



THE FACTS ON SIDE AIRBAGS

READ YOUR OWNERS MANUAL!

Supplemental Restraint Systems (SRS) or Airbags have been documented for saving thousands of lives. Airbags are also blamed for injuries or fatalities when occupants have not been wearing seat belts or belts worn improperly. Although side impact airbags and head curtain airbags are not required in vehicles, many different types of side airbags are available in most vehicles. Approximately 10,000 persons die in side impact collisions each year. Head injury is the leading cause of death. These guidelines will help prevent this type of injury.

If ANY side impact airbags have deployed into an occupied seated position. Please complete NHTSA's Special Crash Investigation Form. With or with out an injury. See www.nhtsa.dot.gov, click on "Airbags", scroll down to "Airbag Related Injuries and Fatalities", click on "SCI Crash Notification Fax Back Form."

FACTS ON SIDE IMPACT AIRBAGS:

- Are not required by the US government/NHTSA for vehicles, but are newer technology
- Some are standard, some are optional on models, but most are affordable, offered in 40% of all car models
- There are 7 different types of side airbags available, some standard, some optional
- Some are available in the front and the rear and most side impact airbags deploy in side collisions
- Some head curtain airbags protect front 1st row, middle 2nd row or and 3rd row seated occupants
- Some side impact airbags also deploy in a vehicle rollover with a special rollover detection system
- Over 300 models of cars, SUV's, wagons and pickups are available with side impact airbags

SIDE AIRBAG SAFETY TIPS:

- **ALWAYS** wear your safety belt properly IN ANY SEAT, sit upright in the center position of the seat
- Do not lean into the side airbag, against the side of the vehicle, or against the side glass
- Do not place a seat cover over a seat with a seat mounted side airbag
- Children seatbelted in an infant seat, child safety seat, or booster has no interaction with the side impact airbag. Side airbags have been shown to be safe for properly restrained children.
- No deaths have been associated with side airbags, AORC reports show "extremely safe"
- Most side airbags are 5-6 inches thick or wide in vehicle. They may vary in length and height.

ALSO:

- You are more likely to die in a side impact crash than a frontal crash. The number one cause of death is head & chest injuries. Deaths occur by high G-forces to the head. Up to 74% risk reduction in 2 vehicle crashes with a head bag.
- Curtain airbags offer more head protection in side crashes up to 80% reduction in Head Injury Criterion(HIC) and 45% decrease in deaths (bags that include head protection), chest and abdomen bags only reduce deaths by 11%
- Improperly restrained occupant puts them out of position for airbag deployment can put them in danger.
- Improper structural body work or can affect airbag deployment timing.
- In Fire-Rescue operations airbags can deploy!
- Technicians should use care when handling.
- Many new vehicles have side airbags and have warnings specifically for them in the owners manual.
- **READ YOUR OWNERS MANUAL FOR SPECIFIC USE OF RESTRAINT SYSTEMS!**

See www.airbaginstitute.com for the *ALERT airbag safety class*

INJURY FACTS ON SIDE IMPACT AIRBAGS

North Memorial Medical Center and ABRA Auto Body & Glass (07-2004)

Side Airbag History

- Side airbags were introduced in 1994-1995 model year by Volvo and Mercedes, then GM and Cadillac in the door and the seat
- No standardization of labeling side airbags; look for Airbag, SRS, SIPS, SIRS, Curtain, HPS, or side airbag label
- Labeling will appear on the seat, seat trim, side pillars, interior trim or roof headliner of the vehicle
- Most side airbag labels may be difficult to visualize in all crash conditions. Most vehicles label the airbag systems; exceptions may include executive-type vehicles such as; Bentley or Rolls Royce, and the Volvo XC 90 SUV.
- Head curtain airbags deploy on rollovers: Ford/Mercury/Lincoln SUV'S, 04 Ford Freestar/Mercury Monterey, 03 Mercedes S, SL and E class, BMW, 03 Lexus RX330, Volvo XC90, 04 Acura MDX SUV, Pierce-Oshkosh Series 8 Fire Truck, Nissan Pathfinder Armada and XTerra, Infiniti QX56, 04 Caravan/TC Minivan

The 7 types of side airbags are

- Thorax-chest(torso only), head & thorax, full head curtain, 1/2 curtain, tubular HPS, rear HPS, tubular curtain
- Side airbags may be located in the door(s), seat(s), and roof rail. A-pillar, C-pillar
- They can protect the occupant's head and chest from the striking bullet vehicle/object and also may prevent ejection
- An AORC Technical Working Group will monitor developments and test procedures

Slim-jimming

- Damaging or deactivating the side airbag safety system carries liability to the officer
- All stories of officer deaths related to slim-jimming are hoaxes, see www.extrication.com
- **Side airbags mounted in the door may deploy when slim jimming the vehicle; electric door locks are powered and likely to deploy a side airbag if wires are damaged by sharp tools or objects. Slim-jimming is not recommended, unless life threatening emergency.**

Technology Facts and Glass

- Most side airbags deploy at a speed 3-4 times as fast as frontal airbags, approximately 495 mph at .12 to .25 milliseconds
- Crash sensor threshold based upon impact at the side sensor location at approximately 15-20 km/h
- Side impact sensors are located on the side of the vehicle to detect occupant intrusion in the front, middle or rear sides
- Additional side protection may include; reinforced steel beams and side pillars, foam bolsters, and **break resistant glass**. Dual pane/anti-theft deterrent/anti-smash & grab safety & security or dual pane side glass = **Break Resistant Glass** is available in some models. Vehicles may include: Audi, BMW, Mercedes, Volvo, Expedition, Navigator, and Cadillac Deville

Rescuer Warning

- The hybrid canister inflator for most sedans with curtain airbags is in the low C-pillar
- The hybrid canister inflator for most SUV's/ Wagons with curtain airbags is in the roof rail between the C&D pillar above the 1/4 glass
- The hybrid canister is typically argon gas under 3,000 psi. Do not cut through the hybrid inflator canister. Some tests have shown the canister may explode. Canister location may vary in mounting location and are not labeled.
- Rescuers may cut through and undeployed airbag fabric or tubing on the side of the vehicle, but must consider the opening a "danger zone" where gas under pressure and heat may be expelled from the hybrid canister. Caution! Peel before Cutting!

The Best of the Best Cars-What's the Safest Car? *For the most protection, a vehicle should do well in all three below.*

- NHTSA Gov't **Frontal (FMVSS 212)** Impact Crash Test at 25 mph – Star rating 1 lowest, 5 stars the best. The test for **restraints** in the vehicle.
- NHTSA Gov't **Side Impact Crash Test (FMVSS 214) 20 mph – Star rating 1 the lowest, 5 stars the best. The test both for restraints and structural integrity of the vehicle.** See www.nhtsa.dot.gov (Note: utilizes head and chest criteria, not abdominal or pelvic injury criteria)
- Insurance Institute for Highway Safety – 40 mph **Offset** Crash Test into deformable barrier. The independent test for **structural integrity** of the vehicle. About 75% of frontal crashes are of this type. Ratings from lowest to highest; poor-marginal-acceptable-good. See www.highwaysafety.org
- NHTSA Gov't **Roll-Over** Crash testing; See www.safecars.gov Cars and older models see www.crashtest.com