Volvo Cars safety innovations

1959: Front seats three-point safety belt as standard – A world-first safety innovation that made its way in to almost every car and is estimated to have saved more than one million lives.

1972: Volvo rearward-facing child seat – Volvo Cars started testing child seats in crash tests already in the 1960s, and this launched as an OEM world-first innovation. From a safety point of view, it recommends that all children up to the age of four years old should travel seated backwards.

1978: Child safety booster cushion – For children from four years old, Volvo Cars recommends seating them on a booster cushion or a booster seat, facing forward. By raising them to the height of the safety belt, they will get full benefit of the advanced vehicle safety belts. This was another world-first innovation.

1986: Three-point safety belt in rear centre seat – Once upon a time the safety belt was seen as a restriction on people's freedom. These days, it is commonly accepted as a potential life saver, also in the rear.

1990: Integrated child safety booster cushion – World-first booster cushion integrated in the rear seat.

1991: Side Impact Protection System (SIPS) – Volvo's research in the 1980s showed that people were especially at risk in side impacts, due to the short distance between occupant and impact. Hence it developed SIPS, a world-first side impact protection system integrated into the car body.

1991: New front structure – The company introduced a new front structure with a refined crumple zone to better mitigate front overlap crashes, in the Volvo 850. The same front structure was also used in the Volvo P2X programme, which started with the Volvo S80, V70 and S60.

1994: Side Impact Airbags (SIPS-bag) – Another feature designed to protect people better in side impacts. The Volvo 850 was the first car to come with side-impact airbags.

1998: Whiplash Injury Protection System (WHIPS) – Designed to better protect all occupants against whiplash injury. WHIPS is one reason for the unique look of Volvo's seats and head restraints.

1998: Inflatable Curtain (IC) – A further development of the side impact protection system, these roof-mounted inflatable curtains were designed to improve head protection. In addition, they also help protect occupants in a rollover situation.

2000: Rearward facing ISOFIX child seat – A world-first child seat for infants and toddlers. It was also the first rearward facing child seat attached using the ISOFIX standard.

2002: Rollover Stability Control (RSC) with gyro sensor & DSTC – A world-first technology introduced on the first-generation XC90 SUV, this system used a gyro-sensor to detect and counteract the risk of a rollover.

2002: New patented front structure – The first generation of XC90 was the first model to be built with this new front structure design.

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2003: Intelligent Driver Information System (IDIS) – An early driver assistance system that, for example, delayed incoming phone calls in complex traffic situations that require the driver's undivided attention. First introduced on the Volvo S80 sedan.

2004: Blind Spot Information System (BLIS) – Another early driver assistance system and integrated in the side mirror, BLIS uses visual cues to warn drivers of vehicles in their blind spot.

2005: Door Mounted Inflatable Curtain (DMIC) – Specially developed for the C70 convertible, these inflatable curtains were installed in the door instead of the roof. They deployed upwards in a collision, remaining inflated to provide protection in case of a roll-over.

2007: 2-stage integrated booster cushion and safety belt load limiter – This world-first innovation was a further improvement of integrated booster seats for children, with two different heights to help provide better comfort and belt fit for the growing child. The safety belt load limiters included a child adapted seat belt functionality.

2008: City Safety – A ground-breaking, world-first collision avoidance function that introduced automatic braking in low speed situations as standard fitment. The current generation of the system is standard on all Volvos.

2010: Pedestrian detection with full auto brake – The first extension of the City Safety active safety technology following its introduction. These days, City Safety also detects pedestrians in darkness.

2013: Cyclist detection with full auto brake – Another upgrade to the City Safety active safety technology following its introduction. City Safety also detects cyclists in dark conditions.

2014: Auto brake at intersections – As City Safety took on an extended role as the umbrella name for all auto brake functions, this world-first feature introduced on the XC90 engages auto braking if the driver turns in front of an oncoming vehicle.

2014: Run-off-road protection – A world-first technology launched on the XC90 that focuses on keeping the occupants firmly in position during run-off-road accidents and introduced energy-absorbing functionality in the seat to counteract spine injuries.

2015: Large animal detection – Another extension of City Safety that detects large animals during both day and night and mitigates potential collisions via auto brake. City Safety is still the only safety system on the market to help recognise pedestrians, cyclists and large animals.

2015: Run-off-road mitigation – This technology covers one of the most common causes of single vehicle accidents and uses auto-steer to help keep drivers on the road.

2018: Oncoming mitigation by braking – This system, first introduced on the new XC60, helps drivers to avoid collisions with vehicles in an oncoming lane by providing automatic steering assistance if drivers drift off. Auto brake was added with the launch of the new V60.

2020: 180kph speed cap on all cars – To send a strong signal about the dangers of speeding, Volvo Cars will limit the top speed on all its cars to 180kph from 2020.