

SEAT BELTS SAVE LIVES

COMMUNICATIONS

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Weekly ES&H Toolbox Talk

FACTOID: Who invented the seat belt?

- In 1885 Edward J. Claghorn was awarded the first U.S. patent for automobile seatbelts although Volvo had been using them since 1849.
- The 3-point safety belt was invented by Nils Bohlin for Volvo and patented in 1958.



What is a Seat Belt?

A seat belt, also termed a safety belt, is a safety harness designed to secure the occupant of a vehicle against harmful movement that may result from a collision or a sudden stop. Seat belts are intended to reduce injuries by stopping the wearer from hitting hard interior elements of the vehicle or other passengers and by preventing the wearer from being thrown from the vehicle.

How Seat Belts Work:

The technology which is used in seat belts is called an **Inertia Reel**. It tightens the belt when pulled fast (during a crash) but does not tighten when pulled slowly. This is implemented with a centrifugal clutch, which engages as the reel spins quickly. Types of inertia reel type seatbelts include:

NLR: (Non locking Retractor) commonly used in recoiling lap belts.

ELR-V: (Emergency Locking Retractor/vehicle sensitive) composed of a locking mechanism activated in an emergency situation. It is sensitive to the vehicle's motion.

ELR-VW: (Vehicle and



Webbing Sensitive) it allows freedom of movement by the wearer of the seatbelt by means of length-adjusting components that automatically adjust the strap to the wearer, with a locking mechanism that is activated by deceleration or rollover of the vehicle.

Common Excuses for not Wearing a Seat Belt

Seat belts are one of the most significant safety device ever invented. They provide impact protection, absorb crash forces, and keep you from being thrown out of the vehicle. Yet for all of these benefits, some people have lots of "reasons" why they don't wear them. Let's examine a few of them and see why they are not valid.

1 "I'm a skilled driver and I've never had an accident before"

Statistics show that 4 out of 5 drivers involved in accidents never had one before. In addition to reducing injuries and saving lives, safety belts are comfortable and give you better control.

2 "Seat belts are for long trips"

Buckling and unbuckling is a lot

easier than banging your head against the windshield should you have an accident. Research proves that most motor vehicle accidents happen within home vicinity and at speeds below 40 mph.

3 "A seat belt will trap me in my vehicle if I have an accident"

Chances are that if the crash is severe enough to trap you, you will be trapped even if you

aren't wearing a seat belt. Fires only occur in 0.2% of all injury producing accidents.

4 "Seat belts mess up my clothes"

What's worse, arriving at work with a few wrinkles or not getting there at all because you were thrown from your vehicle during an accident?

5 "Seat belts are not for back seat occupants"



No matter which seat you occupy, you might be thrown onto the front seat, hit the roof, or smash your face into the back of the front seats. Always wear your seat belt, even in back!

Other tips: Never use a seat belt for more than one person. Ensure children wear the right seat belts and use child safety seats appropriate for their age and size.