

Ryan Kellus Turner
General Counsel and Director of Education
TMCEC
AY 2011

THE EVOLUTION OF TRAFFIC SAFETY

America's Love Affair with the Car



"I had the carburetor cleaned and checked with her line blown out she's hummin' like a turbajet

Propped her up in the backyard on concrete blocks for a new clutch plate and a new set of shocks

Took her down to the carwash check the plugs and points

I'm goin' out tonight I'm gonna rock that joint"

**Bruce Springsteen
Open All Night
Nebraska (1982)**

1771 - Nicolas-Joseph Cugnot

Believed to be the first Person to Crash a Car



1865 - UK 'Locomotive Act'

The First Traffic Law

- Set a speed limit of 2 miles per hour in towns
4 miles per hour out of town, by requiring a man with a red flag to walk 60 yds. ahead of qualifying powered vehicles.
- The distance ahead of the pedestrian crew member was reduced to 20 yds. in 1878
- Vehicles were required to stop on the sight of a horse.
- The speed limit being effectively redundant as vehicle speeds could not exceed the speed at which a person could walk.

1869 – Mary Ward

The First Motor Vehicle
Fatality 8/31/1869



Henry H. Bliss
First American Killed by an
Automobile 9/14/1899



1895 – John Henry Knight



- 10/17/1895
- Knight was Charged by Information of the Offense of "Using a Locomotive without a License"
- He is Considered the First Traffic Offender

1905 – The American Automobile Association

Formed to Help Motorists
Avoid Speed Traps

One year earlier law had
been adopted to impose
fines on speeders

The law also required
drivers to have a driver's
license and to have their
vehicles registered



1931 – Scoggin v. State, 38 S.W.2d 592

- The Texas Court of Criminal Appeals shoots down legislative efforts to hinder the enforcement of traffic laws against speeding violators

"No officer shall have authority to make any arrests for violation of the laws of this State relating to the speed of motor vehicles unless he is at the time of such arrest wearing a uniform and badge clearly distinguishing him from ordinary civilians or private citizens, and shall have no authority to make any such arrests by designedly remaining in hiding or lying in wait unobserved in order to trap those suspected of violating the speed laws in reference to motor vehicles."

1930s – Dr. Claire L. Straith and Dr. C.J. Strickland

- Pioneers of Automobile Safety
- Described Cranial and Facial Injuries Caused by Car Wrecks
- Advocated for Padded Dashboards and Seatbelts



1934 – General Motors performs first crash test



1940 – The U.S. Government adopts first equipment regulation on automobiles

- Guess the regulation.
- Hint: This piece of equipment would remain virtually unchanged for 40 years!

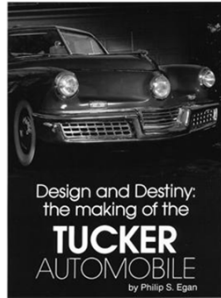


1942 - Hugh De Haven publishes the classic Mechanical analysis of survival in falls from heights of fifty to one hundred and fifty feet

- *The human body can tolerate and expend a force of two hundred times the force of gravity for brief intervals during which the force acts in transverse relation to the long axis of the body. It is reasonable to assume that structural provisions to reduce impact and distribute pressure can enhance survival and modify injury within wide limits in aircraft and automobile accidents*

1948 – The Tucker Sedan is released

The First Automobile to have a Padded Dashboard



1949 – The Saab 92 is released

The First Car with a Safety Cage



1956 – The Ford Motor Company unsuccessfully markets the Lifeguard Safety Package

THE WORLD'S LARGEST SELLING FORD
...and Lifeguard Design is another reason why!

FORD V-8

A collage of four small images illustrating safety features: 1. A close-up of the steering wheel with a Lifeguard steering wheel. 2. A close-up of a door latch with Lifeguard door latches. 3. A close-up of a seat belt with Lifeguard padding. 4. A close-up of a seat with Lifeguard padding.

You'll be safer in a '56 Ford!

New Lifeguard steering wheel
New Ford seat belts
New Lifeguard padding

New Lifeguard door latches

A collection of text and small images describing the Lifeguard Safety Package. It includes a steering wheel, a seat belt, and door latches. The text describes how these features improve safety for the driver and passengers.

1958 – United Nations World Forum for Harmonization of Vehicle Regulations

- Advances Seatbelts and Roll Cages
- Volvo 's Nils Bohlin Patents the 3 point lap and shoulder belt



Nils Bohlin, inventor of the three-point safety belt
August 2009

1959 - Insurance Institute for Highway Safety (IIHS) is created

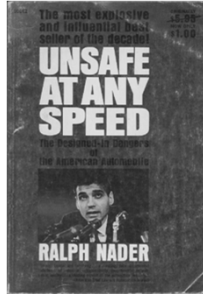
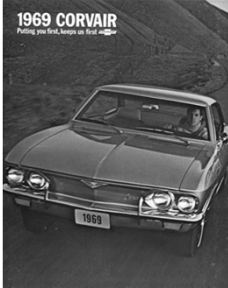


1964 - Volvo developed the first rear-facing child seat



Ellen Louise Turner
Born 8/13/10

1965 – The book *Unsafe at Any Speed: The Designed-In Dangers of the American Automobile* by Ralph Nader is published



1966 – U.S. Congress mandates seat belts in automobiles



1966 – The U.S. Department of Transportation (DOT) is created



1970 – The National Highway Safety Administration (NHTSA) is created



1974 - Mini Clubman Experimental Safety Vehicle

- Advent of the "Pedestrian Friendly" Front End



1975 – The National Transportation Safety Board (NTSB) becomes separate from DOT



1978 – Volvo introduces its first booster seat



1979 - NHTSA began crash-testing popular cars



1984 - New York State passed the first US law requiring seat belt use in passenger cars



1986 - Central 3rd brake light mandated in North America.



April 1989 – Passive restraints required for drivers of automobiles



Ford brings you the most significant advance in motoring safety since the seat belt...



Passive restraints required in small trucks required in 1997

...and the most significant advance in motoring safety since the seat belt... is the air bag. The air bag is a device that inflates in the event of a collision, providing a cushion for the driver and front passenger. It is a passive restraint, meaning it does not require the driver or passenger to do anything to activate it. The air bag is a critical safety feature that has saved many lives. It is a testament to the ongoing commitment to safety in the automotive industry.

1998 – Dual airbags required in automobiles



1995 - IIHS begins frontal offset crash tests



2003 - IIHS begins conducting side impact crash tests.



2004 - NHTSA released new tests designed to test the rollover risk of new cars and SUV.



But Are We Any Safer?

II. Risk compensation

Risk compensation is an effect whereby individual people may tend to adjust their behavior in response to perceived changes in risk. It is seen as self-evident that individuals will tend to behave in a more cautious manner if their perception of risk or danger increases. Another way of stating this is that individuals will behave less cautiously in situations where they feel "safer" or more protected.

III. Safety Trends

International Comparison of Change in Automobile Fatalities 1979 - 2012

Country	1979 Fatalities	2012 Fatalities
United States	~55,000	~45,000
Great Britain	~10,000	~8,000
Canada	~8,000	~6,000
Australia	~6,000	~4,000

Thank You for Your Attention

