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## Children should travel rearward facing until they are three-four years



Small children should travel in rearward facing child restraints for as long as possible, at least until they are three to four years old. Older children should use a booster cushion until they are 140 centimetres tall and at least ten years old. This is Volvo Cars' firm recommendation. The knowledge is based on real life accidents, together with advanced research at Volvo Cars' state-of-the-art crash laboratory.

### Over 40 years of child safety development

"Cars are driven by people. The guiding principle behind everything we make at Volvo therefore, is - and must remain - safety." Founders Assar Gabriellsson and Gustaf Larson said this in Volvo's childhood, and it still stands. Since the early days Volvo Cars has introduced numerous world firsts, such as the three-point safety belt in 1959. This life-saving safety belt is now integrated in all car models in the world.

Volvo Cars started researching child safety in the early 1960's. This was a time when space journeys were hot news. On the black and white TV screen you could see the astronauts lying on their backs to even out the forces during take-off and landing. Using the entire back to

spread the forces was incorporated in the first child restraint prototype, which was tested in 1964. Since then, Volvo Cars has been setting the standard in child safety.

- Our first rearward facing child restraint was launched back in 1972, says Lotta Jakobsson, Child Safety Specialist at Volvo Cars Safety Centre. Volvo Cars has also been a driving force in international co-operations such as the making of the ISOFIX standard. ISOFIX is a standardised anchoring system that makes it easier to fit a child restraint correctly in any car equipped with the system.

### Based on accident research

In 1970 the Volvo Traffic Accident Research Team was established to study car crashes in Sweden involving newer Volvo models. Since then the team has studied approximately 2,500 traffic accidents down to the smallest detail, and the knowledge they gain is used in developing new safety technologies. Information from more than 36,000 accidents is stored in a statistical database. For example, SIPS (Side-Impact Protection System) and WHIPS (Whiplash Protection System) are direct results of this accident research.

- Our engineers identify interesting areas, develop solutions and incorporate them in the oncoming Volvo model, says Lotta Jakobsson. When that model is out on the streets, the research of real life car crashes continues to help decide which areas to focus on in next generation. It is a continuous process.

The statistical database at Volvo Cars includes more than 4,500 children. The accidents have been studied carefully and reveal the following:

- A child in a rearward facing child seat is approximately 90% less likely to be injured in an accident compared to an unrestrained child.
- Using a booster cushion the child runs an approximately 75% lower risk of being injured compared to being unrestrained.

### Advanced safety centre

Volvo Cars Safety Centre is the world's most advanced crash laboratory, where real life collisions can be reconstructed and studied. For example crash tests can be run with two moving cars in different angles, creating different forms of impact. Volvo Cars uses this research together with accident data from real life to enhance road safety for various road users: the driver, the passengers and people outside the car - pedestrians as well as people in other vehicles.

- All children must always be restrained properly. They should travel facing the rear until at

least the age of three-four and use restraints for older children up to 10-12 years of age, says Lotta Jakobsson.

### **New safety improvements**

Volvo Cars continues its child safety development as can be seen in the all-new Volvo V70, which was launched in February 2007. To help increase the use of child restraints, not only for small children but up to a height of 140 centimetres, there is an integrated two-stage booster cushion in the V70. A booster cushion gives the child an increased height and positions the lap belt correctly over the pelvis. This decreases the risk for abdominal injury in the event of an accident. Meanwhile, the child gets a better view.

- Using a booster cushion, integrated or accessory, with the lap belt pulled tight prevents the body from riding underneath the safety belt and forward in a collision, says Lotta Jakobsson.

The new integrated two-stage booster cushion is also available to the all-new XC70. Another improvement in Volvo's latest car models compared to their predecessors is that the inflatable curtains have been extended by 60 mm. The extended curtain is designed to provide more children of different sizes with effective protection in a side impact.

- The integrated two-stage booster cushion in the all-new Volvo V70 and XC70 is the latest addition to Volvo Cars' long history of child safety development, says Lotta Jakobsson. Our researchers now also focus on preventing accidents and protecting travellers in upcoming models.

*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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