VOLVO

Press Release

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VOLVO V40 CROSS COUNTRY

- Rugged look for the V40
- Five-seat, five-door hatchback with increased ride height
- Standard fitment of the world's first Pedestrian Airbag

Overview

The V40 Cross Country is designed for those who want a sense of adventure every day. An expressive and rugged evolution of the V40, giving increased ride height and practical versatility. It features a number of options carried over from the V40, coupled with a few unique features.

Special attention has been made by the Volvo chassis engineering team to ensure the dynamic drive of the V40 is not lost with the increased ride height of the Cross Country. It has been designed to offer the optimum handling, steering feel, agility and ride comfort.

Safety is, and will always be a top priority when it comes to car design and features. The V40 Cross Country is fitted as standard with Volvo's low-speed collision avoidance system, City Safety, and the world's first pedestrian airbag. These, amongst the many other safety features fitted, ensures Volvo's reputation for safety leadership continues. These features have helped the V40 receive the highest overall score in Euro NCAP's tests. The fitment of City Safety as standard has also resulted in the car having lower insurance ratings after being tested by Thatcham on behalf of the Association of British Insurers.

The V40 Cross Country is fitted with Sensus, Volvo's infotainment system, designed to give outstanding connectivity, security and personalisation. Fitted as standard with DAB radio and Bluetooth, offering hands-free mobile connectivity, along with music streaming from a compatible device.

The seats fitted to the V40 Cross Country are the same as those fitted to the V40, meaning it offers the same support and comfort, one of Volvo's trademarks. The rear seats offer the same level of comfort with two sculptured seating positions, however there is room for three, all with three-point safety belts.

There are a number of design details fitted to the V40 Cross Country, such as the rimless rear view mirror, further proof of a clean design focus with crisp and uncluttered detailing.

Exterior Design and Features

There is a choice of 13 exterior colours, while the door mirrors are fitted with contrasting high-gloss black door mirror covers and side window surrounds, and the roof rails are silver-coloured

The front bumper has been re-designed to incorporate lower black bumper inserts, which also houses the vertical day-running lights and is fitted with a front skid plate. The front bumper is also fitted with a unique larger honeycomb grille. The rear bumper has a lower black insert, which is fitted with a silver-coloured plastic skid plate with ‘Cross Country' moulded into it. The side sills have also received the Cross Country treatment and are made of the same black moulding as fitted to the front and rear bumper. The rear bumper houses the twin visible chromed tailpipes.

The V40 Cross Country can be fitted with 16”, 17” 18” and 19” alloy wheels, all unique to the Cross Country.

Volvo's classic V-shaped bonnet has bold edging with wide shoulders that stretch from just behind the headlamps. At the end of the rear door it sweeps into an integrated "hook", a design legacy from the P1800 coupé.

The roof silhouette is 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 hexagonal shape of the tailgate is

now something of a Volvo hallmark, aligning the V40 design with the look of the V60 sports-wagon.

The V40 Cross Country also has some nice design touches to finish off the look, such as body coloured washer jet nozzles and is the first Volvo that uses hemmed wheel flanges, which allows the use of bigger wheel and tyre combinations.

Smart and practical, the fuel-filler pipe is cap-less and self-closing to make fuel-filling easier.

As well as LEDs being used in the DRLs (optional), they are also used in the door mirror turn indicators, rear position lights, high position rear brake light and in the rear number plate illumination.

A fixed panoramic glass roof can be specified, 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.

Interior Design and Features

Volvo's "Designed Around You" philosophy can clearly be seen in the design and functionality of the interior cabin of the Volvo V40 Cross Country. It is comfortable, simple in design and visually pleasing. It has been designed to be the most intuitive driver interface ever in a Volvo. The premise is to find everything instinctively and 'be-at-hand' instantly.

There are a number of unique interior features for V40 Cross Country owners to choose from. The V40 Cross Country Lux comes with leather-faced upholstery with coarse visible seams and can be specified in Charcoal or a dual-tone combination of Charcoal and Blonde.

The TFT (thin film transistor) instrument display, first seen in the V40, offers excellent legibility in all light conditions, can prioritise information in emergency situations and also allows the display to be personalised. The three settings in the V40 Cross Country are Eco, Elegance and Performance. The instrument display also includes navigation instructions, when satellite navigation is fitted.

The floating centre stack is the centrepiece of the V40 Cross Country cockpit. It was inspired by Swedish furniture and the depth of the stack gives the effect that it "floats". It's larger at the top and tapers down to help increase knee room for the driver and front passenger. In the Cross Country, it is available in both Aluminium and Copper Dawn. It is finished off with a chrome frame to enhance the décor.

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.

The Cross Country comes as standard with High Performance Sound, using a CD player and RDS radio, four 45W amplifiers, USB/iPod input and eight speakers.

The top-of-the-range Sensus Connect with Premium Sound by Harmon Kardon audio system is one of the finest car entertainment systems in the world. It allows access to a web browser and a selection of web apps, connected service booking, voice activated control, DVD player, hard disc drive for music storage, Dolby Pro-Logic II Surround Sound, Dirac Live Sound Stage, 5 x 130W amplifiers and 10 speakers.

Volvo is famed for its seating comfort and the V40 is no different. 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 glovebox has space for two soft-drinks cans or bottles and is refrigerated with cold air from the Electronic Climate Control system.

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, such as the footwells. 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 also be dimmed independently.

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.

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.

Driving Dynamics

The V40 Cross Country is fitted with the same Dynamic chassis as fitted to the V40, with a number of changes due to the increase in ride height. The ride height has been made possible by the front wheel

spindles, made of aluminium, being 20mm longer, and having modified subframe bushings. To increase the ride height for the rear, the link arms and track rods have been modified.

A huge effort has gone into making the Volvo V40 Cross Country as good to drive as the V40, creating a balance of ride, handling, steering and braking, as well as the driver assistance functions. To ensure the car drives as well as the V40, a number of parts had to be changed: - shock absorbers, springs, ant-roll bars, rear sub frame, along with ESC and steering gear tuning.

The Electrical Power Assist Steering (EPAS) system uses electric power on a rack and pinion. 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.

If fitted with the optional adjustable steering, it allows the driver to choose between three levels of power assistance with varying levels of steering support.

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.

The dampers, affecting ride, handling and steering, was tuned mostly in the UK, on the country's legendary B-roads. The V40 Project Team tested every possible area of damping and because of the roughness, camber changes, undulations and the variety of corners, 90 per cent of the damper tuning in the UK.

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.

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.

The Electronic Stability Control (ESC) system on the V40 Cross Country 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.

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

A dynamic and safe car obviously needs excellent brakes. The V40 Cross Country 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).

Safety

"Cars are driven by people, therefore the guiding principle behind everything at Volvo is, and must remain, safety." declared co-founders Assar Gabrielsson and Gustaf Larson. This has been the guiding principle behind everything designed and built at Volvo Cars since the first car was built back in 1927.

Volvo has been a safety pioneer ever since the company was founded with inventions such as the three-point seat belt, the safety cage, rear seat belts and side impact airbags. Continuing Volvo’s safety leadership, the V40 is fitted as standard with City Safety and the world's first Pedestrian Airbag. Safety features, most fitted as standard, all help the Volvo V40 achieve the highest score ever recorded in a Euro NCAP test, helping toward Volvo's 2020 vision that no-one should be seriously injured or killed in a new Volvo.

World's First Pedestrian Airbag – 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-pillars.

The raised bonnet, made from soft metal, helps to absorb the pedestrian impact, while the airbag helps to cushion the pedestrian from potentially dangerous hard points on the car, the windscreen and A-pillars.

It works between 12 and 31 mph due to 90 per cent of pedestrian accidents happening below 41mph.

City Safety – 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 system works up to speeds of 31mph.

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 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.

Pedestrian and Cyclist Detection with Full Auto Brake – 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 and cyclist can be detected much sooner. The camera allows the system to spot patterns of pedestrian and cyclists, allowing the system to better monitor the potential course of action.

Collision Warning – 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 and Cyclist 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.

Lane Keeping Aid – the Lane Keeping Aid in the V40 helps the driver stay in the intended lane. This feature uses the digital camera behind the rear-view mirror to monitor the car’s progress and 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 40mph and 125mph.

Blind Spot Information System (BLIS) – the V40 offers enhanced Blind Spot Information System (BLIS), which is radar-based (located behind the corners of the rear bumper), to help the driver avoid potentially dangerous lane-changing manoeuvres. The technology can monitor and alert the driver to rapidly approaching vehicles up to 70 m (166 feet) behind the car. The system is active and informs the driver about vehicles in the blind spots on both sides of the car.

Cross Traffic Alert – uses the same radar sensors as BLIS, 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.

Adaptive Cruise Control – 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 by controlling the accelerator and braking to keep to a pre-selected speed and distance set by the driver.

Active High Beam and Active Bi-xenon Headlights – helps the driver stay on high beam, if they 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.

As part of this, the headlights 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 as the steering is taken care of by the car, the driver only has to control the speed. The parking manoeuvre is based on front, rear and side-facing ultrasonic sensors.

Security

Volvo On Call (VOC) – system uses advanced telematics 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. Volvo On Call also offers vehicle tracking in case of theft.

VOC Mobile App – the owner of a V40 Cross Country can use a mobile application to stay in touch with the 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 is available on iPhone, Android and Windows smart phones. It includes a number of features:

- Enhanced driving journal. Detailed data of each trip during the last 40 days can be downloaded and stored. There is also a possibility to extract the data as an Excel file. Now allows you to see the route the car took on a map (incl. Google Street View) and gives speed/fuel consumption/battery consumption at specific time intervals.
- Send destination to the car. Using the map function within the app, select a location (within 50km) and send the destination to the car. This will then show-up in the car's RTI system.
- Outside temperature. Shows the temperature using web-based weather information at the parked location of the car.
- Honk and Flash. Allows the user to activate the horn or flash the lights independently to allow easy location of the car in busy areas.
- Car in motion. Shows if the car is in use.
- 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.
- 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 bulbs, brake fluid level, coolant level, engine oil level and engine oil pressure.
- 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.

Personal Car Communicator – although very similar to the look of the standard remote fob, 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:

- 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.

Locks, 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. You can also take advantage of Volvo's "Global Opening and Closing", allowing the user to open or close of the windows via the remote.

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