

VOLVO S40

VOLVO S60

VOLVO S80

VOLVO V40

VOLVO V70

VOLVO
BI-FUEL

VOLVO
for life



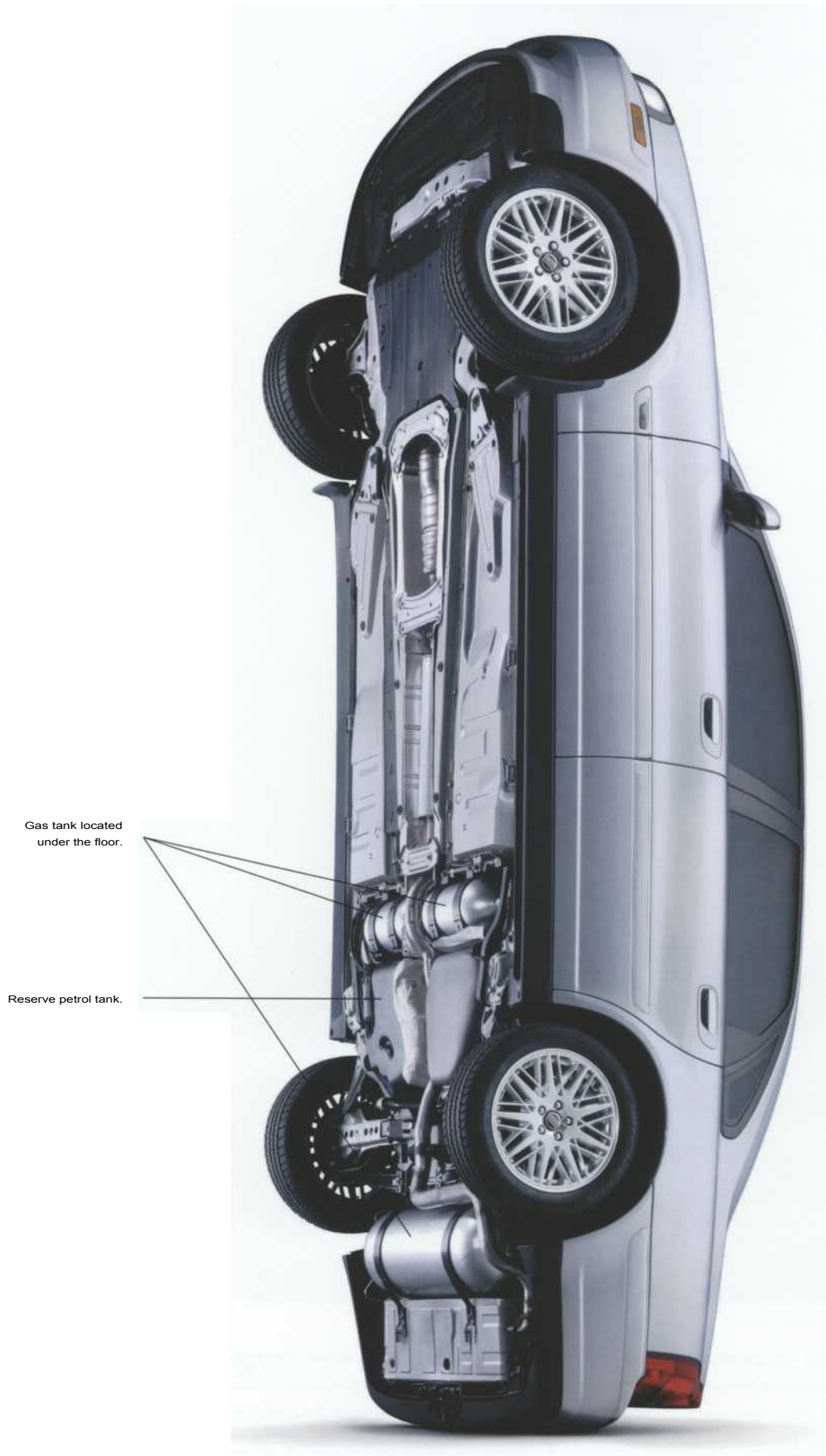


PURE LUXURY.

GET IT ALL - HIGH PERFORMANCE, SUPERIOR ECONOMY AND EXCELLENT ENVIRONMENTAL CREDENTIALS. AND ALL WITHOUT SACRIFICING ANY PART OF THE FUN, COMFORT, SAFETY AND VERSATILITY YOU EXPECT FROM A VOLVO. DISCOVER THE DIFFERENCE A VOLVO BI-FUEL MAKES.



Most Volvo cars are available with the latest generation high-efficiency Bi-Fuel gas/petrol engines. They represent a major step towards a better environment, because when driving on gas, hazardous emissions are much lower than when running on conventional fuels. And with natural gas, emissions of carbon dioxide - which contributes to the greenhouse effect - are 20% lower than when running on petrol, while LPG power cuts carbon dioxide emissions by 10%. Add the extremely low fuel costs for gas, and your environmental choice will be rewarding in more ways than one.



In the picture, the panels that normally shield the gas tanks have been removed so you can see them. The number of tanks and their placing vary depending on the individual Volvo model.



Gas is filled via a special fitting. The gas tanks take just a few minutes to fill. The picture shows the filler fitting for methane. The fitting for LPG is different, and varies with different markets. An LPG fitting adapter permits convenient refuelling in different countries.

If your car's gas supply runs out, the engine automatically switches to petrol power. You can also switch manually between gas and petrol while driving.

You can utilise the entire load space to the full in your Volvo Bi-Fuel.

PURE TECHNOLOGY.

THE BI-FUEL INSTALLATION IS DESIGNED, TESTED AND FACTORY-FITTED BY VOLVO. SO WHEN CHOOSING A VOLVO BI-FUEL CAR, YOU BENEFIT BOTH THE ENVIRONMENT AND YOUR WALLET WITHOUT COMPROMISING ON SAFETY OR DRIVING PLEASURE. AND TO MEET LIFE'S MORE DOWN-TO-EARTH NEEDS, WE HAVE LOCATED THE FUEL TANKS UNDER THE FLOOR SO YOU CAN USE THE CAR'S CARGO CAPACITY WITHOUT ANY LIMITATIONS.

MORE EFFICIENCY, LESS IMPACT

The Bi-Fuel engine is part of Volvo's latest engine generation. Low internal friction combined with electronic engine management and variable valve timing promote good performance and low fuel consumption. By adding an advanced injection system for gas power, the already fuel-efficient engine has an even lower impact on the environment. Even when running on petrol, the Volvo S80, S60 and V70 Bi-Fuel already meet the extremely stringent EU emission requirements that will come into force in 2005. And of course, if you run on gas, the exhaust emissions are even cleaner.

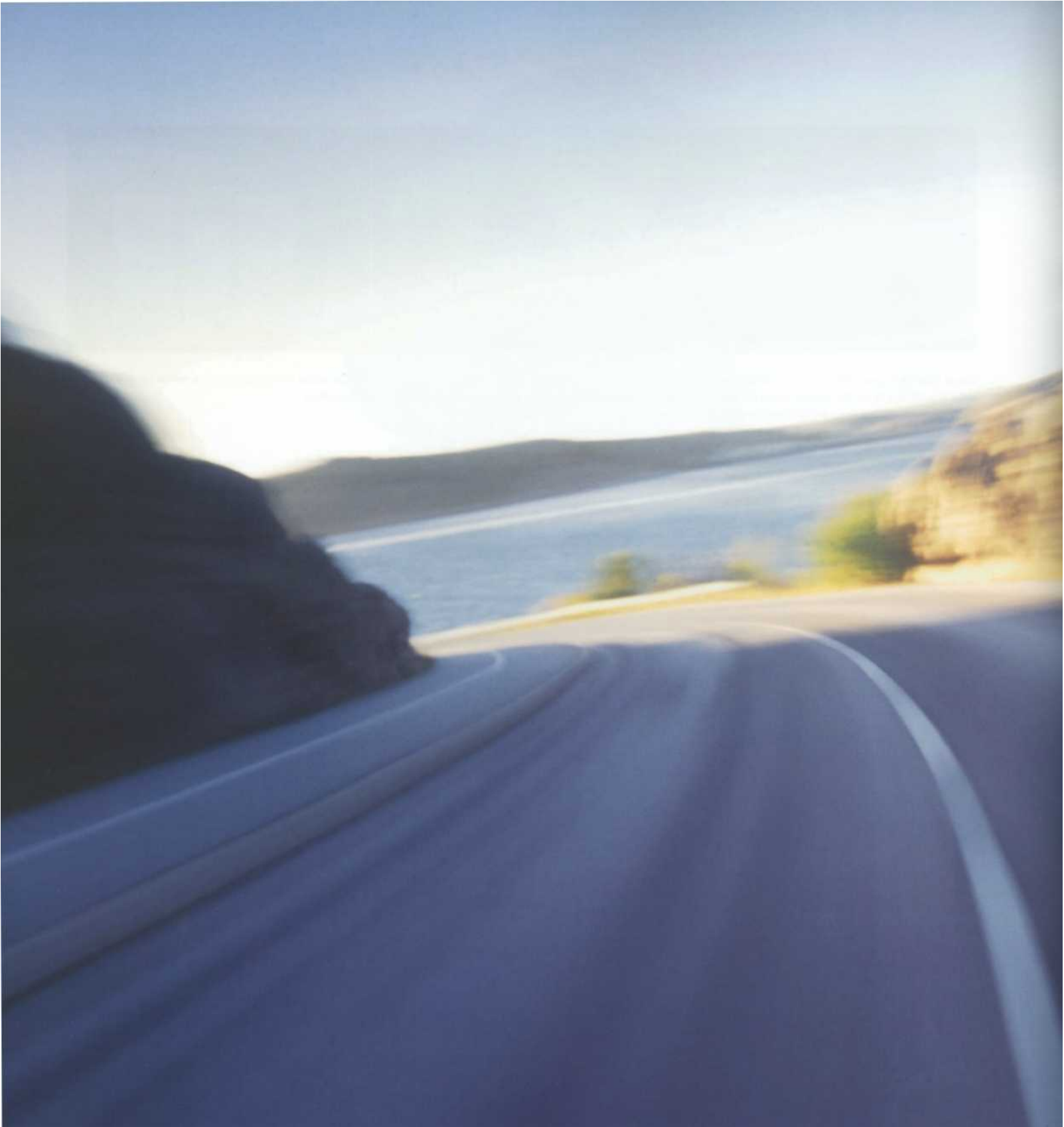
LONG RANGE - WITH UNAFFECTED LUGGAGE SPACE

The gas tanks are located under the floor. This gives you access to the same generous load space as in the petrol and diesel-powered versions. In the Volvo S80, S60 and V70 Bi-Fuel, you have a range of about 250-300 km* on a tank of methane or about 370-430 km on a tank of LPG. The reserve petrol tank provides an additional range of about 350 km. The Volvo S40 and V40 Bi-Fuel offer a range of about 400 km on LPG and a further 750 km on petrol. The possibility of switching from gas to petrol at any time gives you the flexibility to refuel anywhere you like.

SAFE AND SOUND

Volvo cars with the Bi-Fuel engine are naturally crash-tested to ensure that they meet Volvo's stringent safety requirements. Both the extremely tough gas tank and all the connections are designed to withstand immense forces. What's more, the fuel system is equipped with valves and other safety devices that prevent leakage. In addition, methane is a non-toxic gas and a safer fuel to handle than petrol, for example.

* Depending on specification and quality of gas.



PURE EXHILARATION.

BEHIND THE WHEEL OF YOUR VOLVO BI-FUEL YOU'LL HARDLY BE AWARE OF WHETHER YOU ARE RUNNING ON GAS OR PETROL. YOUR PROGRESS WILL BE EQUALLY SAFE AND YOU CAN ENJOY THE SAME INSTANT ENGINE RESPONSE EVEN FROM LOW REVS. YOU'LL NOTICE THE DIFFERENCE WHEN YOU COMPARE FUEL BILLS AND - NOT LEAST - IN THE EXCEPTIONAL FEELING OF DRIVING A CAR THAT IS BOTH ONE OF THE CLEANEST AND ONE OF THE SAFEST IN THE WORLD.



No matter which Volvo you choose, you'll get a car that was planned and built from the very outset with due regard for environmental compatibility - both inside and outside the car. For instance, all the textiles used in the interior trim are free from hazardous substances, and if you choose Volvo's interior air quality system in the Volvo S80, S60 or V70, the air in the car is always cleaner than the air outside. The radiator even has a special coating, PremAir®, which converts harmful ground-level ozone into fresh oxygen as the car is driven.

PremAir® is a registered trademark of Engelhard corporation.



BI-FUEL METHANE (CNG)

Methane can be obtained in two different ways. Firstly it can be extracted from the earth in the form of Compressed Natural Gas (CNG), and secondly, it can be produced from organic material in the form of biogas from landfill sites or sewage works. Apart from being a particularly economical fuel, CNG produces far lower total emissions of environmentally hazardous substances compared with petrol and diesel. Emissions of carbon dioxide, a gas which contributes to the greenhouse effect, are 20% lower when running on CNG (compared to petrol). And if you run on biogas, you actually help cut the level of greenhouse gases in the atmosphere.

Compressed Natural Gas is only available at

13 "fast fill" stations around the UK. Details of locations can be found by phoning 0845 606 6030. However, it is likely that over the next 18 months a new home fuelling system will come onto the market that will enable customers to refuel from their home gas supply.

BI-FUEL LPG

Liquefied Petroleum Gas (LPG) is a mixture of butane and propane gas. It is obtained both directly, when oil or gas is pumped out of the ground, and indirectly as a residual product from oil refineries. As with natural gas, LPG is a far cleaner fuel than both petrol and diesel. The result is extremely low emissions of harmful substances and emissions of carbon dioxide are 10% lower than those from petrol.

Over 1,300 stations are now open in the U K (which accounts for about 10% of all fuel stations). More than two thirds of these can be found in typical petrol forecourt locations. Filling up is very easy and takes a similar amount of time as filling up with petrol. Details of all current locations can be found on www.est-powershift.org.uk.

Fleet customers can gain most financial benefit by installing "bunkering" facilities, this gives access to LPG on the customer's site and LPG suppliers will be able to quote for this work. Generally speaking the cost will be based upon expected quantities of gas purchased but a "rule of thumb" is 10p/litre cheaper than the cost of LPG on the forecourt.

PURE POWER.

VOLVO'S BI-FUEL ENGINE RUNS ON GAS, UTILISING PETROL AS A RESERVE FUEL. THE 2.4-LITRE FIVE-CYLINDER BI-FUEL ENGINE FOR THE VOLVO S80, S60 AND V70 IS AVAILABLE IN TWO VARIANTS: ONE POWERED BY METHANE (NATURAL GAS - CNG OR BIOGAS) AND ONE THAT RUNS ON LIQUEFIED PETROLEUM GAS (LPG). A FOUR-CYLINDER 1.8-LITRE BI-FUEL ENGINE RUNNING ON LPG IS AVAILABLE FOR THE VOLVO S40 AND V40.

Kind on the environment - and your wallet.

PURCHASE PRICE:

The Powershift grant scheme is available from the Energy Saving Trust to assist customers purchase alternative fuelled products in the UK. All current Volvo Bi-Fuels receive a 60% grant. Further details of the Powershift scheme can be found on www.est-powershift.org.uk or 0845 6021425. For example, an S40 LPG Bi-Fuel costs £1,532 (excl VAT) more than the petrol equivalent. You will receive a 60% Powershift grant of £919 back, meaning you only pay £881 (inc VAT) more. Please note servicing costs for Bi-Fuel are slightly greater than diesel and petrol.

FUEL DUTY:

LPG is approximately half the cost of petrol! diesel. However, it should be remembered that LPG is about 25% less efficient than petrol.

CNG is as efficient as petrol but is also approximately half the cost of petrol/diesel.

VEHICLE EXCISE DUTY:

Vehicle Excise Duty (VED) is linked to carbon dioxide (CO₂) emissions and fuel type. Volvo Bi-Fuels pay less VED than the equivalent petrol and diesel vehicles.

COMPANY CAR TAX (BENEFIT IN KIND):

From April 2002 benefit in kind taxation rates on company provided vehicles have been based on the cars' P11 D (retail cost) value and its carbon dioxide (CO₂) emissions. Volvo Bi-Fuel models benefit from their low CO₂ emissions and are further rewarded by a 1 % reduction against their petrol equivalent models.

LONDON CONGESTION CHARGING:

From February 17th 2003 all cars have been

charged £5 a day (not including weekends) to enter the inner London congestion zone. All S60, V70 and S80 (MY02 onwards) LPG and CNG Bi-Fuels receive a 100% discount. The customer can claim this saving (up to £1,200! year for some drivers) by completing a simple form and paying a £10 application fee. This is likely to spread to other UK cities and towns over the next few years.

BI-FUEL RESTRICTIONS:

At the moment EuroTunnel will not allow gas powered vehicles through the Channel Tunnel. All "domestic" tunnels, however, will allow gas cars - Clyde, Mersey, Thames etc.

At time of writing, the EuroTunnel ban is being reviewed and this will hopefully lead to a reversal of the current ruling. It may also be that some privately owned underground car parks have gas car restrictions.

PURE SELECTION.

THE VOLVO BI-FUEL IS A GENUINE VOLVO IN EVERY RESPECT- SO YOU CAN REST ASSURED THAT THE CAR MEETS EVERY SINGLE ONE OF VOLVO'S STRINGENT QUALITY AND SAFETY REQUIREMENTS. YOUR VOLVO BI-FUEL IS NATURALLY COVERED BY VOLVO'S COMPREHENSIVE WARRANTY AND SERVICE PACKAGE. YOU ALSO GAIN ACCESS TO VOLVO'S FAVOURABLE FINANCING, LEASING, INSURANCE AND ROADSIDE ASSISTANCE SERVICES. ADD THE IMMENSE SCOPE OF EQUIPPING YOUR VOLVO BI-FUEL TO SUIT YOUR SPECIFIC TASTES, AND YOU GET A CAR THAT WILL BE A PURE PLEASURE TO LIVE WITH.

		S40 Bi-Fuel LPG/Petrol	S60 Bi-Fuel LPG/Petrol	S60 Bi-Fuel CNG/Petrol	S80 Bi-Fuel LPG/Petrol
Max output ECE, bhp/kw/rpm		120/88/5800 (LPG) 122/90/5800 (Petrol)	140/103/5100 (LPG) 140/103/4500 (Petrol)	140/103/5800 (CNG) 140/103/4500 (Petrol)	140/103/5100 (LPG) 140/103/4500 (Petrol)
Max torque ECE, Nm/rpm		167/4000 (LPG) 170/4000 (Petrol)	214/4500 (LPG) 220/3750 (Petrol)	192/4500 (CNG) 220/3750 (Petrol)	214/4500 (LPG) 220/3750 (Petrol)
Top Speed (mph)	Man Auto	124 (LPG)/124 (Petrol) N/A	127 (LPG)/130 (Petrol) 124 (LPG)/127 (Petrol)	130 (CNG)/130 (Petrol) 127 (CNG)/127 (Petrol)	127 (LPG)/127 (Petrol) 124 (LPG)/124 (Petrol)
Acceleration 0-62 mph (sec)	Man Auto	11.0 (LPG)/10.5 (Petrol) N/A	10.3 (LPG)/10.2 (Petrol) 11.2 (LPG)/11.1 (Petrol)	10.7 (CNG)/10.2 (Petrol) 11.6 (CNG)/11.1 (Petrol)	10.6 (LPG)/10.5 (Petrol) 11.5 (LPG)/11.4 (Petrol)
Range on Fuel Tank⁽ⁱ⁾ miles (km)	Man Auto	239 (385) LPG/460 (741) Petrol N/A	302 (487) LPG/200 (322) Petrol 267 (431) LPG/187 (302) Petrol	163 (262) CNG/207 (333) Petrol 148 (233) CNG/188 (302) Petrol	303 (487) LPG/200 (322) Petrol 268 (322) LPG/188 (302) Petrol
Fuel Consumption^(ii, iii) mpg (l/100km)					
Urban	Man Auto	19.9 (14.3) LPG/25.0 (11.3) Petrol N/A	18.1 (15.6) LPG/22.4 (12.6) Petrol 15.3 (18.5) LPG/20.2 (14.0) Petrol	21.9 (12.9) CNG/23.5 (12.0) Petrol 19.6 (14.4) CNG/19.9 (14.2) Petrol	17.5 (16.1) LPG/22.8 (12.4) Petrol 15.1 (18.7) LPG/19.9 (14.2) Petrol
Extra Urban	Man Auto	34.4 (8.2) LPG/45.6 (6.2) Petrol N/A	31.0 (9.1) LPG/39.8 (7.1) Petrol 29.4 (9.6) LPG/39.8 (7.1) Petrol	42.2 (6.7) CNG/40.9 (6.9) Petrol 38.2 (7.4) CNG/40.4 (7.0) Petrol	31.7 (8.9) LPG/40.9 (6.9) Petrol 28.0 (10.1) LPG/37.2 (7.6) Petrol
Combined	Man Auto	27.2 (10.4) LPG/34.9 (8.1) Petrol N/A	24.6 (11.5) LPG/31.0 (9.1) Petrol 21.9 (12.9) LPG/29.4 (9.6) Petrol	31.4 (9.0) CNG/32.1 (8.8) Petrol 28.2 (10.0) CNG/29.4 (9.6) Petrol	24.4 (11.6) LPG/31.7 (8.9) Petrol 21.2 (13.3) LPG/28.2 (10.0) Petrol
CO₂ g/km	Man Auto	168 (LPG) /193 (Petrol) N/A	186 (LPG) /217 (Petrol) 209 (LPG) /231 (Petrol)	161 (CNG) /211 (Petrol) 178 (CNG) /231 (Petrol)	187 (LPG) /213 (Petrol) 215 (LPG) /240 (Petrol)
Transmission		5-speed Manual	5-speed Manual & 5-speed Automatic	5-speed Manual & 5-speed Automatic	5-speed Manual & 5-speed Automatic
Special Standard Equipment		Tyre Weld in Lieu of Spare Wheel	Tyre Sealant & 12V Compressor and Load Compensating Suspension	Tyre Sealant & 12V Compressor and Load Compensating Suspension	Tyre Sealant & 12V Compressor and Load Compensating Suspension

(i) Fast fill for CNG range dependent on gas quality.

(ii) These results do not express or imply any guarantee of the fuel consumption of a particular car as there are inevitable differences between individual cars of the same model. Additionally driving style, traffic conditions, as well as the age and mileage and standard of maintenance will affect a car's fuel consumption.

(iii) The Urban fuel consumption figure is based on typical city driving, including starting the car from cold. The Extra Urban figure is based on typical motorway driving and cruising. The Combined figure averages the consumption across both cycles.

(iv) Only available until late 2003.

S80 Bi-Fuel CNG/Petrol	V70 Bi-Fuel LPG/Petrol	V70 Bi-Fuel CNG/Petrol	V40 Bi-Fuel (iv) LPG/Petrol
140/103/5800 (CNG) 140/103/4500 (Petrol)	140/103/5100 (LPG) 140/103/4500 (Petrol)	140/130/5800 (CNG) 140/103/4500 (Petrol)	120/88/5800 (LPG) 122/90/5800 (Petrol)
192/4500 (CNG) 220/3750 (Petrol)	214/4500 (LPG) 220/3300 (Petrol)	192/4500 (CNG) 220/3300 (Petrol)	167/4000 (LPG) 170/4000 (Petrol)
127 (CNG)/127 (Petrol) 124 (CNG)/124 (Petrol)	127 (LPG)/127 (Petrol) 124 (LPG)/124 (Petrol)	127 (CNG)/127 (Petrol) 124 (CNG)/124 (Petrol)	124 (LPG)/124 (Petrol) N/A
11.0 (CNG)/10.5 (Petrol) 11.9 (CNG)/11.4 (Petrol)	10.6 (LPG)/10.5 (Petrol) 11.5 (LPG)/11.4 (Petrol)	11.0 (CNG)/10.5 (Petrol) 11.9 (CNG)/11.4 (Petrol)	11.0 (LPG)/10.5 (Petrol) N/A
158 (254) CNG/196 (315) Petrol 141 (227) CNG/182 (293) Petrol	285 (459) LPG/192 (309) Petrol 258 (415) LPG/180 (290) Petrol	154 (248) CNG/200 (322) Petrol 141 (227) CNG/180 (290) Petrol	239 (385) LPG/460 (741) Petrol N/A
22.1 (12.8) CNG/22.1 (12.8) Petrol 18.7 (15.1) CNG/19.0 (14.9) Petrol	17.2 (16.4) LPG/21.9 (12.9) Petrol 14.9 (19.0) LPG/19.5 (14.5) Petrol	21.2 (13.3) CNG/22.4 (12.6) Petrol 19.0 (14.9) CNG/19.9 (14.2) Petrol	19.9 (14.3) LPG/25.0 (11.3) Petrol N/A
39.8 (7.1) CNG/39.8 (7.1) Petrol 35.8 (7.9) CNG/37.2 (7.6) Petrol	28.8 (9.8) LPG/37.7 (7.5) Petrol 26.9 (10.5) LPG/36.7 (7.7) Petrol	37.7 (7.5) CNG/40.4 (7.0) Petrol 36.2 (7.8) CNG/35.8 (7.9) Petrol	34.4 (8.2) LPG/45.6 (6.2) Petrol N/A
30.7 (9.2) CNG/30.7 (9.2) Petrol 26.9 (10.5) CNG/28.0 (10.1) Petrol	23.2 (12.2) LPG/29.7 (9.5) Petrol 20.8 (13.6) LPG/27.7 (10.2) Petrol	29.4 (9.6) CNG/31.0 (9.1) Petrol 27.2 (10.4) CNG/27.7 (10.2) Petrol	27.2 (10.4) LPG/34.9 (8.1) Petrol N/A
164 (CNG)/219 (Petrol) 187 (CNG)/246 (Petrol)	197 (LPG)/227 (Petrol) 221 (LPG)/244 (Petrol)	171 (CNG)/219 (Petrol) 186 (CNG)/244 (Petrol)	168 (LPG)/193 (Petrol) N/A
5-speed Manual & 5-speed Automatic	5-speed Manual & 5-speed Automatic	5-speed Manual & 5-speed Automatic	5-speed Manual
Tyre Sealant & 12V Compressor and Load Compensating Suspension	Tyre Sealant & 12V Compressor and Load Compensating Suspension	Tyre Sealant & 12V Compressor and Load Compensating Suspension	Tyre Weld in Lieu of Spare Wheel