

Press Release

Jul 02, 2012 | ID: 44507

The All-New Volvo V40

ALL-NEW VOLVO V40

OVERVIEW

- Brand new model in the Volvo line-up
- Coupe-like design but with full five-door practicality
- Class leading ride quality and handling
- Class leading fuel economy (94g/km CO₂ for D2 fitted with 205 tyres)
- Class leading safety including the world's first Pedestrian Airbag
- Competes in the C-segment against Audi A3, BMW 1-series and Mercedes A-class
- Aimed mostly at Europe with UK likely to be the biggest global market
- With like-for-like equipment, better value than all premium rivals
- Low company car taxation at just £85 per month BIK for a 40% tax payer

SHORT STORY:

All-new Volvo V40 sets new standards in premium, five-door hatchback class

The all-new Volvo V40 is a sporty five-door hatchback that sets new ride handling, fuel efficiency and safety standards in its class.

Its eye-catching coupé design, which uses styling cues from the C30 coupé and classic P1800ES Volvo, is sportier and sleeker than the homogeneous class norm.

Special attention has been given to handling, steering feel, agility and ride comfort. Volvo engineers believe that the V40 is now the class benchmark for dynamic fineness.

Volvo's reputation for safety leadership has not been overlooked. A new innovation, Pedestrian Airbag Technology, joins a previous Volvo world-first, Pedestrian Detection with Full Auto Brake, which was first shown on the Volvo S60. Together, they ensure the all-new V40 offers unrivalled protection for pedestrians, as well as for the car's occupants.

The new Pedestrian Airbag, which makes its world debut on the V40, inflates from under the rear edge of the bonnet when the car detects that it has hit a pedestrian. The raised bonnet better cushions the unfortunate pedestrian, and the airbag also protects the pedestrian's head from the "hard points" at the base of the windscreen and the lower A-pillars.

In Europe, 14 per cent of all traffic fatalities are pedestrians. In China, it's over 25 per cent.

City Safety, an innovation first shown on the Volvo XC60 to avoid noise-to-tail urban accidents, has been further improved for the V40. It now works at up to 50 km/h (31 mph), instead of 30 km/h (19 mph). Insurance claims involving the Volvo XC60 show that City Safety has reduced personal injury claims by 51 per cent, while vehicle repair costs have been lowered by more than 20 percent. Little wonder that many insurers now reduce premiums for Volvo drivers.

Pedestrian Airbag Technology, Pedestrian Detection and City Safety are all part of Volvo's IntelliSafe safety philosophy. Other new safety features on the V40 include a Cross Traffic Alert radar system - which helps you reverse out of a parking space and see traffic coming from the

side - and an improved Blind Spot Information System (BLIS). This new radar-based technology still warns of vehicles in the blind spot, on both sides, but in addition now warns of vehicles approaching rapidly from the rear - making it safer, for example, to change lanes on the motorway.

Volvo also has a time-honoured reputation for environmentally friendly motoring - the three-way catalytic converter with lambda sensor is among Volvo's many green innovations. The all-new V40's 1.6-litre D2 engine emits only 94g/km (when fitted with 205/55 R16 wheels) of CO₂, a class-leading figure. This also offers major company car taxation, road tax and residential parking savings. Little wonder the V40 is so good in this area: one third of Volvo's entire research and development budget is earmarked for cutting CO₂ emissions.

"The V40 is our first C-segment five-door hatchback," says Volvo's President and CEO Stefan Jacoby. "We expect most buyers will be new to Volvo. We also believe it is a class leader in so many areas, from design, driving dynamics, safety, to fuel economy. It perfectly illustrates our 'Designed Around You' philosophy. A car that is seamlessly connected to the driver, which is easy and pleasing to use, which handles in a very intuitive way and which cares for people."

The design is particularly striking. The exterior was styled by Volvo's Californian studio in Camarillo by American Chris Benjamin. "I wanted an emotionally engaging car that looked like a coupé but had the practicality and functionality of a five-door hatchback," he says. The Pedestrian Airbag Technology allowed him to lower the bonnet line and lower the whole car. It's actually 29mm (just over an inch) lower than a C30 coupé, one of the lowest hatchbacks on the road. The rear styling is based on the C30, which in turn took cues from the classic P1800ES of the '70s.

The cabin design priorities were to give, "a large car feel inside a small car". The dash is wide - accentuating the big car feel - while a new high-tech TFT (thin film transistor) instrument digital display is available. Three different instrument displays can be selected, including an "eco" setting to help you drive more economically and a "performance" mode to better suit more spirited driving. There is also a more classical "elegance" mode. TFT instrumentation is available as an option on all models in the V40 range.

The V40 comes with Bluetooth music streaming and handsfree mobile connectivity as standard. A navigation system with directions in the main instrument cluster, and a mobile app that can find your car in a large car park, lock or unlock doors and even give you a journey log.

These choices are all part of Volvo's innovative infotainment system, giving outstanding connectivity, security and personalisation.

The seats are new and continue Volvo's fine reputation for occupant comfort. The rear seat is prominently sculpted to offer maximum support for two and sees them positioned slightly more inboard than is the norm, improving comfort and forward visibility. Nonetheless there is room for three in the rear, and a trio of three-point seat belts (a Volvo invention, of course) in the back seat.

An optional panoramic glass roof improves the "big car feel" of the cabin. Another unusual and stylish design touch is the rimless rear view mirror - further proof of the V40's design focus and crisp, uncluttered detailing.

Driving pleasure was a priority. "We sought dynamic leadership in this class and I'm confident we have achieved it," says Stefan Karlsson, Manager of Vehicle Dynamics and Calibration. "Our goal was to offer a truly connected feel, to give great driver confidence. If a driver feels well connected, he or she feels in control. This not only improves driving enjoyment, it also improves dynamic safety."

Ride comfort was also crucially important. "We just don't accept that agility should come at the expense of comfort. It is not necessary."

The damping - a key quality in comfort and driver interaction - was mostly calibrated by testing on British B-roads, "the best real world testing ground," says Stefan Karlsson. "They are extremely demanding roads, which is why so many cars struggle on them. They are brilliant for damper tuning, which in turn improves ride comfort, steering response, handling and agility."

The all-new V40 comes with three different diesel engines, and three petrol engines. They include a 1.6 diesel, which gives an outstanding and class-leading CO₂ figure of 94 g/km (equivalent to 78.5mpg on the combined cycle), a sporty 177hp 2.0-litre five-cylinder diesel, and the high

performance T5 petrol, good for 254hp. All engine and gearbox versions have start/stop technology, to boost economy and reduce emissions.

Volvo Car UK expects the D2 to be the big selling engine, with 63 per cent of UK sales.

Three trim levels are offered - ES, SE and SE Lux. Prices start at £19,745 for the D2 ES. The cars are all extremely well equipped. The entry level ES has City Safety, Pedestrian Airbag, Bluetooth hands-free, High Performance Audio, Electronic Climate Control, leather steering wheel and a cooled glovebox as standard.

Taking into account equipment levels, the V40 is not only less expensive than the equivalent Audi A3 and BMW 1-series, but also undercuts many mass-made rivals too.

Just over 12,000 are likely to be sold in the UK during the first full calendar year (2013). That would make the UK the V40's biggest market worldwide.

UK customer deliveries begin in September, with the high-performance T5 coming later in 2012. The V40 is a new class entrant for Volvo, but it will also replace the S40 and V50.

DESIGN:

- Coupé styling but five-door hatchback practicality
- Eye catching design by Volvo's Californian studio
- C30 and P1800ES inspired rear styling

Low, sleek and sporty, the V40 is one of the most eye-catching Volvos ever. It looks like a two-door car, thanks to the low roof (29mm or 1.1 inches lower than a C30) and bonnet lines. In fact, it's a five-door hatchback with all the functionality and practicality you'd expect from a Volvo.

Exterior designed in Volvo's Californian studio

The exterior was designed by Chris Benjamin, Design Director at Volvo's Californian studio in Camarillo, north-west of Los Angeles. "I wanted a car with a wedge shape, a high tail and wide shoulders. I see it as a combination of coupé and a sports wagon. Volvo has always done estates well and has had some classic coupés too." He describes it as, "a 3D piece of art you can drive".

The sleek exterior profile is accentuated by the low and wide high gloss grille that accentuates the car's ground hugging qualities. Daytime LED running lights are set into the lower corners of the front end, giving a "blade design" appearance. LEDs are also used in the door mirror turn indicators, rear position lights, high position rear brake light and in rear number plate illumination.

Volvo's classic V-shaped bonnet has bolder edging. The wide shoulders stretch from just behind the headlamps. They, too, are sharp edged, echoing the rising beltline. At the end of the rear door it sweeps into an integrated "hook", a design legacy from the P1800 coupé.

Dramatic wedge shape with wide shoulders

The roof silhouette is also wedge shaped, and contributes to the lean-forward stance. Rear tail lamps are positioned high, for maximum visibility, and follow the curvature of the shoulders. The broad-shouldered look is another Volvo design trademark, which goes back to the Amazon models of the '50s and was reintroduced by Volvo's British-born design boss Peter Horbury on the S80 and V70.

"We have pulled in the D-pillar considerably," says Benjamin. "This gives a teardrop shape to the glasshouse and has paved the way for the powerful rear shoulder that is such a distinctive feature. The low height also improves the frontal area, which leads to better aerodynamics and lower CO₂ emissions."

His favourite design feature? "The sculpted rear. It too has a low wide look that radiates a lot of confidence. The hexagonal shape of the tailgate is now something of a Volvo hallmark, aligning the V40 design with the look of our V60 sports wagon." The tailgate design, first introduced on the C30 and also inspired by the P1800ES, is a further Volvo signature.

The V40 was designed under the leadership of Steve Mattin, Volvo's then Vice-President of Design. As is usual for new models, Volvo's design satellites in Camarillo and Barcelona pitched

ideas against the head office in Gothenburg. (Since then, a new design studio has been added in Shanghai.) Chris Benjamin's Camarillo proposal was eventually chosen. Benjamin then spent two years working and living in Gothenburg, finishing the car.

"This is one car that actually improved as it got nearer production," says Benjamin. "I wanted a really emotionally pleasing piece of design. For me, too many modern cars have become machine like, they're too commodity like. I wanted to rediscover some design romance with some really voluptuous surfacing. The surfacing is a mixture of hard edges and softness, like the V60 and S60 but pushed to another level."

Some pleasing small details: it is the first Volvo with body colour washer jet nozzles and is the first Volvo that uses hemmed wheel flanges, which allows the use of bigger wheel and tyre combinations.

Another practical new detail is that the fuel-filler pipe is self-closing. This is a "smart" design that makes refuelling easier as there is no longer a need for a fuel-filler cap.

At 4369mm in length, the V40 is slightly longer than an Audi A3 or BMW 1-series, and slightly wider too. The drag co-efficient varies from 0.29 to 0.31 depending on tyre and wheel choices.

Personalisation is a key aspect of "Designed Around You", the central theme of all new Volvos. This includes an exterior styling kit, which further improves aerodynamic efficiency and gives an even sportier aura. The kit includes deflectors, a twin-coloured rear diffuser, a striping kit and enlarged rectangular chromed tail pipes.

Panoramic glass roof improves feel of spaciousness

A fixed panoramic glass roof, stretching from the front windscreen to the backrest of the rear seats, improves the feeling of light and space in the car and makes the cabin even airier and brighter. The roof is tinted to reduce infrared radiation into the cabin. A fabric curtain, under the roof, provides shade, and can be used to block out the sun for part of the cabin. So the rear passengers, for example, can enjoy sunshine while the driver relaxes in shade.

The all-new V40 comes with a choice of 16-, 17- or 18-inch wheels, depending on trim level and customer specification.

INTERIOR DESIGN:

- Seating comfort a priority
- Engaging "connected" driving experience
- Instrument pack and mood lighting can be personalised
- Simple, intuitive controls
- High quality materials and classic Swedish design
- Highly configurable for extra versatility
- Connectivity and infotainment system easy to use

Nowhere is Volvo's "Designed Around You" philosophy better manifested than in the cabin. It is comfortable, simple in design (like all good Scandinavian design), intuitive and visually pleasing. "The interior of the all-new V40 is designed around people and puts a strong emphasis on ergonomics, comfort and an in-command driving experience," says Sven-Olof Persson, Interior Design Manager.

Adds President and CEO Stefan Jacoby: "The all-new V40 has the most intuitive driver interface ever in a Volvo. We believe that the ultimate luxury is to own a car that fits you, understands you and evolves together with you. You jump in behind the wheel for the first time. You take a look at the dashboard - and you find everything so functional and obvious that you are ready to take off directly.

"We design cars around people's needs and lifestyle. Creating an intuitive and ergonomically optimised driver's environment is part of our aim to offer a feeling of relaxed control."

Volvo is renowned for the quality of its car cabins, its ergonomics and its seating comfort. The all-new V40 takes all these qualities to a new level.

"Big car" feel

The large and wide instrument panel accentuates the "big car" feel, as does the airiness offered by the deep windscreen and panoramic glass roof (when fitted). Instrumentation is classy yet simple. Intuitive design is a Volvo hallmark.

The cabin is full of easy-to-use technology, all part of Volvo's high-tech but easy to use HMI (Human-Machine Interface). The 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 set 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.

"My Car" button typical of easy-to-use technology

The "My Car" button on the dashboard offers easy access to a wide range of personalised settings for City Safety, Collision Warning, Pedestrian Detection, Driver Alert System, Active Cruise Control, lighting, door mirrors, climate unit, central locking and audio system.

If the customer chooses a Multimedia audio system, Volvo's infotainment system comes upgraded with the larger seven-inch screen that also displays information and images from the navigation system, phone, reversing camera, DVD player, digital TV and more.

The Bluetooth connection has been upgraded to allow not only hands-free phone conversations but also music streaming from your preferred Bluetooth-enabled portable music player. Volvo is the only brand to offer Bluetooth throughout the entire range as standard. Integrated navigation with voice commands is available as an option.

High-tech TFT instrumentation available

The TFT (thin film transistor) instrument display is new for Volvo and also a class-first. It offers excellent legibility in all light conditions, can prioritise information in emergency situations, and also allows the display to be personalised - all part of Volvo's "Designed Around You" philosophy.

There are three settings.

The "Eco" theme has a green background and includes an economy meter to allow you to drive as economically as possible. A green light is illuminated when your eco driving is optimal.

The "Performance" theme has red background illumination and includes a power meter that tells the driver how much power is being used and how much is available. In this mode, the tachometer is centralised on the instrument display, and speed is shown digitally. This is the setting of choice when spirited driving is preferred.

The "Elegance" theme has an amber illumination and gives a more conventional dash display. It's perfect for a calm, relaxing drive, and will probably be the everyday setting of choice.

The instrument display also includes navigation instructions, when satellite navigation is fitted.

The V40's cabin is designed around the driver, but never to the exclusion of passenger comfort. "It's driver oriented," notes design director Chris Benjamin. "You feel you're in a real cockpit. But the passengers never feel isolated."

Improved iconic centre stack

The floating centre stack, first seen on the S40 and V50 in 2003 has become a Volvo design trademark and is the centrepiece of the V40 cockpit. It was inspired by Swedish furniture and its tendency to "bend wood". The depth of the stack gives the effect that it "floats".

On the V40, the centre stack is even more sculpted. "It's larger at the top and tapers down. This helps to increase knee room for driver and front passenger," notes Chris Benjamin. The centre stack comes as standard in charcoal, upgrading to Shimmer Graphic in the higher trim levels. Modern Wood and Centre Court (tennis-inspired look with a red stripe) are available as an accessory.

The centre stack has a Silk Metal Chrome finish frame that enhances the décor. The same finish is also found in the doors and on the instrument panel as well as around the centre display, outer air vents, start button and gearshift gaiter.

A design highlight is the unusual yet classy rimless rear view mirror - without an unsightly plastic surround. It was inspired by classic '50s and '60s cars, many of which had dainty rimless rear view mirrors.

Sculpted seats, including in rear

Volvo is famed for its seating comfort. On the V40 the seats are new. Like the front seats, the outer rear seats are also noticeably sculpted, to offer greater comfort and support. You sit slightly more inboard than the norm, moving you further from the doors and allowing greater forward visibility. The rear seat is ideal for two people, although there is ample room for three.

Front and rear seat heaters are available. The latter is an unusual Volvo speciality, an upshot of our chilly home market.

There is extensive storage space. Below the armrest is a storage compartment suitable for CDs and other small items. It also has a connector for either USB/iPod or AUX. Two cupholders and a 12V power outlet are integrated in the console in front of the armrest.

The glovebox has space for two soft-drinks cans or bottles. It is refrigerated with cold air from the Electronic Climate Control system.

Other convenient features include an accessory supplied sunglass compartment above the driver's door, a pen holder in the glove compartment and handy storage compartments under the instrument panel and on the outside of the outer rear seats. Another smart detail is the specially designed, drained storage unit for an ice scraper in the driver's door panel.

The interior lighting is designed to give a "theatre lighting" feel. This adds to the luxury feel of the interior. LED lamps are used to light up strategic areas. The driver can enjoy a red-to-blue setting that adapts the light to the interior temperature - or choose between another seven mood themes. The reading lights front and rear can be dimmed.

Illuminated gearshift

There is an optional gearshift knob for the automatic and manual transmissions which is transparent and LED-illuminated from inside. There are also LED lights in the door panel storage pockets. This is another example of elegant imaginative design, boosting the quality feel of the cabin.

"Plus that illuminator gear shifter looks great at night," notes Chris Benjamin. "It's a real conversation topic."

The two-piece, 40/60, rear seat backrest can be easily folded in different ways when carrying long objects. The front passenger seat can be folded forward to create even more space.

There is a practical hanging load net in the load compartment. A soft safety net is optional and a metal version is available as an accessory.

Twin floor boot

The V40 can be equipped with an "extra" floor in the load compartment, making the floor flat when the rear seat is folded. In addition to the two permanent hooks, the extra floor integrates hooks for grocery bags. Between the upper and lower floors there is a concealed storage area.

The accessory range includes a "Cargo Mat Organiser" that keeps smaller items secure, as well as a "Load Organiser" that includes a load compartment divider, a load belt and two floor rails.

High quality upholstery and trim

Luxury materials, including leather, aluminium and high-quality fabrics, are used throughout. The leathers are tanned organically, which means they age better, and develop a 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 Lorensburg textile (a finely woven fabric that feels very modern and durable). Real aluminium inlays are also a highlight.

Charcoal upholstery is, of course available, but Sweden is famous for its lighter hues - an upshot of those long, dark winters. So charcoal and blond, as well as espresso and blond themes are also available.

DRIVING DYNAMICS: CHASSIS

- Highly "connected" driver experience
- Target of class best ride and handling
- Developed on British B-roads
- Excellent balance of comfort, agility and handling

A huge effort has gone into making the Volvo V40 the class leader in all-round dynamics. According to Stefan Karlsson, Manager of Vehicle Dynamics and Calibration, Volvo wanted a "great balance of ride, handling, steering and braking, as well as the driver assistance functions".

He feels the V40's special niche is, "the whole connected feel of the car. The way you are always in charge, never with any nasty surprises. It's the intuitive way the car drives and behaves. If the driver is well informed on the behaviour of the car, he or she will always make the right decisions. He or she will be a better driver, will enjoy driving more, and be a safer driver."

Great steering feel connects you to road

Special emphasis was put into the steering, "the main connector with you and the road. We tried very hard to ensure that the steering provides an intuitive and linear feel between you and the road. That way it's very responsive and very precise. I'm confident we are more 'connected' than rivals. I think we really have an edge here."

The Electrical Power Assist Steering (EPAS) system uses electric power on a rack and pinion. Early electric steering systems were sometimes criticised for lack of feel but Karlsson says Volvo has conquered that failing, and claims that feedback and feel is now as "as good as a good hydraulic steering system". A key benefit of electric steering is that, because there is no hydraulic assistance, there are fuel economy savings.

The steering column's thick tubing and stiff insulation increase torsional rigidity. This also contributes to the enhanced feeling of direct contact with the wheels and the road.

The electric steering allows you to choose between three levels of power assistance:

In Low mode the system provides a high degree of power support, making manoeuvring easier. Medium mode has lower power support to offer more road response at higher speeds. High mode is the ultimate setting for the enthusiastic driver, contributing to the car's dynamic character.

The Electrical Power Assist Steering also allows for the integration of safety and driver support functions that involve the steering, such as Lane Departure Warning and Park Assist Pilot.

Suspension tested in Britain

The damper tuning on the all-new V40 was done mostly in the UK, on our country's legendary B-roads. "It was Richard Parry-Jones [legendary Ford technical director] who first alerted us to the advantages of using British B-roads," says Karlsson. "They test every possible area of damping, because of their roughness, their camber changes, their undulations and the variety of corners." Karlsson says Volvo now does "90 per cent of our damper tuning in the UK. And the dampers are such a critical part of the suspension. They affect ride, handling, steering - everything."

The dampers include rear monotube designs that have compression and rebound damping done by the same valve. This gives shorter, faster fluid flow, which in turn means that the damper responds more quickly.

Karlsson is part of a small (only four engineers) dynamic team that test new Volvos partly "by the seat of the pants". Of course we have tons of people working on CAE [computer-aided engineering]. Our suspension designed is heavily influenced by them. But real-world driving is also

crucial. So it's a mixture of subjective testing and objective measurement."

The four chassis dynamic team members each averages 15 years of driving-tuning experience. "My background is as a calculations engineer. One of my team is a Swedish rally driver." Karlsson races a Mazda MX-5 sports car on weekends.

The chassis set up - fully independent suspension front and rear, using MacPherson struts at the front - is complemented by a suite of electronic controls, designed to boost safety but also improve driving enjoyment.

DSTC improves safety and driving enjoyment

The Dynamic Stability and Traction Control (DSTC) system in the Volvo V40 includes several sophisticated features that offer a unique blend of driving pleasure and safety. The Advanced Stability Control, that is part of it, uses a roll angle sensor that makes it possible to identify any skidding tendency at an early stage. This means that the stability control system can step in earlier and with greater precision. Advanced Stability Control is a great asset in dynamic driving involving considerable lateral forces, improving handling and rapid avoidance manoeuvres.

Engine Drag Control prevents the wheels from locking during engine braking on a slippery surface.

If the car is equipped with a towbar, Trailer Stability Assist helps dampen the snaking action that may occur when towing a trailer or caravan. The car is stabilised by braking one or more wheels and by reducing torque.

Corner Traction Control improves handling

Corner Traction Control is a new feature of the V40 that uses torque vectoring to make the car corner even more smoothly. The car's inner driven wheel is braked, causing more power to be transmitted to the outer driven wheel. This allows the driver to corner more tightly while reducing any tendency to understeer.

This system makes it easier to smoothly maintain the desired line on winding roads, in roundabouts and on wet surfaces. Corner Traction Control is a huge asset when exiting from a small side road to merge swiftly with faster highway traffic.

The standard V40 comes with a "dynamic" chassis, but a "sports" chassis is also available. This lowers the ride height by 10mm (just under half an inch), lowering the centre of gravity and offering firmer springs and dampers, to give even more responsive driving.

Comfort is a priority

Although the emphasis is very much on a sporty driver feel, Stefan Karlsson says comfort has not been sacrificed. "That is one of the things we're really proud of - it's a very agile, responsive car, but ride comfort is also excellent."

A dynamic and safe car obviously needs excellent brakes. The all-new V40 comes with four wheel discs, ventilated at the front. Anti-lock braking system (ABS) is standard, and so is Electronic Brake Distribution (EBD) and Electronic Brake Assist (EBA).

EBA helps the driver stop in the shortest possible time in an emergency stop. The system detects if the driver is in an emergency brake situation and, even if the pedal has not been pushed with maximum force, it applies maximum braking power.

EBD varies the braking pressure to each wheel - depending on speed and road conditions - ensuring maximum stopping power yet full vehicle control.

Both EBA and EBD work in conjunction with the anti-lock brakes.

DRIVING DYNAMICS: POWERTRAINS

- Best selling D2 engine has class-leading CO₂ emissions of just 94g/km
- Economical engines mean savings in car taxation, including company Benefit in Kind tax
- Most powerful T5 version has 254hp
- All engines have start-stop to improve fuel consumption and cut emissions

- All engines are turbocharged for extra power and efficiency
- Choice of six-speed manual or automatic gearboxes on many engine versions

The all-new V40 has a wide choice of turbocharged diesel or petrol engines, both available in four- and five-cylinder forms. In the UK, diesel is likely to account for over 80 per cent of sales, and Volvo estimates the D2 will constitute about 63 per cent of total V40 UK sales.

Diesel engines:

The big seller will be the 1.6-litre four-cylinder diesel D2. This highly-efficient engine delivers an amazing 94g/km CO₂, the best in class. That equates to 78.5mpg on the combined cycle.

Such outstandingly low figures make the Benefit in Kind company car tax very low (£43 BIK a month for 20% tax payers). There are also major benefits in other taxation. For example, the sub-100g figure means there is no vehicle tax either in the first year or in subsequent years. It is also currently exempt from the London Congestion Charge.

The D2 is an eight-valve engine using the latest common rail direct injection. Piezo-electric injectors ensure particularly precise distribution of the atomized fuel, resulting in efficient combustion and low emissions. The cylinder block and head are both made from aluminium, ensuring low weight.

Maximum power is 115hp while maximum torque is a healthy 270 Nm, available from 1750-2500rpm. Even at 4000rpm, the engine is still producing almost 200 Nm of torque. The D2 is only available with a six-speed manual transmission.

Using optional 225 - rather than standard 205 - tyres, CO₂ emissions increase to 99g/km.

Top speed is 118mph and 0-60 mph acceleration takes 11.7 seconds.

The other two diesel engines on offer are the five-cylinder D3 and D4. Both have aluminium blocks and heads for lighter weight, and use four valves per cylinder for improved breathing.

The D3 and D4 both have 2.0-litre capacities. The former - likely to be the second best selling engine version in the UK - produces 150hp and 350 Nm of torque from 1500-2750rpm. The flat torque curve - which makes for better acceleration over a broader rev range - means it is still producing over 200 Nm at 4750rpm.

On the top diesel version - the D4 - extra turbo boost means power jumps to 177hp and maximum torque to 400 Nm. Maximum torque is achieved from 1750 to 2750rpm. As with the D3, it is also strong even at very low revs: at just over 1000rpm, 100 Nm is being produced. This makes both the D3 and D4 very flexible and tractable.

The D3 and D4 both come with a choice of six-speed manual or automatic transmissions. In manual guise, top speed is 130mph (D3) and 137mph (D4), while 0-60mph acceleration takes 9.1 seconds and 8.2 seconds respectively.

Both five-cylinder engines also offer fine economy and low emissions. The D3 produces 114g/km of CO₂ as a manual, which puts it in vehicle tax band C. No vehicle tax is payable in the first year. The manual D4 emits the same CO₂, excellent for a high performance diesel. Combined fuel economy for both engines is 65.7mpg.

Petrol engines:

The four-cylinder T3 and T4 engines are new-generation units, first shown in mid 2010 on the Volvo S60 and V60. They are among the world's most advanced four-cylinder petrol engines, being exceptionally light and efficient.

They are compact and made from die-cast aluminium, which reduces weight and improves heat dissipation. The plastic inlet manifold also cuts weight. Both engines use direct injection, still unusual on petrol engines, to give far more precise combustion with improved performance and emissions.

The variable valve timing (for both inlet and exhaust valves) and quick-acting turbocharger help

give this petrol engine almost diesel-like lugging power. Maximum torque, for the T4, is over a wide rev band: from 1600 to 5000rpm. On the less powerful T3, the maximum torque is developed from 1600 to 4000rpm. Maximum torque for both versions is 240 Nm. The T3 produces 150hp, the T4 180hp.

The petrol engines come with six-speed manual transmissions only. Maximum speed is 130mph (T3) and 140mph (T4) while 0-60 acceleration takes 8.4 and 7.3 seconds respectively.

Their highly efficient engines give excellent economy and low emissions. Thus, CO₂ emissions are 125 g/km (T3) and 129 g/km (T4). They both qualify for free first year vehicle tax, and are classified in vehicle tax band D.

Late in 2012, the high-performance T5 engine joins the V40 range. This five-cylinder 2.5-litre 254hp unit uses an aluminium block and head and will be the sportiest choice in the V40 range. It comes with automatic transmission only.

0-60mph acceleration takes just over six seconds, while top speed is 155mph. Yet, despite such high performance, preliminary CO₂ emissions are a reasonable 185g/km.

All V40 engines meet the latest Euro V exhaust emissions standards. They are all fitted transversely, to improve packaging - so more space is devoted to passengers - and also to improve safety: a transverse engine is less likely to intrude into the passenger cell than a longitudinally mounted engine in a severe front impact.

Six-speed transmissions:

All versions, apart from the high performance T5, come with six-speed manual gearboxes as standard. The diesel D3 and D4, additionally, come with the option of six-speed automatic gearboxes.

All versions of the V40 come with front-wheel drive. Volvo believes this offers safer and more predictable handling than the alternative rear-wheel drive solution. It is especially advantageous in slippery conditions, such as may be experienced on cold winter days.

SAFETY:

- Mix of innovative active and passive safety technologies makes V40 the safest car in class
- World first use of Pedestrian Airbag Technology
- Only car in class with Pedestrian Detection with Full Auto Brake - a Volvo innovation first introduced on the S60
- City Safety is upgraded and offered for first time in this class as standard
- New driver knee airbag
- World debut of Cross Traffic Alert - a technology that makes reversing out of tight parking spots safer
- Enhanced Blind Spot Information System for better visibility
- Active High Beam improves nighttime visibility
- Five three-point seat belts

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), rear seat belts (1966) and side impact airbags (1994).

To this rollcall of safety milestones can now be added a few more, City Safety (first offered on the XC60), Pedestrian Detection with Full Auto Brake (S60 and V60) and now, on the V40, Pedestrian Airbag Technology.

"Safety has always been the cornerstone of any Volvo," notes Andreas Eidehall, Technical Expert Active Safety. "Safety is a key part of our 'Designed Around You' philosophy. Our cars are designed to help you avoid an accident, but also to avoid injury if an accident is unavoidable. Caring for people is part of the Volvo ethos. That's why our innovative pedestrian safety features

are so important."

Pedestrian Airbag Technology

In Europe, 14 per cent of all traffic fatalities are pedestrians. In China, it's over 25 per cent. Volvo believes it is essential that car makers look after other road users, not just drivers and their passengers.

Accordingly, the Pedestrian Airbag means that, if collision with a pedestrian is unavoidable, the new technology will try and mitigate any injury.

Seven different sensors in the front bumper register the contact between the car and the pedestrian. The rear end of the bonnet is released and at the same time elevated by the deploying airbag, which is sited under the trailing edge of the bonnet. The inflated airbag covers the area under the raised bonnet and approximately one third of the windscreen area and the lower part of the A-pillar.

The raised bonnet - made from soft metal - helps to absorb the pedestrian impact, while the airbag helps to cushion the pedestrian from two potentially dangerous hard points on the car, the windscreen and A-pillars. "We believe this technology will greatly increase a pedestrian's chance of survival," says Andreas Eidehall.

It works between 20 and 50 km/h (12 and 31 mph). "Ninety per cent of pedestrian accidents happen below 50 km/h," notes Eidehall.

Pedestrian Detection with Full Auto Brake

Pedestrian Detection with Full Auto Brake, first shown on the Volvo S60, uses a radar unit integrated into the car's grille, a camera fitted just behind 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 (25km/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 Thomas Broberg, Senior Safety Advisor for Volvo.

Pedestrian Detection perfectly complements the new Pedestrian Airbag, in Volvo's quest to protect all road users.

City Safety

Volvo's innovative City Safety system has been upgraded for the V40. It now works at speeds up to 50 km/h (31mph) rather than 30 km/h (19mph).

City Safety 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."

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.

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.

The American Insurance Institute for Highway Safety (IIHS) has documented that City Safety reduces the frequency of collisions by 22 per cent.

Volvo Car UK's own statistics show that chauffeur company, Tristar, reduced its 'at fault' rear impacts by 28% in the first six months of trialling City Safety.

Insurance claims involving the Volvo XC60 - the first Volvo fitted with City Safety - also show that the new technology reduces the cost of personal injury claims by 51 per cent, while vehicle repair costs were lowered by more than 20 per cent.

Lane Departure Warning

Approximately 30 per cent of all accidents in Volvo's accident database are due to cars leaving the road. About 75 per cent of these occur on roads with speed limits of 70 km/h (44mph) or more.

The new Lane Departure Warning in the V40 helps the driver stay in the intended lane. This feature applies extra steering torque to the steering column when the car gets close to a lane marking and is about to leave the lane. The system is active at speeds between 65 km/h (40mph) and 200 km/h (125mph).

The forward-looking digital camera monitors the left and right lane markings. Lane Departure Warning registers the car's progress between the lane markings and takes action if the driver shows signs of unintentionally drifting out of the lane.

As a first step, Lane Departure Warning applies gentle steering wheel torque to help the driver steer back onto the intended course. If the car leaves the lane, the technology generates a distinctive warning through a haptic vibration in the steering wheel.

Enhanced Blind Spot Information System (BLIS)

The V40 is the first Volvo to offer the enhanced Blind Spot Information System (BLIS), which is now radar-based. The technology can now also monitor and alert the driver to rapidly approaching vehicles up to 70 m (166 feet) behind the car. Of course, it still informs the driver about vehicles in the blind spots on both sides of the car.

BLIS helps the driver avoid potentially dangerous lane-changing manoeuvres.

The enhanced BLIS uses radar sensors located in the rear corners of the car, behind the bumper cover. The radar continuously scans the area behind and alongside the vehicle. Warnings are displayed in LED indicators located in each A-pillar. A steadily glowing LED indicates when the radars cover a vehicle in the zone. The second warning level - LED flashing - occurs if the driver uses the turn indicator when the first alert is active.

Cross Traffic Alert - covering your back

Cross Traffic Alert uses the same radar sensors at the rear end of the car to alert the driver to traffic crossing from the sides when he or she is reversing out of a parking space. This is especially helpful in tight and crowded areas where the side view might be limited or impaired.

The function warns of traffic up to 30 metres (100 feet) from the car. Smaller objects like bicycles and pedestrians may also be detected. The alert, which remains active as long as the target is present in the zone, is delivered to the driver as an audible signal and a warning in the centre screen.

This is another safety first making its debut on the all-new V40.

Collision Warning with Full Auto Brake

Volvo's world-first Pedestrian Detection is a technical development of the company's Collision Warning system, which uses the nose-mounted radar 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, 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 closer 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 if the speed differential is up to 35 km/h (21mph) and reduces 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 Thomas Broberg. "It's only when they don't respond, or they respond too late, will automatic braking take over."

Collision Warning with Full Auto Brake was considered the best automatic braking system in the world in a test by German organisation ADAC in 2011. In the all-new V40, auto brake performance at higher speeds has been improved compared with previous versions.

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.

Driver Alert Control

A unique technology to alert tired and distracted drivers, Driver Alert Control 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.

Active High Beam

This clever technology means you can drive on high beam - if you wish - and the car will dip the lights automatically. The advantage is you always get maximum illumination of the road ahead.

A digital camera monitors other vehicles and their headlamps and tail lamps. Advanced image processing software analyses this data and provides information about the position and direction of other vehicles. The calculation serves as the basis for automatic switching between low and high beam.

It also works in built-up areas, in other areas where low beam is mandatory.

Active Bending Xenon 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 motorised, 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, maximising illumination and avoid dazzling oncoming motorists.

Road Sign Information

This technology displays road signs in the instrument display. The forward-facing camera detects speed limit signs as well as "no overtaking" signs and the road sign icon is then displayed until a

new sign is detected.

Park Assist Pilot

When this technology is fitted, parallel parking becomes easy for all.

The new Park Assist Pilot operates the steering while you handle the gearbox and control the car's speed. The parking manoeuvre is based on front, rear and side-facing ultrasonic sensors.

When the driver activates the Park Assist Pilot the sensors start to scan the side of the car. When a parking slot measuring a minimum of 1.2 times the car's length is detected, the driver is notified by an audible signal and advised to stop by a message in the instrument cluster.

The display guides the driver step-by-step until the car is correctly parked. When parking is completed the driver is notified by an audible signal and a text message.

The all-new Volvo V40 can also be equipped with a rear park assist camera and park assist sensors front and rear.

The highest levels of passive safety - including new knee airbag

Much of the new safety innovation on the V40 concentrates on active safety - helping you prevent an accident. But if an accident is inevitable, Volvo's legendary rigidity and passive safety aids will help avoid injury.

The all-new Volvo V40 also features world-class crash safety including a safety cage with effective deformation zones and various grades of high-strength steel.

Safety belt pre-tensioners are standard in the front and outer rear seats and the front seats are equipped with whiplash protection (WHIPS) to help prevent neck injuries. Both the driver and front seat passenger seat have dual stage airbags. There are also side airbags integrated in the front seat backrests.

The driver's side is also fitted with a new knee airbag. It is installed in the dashboard above the pedals and deployed together with the other airbags in the event of a frontal collision.

The Roll Over Protection System includes a robust body structure, seat pre-tensioners and Inflatable Curtains. The Inflatable Curtains cover both sides, from the A-pillar to the C-pillar, and deploy in frontal offset, side or rollover accident situations.

ISOFIX attachments are standard and Volvo offers thoroughly tested child seats that cover ages from newborn up to 10 years.

"The all-new V40 is packed with more intelligent support systems than any previous Volvo," notes Thomas Broberg. "It is yet another important step toward our vision that nobody should die or suffer serious injuries in a new Volvo car by the year 2020."

EQUIPMENT:

- Very high level of standard equipment
- With like-for-like equipment, better value than many mass-market rivals
- Choice of ES, SE and SE Lux equipment levels
- Bluetooth standard on all trim levels

Volvo has a reputation for equipping its cars generously, unlike German rivals on which 'options' can be very expensive. The V40 is no different.

V40 ES:

The ES is the entry level but still very well equipped. Standard specification includes City Safety, Pedestrian Airbag, Bluetooth, High Performance audio with 5-inch colour display screen, ECC (Electronic Climate Control), 16-inch Matres alloy wheels, DSTC (Dynamic Stability and Traction Control), power windows, a leather steering wheel and gear knob, and textile floor mats. A cooled glovebox is also standard.

V40 SE:

The SE model adds T-Tec upholstery, cruise control, steering wheel remote controls and keyless start. It also has autofolding power door mirrors with ground lighting and chrome exterior trim on the outside. Rain sensors with automatic wipers are also standard.

V40 SE Lux:

The most luxurious version of the V40 offers leather-faced upholstery, 17-inch Mannan alloy wheels and LED day running lights as well as active bending xenon lights with a headlight cleaning system.

Option Packs

Rather than offer a plethora of individual options, Volvo instead has concentrated on option "packs", which group popular options in "themes".

Winter Pack groups heated front seats, heated front windscreen and a headlight cleaning system.

The Winter Illumination Pack includes active bending xenon lights, headlight cleaning, LED day running lights, heated front seats, heated front screen and rear reading, theatre and front door side step lights.

The Driver Support Pack groups Collision Warning with Full Auto Brake, Pedestrian Detection, Adaptive Cruise Control, Lane Departure Warning, Driver Alert Control plus Active High Beam and the Road Sign Information display. It also includes the Blind Spot Information System.

The Sports Pack includes the lowered sports chassis, 17-inch Segomo alloy wheels, three-way adjustable steering with memory. Eighteen-inch Taranis alloy wheels are available as an upgrade.

Nav Variants can be specified on all variants and come fitted with the fully integrated satellite navigation system with voice activated control, which comes with a 7-inch colour display screen and DVD player. As well as full European mapping, two complimentary annual map updates are included.

Audio and DVD systems

All versions - ES, SE and SE Lux - come standard with the excellent High Performance Audio System that uses a CD and RDS radio, four 45W amplifiers, USB/iPod input and eight speakers. There is a five-inch integrated colour screen.

The optional High Performance Multimedia system uses a DVD and seven-inch colour display screen.

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 and 10 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, as is Digital TV.

All Volvo V40s get Bluetooth hands-free for telephone and music streaming. The V40 is the only car in its class to have Bluetooth standard on all models.

SECURITY:

- Volvo On Call rings for help automatically
- Smart phone app allows for communication between you and car - all part of Volvo's Sensus technology
- Personal Car Communicator enhances security

Volvo's infotainment technology allows for seamless connectivity between you and the car, enhancing the owner experience - and also security.

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 located by the front reading light switches.

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.

Mobile app

The owner of a V40 can use a mobile application to stay in touch with the parked car via a smart phone. The mobile application is an extension of Volvo On Call, which originally focused on direct access to a call centre in the event of an accident or other emergency.

The mobile app, which is free and downloaded via the application stores, is designed to offer the owner an intuitive, easy-to-use relationship with the car from a distance. It includes a number of features:

- Car locator. The location of the car is shown on a map. There is also a digital compass that points the driver in the right direction. This is especially useful when your car is left in a large or crowded car park.
- Remote door lock. The status of all doors and windows is displayed - and the driver can lock and unlock the car with a push on the touch screen.
- Vehicle dashboard. This feature gives the driver access to a wide range of information: fuel level, remaining range to empty tank, average fuel consumption, average speed, odometer reading and trip meter reading.
- Car check. The mobile app performs a "health" check of the car; displaying information about lights, brake fluid level, coolant level, oil level and oil pressure.
- Driving journal. Detailed data of each trip during the last 40 days can be downloaded and stored. It is also possible to extract the data as an Excel file - a perfect feature for company car owners.
- Vehicle information. Basic car data such as model, registration number and VIN number are stored and can be displayed.
- Theft notification. If the car alarm is triggered, the driver is alerted via the mobile app.

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.

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

When locked by remote control, the doors are automatically deadlocked, You can also take advantage of Volvo's "Global Opening and Closing", allowing the user to open or close of the windows and sunroof (if fitted) via the remote.

Keywords:

V40, Press Releases, 2013

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.

media.volvocars.com >

volvocars.com >

Copyright © 2025 Volvo Car Corporation (or its affiliates or licensors).