Volvo Celebrates 80 Years Of Safety

Some principles never change. And after 80 years of safety advances from Volvo, the philosophy expressed by the company's founders is more appropriate than ever:

"Cars are driven by people. Therefore the guiding principle behind everything we make at Volvo is - and must remain - safety"  
(Assar Gabrielsson and Gustaf Larson)

Volvo will celebrate its 80th anniversary on 14 April - just a month after the world premiere of the all-new Volvo V70 and XC70 in Geneva. As always, new Volvo models come with improved safety features, and the new arrivals are equipped with extended inflatable curtains which, in combination with adjustable child booster cushions, belt force limiters adapted for children and a strong side structure, help to provide children of different heights with effective protection in a side collision. Child safety has always been important to Volvo, which introduced the first rear-facing child seats on the market as early as in the 1960s.

The philosophy of the founding fathers has provided the basis for many other new safety features over the years. One example is the safety cage, which was introduced in the Volvo PV 444 in 1944, together with the laminated windscreen, and was among the first major safety features in the company's cars. The three-point safety belt - the most important of all Volvo's inventions - appeared in 1959. This is considered to be one of the technical inventions that has saved most lives in the history of mankind. Side-impact protection (SIPS) was introduced in 1991 and the WHIPS whiplash protection system in 1998. In today's models, the crumple zone introduced in 1966 has been refined with the use of four different grades of steel to optimise the absorption of collision forces.

For the last 37 years, Volvo's own accident research team has been studying and learning from accidents involving Volvo cars. The team provides Volvo's research and development function with vital knowledge on a continuous basis.

Volvo envisages a future in which the traffic environment will be completely safe. In this vision, cars will be equipped with intelligent systems that will not only help to improve driver alertness, but may even take control of the car if the driver does not react in sufficient time to avoid an impending emergency. This work is already in full progress. The latest Volvo cars incorporate several advanced safety systems that assist the driver in this respect. These include BLIS, which warns of vehicles in the blind spot and Collision Warning with Brake Support which, in addition to visual and audible warnings, 'primes' the brakes to help avoid a collision with the vehicle in front.

"The thrust of our new safety philosophy is to place human capability at the centre of our research work and future systems development. The objective is to help the driver to keep his or her hands on the wheels and eyes on the road," explains Ingrid Skogsmo, director of the Volvo Cars Safety Centre, who was named Woman of the Year 2006 by the influential trade magazine Automotive News.

City Safety, which was unveiled for the first time in the XC60 Concept at the Detroit Motor Show earlier this year, represents yet another step towards this vision. The system itself can, in some situations, apply the brakes to avoid a collision and Volvo Cars hopes that its use will prevent half of all rear-end collisions. City Safety is scheduled for commercial introduction within the next two years.
Milestones in 80 years of Volvo safety

1944  Safety cage
1944  Laminated windscreen
1959  Three-point safety belts in front seats
1960  Padded dashboard
1964  Prototype of first rear-facing child seat
1966  Dual-circuit braking system
1966  Crumple zones
1967  Safety belts in rear seat
1968  Head restraints in front seats
1969  Three-point, inertia-reel safety belts in front seats
1972  Three-point, inertia-reel safety belts in rear seats
1972  Rear-facing child seat and childproof locks
1972  Volvo Experimental Safety Car (VESC)
1973  Collapsible steering column
1974  Energy-absorbent bumpers
1974  Crash-protected location of fuel tank
1978  Child booster cushion
1982  Anti-submarining protection
1982  Wide-angle door mirrors
1984  ABS (Anti-lock Braking System)
1986  High-level brake light
1986  Three-point safety belt in centre rear seat
1987  Safety belt pretensioners
1987  Driver airbag
1990  Integrated child booster cushion
1991  SIPS (Side Impact Protection System)
1991  Automatic height adjustment of front safety belts
1993  Three-point, inertia-reel safety belts standard in all seats
1994  SIPS bags (side-impact airbags)
1997  ROPS (Rollover Protection System) in C70 Convertible
1998  WHIPS (Whiplash Protection System)
1998  Inflatable side-impact curtain (IC)
2000  Inauguration of Volvo Cars Safety Centre in Göteborg
2000  ISOFIX attachment system for child seat
2000  Dual-stage inflation airbags
2001  Volvo On Call security and roadside assistance system
2001  Volvo Safety Concept Car (SCC)
2002  RSC (Roll Stability Control) active stability system in Volvo XC90
2002  Further-developed ROPS
2002  Lower front crossmember in Volvo XC90 to increase safety compatibility with lower cars
2002  Development of virtual, pregnant crash dummy
2003  IDIS (Intelligent Driver Information System)
2003  New, patented front-end structure for increased collision protection
2004  BLIS (Blind Spot Information System)
2004  DMIC (Door-mounted Inflatable Curtain) for convertibles
2004  ACC (Adaptive Cruise Control)
2005  Volvo CoDriver support system (concept)
2005  Volvo MultiLock (research project)
2005  Driver Alert warning system for fatigued drivers (concept)
2006  Personal Car Communicator with heartbeat sensor
2006  Active Bending lights with swivelling headlamps
2006  Collision Warning with Brake Support
2007  Volvo City Safety system for avoiding low-speed collisions (concept)
2007  Second generation of WHIPS whiplash protection system
2007  New, stronger side structure using different grades of high-strength steel
2007  Integrated two-stage child booster cushion with force limiter adapted for children
2007  Extended inflatable curtains for enhanced child safety
Volvo Celebrates 80 Years Of Safety

Some principles never change. And after 80 years, the commitment to safety is more important than ever. Today, that commitment to safety is part of a 35-year development journey that has involved more than 200 projects.

A significant part of this history is focused on the work of the Volvo Cars research team, which has been studying and learning from real-world accidents since 1966. For the last 37 years, Volvo's own accident research team has been studying accidents and learning from them. The team has provided Volvo with a wealth of vital knowledge that constantly helps to improve the company's cars.

For example, the introduction of the three-point safety belt in the rear seat of the Volvo PV 444 in 1944, together with the laminated windscreen, was among the first major safety features in the world. In 1959, the company introduced the first effective side-impact protection in the front seat. A decade later, rear-facing child seats were introduced, and in 1984, the company's research team developed the world's first anti-lock braking system. And in 2002, the company introduced the world's first roll stability control system for passenger cars.

The philosophy of the company's founders has provided the basis for many other new safety features that have been introduced over the years. One example is the safety cage, which was introduced in the Volvo PV 444 in 1967. Another example is the crumple zones, which were introduced in the Volvo XC90 in 2002. The company has also introduced several advanced safety systems that assist the driver in this respect. These include BLIS, which warns the driver of a vehicle in the blind spot, and the Volvo City Safety system, which is designed to avoid low-speed collisions.

City Safety, which was unveiled for the first time in the XC60 Concept at the Detroit Motor Show in 2007, is scheduled for commercial introduction within the next two years. The system will be able to recognize a vehicle in front of it and, if necessary, the car will automatically slow down or come to a complete stop to avoid the collision. For the last 37 years, Volvo's own accident research team has been studying and learning from real-world accidents. The team provides Volvo's research and development function with vital knowledge on a continuous basis.

The team is already working on even more advanced safety systems. For example, the team is currently working on a system that will not only help to improve driver alertness, but may even take control of the car if the driver does not react in sufficient time to avoid an impending emergency. This work is already in full progress. The latest Volvo cars incorporate several advanced safety systems that assist the driver in this respect. These include BLIS, which warns the driver of a vehicle in the blind spot, and the Volvo City Safety system, which is designed to avoid low-speed collisions.

For the last 37 years, Volvo's own accident research team has been studying and learning from real-world accidents. The team provides Volvo's research and development function with vital knowledge on a continuous basis. The team is already working on even more advanced safety systems. For example, the team is currently working on a system that will not only help to improve driver alertness, but may even take control of the car if the driver does not react in sufficient time to avoid an impending emergency. This work is already in full progress. The latest Volvo cars incorporate several advanced safety systems that assist the driver in this respect. These include BLIS, which warns the driver of a vehicle in the blind spot, and the Volvo City Safety system, which is designed to avoid low-speed collisions.