

Press Release

Nov 04, 2010 | ID: 35477

ALL-NEW VOLVO V60 SPORTSWAGON

OVERVIEW

- Brand new model in the Volvo line up
- Based on the S60, with the same dynamic handling and performance
- Aimed at drivers who want a great driving experience but would like more carrying capacity than the S60
- Coupé styling mixed with wagon functionality including versatile 40:20:40 split rear seat arrangement and folding passenger front seat
- Top range T6 engine produces 304PS and gives 155mph top speed
- DRIVe version on sale in mid-2011
- World's first wagon to offer Volvo's innovative new Pedestrian Detection with Full Auto Brake technology
- Award winning City Safety technology is standard
- Competes in small premium sportswagon segment
- Estimated 90 per cent of global sales will be in Europe

Engines - Petrol

Engine:	T3	T4	T5	T6 AWD Auto
Type	1595cc, Transverse 4cyl, 16v	1595cc, Transverse 4cyl, 16v	1999cc, Transverse 4cyl, 16v	2953cc, Transverse 6cyl, 24vl
Fuel	Petrol	Petrol	Petrol	Petrol
Power	150 PS	180 PS	240 PS	304 PS
Torque	240 Nm at 1600-4000 rpm	240 Nm at 1600-5000 rpm	240 Nm at 5500 rpm	440 Nm at 2100-4200 rpm
0-60mph (sec)	9.2	8.0 Manual 8.7 Auto	7.1 Manual 7.3 Auto	6.2
Top speed (mph)	127	137 Manual/Auto	143 Manual/Auto	155
CO ₂ (g/km)	156	156 Manual 176 Auto	189 Manual 194 Auto	231
Mpg: Urban Extra-Urban Combined	32.5 50.4 42.2	32.5 Man (28.0 Auto) 50.4 Man (46.3 Auto) 42.2 Man (38.2 Auto)	25.0 Man (25.0 Auto) 44.8 Man (42.8 Auto) 34.9 Man (34.0 Auto)	19.5 38.7 28.5

Engines - Diesel

Engine:	D3	D5
Type	1984cc, Transverse 5cyl, 20v	2400cc, Transverse 5cyl, 20v
Fuel	Diesel	Diesel

Power	163 PS	205 PS
Torque	400 Nm at 1400-2850 rpm	420 Nm at 1500-3250 rpm
0-60mph (sec)	8.7 Manual 8.7 Auto	7.4 Manual 7.4 Auto
Top speed (mph)	137 Manual 134 Auto	146 Manual 143 Auto
CO₂ (g/km)	139 Manual 154 Auto	139 Manual 166 Auto
Mpg: Urban	39.2 Man (35.3 Auto)	40.9 Man (31.0 Auto)
Extra-Urban	67.3 Man (61.4 Auto)	65.7 Man (60.1 Auto)
Combined	53.3 Man (47.9 Auto)	53.3 Man (44.8 Auto)

Pricing

All-new Volvo V60	Prices (OTR)
ES	
D3 (163 PS) ES	£24,960
D5 (205 PS) ES	£27,115
T3 (150 PS) ES Start/Stop	£23,145
SE	
D3 (163 PS) SE	£26,960
D3 (163 PS) SE Premium	£28,960
D5 (205 PS) SE	£29,115
D5 (205 PS) SE Premium	£31,115
T3 (150 PS) SE Start/Stop	£25,145
T3 (150 PS) SE Premium Start/Stop	£27,145
T4 (180 PS) SE Premium Start/Stop	£28,675
T5 (240 PS) SE Premium	£30,470
T6 AWD (304 PS) SE Geartronic Premium	£36,845
SE Lux	
D3 (163 PS) SE Lux	£28,760
D3 (163 PS) SE Lux Premium	£30,010
D5 (205 PS) SE Lux	£30,915
D5 (205 PS) SE Lux Premium	£32,165
T3 (150 PS) SE Lux Start/Stop	£26,945
T3 (150 PS) SE Lux Premium Start/Stop	£28,195
T4 (180 PS) SE Lux Premium Start/Stop	£29,725
T5 (240 PS) SE Lux Premium	£31,520
T6 AWD (304 PS) SE Lux Geartronic Premium	£37,895
R-DESIGN	
D3 (163 PS) R-DESIGN	£27,510
D3 (163 PS) R-DESIGN Premium	£28,760
D5 (205 PS) R-DESIGN	£29,665
D5 (205 PS) R-DESIGN Premium	£30,915
T3 (150 PS) R-DESIGN Start/Stop	£25,695
T3 (150 PS) R-DESIGN Premium Start/Stop	£26,945
T4 (180 PS) R-DESIGN Premium Start/Stop	£28,475
T5 (240 PS) R-DESIGN Premium	£30,270
T6 AWD (304 PS) R-DESIGN Geartronic Premium	£36,645

Benefit in Kind

Model	Transmission	CO ₂	P11D price	% of P11D	Annual tax payable	
					20%	40%

1.6 T3 ES	Manual Start/Stop	153	£22,400	20	£896	£1,792
1.6 T3 SE	Manual Start/Stop	153	£24,935	20	£997	£1,995
1.6 T4 SE	Manual/Auto	156/176	£27,929/ £29,380	21/25	£1,173/ £1,469	£2,346 / £2,938
2.0 T5 SE	Manual/Auto	189/194	£29,455/ £30,905	27/28	£1,590.40/ £1,730.60	£3180.80/ £3,461.20
3.0 T6 AWD SE	Auto	237	£35,840	35	£2,509	£5,018
2.0 D3 ES	Manual	142	£24,780	21	£1,041	£2,082
2.0 D3 SE	Manual/Auto	142	£26,780	21	£1,125	£2,250
2.4 D5 ES	Manual	142	£26,935	21	£1,131	£2,263
2.4 D5 SE	Manual/Auto	142	£28,935	21	£1,215	£2,431

SHORT STORY

The all-new V60, Volvo's dynamic sportswagon, is aimed at those who want coupé styling and driving enjoyment but with added versatility and carrying capacity.

Based on Volvo's new S60, the most dynamic saloon in the company's range, the V60 maintains the fun-to-drive qualities and performance of its four-door counterpart but offers more space and versatility.

"The V60 customer will be just as interested in driving pleasure and great design as the S60 buyer," says Volvo's President and Chief Executive Officer Stefan Jacoby. "The driving experience is every bit as rewarding, the coupé-like style just as striking. The difference is they'll get more space. It may be because they need to carry skis, scuba gear or mountain bikes. Or they have a young family and need to carry prams or pushchairs. The important point is: this is one Volvo estate where the sports setting is dialled right up."

Volvo designers have preserved the coupé-like style of the S60. Note the low roof and wedge shape. Note also the tapered coupé-like tail. From the B-pillar forward, the V60 is identical to the S60. Rear door sheetmetal is also identical, although the windows and 'door uppers' are different. The roof and whole rear end are new, reflecting the re-designed tail to offer extra carrying capacity. The boot capacity is a generous 430 litres to the window line, with rear seats up, and 557 litres when loaded to the roof. When rear seats are folded, capacity jumps to a capacious 1241 litres.

The rear seats fold 40:20:40, the same as Volvo's champion load-lugger the V70. To further improve carrying capacity, the front passenger seat backrest can also fold forward, which helps to carry long items. There are also twin booster cushions for children in the outer rear seats available, hooks for carrying and lockable under floor storage. "Functionality must be a key quality of all Volvo wagons, even sporting ones," says Tomas Ahlborg, Project Director.

"This car is not designed to carry big loads," says Malin Schwartz, Commercial Project Leader. "We have a V70, XC70 or XC90 in our range that can do that. Rather it's a stylish dynamic vehicle that offers more carrying capacity and versatility than a typical saloon or hatchback."

A Volvo wagon that starts with the driver, rather than the loading capacity, is clearly a departure from the norm. "Volvo estates used to be designed to carry fridges," says Design Director Peter Horbury. "But modern lifestyles make that unnecessary. Retailers nowadays normally deliver fridges! We clearly see the need to continue to offer vehicles that can carry big loads, but that is not the role of the V60."

He continued, "The V60 is a sportswagon that's full of emotional appeal. We wanted to carry over the excitement of the S60 but offer just that bit more functionality. Volvo estate cars were typically developed as separate programmes, and invariably started with the inside. The appearance was dictated by the needs of the cabin. The V60 was developed alongside the S60, in both engineering and design. We started with the driver, and the exterior style. This is partly because estate buyers are changing. If you want loads of space and utility you'd typically now buy an SUV or cross-over. Wagons are increasingly now about driving and style. Some people will indeed buy a V60 over an S60 purely because they happen to prefer its styling", says Horbury.

Exterior Designer Orjan Sterner says that he wanted a dynamic, flowing side profile - note how the

'double arch' side styling visually suggests road-hugging qualities, by giving the car a 'hunkered down' style. The roof is very low for a wagon, and sweeps down to the coupé fastback-like tailgate. He wanted a distinctive confident nose treatment 'that shouts Volvo' and a sporty rear end, inspired both by the C30 and the classic P1800E wagon of fond memory - Volvo's last sportswagon. The upright lights are very C30 like. The rear end tapers in plan view, aircraft style and high LED taillights add to the visual drama. Length and width are exactly the same as the S60.

Cabin design is classy, functional and Scandinavian-simple. "The cabin is very intuitive," says Horbury. "There is nothing superfluous or unnecessary. There is nothing worse than a car that has so many switches that it seems cleverer than you are. Materials are premium, and include the availability of leather, wood and aluminium trim."

Although engineered to be dynamic, and to offer a truly enjoyable driving experience, the V60 is designed to offer time-honoured Volvo qualities of predictability and primary safety. "It is not a rally car," says Project Leader Tomas Ahlborg. "It is not designed to slide or go-sideways, or to outdrag sports cars. Rather, it is designed to be fluid to drive, to always be predictable, be agile, and to drive in a natural and almost intuitive way. You will feel confident behind the wheel of this car. The bends flow together beautifully. It's also extremely predictable in poor weather, such as snow, ice and rain. This is a Swedish car, after all."

Like the S60, the V60 has sharper steering and more nimble handling than any previous Volvo. Engines and gearboxes have also been designed to be more responsive. This includes the double-clutch automatic Powershift gearbox, and the revised torque converter Geartronic automatic, which 'locks up' far more quickly, improving fuel economy and throttle response. "We've also revised every engine, and each is more throttle sensitive," says Vice President Powertrain Engineering Derek Crabb. "Responses are much quicker than before. That's all part of making this a real driver's car."

A Volvo wagon whose design starts with the driver may be a departure for the Swedish company. A major safety advance will come as less of a surprise. The all-new V60 is the world's first estate to offer Pedestrian Detection with Full Auto Brake, the innovative technology introduced on the S60. A digital camera and radar are used to scan the road ahead. If they detect a pedestrian, and the driver fails to respond to warnings, the car will self-brake.

Other class-leading safety technologies include City Safety - which avoids low speed impacts up to 30 km/h (19mph), Driver Alert Control (DAC) to alert drivers who are tired or distracted and Blind Spot Information System (BLIS) which helps detects vehicles in the rear blind spots on both sides of the car. In addition Lane Departure Warning (which alerts drivers if the vehicle runs across the lane markers without the turn indicator being used), Active Bi-Xenon lights that follow the bends in the road and numerous secondary safety features including seat-mounted side airbags, improved inflatable curtains and Volvo's patented whiplash protection system (WHIPS).

According to Tomas Ahlborg, Project Director, all round, this is the safety Volvo estate ever.

To affirm the V60's dynamic roots, the top-range engine is the 304PS straight-six T6, which gives 155mph performance and 0-60mph in 5.9 seconds. Two common-rail direct-injection turbodiesel engines are offered. The 163PS D3, likely to be the best seller in the UK, and 205PS D5 both give excellent low-down torque and strong performance: the D5 offers 0-60mph in just 7.5 seconds, and both diesel engines deliver sub-150g/km CO₂ figures.

Volvo's new direct-injection turbocharged four-cylinder engine, the GTDi (Gasoline Turbocharged Direct Injection), is available in 150PS T3, 180PS T4 and 240PS T5 guises. The T3 and T4 units have 1.6 litres capacity, while the T5 is a 2.0 litre. In its latter guise the engine also pioneers a new sheet steel turbocharger that allows for higher temperatures, improving efficiency and cutting emissions. The GTDi engines are available with Volvo's twin-clutch Powershift automatic gearbox, which gives lightning-fast shift changes and can also operate as a full automatic.

The all independent suspension, as used in the S60 - only the bushes have been modified - is tuned for dynamic driving. It also, according to Tomas Ahlborg, offers the best ride comfort in the small sportswagon class. As with the S60, the dampers were tuned on UK B-roads - renowned as among the most challenging roads in the world - to give an excellent balance between agility and comfort.

Advanced electronic controls further improve handling and the driving experience. These include

Corner Traction Control, which boosts agility by automatically braking the inner driven wheel as extra power is applied to the outer wheel. This 'torque vectoring' improves turn-in, reducing understeer.

The V60 has one of the world's most advanced stability control systems - part of Volvo's high-tech DSTC (Dynamic Stability and Traction Control) - reducing the likelihood of skids. In addition, Volvo's optional FOUR-C active suspension has been modified and improved. This state-of-the-art self-adjusting system boosts handling and ride comfort.

"The figure "60" in our model range nowadays indicates our sportiest models," says Gerry Keaney, Senior Vice President, Marketing Sales and Customer Service. "The XC60 was the first step. We took the next step with the all-new S60 saloon and now we're launching the V60 sportswagon," says Keaney.

DESIGN

- Coupé style but with estate functionality
- Promises great driving appeal
- Rear end has overtures of C30 and classic P1800E

As a sportswagon, the V60 needs to look dynamic and appealing. This car is as much about emotional appeal as carrying loads. Accordingly, the V60 has a low hunkered-down stance. Its broad shoulders suggest power and strength - including Volvo's renowned secondary safety. The roof is extraordinarily low for a wagon - just 37mm (or about an inch and a half) higher than the C30 coupé. The wedge profile further reinforces the sports styling.

"From the outset, our goal was to make this car look like the sportiest wagon Volvo has ever done," says Orjan Sterner, responsible for exterior design. "The focus was to make the car look as close to a coupé as possible. It was never going to be a regular estate. It was an S60 for people who want to carry more."

"From the front we increased the size of the Ironmark logo in the grille, to help make the front more bold. The eyebrow LED lights, on night and day, are very distinctive. That wide lower front air intake really helps to push the style down, increasing the sense of ground hugging design."

"At the side, there's a coupé wedge shape and a really low roofline, especially for a wagon. The 'double wave' side design, with a wave over each wheel-arch, also helps visually to pull the car down to the road."

"At the rear, the high upright tail lights - very good for visibility and safety - are similar to the C30 coupé. There are also cues from the P1800ES, the last really sporty Volvo estate - especially in the way the rear glass is treated. That classic car was an inspiration."

Length, width and wheelbase are the same as the S60. So, therefore, are the front and rear overhangs, which are unusually short for an estate, increasing the sense of styling dynamism.

The style is clean and organic and, says Sterner, "very Scandinavian. Many cars now have fussy cluttered designs, but good Swedish design is all about simple organic forms, not fuss. The V60 has a simple flowing shape, with integrated front and rear styling. The same theme is carried over to the car's interior, giving an unusual design harmony to the V60."

LED (light emitting diode) technology has been used to add styling character and increase visibility, by day and night. These distinctive fluid light streams include vertical position lights at the front, eyebrow-like dashes over the headlamps, turn indicators in the door mirrors, and position lights at the rear.

The low coupé style not only looks good, it also delivers an excellent drag co-efficient of 0.29 Cd - making the V60 one of the most aerodynamic estate or wagons in the world.

R-Design dials up sports styling

The R-Design version, typically very popular in the UK and accounting for up to 60 per cent of some model lines, dials up the sports styling even further.

Available from the end of 2010 across the whole V60 range, irrespective of trim or engine, the V60 R-Design benefits from a redesigned front valance and twin exhaust pipes. The whole vehicle is

lowered by 15mm, accentuating its ground-hugging qualities. Special five-spoke diamond-cut Ixion aluminium alloy wheels help fill the wheel-arches and add to the dynamic stance.

Options allow owners to personalise their V60s

There are numerous choices available to the prospective V60 buyer, to allow them to personalise their cars. These include an exterior styling kit, which includes front and rear skid plates, side scuff plates, exhaust tail pipe finishers, dual front deco frames - all in matt aluminium - and 18-inch diamond cut Freja aluminium alloy wheels.

There are numerous colour choices from Ice White to Black Stone. Among the 15 colours are new more assertive shades such as Passion Red, Electrum Gold and Vibrant Copper. There are many aluminium alloy wheel choices, in different sizes - 16-, 17- and 18-inch - and in different designs, ranging from five-, six- or seven-spoke.

INTERIOR DESIGN

- Focus on driver, not load carrying
- Sports details include small leather-rim steering wheel
- All major controls angled to driver
- Premium Swedish design
- Excellent functionality boosts carrying versatility

The V60's cabin is designed around the driver. The dashboard, including instruments and controls, is identical to the S60. So are the front seats. Like the S60's, they have extra side support as standard. The sporty leather-rim wheel, available in several different finishes (including a silk-metal rim inlay), is smaller than in previous Volvos. All major instruments and controls are angled to the driver.

Jonathan Disley, Head of Interior Design says "Instruments and the centre stack are angled towards the driver to create a sensation of focus and control. You also sit lower than is usual for a Volvo."

Although driver focused, the V60's cabin provides excellent space and comfort for five adults. Rear seat legroom is the same as the S60, although headroom is slightly improved by 3mm.

As with its sister car, the S60, Disley says this is the best finished, most stylish and most distinctive Volvo cabin. Of course, it is highly rational and functional. "Everything is intuitive. You really don't need to study the owner's manual to work out what's what. It's obvious. It is a far less complicated interior than, say, our German rivals."

Yet it is not a ruthlessly rational cabin. "I think we have added some playfulness to the rational simplicity of Scandinavian design tradition," Disley notes. "For example, lines inside the cabin are joined up, to give the continual expression of movement. Every detail looks like it's in motion. All these lines 'embrace' the driver's cockpit."

The floating centre stack, first seen on the C30 in 2006 and fast becoming a Volvo design trademark, is the centrepiece of the V60 cockpit. It was inspired by Swedish furniture and its tendency to 'bend wood'. The depth of the stack gives the effect that it 'floats'.

As with the S60, the V60 represents a significant step forward in quality and craftsmanship for Volvo. According to Design Director Peter Horbury, "alongside the S60, this is the best car cabin Volvo has ever done."

Luxury materials, including leather, wood, aluminium and high-quality fabrics, are used throughout. The leathers are tanned organically, which means they age better, and develop a lovely patina as they mature. Quality stitching is a feature, even on the man-made fabrics. Buyers have a choice of leather, sporty T-Tec (a synthetic 'skin' inspired by wetsuits and other durable outdoor gear) and Mellbystrand textile (a finely woven fabric that feels very modern and durable). The wood trim is real, and elegantly crafted. Real aluminium inlays are also a highlight.

Black upholstery is, of course, available but Sweden is famous for its lighter hues - an upshot of those long, dark winters. So Beechwood tan upholstery, which can trace its roots back to the P1800E is offered as well as soft beige and sandstone beige. These lighter colours can be mixed with black or charcoal décor inlays.

Typical Volvo wagon functionality

This is by no means the most capacious Volvo estate ever - it was never designed to be - but it does have all the handy functionality for which Volvo wagons are famed.

The rear seat can be specified with integrated child booster cushions in the outer seats. They are suitable for children weighing from 15-36 kg, and ensure that children sit comfortably and safely. Two-stage height adjustment ensures small children can still get a good view of the scenery.

The rear seat backrests can fold 40:20:40, rather than the 60:40 that is more usual for wagons. This greatly improves versatility. Skis or long golf bags can be easily carried along with two rear passengers. The backrests fold forward to give a perfectly flat load area. Rear seat headrests can be folded electronically, making it easier to drop the rear seats. With rear seats folded, the flat cargo space is just under three metres long. To utilise the longest carrying length, the passenger front seat backrest can also fold flat.

There is a locked underfloor rear compartment, net pockets and a grocery bag holder (to keep shopping bags upright). There are also four load-anchoring eyelets in the rear compartment. A telescopic alloy frame can be installed on the floor rails to help organise the load area and separate items. The frame can be easily removed and stored when not in use.

Also available is a hot box to keep food warm. It can easily turn into a fridge, to keep drinks cold. It connects to the power outlet in the load compartment, and is secured by mounting straps.

Accessories include a load compartment mat, useful if you regularly carry anything dirty, a protective grille to divide the load compartment from the seating area (useful for dogs or to ensure that unsecured loads do not impede into the passenger area during heavy braking) and a tough rear bumper strip that stops scuffing during loading.

A retractable load cover, for security, is standard.

The load area has been designed for maximum usability. The 1095mm wide tailgate gives good access to the boot area. With rear seats raised, load capacity is 430 litres up the window line and 557 litres loaded to the roof. When seats are dropped, capacity is boosted to 1241 litres.

"Load-carrying ability is not just about volume," says Disley. "It is equally about the shape and flexibility of the load space. We have worked hard to free up load-carrying area and to provide capacity that truly makes a difference to the car owner."

Easily accessible storage space is an important part of interior comfort and convenience. The new V60 has a storage compartment behind the centre stack and another in the centre console armrest, while in the door pockets there is space for books, maps and soft-drink bottles and cans. Both the front and rear seat occupants have seat pockets within easy reach.

R-Design boosts sports appeal internally too

The new R-Design V60 dials up the sports attitude by using seats with added side bolster support. The special leather/textile upholstery is available in a version trimmed in off-black and ceramic light, or in an all-black variant, both with contrasting stitching. The interior also features a special steering wheel, gear selector, sports pedals and floor-mats.

Most high tech Volvo cabin ever

The cabin is full of useful, easy-to-use technology. An all-new infotainment system - combining audio, navigation, mobile phone and other functions - is presented on a five- or seven-inch colour screen in the upper part of the centre console. It's high to make it easier for the driver to keep his or her eyes on the road. All functions can be controlled from the steering wheel, or by controls directly below the screen.

The human-machine interface is a crucial quality of any Volvo. The controls are so intuitive that Volvo's goal was to make reading the instruction manual unnecessary.

Voice controlled navigation is available. Bluetooth can connect the driver's own mobile phone to the infotainment system.

The new V60 can be equipped with parking sensors front and rear and a Park Assist camera at the rear. A camera in the front grille with 180 degree vision is a new Volvo feature available as an accessory. The camera is a great asset when manoeuvring in crossings with limited view or when

driving out from a tight and narrow exit such as a garage. The image from the camera is displayed on the infotainment screen.

DRIVING DYNAMICS: ENGINES

- Revised five-cylinder diesel engines offer better economy and torque
- New direct injection four-cylinder turbo petrol units offer six-cylinder refinement - but much better economy
- Top of the range T6 has 304PS and 155mph performance
- DRIVe version on sale in mid-2011

The V60 goes on sale in the UK with a choice of two five-cylinder diesel engines (D3 and D5), three four-cylinder direct injection turbocharged petrol engines (T3, T4 and T5) and the range-topping 304PS six-cylinder T6. The D3 is expected to be the biggest seller in the UK. All engines meet the latest Euro 5 exhaust emissions standards.

Coming in 2011 is a new 1.6-litre diesel DRIVe version.

D3 and D5 diesel engines

The 2.0-litre D3 turbodiesel is an advanced common-rail direct injection engine that delivers an excellent balance of performance and economy. It is designed to offer excellent torque at low revs, to make for an engaging yet relaxing driving experience.

Performance is exceptionally strong - 0-60mph in 8.9 seconds (manual or automatic transmission) and top speed of 137mph (manual, or 134mph for the auto). Fuel consumption (EU combined) is an exceptional 51.4mpg (manual, 46.3mpg for the auto) while CO₂ emissions are 144g/km (162g/km for the automatic).

A new type of piezoelectrical fuel injector is used to boost economy, and the single turbocharger has been fine tuned to boost low-end torque. Maximum torque is delivered at only 1400-2850rpm. The D3 is available with front-drive only and comes with a choice of six-speed manual or six-speed Geartronic automatic.

The high-performance D5 engine also uses direct injection and common rail technology. Capacity is 2.4 litres and it uses twin turbochargers of different sizes that operate in sequence to provide added power over a broad rev range. The result is an immediate response from the lowest engine revs without any perceptible turbo lag. It also offers rapid acceleration at all speeds, with smooth power delivery between the power bands of both turbocharger ranges.

The advanced fuel injection system also uses piezoelectric fuel injectors. This provides precise distribution of the atomised fuel in the combustion chamber, resulting in efficient combustion and low emissions.

The D5 has a top speed of 143mph (manual or auto) and 0-60mph acceleration in only 7.5 seconds. Yet on the combined cycle, the manual version delivers an extraordinary 52.3mpg or 142 g/km CO₂. (Automatic version: 44.1mpg and 169g/km CO₂.)

Both diesel engines with manual gearboxes are well under the 160g/km CO₂ company car tax break, which helps in the 'writing down allowance' (a statutory tax deduction for depreciation).

The five-cylinder diesels have aluminium block and head construction for low weight, four valves per cylinder for optimal breathing and twin overhead camshafts for efficient valve actuation.

A maintenance-free particulate filter traps 95 per cent of the soot particles.

T3, T4 and T5 GTDi petrol engines

The new GTDi (Gasoline Turbocharged Direct Injection) engines are light and extremely efficient units featuring advanced direct petrol injection and turbocharging for an extraordinary balance of performance, good fuel economy and low emissions.

They use aluminium blocks and heads, and twin variable camshafts operating 16 valves. The top-range T5 2.0-litre version has a world first Volvo patent: the use of sheet steel, rather than cast iron, for the turbocharger. Using sheet steel for both the exhaust manifold and the turbocharger reduces weight and boosts efficiency, mostly because it allows for greater heat generation. This also improves the after treatment of the burnt gases, reducing pollutants. The turbo is unusually

small - the market's smallest in relation to engine output. A small turbo boosts engine response and cuts consumption.

The choice of using a four-cylinder petrol engine, rather than a five- or six-cylinder, reduces friction, increasing economy. It is in-keeping with Volvo's plans to progressively downsize its engines - yet boost driving enjoyment.

Sharp engine response is a key quality of a sporting car, and Derek Crabb says Volvo has worked hard to give all the engines - not just the new GTDi - sprightly performance. All the S60 and V60 engines are either new, or upgraded, and a key goal has been to give them greater response through the engine range. We have done this by reworking the bottom ends, reducing friction and improving the breathing. It's not just engines - we have also redesigned the transmissions. Surprising performance was an absolute priority for the V60."

The T4 and T5 GTDi models come with a choice of six-speed manual transmission or six-speed Powershift dual-clutch gearboxes. (See Transmission section for more details.) The T3 is offered with the manual gearbox only.

All GTDi engines give an excellent balance of performance and economy. The 240PS T5 manual has a top speed of 143mph and 0-60mph acceleration in 7.1 seconds (T5 auto 143mph and 7.3 seconds). Average combined fuel economy is 34.9mpg (34.0mpg for the auto), while CO₂ emissions are 189 g/km (194g/km for the auto).

The T3 and T4 engines are of 1.6-litre capacity, and have different architectures from the T5 2.0 - although they also have aluminium alloy blocks and heads, and use variable twin camshafts driving 16 valves. Their turbochargers are cast iron, not sheet steel. The T4 180PS engine delivers its maximum 240Nm torque from 1500rpm all the way to 5000rpm, making this an extremely eager and easy-to-drive engine. This gives excellent lugging ability throughout the rev range. The torque curve is relatively gentle, resulting in a particularly comfortable driving experience. A short-term turbo overboost allows torque to deliver up to 270Nm, if needed. Top speed of the T4 version is 137mph and 0-60 takes just 8.0 seconds - faster than hot hatchbacks not so many years ago. (The auto version takes 8.7 seconds.) Thanks to a Start/Stop system, the first on a non-DRIVE Volvo, average fuel economy, on the official combined cycle, is 42.2mpg, which translates to 156g/km of CO₂. The auto version delivers 37.2mpg and 176g/km.

The T3 also has 240Nm of maximum torque, which it delivers from just 1600rpm, which makes it extremely flexible and easy to drive. Maximum power is 150PS, 0-60 acceleration takes 9.2 seconds and top speed is 127mph. Combined fuel economy and CO₂ emissions are the same as the T4 manual - 42.2mpg and 156g/km, again thanks to the Start/Stop system on the manual gearboxed car.

The T3 comes as a six-speed manual only, while the T4 and T5 come with Volvo's optional dual clutch Powershift automatic gearbox.

Top of the range T6

This is the top-range engine, delivering the fastest and most thrilling performance.

Designed by Volvo in Sweden but built in Bridgend, Wales, the SI6 (short in-line 6) is powerful and extremely compact. In 3.0-litre T6 turbocharged guise, as used in the S60 and V60, it produces maximum torque over a very wide rev band (2100rpm-4200rpm). So the car can be driven at low revs, economically, and yet can still deliver enormous urge.

The turbocharger is an unusual twin-scroll device that allows for excellent low-rev pick-up, eliminating traditional turbo 'lag', and yet also delivers enormous thrust when maximum performance is desired. There are twin overhead camshafts and 24 valves (four per cylinder) to provide optimal engine breathing.

Unusually in this sector, the six-cylinder engine is a straight-six not a V6, which is usually cheaper to build and easier to package. A straight-six engine, as used on the T6, is intrinsically the smoothest and most refined of all engine configurations.

The biggest problem with a straight-six is that they're long and difficult to package transversely. "Transversely mounted engines are safer - that's why we use them," says Derek Crabb. "They reduce the risk of an engine penetrating the passenger load space and also can be designed with

more crumple space in front and behind, allowing the safety systems to work more effectively."

Most straight-six engines would not fit into a car's engine bay crossways; they're too long. Volvo engineers overcame this problem by making the new S16 engine extremely compact and much shorter than the straight-six norm.

On the V60 T6, a six-speed Geartronic automatic gearbox and all-wheel-drive (AWD) are standard.

DRIVING DYNAMICS: CHASSIS

- Fluid predictable driving characteristics a priority
- Engineered to be the best handling Volvo ever (like its S60 twin)
- Developed on British B-roads
- A suite of electronic controls improve agility and safety
- R-Design models get even greater agility

The V60 has exactly the same suspension as the new S60, except that the suspension bushes are slightly different to compensate for its marginally greater weight (21kg more than the S60). Says Tomas Ahlborg, Project Director, "The two vehicles handle precisely the same. The dynamics are identical."

The suspension is fully independent using coil springs, and has been tuned for agile, responsive behaviour. Front suspension is by MacPherson struts and rear is by multi-link.

The BMW 3-series Touring was a handling benchmark, confirms Egbert Bakker, Technical Expert responsible for vehicle dynamics. "But the two vehicles are very different. Of course our V60 must be agile and responsive, and really good to drive. That is essential for a sportswagon. But - and this is the real Volvo difference - it must be predictable and offer extraordinary security on all road conditions, from dry tarmac, to ice, to snow, to heavy rain. Don't forget, we are a Swedish car company. We know about bad road conditions! We have our own chassis DNA, it's fun but always with security. That's one reason why we only offer front-wheel drive or all-wheel drive. It gives greater predictability."

Fluent, predictable handling - all with the utmost sure-footedness and security - are the keys to a great driving Volvo.

The platform is similar to the latest S80, V70 and XC60. On the latest S60 and V60, the suspension has been tuned for greater responsiveness and dynamism. "It's not just the suspension," says Bakker. "We have gone right through the chassis - from steering right through to tyres - always with the goal of providing maximum driving enjoyment combined with safety."

Ride and handling developed in UK

The damper tuning for the V60, as with the S60, was mostly done in England, on old Roman roads that have only been resurfaced a few times since they were built.

Says Bakker: "The UK is not only one of our biggest markets [third biggest worldwide in 2009] but also has uniquely challenging roads. Its B-roads are winding, narrow, badly surfaced and have many camber changes. They are very demanding and were the ideal surface on which to test the S60 and V60. Get those roads right, and you get the suspension right."

Dynamic suspension - but with comfort

Volvo has improved the sports handling characteristics of the V60. Yet ride quality, claims Bakker, is class leading. The firmer springs, dampers and bushes give more precise body control, and thus improved poise on poor roads. But they actually improve comfort. "The goal was to offer superior comfort to German sportswagons, which tend to have very firm suspension."

R-Design gives even greater sharpness

To further improve agility, and make for an even richer driving experience, the V60 R-Design has modified suspension. The front and rear springs are shortened by 15mm while spring rates are also 15 per cent stiffer, reducing roll and pitch, and improving responsiveness. Suspension bushings are also stiffer. Rear R-Design dampers are monotube, not twin-tube, helping damper response time. This further improves the 'connected feel' of the car.

A strut brace, under the bonnet, stiffens the body structure, improving handling sharpness.

FOUR-C as an option

Volvo's FOUR-C 'active' suspension - in which the dampers are automatically adjusted to suit the immediate driving situation - is optional on all versions of the V60.

Electronic sensors continually monitor the car's behaviour. The dampers then readjust in a fraction of a second to offer optimal handling and ride. This technology reduces the car's tendency to squat, dip or roll under firm acceleration, hard braking or fast steering manoeuvres.

The advanced multiplex control systems update the suspension settings 500 times every second. The system is especially useful when the car's handling balance is upset - for example during fast take off (with FOUR-C, the rear dampers are set to maximum stiffness to reduce squat and optimise front-end traction), during hard braking (the front dampers are stiffened to reduce nose dive) and when cornering (outside dampers are stiffened to reduce roll and improve roadholding).

Dampers also automatically stiffen as speed increases. The driving behaviour is improved in all situations. It boosts safety and entertainment.

Though dampers are adjusted automatically, drivers can also programme their desired settings. The three chassis settings are selected by the touch of a button. They are:

- Comfort - which provides the most comfortable ride with smooth and gentle body movements
- Sport - for more tightly controlled body movements and a firmer 'hunkered down to the road' feel. Steering response is sharpened, body roll is reduced
- Advanced - the maximum sports choice that noticeably firms up dampers and would be the desired setting for brisk drives on smooth winding roads

In an emergency - when the driver needs maximum control - the ingenious FOUR-C system overrides the personal settings to deliver maximum stability and traction. Equally, as the speed builds, the dampers automatically become firmer to improve handling, response and safety.

Corner Traction Control for improved turn-in

Volvo's new Corner Traction Control (CTC) sharpens handling. A refinement of the Dynamic Stability and Traction Control (DSTC) system, it uses torque vectoring to improve turn-in.

When taking a curve, the inner driven wheel is braked at the same time that extra power is fed to the outer driven wheel. This not only improves agility and precision, it also reduces the tendency to understeer - a characteristic of powerful front-wheel drive cars.

In addition, CTC makes it easier to maintain your line on a winding road, in keeping with Volvo's desire to maximize the poise and predictability of the V60. It also reduces the 'snatch' sometimes found in front-drive cars when you need to accelerate hard from a small side road and merge with traffic.

Advanced Stability Control boosts driving pleasure and safety

The V60 has a new Advanced Stability Control - part of the Dynamic Stability and Traction Control (DSTC) system - that Volvo believes is one of the world's most sophisticated. A new roll angle sensor identifies any possible skid at an early stage.

DSTC is standard on all Volvos and has been further refined for the S60 and V60. This electronic stability and traction system stops skids and slides, using sensors to detect if any of the wheels loses traction or grip. If so, power is cut to the relevant wheel. If the sensors detect early signs of a skid, the system automatically brakes the relevant wheel to reduce speed and regain control.

DSTC has a sports setting on the new V60 that disables the electronic intervention, if the driver wants to use the vehicle in a more energetic manner.

The V60 also features Engine Drag Control that prevents the wheels from locking during engine braking on a slippery surface.

Another new active safety technology is Trailer Stability Assist (TSA), first showcased on the Volvo XC60. TSA dampens the swaying 'snaking' motion that can occur when towing, which can sometimes lead to serious accidents. TSA operates with the DSTC system to stabilise the rig by braking one or more wheels while at the same time restricting the engine's torque. When an accessory tow bar is ordered, the TSA forms part of the cost of the tow bar.

DRIVING DYNAMICS: STEERING, BRAKES AND TRANSMISSION

- New fast ratio rack-and-pinion steering for greater precision
- ABS anti-lock brakes combines with HBA (Hydraulic Brake Assist) and RAB (Ready Alert Brakes) to give maximum braking ability in all conditions
- Choice of six-speed manual, six-speed automatic or - in GTDi engine - new dual-clutch automatic Powershift transmission
- All Wheel Drive (AWD) is standard on top-range T6

The V60 has been engineered to offer the same dynamic driving experience as the new S60, so that means precise steering, powerful progressive brakes and efficient transmissions that allow for progressive throttle response.

The small steering wheel (leather rimmed as standard) not only looks the part, it helps give sharper steering inputs. The rack-and-pinion steering ratio is faster than is usual for Volvo. Similarly, the steering column has high torsional stiffness for maximum feel. The steering column mounts are also unusually stiff.

Speed dependent power steering available

All V60's get power-assisted steering, but Volvo's new sportswagon can also be ordered with speed-dependent power steering. This provides extra assistance at low speeds, making parking simpler. The power assistance gradually declines as road speed increases, disappearing entirely at high cruising speeds. To give all drivers their own optimum road feel, the level of steering servo assistance can be adjusted via the car's set-up system. Power steering assistance can be set at one of three levels, depending on personal taste.

Strong, progressive brakes featuring advanced electronic controls for improved safety

The V60 has powerful anti-lock (ABS) four-wheel disc brakes - ventilated at the front - to give excellent low-fade stopping power. But the naturally effective disc brakes are supplemented by a host of advanced electronic controls, to maximise braking power. They include:

- Hydraulic Brake Assist (HBA). This new generation system, first shown on the S80, helps the driver to stop in the shortest possible distance in emergency situations. HBA reinforces brake pressure hydraulically. In an emergency, when the driver does not press the pedal sufficiently firmly or quickly, HBA ensures that maximum braking pressure is applied, always giving the driver the greatest chance to reduce the likelihood, or seriousness, of an accident.
- Optimised Hydraulic Brakes (OHB). In heavy braking, vacuum pressure in the brake servo can become low, reducing braking effort. OHB compensates by using hydraulic pressure to boost braking effort.
- Ready Alert Brakes (RAB). If the accelerator is released suddenly or the adaptive cruise control registers an obstacle in front of the car, RAB is deployed. The brake pads are instantly positioned very close to the discs, reducing braking response time and braking distance.
- Fading Brake Support (FBS). In long, hard braking, such as on a lengthy, mountainous descent, there is a risk of brake fade. FBS uses the hydraulics to gradually build brake pressure, maintaining pedal feel.

The V60 is fitted with an electronic parking brake as standard.

Six-speed automatic or manual gearboxes

The T6 model is mated exclusively to Volvo's six-speed Geartronic gearbox, which offers both full automatic and manual clutchless changes. The D3 and D5 diesel engines are available with Geartronic as an option, and come with a six-speed manual gearbox as standard.

In automatic mode, the shifts of the Geartronic transmission are so smooth as to be almost imperceptible. The sports button allows higher revs before each gear change and slightly faster shifts, and also sharpens kickdown.

The six-speed manual is a smooth-shifting clutch-and-stick shift aimed at those who prefer changing gear themselves.

Powershift transmissions for GTDi engines

The T4 and T5 GTDi engines are available with twin-clutch automatic Powershift transmissions. The Powershift uses two clutches to offer lightning fast gearchanges, can be used as a full automatic. As drive is continually engaged, it offers excellent fuel economy.

All Wheel Drive

The AWD (All Wheel Drive) system - only available on T6 - improves the handling and road holding by apportioning torque to all four wheels. The computer-controlled set-up automatically sends torque to the wheels with most grip, ensuring maximum possible traction and primary safety. The front-to-rear torque split changes constantly - from zero to 100 per cent, front or rear. The

sophisticated electronics control a hydraulic clutch that determines the most effective distribution of torque.

Sensors monitor the road surface and the positions of the steering, brake and accelerator. In normal conditions on a dry tarmac road, almost all the power is distributed to the front wheels. However, as soon as slippage occurs, torque is diverted to the rear wheels to boost grip.

This system also features Volvo-patented Instant Traction that detects loose or slippery surfaces and switches drive from front to rear (or vice versa) to help with standing starts.

SAFETY

- Pedestrian Detection with Full Auto Brake is a new safety technology, first introduced on the S60 and now the V60
- City Safety offered for first time on an estate
- Engineered to be the safest car in its sector
- Airbags include curtain side airbags and dual-stage side airbags
- Five three-point seat belts
- Advanced electronic primary safety measures - including DSTC (Dynamic Stability and Traction Control) - give owner every chance of avoiding accidents

Ever since the first Volvo was built in 1927, the overriding priority has been to develop cars that help prevent accidents and, if the accident does happen, to offer maximum protection. "Cars are driven by people," declared co-founders Assar Gabrielsson and Gustaf Larson. "Therefore the guiding principle behind everything at Volvo is, and must remain, safety."

Volvo has been a safety pioneer ever since the company was founded. Innovations include the three-point seat belt (1959) - the greatest advance in car safety of all time, according to many safety experts. They also include the safety cage (1944), padded instrument panel (1960), rear seat belts (1966) and side impact airbags (1994). To this rollcall of safety milestones can now be added two more, City Safety (first offered on the XC60) and Pedestrian Detection with Full Auto Brake (S60 and V60).

Pedestrian Detection with Full Auto Brake

This is the first time that any car maker has offered a feature that can specifically avoid a collision with a pedestrian. The radar- and camera-based system can detect pedestrians in front of the car, warns the driver, and then automatically activates the brakes if the driver fails to respond in time.

Pedestrian accidents are regular occurrences. In Europe, 14 per cent of all traffic fatalities are pedestrians. In the USA it is 11 per cent and in China the proportion rises to 26 per cent.

"At Volvo we have always led the way when it comes to protecting the occupants in our cars," says Thomas Broberg, Senior Safety Advisor. "In recent years, we have adopted groundbreaking initiatives that help the driver avoid and mitigate accidents with other vehicles. Now we are taking a giant stride forward with technology that can contribute to increased safety for unprotected road users as well."

Pedestrian Detection with Full Auto Brake uses a newly developed radar unit integrated into the car's grille, a camera fitted in front of the interior rear-view mirror, and a central control unit. The radar detects any object in front of the car and determines the distance to it. The camera determines what type of object it is.

Thanks to the newly developed dual-mode radar's much wider field of vision, pedestrians about to step into the road are detected. The system can detect pedestrians who are 80cm (31 inches) tall and upwards - so that includes children.

If a pedestrian is detected, the driver first receives an audible warning combined with a flashing light in the windscreen's head-up display. At the same time, the car's brakes are pre-charged. If the driver does not react to the warning and an accident is imminent, full braking power is automatically applied.

Half of all pedestrian accidents occur at speeds below 15mph (25 km/h). Pedestrian Detection with Full Auto Brake can avoid a collision with a pedestrian at speeds up to 21mph (35km/h) if the driver does not react in time. At higher speeds, the focus is on reducing the car's speed as much as possible prior to the impact, reducing the likelihood of serious injury or death.

"The proportion of pedestrian fatalities is high today and our technology will play a major role in reducing it," says Broberg.

Collision Warning with Full Auto Brake

Pedestrian Detection is a development of Volvo's Collision Warning system, which uses the nose-mounted radar and camera to warn drivers if they're about to hit another vehicle, and apply the brakes automatically if necessary.

Unlike Pedestrian Detection, and City Safety, this automatic braking technology is designed for higher speed, such as that encountered on motorways. A radar sensor fitted behind the grille, and a digital camera behind the windscreen, automatically monitor the distance to the vehicle in front. If the vehicle in front suddenly brakes, or is stationary, or you are travelling too close to it, a red warning light flashes on the windscreen and a warning buzzer sounds. The braking system is also automatically pre-charged to prepare for panic braking: the pads move very close to the discs and the hydraulic brake pressure is increased. If the driver does not react to the warnings and a collision is imminent, automatic braking is applied to reduce the severity of the accident.

As with Pedestrian Detection, this can avoid collisions up to 21mph (35 km/h) and reduce the severity of the impact at speeds over that.

Automatic braking is only applied as a last resort. "We give the driver ample warning," says Broberg. "It's only when they don't respond, or they respond too late, will automatic braking take over."

City Safety prevents, or mitigates, low speed urban accidents

City Safety, a technology first shown on the XC60 and now featured as standard on the S60 and V60, avoids low speed accidents - statistically, the most common type of crash. These accidents typically happen in towns and they typically involve tailbacks of traffic. City Safety either eliminates such accidents or reduces the severity of the impact.

"The biggest safety benefit is to reduce whiplash," says Thomas Broberg. "We are also reducing the damage to the cars involved and probably preventing accidents further down the line of traffic."

City Safety has already won the Technology category at the 'Fleet World Honours Award 2008' and the American 'Traffic Safety Achievement Award' at the 2008 international traffic safety symposium in New York.

City Safety works at speeds below 19 mph (30 km/h). A laser sensor, fitted behind the rear-view mirror and looking through the windscreen, keeps an eye on traffic in front of the vehicle. It can detect vehicles and other objects up to 6 metres (approximately 30 feet) in front of the car's front bumper. City Safety reacts to vehicles in front that are either stationary or moving in the same direction.

Based on the gap to the vehicle in front and the car's own speed, the system makes 50 calculations per second to determine what braking force would be needed to avoid a collision. If the calculated braking force exceeds a certain level without the driver responding, the system determines that the risk of a collision is imminent.

City Safety helps either avoid or reduce the severity of the collision by automatically braking the car and reducing the throttle opening. At the same time, the brake lights are automatically activated to warn other traffic.

According to Thomas Broberg: "City Safety automatically brakes at the last possible moment, at the point of no return. If City Safety were not activated, there would be an accident. Our studies show that if the speed difference with the car in front is under 9mph (15 km/h) then City Safety should avoid an accident entirely. If the speed difference is greater, then an accident will probably happen, but the severity will be substantially reduced."

The V60 is the first estate car in the world to be offered with City Safety, and only the third vehicle after the XC60 and S60.

Adaptive Cruise Control with Distance Alert and Queue Assist

To help the driver maintain a safe distance from the car in front, Volvo has developed Adaptive Cruise Control (ACC). It uses a radar sensor to measure continuously the distance to the vehicles in front and automatically adapts the speed of the car to help ensure the distance is not too short.

This technology also forms the basis of several of Volvo's advanced driving and support systems, including Collision Warning, and Pedestrian Detection, with Full Auto Brake.

The driver activates the cruise control, setting the desired maximum speed at between 18 and 125mph, and chooses the minimum time interval to the cars in front. There are five different time intervals to choose from.

Distance Alert is another feature included in this option. The system helps the driver maintain a safe distance to the vehicle in front even when Adaptive Cruise Control is not in use. Activated via a button on the centre console, the driver can choose between five settings. If the time gap to the car in front gets shorter than the selected speed, the driver gets visual information in the head-up display on the lower section of the windscreen.

Active Bending Lights 'see around corners'

Compared with conventional halogen headlights, Volvo's active bending lights - using dual xenon technology - more than double the driver's range of vision. The lamps are motorized, and can turn up to 15 degrees in either direction, as they follow the direction of the steered wheels. Thus, they help the driver to 'see around corners'. The headlights also self-adjust, always maintaining the correct angle to the road, maximizing illumination and avoid dazzling oncoming motorists.

Side Impact Protection System (SIPS), including dual-stage airbags

Volvo has further developed its SIPS side impact protection system. The body's entire side structure is both strong and light thanks to a well balanced combination of high-tensile steel of different grades (High Strength Steel, Extra High Strength Steel and the extremely strong Ultra High Strength Steel). The various components and grades of steel interact to reduce penetration into the passenger compartment.

Dual-stage seat-mounted side airbags further protect occupants from side intrusion. These side airbags get two separate chambers: one for the hip section and one for the chest. The hips can withstand greater force than the chest, so the lower chamber inflates with up to five times more pressure than the upper section. The side impact airbags interact with the inflatable curtains, which offer excellent head protection for children and adults alike. The inflatable curtains can now also be deployed outside of the passenger compartment, extending the range of protection. The gyro measuring the vehicle's yaw rate (part of the DSTC), along with the various accelerometers in the vehicle, can provide early activation of the inflatable curtains.

The V60 naturally offers dual-stage driver and passenger airbags as well. All airbags are standard across the range.

Whiplash Protection System (WHIPS)

WHIPS reduces the risk of neck injuries in a rear-end collision. The front seat backrest accompanies the passenger's initial body movement and dampens the incoming force rather like one's hand does when catching a ball.

The V60 features the same generation of WHIPS mechanism as was launched on the latest S80. This latest generation WHIPS ensures that the damping motion is gentle and provides good contact between the head and head restraint throughout the impact sequence.

WHIPS is a highly effective technology avoiding one of the most common injuries suffered in motor accidents.

Alerting Tired Drivers - and avoiding distraction

The V60 is full of solutions to keep drivers alert and reduce distractions. These include:

- Driver Alert Control (DAC). A unique technology to alert tired and distracted drivers, DAC monitors the car's progress between the lane markers and warns the driver if his or her driving pattern changes in a random or uncontrolled way.
- Blind Spot Information System (BLIS) helps detect vehicles in the offset rear blind spot on both sides of the car. A warning lamp beside the relevant door mirror comes on to alert the driver to the danger.
- Lane Departure Warning (LDW) alerts the driver if the car runs across the lane markers without the turn indicator being used.
- Intelligent Driver Information System (IDIS) helps prevent the driver from getting distracted by irrelevant information in difficult situations. By continuously monitoring certain functions in the car, such as brake application and movements of the steering wheel, accelerator pedal and turn indicators, IDIS can assess the complexity of the driving situation. The information is processed and at a certain level of complexity,

any information that is not essential to safety is delayed - for instance incoming phone calls or SMS text messages aren't delivered until the driver can cope.

Emergency Brake Light

EBL (Emergency Brake Light) computes the difference between normal and panic braking. In a panic stop, the rear brake lights flash at four times a second. Once speed drops below 19mph (30 km/h), the brake lights stop flashing and the hazard lights flash instead.

The safest Volvo of all

"No previous Volvo model has ever had such advanced safety technology as the all-new Volvo S60 and V60," says Thomas Broberg. "It is a worthy representative of our aim to build the world's safest cars - and it marks yet another step towards our goal of no fatalities or serious injuries in a new Volvo car by the year 2020."

QUALITY AND EQUIPMENT

- Very high level of standard equipment includes City Safety, power adjustable heated door mirrors and cruise control
- Premium Swedish design
- Allergen-free high quality cabin materials and pollen filter
- Superb in-car entertainment
- Choice of ES, SE, SE Lux and R-Design model lines
- Three year/60,000 mile warranty

Volvo has a reputation for equipping its cars generously, unlike German rivals on which 'options' can be very expensive. The V60 is no different.

V60 ES

The entry level car but still well equipped. The ES comes as standard with cruise control, 16-inch Oden aluminium alloy wheels, electrically adjustable and heated door mirrors, electronic climate control, leather steering wheel, illuminated vanity mirror and headlamp levelling.

Safety is the cornerstone of all Volvos, so little wonder the ES comes with key safety systems as standard. These include City Safety, DSTC (Dynamic Stability Traction Control), dual stage driver and passenger airbags, SIPs (Side Impact Protection System, including airbags), inflatable curtain airbags and three-point seat belts all round.

An excellent Performance Sound Audio system is offered (4 x 20W amplifier, aux input for MP3 player, six speakers) and so are remote controls on the steering wheel. A five-inch colour display screen is standard.

V60 SE

The SE is further enhanced with rain sensor windscreen wipers, rear park assist and the auto folding door mirrors with ground lights, for night illumination. Volvo's advanced T-Tec/Textile upholstery finish is modern yet superbly comfortable. Trim is shimmer graphite aluminium, which looks both sporty and high-tech.

The rear-view mirror dims automatically, there's a Bluetooth hands-free kit and larger and sportier 'Balder' 17-inch alloy wheels using low-profile sports 215/50R17 tyres. Volvo's innovative Interior Air Quality System (AQS) monitors air quality coming into the cabin and automatically closes the vents if pollution levels are high. A higher specification audio system - the High Performance Sound Audio System - is used, featuring 4 x 40W amplifiers, eight speakers, USB input and Bluetooth.

V60 SE Lux

The Lux takes everything that the SE offers and adds leather upholstery, power adjustable driver's seat with memory function and active bending lights that 'see around corners' complete with headlamp cleaning.

V60 R-Design

R-Design dials up the sport. As well as lowered suspension, stiffer spring rates and revised dampers (see Driving Dynamics: Chassis), the V60 R-Design also gets 18-inch five-spoke diamond-cut Ixion aluminium alloy wheels. Specially stitched and embossed R-Design sports seats (T-Tec/Textile with leather-faced upholstery) are standard, and there's a unique three-spoke steering wheel featuring a stamped metal R-Design badge. Other special styling touches include racetrack-type aluminium alloy pedals with rubber ridges, an aluminium centre stack, a special sports perforated leather gearshift knob and special hand-tufted sports mats. The instrumentation has blue accents.

Exterior design changes include larger front air intakes and dual tailpipes (see Design).

Options and Accessories

There are a huge number of options available to allow V60 owners to personalize their vehicles. They include:

- Speed dependent power steering
- Power glass tilt and slide sunroof
- Wood trim
- Heated front seats
- Heated rear seats
- Powered front passenger seat
- Dual colour (black and cream) sports leather steering wheel with chrome trim
- Rear Tinted windows for cargo area
- Load Compensating Suspension
- Front and rear park assist
- Rear Park Assist Camera
- Active Four-C chassis

Audio and DVD systems

The Volvo S60 comes standard with the excellent Performance Sound Audio system that uses a CD and RDS radio, four 20W amplifiers, auxiliary input jack for MP3 player and six speakers. Remote radio controls are fitted to the steering wheel. There is a five-inch integrated colour screen.

The optional High Performance Sound system uses CD, RDS radio with dual tuners, four 40W amplifiers, auxiliary input jack for MP3 players, a USB port and eight speakers.

The High Performance Multimedia Sound audio system uses a DVD and seven-inch colour display screen, four 40W amplifiers, Bluetooth, USB, auxiliary input jack for MP3 players and eight speakers.

The top-of-the-range Premium Multimedia Sound audio system is one of the finest car entertainment systems in the world. It has Dolby Pro-Logic II surround sound and Dolby Digital 5.0 Cinema Edition, a DVD and seven-inch screen, 5 x 130W digital class D amplifiers, auxiliary input jack for MP3 players, USB port and 12 speakers.

This superb sound system is one of the first, in an automotive application, to use Audyssey Laboratories MultEQ technology, the standard for room equalization in the home and professional theatre markets. MultEQ removes distortion caused by the car cabin's acoustics, enabling crisp, clear sound with improved soundstage for everyone in the car.

A DAB (Digital Audio Broadcasting) radio is available with High Performance and Premium systems.

Bluetooth compatibility plus advanced satellite navigation

Bluetooth connectivity is available. This advanced wireless system enables your mobile phone to be connected to the car's loudspeaker system. This allows for perfect sound and minimizes the interference often experienced when a mobile is used while driving.

Volvo's Satellite Navigation System (RTI) is offered with the standard seven-inch screen and has a super-fast processor, which means alternative routes are plotted quickly, and there is highly detailed information, including local speed limits. This new sat-nav system features RDS-TMC (traffic message channel) that displays up-to-date information on traffic problems.

Options Packs

Some of the more popular options are grouped into packs, offering better value for money. These packs include:

- Winter Pack, offering heated front seats and headlight cleaning
- Driver Support Pack, which gives the buyer Pedestrian Detection with Full Auto brake, Adaptive Cruise Control with Distance Alert, Queue Assist and Collision Warning, Lane Departure warning and Driver Alert Control, Blind Spot Information System

- Security Pack, which offers Personal Car Communicator with Keyless Drive and Laminated side windows (includes rain repellent front side windows)
- Family Pack, which offers the two-stage child booster cushions and power child locks for the rear doors

SECURITY

- Optional Personal Car Communicator (PCC) enhances security
- Home Safe and Approach Lighting
- Remote control central locking and alarm
- Volvo On Call rings for help automatically
- Laminated side (water repellent) windows available
- Optional 'security pack' bundles PCC, laminated side windows and private locking

No car company has a better reputation for safety than Volvo. But increasingly safety also involves personal security. The Volvo V60 is packed with security features to give owners extra peace of mind.

Side laminated glass

To make break-ins more difficult, the Volvo V60 can be specified with laminated glass in the side windows. The glass includes rain repellence for improved visibility in poor weather.

Personal Car Communicator

Although it looks remarkably like a regular remote control, the PCC can do a lot more than just activate the locks and alarm. A simple push of a button can, within a few seconds, tell the car owner if:

- the car is locked or unlocked
- the alarm has been triggered

The information is available and up-to-date as long as the distance between the PCC and the car is 100 metres or less. In addition, the most recent data is logged so the owner can at any time and any place check whether the car was locked when it was parked.

Volvo On Call

Advanced telematics are used to call for help during an emergency. The system uses the integrated GSM telephone and GPS satellite navigation to automatically call the emergency services when an airbag or seatbelt pre-tensioner is triggered during an accident. Alternatively, you can ring the emergency services by pushing a red SOS button on the GSM phone.

If the car breaks down or you need help, pressing the Volvo On Call button will put you straight through to a Volvo On Call operator who can offer roadside assistance.

Volvo On Call also offers vehicle tracking in case of theft.

Home Safe and Approach lighting

By pressing a button on the remote controller when approaching the car, the driver can turn on the inside lights, the side marker lights and the lights in the rear-view mirror. On leaving the car, a tweak of the headlamp stalk activates the dipped beam headlamps for 30, 60 or 90 seconds (programmable), lighting the path to the door.

Deadlocks, immobiliser and alarm

Standard features include a remote-control key fob that activates an alarm and strong deadlocks. Even if a thief does break into the car, for instance through breaking the glass, the deadlocks make it impossible to open the doors from the inside. The key fob also activates an electronic immobiliser that makes starting the car impossible without the correct key.

Remote control locking

When locked by remote control, not only are the doors deadlocked. The power windows and sunroof (if fitted) are also automatically shut.

...ends

Keywords:

Old V60, Press Releases, 2011

Descriptions and facts in this press material relate to Volvo Car UK's car range. Described features might be optional. All information is correct at time of going to press and may be altered without prior notification.

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