

# O'STEEN VOLVO

## 2016 VOLVO XC90 ORDER GUIDE





**MOMENTUM\***



**INSCRIPTION**



**R-DESIGN**

*Production week 20 /  
Showroom arrival summer 2015*



**MOMENTUM**

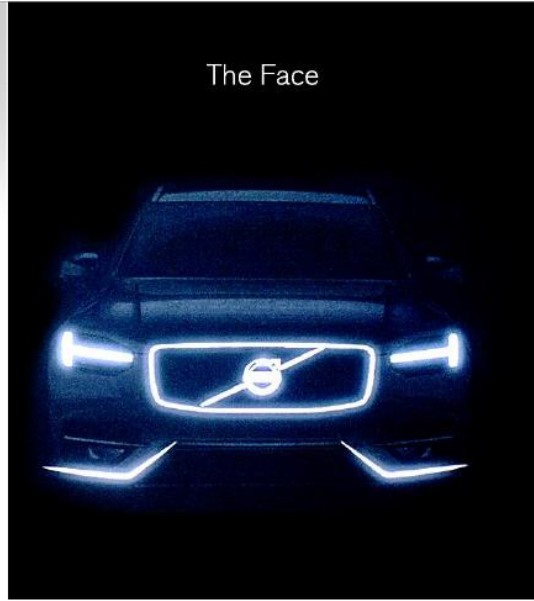


**INSCRIPTION**

*Start of Production week 20 /  
Showroom arrival summer 2015*



**R-DESIGN**



### Grille

The design of the grille evokes a design language from a more classic era in Volvo's history, yet re-dimensioned and interpreted for a modern luxury SUV. The design of the grille enhances the strong identity of the different trim levels. Especially the executions of R-Design and Inscription really make the car stand out.

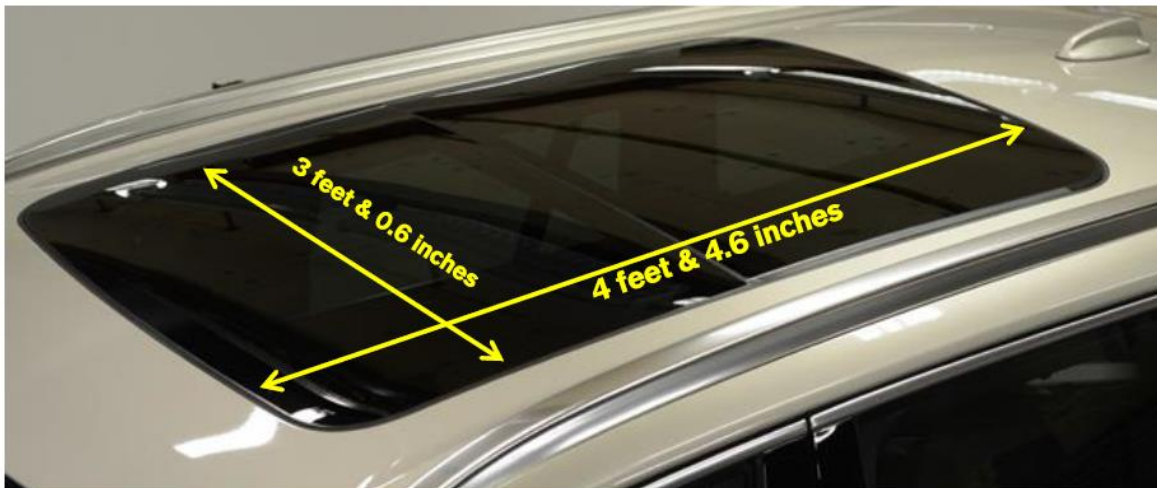
From top to bottom, the different grilles shown belong to the following trim levels:

- ✓ Momentum: high gloss black grille with glossy chrome frame.
- ✓ Inscription: matte silver colored grille with strong waterfall theme, glossy chrome frame
- R-Design: horizontal mesh in high gloss black paint, silk metal frame



## Panoramic Moonroof

















The standard, panoramic sunroof, measuring 36.6" (930mm) wide and 52.6" (1335mm) long, it offers the **widest glass roof ever** available at Volvo (50% larger compared to XC60), and **stretches further back** than in other Volvos in order to make sure the rear passengers can enjoy a light and airy feeling. New construction and sealing help to keep the weight to the minimum and optimize the visual appearance since the large glass area is only interrupted by a minimal transverse division.



## Capless fuel filling

When the fuel lid is opened by a gentle push, there is **no cap** that needs to be removed. The fuel pipe has an integrated seal that opens when the filling nozzle is inserted, and closes when it is removed. This feature perfectly fits the Designed Around You strategy as it delights customers with unexpected convenience and less risk of getting dirty hands.





# EXTERIOR COLORS

MOMENTUM & INSCRIPTION							
	614 Ice White Solid	467 Magic Blue Metallic	492 Savile Grey Metallic	700 Twilight Bronze Metallic	707 Chrystal White Metallic		
							
	711 Bright Silver Metallic	714 Osmium Grey Metallic	717 Onyx Black Metallic	719 Luminous Sand Metallic	487 Ember Black Metallic		
	R-DESIGN						
		707 Chrystal White Metallic	612 Passion Red Solid	720 Bursting Blue Metallic	477 Electric Silver Metallic	714 Osmium Grey Metallic	717 Onyx Black Metallic



# WHEELS

## STANDARD WHEELS

Model	T6 MOMENTUM	T8 MOMENTUM	INSCRIPTION	R-DESIGN
				
Wheel Name	19" 10-Spoke Turbine Silver Bright	19" 6-Spoke Turbine Silver Bright	20" 10-Spoke Tinted Silver Diamond Cut	20" 5-Spoke Tech Matte Grey Diamond Cut
Option code	172	177	173	-
Tires	235/60R19	235/60	275/45	275/45
Tire Brand	Continental	Michelin	Pirelli	Pirelli
Wheel Dimension Width/Diameter/Offset	8x19x42.5	8x19x42.5	9x20x38.5	9x20x38.5
Color	Silver Elegance, 965	Silver Elegance, 965	Light Grey Glossy, 960	Technical Matte Black, 955

## OPTIONAL WHEELS

Model	T6 MOMENTUM	T8 MOMENTUM	INSCRIPTION	R-DESIGN
				
Wheel Name	20" 5-Double Spoke, Matte Tech Black Diamond Cut	20" 10-Spoke, Tinted Silver Diamond Cut	21" 8-Spoke, Silver Bright Diamond Cut	22" 5-Double Spoke, Matte Black Diamond Cut
Option code	234	173	174	175
Tires	275/45 tyres	275/45 tyres	275/40 tyres	275/35 tyres
Tire Brand	Pirelli	Pirelli	Pirelli	Pirelli
Wheel Dimension Width/Diameter/Offset	9x20x38.5	9x20x38.5	9x21x38.5	9x22x38.5
Color	Technical Matte Black, 955	Light Grey Glossy, 960	Silver Elegance, 965	Matte Black Stone, 968

# INTERIOR





**Charcoal leather in Charcoal interior (RA00)**



**Amber Leather in Charcoal interior (RA20)**



**Blond Leather in Blond interior (WA00)**





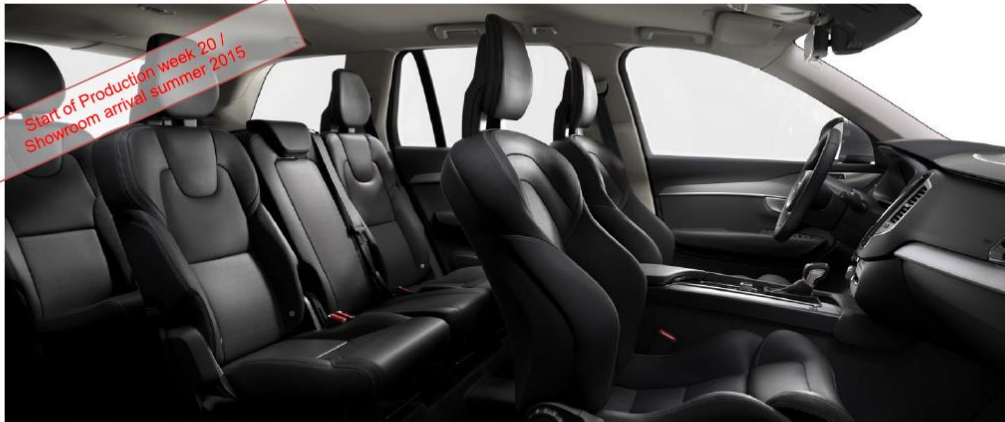
**Charcoal Perforated Nappa Leather in Charcoal interior (RC00)**



**Amber Perforated Nappa Leather in Charcoal interior (RC20)**



**Blond Perforated Nappa Leather in Blond interior (WC00)**



**Charcoal Nappa Leather in Charcoal interior Contour Seat (RB01) – NOT AVAILABLE UNTIL PRODUCTION WEEK 20**



**Amber Nappa Leather in Charcoal interior Contour Seat (RB21) – NOT AVAILABLE UNTIL PRODUCTION WEEK 20**



**Blond Nappa Leather in Blond/Charcoal interior Contour Seat (UB01) – NOT AVAILABLE UNTIL PRODUCTION WEEK 20**



**XC90 R-Design, Charcoal Nubuck & Nappa Leather in Charcoal interior (RB0R)**  
-- NOT AVAILABLE UNTIL PRODUCTION WEEK 20



### Digital Instrument Displays

The instrument cluster / display in front of the driver is digital and permits a freedom to arrange pertinent information in front of the driver. The screen is glossy black when the car is not in use, and when activated it has a dramatic start up sequence that reinforces a premium experience.



The 8" digital driver display is standard on T6 AWD Momentum, while the full-graphical, 12.3" digital display is standard on Inscription and R-Design, and available on T6 Momentum.



The 8" digital instrument display can arrange nearly the same information as the larger display, just less graphically, as shown below. Information from the center display (navigation or phone information, for example) can still be displayed in front of the driver.



The 12.3" digital instrument display has two large round gauges and an information area in-between, which can differ in size depending on what center display information is being projected (e.g. when navigation is used, the info section becomes larger and the two round instruments smaller).

### Head-up Display (HUD)

The instrument cluster can be complimented with a **Head-up display**. With this option, text and graphical information about road signs, set speed and navigation are displayed on the lower part of the windscreen.

Information will be experienced as if it were hovering in the air about 6 ft. / 2m in front of the car. Therefore, the driver won't have to change focus from the road ahead, which contributes to safety and convenience



### Remote control and locking

The **remote control** is a new generation key fob; it is a really nice example of smart, Scandinavian design. The wide upper and lower surfaces are clean, and all buttons are located discretely in the side the upper and lower shells can be personalized, via accessory. When ordering an Inscription or R-Design, for instance, the key remotes have **fine Nappa leather covers** in the same color as the upholstery inside the car. A very thoughtful detail! There is no longer a separate button for Approach lighting on the key fob. This function is always automatically activated when you unlock the car, contributing to a welcoming feel.



## Keyless Drive

The all-new Volvo XC90 is equipped from the factory with Keyless Drive. As a result:

- There is no physical slot to insert the key
- Start the engine by simply turning the Start knob on the tunnel console while depressing the brake at the same time.



## Keyless Entry and Hands-free Power Tailgate

Standard on all models, these great features are designed to make life easier. Approach the XC90 and it readies the vehicle to be unlocked. Grab the handle and go. No need to fumble for the remote.

- The dedicated door handles for Keyless Entry (with "invisible" button) also include puddle lights.
- Just wave a foot under the left side of the bumper and the tailgate will open automatically.



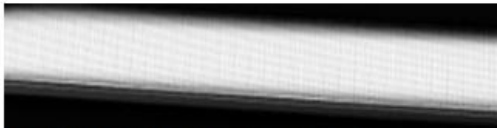
Moreover, with Keyless entry, you also get a very nice **waterproof, complementary "KEY TAG" Keyless Mini Remote Control**". The 'Key Tag' can be slipped discreetly into a pocket, or even worn around the neck. Ideal for when the regular remote is too big. And it's waterproof, so owners don't have to worry about swimming, surfing, or engaging in any other outdoor activity. This is perfect if you want to take it with you when surfing or in other outdoor activities where the regular remote is too big.

## Inlays

Interior veneers cover a **generous surface** area on dashboard, center console, tunnel console (incl roller blind over the cup holder) and on the doors. A great selection inlays are available.



Cross Brushed aluminum, Momentum



Metal Mesh Aluminum, R-Design



Linear Walnut Wood, Inscription



Dark Flame Birch inlays,  
Option - Momentum



Carbon Fiber inlays  
Option - R-Design

**Private Locking** of the glove box compartment and the storage area below the load floor is controlled via the center display by entering a 4-digit code making it convenient to secure your valuables.

### Steering wheel

The steering wheel in the all-new Volvo XC90 is designed to harmonize with the overall design and image of the car. There are two color families which match with the respective interior: **Charcoal** leather wheel is matched with all Charcoal interiors **Charcoal and Blond** leather (Charcoal outer rim, Blond interior) is matched to the Blond interiors  
Silk metal accent and illuminated buttons



MOMENTUM INSCRIPTION	HEATED	WOOD	R-DESIGN
<ul style="list-style-type: none"> <li>- Leather material</li> <li>- Silk metal accents</li> <li>- Charcoal</li> <li>- Charcoal &amp; Blond with radial seam</li> </ul>	<ul style="list-style-type: none"> <li>- Leather material</li> <li>- Silk metal accents</li> <li>- Radial Seam</li> <li>- Charcoal</li> <li>- Charcoal &amp; Blond</li> </ul>	<ul style="list-style-type: none"> <li>- Flame Birch wood outer rim &amp; leather</li> <li>- Silk metal accents</li> <li>- Charcoal</li> <li>- Charcoal &amp; Blond</li> <li>- Cannot be heated</li> </ul>	<ul style="list-style-type: none"> <li>- Smooth &amp; perforated Leather rim</li> <li>- Silk metal accent</li> <li>- Deco &amp; R-D emblem</li> <li>- Charcoal</li> <li>- Paddle controls</li> </ul>

Not available until 2015 week 20 production / Summer 2015

- Dark Flame Birch wood and leather steering option cannot be combined with the Climate Package

### Upholsteries

4 different levels are available.

- **Leather** upholstery (xAx0): Comfort seats, standard on Momentum
- **Nappa leather** upholstery: Contour seats (xBx1), option on Momentum (w19 production)
- **Perforated Nappa leather** upholstery with **ventilation** (xCx0): Comfort seats, Inscription
- **Nubuck / Nappa leather** upholstery (RB0R): Contour seats, R-Design

## 2<sup>nd</sup> row of seats

The second seat-row seats are designed for maximum comfort and flexibility.

- Each seat is contoured on the seatback and seat cushion for add support and comfort. Note many competitive second row seats are flat and not as supportive.
- Consists of three individual seats with backrest recline adjustments and the seats can slide individually to provide either more legroom or more luggage space depending on whether the third row is in use
- Seat backs are configured in a 40 / 20 / 40 split configuration. This configuration can accommodate long items via folding the center seat while retaining the two full sized outboard seating positions. This is a clear advantage over competitors with a 60/40 split seat back.
- Legroom improves dramatically versus previous generation by 2.4" due to the new, slimmer design of the front seats. Moreover, the XC90 has more legroom than the MDX or the X5.



In the center position, an integrated, child booster cushion, similar to the one on today's XC90 can be optioned. Since 2<sup>nd</sup> row seats slide, the child can be conveniently positioned closer to the front seats for better access to driver and front passenger.

- For children 33 to 79 lbs. (15–36 kg)
- The three seats of the second row can be folded individually for maximum versatility, and contributes to XC90's 32 possible seating configurations.
- They always have the same type of seat foam, regardless of upholstery type



all



## Theatre Seating

This is an engineering detail that rewards rear seat occupants with enhanced comfort and visibility (pictured below).

- The second row of seats is positioned higher than the first, and the third row is again higher than the second.
- In combination with the larger windows, all passengers have a good view forward and contribute to a spacious feeling.

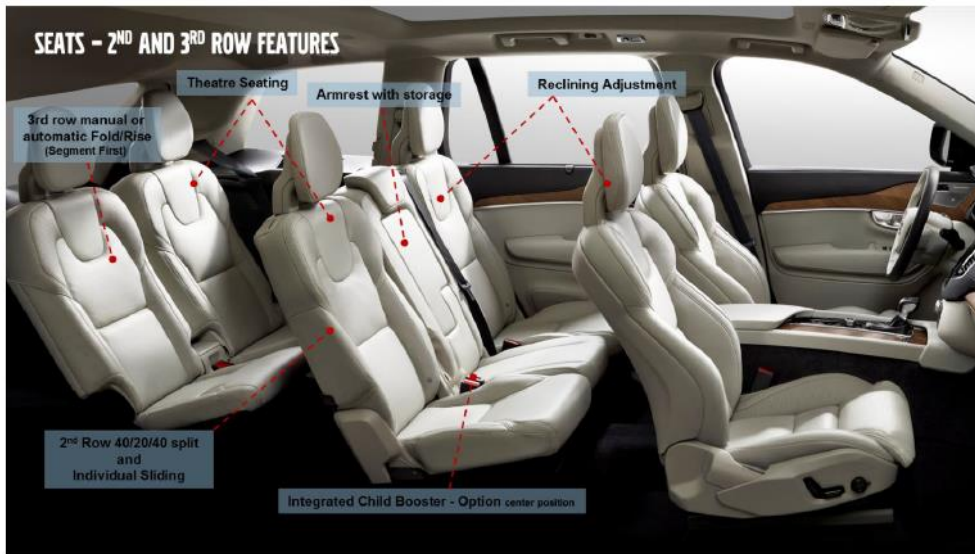
#### Other features

- A center armrest with two cup holders covered by a lid is integrated in the backrest of the middle seat.
- Heat rear seats (outboard seating) can be added with optional Climate Package.

#### Four-zone Climate System

This standard system offers additional comfort and control to the 2<sup>nd</sup> row occupants.

- An elegant touch screen panel on the end of the tunnel console facing the 2<sup>nd</sup> row allows the two outer second row seat passengers to adjust temperature and fan speed individually, for their greatest comfort.
- Four-zone ECC also allows to cool the glove box compartment to keep drinks cool.
- When the car also has optional heated rear seats, these are controlled as well via the rear touch screen (as opposed to via buttons on cars without 4-zone ECC).



#### Clean Zone

Clean Zone is an umbrella name for technologies that offer occupants a better interior environment, like incoming air, interior emissions and odors, and requirements regarding interior surfaces. Cars with AQS have a Clean Zone logo on the two central adjustable air vents.

- The interior Air Quality System (AQS), which is standard on all cars.

# 3<sup>RD</sup> ROW



comfort for these occupants – and, we can say we are confident we can do this better than any of our 7 passenger competitors.

- Aside from the XC90, only the Acura MDX, Audi Q7, and Infiniti QX60 have it standard. It is an option on BMW X5, and not available on Lexus RX, and Mercedes Benz ML.
- The two individual seats in the third row are generously proportioned for **passengers up to 5' 7" / 170cm**.
- The seat backs are full sized – same as the 2<sup>nd</sup> row.
- **Class leading legroom at 31.9"**
  - 3.8" better than the Acura MDX
  - 1.1" better than the Infiniti QX60
  - 2.7" better than the Audi Q7
  - Note: BMW X5 does not publish 3<sup>rd</sup> row measurements, but we are confident we exceed their legroom.
- A **separate air-conditioning** unit (see below for details) is included to ensure the area in the rear of the XC90 is cooled just as quickly as the front occupants – and they feature their own adjustable air vents.
- Each seat includes separate armrests, storage and cupholders.
- Unlike on the current generation of XC90, the third row cushions don't slide under the load floor, but they stay in place when the seats are folded and offer a completely **flat load floor** with folded seats.

### Easy ingress and egress

Ingress / egress to the third row is secured in the same way as on the first XC90:

- When you lift the handle on top of the outer second row backrest and the backrest is folded forward to its halfway point, the seat can be pushed forward for easy entrance.
- You can enter and exit from both driver and passenger sides
- The third row seats can be folded manually very easily with a button located close to the headrests
  - head restraints automatically fold in once the backrest is released

### Power 3<sup>rd</sup> Row – Fold and Rise (Segment exclusive)

Power operated backrest release is available for the third row seats, and no other vehicle in the segment has it.

- By pushing the button on top of the backrest or a button on the central touch screen the backrest released electrically and folds by means of spring-loading. The head restraints fold automatically as the backrest folds.
- The backrests are raised electrically by pushing either of the two buttons. The head restraints will remain folded when the backrests have been raised.



is

### 3<sup>rd</sup> Row Air Conditioning

The Four-zone ECC is complimented with a separate air-conditioning unit for the 3<sup>rd</sup> row. The challenge for cooling SUVs is that they have a larger interior volume than smaller cars. In order to overcome this, the XC90 features its own separate air conditioner for the 3<sup>rd</sup> row which provides excellent cooling ability even in a large space like the XC90 interior.

- The a/c unit has no separate controls and is activated if at least one of the seatbelts in the third row is used, or via the touch screen if you for instance want to offer extra comfort to your pet. Adjustable vents in the C-pillars supply cooled air from the climate

system, or (in cold conditions) additional PTC elements can supply warmed air quickly after a cold start.

### Cargo area

The all-new Volvo XC90 offers generous cargo space and clever load features.

- **Max cargo space** is 85.7 cu. ft. – the largest in the segment!
- The **one-piece tailgate** offers good weather protection and allows for easy reach inside the cargo area.
- Customers will benefit from a **power-operated tailgate** that has a 'soft close' feature.
  - It can be opened or closed with a button on the remote control, a soft button on the tailgate for closing, or a button on the left side of the dashboard.
- The cargo area itself has a regular shape, and wheel arch suspension has been designed not to intrude on the load compartment or reduce the width between the wheel arches. That way, it is easy to load even bulky objects.
- Several practical solutions, like standard shopping bag hooks (2) or four load securing eyelets and an optional grocery bag holder with (new!) adjustable elastic band, contribute to the ease of use of the cargo area.



- A **hidden storage compartment** under the load floor (with a molded cargo divider storage tray) allows for easy transport of small or valuable objects. As it is impossible to open the floor hatch when the tailgate is closed, this area is safe when it is included in Private Locking or when someone breaks into the car.



- The area behind the 3<sup>rd</sup> row offers generous cargo capacity. At 15.8 cu.ft, this area is the largest in the segment, outperforming the Acura MDX and Audi Q7, while having the same area as the Infiniti QX60.

- A **12V outlet**, which comes together with an elastic holding strap fitted above the storage recess to the right side of the load compartment (picture above, right), is also available as part of the Convenience Package.



- To hide luggage from people's view, the XC90 is equipped with a **semi-automatic luggage cover** behind the second seat row. If the luggage cover handle is depressed, the load cover automatically retracts halfway, which makes it easy to access the load area when you have your hands full of luggage.

An overview of the All-new Volvo XC90's load capacity compared to its main competitors as well as to its predecessor can be found below in this document.



### Premium Sound by Bowers & Wilkins

The Premium Sound system of the all-new Volvo XC90 is one of the best audio systems in the market. It has been developed together with the renowned high-end audio manufacturer Bowers & Wilkins, a name which carries great authority and respect in audio circles. They are, in fact, the preferred audio equipment of the famed Abbey Road Studios.



- Premium Sound by Bowers & Wilkins delivers an astonishing 1400 Watts to 19 speakers.
  - The tweeter panels in the door panels and on the dashboard are in **stainless steel** with **Bowers & Wilkins** logotypes.
  - The front and rear door mid-range speaker panels are also in stainless steel, and the trademark Bowers & Wilkins **yellow speaker cone** can be seen through the mesh (pictured right) – thus contributing to a premium and exclusive impression both from inside and outside the car.
- “Room Transformation” technology, developed with the Swedish software specialist **Dirac Research**, makes it possible to recreate the **acoustics of a specific room** inside the car. Customers have the choice between 3 different ‘room modes’:
  - Studio
  - Individual Stage
  - Gothenburg Concert Hall
- Included is the newly designed and extremely thin **sub-woofer** which is **integrated** into the architecture of the car, by the rear wheel arch.
  - Thanks to an opening in the wheel arch, the subwoofer can pulse more air, which enables **extremely low bass tones** down to 20 Hz, and thus a sound quality similar to that of a movie theatre.



O'STEEN Volvo



### City Safety

City Safety, from the all-new Volvo XC90 onwards, will be used as an umbrella name for all **collision avoidance functionalities**, previously known as City Safety but also as Collision Warning with Full Auto Brake.

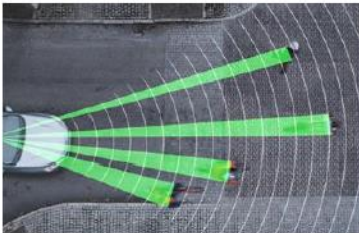
The importance of this ground breaking and revolutionary active safety technology is illustrated clearly that US studies indicate that **50 per cent** of drivers involved in collisions have not tried to avoid the collision

A compact combined radar and camera unit behind the windscreen is designed to detect **vehicles, cyclists and pedestrians**, both day and night.

- If City Safety judges that a collision is imminent, it will warn the driver with a head-up light in the windscreen, an audible warning sound as well as a short, light brake pulse, and at the same time prepares the brake system as well as the safety belts for immediate efficiency. Should the driver not react or react too late, City Safety will brake the car autonomously.

City Safety is active at all speeds over 2.5 mph / 4 km/h and will avoid or mitigate 3 types of collisions with vehicles, cyclists, and pedestrians:

- **Avoiding or mitigating collisions with other vehicles**
  - Up to a relative speed difference of 31 mph / 50 km/h, accidents with other cars can be avoided.
  - At higher speed differences, the collision is mitigated.
  - The driver can take control and brake and/or steer away at any time. If a collision is imminent, the safety belts are prepared for a collision and the brakes are prepared – so if the driver takes action and brakes, they deliver immediate and maximum performance.
- **Avoiding collisions at intersections - World's First!**
  - The XC90 is the first car in the world with technology that features automatic braking if the driver turns in front of an oncoming car. This is a common scenario at busy city crossings as well as on highways, where the speed limits are higher.
  - The all-new Volvo XC90 detects a potential crash and brakes automatically in order to avoid a collision or mitigate the consequences of a crash.
- **Avoiding or mitigating collisions with cyclists**
  - If a cyclist swerves into, or crosses the path of the car, or is stationary in the path of the car, the XC90 warns the driver and will brake automatically if the driver does not act.
  - A collision with a cyclist can be avoided at speeds up to 31 mph / 50 km/h and a speed differential\* between the car and the cyclist of 25 mph / 40 km/h.
  - At higher speed differentials, the collision is mitigated.
- **Avoiding or mitigating collisions with pedestrians**
  - If a pedestrian moves into, or crosses the path of the car, or is stationary in the path of the car, the



Volvo XC90 warns the driver and brakes automatically if the driver does not act.

- A collision with a pedestrian can be avoided at speeds up to 28 mph / 45 km/h. For speeds between 29 – 50 mph / 46 - 80 km/h the collision is mitigated.

- Detection of cyclists and pedestrians at night is a new functionality of City Safety on the XC90.

\* Also called relative speed. For example, if one vehicle is driven at 46 mph / 75 km/h and another at 31 mph / 50 km/h, the speed differential is 15 mph / 25 km/h.

#### Run-off Road Protection – World's First

Accidents during which the vehicle runs off the road are common, and occur due to different causes, such as driver distraction, fatigue or poor weather conditions. For example, half of all traffic fatalities in the United States are road departure accidents, while in Sweden, single-vehicle accidents involve one third of all fatal and severe injury crashes with passenger cars.



Volvo is deeply troubled by these statistics. Even though there are currently no regulatory or rating tests to examine a car's ability to handle run-off road accidents, the company has taken the lead to develop the technology to protect occupants should these situations occur.

Volvo Cars developed Safe Positioning to address these situations.

The Safe Positioning capability means that in a run-off road scenario, the all-new Volvo XC90:

- Detects what is happening and the front safety belts are tightened to keep the occupants in position. The belts are firmly tightened as long as the car is in motion.
- To help prevent spine injuries, energy-absorbing material between the seat and seat frame cushions the vertical forces that can arise when the car encounters a hard landing in the terrain. The solution is capable of reducing the vertical occupant forces by up to one third. This counteracts spine injuries, which are serious and relatively frequent consequences of these situations.

#### Road Sign Information

The camera unit behind the windscreen will recognize a large number of traffic signs (such as speed limits but also prohibition signs) and display them in the lower part of the speedometer or on the head-up display as a convenient reminder for the driver.

Some examples of signs which are recognized (for illustration purposes only. US signs will be displayed)



When the Road Sign Information system detects a no-entry sign and the driver passes it anyway, the no-entry icon will flash.

### 3.6.2. IntelliSafe: Options

**IntelliSafe Surround** is the new name grouping of some existing driver support features:

#### **BLIS with Cross Traffic Alert and Rear Collision Mitigation**

- Active at speeds above 7 mph / 12 km/h, the **Blind Spot Information System** uses a **radar unit inside each corner of the rear bumper** of the car and measures the distance to vehicles coming from behind.
- The driver is warned by a **light in the door mirror glass** about vehicles which are about to pass.
- The light is **constant** if a vehicle is approaching rapidly from behind in the lanes to the left or right of the car (at a distance up to 230 ft. / 70m).
- If the driver ignores the light and turns on the indicator to change lanes, the warning light starts to **flash**.
- System can be de-activated via the center control panel.



#### **Cross Traffic Alert**

This feature makes it considerably easier to reverse out of parking spaces as it detects and warns for vehicles, cyclists, and pedestrians approaching on either side.

- Emits an audible warning as well as displaying a visual warning on the center screen
- Active at a distance of up to 98 ft. / 30m for vehicles. Cyclists and pedestrians at shorter distances.



There are two changes/enhancements versus today's radar-based BLIS on existing Volvos:

- The location and function of the warning light differs
- Addition of **Rear Collision Mitigation**:
  - If a vehicle is approaching from behind and the system calculates that there is a risk for a collision, XC90 will **flashes all indicators at a high rate** in order to try and catch the attention of the driver of the approaching vehicle and make him brake.
  - If the car is at standstill and another vehicle is about to hit XC90 from behind, the system activates a). the pre-tensioners just before collision, and then b). apply **full auto braking** to keep vehicle from being pushed into a vehicle or into an intersection – potentially an even more dangerous situation.

#### **IntelliSafe Assist**

IntelliSafe Assist is the new name grouping the following features, which make use of the camera and radar integrated behind the windscreen:

#### **Adaptive Cruise Control (ACC) with Pilot Assist**

This is a great feature for someone who uses their XC90 on the highways or in a daily commuting situation. ACC helps un-complicating a driver's commute by creating a less stressful environment, particularly in slow, stop-and-go traffic.

- This is Cruise Control with the added function that the speed is adapted automatically to slower vehicles in front of the XC90. The system uses the radar unit in the windscreen, and if the vehicle in front slows down and stops, Adaptive Cruise Control will make the XC90 stop comfortably behind it, and then keep the brakes engaged. If the lead vehicle stops for less than three seconds, the XC90 will automatically start following the car in front as it takes off again.
- The driver can choose between five different time gaps to vehicles in front via buttons on the steering wheel and graphics in the driver display.
- Other functions and controls are the same as for Cruise Control. The driver can anytime choose to turn ACC on or off
- When the car is adapting the speed to a vehicle in front above 43 mph / 70 km/h, and the driver wants to overtake a vehicle, the Adaptive Cruise Control briefly accelerates the car towards the vehicle in front of it if the turn indicator is used.

#### **Pilot Assist function is NEW!**

Adaptive Cruise Control is supplemented by Pilot Assist. This means the car can not only keep the set speed and distance to a vehicle in front, but also supports the driver in keeping the car within the lane as well. It relieves the driver from the need to constantly adapt the speed to the vehicle in front and adjust the steering to keep within the lane in low speed traffic.

- Occurs at 'queue speeds' below 31 mph / 50 km/h.
- This is achieved by means of the camera and radar in the windscreen, which monitor the car's position in relation to visible lane markings and a vehicle in front, as well as light steering adjustments, if the car is coming close to passing a lane marking without the indicator being used.
- Will keep the car's position in its lane by using **light steering torque**, in relation to visible lane markings and a vehicle in front of it. Driver must have the hands on the steering wheel.
- If Pilot Assist is not activated under 50 km/h, Adaptive Cruise Control will still keep the speed and distance to the vehicle in front, but there will be no steering corrections.

#### **Distance Alert**

This system helps reduce the risk for collisions with other vehicles, and offers a less stressful driving environment with the knowledge that the car will warn its driver if it comes too close to a vehicle in front of it.

- Distance Alert monitors the XC90's distance to the car in front at speeds above 16 mph / 30 km/h when Adaptive Cruise Control is not in use.
- Distance Alert can be turned off in the settings menu via center display.
- One of five time gaps to vehicles in front can be set with the same buttons on the steering wheel just like the Adaptive Cruise Control.
- If the driver comes closer to a vehicle in front than the set time gap, an amber warning light is displayed on the windscreen, from head-up LEDs on the dashboard or in the form of a symbol if the car is equipped with the full graphic Head-up Display.

#### **Lane Keeping Aid**

This system actively aids the driver by steering the car back if it is straying towards another lane because the driver has lost concentration or for some other reason is not in control. The system attempts to get the driver to intervene through clear warnings if the car crosses a lane marking.



### 3.7. Chassis, engine and transmission

#### 3.7.1. T6 Drive- E Engine

The focus of the all-new Volvo XC90's powertrains is an uncompromising blend of lightweight design, high horsepower performance, and class leading fuel efficiency unrivaled by any competitor.

At the heart of this strategy is our range of aluminum, four-cylinder engines that actually puts XC90 performance squarely in the lead.

The benefit – an exhilarating driving experience delivered with lower fuel consumption and emissions.



#### T6 AWD

- 316 HP and 295 lb.ft. of torque between 1800rpm and 5500rpm

This second generation Drive-E engine and features:

- Compact 4-cylinder design
- Lightweight, which contributes to better fuel economy, better driving dynamics and more agile cornering.
- Balancer shafts for smooth and vibration free running.
- Direct injection with high pressure, also for the petrol engines
- Power development occurs via supercharger for superb low-rev power delivery and throttle response, and a turbocharger that keeps the engine punching hard at higher revs.
- Volvo optimized our new petrol engines by designing camshafts with ball bearings, creating a special internal surface treatment, general machining refinement and a fully variable oil pump. Even the engine oil has been specially developed for our new engines, with a low viscosity range of 0W-20

#### Supercharging & Turbocharging

- A supercharger adds torque in low and medium engine speeds up to 3500 rpm until the turbo takes over. The supercharger is then disengaged in order to reduce friction and thus fuel consumption and CO2 emissions.
- Turbocharging means that the air volume that goes into the engine's combustion chambers is made smaller (compressed) rather than physically making the engine's combustion chambers bigger to accommodate more air. More air means more oxygen, which means more power. The result is a smaller engine that performs like a bigger one.
- Volvo has very long experience with turbo technology and we put our first turbocharged car engine into series-production already in 1981.

#### 3.7.2. Transmission / driveline

The All-new Volvo XC90 is equipped with a new eight –speed automatic transmission using the latest technology.

- It has 2 overdrive speeds which help save fuel and a lock-up function (bypassing the torque converter to reduce energy-consumption).
- It can be manually operated via the gear lever or via steering wheel paddles on R-Design.



### 3.7.3. Drive Mode settings

The standard Drive Mode settings allow the driver to choose different settings for the engine (even the supercharger in the T6), via an elegant rotary knob in the center console. The driver can personalize their car and always enjoy the driving characteristics which they prefer.



The settings available to choose from are:

- **Comfort mode**
  - The car is raised by 10mm to increase the suspension comfort. This is the default mode every time the engine is started (if not the Off Road mode was chosen before the engine was turned off).
- **Eco mode:**
  - calibrates engine, gearbox and even climate control systems for the lowest possible fuel consumption including eco-coast feature when releasing the accelerator fully above 40 mph / 65km/h
  - On cars equipped with 4-corner air suspension, it will lower the car by 0.8" / 2 cm above 43 mph / 70km/h for lower aerodynamic drag,
- **Dynamic mode:**
  - More sporty driving experience thanks to a quicker response of throttle & gearbox,
  - The gearbox allows for higher speeds/revs before it changes gears
  - On cars equipped with 4-corner air suspension lowering the chassis by 0.8" / 2 cm at speeds above approximately 84 mph / 135 km/h for lower aerodynamic drag while adapting the Four-C active dampers.
- **Off-road mode:**
  - For speeds below 25 mph / 40 km/h. Off-road is disengaged above 25 mph.
  - The accelerator is adjusted to reduce the risk for inadvertently exceeding 25 mph, when the Off-road mode is disconnected
  - The differentials are locked.
  - Hill Descent Control is automatically activated when driving down hills.
  - The steering is set to comfort mode.
  - The engine and gearbox are optimized for traction.
  - The ESC system is set to Traction/Sport
  - The Stop/Start function is deactivated.
  - On cars equipped with 4-corner air suspension, offering an additional 1.6" / 4cm of ground clearance
- **Individual mode:**
  - Stores the driver's personal preferences into the remote control memory and is activated every time the car is unlocked with that particular remote control.

### 4-corner Air Suspension with Active FOUR-C chassis

A very exclusive option, Mercedes Benz ML is the only other competitor in the segment to offer some sort of adaptive air suspension. The suspension offers a superior level of ride comfort, handling and road holding.

The all-new Volvo XC90 can be ordered with an optional air suspension, which replaces the springs. An electronically controlled damping system called Four-C replaces the traditional dampers/shock absorbers, and has been adapted to work together with the air-suspension system.

- The Four-C system is fundamentally the same as in previous Volvo models, but has been adapted to work together with the air-suspension system.

## 4. Pricelist and Equipment

Volvo Cars of North America, LLC.  
Model Year 2016 - United States



### XC90 T6 AWD

316 hp, 295 lb. ft. torque, Direct-Injected Turbo & Supercharged Engine, 8-speed Geartronic Automatic with Start/Stop & Adaptive Shift

Destination Charge: \$925

	<u>Momentum</u>	<u>Inscription</u>	<u>R-DESIGN</u>
	MSRP \$48,900	MSRP \$54,500	MSRP \$52,900
<b>SAFETY</b>			
Volvo On-Call, includes:	•	•	•
Convenience features - Remote Lock/Unlock, Send to Car, Vehicle Tracking - with 6-Month Subscription			
Roll Stability Control	•	•	•
Collision Avoidance by City Safety includes Pedestrian & Cyclist Detection & Avoidance (Day & Night)	•	•	•
Run-off Road Protection	•	•	•
Lane Departure Warning	•	•	•
Road Sign Information	•	•	•
Driver Alert	•	•	•
<b>EXTERIOR</b>			
Laminated Panoramic Sunroof w/Power Sunshade	•	•	•
19" 10-Spoke Turbine Alloy Wheels in Silver Bright	•	•	•
Adjustable Drive-mode settings	•	•	•
Aluminum Roof Rails	•	•	•
Dual Integrated Tailpipes	•	•	•
LED Fog Lamp with Corner Illumination	•	•	•
Front Grille, High-gloss Black	•	•	•
Tinted Windows, Rear & Cargo	•	•	•
Door Handle Illumination	•	•	•
<b>INTERIOR</b>			
Leather upholstery (seating surfaces)	•	•	•
10-way, Power Front seats incl. power lumbar & driver seat memory	•	•	•
Heated front seats	•	•	•
3rd Row seating (7-seats)	•	•	•
Sensus Navigation	•	•	•
Volvo Sensus Connect w/ 9" touchscreen & 6-Mo. Complimentary Subscription	•	•	•
Natural-speech Voice Control	•	•	•
8" Digital Instrument Display	•	•	•
High Performance Audio w/10 spks, 330w, 1 USB, & AUX input	•	•	•
Sirius™ Satellite Radio w/ 6-Month Subscription	•	•	•
4-zone Electronic Climate Control	•	•	•
CleanZone Air Quality System	•	•	•
Leather Steering Wheel	•	•	•
Aluminum Inlays	•	•	•
Aluminum tread plates, "Volvo"	•	•	•
Auto Dimming Mirror	•	•	•
<b>VERSATILITY</b>			
Keyless Entry & Drive	•	•	•
Rear Park Assist Camera	•	•	•
Hands free, Power Tailgate	•	•	•
Rear Park Assist	•	•	•
Cargo Cover	•	•	•
Cargo Divider, under cargo floor	•	•	•
Power-folding Rear Head Restraints (outer positions)	•	•	•
Power Child Safety Locks	•	•	•
Tempa Spare Wheel, incl Jack Kit	•	•	•
Aluminum Cargo Scuff Plate	•	•	•
<b>INSCRIPTION &amp; R-DESIGN</b>			
LED headlights w/Active Bending Lights (ABL), Auto Highbeam (AHB) & Thor's Hammer DRL		•	•
Headlight High-pressure Cleaning		•	•
12.3" Digital Instrument Display		•	•
Illuminated Tread Plates		•	•
High-level Interior Illumination		•	•

Start of Production week 20 /  
Showroom arrival summer 2015

	<u>Momentum</u>	<u>Inscription</u>	<u>R-DESIGN</u>
<b>INSCRIPTION FEATURES</b>			
Front Grille, Silver matte		●	
Lower Door Molding with "Inscription" Logo		●	
Silver Exterior Mirror Covers		●	
Chrome Accents, Rear Fascia		●	
"Inscription" Badge, tailgate		●	
Integrated Aluminum Roof Rails		●	
20" 10-spoke Tinted Silver Alloy Wheels		●	
Nappa Leather Upholstery		●	
Nappa Leather Dashboard & Upper Door Panels		●	
Ventilated Front Seating		●	
Power Side Support, front seats		●	
Power Cushion Extension, front seats		●	
Linear Walnut Wood Inlays		●	
Inscription Mats, including cargo area		●	
Nappa Leather Key Fob, color coordinated		●	
Rear Sun Curtains, rear side doors		●	
"Inscription" Start-up sequence [Digital Display]		●	
<b>R-DESIGN FEATURES</b>			
R-Design Lower Front Spoiler			●
R-Design Front Grille			●
R-Design Pedals			●
R-Design Silk-metal Window Trim			●
R-Design Dual integrated Tail Pipes			●
R-Design Silk-metal Mirror Covers			●
R-Design Perforated Leather Gearshift Knob			●
R-Design Badge, tailgate			●
R-Design 20" 5-spoke alloy wheels in Tech Matte Grey Diamond Cut			●
R-Design Nubuck / Nappa Leather Contour Seats			●
Power cushion extension, front seats			●
Metal Mesh Aluminum Inlays			●
Illuminated Tread plates, R-Design logo			●
R-Design Perforated Leather Steering Wheel			●
Steering Wheel Gear Shift Paddles			●
R-Design Nappa Leather Key Fob			●
Black Headlining			●
R-Design Mats, front/rear			●
"R-Design" Start-up sequence [Digital Display]			●



**OPTIONS**

	Description/Notes/Restrictions	MSRP
<b>Momentum Plus</b>		
	NA for Inscription or R-Design	\$2,100
645	LED headlights w/Active Bending Lights (ABL), Auto Highbeam (AHB) & Thor's Hammer DRL	
65	Headlight high pressure cleaning	
19	12.3" Digital Instrument Display	
458	Dark Flame Birch Wood Inlays	
	Illuminated tread plates	
879	Interior high level illumination	
<b>Vision Package</b>		
		\$1,600
603	Blind Spot Information System & Cross Traffic Alert	
139	360° Surround View Camera	
169	Automatically Dimmed Inner & Exterior Mirrors	
167	Retractable Rear-view Mirrors	
<b>Climate Package</b>		
		\$1,050
752	Heated Rear Seats	
869	Heated Steering Wheel	
871	Heated Windscreen	NA with HUD (opt. 117)
63	Heated Washer Nozzles	
<b>Convenience Package</b>		
		\$2,000
870	Park Assist Pilot Front Park Assist	
132	Adaptive Cruise Control with Pilot Assist Lane Keeping Aid	
192	Power 3rd Row Backrest (fold & rise)	
372	HomeLink™	
454	Compass (Interior Rearview Mirror)	
346	Grocery Bag Holder	
424	12V Power Outlet, Cargo Area	
<b>Single Options</b>		
XXX	Metallic paint	\$550
458	Dark Flame Birch Wood Inlays	Momentum only; NA w/Momentum Plus Package \$400
14	Integrated, Center Booster Cushion, 2nd row	\$250
319	Leather & Flame Birch Wood Steering Wheel	Momentum only, Req. opt. 458; NA w/Climate Pkg \$325
553	Bowers & Wilkins Premium Sound System	\$2,500
XXXX	Contour Seats in Nappa Leather	Momentum only; Available Production week 20 \$1,400
117	Graphical Head-up Display (HUD)	Deletes heated windshield if Climate Pkg is ordered \$900
1000	4-corner Air suspension with FOUR-C active chassis	Requires Convenience Package \$1,800
480	Carbon Fiber Inlays	R-Design only \$800
234	20" 5-double spoke Alloy Wheels in Matte Tech Black	Momentum only \$750
174	21" 8-spoke Alloy Wheels in Silver Bright Diamond Cut	Inscription only \$750
175	22" 5-double spoke Alloy Wheels in Matte Black Diamond Cut	R-Design only \$1,000



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