Volvo V60 Plug-In Hybrid – Model Year 2014

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The world's first diesel plug-in hybrid is Volvo Car Group's most technically advanced model ever - an electric car, hybrid car and high-performance car all rolled into one. Following the successful 2012 introduction in its high-specification 'Pure Limited' guise, the ingenious Volvo V60 Plug-in Hybrid is now available with a full range of colours and specifications, including most of the design and technology upgrades of the standard V60, while retaining its unique and class-leading 48 g/km emissions.

DESIGN

Accentuated road presence
The design team has increased the road presence of the V60 Plug-in Hybrid by emphasising its horizontal lines, which visually connects the car directly to the road. The silhouette is a visual reminder that this is no ordinary estate - it's a wagon with a coupé-like appearance.

The tailgate on the world's first diesel plug-in hybrid still displays the D6 AWD badge, hinting at the high levels of performance under its skin.

Redesigned interior
Scandinavian design is exemplified by beautiful, simple shapes and surfaces with any unnecessary clutter removed. This is evident in the new interior and exterior. Inside, the attention to detail, the authentic materials - such as wood and leather - and the easy-to-use controls contribute to the in-command driving experience. There are upgrades such as new upholstery colours, new wood inlays, a new headliner, and light controls.

Heated steering wheel
To give drivers in cold climate extra comfort, three-spoke steering wheels can now be specified with electric heating.

New, comfortable sport seat
Supportive yet comfortable seats that ensure a fresh and relaxed arrival after the longest of journeys have been one of Volvo strengths for decades. The buyer of the V60 Plug-in Hybrid can now specify a new sport seat that retains this traditional comfort and makes a perfect addition to the in-command feel of a true driver's car. It has great hugging side support all the way from the thighs to the shoulders, so the seat keeps the driver firmly in position when cornering fast.

Emphasised attention to detail
There are several other examples of the attention to detail. The previously visible washer nozzles have been relocated out of sight under the bonnet.

The radar cover has been painted gloss black, which practically makes it disappear in the grille. The chrome frame around the grille has been removed and the new, bigger ironmark badge enhances the new cars’ self-confident look.

CHASSIS & POWER TRAIN

Ingenious power blend
The rear axle is powered by an electric motor producing 68 hp and 200 Nm. The electric motor is supplied with power from an 11.2 kWh lithium-ion battery pack installed under the floor of the load compartment.
The driver selects the required driving mode via three buttons that give the car three entirely different temperaments: Pure, Hybrid or Power.

- In Pure mode, the car is powered solely by its electric motor as much as possible. The range is up to 50 kilometres.
- Hybrid is the standard setting whenever the car is started. The diesel engine and electric motor cooperate to achieve CO2 emissions (NEDC, mixed driving cycle for certification) of 48 g/km (1.8 l/100km).
- In Power mode, the technology is optimised to give the car the maximum possible power. The diesel engine and electric motor combine to deliver a total power output of 215+68 hp and maximum torque of over 600 Nm. The car accelerates from 0 to 100 km/h in 6.1 seconds.

Save battery power for later
The driver can choose to save battery power in order to drive on pure electricity later on, for instance in an urban green zone or in the heart of a city.

When Save is activated, the on-board system ensures that there is always sufficient charge for driving later in Pure mode. If necessary, the high-tension generator will charge the battery pack so there is sufficient capacity for driving in Pure mode.

Charge at home - cooling or heating in advance
The V60 Plug-in Hybrid can be recharged from a regular power outlet (230V/6A, 10A or 16A fuse) at home or in a parking lot. Recharging time varies with amperage. A full charge with 10A takes 4.5 hours. This is cut to 3.5 hours with 16A, while a 6A charge takes 7.5 hours.

It is also possible while recharging the car to heat or cool the passenger compartment to provide a more comfortable start to your journey. This also means that more battery power is available for actually propelling the car.

The pre-conditioning function can also cool the batteries if necessary. Cooling prior to driving is very important in order to maximise battery charge and thus also range.

The V60 Plug-in Hybrid has two heating systems. In electric mode the car uses a PTC (Positive Temperature Coefficient) air heater. The car also has a diesel-powered heater.

Better pulling power with four-wheel drive (AWD)
Pressing the AWD button activates the electrical four-wheel drive. Instead of the mechanical power transfer of conventional four-wheel drive, the central control unit distributes power between the diesel-driven front wheels and the electrically driven rear axle. The electric four-wheel drive system has been designed as a traction system to provide better grip when starting and when driving on slippery roads, for instance in snow or mud.

When four-wheel drive is activated, the diesel engine operates continuously and the generator ensures that the charge level in the battery pack is sufficient to supply the rear axle with the necessary power.

Regeneration of braking energy
A two-stage braking system is yet another smart feature of the Volvo Plug-in Hybrid. When the driver presses the brake pedal, the system starts braking the rear axle's electric motor. The mechanical brakes are activated only when the situation requires more braking power than the rear axle can provide. The braking energy can be used to recharge the battery.

SENSUS
All-new infotainment system – Sensus Connect
The Digital Display theme colours are also echoed in the all-new connected infotainment system, which is introduced in the S60, V60 and XC60 during the second half of 2013. It features a refreshed HMI with a number of innovative functions, such as:

- Cloud-based services integrated into the car, enabling future functionality updates.
- Improved navigation with 3D maps, local search, and send-to-car remote destination setting.
- New 3G telematics option (Volvo On Call), offering a WiFi hotspot for Internet connectivity.
- TuneIn Internet radio (with 80,000 channels), and music streaming through Bluetooth.
- Voice control of most infotainment and navigation functions.
Adaptive Digital Display
The Adaptive Digital Display, which debuted in the all-new V40, uses an active TFT (Thin Film Transistor) crystal display to bring the driver personalised information. There are three themes to choose from: Elegance, Eco and Performance.

The default mode Elegance has a classic look and layout. The Eco mode has a green colour theme and is designed to encourage and reward a fuel-efficient driving style. Performance features red illumination, and a rev scale replaces the speedometer displayed in the Elegance and Eco versions.

The V60 Plug-in Hybrid also comes with an additional Hybrid Theme with blue illumination. It includes hybrid and battery information that supports energy-efficient use of the ingenious driveline.

SAFETY AND SUPPORT
IntelliSafe, Volvo's blanket name for all active safety systems, is an important part of the driver-centric approach in the V60 Plug-in Hybrid.

Permanent high beam with groundbreaking technology
The new Active High Beam Control eliminates the need to switch between low and high beam. Instead, Active High Beam Control makes it possible keep the headlights on high beam continuously.

When another car approaches from the opposite direction, the system helps to prevent dazzling of the oncoming driver by shading out only as much of the beam as necessary. This is done by an ingenious projector module mechanism integrated into the headlamp. The same benefit applies to drivers in preceding cars.

New Pedestrian and Cyclist Detection technology
New advanced software, including more rapid vision processing, has now made it possible to extend Volvo Cars’ present detection and auto brake technology to cover certain cyclist situations as well.

The new Pedestrian and Cyclist Detection with full auto brake is equipped with an advanced sensor system that scans the area ahead. If a cyclist heading in the same direction as the car suddenly swerves out in front of the car as it approaches from behind and collision is imminent, there is an instant warning and full braking power is applied.

The technology also detects if a pedestrian steps out into the road in front of the car. If the driver does not respond in time, the car can warn and automatically activate the brakes.

City Safety - active up to 50 km/h
The V60 Plug-in Hybrid features an upgraded City Safety system. This system is active at speeds up to 50 km/h. The car automatically brakes if the driver fails to react in time when the vehicle in front slows down or stops - or if the car is approaching a stationary vehicle too fast.

Cornering Light for better visibility
Another innovative option for driving in the dark is the low-speed Cornering Light feature. As an extension of the current Active Bending Light system, it lights up the area the driver is steering towards for safer manoeuvring.

Enhanced Blind Spot Information System - for better visibility
The V60 Plug-in Hybrid offers the enhanced Blind Sport Information System (BLIS), which is radar-based. The technology can now also monitor and alert the driver to rapidly approaching vehicles up to 70 m behind the car. Of course it still informs the driver about vehicles in the blind spots on both sides.

Cross Traffic Alert - covering your back
Cross Traffic Alert uses the radar sensors at the rear end of the car to alert the driver to crossing traffic from the sides when reversing out of a parking space. This is especially helpful in tight and crowded areas where the side view might be limited due to infrastructure, vegetation or other parked cars.
Volvo On Call combined with Bluetooth
The Volvo On Call system can be combined with the Bluetooth mobile phone service. The Bluetooth connection allows hands-free phone conversations as well as music streaming from a preferred Bluetooth enabled portable music player. Volvo is actually the only brand to offer Bluetooth music streaming throughout the entire vehicle range.

Keep in touch via mobile application
A mobile application that makes sure that the driver can stay in touch with the parked car via an iPhone or Android smart phone. The mobile application is an extension of Volvo On Call.

Owners of all new models with Volvo On Call can download the application that opens up a range of connectivity possibilities. The mobile app is free and downloaded via the iPhone and Android application stores. The app is designed to offer the owner an intuitive, easy-to-use relationship with the car from a distance.

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Descriptions and facts in this press material relate to Volvo Cars’ international car range. Described features might be optional. Vehicle specifications may vary from one country to another and may be altered without prior notification.

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