

960







**VOLVO**  
Volvo Car UK Limited

Globe Park, Marlow, Buckinghamshire SL7 1YQ

**Volvo 960 GLE**



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**Volvo 960 Luxury Edition**





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# VOLVO



Introduction speech for the Volvo 960 launch, Monterey June-July 1994

Good morning, ladies and gentlemen, and much welcome to Monterey and to the Volvo Car Corporation.

As you have noticed, we have chosen a classic place for our launch. Classic in history, classic in literature, classic in films and also classic in its own right today. Because this is one of the most beautiful spots in the country.

Consequently, this area provided the exciting background for several novels by Nobel prize-winning author John Steinbeck. Like the famous "Cannery Row".

When the main character Mack and his lazy friends set out from Cannery Row in Monterey, John Steinbeck provided them with things mechanical that bore very little resemblance to a car.

I can promise you that we have no such intentions here today. On the contrary.

Today we will let you out on to the roads of Mack and his friends in a completely different vehicle:

The new Volvo 960 - our top-of-the line car - in its 1995 livery.

A car developed during a time that perhaps may be described as "Steinbeckian".

A time affected by a recession that covered the world like a heavy blanket. A blanket which we have just thrown aside.

A car that was to be ready for launch on the market when things turned to the better.

The Volvo Group of Companies, in which the Volvo Car Corporation is one, learned the meaning of world recession the hard way.

And we were among the first to be hit, already at the end of the 80's.

The decline in sales led to overcapacity in terms of both work force and production facilities.

We faced problems both at home and on almost all our markets.

And we were losing blood like many others.

But as you know the saying goes: In wartime you prepare for peace, and in peacetime you prepare for war.

It is simply a matter of a rock-solid strategy and flexible tactics; to be able to look ahead and adjust quick enough to cope with the situation.

So in parallel to launching the predecessor of today's star in 1990, Volvo started on the huge task of slimming the operations.

To adjust with times, both present and the future.

To reduce costs, cut leadtimes and make production lean.

Still, at the same time develop and offer new and attractive cars to the market. Safe and comfortable cars that are fun to drive and use. Cars offering good value for money. Cars like the Volvos of today.

The Volvo 850, launched in 1991 has worked extremely well for us. However it can not work the market on its own.

We need a strong presence in several customer segments. Our customers, their needs and demands have to be clearly identified and aimed at with the right products.

It is very much a matter of life-cycles. Not only for the cars, but for the customers too. To be able to cover the customer's life-cycle with various products depending on demands.

To be able to offer the right car for the right customer, when he or she wants it:

Like a sporty Volvo 850 T-5 for the young couple; the safe and roomy family estate some years later; the fast and comfortable 960 for those who seek smooth and prestigeous motoring.

Therefore the product development work has to be spread across the model range, and also diverted into new product lines for the future as well.

So during the gloom of the early 90's, we decided to strengthen our potentials in the upper family, or comfort car, segment and be ready when times turned to the better.

Although having a newly-launched first-class car available, we decided to start the work from the ground.

About two years of intensive planning, designing, testing and production resulted in what is virtually a new car.



And it was all achieved by using money very wisely. To concentrate where customers would benefit in terms of characteristics, freedom of choice and value for money; to improve within the areas we know could be improved with excellent results:

1400 new components, or delivery units, have gone into the new 960.

I think I can summarize the new 960 with one word, EXPERIENCE

It is:

- The experience of motoring pleasure, both behind the wheel and in the rear seat

- The experience of the car's road behaviour, the feeling of comfort and care that is experienced from the inside.

- The experience of driving a reliable, high quality car that offers excellent service plus something more that is difficult to define.

Maybe feelings or a certain state of mind.

Yet several characteristics can be clearly defined. They are very concrete.

Like the chassis:

Although based on the previous concept it is totally new.

A completely different set-up with new geometry, featuring wider track and improved suspension, has worked wonders.

The car rolls less, steers almost neutral, is less sensitive to tough road conditions and it even has a smaller turning circle than before!

The new front suspension has new-designed lower wishbones and an integrated anti-roll bar. Together with a tubular crossmember under the engine it forms a sturdy unit, like a subframe.

The crossmember also acts as an important element for dissipating crash energy in frontal collisions.

The location of the steering gear and a new gearing on top of that have cut the turning circle further down, to an incredible 9.7 metres.

**CAN YOU THINK OF A CAR OF THIS SIZE THAT CAN BEAT THAT?**

**IF YOU CAN, I REALLY WANT YOU TO LET US KNOW, BECAUSE WE CAN'T!**

The rear axle represents the new generation of our multi-link suspension.

It features an aluminium-alloy frame and a composite transverse leaf spring instead of a steel frame and conventional steel coil springs.

Not only does this cut the weight by some 11 kgs but it also improve the handling significantly during all driving conditions.

Just ask those who drive around in the other car on the market that features a transverse composite spring at the rear.

I am also happy to announce that the 960 estate now has been fitted with the multi-link rear suspension too.

Thanks to all this in combination with a more effective braking system and the neutral steering the new 960 performs extremely well.

On twisting country roads or motorways alike. You will experience it yourselves shortly.

The chassis of a car means much, but of course, engines and transmissions are also vital when it comes to a car's performance.

And the customers in this segment want power to be at hand at all times and delivered without noise. Smooth and snappy.

Our in-line silk-smooth sixes still provide the power in the Volvo 960.

However, the much praised 3 litre engine has now been added company by a smaller version in order to offer better possibilities of having the car tailored to your own requirements.

The new engine is a 2.5 litre version with an output of 170 hp and a maximum torque of 230 Nm at 4,400 revs.

The capacity has been obtained by slightly reducing the bore and shortening the stroke.

Without affecting the engine's excellent flexibility, of course.

The levels of power and torque are ample for most drivers and make driving relaxing, yet exciting.

Except for the bore and stroke the two engines are identical:

Technically advanced, light, clean, silent, smooth and powerful with very small service requirements.

A truly modern design for discerning drivers.

Another important novelty is the possibility to have a manual gearbox for those who prefer this.

The 5-speed manual can be combined with the 2.5 litre engine and it is of the same compact design as the 850 gearbox. But here of course it is longitudinally installed.

Otherwise the 960 uses the electronically controlled four-speed automatic that is both well-proven and very efficient. With ultra-smooth gear-changes and a swift torque converter.

But as I said earlier, we want to offer the customer a choice.

This freedom of choice is very much obvious if we step inside the new 960.

The selection of trim levels, materials and colours enable the customer to select what he or she prefer and combine it.

For instance with a leather steering-wheel, with one of the most advanced climate units on the market and some elegant and practical accessories.

Choose from comfortable plush or elegant leather upholsteries in two versions. Maybe you prefer a light coloured steering wheel and seat belts to match. And some elegant burr walnut on doors and dash.



As you understand, the new 960 is able to cater for most tastes not only technically but also on the inside. Here you can really talk about tailor-made to your choice.

Also to provide an experience of roomy comfort in safety.

And for all who travel in the car too. Not only the driver but the passengers as well. Irrespective of age and built.

For instance, through the Volvo child seat programme which provides safe and comfortable travel for babies, in our most recently developed child seat, up to the integrated booster cushion in the rear armrest for bigger children.

Safety is one of those areas in which you constantly improve. However the results are rarely to be seen. And to be honest, they shouldn't show. Only work when they are needed.

The new 960 has been highly improved in terms of both dynamic safety and crash safety.

Having already talked about the new chassis, I would also like to mention the high level of passenger protection:

- A new design of the front side and cross members provide excellent protection in both head on and off-set collisions, by efficiently absorbing and distributing the impact forces away from the occupants.

- The now famous Volvo SIPS system has also been further worked on. Several reinforcements have been added into the structure and the doors have more absorbents.

And all this in a design which ALREADY is one of the best cars in terms of crash safety on the market today.

The new look of the inner door panels plays an important role in this connection.

Not only have they been completely re-designed, with a better look and more comfort, but their shape and function are also of vital importance for the function of the SIPS system.

You see, nothing in a Volvo car looks or functions the way it does by mere coincidence.

Everything that goes into a Volvo has been thoroughly developed, tested and tested all over again.

Therefore I just like to add that your cup of coffee or soft drink will stay safely in place in our new accessory cup holder; an item which I know is very much in demand in many places nowadays.

Let me round off this tour of the new 960 on the outside of the car. I know that it is very tempting for you to say:

"So what's new about it, then?"

I say, take another look! You'll discover that the body has undergone a lot of treatment.

The new front, with its slimmer head lamps, the new grille and bumpers are discreet hints of what lies underneath the exterior, and what have gone inside the car.

But not only have the eyes a lot to discover. Even more important is the fact that

I can promise you a new experience the moment you lift your foot off the brake pedal, or let up the clutch.

As I said before, some fifty per cent of the components are new, and the rest have been cleverly treated and fine-tuned. The result speaks for itself.

The new 960 is an excellent example of the new Volvo Car Corporation that has emerged from the past, company and products alike.

Because the 960 is:

Money spent very efficiently by a dedicated and highly-skilled project group over a short period of time, resulting in a modern and very competitive product with a clear Volvo-identity. And with the customer in focus.

Of course, I will leave it for you to decide, But I can proudly say that the Volvo 960 is motoring at its best.

Comfort - Motoring pleasure - Value for money by freedom o choice.

The key words of our new representative in the upper family car and comfort segment - the new Volvo 960.

Thank you, and drive safely.

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## PRESS INFORMATION - VOLVO 960 1995

1. The new Volvo 960 - Motoring at its best
2. Classical styling combines flair with good sense
3. Well-planned design produces motoring pleasure and safety
4. Chassis improvements for enhanced driving pleasure and greater driving safety
5. New, smaller six-cylinder and manual gearbox -  
New features on the Volvo 960
6. Six-cylinder engines - A proud Volvo tradition
7. Technical specifications
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## **THE NEW VOLVO 960 - MOTORING AT ITS BEST**

Motoring is an essential factor if our modern society is to function. However, car driving and travelling by car can vary enormously depending on the situation.

The new Volvo 960 makes getting from A to B a delight, regardless of the situation; the safe and effective combination of pleasure and enjoyment.

The Volvo 960 is the largest member of Volvo's range of safe family cars. The Volvo 960 has a six-cylinder engine, it is based on refined technology and is outstandingly comfortable and classically elegant.

### **Greater freedom of choice and new technology**

The 1995 model of the new Volvo 960 now offers customers even greater freedom of choice when it comes to specifications and equipment, not least as a result of a new engine alternative and the introduction of a manual gearbox. This means that them-line, 3-litre, six-cylinder, which has previously characterised the 960, is now being supplemented by a new, smaller six-cylinder engine. At the same time, a manual gearbox is available for the first time in the 960.

The engine and gearbox are components which are hidden under the surface, but the large-scale modifications can already be seen on the exterior of the car.

The sober, elegant language of design of the previous model has been maintained and refined. The lines are softer and blend together in a total harmony which is underlined by the uniform colour scheme.

At the same time, the elegance is governed by functionality. The Volvo 960 is a large car with all the benefits that entails in terms of generous amounts of interior space and an impressively large luggage compartment. When it comes to handling, however, the 960 is a small car with an outstandingly tight turning circle and precise, responsive steering which, combined with the distinct styling, makes the car easy to manoeuvre in every traffic situation.

The new appearance has primarily been achieved by the creation of a new front. The whole of the front has been given softer lines; the wings, bonnet, grille and bumpers surround lower headlight units. The bumpers are colour-keyed to match the paintwork and there is a narrow, contrasting chromium strip in the front and rear bumpers and in the side mouldings. The area between the tail-light units on the saloon model has a new design with a unifying line between the edges.

This new appearance gives the car a lower profile; it emphasises the power without being heavy. It conveys a sense of elegance and efficiency. And it demonstrates the family affiliation with pride.

A number of new exterior colours help to create an impression of greater vitality.

### **Change of interior setting**

The new Volvo 960 also features changes to the interior. Never before has a Volvo passenger compartment offered such a high level of comfort combined with such tasteful interior design alternatives. With practical use and fine ergonomics as the focal point.

For many years, the Volvo driver's area has been the epitome when it comes to handling and safety - and the same thing is naturally true of the new Volvo 960. The setting is, however, different; more flair without sacrificing any of the practical aspects.

The basic design of the dashboard and the location of the instrumentation and controls is the same as before, but a whole host of details have been changed. The adjustable steering wheel has an entirely new design with a hub which has been given softer lines.

The sides of the doors are also new and softer with their easy-to-grip handles, comfortable armrests and door pockets. The decor varies according to the interior - from textile to leather with walnut inlays.

Great emphasis has been placed on all the interior fittings with a view to combining comfort with quality and easy use.

The interior is available in three different versions and in several colours. Black, grey and beige can be varied in terms of materials between two different types of plush upholstery and leather upholstery. The cut and grades of plush differ from the previous versions and the leather upholstery has pleated seams.

In the beige and grey versions, the safety belts, steering wheel and upper section of the dashboard are also colour-keyed to create a more harmonious design.

Every interior is characterised by superb ride comfort as a result of seats which have the correct ergonomic design and are comfortable at the same time. The fine design of the various details, the low noise levels and the feeling of being in a luxurious, safe environment also help to create the top-class comfort.

The climate in the passenger compartment also has a vital effect on the comfort level. The Volvo 960 is available with three different climate units where personal preference will govern the choice between fully-automatic climate control and two manual alternatives, with or without air conditioning. It goes without saying that these systems are CFC-free.



Ride comfort and driving comfort are largely dependent on the chassis and wheel suspension systems. It is a question of striking an incredibly difficult and sensitive balance between the two.

Of choosing the correct settings, hardness and components. The chassis and wheel suspension have to contribute to a high level of active safety. The driving characteristics and road performance have to be reliable and safe. No matter whether you are driving on Continental motorways or executing difficult parking manoeuvres in congested city centres.

In the new Volvo 960, the front chassis has been improved. The spring struts have lower wishbones and the heaviest components, which face backwards and inwards, are attached by rubber bushings to a cross member which runs across the car. Together with the actual front member, the wheel suspension thus creates a stable subframe of much the same type as the one in the Volvo 850. A powerful anti-roll bar counteracts body movements and this new front-wheel suspension has helped to make the Volvo 960 easier to manoeuvre while cornering with improved steering response and greater flexibility.

Rack and pinion power steering makes the car easy to steer with the same fine road contact in every situation. New front chassis geometry has made it possible to reduce what was already an impressively tight turning circle still further - it is now just 9.7 metres! On a car with a wheelbase of 277 cm.

At the rear, all the versions of the 960 now feature the second generation of Volvo's superb Multilink rear-wheel suspension - this also includes the estate. Multilink combines the best of two worlds in that it moves independently, thereby giving the car an extremely high level of comfort, while track and wheel angles are affected only very slightly by loads and driving as a result of the axle design.

The new version of Multilink also weighs less because the coil springs which previously surrounded the shock absorbers have now been replaced by a

transverse leaf spring made of composite material. This leaf spring is both light and very strong and has excellent suspension characteristics.

An anti-roll bar counteracts rolls tendencies in the rear chassis. Needless to say, the brake system is an excellent match for the other components and the performance of the car. Powerful discs all round, ventilated at the front, with ABS as standard.

It goes without saying that the top-class driving safety in the Volvo 960 is naturally matched by crash safety of the very highest class. Large crumple zones at the front and rear combined with a powerful basic structure and the SIPS side impact protection system provide outstanding protection for everyone in the car in every collision situation.

Every seat is equipped with a three-point belt and head restraint, even in the estate, and there are belt pretensioners on the front seats. An airbag is standard on the driver's side, whereas it is either standard or optional on the passenger side. The same thing applies to Volvo's integrated child booster cushion in the centre rear armrest.

Needless to say, the rest of Volvo's child safety programme comprising meticulously-tested products which have been developed for and tested in Volvo cars is also available.

### **New, small six-cylinder**

A new, small 2.5-litre engine, known as the B6254 FS, is being introduced. It develops 170 bhp at 5,700 rpm. Maximum torque is 230 Nm at 4,400 rpm and, when it comes to the generous torque curve, priority has been given to the low and intermediate engine speed range.

This engine is identical in every way to the larger version, apart from the fact that the stroke has been reduced to 80 mm and the bore to 81 mm, this produces a displacement of 2,473 cc.

The larger engine version with a displacement of 3.0 litres is the one which is already available in the Volvo 960. It has an output of 204 bhp at 6,000 rpm and a maximum torque of 270 Nm at 4,100 rpm. Unlike the 2.5-litre version, this engine has a long stroke of 90 mm.

Both engines offer the characteristic features of a six-cylinder engine, such as silky-soft and stable operation, smoothness, flexibility and a speedy response to the throttle throughout the engine speed range.

What's more, it is all produced in an environmentally-compatible manner.

The engine is controlled by the most modern technology available when it comes to management and regulation and this results in extremely moderate fuel consumption and low emissions.

Fuel consumption and emissions are also largely a result of the transmission.

Volvo is aware of this and has therefore chosen transmissions with the kind of function that enables fuel consumption to be optimised and emissions to be kept down.

In most versions, the Volvo 960 has an automatic gearbox as standard, but with the 2.5-litre engine it can also be specified with a manual gearbox. This gearbox is extremely compact as it is based on the special gearbox design in the Volvo 850. It has five speeds, synchronised reverse gear and is both quick and easy to operate.

When it comes to function, the automatic gearbox can only be described as a small miracle of adaptation and flexibility. It has three optional driving programs, depending on the circumstances, as well as a number of other automatic functions. Should a defect occur, it is naturally possible to get to the car to a workshop without the support of the electronic system.

In some cases a differential brake which counteracts wheel spin on slippery surfaces is standard; in others it can be specified as extra equipment.

### **Complete car family**

With the new Volvo 960, Volvo is establishing an entire car family in the segment comprising large family/comfort/prestige cars, as a result of the tremendous freedom of choice available.

This will significantly sharpen the company's competitive edge, as well as improving its market potential, as a larger group of customers is now being offered the chance to choose a six-cylinder Volvo.

The range spans virtually everything from a 2.5-litre four-door model with a manual gearbox and tricot plush upholstery to a fully-equipped 3-litre estate with a four-speed automatic.

Regardless of the version and the specifications the customer chooses, the common denominator for the new Volvo 960 is quality, safety and comfort levels which are out of the ordinary combined with driving and travelling pleasure. Motoring at its very best.

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## **CLASSICAL STYLING COMBINES FLAIR WITH GOOD SENSE**

The Volvo 960 is not an exponent of short-lived design trends. Volvo's most exclusive model has a timeless design which is linked to the present day without being dependent on it. In the 1995 version, this is even clearer than before.

The sober, elegant language of design of the previous model has been maintained and refined. The 960 radiates a sense of classical design. The lines are softer and blend together in a total harmony which is underlined by the uniform colour scheme.

The exterior colour now also includes the whole of the bumper sections, the side mouldings, door handles and exterior rearview mirrors. The result is an impression of restrained elegance; peaceful to look at, inviting to study in closer detail.

At the same time, the elegance is governed by functionality. The Volvo 960 is a large car with all the benefits that entails in terms of generous amounts of interior space and an impressively large luggage compartment. When it comes to handling, however, the 960 is a small car with an outstandingly tight turning circle and precise, responsive steering which, combined with the distinct styling, makes the car easy to manoeuvre in every traffic situation.

### **Change in styling -- in the right places**

Modifications to the styling and to details in the design of the 960 have been made whenever they could result in improvements. As both the 4-door and 5-door versions have been given an extensive facelift, some of the changes differ between the two models owing to differences in the exterior and interior.

The 960's new appearance has primarily been achieved by the creation of a new front, together with changes along the sides and at the rear.

The whole of the front has been given softer lines; the wings, bonnet, grille and bumpers surround lower headlight units.

Developments in lighting technology have enabled the headlights to be reduced in size, but, at the same time, they have been made even more effective following a change in the design of the reflectors.

The glass which covers the indicators is now transparent and the actual bulb is now orange instead, thereby reinforcing the effect of the bodywork colour.

#### **Uniform colour scheme with discreet contrasts**

The bumpers are colour-keyed to match the paintwork and there is a narrow, contrasting chromium strip in the front and rear bumpers and in the side mouldings which creates a unifying line right round the car. On the estate, this line only runs along the front and sides, however.

A similar line in contrasting grey is formed by the lower edges on both the bottom rails and the front and rear spoilers.

There are double foglamps in the front spoiler; they are either standard or optional depending on the market and the model version.

At the rear, the styling modifications are somewhat more restrained. The area between the tail-light units on the saloon model has a new design with a soft unifying line between the edges.

On the estate, a narrow spoiler has been fitted along the top edge of the rear window and from behind it gives the optical impression of "lowering" the car. This spoiler and the tailgate handle are the same colour as the car.

Rails for the estate are now available in colour-keyed versions.

On both versions the orange field in the tail-light units has been replaced by transparent glass with orange bulbs underneath, to avoid disrupting the uniformity of the overall colour scheme.

This new appearance gives the car a lower profile; it emphasises the power without being heavy. It conveys a sense of elegance and efficiency. And it demonstrates the family affiliation with pride. The classical Volvo grille has been framed in such a way that it closely resembles that of the other family members in the 850 and 400 Series. The new front underlines the family ties still further.

### **New, elegant exterior colours**

The choice of exterior colour plays a decisive part in the impression created by the styling of a car. A number of new exterior colours help to create an impression of greater vitality.

The previous metallic colours silver and silver grey have been replaced by a new colour, Silver Sand, and blue-green and dark red metallic have been deleted. The elegant pearlised colours Regent Red, Aubergine and Dark Olive Pearl have been added.

The solid colour range still comprises black, white, bright red and dark blue.

### **Entirely new wheels**

Every version of the new 960 has new wheels.

A 15" steel wheel with a flush-fitting hubcap and 195/65 tyres is standard.

Depending on the equipment level, the other alternatives are aluminium wheels in both 15- and 16-inch versions for 195/65 and 205/55 tyres.

### **Durable bodywork**

Most of the body is made of galvanised steel sheet. The actual zinc coating varies depending on the level of exposure; it is, for example, thicker on the floor pan and thicker under the shock absorber line than above it. Large parts

of the body components are also made of HSS (High Strength Steel), which has first-class characteristics when it comes to the relationship between strength and weight.

Galvanisation, combined with the primer, elastic stone-chip paint, surfacer and top coat, gives the Volvo 960 outstanding resistance to exterior damage for a very long time.

Underseal is applied using the hot melt method which requires no solvents whatsoever and the work is done by robots.

The painting also takes place with a minimum of emissions in Volvo's new paintshop, the most modern in the automotive industry.

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**WELL-PLANNED DESIGN PRODUCES MOTORING PLEASURE AND SAFETY**

A good car is built using a combination of experience and new ideas.

In the new 960, the good design solutions have been retained, refined and improved. Wherever better alternatives have been developed, they have replaced the previous solutions. Which explains why the new 960 is a combination of new approaches and established systems and solutions.

Comfort is not a luxury. Not in a Volvo. Comfort is a natural component of the total experience which comes from driving and travelling in a Volvo car. Comfort is also very much a safety factor; the importance of feeling in good form behind the wheel, of being able to rely on the car. Comfort is also one of the key words when it comes to any description of the new Volvo 960.

**You feel it without seeing it**

Ride and driving comfort call for a solution which unites a reliable and stable chassis with convincing road performance, a comfortable interior and low noise levels inside the car. The foundations are laid under the car, but the results are experienced inside it.

The new features in the Volvo 960 can be most clearly experienced behind the wheel. The driver's area, the choice of materials, the appearance, the details, the function, the overall character...

**Three alternative interiors**

There are now three interior designs to choose from. To enable the customer to adapt the car to match his own tastes and requirements, three different

interior trim levels in a number of different colours are available. All three radiate a sense of comfort -- as well as flair. Top-class function need not preclude attractive styling.

Leather upholstery with walnut inlays in the doors and dashboard is the most exclusive alternative, followed by a high-class, single-coloured plush upholstery and tricotee plush upholstery with a discreet, non-figurative pattern. In the beige and grey versions, the steering wheel, upper section of the dashboard and the safety belts are also colour-keyed.

All the seats have an anatomically-correct design. The range of adjustments on the front seats is virtually limitless and it is possible to specify either manual or electrical adjustment. The electrical system also features a memory function for the driver's seat in which three pre-programmed settings, within the same family, for example, can be stored.

### **Travelling in comfort and safety**

Every seat is equipped with a three-point belt and head restraint, even in the estate, and there are belt pretensioners on the front seats. An airbag is standard on the driver's side, whereas it is either standard or optional on the passenger side. The same thing applies to Volvo's integrated child booster cushion in the centre rear armrest.

It goes without saying that the rest of Volvo's child safety programme comprising meticulously-tested products is also available.

Never before has a Volvo passenger compartment offered such a high level of comfort combined with such tasteful interior design. At the same time, attention has focused on the practical features, top-class ergonomics and, of course, safety.

**Making an excellent driver's area even better**

For many years, the Volvo driver's area has set the standard when it comes to handling and safety and the same thing is naturally true of the new Volvo 960.

The basic design of the dashboard and the location of the instrumentation and controls is the same as before, but a whole host of details have been changed. The steering wheel, which can be adjusted for height, has an entirely new design with a hub which has been given softer lines.

The buttons and controls have the same location as before, but many of them have been given a more user-friendly design.

The sides of the doors are also new and softer with their easy-to-grip handles, comfortable armrests and door pockets. The decor varies according to the interior - from textile to walnut inlays and leather.

The controls for the window winders and electrically-operated rearview mirrors are located in the armrests in the doors.

At the bottom of the front doors there are spacious storage compartments with rounded edges and one pair of the audio system loudspeakers are positioned at the front edges.

Great emphasis has been placed on all the interior fittings with a view to combining comfort with quality and easy use, as a result of ingenious design solutions, low noise levels and the feeling of being in a luxurious and safe environment.

**Top-class climate control essential to safety**

For many years now, Volvo has maintained that climate comfort is not only important when it comes to travelling pleasure and enjoyment but that it is also a safety factor. The comfort level inside the car is largely determined by the interior climate and this also has a significant effect on the driver. For this reason, the heating and ventilation system has to be both efficient and easy to use, despite the frequent complexity of the technology it incorporates.

The Volvo 960 is available with three different climate units where the customer's wishes govern the choice between fully-automatic climate control and two manual alternatives, with or without air conditioning. It goes without saying that these systems are CFC-free.

**ECC** Electronic Climate Control is Volvo's fully-automatic climate control system where all the driver needs to do is select the temperature. In the automatic mode, the system takes care of everything else, regardless of whether the driver has chosen heat or air conditioning, the defroster or cool air round his feet.

**MCC** - Manual Climate Control requires a little more work on the part of the driver, fan speed, air distribution and temperature, but it has the same effect and functions.

All three systems feature a function which permits the full recirculation of the air inside the car.

The hot air and fresh air reach the passenger compartment through a large number of strategically-positioned vents and, as there are so many vents, the capacity is impressive. Large amounts of air are therefore able to reach the passenger compartment quietly and without draughts, as the systems are not obliged to operate at high air speeds.

### **Loading easily and ergonomically**

A car in the Volvo 960 class needs plenty of luggage space and the Volvo 960 has it, both in terms of volume and when it comes to the opportunity to make use of it.

In the saloon model, the boot holds no less than 471 litres and is easy to load as a result of the low sill. In the estate, the load capacity is almost unlimited. With the rear seat upright, it can take 1,113 litres, but the amount of space

can naturally be extended to suit individual needs and requirements.

The rear seat split folds 2/1 with the small section on the right. Folding down all or part of the rear seat produces a load length of 182 cm. The rear head restraints retract automatically into the backrest when it is folded down and the floor is therefore completely flat.

There are also a large number of small storage compartments under the luggage compartment floor where all kinds of useful and necessary items can be kept, pockets on the back of the front seat backrests, the storage compartments in the front doors and in the console between the front seats. This storage compartment can also be equipped with a comfortable armrest containing a practical cup holder.

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## **CHASSIS IMPROVEMENTS FOR ENHANCED DRIVING PLEASURE AND GREATER DRIVING SAFETY**

Ride comfort and driving comfort are dependent to a very large degree on the chassis and wheel suspension systems. It is a question of striking an incredibly difficult and sensitive balance between the two.

The chassis and wheel suspension have to contribute to a high level of active safety. The driving characteristics and road performance have to be reliable and safe. Regardless of the situation - from high-speed driving on motorways to winding, narrow mountain roads.

A large number of important improvements have been made to vital chassis components at the front and rear alike to improve the characteristics of the new Volvo 960 still further.

### **New front-wheel suspension**

Most of the front chassis has been redesigned, even if the basic principle still constitutes spring struts with telescopic shock absorbers. They are surrounded by asymmetrically-positioned coil springs. This system requires little space and produces both top-class ride comfort and a well-balanced front chassis with good response.

The spring struts have been equipped with lower wishbones and the heaviest components, which face backwards and inwards, are attached by rubber bushings to a tubular cross member which runs across the car.

Together with the actual front member, which contains two engine mountings and the steering gear, the wheel suspension thus creates a stable subframe. In its design and structure it closely resembles the one in the Volvo 850.

A powerful anti-roll bar counteracts lateral body movements. Like the 850, the Volvo 960 also has rods located between the anti-roll bar and the spring strut to counteract the tendency the car displays to lift and kneel at full throttle or when braking really hard.

Taken as a whole, this new front-wheel suspension has helped to make the Volvo 960 easier to manoeuvre while cornering with improved steering response and greater flexibility.

Rack and pinion power steering is precise, well-balanced and smooth. It makes the car easy to steer with the same fine road contact in every situation. In a serious collision, the steering column collapses and is therefore unable to penetrate the passenger compartment.

New front chassis geometry has made it possible to reduce what was already an impressively tight turning circle still further - it is now just 9.7 metres! An impressive figure for a car with a wheelbase of 277 cm and a total length of almost five metres.

### **Second generation of Multilink**

At the rear, we find Volvo's superb independent rear-wheel suspension system, Multilink, in a version which has now been further developed. It is used on all the versions of the 960, including the estate.

Multilink combines the best of two worlds in that it moves independently, thereby giving the car an extremely high level of comfort, while track and wheel angles are affected only very slightly by loads and driving as a result of the axle design.

A powerful anti-roll bar counteracts roll in the rear chassis when cornering.

For anyone who is used to driving with the car heavily laden, automatic levelling, Nivomat, is an excellent option which simplifies and improves

driving. This system is standard on some versions. Nivomat increases the damping function of the shock absorbers automatically depending on the load. Ground clearance thus remains unchanged and oncoming motorists are not dazzled by headlights which point upwards instead of straight ahead.

### **Lighter and smaller**

The new version of Multilink also weighs less because the coil springs which previously surrounded the shock absorbers have now been replaced by a transverse leaf spring made of composite material. This leaf spring is both light and very strong and has excellent suspension characteristics. It is located between the wheels under the halfshafts.

Components made of cast aluminium also help to keep the weight down and strong yet lightweight materials have made it possible to create a more compact construction. This means that less space is needed. The 80-litre fuel tank is positioned in front of the rear axle where it is well-protected.

It goes without saying that the brake system in the Volvo 960 is an excellent match for the other components and the performance of the car. Powerful discs all round, ventilated at the front, with ABS as standard and an automatic reduction valve which distributes the braking force correctly if the driver brakes hard.

### **Crash safety of the highest class**

Needless to say, the top-class driving safety in the Volvo 960 is matched by crash safety of the very highest class. Large crumple zones at the front and rear combined with a powerful basic structure and the SIPS side impact protection system provide outstanding protection for everyone in the car in every collision situation.

The decisive factor when it comes to the superb basic protection offered by the Volvo 960 is the large percentage of HSS (High Strength Steel) in the



bodywork. HSS produces high strength in relation to its weight. It is about four times stronger than conventional steel sheet and is used for the body components included in SIPS, for example.

In addition, the sides of the body are pressed in one piece and the rest of the bodywork has few joints as the number of sheet-metal sections are small in number and large in size. PUR-bonded windows are elements in the structure of the car and also help to produce the top-class strength.

940620/CR/JK

## **NEW, SMALLER SIX-CYLINDER AND MANUAL GEARBOX - NEW FEATURES ON THE VOLVO 960**

An in-line, six-cylinder engine is something very special.

Quiet, vibration-free operation, an abundance of power and tractive force. This comes as no news to anyone who drives a Volvo 960, but even more people are now going to be able to experience it for themselves.

The 1995 model of the Volvo 960 will enable more customers to enjoy the wonderful experience of driving a car with a six-cylinder engine. This will be made possible by even greater freedom of choice when it comes to specifications and equipment, not least as a result of a new engine alternative and the introduction of a manual gearbox.

This means that the in-line, 3-litre, six-cylinder, which has characterised the 960 until now, is being supplemented by a new, smaller six-cylinder engine. At the same time, a manual gearbox is being made available for the first time in the 960.

### **New small six-cylinder**

A new, small 2.5-litre engine, known as the B6254 FS, is being introduced. It develops 170 bhp at 5,700 rpm and maximum torque of 230 Nm at 4,400 rpm. Like its larger relatives and other Volvo engines, the torque curve is extremely generous and priority has been given to the low and intermediate engine speed range. This engine is identical in every way to the larger version, apart from the fact that the stroke has been reduced to 80 mm and the bore to 81 mm, this produces a displacement of 2,473 cc.

A special version for leaded fuel has been specially developed for certain markets where access to unleaded fuel is either limited or non-existent.

**Rigid and light, as a result of the design and choice of materials**

In its work on these engines, Volvo has focused on developing a stiff, lightweight construction with effective combustion and low emissions.

The entire engine is made of aluminium. This results in low weight and a top-class thermal dissipation capacity. The engine consists of five main parts, the oil sump, a lower (crankcase) and upper (engine block) intermediate section, the cylinder head and the camshaft bearing housing.

Both the crankcase and engine block are die-cast.

Many vital components are cast in from the start, thereby producing benefits when it comes to process, function and cost. The crankcase main bearing support is, for example cast in, as are the engine block cylinder liners and all the oil and coolant ducts.

Volvo's N engines, the 5- and 6-cylinder versions, have no separate gaskets. What are known as liquid gaskets in combination with bolted joints are used instead. You could say that the five main parts of the engine are bonded together.

The inlet manifold has a spherical gauge pressure chamber to provide the best possible fuel flow and distribution of the fuel-air mix. The efficiency of the combustion process is partly due to comprehensive laser measurements of both gas speed and the position of the fuel in the combustion chamber.

The combustion chambers are of the pent-roof type with centrally-located spark plugs and pairs of angled valves set at an angle of 58 degrees to one another. The large valve area, combined with the advantageous design of the combustion chambers, results in rapid gas exchange and highly effective combustion.

The 24 valves are operated by double overhead camshafts via hydraulic valve tappets. These tappets are self-adjusting which means that the clearance

between the camshafts and tappets always remains completely constant. As a result, no valve adjustments are necessary.

The ignition system is inductive. There is a high-voltage ignition coil on every spark plug. This design solution eliminates the risk of voltage drops and short circuits caused by dirt and moisture in the distributor and ignition cables, as there are no such components in the system. This improves the level of reliability and starting is facilitated by the powerful spark.

### **Functions controlled by the most modern computer technology**

Both fuel supply and ignition are regulated by the most modern control technology available (Motronic) and this results in extremely moderate fuel consumption and low emissions for all engine versions.

The amount of fuel and the ignition timing is regulated and adjusted to produce optimum combustion in every conceivable driving situation.

Double knock sensors are also included in the system.

The CO content and idling are also monitored and regulated, as is maximum engine speed. The system intervenes if it senses that maximum engine speed is about to be exceeded, in order to avoid over-revving and possible engine damage as a result.

The Motronic system has a self-diagnosis function and stores any defect codes which may be reported. This reduces troubleshooting and service time to a minimum.

### **Long-stroke 3-litre version**

The larger engine version with a displacement of 3.0 litres is the one which is already available in the Volvo 960. It has an output of 204 bhp at 6,000 rpm and a maximum torque of 267 Nm at 4,300 rpm.

A special US version has been developed with a slightly different distribution between output and torque, to match the American way of driving. In this

version, the output is 181 bhp at 5,200 rpm and maximum torque is 270 Nm at 4,100 rpm.

Unlike the 2.5-litre version, the 3-litre has a long stroke of 90 mm. Bore x stroke: 83 x 90 mm (2,922 cc).

Both engines naturally offer the characteristic features of a six-cylinder engine, such as silky-soft and stable operation, smoothness, flexibility and a speedy response to the throttle throughout the engine speed range.

What's more, it is all produced in an environmentally-compatible manner. Great emphasis has been placed on low emissions of both exhaust gas and petrol vapour.

### **Clean emissions and minimal service requirements**

The three-way catalytic converter interacts with the electrically-heated Lambda sensor and with EGR (exhaust gas recirculation) and air injection in some versions. Hydrocarbons which evaporate from the fuel tank and fuel lines are collected by the evaporation system, taken to a collection canister and conducted from there to the engine where they are burnt in the combustion process.

Exhaust gas recirculation means that some of the exhaust gas is conducted to the intake side of the engine where it helps to reduce the combustion temperature. Injecting air into the hot exhaust gases makes it possible to burn any fuel residue which may be included in these gases. This reduces the emission of carbon monoxide and hydrocarbons, as well as reducing the time it takes for the catalytic converter to heat up in conjunction with cold starts. The whole of the exhaust system is made of stainless steel to ensure the longest possible service life.

Long service life is a term which characterises all the engines. The design as a whole, in combination with the individual technical systems and solutions,

produces an engine with minimal service requirements and outstanding reliability.

The service intervals are 15,000 km for oil and filters, 90,000 for general inspections and the replacement of auxiliary unit belts and 120,000 km for the camshaft belts. The cooling system is the sealed-for-life type which means that it never needs to be touched during the service life of the engine.

### **Compact, smooth manual gearbox**

The 3-litre version of the Volvo 960 has an automatic gearbox as standard, but, in combination with the 2.5-litre engine, the model can also be equipped with a manual gearbox, thereby significantly extending the model range.

The manual gearbox is extremely compact as it is based on the special gearbox design in the Volvo 850. It has five speeds, synchronised reverse gear and is both fast and easy to operate.

The helical drive in the reverse gear makes it as quiet as all the other gears. Reverse is located directly below fifth, but the gear lever cannot be moved directly from fifth to reverse, thereby avoiding mistakes. This design eliminates the need for a special reversing lock.

Even if the manual gearbox is both smooth and precise, the character of the engine and the generous torque make constant gear changes unnecessary in order to take advantage of engine power. The inherent smoothness of the six-cylinder makes driving relaxed.

### **The 960's automatic gearbox a "thinking" miracle**

when it comes to function, the automatic gearbox can only be described as a small miracle of adaptation and flexibility. It is a four-speed in which fourth gear is a fuel-efficient overdrive and it also features lock-up - the torque converter is locked when it is not needed - on the lower gears. Lock-up prevents unnecessary gear-changing and saves fuel.

The automatic has three optional driving programs, depending on the circumstances, as well as a number of other automatic functions, some of which still function without electronic support if a defect occurs.

With the E (Economy), S (Sport) and W (Winter) modes, the driver is able to choose the driving characteristics he requires; how high the engine speed should be on each gear.

To ensure that gear changes are smooth and natural, the engine management system delays ignition at the moment of gear-changing, thereby reducing the load on the clutch discs in the automatic gearbox.

The automatic functions also include an engine brake when driving downhill and constant adaptation to disc wear.

If the electronic system fails, the car can still be driven on two forward gears and reverse.

In some cases a differential brake which counteracts wheel spin on slippery surfaces is standard; in others it can be specified as extra equipment.

### **Complete car family**

With the new Volvo 960, Volvo is establishing an entire car family in the segment comprising large family/comfort/prestige cars, as a result of the tremendous freedom of choice available.

This will significantly sharpen the company's competitive edge, as well as improving its market potential, as a larger group of customers is now being offered the chance to choose a six-cylinder Volvo.

The range spans a wide variety of versions from a 2.5-litre model with a manual gearbox to a 3-litre with a four-speed automatic.

Regardless of the version and the specifications the customer chooses, the common denominator for the new Volvo 960 is Volvo quality, safety and comfort levels which are out of the ordinary combined with driving and travelling pleasure.

940620/CR/PR



## **SIX-CYLINDER ENGINES - A PROUD VOLVO TRADITION**

As a result of its engine type, Volvo's six-cylinder model, the 960, represents a fine Volvo tradition. Six-cylinder Volvo engines represent a technical design solution which dates back many years and for many years they were the company's only engine type when it came to cars.

The first six-cylinder engine was used in a Volvo model back in 1929. The car was known as the 651, the engine was called the DB and had a displacement of just over three litres. Output was a modest 55 bhp, but this engine was flexible and as strong as a bear, both characteristics which typify the in-line, six-cylinder engine as a technical solution.

The DB engine formed the basis of all the in-line, six-cylinder Volvo engines until 1958, when production ceased in conjunction with the phasing-out of the PV830. In various guises during this period of almost 30 years, the engine changed its name from DB to EB, from EB to EC and, finally, to ED. The displacement increased from 3,010 cc to 3,366 cc and then 3,670 cc. Output eventually rose to 90 bhp. Still not an engine with racing performance, but one with a durability and service life to make the competition pale.

Between 1930 and 1947, Volvo produced nothing but six-cylinder cars. The four-cylinder PV was only produced in a prototype and did not go into production until 1947. During the Second World War, the six-cylinders were converted to run on producer gas (charcoal or wood) as a result of petrol rationing.

### **From side to top valves**

When the ED engine disappeared, it took almost ten years for the next Volvo six-cylinder to make its appearance. These ten years were a period of large-scale development and increasingly rigorous demands when it came to the technical design.

The B30, an in-line engine with top valves and a displacement of 3 litres, made its debut in 1968 in Volvo's new 164 model. The B30 was based on the popular and highly reliable four-cylinder B18 engine from the PV, Amazon (PV121) and 144 models. Output was 145 bhp in the carburettor version and 175 bhp in the injection version. The highest output ever in a Volvo car at this time.

This engine produced fine performance, but it was extremely heavy and it was still equipped with push-rods.

Like its smaller relation, it was resilient and operationally reliable which also made it popular in other parts of the Volvo Group. It was used in both military vehicles and in marine applications.

In addition to being used in the Volvo 164 and 164E, the B30 was also chosen by the British sports car manufacturer Marcos as the power source in their 3-litre models, most of which were destined for the US market. The small Marcos version was equipped with Volvo's B18 engine.

In 1974, when the Volvo 164 was succeeded by the Volvo 264, the B30 was replaced by an engine with an entirely new design, the B27. This was a V6

engine, the result of a French-Swedish engine joint venture between Peugeot, Renault and Volvo. It was therefore known as the PRV six-cylinder.

It was produced at the French Douvrin plant and had an angle of 90 ° between the banks of cylinders and one overhead camshaft per cylinder bank. This angle was more like that of a V8 than a V6 and the engine had, in fact, started out as a V8, but two cylinders had been removed as a result of the prevailing conditions brought about by the world energy crisis.

The entire engine was made of aluminium, the displacement was 2,664 cc and the output in this initial version was 125 bhp in the carburettor version and 140 bhp in the injection version.

In 1980, the displacement was increased to 2,849 cc and the engine was now known as the B28. It was this engine that was fitted in the new 760 GLE in 1982, the first model in an entirely new generation of Volvo cars.

### **From V to in-line engines**

Different versions, but with the same 2.8-litre displacement, of this V6 went on to power six-cylinder, petrol-driven Volvos (diesel engines are six-cylinders) until the 1991 model year, when the Volvo 960 was introduced with a new in-line, six-cylinder engine made entirely of aluminium.

The B6304F, as this new engine was known, was a completely new design from Volvo's engine design department and was produced in Skövde in Sweden.

It had been designed using the very latest CAE techniques and featured a number of technical refinements. Moreover, it represented the first stage in

the new modular engine family which one year later was extended to include the new five-cylinder version in the Volvo 850.

The displacement was just under 3 litres 2,922 cc, to be exact and output was 204 bhp. The double overhead camshafts operated four valves per cylinder and other refinements included the low weight, the ignition system with six high-voltage coils, cast-in bearing supports, so-called liquid gaskets instead of the traditional type and minimal service requirements.

### **In-line six-cylinder technically superior**

The step from the V6 engine to the in-line six-cylinder was taken for a number of rational and sensible reasons. As Volvo's engine philosophy is based on the use of in-line engines whenever possible, this was a perfectly natural move. From a purely technical angle, the in-line engine is the best solution and here are some of the reasons.

An in-line six-cylinder engine produces excellent comfort because it is quiet and virtually vibration-free as it can be balanced to a level of almost 100%.

An in-line engine makes it possible to utilise advanced techniques such as variable valve systems and turbocharging, as one cylinder head is less complicated and less expensive than two.

An in-line engine offers emission benefits as all the exhaust gases leave the engine on one side and thus reach the catalytic converter with very small energy and output losses.

The distance to the catalytic converter is short and this, in turn, means that the

catalytic converter starts working more rapidly.

In addition, it is difficult to counterbalance the cylinder banks in the V engine when it comes to emissions.

An in-line six-cylinder engine has excellent performance potential as a result of favourable intake and exhaust conditions- in other words, it has one cold and one hot side. Using different turbocharging systems, output and torque comparable with those of far larger engines can be obtained.

### **Ninety years of six-cylinder technology**

It is an old and well-established fact that the six-cylinder car engine is an effective and attractive technical solution.

As a technical phenomenon, its roots can be traced as far back as 1903 when the Dutch car manufacturer Spyker presented what was the world's first six-cylinder car engine. It had a displacement of 8.5 litres and developed no less than 60 bhp.

However, the Spyker was a racing car which was not intended for series production. The car which can claim the honour of being the first series-manufactured and commercially successful six-cylinder engine is the superb English make, the Napier. In 1904, Napier presented their 18 bhp model, equipped with an in-line 4.9-litre six-cylinder with an output of around 30 bhp and, during the next twenty years, the Napier was the car make which did most to popularise the six-cylinder as an engine type for cars.

Automobile history is full of facts, both true and less true. The following is a short presentation on the theme of six-cylinder cars which fits into the first of these categories.

Configurations: In-line, V6, horizontally-opposed (boxer)

First six-cylinder engine: 1903, Spyker (Holland) (1904 Napier 18 bhp, Great Britain\*)

First inline six-cylinder: 1903, Spyker (Holland) (1904 Napier 18 bhp\*)

First V6: 1950, Lancia B10 (Italy)

First horizontally-opposed (boxer) six-cylinder: 1947, Tucker Torpedo, air-cooled, rear engine (USA)

Smallest six-cylinder: 1,087 cc MG K1 Magnette 1932 (Great Britain)

Largest six-cylinder: 15,910 cc, Ariel 50/60 1907 (Great Britain)

\* = The first series-manufactured six-cylinder engine

### **Six-cylinder Volvos on land and sea**

Since 1930, Volvo trucks have only been equipped with six-cylinder engines, with the exception of the light Snabbe and Trygge trucks. They were built between 1956 and 1975 and could be specified with either a petrol V8 or a four-cylinder diesel.

The largest six-cylinder engine for trucks can be found in the current FH Series, in the FH16, and has a displacement of 16 litres and an output of 520 bhp.

Six-cylinder engines have also been used in Volvo buses and other heavy vehicles, as well as in marine and stationary versions.

As a result, Volvo has extremely lengthy traditions to lean back on when it comes to six-cylinder engines. At the same time, the current situation is no less impressive - from the three-litre machine made of aluminium to one of sixteen litres made of iron.

So the playwright who gave his play which was performed in a theatre in New York in 1921 the title "Six Cylinder Love" knew what he was talking about. It is not difficult to love a six-cylinder engine.

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## **VOLVO 960 - TECHNICAL SPECIFICATIONS**

(Certain deviations are possible depending on the market and version)

### **ENGINE**

Type: Front-fitted, 6-cylinder, in-line engine made of aluminium with cast-in cylinder liners made of iron. Double belt-driven overhead camshafts. 24 valves set at an angle of 29 degrees to one another. Pent-roof type combustion chamber.

Bore x stroke: 83 x 90 mm (B6304FS), 81 x 80 mm (B6254FS).

Displacement: 2,922 cc (B6304FS), 2,473 cc (B6254FS).

Compression ratio: 10.7:1 (B6304FS), 10.5:1 (B6254FS).

Fuel system: Electronic injection (Motronic 1.8), microprocessor-controlled with double knock sensors and diagnosis system.

Fuel: 95 octane unleaded.

Emission control: Three-way catalytic converter with preheated Lambda sensor, EGR and evaporation control.

Ignition system: Electronic, microprocessor-controlled with six ignition coils of the high-voltage type. The coils are located directly on the spark plugs.



Max output: 204 bhp at 6,000 rpm (B6304FS), 170 bhp at 5,700 rpm (B6254FS).

Max torque: 267 Nm at 4,300 rpm (B6304FS), 230 Nm at 4,400 rpm (B6254FS).

### **ELECTRICAL SYSTEM**

Type: 12V.

Alternating current (AC) alternator: 120A.

Battery: 520A-600A depending on the market.

Starter motor: 2.3 bhp.

### **TRANSMISSION**

Drive: Rear-wheel drive.

Gearbox manual: Volvo M90, five-speed, fully-synchronised including reverse.

Gear ratios: 1st: 3.544:1, 2nd: 2.045:1, 3rd: 1.377:1, 4th: 1:1, 5th: 0.808:1, R: 3.453:1.

Rear axle ratio: 3.91:1.

Gearbox automatic: Volvo AW 43, four-speed automatic with three optional driving programs (Sport, Economy, Winter).

Gear ratios: 1st: 2.804:1, 2nd: 1.532:1, 3rd: 1:1, 4th: 0.754:1.

Rear axle ratio: 3.73:1.

### **CHASSIS**

Front-wheel suspension: Independent with McPherson type spring struts, lower wishbones and anti-roll bar.

Rear-wheel suspension: Independent with a Multilink rear axle, a transverse leaf spring made of composite material, telescopic shock absorbers with or without automatic levelling, anti-roll bars.

Steering: Rack and pinion with progressive power assistance.

Number of turns of the steering wheel lock to lock: 3.5.

Turning circle: 9.7 m.

Brakes: Disc brakes with servo and ABS all round, ventilated at the front. Disc diameter, front 280 mm, rear 265 mm.

Wheels: 6 x 15" steel or 6.5 x 16" aluminium depending on the version and market.

Tyres: 195/65VR15 or 205/55VR16 depending on the wheel type.

Fuel tank volume: 80 litres.

## **BODYWORK**

Type: Unitary, 4-door saloon, 5-door estate.

Drag coefficient: 0.36 saloon, 0.38 estate.

**MEASUREMENTS AND WEIGHT**

Length: 487 cm saloon, 486 cm estate.

Width: 175 cm.

Height: 141 cm saloon, 144 cm estate.

Wheelbase: 277 cm.

Track: 150 cm front, 152 cm rear.

Kerb weight: approx. 1,600 kg.

Weight distribution: 55/45% saloon, 53/47% estate.

Luggage compartment capacity: 457 litres SAE (491 DIN) saloon, 1,050 SAE with rear seat upright, 1,702 litres DIN/VDA with rear seat down estate.

Max. roof load: 100 kg.

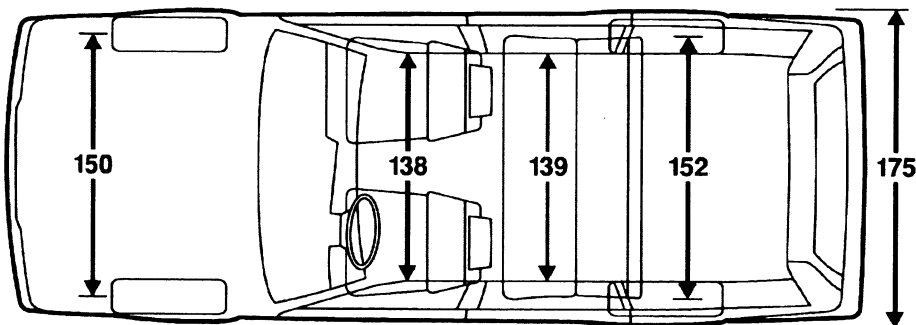
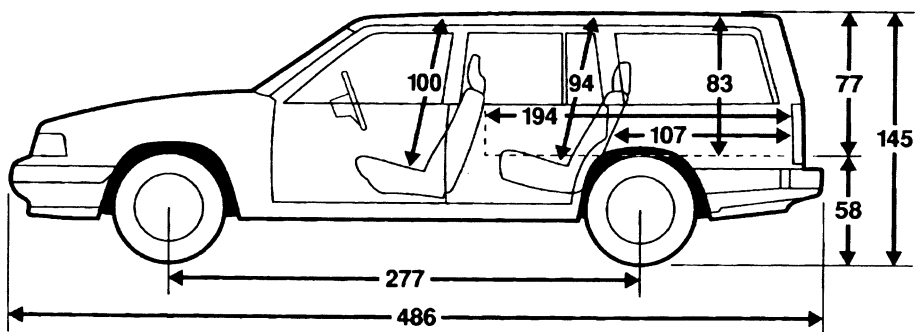
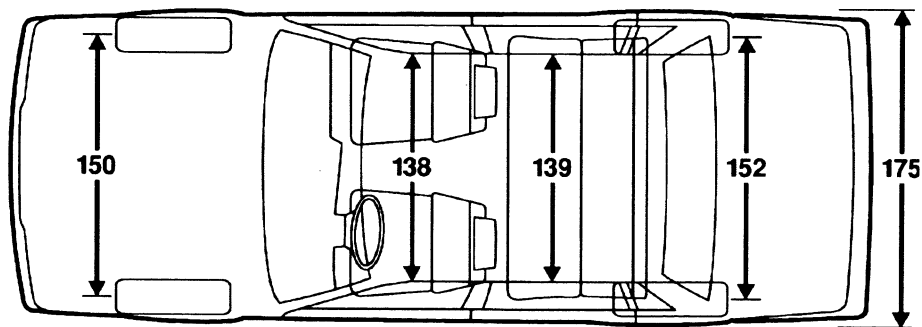
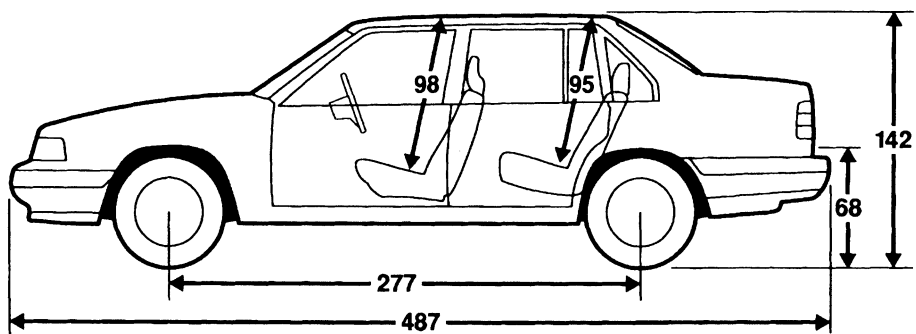
Max. trailer weight: 1,800 kg.

**PERFORMANCE**

Acceleration 0-100 km/h: Saloon 9.7 seconds manual, 10 seconds automatic (B6254FS), 9.1 seconds automatic (B6304FS). Estate 9.9 seconds manual, 10.3 seconds automatic (B6254F5), 9.3 seconds automatic (B6304FS).

Braking 100-0 km/h: 3.2 seconds lightly laden, 3.5 seconds fully-laden.

Top speed: 210 km/h manual, 205 km/h automatic (B6254F5), 210 km/h (B6304F5),

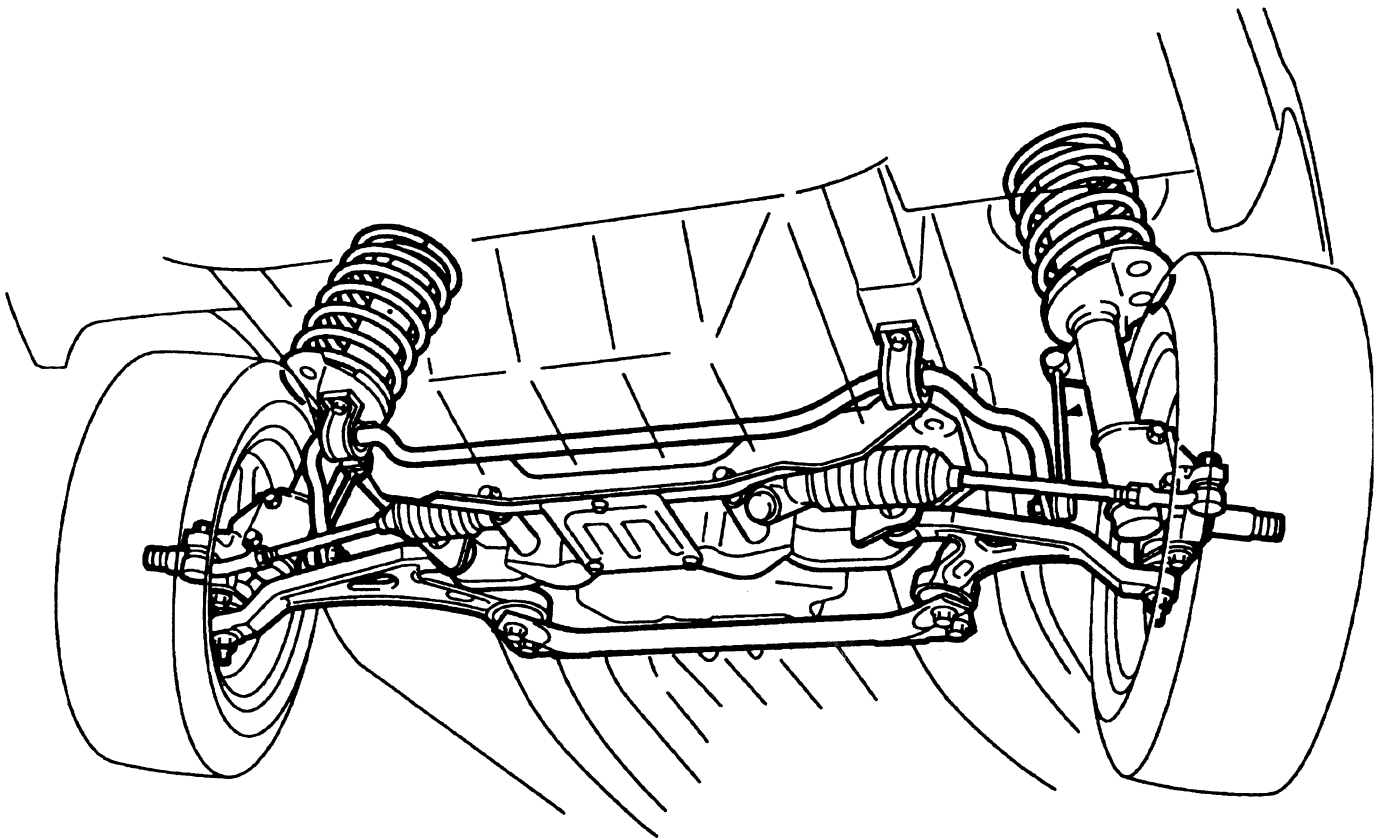
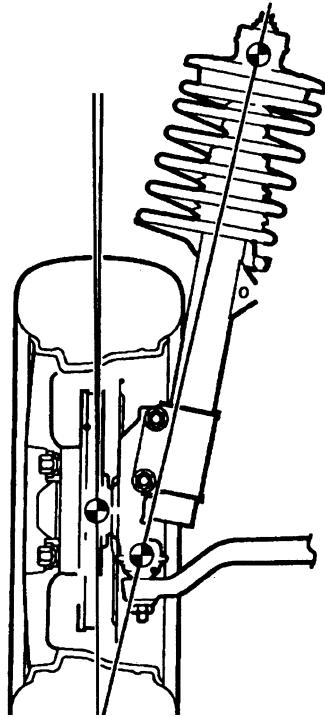


# Volvo 960

## Sedan/Estate

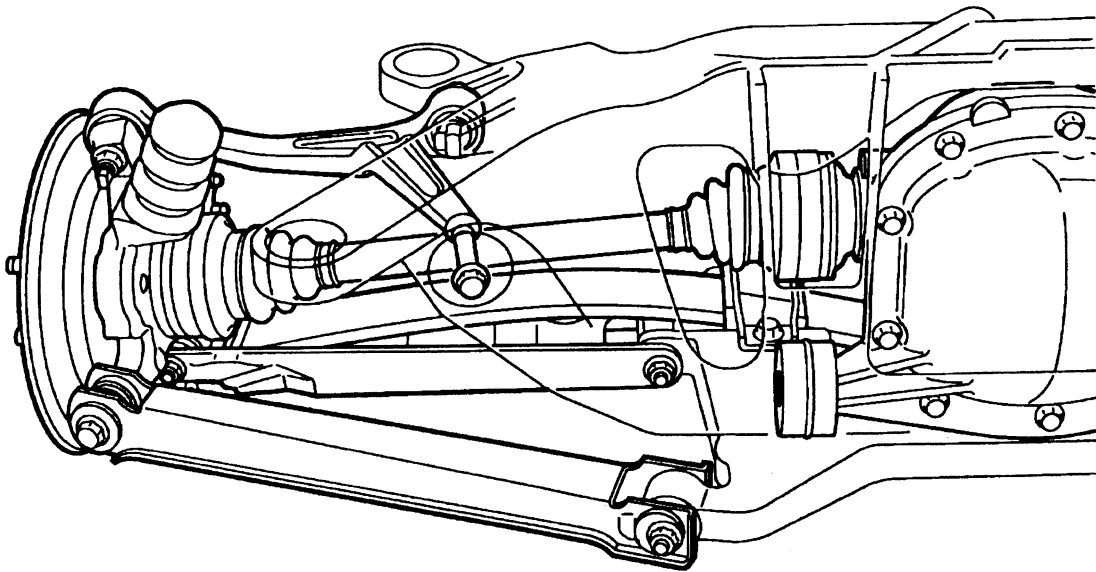
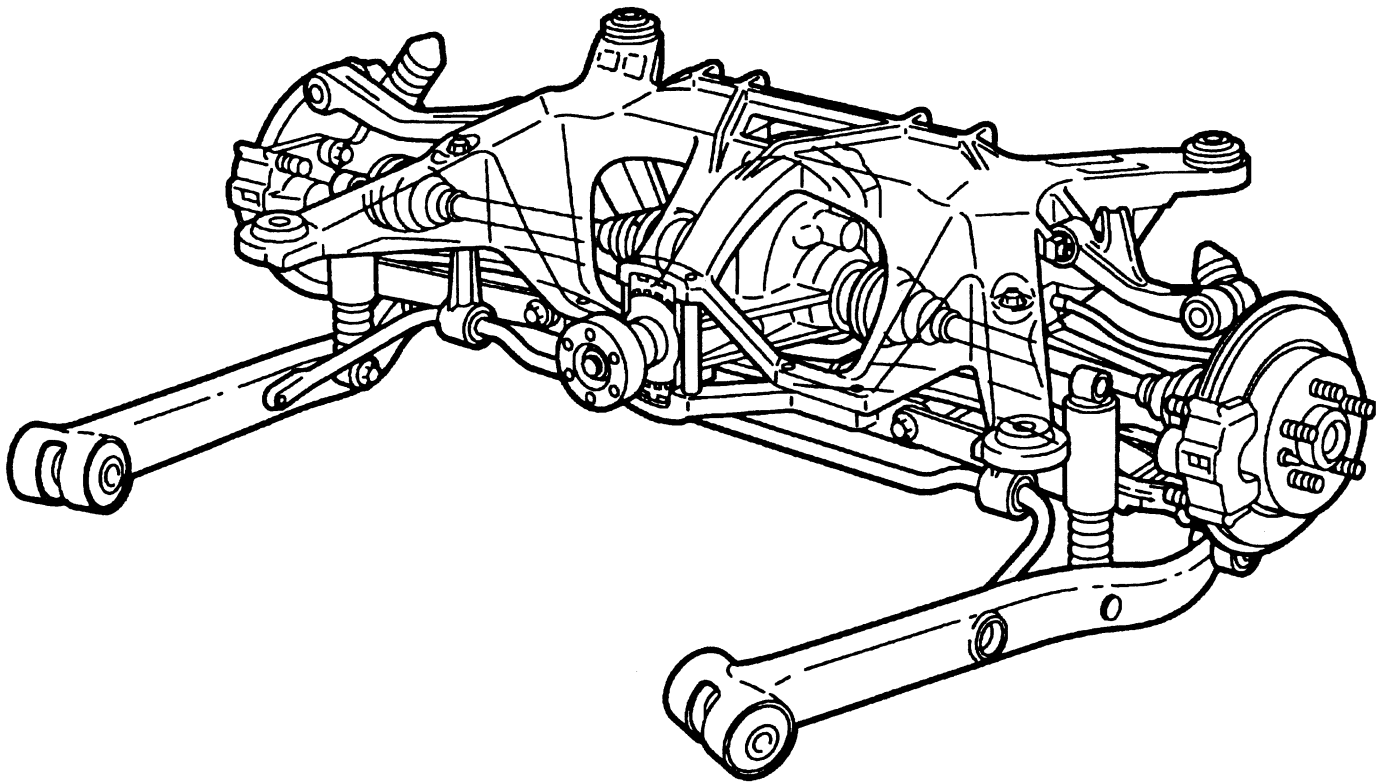
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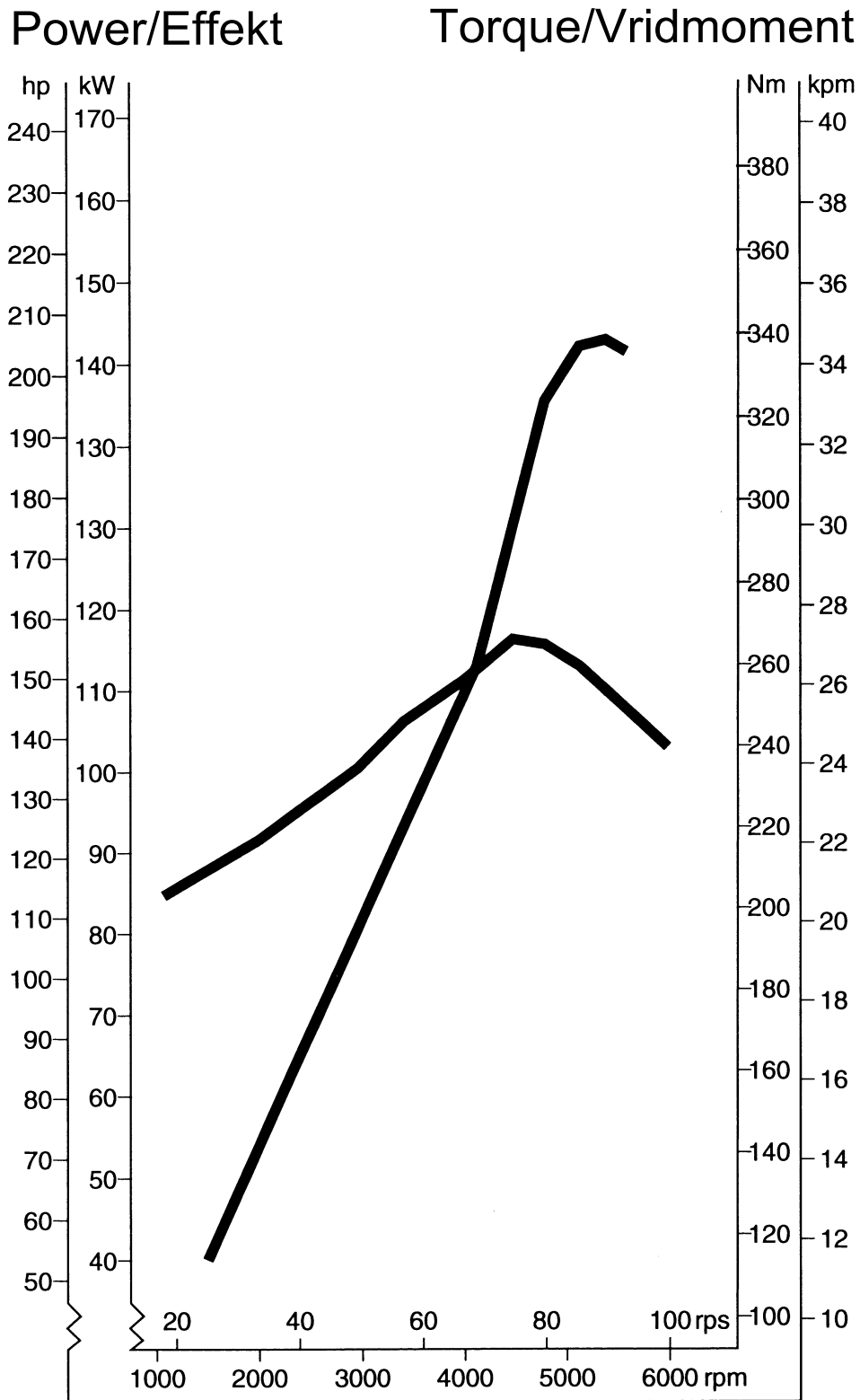
Volvo 960  
Front suspension  
Framvagn

**VOLVO**



Volvo 960  
Multi-link rear suspension  
Multi-link bakaxel

**VOLVO**



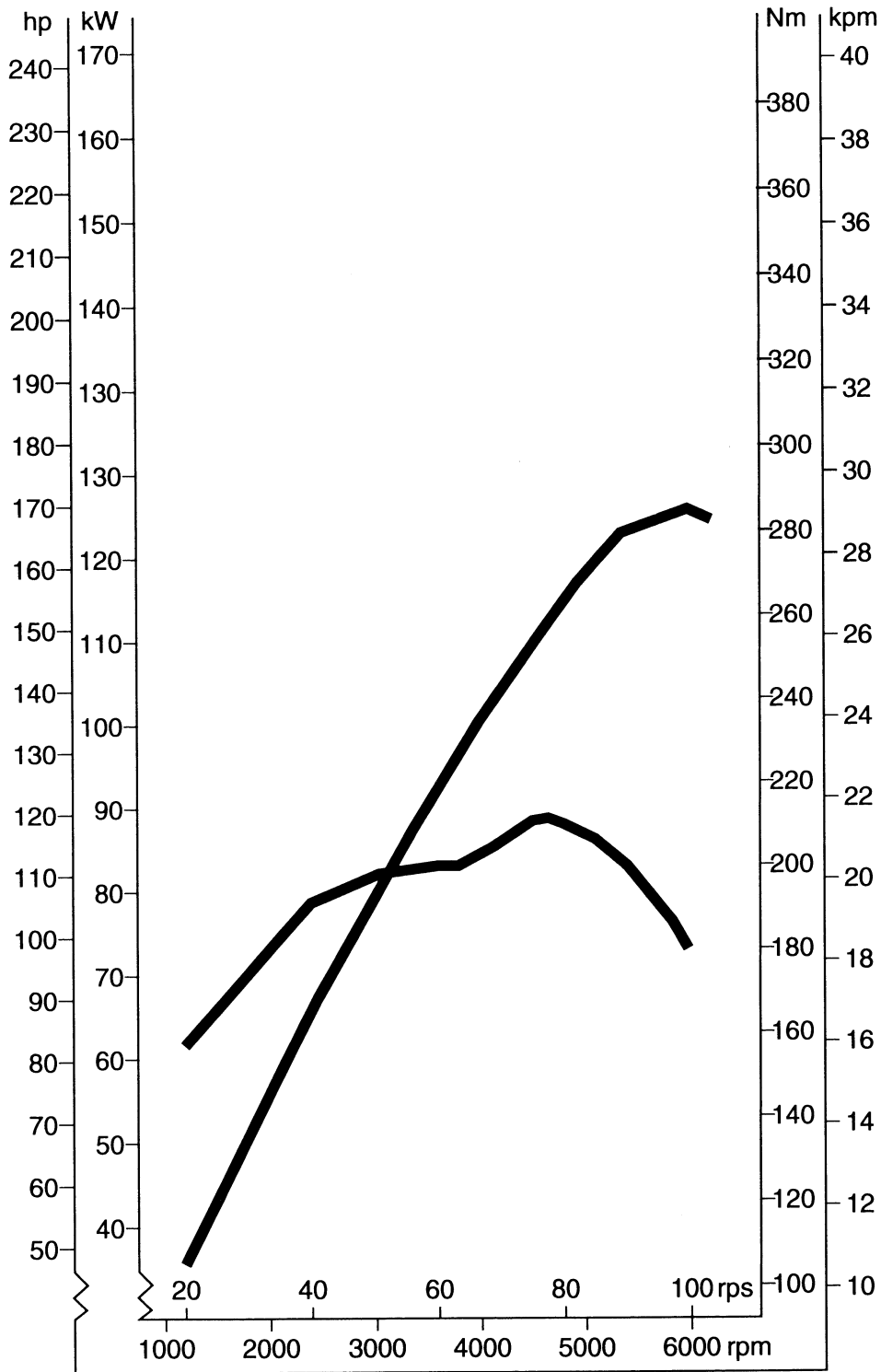
**Volvo 960**

**Engine B6304FS**

**Motor B6304FS**

**VOLVO**

Power/Effekt      Torque/Vridmoment



Volvo 960

Engine B6254FS

Motor B6254FS

