



VOLVO S80, V70

**DRIVE**



OWNERS MANUAL SUPPLEMENT

## Quieter and cleaner



Environmental care is one of Volvo Car Corporation's core values which guides all our activities. This target-orientation has resulted in the DRIVe vehicle series.

The DRIVe concept consists of an interaction between several different energy-saving functions, e.g. Smart charging, Adapted power steering and Aerodynamics – all with the common purpose of reducing fuel consumption, which in turn contributes to reduced exhaust emissions.

These instructions cover the V70 and S80 models.

## Smart charging

The car's kinetic energy is utilised during engine braking by means of it being converted into current and stored in the car's battery.

## Adapted power steering

One DRIVe function is that the power steering's energy take-off is adapted according to requirements. By means of optimisation and the introduction of an energy saving function the energy take-off can be minimised on occasions where power assistance (help in turning the steering wheel) is not necessary.

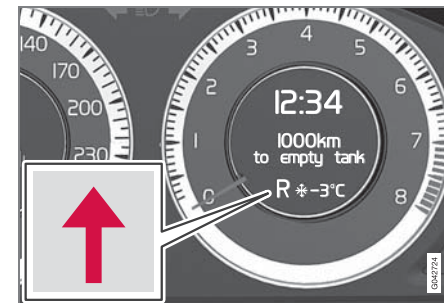
## Aerodynamics

The DRIVe concept also includes a lowered chassis<sup>1</sup>, front and rear spoilers with low wind resistance, as well as specially developed wheel rims<sup>2</sup>.

<sup>1</sup> Only V70.

<sup>2</sup> The range varies depending on the market.

## Gear indicator



A significant detail in relation to environmental driving is to drive in the right gear and change gear in time.

The driver is assisted by the GSI – Gear Shift Indicator – which notifies the driver when it is most advantageous to engage the next higher or lower gear.

Indication is made with an up or down arrow in the tachometer's information display.

When shifting up or down is not recommended, the gear that is engaged is indicated in place of the arrow.



## General

### Environment and economy tips

Here is some advice that reduces fuel consumption without the need to increase the travel time, or reduce the pleasure of driving.

- Space box and load carriers result in higher wind resistance, which increases fuel consumption – remove them immediately after use.
- Drive with the correct air pressure in the tyres (see the Section *Wheels and tyres* on page 4).
- Clear the car of unnecessary items – the more load and higher weight, the higher the fuel consumption.
- If the car is equipped with an engine block heater, always use it before cold starting – it lowers consumption and reduces emissions.
- Drive smoothly and avoid sudden braking.
- Drive in the highest possible gear – lower engine speeds result in lower fuel consumption.
- Use engine braking during deceleration.
- High speed increases consumption significantly because increased wind resistance – twice the speed increases wind resistance four times.
- Maintain the car regularly – follow Volvo's recommended service intervals.

**Specifications****Engine**

Diesel	1.6D
Engine designation <sup>1</sup>	D4164T
Power output (kW/rpm)	80/4000
Power output (hp/rpm)	109/4000
Torque (Nm/rpm)	240/1750
No. of cylinders	4
Bore (mm)	75
Stroke (mm)	88,3
Swept volume (litres)	1.56
Compression ratio	18.3:1

<sup>1</sup>Engine type designation, component and serial number can be read on a plate under the bonnet. See the normal owner's manual for plate location.

**Engine oil**

Oil grade <sup>1</sup>: ACEA A3/B3/B4

Viscosity: SAE 0W-30

Filling volume between the dipstick's MIN and MAX marks: 1.0 litre.

Volume for oil change, including oil filter: 3.8 litres.

<sup>1</sup> When driving under adverse conditions, use ACEA A5/B5 SAE 0W-30.

**Coolant**

Use coolant with corrosion inhibitor mixed with water<sup>2</sup> (see the instructions on the packaging).

Volume: 9.1 litres.

The thermostat opens at 82 °C.

**Gearbox**

MTX75, manual 5-speed.

Prescribed transmission fluid: BOT 350 M3.

Volume: 1.8 litres.

<sup>2</sup> Water quality must fulfil the standard STD 1285.1.

**Consumption and emissions**

Model		CO <sub>2</sub>
V70	4,5	119
S80	4,5	119

**Table symbols**

	: Consumption (litres/100 km)
	: Emissions of carbon dioxide (g/km)

**Trailer**

Max weight (kg)	Braked trailer	Unbraked trailer
V70 & S80	1300	750
Towball load	75	50

**NOTE**

Towing a trailer with heavy loads on steep gradients and at high altitudes leads to higher fuel consumption and an increased quantity of emissions.



## Specifications

### Wheels & tyres

An important detail in connection with environmentally conscious driving is to use the right type of tyres and to drive with the correct air pressure inside them.

### Dimensions

When fitting new tyres, the same type and brand as the car was equipped with from the factory are recommended – they are designed for low fuel consumption.

The following dimensions generally provide a slightly lower consumption than wider variants:

V70	S80
205/60-16	205/60-16 225/50-17

### Air pressure

Inadequately inflated tyres increase fuel consumption. For this reason, check the pressure in the tyres regularly.

By using so-called ECO pressure<sup>1</sup> fuel consumption is minimised. A certain impact on ride comfort, road noise and steering characteristics may be experienced, but this does not affect safety.

<sup>1</sup> The pressure recommended at maximum load.

See the label with the recommended tyre pressure adjacent to the driver's door pillar.

### Battery charging

Aiming for environmentally friendly driving also includes saving power – just as in the home.

The more consumers (stereo, heating in windows, mirrors and seats, very cold air from the climate control system etc.) that are switched on in the car, the more power must be generated to recharge the battery.



### NOTE

The higher the current demand in the car, the more the battery must be charged = increased fuel consumption.

### **This publication**

These operating instructions are a supplement to the car's normal owner's manual.

In the event of uncertainty regarding any of the car's functions: consult the owner's manual first.

For answers to further questions, contacting a dealer or a representative of Volvo Car Corporation is recommended.

### **Internet**

Development within environmentally friendly technologies is continuously evolving and printed information can quickly become obsolete or outdated.

We recommend visiting Volvo's Internet page, [www.volvocars.com](http://www.volvocars.com) – which contains the latest and most relevant information on your car.

### **Changes**

The specifications, design data and illustrations contained in this supplement are not binding.

We reserve the right to make changes without notice.









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