

STATUS REPORT

INSURANCE INSTITUTE
FOR HIGHWAY SAFETY

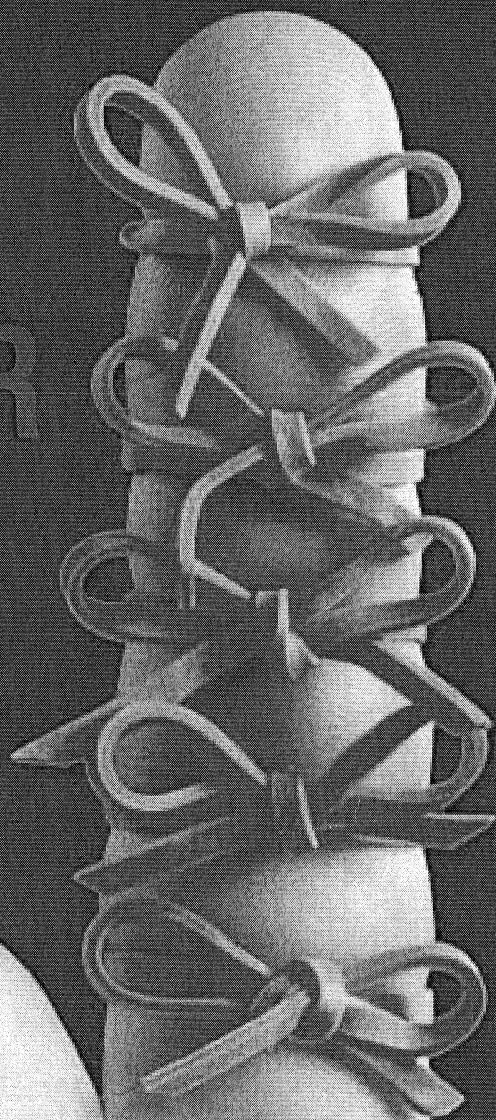
Vol. 39, No. 4, March 27, 2004

Some of us need a

REMINDER

**More and more automakers
are reminding us to buckle up**

Safety belt use on U.S. roads approaches 80 percent, up from fewer than 20 percent in the early 1970s. But what about the holdouts, those who are hard to convince to buckle up? Ford was first among automakers to try to reach these motorists by going beyond the safety belt reminder systems required in all passenger vehicles. Now, spurred by the National Highway Traffic Safety Administration (NHTSA), virtually every automaker is going beyond the sound-and-light warning



that's required if a driver's safety belt isn't fastened. This warning is brief. NHTSA isn't allowed to require any sound persisting longer than eight seconds.

"It's easy to ignore such a brief warning," says Institute chief scientist Allan Williams, "and under current federal law it isn't possible for NHTSA to require longer warnings that might prove more effective."

But automakers may install any kind of reminder they want. The first voluntary system, a chime-and-light sequence that persists in intervals for up to five minutes if a driver doesn't buckle up, was introduced in 2000 model Fords.

"Call it benevolent nagging. The chime Ford uses isn't unpleasant, and it keeps on reminding you for five minutes. When we evaluated this system we found it produces a modest but important increase in belt use," Williams says (see *Status Report*, Feb. 9, 2002; on the web at www.highwaysafety.org).

Based in part on the Institute's evaluation of Ford's reminder system, NHTSA Administrator Jeffrey Runge urged all automakers in February 2002 to "consider voluntarily adding inexpensive, but effective, buckle up reminder systems" and to do so "as quickly as possible." Now reminders are in most 2004 model passenger vehicles.

All reminders aren't alike: There's variation among automakers in terms of the kinds of belt reminders they're using and how many models they're equipping. Audi, Ford, Hyundai, Porsche, and Volkswagen say they're putting reminders with intermittent lights and chimes in all 2004 passenger vehicles. Other manufacturers report lesser percentages. The loudness, urgency, sequence, and duration of the lights and chimes vary somewhat. General Motors adds a text message instructing drivers to buckle up.

Less elaborate reminders are in Infiniti, Lexus, Nissan, Saab, Scion, and Toyota models (except Toyota Prius). A light stays on, but no chime persists beyond eight seconds (the Prius does have a persistent chime).

In contrast, enhanced reminders aren't in any Hummers or models made by Isuzu, Land Rover, Mini, Mercedes, Subaru, or Volvo.

"Lights-only reminders haven't been evaluated yet, but the systems with audible warnings are almost certainly going to be more effective because a repeating chime or other sound is harder to ignore," Williams says.

Idea of enhanced reminders isn't new: In the early 1970s when only about 20 percent of drivers were buckling up, NHTSA tried several approaches to improve the situation. First there was a mandatory 60-second buzzer light in cars without automatic restraints (virtually no cars back then had such restraints). Starting with 1974 models, cars without automatic restraints couldn't be started if front-seat occupants weren't belted.

The buzzer-light reminder wasn't effective, Institute research found, but ignition interlocks did work. A separate Institute study found 59 percent of drivers using their belts in cars with interlocks, while the use rate was only 28 percent in cars with buzzer lights.

The problem was that many motorists didn't like interlocks. Public outcry against them led Congress to prohibit NHTSA from requiring them. Congress also told the agency it couldn't require any audible signal exceeding eight seconds.

"Nowadays motorists apparently don't object so much to being reminded. Maybe interlocks still wouldn't be accepted, but reminders of the type Ford pioneered seem to be okay," Williams says. The Institute surveyed Ford owners, most of whom said they like their reminders. Almost half said they buckle up more often because they're being reminded (see *Status Report*, June 16, 2003; on the web at www.highwaysafety.org).

Belt reminders in Europe, too: No requirement forces automakers to equip cars in the European Union with any kind of reminder (Sweden does require them). Although belt use rates exceed 90 percent in many European countries, reminders still are needed because use rates in serious crashes are lower. And now there's a powerful incentive to install reminders because doing so can boost a vehicle's consumer safety rating.

The European New Car Assessment Program rates passenger vehicles based primarily on performance in front and side crash tests. Since 2002 points may be added to a

REMINDERS IN 2004 MODELS

Light & chime:

Acura (63% of sales)	MDX & TL
Audi	All models
BMW (23% of sales)	5, 6, & 7 series
DaimlerChrysler (50% of sales)	Chrysler Crossfire Chrysler Pacifica & Sebring Dodge Durango Dodge Ram pickup Dodge Stratus & Viper Jeep Liberty
Ford	All models
Honda (70% of sales)	Accord & Insight Pilot & S2000 Civic except hatchback
Hyundai	All models
Jaguar (80-90% of sales)	X-Type XJ series
Kia (21% of sales)	Amanti & Spectra
Lincoln	All models
Mazda (40% of sales)	B-series pickup Mazda 3 & Tribute
Mercury	All models
Mitsubishi (90% of sales)	All except Montero Sport
Porsche	All models
Suzuki (28% of sales)	XL-7 only
Toyota	Prius only
Volkswagen	All models

Light, chime, & text message:

General Motors (50% of sales)	Cadillac Escalade Chevrolet Avalanche Chevrolet Silverado Chevrolet Suburban Chevrolet Tahoe GMC Denali & Sierra GMC Suburban & Yukon
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Light only:

All Infiniti, Lexus, Nissan, Saab, Scion, Toyota (except Prius) models

No enhanced reminder:

AM General (Hummer), Isuzu, Land Rover, Mini, Mercedes, Subaru, Volvo

Note: Sales estimates reflect percentages of all models sold by the manufacturer.

SAFETY BELT REMINDER SYSTEMS

(continued from p.1) up and they're especially effective among motorists who say they do use belts but not all the time.

A new Institute study indicates that reminders boosted belt use among Honda drivers from 84 to 90 percent. The use rate went up among both men and women and in various kinds of passenger vehicles — cars, minivans, and SUVs. Only 6 percent of the unbuckled drivers who encountered the reminder systems reported ignoring the annoyance.

Results are especially impressive among drivers who reported that they usually but not always buckle up. Eighty-one percent of the people in this group said they buckled up the last time they encountered the belt reminder.

The findings confirm the results of a previous Institute study of the effectiveness of reminders in Ford vehicles. These systems boosted belt use from 71 to 76 percent in 2000-02 vehicles, compared with earlier models of the same Fords without reminders (see *Status Report*, Feb. 9, 2002; on the web at iihs.org).

"Boosting belt use by 5 or 6 percentage points might not sound like a lot but, remember, these are the hard-to-convince motorists, and what the reminders are doing is convincing them to buckle up more often. The idea is to turn them into full-time belt users," says Susan Ferguson, Institute senior vice president for research.

Ford was first to equip vehicles with extended reminders, beginning with some 2000 models. In 2006 most models have some kind of reminder system, but not all of them are as intrusive as the Ford and Honda systems (see facing page).

Reminders go beyond what's required: These systems exceed the federal government's modest requirement of a reminder that lasts 4 to 8 seconds. The reminders in Fords persist in intervals for up to 5 minutes if drivers don't buckle up, and those in Honda vehicles are even more persistent.

There's an intermittent flashing light, sometimes including a "fasten seat belt" message, plus a chime that lasts for at least 9 minutes. Most 2004 and all later Hondas have such reminders.

Despite the potential annoyance, an overwhelming 89 percent of drivers of Hondas with reminders said they like having the systems in their vehicles. Eighty-eight percent said they would want one in their next vehicle.

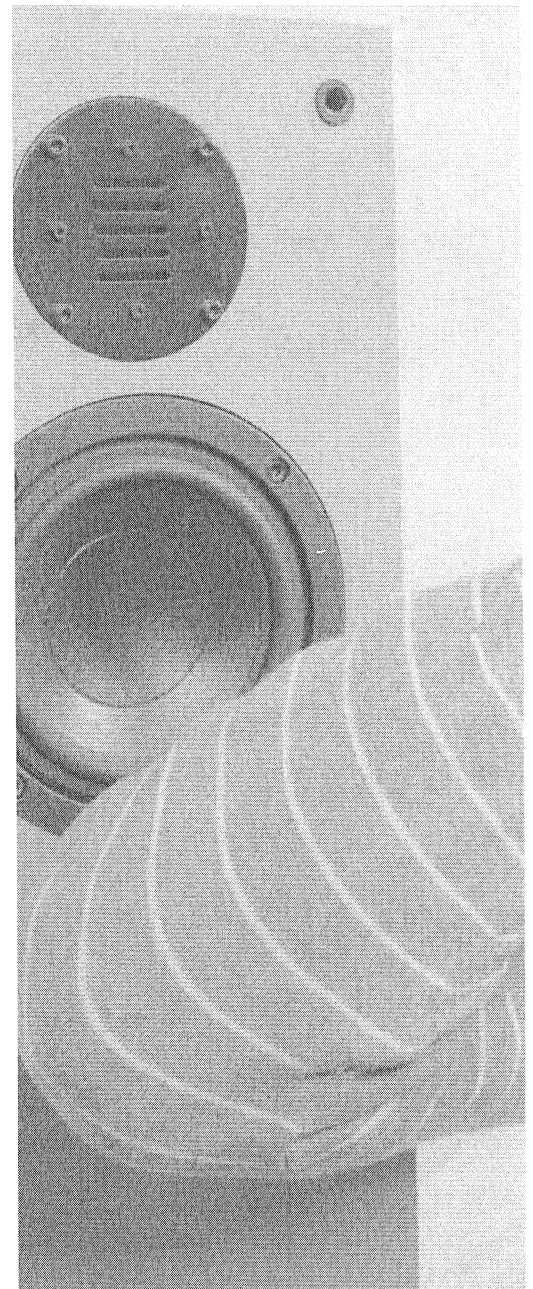
"These findings are important because, while the purpose is to annoy drivers into buckling up, it wouldn't be beneficial to overdo it and alienate people enough so they want to disable their reminder systems. The goal is benevolent nagging — just enough to accomplish the purpose," Ferguson says.

Why reminders are needed: The US belt use rate has topped 80 percent for two straight years, up from less than 20 percent in the early 1980s and about 60 percent as late as 1994 (see *Status Report*, Jan. 11, 2003; on the web at iihs.org). The gains during the 1980-90s resulted largely from enacting and enforcing belt use laws in every state except New Hampshire.

"What the reminders do is complement the laws and enforcement programs," Ferguson explains. "They help convince motorists to comply with the belt laws, and they give motorists an incentive to do so because buckling up is the easiest way to stop the annoying lights and chimes."

What if all vehicles had reminders similar to those in Hondas? Ferguson estimates that at least 730 passenger vehicle driver deaths could have been prevented in 2004 if all vehicles had been equipped with reminders that increased belt use by 6 percentage points.

Researchers studying the Honda systems surveyed belt use among drivers of 2004-06 model cars, minivans, and SUVs with reminders, comparing use rates in these vehicles with rates in 2002-04 Hondas without reminders. The observations were conducted at Honda dealerships in the Philadelphia area during the fall of 2005



when vehicles were brought in for service. Mail-in surveys also were distributed to drivers of vehicles with reminders, and 62 percent of these drivers replied.

For a copy of "Effectiveness and driver acceptance of the Honda belt reminder system" by S. Ferguson et al., write: Publications, Insurance Institute for Highway Safety, 1005 North Glebe Road, Arlington, VA 22201, or email publications@iihs.org.

The following graph shows the trend line of seat belt use in Alaska from 1999 – 2010.

% Seat Belt Use in Alaska 1999 - 2010

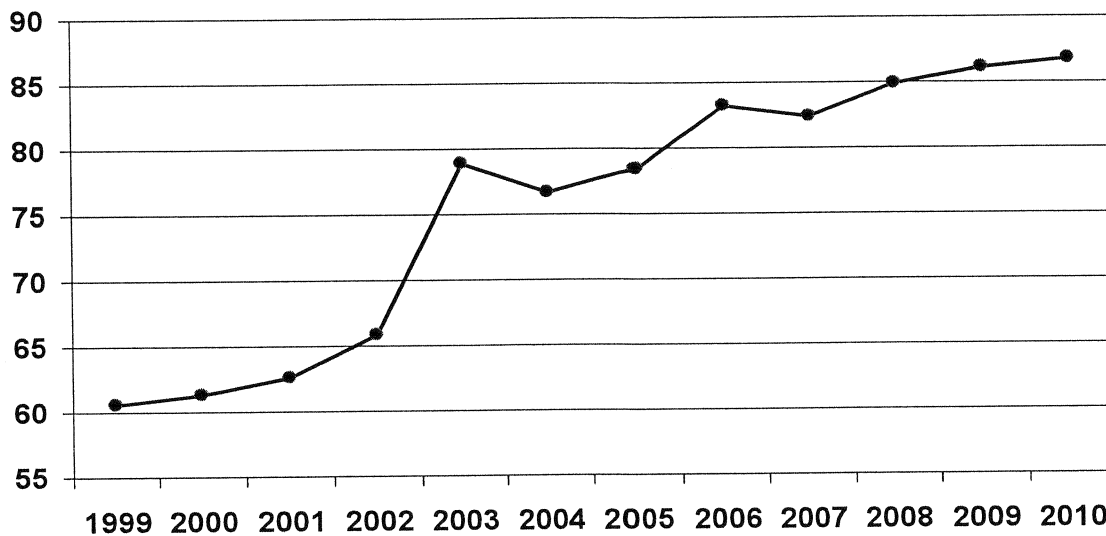


Table 1 shows the percent of drivers, passengers, and combined occupants who were wearing seat belts and the change across study years (weighted).

Table 1: Seat belt Use in Alaska, 2004-2010

		2010	2009	2008	2007	2006	2005	2004
All Vehicles	Share of Drivers Belted	.874	0.866	0.859	0.828	0.834	0.785	0.772
	Share of Passengers Belted	.846	0.841	0.812	0.810	0.825	0.779	0.750
	Share of Occupants Belted	.868	0.861	0.849	0.824	0.832	0.784	0.767
Cars	Share of Drivers Belted	.879	0.888	0.878	0.856	0.842	0.797	0.798
	Share of Passengers Belted	.852	0.854	0.801	0.828	0.829	0.777	0.756
	Share of Occupants Belted	.873	0.882	0.862	0.850	0.840	0.793	0.789
Vans	Share of Drivers Belted	.899	0.874	0.898	0.859	0.887	0.838	0.810
	Share of Passengers Belted	.869	0.879	0.864	0.841	0.881	0.837	0.800
	Share of Occupants Belted	.892	0.876	0.889	0.854	0.885	0.838	0.808
SUVs	Share of Drivers Belted	.898	0.883	0.883	0.854	0.869	0.827	0.812
	Share of Passengers Belted	.876	0.858	0.844	0.834	0.853	0.830	0.786
	Share of Occupants Belted	.894	0.879	0.874	0.850	0.865	0.827	0.806
Trucks	Share of Drivers Belted	.830	0.813	0.792	0.753	0.770	0.716	0.689
	Share of Passengers Belted	.789	0.782	0.764	0.742	0.761	0.706	0.685
	Share of Occupants Belted	.822	0.806	0.787	0.750	0.768	0.714	0.689

In Alaska, 80 percent of drivers and 76 percent of passengers were wearing seatbelts. The share of occupants wearing seatbelts was 79 percent. This is an increase of 13 percent above that observed in 2002. The rate for occupants of cars was higher than that for trucks. Eighty-two percent of car occupants compares with 70 percent of truck occupants.

Table 1 shows the percent of drivers, passengers, and occupants who were wearing seatbelts. Data cover 1997 to 2003.

Table 1: Seatbelt Use in Alaska, 1997-2003

		2003	2002	2001	2000	1999	1998	1997
All Vehicles	Share of Drivers Belted	0.797	0.663	0.634	0.615	0.609	0.613	0.604
	Share of Passengers Belted	0.762	0.643	0.602	0.607	0.599	0.601	0.572
	Share of Occupants Belted	0.789	0.658	0.626	0.613	0.606	0.610	0.596
Cars	Share of Drivers Belted	0.826	0.700	0.675	0.656	0.652	0.653	na
	Share of Passengers Belted	0.790	0.664	0.625	0.646	0.631	0.632	na
	Share of Occupants Belted	0.818	0.691	0.662	0.654	0.646	0.648	na
Trucks	Share of Drivers Belted	0.707	0.556	0.518	0.490	0.478	0.513	na
	Share of Passengers Belted	0.670	0.568	0.528	0.474	0.489	0.509	na
	Share of Occupants Belted	0.699	0.558	0.520	0.487	0.481	0.512	na

According to federal guidelines, the reliability of survey results should be expressed as the ratio between the standard error and the percent of the target population observed to wear seatbelts. This ratio, termed the relative standard error, should be less than or equal to five percent. Using SPSS statistical software, we calculated a standard error of .00258. The relative standard error for the percent of occupants who are belted is .0033.

There were 126 motorcycles in the sample. Sixty-six percent of drivers were wearing helmets. The number of motorcycles is too small to use in more detailed analysis and still be confident in the reliability of the results.

We noted in our survey when children were outboard passengers. Area wide, 75 percent of children were wearing seatbelts. This is an increase of 22 percent over 2002. In Anchorage, 78 percent of children were wearing seatbelts. The number of children in our samples from other areas is too small to use in more detailed analysis. Statewide, we observed 519 children riding as outboard passengers.

It is important to note that survey results reflect restraint use by the driver and outboard passenger in a probability sample of vehicles drawn from the most populated areas of Alaska. Included in this area are the Municipality of Anchorage, the Matanuska-Susitna Borough, the Juneau Borough, the Kenai Peninsula Borough, and the Fairbanks North Star Borough.

Table 2 presents the share of drivers, passengers, and occupants who were wearing seatbelts by region. The table presents data from 1997 through 2003.

IMPLEMENTATION OF ALASKA'S PRIMARY SEAT BELT LAW

MAY 2006

ALASKA SEAT BELT FACTS

- May 1989: Alaska State Legislature passes a law requiring seat belt use by all occupants in a motor vehicle. Failure to wear a seat belt for anyone over 16 years of age is a secondary traffic violation.
- January 2006: Alaska State Legislature amends the seat belt law making it a primary traffic violation.
- January 31, 2006: Alaska Governor Frank Murkowski signs the primary seat belt bill into law.
- May 1, 2006: Alaska's primary seat belt law goes into effect.
- Primary seat belt law permits a law enforcement officer to stop a vehicle and issue a citation for a seatbelt violation even if it was the only violation observed.

ALASKA'S PRIMARY SEAT BELT LAW

WHAT IT IS...

- It is a way to save an estimated seven lives, 102 serious injuries and \$29 million annually in Alaska. Nearly 75% of the costs of motor vehicle crashes are borne by people not involved through increased taxes, insurance premiums, medical, and legal costs.
- It is a no-cost way to increase seat belt use by Alaska's citizens. Use of seat belts is an effective and proven method to prevent death and injuries in motor vehicle crashes.
- It is a way to protect our families and friends from being killed or injured when an unbelted occupant is thrown around a vehicle following a collision.
- It is a way to decrease the fatality rate in Alaska. States with primary seat belt laws have consistently lower fatality collision rates than those states with secondary seat belt laws.

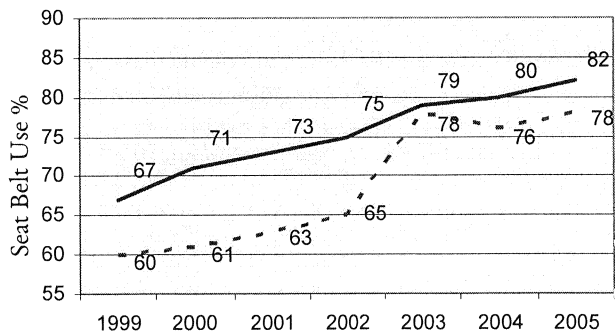
- *Motor vehicle crashes are the leading cause of death for Americans ages 3-33. (Centers for Disease Control & Prevention)*
- *In 2004, 55% of Alaskans killed in motor vehicle crashes were not wearing a seat belt. Seat belts reduce the risk of death in a crash by 50%. (National Highway Traffic Safety Administration)*

WHAT IT IS NOT...

- It is not an infringement on personal rights. We live in a society where we all pay for the cost to treat individuals in need of medical care including those injured who were not wearing a seat belt. As citizens, we have the right not to pay for preventable death and injuries caused by those who choose not to buckle up.
- It is not a revenue-generating public policy. Law enforcement does not receive a direct benefit from seat belt citations and fines.
- It is not a quota program to get law enforcement officers to write more tickets. There is no place for quotas in professional policing.
- It is not a way for law enforcement officers to use the violation as a pretext to stop citizens to gain entry to their vehicles. There is no place in professional policing for biased policing. In states with primary seat belt laws, research has shown no evidence that seat belt enforcement has been used as a tool for biased policing.

Seat Belt Use % by Year

-- -- Alaska — U.S.



Alaska trails the national average for seat belt use. Enactment of a primary seat belt law in other states has resulted in increased belt use rates of 7% to 9%.

WHAT CAN THE PUBLIC EXPECT BEGINNING MAY 1, 2006?

- A coordinated, statewide effort to boost compliance with the seat belt law. Law enforcement will be compassionate, consistent and fair when enforcing the law with the goal of changing the behavior of those citizens who do not buckle up.
- A public education campaign regarding the importance of buckling up and the strict enforcement of the seat belt law.
- An increase in seat belt citations. In other states, the increase in citations issued lasts four to six months following enactment of a primary seatbelt law.
- The beginning of a trend showing a decrease in death and injuries on Alaska's roads and highways.