adaptive automatic gearboxes Winter mode (W) Spring-strut front suspension Anti-lift/anti-dive geometry Rack & pinion – exact steering reactions		2 
	Wheels and tyres for different driving styles	Tinted windows Power exterior rearview mirrors Convenient central locking Remote control with many functions	3 
Large tail-lights	Delta Link rear suspension with steering links	Through-hatch in rear seat with protective bag for long items	4 
Tasteful, functional interior Alternative decor panels/trim Ergonomic design Clear, logical instrumentation Sense of space Model-specific textile mats Optional interior colours Many upholstery colours Many material combinations	Transverse light weight engines High power/torque Electronic throttle	Pushbutton foldable top Folding top with two layers for improved insulation, noise level and temperature. Doors with three opening positions Entry lighting front/rear Light, roomy interior Top-class seating comfort on all 4 seats Rear seat for fullgrown persons Steplessly adjustable front lumbar support Adjustable steering wheel Controls in the right place Auto-down on all 4 side windows Individual temperature control front Dual zone temp control RTI – Road Traffic Information Top-class audio system – several alt Dolby Surround Prologic System Speed-dependent volume control Diversity system	5 
Reinforcement of the features and benefits in which the customer is interested	Reinforcement of the features and benefits in which the customer is interested	Reinforcement of the features and benefits in which the customer is interested	6 



# SPECIFICATIONS VOLVO C70

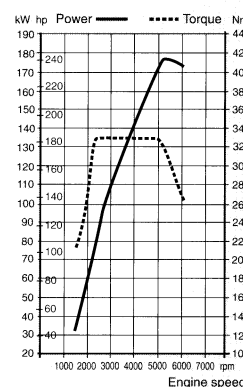
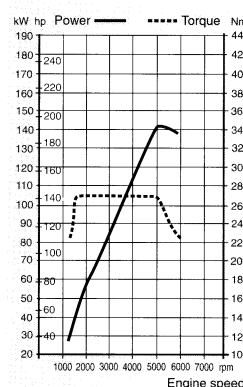
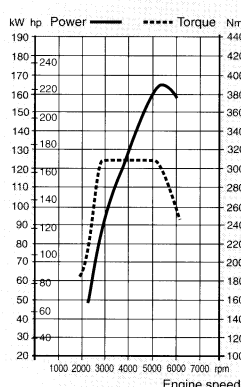
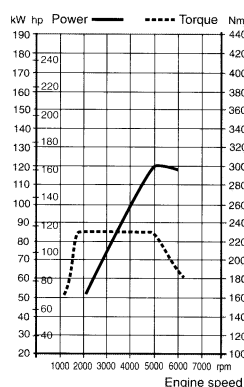
## ENGINE

Engine designation	<b>B5204T4</b>	<b>B5204T3</b>	<b>B5244T</b>	<b>B5234T3</b>
Engine type	In-line, 5-cyl, light pressure turbo	In-line, 5-cyl, high pressure turbo	In-line, 5-cyl, light pressure turbo	In-line, 5-cyl, high pressure turbo
Engine configuration and drive	Transverse, front-wheel drive	Transverse, front-wheel drive	Transverse, front-wheel drive	Transverse, front-wheel drive
Displacement, cm <sup>3</sup>	1984	1984	2435	2319
Cylinder block material	Aluminium	Aluminium	Aluminium	Aluminium
Cylinder head material	Aluminium	Aluminium	Aluminium	Aluminium
Combustion chamber type	Pent-roof	Pent-roof	Pent-roof	Pent-roof
Number of valves per cylinder	4	4	4	4
Number of camshafts	2	2	2	2
Engine management system	Microprocessor controlled fuel ignition with self-diagnostics			
Recommended octane No.	98 RON (min 95)	98 RON (min 95)	98 RON (min 91)	98 RON (min 91)
Max output kW(hp)/rpm	120(163)/5100	166(225)/5500	142(193)/5100	176(240)/5400
Max torque Nm/rpm	230/1800-5000	310/2700-5000	270/1600-5000	330/2400-5100

## GEARBOX

Manual transmission,  
5-speed

Automatic transmission,  
4-speed with lock-up.  
Adaptive shift program  
where E and S automatically  
adapts the gear change  
programme to the drivers  
style of driving, and a manual  
W mode – for start and driving  
on slippery surfaces.

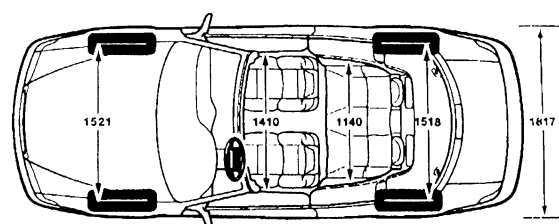
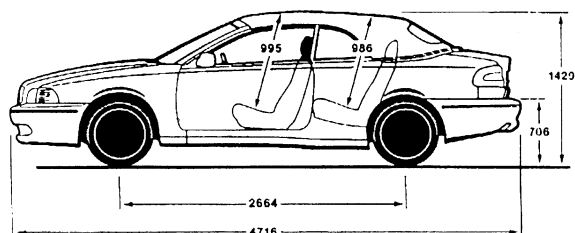


## PERFORMANCE

Gearbox type	Manual	Automatic	Manual	Automatic	Manual	Automatic	Manual	Automatic
Acceleration, 0-100 km/h, sec.	9.9	10.7	7.9	8.2	8.5	9.0	7.5	8.0
Top speed, km/h	200	195	235	225	220	210	235	225
Fuel consumption (combined) (acc to. EU 93/116) l/100 km	9.8	10.1	9.8	10.5	9.8	10.6	9.8	10.3

## CHASSIS

Suspension	front	Spring-strut lower link anti-roll bar
	back	Semi-individual, Delta-Link, coil springs, anti-roll bar
Steering	Rack and pinion, power ass.	
Turning circle	11.7 m	
Brakes	ABS system with EBD. Ventilated discs front Discs rear	



## MEASUREMENTS AND VOLUMES

Fuel tank volume, l	68
Luggage capacity, Cu.ft.	8.1
Curb weight, kg	1565
Ground clearance, cm	12