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VOLVO 460



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Volvo 460 press information

New 460 completes the Volvo 400 series

With its classical 4-door saloon styling the Volvo 460 meets the highest consumer requirements for generous interior space and comfort in its class - yet does this within compact exterior dimensions which make it easy to manoeuvre and park in city-street driving.

From all angles it is easily recognizable as a Volvo for it shares many family features with other Volvo models. This includes the long, high roofline and near vertical side windows, typical space-maximizing and comfort-enhancing attributes of a Volvo. Other family resemblances -- appropriately to other topof-the range Volvo models, notably the 700 series -- are the steeply sloping nose section, the grille with vertical bars, the large rectangular headlights and the colour co-ordinated bumpers. The aerodynamic wedge shape of the body enhances stability at motorway speeds and provides a comfortably quiet interior. This good airflow management is obtained without concession to interior space and comfort. Having regard to the modest amount of space it takes up on the road, the Volvo 460 is an uncommonly roomy car (also see Table 1).

Passenger compartment

In the remarkably roomy interior, the dashboard centre console is angled, cockpit style, towards the driver, bringing all the controls within easy reach. For driver convenience and enhanced safety, the twin column stalks can be operated with the hands still on the steering wheel, while a full complement of warning lamps and instruments is incorporated directly ahead of the driver in a reflection free centre binnacle. All 460's have a height adjustable steering column and this, in combination with the height adjustable seat and other adjustment modes, allows virtually every driver to find the ideal steering position. In addition to the usual high level of standard equipment offered by every Volvo, which includes rear head restraints and (460 Turbo + GLE) power windows in the front doors, customers have a choice of different equipment and trim levels.

Variants strategy

'Custom-built'

With the 460 models Volvo is continuing the variants strategy introduced with the 440, which gives the consumer a comprehensive choice of equipment and engines with gradually increasing price levels. In this way the individual needs of the consumer can be maximized in the form of a 'customized' car which matches his or her personal style.

In the 460 range the customer can choose between three levels of equipment and trim and there is a choice of three power units. For details of the model and trim programme in your own country, please refer to the specifications chapter of this publication.

3 Engine/performance levels (see enclosed table 2)

B18KP and B18KPD twin choke carburettor engines.

Highest carburettor performance level. 66 kW/90 hp at 5800 rpm (B18KP); 64 kW/87 hp at 5700 rpm (B18KPD).

B18EP and B18FP injection engines.

Medium performance level. 78 kW/106 hp at 5520 rpm (B18EP); 75 kW/102 hp at 5640 rpm (B18FP).

B18FT and B18FTM turbo-intercooler engines.

Highest performance level. 88 kW/120 hp at 5400 rpm.

Key to engine codes:

B18 1721 cc engine

K twin choke carburettor

E normally aspirated fuel injection engine

F with 3-way regulated catalytic converter

(selective, with Lambda sensor)

D with 3-way unregulated catalytic converter (non-selective, without Lambda sensor)

P enhanced performance (model year 1990)

T turbocharged with intercooling

M non-catalytic converter model

Choice of equipment and trim levels

The choice of 3 engine performance levels is complemented by a choice of tri m and equipment -- GL, GLE and Turbo -- which may, however, differ between the various markets. Importers can choose between the following general equipment and trim levels.

1. Comfort specification (460 GL)

Enhanced comfort level. Includes height adjustable driver's seat and steering wheel, plush upholstery, central locking and asymmetrically split (70/30) rear seat backrest.

This specification is available in combination with the B18KP, B18KPD, B18EP and B18FP engines.

2. Comfort-plus specification (460 GLE)

Luxurious in-car environment. Specification as Comfort, plus driver's door lock ill umination, electrically operated and heated door mirrors, reading lamps at front and rear, power windows for the front doors and tinted glass all round. This specification is available in combination with the B18KP, B18KPD, B18EP and B18FP engines.

3. Turbo specification (460 Turbo)

The most complete specification of all, available only on the 460 Turbo, including uprated suspension and flush, aerodynamic alloy wheels. This specification is available in combination with the B18FTM and B18FT engines.

Options, accessories

Owners of the new Volvo 460 can tailor their cars to an even higher level of personalized transport with the wide range of Volvo accessories and works fitted options. Immediately available at the launch of the 460, they have been developed to match the specific characteristics of the car and are built to Volvo specifications and the usual high standards of quality. Options include an electric tilt/slide glass sun roof with an internal sunshade and full airconditioning, designed to cut in at only 40% of its maximum power before building up progressively to its maximum, thus avoiding any power hesitation from the engine, which is often the case with other types of air-conditioning. Leather upholstery is also available as an option, with special anti-slip material at the body contact points.

Table 1.

The generous amount of room offered by the new Volvo 460 is shown by the following statistics.

Weights and dimensions

•	Overall length	4405 cm	
•	Turning circle	10.15 m	
•	Kerb weight	980 -1040	kg

Interior space

· Width at shoulder height

front 1394 mm rear 1376 mm

Headroom at front 980 mm (GL/GLE)

993 m m (Turbo) at rear 955 mm

Transport versatility

- Large luggage volume of 453 I/VDA
- Max. luggage volume (backrests down): 948 I/VDA
- Asymmetrically split rear backrest (70/30) with fast, fingertip operation Low lift-over height of 698 mm; the tailgate extends down to bumper level between the rear light clusters.
- Opening angle of boot lid: 90, offering a standing height of 1606 mm for the GL/GLE models and 1 621 mm for the Turbo models.

Engines

Front-mounted in the transaxte configuration, the same base petrol engine (1721 cc) is used throughout the 460 range with a choice of fuel metering systems ranging from twin choke downdraught carburettors to multipoint fuel injection and watercooled turbocharged units with intercooling. Power choice ranges from 64 kW/87 hp to 88 kWh 20 hp. Exceptional low-end torque (about 90% of maximum from 2000 rpm) across a wide engine speed band and the ability to run on unleaded petrol are features of all the engines in the range.

The engine is supported on 1 conventional engine mounting and 2 hydro-elastic mountings, which absorb engine vibrations. Torque reactions are taken up by a small hydraulic shock absorber. On the fuel injection and turbocharged engines a knock sensor automatically adjusts the ignition timing, ensuring consistently optimum performance even if a lower grade fuel has to be used occasionally, without risk of damaging the engine.

Engine management system

The digital engine management system on the fuel injection and turbocharged engines controls the quantity of injected fuel, the ignition system, the idle speed and the EVAP system (Lambda sensor engines) and also regulates a number of subsidiary functions. All these functions are controlled by a single electronic control unit.

Limp mode

For correct functioning, an electronically controlled engine management system is largely dependent upon data received from sensors located around the engine. If any of these sensors fail, or if a fault occurs in a wiring harness, the system will not function properly. On the B18 injection engines Volvo has therefore stored limiting values for various input signals in the memory of the microprocessor. If the incoming signals vary outside these limits, the microprocessor takes over and enters the pre-programmed average values into the system. This enhances the reliability of these models considerably because even with defective sensor systems the car can still be started and driven home or to the workshop.

Limiting hydrocarbon emissions

The pressure in the fuel tank is regulated by valves and the fuel filler system incorporates a roll-over check valve which closes off the fuel filler pipe and prevents spillage even if the vehicle should be inverted after a crash. On B18FP and B18FT models, evaporating petrol fumes are conducted to a carbon (activated charcoal) absorption canister in the right-hand front wing, where petrol elements are absorbed and, under certain engine operating conditions, drawn via the inlet manifold into the engine where they participate in the combustion process.

All fuel injection and turbocharged engines feature a separate auxiliary water pump which continues to cool the cylinder head after the engine is switched off if the temperature is above a pre-set safety value. This enhances the reliability and life performance of these models and ensures first-time starting in even the hottest weather conditions.

The turbocharger is watercooled and the cooling action continues after the engine is switched off, thereby virtually eliminating the possibility of turboshaft bearing seizure. Other significant features of the turbocharger unit include the small diameter of the vanes and the electronically controlled turbo boost. This virtually eliminates the uncomfortable and disconcerting turbo-lag which is often experienced in other turbocharged cars, while allowing maximum torque to be obtained low down the engine speed band (1800 rpm).

Diagnostic system

The diagnostic system is used for fault tracing operations. It has three different test functions: one for reading the malfunctions stored in the memory and two for testing the incoming data. Communication with the diagnostic system takes place via a diagnostic plug-in tester located in the engine compartment on the turret of the left-hand MacPherson strut. The data stored in the memory are indicated by a code which is formed by the flashing of the test LED on the diagnostic tester.

The diagnostic system continuously tests the functioning of the engine management system when the engine is running. If a malfunction occurs in the system, this will be stored in the memory of the diagnostic system as a fault. 22 different malfunctions can be identified and stored in the memory as fault codes. Transient faults (faults which disappear spontaneously after a while) are also recorded and can therefore be used for preventive fault tracing by the dealer. There is also a code which indicates when there are no faults in the system.

Low friction technology

These 4-cylinder engines, which benefit from Volvo's low-friction technology, are responsive and free-revving: good driveability properties which are partly the result of using an overhead camshaft, driven by a toothed belt which acts

directly on the valves. They all have a light alloy Heron head with combustion chambers in the piston crowns which allows excellent waterflow management and therefore leads to greater thermal efficiency and an enhanced power output/fuel consumption ratio. An oil cooler is fitted as standard.

No valve adjustments for first 80,000 km

This optimum waterflow management results in good thermal efficiency with enhanced cooling of the valves and injectors. The relatively low thermal stress on the cylinder head and valves gives these parts and the spark plugs and injectors a longer life expectancy. The exhaust valves are coated with the extremely hard, wear and heat-resistant stellite steel alloy; heavy duty hardened steel is used for the valve seats - which makes them suitable for running on alternative fuels such as the hotter-burning propane. Sodium cooled exhaust valves are used in the turbocharged engines, while all fuel injected engines have an auxiliary water pump for continued cooling of the cylinder head after the engine has been switched off.

As a result of the superior reliability of these vital parts, no adjustments are necessary to the valve gear, timing, timing belt and the stainless steel flexible exhaust coupling for the first 80,000 km.

Emission control

Various emission control systems are available for the different models and markets, depending upon local emission legislation and the availability of unleaded fuel (see enclosed table 2).

Engines without a catalytic converter are available as an option in markets where unleaded petrol is not readily available.

Front suspension

Front suspension is by MacPherson struts and coil springs located by lower wishbones with special bushes to allow controlled compliance and incorporating an anti-roll bar with non-compliant linkages. With this front wheel geometry all 460's are designed with a self-correcting steering action to compensate for sudden cross-wind forces. This also contributes to the neutral to mild understeer characteristic of the Volvo 460.

Rear suspension

Rear suspension is by a constant track beam axle located transversely by a Panhard rod and a longitudinal Watt linkage at each end, thus ensuring constant wheel angles and track without creating undesirable steering effects. Twin tube hydraulic dampers are used all round.

Transmission

All 460's are front wheel drive and equipped as standard with a 5-speed overdrive gearbox, with close ratio gears on the Turbo variant to exploit the extra performance potential of this model.

Steering gear

The rack-and-pinion steering gear on the 460 GL features a variable steering ratio. This has been achieved by varying the pressure points on the tooth flanks of the rack from the centre position to the two extremities. In this way a positive steering feel is obtained at all driving speeds while less effort is needed to turn the steering wheel when parking.

Power steering

Power steering is standard equipment on the 460 Turbo and GLE models and is available as an option on the 460 GL. The pump of the hydraulic servo mechanism operates on the drooping flow principle, in which progressively increasing assistance is offered as the engine speed decreases. The benefits are: good steering feel at all driving speeds and very low effort when parking.

Brake system

The Volvo 460's have dual circuit brakes in a diagonal split with discs all round (rear drums on carburettor models). Depending upon the market in question, ABS is standard or available as an option. Carburettor engine models then have disc brakes on the rear axle instead of drums.

Anti-lock brake system

This optional ABS is controlled by two microprocessors in the car's Electronic Control Unit, which offers fail-safe reliability by a double control logic, and responds to input from speed sensors at each wheel. The hydraulic pressure is regulated in 3 circuits. Apart from its reliability, this Alfred Teves Mk II system was chosen and fine-tuned for the 460 on account of its small dimensions and low weight and because of the very fast response offered by its integrated design and its sophisticated electronic circuitry.

Safety

Active safety

As it is based on the Volvo 480, the new Volvo 460 naturally offers commensurate performance. Excellent roadholding, crisp acceleration and good top speed are matched by a high level of comfort. Active safety and driving pleasure are therefore to the usual Volvo standards.

Passive safety

As a pioneer of automotive safety, Volvo traditionally builds extra margins of strength into its cars. It is the only way to achieve the high levels of safety and longevity that are required by Volvo standards.

Tough steel safety cage

In the unitary body of the Volvo 460 the passenger compartment is of the safety cage design. The single pressings of the uniside panels contribute to the high strength of the safety cage: a cell-like survival area protected at front and rear by crumple zones.

Crumple zones

The front crumple zone is formed by the engine compartment and the chassis front side members; at the rear by the boot area and the chassis rear side members. The fuel tank is safely located away from the rear end, slightly ahead of the rear axle.

Four side intrusion bars

To lessen the risk of serious injury to the passengers all four doors have an integrated side intrusion bar in the form of a tough steel pipe made of High Strength Steel.

Overhead protection

The roof cant rails together with the strong windscreen frame, roof rear cross-section, A and B-pillars and triangular C/D-pillars (rear quarter light) can easily support the weight of the car in a roll-over crash. Not only do the roof pillars have high bending resistance to prevent roof intrusion from vertical impact if the car overturns, this also prevents the pillars from collapsing under the stress of lateral forces when the car is sliding inverted on its roof. The roof structure - box-section cant rails connected to strong A to D pillars acts as a roll bar and is designed to prevent the roof collapsing in a roll-over

Anti-burst door locks

crash.

All four doors are fitted with anti-burst door locks which keep the doors safely closed and prevent the passengers from being ejected from the car in a collision.

Safety type door handles and latches

The door handles and inside latches have been specially designed from the viewpoint of safety. They cannot open inadvertently in a crash.

Childproof rear door locks

All variants have childproof locks as standard equipment on the rear doors.

Spare wheel location

The spare wheel is located in a well in the boot floor, angled downwards at the front. In a rear end collision the rear floor section will tilt slightly, bringing the spare wheel up against the strong transverse member under the rear seat. In this way extra energy absorption is obtained. In cars without this design the spare wheel may be forced into the passenger compartment via the rear seat backrest.

Fuel tank

The fuel tank is located outside the passenger compartment under the floorpan below the rear seat. This location is ahead of the rear axle and well away from the rear bumper, therefore safely out of the crash zone.

The fuel tank and fuel filler pipe are made of high density polyethylene. This material is relatively light in weight, it cannot corrode and is very easily moulded, even into intricate shapes. Crash tests have shown an extremely high degree of deformability of the fuel tank without rupture. In a crash involving severe deformation, the filler pipe is designed to shear out of the body side wall with the filler cap still in place and the pipe still attached to the fuel tank.

Five seat belts as standard

Four 3-point inertia reel seat belts are fitted as standard at front and rear. A centre lap belt is also provided for the rear seat. The locking action responds to the belt's extraction speed as well as to deceleration forces in all directions, while the retracting mechanism is designed to give a low webbing tension when the seat belt is being worn by the driver/passengers.

Two 'Fasten seat belt' warning lamps are provided: one in front of the driver in the instrument panel, one at the rear of the tunnel console facing the rear seat passengers. They are both activated by the front seat belt warning systems.

Seat belts anchorage

The lower anchorage points of the front seats are mounted directly on the seat frame. This ensures optimum positioning of the lower part of the webbing over the pelvis, irrespective of the fore-and-aft position of the seat.

Anti-slide protection

All 5 seating positions have an 'anti-submarining' device to prevent the occupants sliding forwards and under the seat belt in a collision.

In the front seats this is a steel pipe transversely located at the leading edge of the cushion under the upholstery padding. At the rear this is achieved by the angle of the floorpan under the seats in relation to the cushion and the location of the belt locks (through the seat cushions, anchored to the floor).

Bumpers and side protection mouldings

The wraparound bumpers are designed to withstand low-speed impacts and easily comply with all European safety legislation. The side mouldings give additional protection against minor parking damage.

Collapsible steering column

The Volvo 460 is equipped with a collapsible steering column and steering wheel. This safety type steering gear collapses on a progressive scale, depending upon the severity of the impact force, and features a double-jointed steering column with a collapsible lower steering shaft. To maximize driver protection in frontal collisions, the steering gear is located behind the engine and behind the centre-line of the front wheels.

The various parts of the steering system are interactive, collapsing gradually in a collision and minimizing the risk of steering column intrusion and injury to the driver.

Steering gear main components:

- 1. Steering wheel with large compressible chest pad
- 2. Double-jointed collapsible steering column
- 3. Collapsible lower steering shaft

Upon initial impact the steering wheel/chest pad aligns with the driver's body and distributes the pressure evenly over a large area of the driver's chest.

As the pressure builds up, the steering wheel collapses progressively towards the steering column.

At very high impact forces the middle section of the steering column remains immovably and safely fixed to the scuttle and the body cross-member; the lower section of the steering shaft then collapses inwards and folds under the passenger compartment.

Volvo quality

A long life was one of the foremost design targets for the new Volvo 460. This is assured not only by Volvo's long experience in achieving the highest build quality and the use of high quality materials, but also by the unfailing precision of robotized assembly at one of Europe's most advanced automobile manufacturing plants.

High strength steel

About 50 kg of High Strength Steel are incorporated in the floorpan and body of the Volvo 460. This has been done in order to ensure a very strong structure with a relatively low weight.

Composite materials

Lightweight composite materials - the ultimate in rust protection - are used for components which are in the front line of corrosion attack. These include the wheel arch liners, bumper skins, rear apron, fuel tank and filler pipe, windscreen surround and additional sill protection mouldings between the front and rear wheel arches.

Zinc-coated components

Extensive use is made of zinc-coated steel on account of its excellent anticorrosion properties. About 60% of the total bodyweight is in single or double-sided zinc-coated steel.

Unique rustproofing and surface treatment programme

Volvo has always enjoyed a reputation for caring about the quality of its products. Lasting quality is built into every Volvo, the kind of quality that gives our customers a car that is safe and economical to run - and a pleasure to own. In recent years the total economy of ownership of a Volvo has been further enhanced by a unique rustproofing and surface treatment programme. This corrosion-beating treatment is so effective that Volvo now gives an 8-year Corrosion Protection Warranty against rust starting to form from within. There are no post-treatment charges for the customer and the warranty is transferred with the car upon change of ownership.

22-stage body protection programme

Volvo's ultramodern, fully computerized surface treatment and spray-painting facility is a sure guarantee that all our cars receive the best anti-rust treatment that state of the art paint technology allows.

14 layers of corrosion protective material (13 for solid colours) are applied during a unique 22-stage programme, including full underbody coating and innercavity rustproofing.

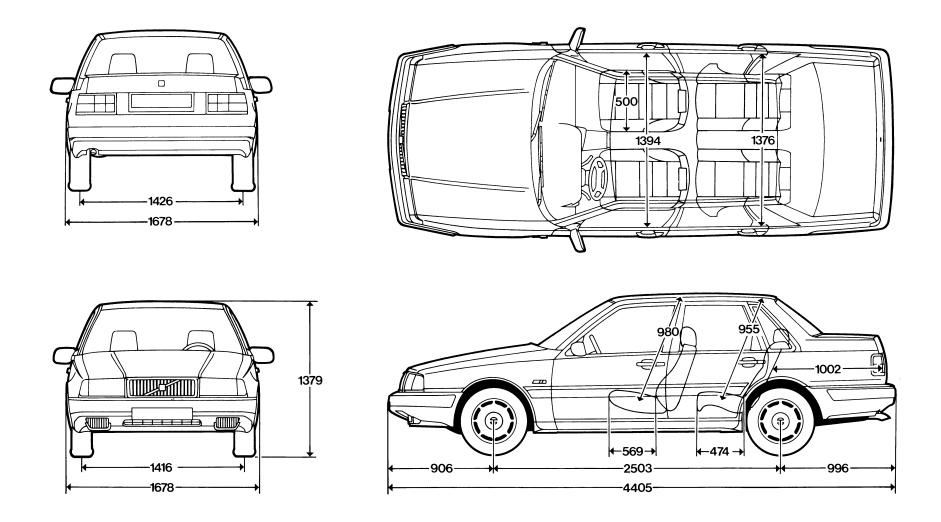
In conclusion

Few will deny that Volvos have always had a distinctive styling. This individuality of design is again reflected in the young and dynamic Volvo 460, which can be further individualized with Volvo's variants strategy. This approach to customizing serves to reinforce the personal appeal of the new Volvo to customers in the upper middle class segment. It does this by offering a wide choice of engines and trim specifications, enhancing the customer's level of driving pleasure and bringing the Volvo standard of personalized motoring to an even higher level.

Fuel management systems and performance figures engine 460 range.

Engine	Fuel management	Emission control	Top speed km/h	Acceleration 0-100 km/h	Power ECE (kW)	Torque ECE (Nm)
B18 KP	Carburettor	Standard (R15-04)	175	11.55	66	131
B18KPD	Carburettor	3-way catalytic converter without Lambda sensor (ECC 88176)	175	11.5 s	64	130
B18EP	Fuel injection	Standard (R15-04)	185	10.5 s	78	145
B18FP	Fuel injection	3-way catalytic converter with Lambda sensor (US 83) EVAP control	180	11.0 s	75	142
B18FTM	Fuel injection + turbo-intercooler	Standard (R15-04)	200	9.0 s	88	175
B18FT	Fuel injection + turbo-intercooler	3-way catalytic converter with Lambda sensor (US 83) EVAP control	200	9.0 s	88	175

Limp mode and diagnostics system standard on all fuel injection engines.



Car variant 4400 CL (possible combinations) X <th>Engine:</th> <th>B18KPD</th> <th>B18KP</th> <th>B16F</th> <th>B18FP</th> <th>B18EP</th> <th>B18FT</th> <th>B18FTM</th>	Engine:	B18KPD	B18KP	B16F	B18FP	B18EP	B18FT	B18FTM
Car valant 480 Turbo (possible combinations STAND STAN	Car variant: 460 GL (possible combinations	Х	Х	Finland only	Х	Х		
Engine: Propertion: B18KP bit of the properties of the propert	Car variant: 460 GLE possible combinations	X	Х		Х	Х		
Parameter Par	Car variant: 460 Turbo (possible combinations						Х	Х
Configuration, transverse mounted	Engine:							
Puel system	Type designation	B18KPD	B18KP	B16F	B18FP	B18EP	B18FT	B18FTM
Non-regulated Lambda-sond	Configuration, transverse mounted	4-in-line	4-in-line	4-in-line	4-in-line	4-in-line	4-in-line	4-in-line
Non-regulated Non-regulat	Fuel system	twin-choke c	arburettor	computer con	trolled multipoin	tfuel injection		
S-way-catalytic Controlled Converter S-way						•	Turbo	intercooler
Converter 3-way 3-way 3-way 3-way 3-way 3-way 2-way 3-way 2-way 3-way 2-way 3-way 2-way		non-regulate	ed	Lambda-sond	Lambda-sond		Lambda-son	d
Catalytic catalytic catalytic catalytic catalytic catalytic converter conv		3-way-cataly	tic	controlled	controlled		controlled	
Converter Converter Converter Converter Converter Converter EVAP-system		converter		3-way	3-way		3-way	
Fuel evaporisation control system: EVAP-system EVAP-				catalytic	catalytic		catalytic	
Camshaft, overhead, driving the distributor: x <td></td> <td></td> <td></td> <td>converter</td> <td>converter</td> <td></td> <td>converter</td> <td></td>				converter	converter		converter	
Capacity (cm³) 1721 1721 1596 1721 1725 12/5400 24/5700 162/5600 160/5500 160/5500 180/5500 28/500 29/500 29/500 28/500 28/500 29/500 29/500 29/500 17/53300				EVAP-system	EVAP-system		EVAP-system	1
Max. output ECE (hp/rpm) 87/5700 90/5800 94/5700 102/5600 106/5500 120/5400 122/5400 Max. output ECE (kW/rpm) 64/5700 66/5800 69/5700 75/5600 78/5500 88/5400 90/5400 Max. torque ECE (nkg/rpm) 13.3/3600 13.4/3600 13.5/3000 14.5/3900 14.8/3900 17.8/3300 18.8/35 81.88.35	Camshaft, overhead, driving the distributor:	X	Χ	X	X	Χ	X	Χ
Max. output ECE (kW/rpm) 64/5700 66/5800 69/5700 75/5600 78/5500 88/5400 90/5400 Max. torque ECE (mkg/rpm) 13.3/3600 13.4/3600 13.5/3000 14.8/3900 14.8/3900 17.8/3300 17.8/3300 Mix. torque ECE (km/rpm) 130/3600 13.1/3600 132/3000 142/3900 14.8/3900 17.8/3300 17.8/3300 Mix. otrque ECE (km/rpm) 30/3600 13.1/3600 132/3000 142/3900 14.8/3900 17.8/3300 17.8/3300 Mix. otrque ECE (km/rpm) 95 9	Capacity (cm ³)	1721	1721	1596	1721	1721	1721	1721
Max. torque ECE (mkg/rpm) 13.3/3600 13.4/3600 13.5/3000 14.5/3900 14.8/3900 17.8/3300 17.8/3300 Max. torque ECE (Nm/rpm) 130/3600 131/3600 132/3000 142/3900 145/3900 17.8/3300 17.8/3300 Min. cotane rating (RON) 95 <td></td> <td>87/5700</td> <td>90/5800</td> <td>94/5700</td> <td>102/5600</td> <td>106/5500</td> <td>120/5400</td> <td>122/5400</td>		87/5700	90/5800	94/5700	102/5600	106/5500	120/5400	122/5400
Max. torque ECE (Nm/rpm) 130/3600 131/3600 132/3000 142/3900 145/3900 175/3300 175/3300 Min, octane rating (RON) 95 <t< td=""><td>Max. output ECE (kW/rpm)</td><td>64/5700</td><td>66/5800</td><td>69/5700</td><td>75/5600</td><td>78/5500</td><td>88/5400</td><td>90/5400</td></t<>	Max. output ECE (kW/rpm)	64/5700	66/5800	69/5700	75/5600	78/5500	88/5400	90/5400
Min, octane rating [RON) 95	Max. torque ECE (mkg/rpm)	13.3/3600	13.4/3600	13.5/3000	14.5/3900	14.8/3900	17.8/3300	17.8/3300
leadfree	Max. torque ECE (Nm/rpm)	130/3600	131/3600	132/3000	142/3900	145/3900	175/3300	175/3300
Bore x stroke (mm) 81x83.5 81x83.5 <td>Min, octane rating (RON)</td> <td>95</td> <td>95</td> <td>95</td> <td>95</td> <td>95</td> <td>95</td> <td>95</td>	Min, octane rating (RON)	95	95	95	95	95	95	95
Compression ratio 9.5:1 9.5:1 10:1 10:1 10:1 10:1 8.1:1 8.1.1		leadfree		leadfree	leadfree		leadfree	
Oil capacity incl. heat exchanger itr 5.3 6.5 </td <td>Bore x stroke (mm)</td> <td>81x83.5</td> <td>81 x83.5</td> <td>78x83.5</td> <td>81x83.5</td> <td>81x83.5</td> <td>81x83.5</td> <td>81 x83.5</td>	Bore x stroke (mm)	81x83.5	81 x83.5	78x83.5	81x83.5	81x83.5	81x83.5	81 x83.5
Cooling system water-cooled, closed system, with multi-stage electrofan. Cooling system capacity ltr) 6.5	Compression ratio	9.5:1	9.5:1	10:1	10:1	10:1	8.1:1	8.1.1
Cooling system capacity Itr) 6.5	Oil capacity incl. heat exchanger ltr	5.3	5.3	5.3	5.3	5.3	5.3	5.3
Cooling continued after engine switch-off: X	Cooling system		1	water-cooled, close	ed system, with i	multi-stage elec	trofan.	
Carburettor: X <t< td=""><td>Cooling system capacity tr)</td><td>6.5</td><td>6.5</td><td>6.5</td><td>6.5</td><td>6.5</td><td>6.5</td><td>6.5</td></t<>	Cooling system capacity tr)	6.5	6.5	6.5	6.5	6.5	6.5	6.5
cylinder head: X	Cooling continued after engine switch-off:							
cylinder head + turbo: X X X X X Electrical system: Electronic ignition mapping system System Electronic ignition mapping system System System Electronic ignition mapping system	carburettor:	X	Χ					
Selectrical system:	cylinder head:			Χ	X	X		
Searbox type	cylinder head + turbo:						Χ	Χ
Battery capacity (V/Ah)* 12/55	Electrical system:							
Alternator (V/A) 14/60 1	gnition system			electron	ic ignition mapp	ing system		
Alternator Performance (W) 840 840 980 </td <td>Battery capacity (V/Ah)*</td> <td>12/55</td> <td>12/55</td> <td>12/60</td> <td>12/55</td> <td>12/55</td> <td>12/55</td> <td>12/55</td>	Battery capacity (V/Ah)*	12/55	12/55	12/60	12/55	12/55	12/55	12/55
Alternation Performance (W) 340 360 360 980 360 980 Transmission: Gearbox type M55** M55'* M55 M55 M55 M59 M59	Alternator (V/A)		14/60	14/60	14/60	14/60	14/60	14/60
Gearbox type M55** M55'* M55 M55 M59 M59	Alternator Performance (W)	840	840	980	980	980	980	980
	Transmission:							
Final Drive reduction: 3.73 3.73 3.73 3.73 3.73 3.73 3.73	Gearbox type	M55**	M55'*	M55	M55	M55	M59	M59
	Final Drive reduction:	3.73	3.73	3.73	3.73	3.73	3.73	3.73

Engine:	B18KPD	B18KP	B16F	B18FP	B18EP	B18FT	B18FTM
Car variant: 460 GL possible combinations	Χ	Х	Finland only	Х	Х		
Car variant: 460 GLE possible combinations	Х	Х		Х	Х		
Car variant: 460 Turbo possible combinations						Х	Х
Steering system:							
Type: Rack and pinion:	Х	Х	Х	Х	Х	Х	Х
manual, variable force system GL variants	Χ	Х	Χ	Х	Х		
power assisted, speed dependent GLE + Turbo	Х	Χ	-X	Х	Х	Χ	Х
Furning circle between kerbstones m	10.15	10.15	10.15	10.15	10.15	10.15	10.15
Wheel suspension:							
Front	Independent, Mac Pherson struts, excentric coil-springs, subframe, direct-link stabilizer, wide-based lower wishbones						
	wishbones	i, ivido i ricioon	ou ato, oxoonaro oo	ii opinigo, out	mamo, anoce in	K Stabilizer, Wide	bacca lower
Rear	wishbones	constant track b	peam axle on coil s				
	wishbones Lightweight	constant track b					
Rear	wishbones Lightweight	constant track b				dinal Watt-linkag	es and a latera
Rear stabilizer	wishbones Lightweight Panhard-rod	constant track t	peam axle on coil s	prings, locate	d by two longitud	dinal Watt-linkag	es and a latera
Rear Rear stabilizer Wheels: steel	wishbones Lightweight Panhard-rod	constant track t	peam axle on coil s	prings, locate	d by two longitud	dinal Watt-linkag	es and a latera
Rear Rear stabilizer Wheels: steel Wheels: light alloy,flush design;	wishbones Lightweight Panhard-rod X	constant track t	peam axle on coil s	prings, locate X O	d by two longitud	dinal Watt-linkag	es and a latera
Rear Rear stabilizer Wheels: steel Wheels: light alloy,flush design; Fyres: 175/65R14T	wishbones Lightweight Panhard-rod X	constant track t	peam axle on coil s	prings, locate X O	d by two longitud	dinal Watt-linkag X	es and a latera X X
Rear Rear stabilizer Wheels: steel Wheels: light alloy,flush design; Fyres: 175/65R14T 185/60HR14	wishbones Lightweight Panhard-rod X X Power assis	constant track to the constant track t	peam axle on coil s	prings, locate X O X	x O X	dinal Watt-linkag X X	x X X
Rear Rear stabilizer Wheels: steel Wheels: light alloy,flush design; Fyres: 175/65R14T 185/60HR14 Brake system:	wishbones Lightweight Panhard-rod X X Power assis	constant track to the constant track t	x X Alit system, pressure	prings, locate X O X	x O X	dinal Watt-linkag X X	es and a latera X X X

Possible combinations

*Nordic markets 12160

"GLT injection M57 4.07

***France: M57 3.73

Car variant	Engine variant	Kerbweight (kg)	Max. permissible weight (kg)	Max. braked trailer (kg)	Topspeed (km/h)	Acceleration 0-100 km/h (sec)	Fuel consum city (ltr/100 km)	ption accordin 90 km/h (ltr/100 km)	g to EC regular 120 km/h (ltr/100 km)	tions combined (ltr/100 km)
460 GL	B18KPD B18KP B18FP B18EP B16F	985 985 1005 1003 1018	1510 1510 1580 1580 1580	1200 1200 1200 1200 1200	175 177 182 185	11.7 11.5 10.6 10.4	9.4 10.4 10.4	5.2 5.1 5.9 6.4	6.9 7.4 7.8	7.2 7.1 7.9 8.2
460 GLE	B18KPD B18KP B18FP B18EP	1000 1000 1020 1017	1510 1510 1580 1580	1200 1200 1200 1200	175 177 182 185	11.8 11.7 10.7 10.4	9.6 9.4 10.4 10.4	5.2 5.1 5.9 6.4	6.9 6.9 7.4 7.8	7.2 7.1 7.9 8.2
460 Turbo	B18FT B18FTM	1040 1035	1580 1580	1200 1200	200 200	9.0 9.0	10.3 11.0	6.1 6.6	8.1 6.5	8.2 8.7
France only: 440 GL	B18KP	985	1510	1200	176	11.5				

Weights are based upon Dutch specifications. They may vary from market to market because of differences in specifications. Check local brochure.

G	GEARBOXES Type		М	55	м	57	M 59		
		Final drive	3.7	73	3.	73	3.	73	
	Gear number:		reduction ratio	speed at 1000 rpm. (km/h)	reduction ratio	speed at 1000 rpm. (km/h)	reduction ratio	speed at 1000 rpm. (km/h)	
	1		3.73	7.7	3.73	7.7	3.09	9.2	
	2		2.05	14.0	2.05	14.0	1.86	15.4	
	3		1.32	21.6	1.32	21.6	1.32	21.5	
	4		0.97	29.6	0.97	29.6	0.97	29.3	
	5		0.80	36.0	0.76	37.9	0.76	37.5	
	Rev.		3.55	8.1	3.55	8.1	3.55	8.0	

Countrie	es:	Sweden	Norway	Finland	Denmark	UK Ireland	The Netherlands	Belgium	France	Spain	Portugal	Germany	Austria	Switzerland	Italy
Car vari	ants:														
460 GL	B18KPD					X	Х	Х							Х
	B18KP				X	X		Х	X						Х
	B18FP	X	X	Χ	X	X	X	X				X	X	Х	X
	B18EP					X		X							Х
	B16F			Χ											
460 GLE	B18KPD					Х	Х								
	B18KP					Х									
	B18FP	Х	Х	Х	Х	Х	Х	Х				Х	X	Х	Х
	B18EP					X		X	×	Χ	X				Χ
460 Turbo	B18FT	Х	Х	Х	Х	Х	Х	Х				X	×	X	Х
	B18FTM					X		×	X	Χ	×				Χ

GENERAL MODEL SPECIFICATION	460 GL Carburettor	njection	460 GLE Carburettor	njection	460 Turbo
Exterior:	Carburettor	Hijection	Carburettor	Hijection	
Front foglights	_	_	_	X	X
Rear foglights (2x)	X	X	X	X	X
Reversing lights (2x)	X	X	X	X	X
Central doorlock (incl. bootlid)	0	-0	X	X	X
Drivers' doorlock light			X.	X	X
Windscreen wash-wipe	X	X	X	X	X
Headlamp wash - high pressure	0	0	0	0	0
Sunroof, electrically operated, tilt/slide	0	0	0	0	0
Tinted glass	0	0	X	X	X
Front spoiler	X	X	X	X	X
Car-coloured bumpers	X	X	X	X	X
Medium black side moulding	X	X-			, ,
Wide black sidemoulding		_	X	X	. X
Outside mirrors, remote control	X	X		_	
Outside mirrors, remote control + electrical de-icing	0	0	X	X	X
Black greenhouse treatment	X	X	X	X	X
Sill protection moulding	X	X	^X	X	X
Interior:					
gnition lock illumination	Χ	X	X	X	X
Courtesy illumination	X	X	X	X	X
Reading lights front (2X)	<u> </u>	_	X	X	X
Reading lights rear. (2X)	<u>-</u>	_	X	X	X
Search illumination safety belt catches	X	X	X	X	X
Ashtray illumination front	X	X	X	X	X
Switches illumination	X	X	X	X	X
Glovebox illumination	X	Χ	X	X	X
Luggage compartment illumination	Χ	Χ	Χ	X	X
Power windows front	0	0	X	Χ	X
Power windows rear	-	_	0	0	0
Seat heating (2X)	0	0	0	0	0
Full air-conditioning	0	O*	0	0	0
Height/Tilt adjustable drivers' seat	Χ	X	X	X	X
Height adjustable steering column	X	X	X	X	X
Adjustable Lumbar support in frontseats	Χ	X	Χ	X	Х
Powersteer	0	0	X	X	X
Height adjustable headrestraints front	X	X	X	X	X
			X		X

GENERAL MODEL SPECIFICATION	460 GL Carburettor	Injection	460 GLE Carburettor	Injection	460 Turbo
Interior:		_		-	
43-point automatic reel safety-belts plus lapbelt rear middle	Χ	X	Χ	X	X
Oddments-box between front seats-armrest	-	_	Χ	X	X
Oddments-box between frontseats	Χ	X	_	_	_
Door pockets	Χ	X	Χ	X	X
Lockable glovebox	Χ	X	Х	X	Х
Rear seat backrest with 1/3-2/3 split	Χ	Χ	Χ	Х	X
Armrest rear	Χ	X	Χ	X	X
Electronic rev, counter	Χ	X	Χ	X	Х
Electronic Information centre	_	_	_	0	Х
ABS	0	0	0	0	O**
Oil pressure gauge	-	_	_	_	X
Turbo-boost gauge		_	_	_	Χ
Fuel tank gauge	Χ	X	X	X	_
Coolant temperature gauge	X	Χ,	Χ	X	_
Warning lights for: door/bootlid open	_	_	Χ	X	Х
washer fluid level	_	_	Χ	X	X
bulb failure warning	Χ	Χ	Χ	X	X
seat-belts reminder front	Х	X	X	X	Χ
seat-belts reminder rear	X	X	Χ	X	X
Upholstery: velours multicolor + tricot	_	_	Χ	X	X
velours multicolor + chamois	Χ	X	_	_	
leather	0	0	0	0	0
Ashtray normal	Χ	X	_	_	_
Ashtray tip-touch operation	_	_	Χ	X	Χ

*Not Finland B16F ** standard for RHD Turbo

This is a general specification: small variations may occur from market to market. Where legal requirements exist for, for instance, headlamp-levelling, centrally mounted high brake light, day-running lights and such, these parts are automatically included in the specification of that country.

Please check local brochure.

In the interest of continuing product development, the factory reserves the right to make changes at any time, without notice, to prices, colours, material, equipment or specifications and also to discontinue models.