



Living examples of people with air bags.

Studies Quantify Effectiveness Of Air Bags in Cars

For the first time since air bags became widely available in new cars, researchers have quantified the benefits of air bags in protecting drivers from death and moderate to severe injury. Two studies report that:

Driver deaths in frontal crashes were 28 percent lower in air bag-equipped cars, compared with cars equipped with manual lap-shoulder safety belts only. This finding is based on Insurance Institute for Highway Safety (IIHS) analyses of data from the federal government's Fatal Accident Reporting System.

Moderate to severe injury was 25 to 29 percent lower among drivers of 1990 model cars with air bags than among drivers of 1990 cars equipped with auto-

matic safety belts. Hospital inpatient rates were 24 percent lower among drivers of the cars with air bags. These findings are based on Highway Loss Data Institute (HLDI) analyses of insurance claims information on driver injuries in serious frontal crashes.

"The data bases of these two studies are different, but the findings are both consistent and conclusive—drivers of cars with air bags are substantially less likely to be killed, seriously injured, or hospitalized after frontal crashes," says Brian O'Neill, president of IIHS and HLDI. O'Neill adds that "frontal crashes are the kind in which most occupant deaths occur. They're the kind of crash in which air bags are designed to work."

"Before these studies, we knew about air bag performance only from many individual crash reports. Now we're beginning to assess their overall effectiveness in preventing deaths and severe injuries. Such quantification of air bag effectiveness is

important because so many new cars are being equipped with air bags. More than one-half of all 1992 passenger car models have driver-side air bags, and we're looking forward to virtually all new cars, passenger vans, light trucks, and utility vehicles being equipped with air bags for right front-seat passengers as well as drivers by the 1996 model year.

"The major finding that air bags are highly effective was predicted by the U.S. Department of Transportation, IIHS, and others. These new IIHS and HLDI studies confirm that air bags will save just as many lives and prevent as many injuries as predicted," O'Neill points out. "Even among drivers reported to be using their belts, air bags are important. They reduce deaths among these drivers by 15 percent in frontal crashes. As this indicates, the combination of air bags and safety belts is a winner."

Details and additional findings of the
(Cont'd on Page 2)

AIR BAGS, FINALLY

1952 • The first air bag patent filed.

1970 • U.S. DOT orders automatic protection in cars by 1974.

1972 • Transportation Secretary John A. Volpe amends rule to permit seat belt interlock as an alternative to automatic restraints.

1973 • General Motors President Edward M. Cole, pledges the company will voluntarily build one million air bag-equipped cars in the 1974 model year, and make them standard by 1975. Actual production is limited to 10,000 1974-'75 models.

1974 • Standard modified to allow Volkswagen automatic seat belt to qualify as a passive restraint, and Congress outlaws seat belt interlocks.

1977 • Secretary of Transportation William Coleman negotiates an agreement with Ford, GM, and Mercedes to manufacture cars with air bags in the 1980 model year. This "demonstration program" was an alternative to rulemaking.

1977 • Automatic restraint standard reinstated by Brock Adams, DOT Secretary, with a three-year phase-in to start in 1981. Coleman agreement canceled.

1981 • Requirement canceled by Transportation Secretary Drew Lewis; State Farm and other insurers file suit.

1983 • U.S. Supreme Court finds rescission "arbitrary and capricious," sends back to DOT.

1984 • Standard reinstated by DOT Secretary Elizabeth H. Dole, phasing in air bags or automatic belts over a four year period beginning with the 1987 model year.

1987 • Dole to encourage use of air bags allows driver side air bags to be used until 1994, without automatic protection for outboard front seat passenger.

1991 • Samuel K. Skinner, DOT Secretary, extends rule to light trucks and vans over a 4 year period beginning with 1995 models.

Air Bag Studies

(Cont'd from Page 1)

new air bag effectiveness studies are summarized below.

IIHS analysis of driver deaths: During 1985-'91, 571 driver deaths occurred in cars equipped with air bags. Another 8,045 driver deaths occurred in crashes of comparable cars with manual belts only. The lifesaving benefit of air bags should be concentrated in frontal crashes, so RHS researchers calculated ratios of driver deaths in frontal crashes to driver deaths in crashes without frontal impact. In air bag-equipped cars, this ratio was 1.47. In cars with manual belts only, it was 2.03.

These ratios translate into a 28 percent reduction in driver deaths in frontal crashes in air bag-equipped cars, compared with what would have been expected without the air bags, and a 19 percent reduction in driver deaths overall (all kinds of crashes). The 19 percent reduction is over and above the lives already being saved by the safety belts in cars equipped with air bags.

HLDI analysis of insurance claims for driver injuries: 1990 was the first model year all cars were required to be equipped with air bags or automatic safety belts. HLDI researchers analyzed and compared insurance claims information on the injury and inpatient hospitalization experience of drivers of two groups of cars, 1990 models with air bags and '90 models with automatic belts. The study included information on driver injuries in nearly 4,000 frontal crashes with at least \$5,000 damage to the car.

HLDI researchers found that about one-half of the drivers in frontal crashes with extensive property damage reported injuries. About one in four of the injuries were moderate to serious. About 1 in 13 drivers required inpatient hospital treatment. Drivers of cars with air bags were 25 to 29 percent less likely to have moderate or severe injuries and 24 percent less likely to be hospitalized than were drivers of cars with automatic belts. Results were

standardized for car size and price because 1990 cars with air bags tend to be larger and somewhat more expensive than 1990 cars equipped with automatic belts.

Drivers of cars with air bags had generally lower rates of moderate to severe head and torso injury than did drivers of cars with automatic belts.

For a copy of "Driver Fatalities in Frontal Impacts: Comparisons Between Cars with Air Bags and Manual Belts" or "Driver Injury Experience in 1990 Models Equipped with Air Bags or Automatic Belts," write: Publications, Insurance Institute for Highway Safety, 1005 North Glebe Rd., Arlington Va. 22201

NHTSA: Dealers Should Provide Car Buyers With HLDI Brochure

The National Highway Traffic Safety Administration (NHTSA) says a brochure detailing vehicle collision insurance loss experience compiled by the Highway Loss Data Institute (HLDI) should be made available to consumers at new car dealerships.

"NHTSA has tentatively concluded that collision loss experience data collected and reported by HLDI is the best available indicator of the effect of damage susceptibility on insurance costs," the agency says.

The brochure will contain the latest collision loss data by make and model, providing comparative information on the average loss payment per insured vehicle year for collision claims.

NHTSA agreed to issue the proposal under a settlement with Consumers Union, which last year filed suit to force the agency to provide information on insurance costs for cars based on their susceptibility to damage and crashworthiness.

The action comes 19 years after Congress declared insurance cost information should be provided to car buyers under the Motor Vehicle Information and Cost Savings Act. The purpose of the law was to foster competition to produce cars

that are safer, less damageable, and easier to repair and maintain.

"It's unfortunate that consumers have had to wait so long for this to happen, but I'm glad to see that HLDI data will be even more widely disseminated," says Brian O'Neill, president of HLDI and the Insurance Institute for Highway Safety, which is affiliated with the insurance research organization. "Our supporters established HLDI in order to provide consumers with this kind of information, so they could make informed judgments before buying new cars," says O'Neill, who assisted in the settlement talks between NHTSA and Consumers Union.

The brochure also will refer consumers to NHTSA's hotline number, so they can obtain 35 mph frontal crash test data available through the agency's new car assessment program.

California's Bumper Law Is Major Victory

New car buyers in California will soon be able to consider bumper quality when making their purchasing decisions. The nation's first bumper quality information law, signed recently by Governor Pete Wilson, requires automakers to disclose the strength of the bumpers on every new car they sell or lease beginning Jan. 1, 1992.

The bill provides that each new car have a window sticker that either lists the speed at which the vehicle has been crash tested and sustained no damage to the car or the bumper, or states that the car meets the minimum federal standard of 2.5 mph. Advocates for Highway and Auto Safety, the national safety group of insurers and consumer organizations that pushed for passage of the bill, called it "a major victory for consumers."

For more than 20 years, the Insurance Institute for Highway Safety has conducted annual, low-speed crash tests that document the wide disparities in bumper performance of various car models.

Parking Lots: Hazard Zone for Fender-Benders

Urban areas are the site of the highest number of injury and property damage crashes in the United States, the bulk of which involve property damage only. Yet little is known about how these crashes occur or the types of vehicular damage they cause. That's because many of them either don't appear in official crash records or fall below the police reporting thresholds.

In an effort to learn more about these low speed urban crashes, commonly referred to as fender-benders, the Insurance Institute for Highway Safety conducted a survey of passenger cars at 16 insurance drive-in claims centers in four major metropolitan areas. The centers are a good source of information because crash-involved vehicles that can still be driven can be brought in for damage assessments and repair estimates.

The survey reveals that parking lots can be hazardous places. That's where about 20 percent of all claims in the study occurred, often when one vehicle was parked or standing. As the Institute points out, "for many parking lots, designs that incorporate safety are compromised for the sake of cost issues, such as narrowing the width of parking stalls and aisles."

Damage from bumper underride was also found to be common in low speed urban crashes. In bumper underride, a vehicle's bumper contacts the bottom surface of, or goes underneath, the face bar of the other vehicle. Front bumper underride is when the vehicle's front bumper assembly contacts the front or rear of the other vehicle. Rear bumper underride is the reverse condition.

The survey finds that front bumper underride occurred in 11 percent of all claims involving frontal damage sustained in colli-

sions with other cars and in 21 percent of claims involving such damage to cars when they collided with vans, pickups, utility vehicles, or trucks. Rear bumper underride occurred in 20 percent of cars with rear-end damage sustained in collisions with vans, pickups, utility vehicles, or trucks, and in just 5 percent of cars sustaining rear-end damage in car-to-car collisions.

Uniform bumper heights and "bumper systems configured to align during real-world multiple vehicle collisions" are among the measures suggested by the Institute to deal with this problem.

Bumpers, fenders, rear quarter panels, and lamps were the car parts most often damaged in urban low-speed crashes, according to the survey. Damage to front bumpers was accompanied by damage to front lamps 72 percent of the time, and damage to rear bumpers was accompanied by damage to rear lamps 40 percent of the time. "This suggests that bumper



designs need to be reassessed in terms of real-world damage and that more adequate protection is needed for both front and rear lights," says the Institute.

For a copy of "Collision Types and Damage to Cars Brought to Insurance Drive-In Claims Centers" by JoAnn K. Wells, S. William Gouse, and Allan F. Williams, write: Communications Department, Insurance Institute for Highway Safety, 1005 North Glebe Road, Arlington, Va., 22201.

Safety Board Warns Of Risks With Onboard Vapor Recovery Devices

The National Transportation Safety Board says it sees no reason to change its mind about the potential hazards of onboard vapor recovery devices now under consideration by the Environmental Protection Agency (EPA).

In a letter to EPA, James L. Kolstad, chairman of the safety board, said the board's 1987 study and review of a recent report by the National Highway Traffic Safety Administration (NHTSA) and California Air Resources Board make it clear that the best alternative for preventing vapors escaping fuel tanks from polluting the atmosphere is to require vapor recovery systems on fuel pumps, rather than on cars.

The safety board says the devices so far considered by EPA will raise vehicle exhaust temperatures, increasing the risk of hose deterioration and "increase the potential for ignition of other materials either on the car or on the ground. Increased exhaust temperatures will also increase the temperature of the gasoline tank, producing additional vapors that must be collected and burned off and further increasing the exhaust temperature." Gasoline tank temperatures have been cited in emergency vehicle fires. The prototype systems have also caused sudden stalling due to vapor lock, which "will definitely increase the risk of an accident," says the board.

In a letter responding to questions by the EPA, the Insurance Institute for Highway Safety says, among other things, that the larger size of the onboard vapor recovery systems EPA is considering will increase the risk of fires because it is more difficult to shield the systems from rupture in a crash and, because the canisters hold more vapor than current systems, there is a greater amount of fuel available for burning.

The EPA requested, and the Institute provided, an analysis of Center for Auto Safety claims supporting installation of onboard vapor recovery devices. The Institute was unable to find anything substantive in the Center's testimony that could support its conclusion that the devices are safe, Adrian K. Lund, assistant vice president for research, told EPA. "One can only conclude," says Lund, "that the Center for Auto Safety is willing to ignore valid engineering analyses that point to increased injuries and fatalities from crash fires in order to obtain a theoretical reduction in health risk from air pollution."



The National Safety Council also urged EPA to proceed cautiously: the "nation's commitment to improved environmental quality could be seriously undermined if new control technologies proved to increase, rather than reduce, health risks."

EPA will decide whether to require automakers to install the larger vapor recovery devices after NHTSA submits its final report, a representative said. Congress directed EPA to issue a final rule requiring onboard refueling vapor recovery devices, unless after consulting with the Department of Transportation, the devices are deemed too risky. The EPA has estimated onboard vapor recovery devices could be expected to prevent about 50 new cancer cases annually, reduce ozone formation, and lower the risk of respiratory ailments.

GAO Is 'Just Plain Wrong' On Small Car Risks

Brian O'Neill, president of the Insurance Institute for Highway Safety, labels "just plain wrong" a General Accounting Office's (GAO) claim that the increasing proportion of light cars on the road since the 1970s hasn't increased the highway fatality rate. "The rate is much higher than it would have been without an increase in the proportion of light cars," O'Neill says, "and GAO's own numbers prove it."

O'Neill cited the following specific problems with the GAO report:

According to the GAO report, "Have Automobile Weight Reductions Increased Highway Fatalities?", the overall fatality rate for newer cars declined by 13 percent—from 23.9 to 20.9 per 100,000 registered cars. But, if the newer cars had the same mix by weight as the older cars, the overall fatality rate would have been 15.7 instead of 20.9 (computed as a weighted average of the individual weight class rates using 1976 through '78 registration percentages as weights). In other words, says O'Neill, "GAO's own results show that the shift to lighter cars between 1974 and '77 and 1984 and '87 model years resulted in an annual increase of 5.2 occupant deaths for every 100,000 1984 through '87 cars registered."

Another problem is that, according to GAO, automobile downsizing has two roughly offsetting effects. One is to reduce the crashworthiness effect of car size, a safety minus. The other is to reduce the aggressivity effect of car weight, a safety plus. "It's true that a uniform distribution of weights—not just passenger car weights, but all vehicle weights—would be desirable in multiple-vehicle crashes," O'Neill notes. (Uniformity of weights had no influence in single-vehicle crashes.) "But," O'Neill continues, "passenger cars share the road with light trucks, vans, utility vehicles, and medium and large trucks.

This makes a uniform vehicle weight scenario impossible."

If a more uniform car weight distribution were, in fact, offsetting the disadvantages of weight reductions in newer cars, as GAO claims, then multiple-vehicle crashes would account for a smaller proportion of occupant deaths in the newer cars. But they don't. According to GAO's own results, multiple-vehicle crashes accounted for 55 percent of deaths in the older cars and 60 percent in the newer cars, so the more uniform weight mix of newer passenger cars isn't resulting in proportionally fewer deaths in multiple-vehicle crashes. It isn't possible to determine definitively from GAO results why this is the case, but a probable explanation is that, as car weight has become more uniform (lighter, on average), there has also been a substantial increase in the population of light trucks, vans, and utility vehicle, which typically are heavier than cars. This means the overall vehicle mix by weight has become less—not more—uniform.

"These problems are troubling," O'Neill says, "because too many people will read GAO's report and conclude we can make cars lighter, usually meaning smaller, without compromising safety. We cannot."

GAO's report has already been cited by advocates of more stringent fuel economy standards as evidence that reducing car weights will not compromise occupant safety. "But it definitely will compromise safety," O'Neill counters, pointing to the GAO report. "Interestingly, GAO reports extraordinarily high fatality rates for very light cars, that is, those weighing less than 1,800 pounds. The 1984 through '87 models in this weight class had a fatality rate of 52.9, more than 250 percent higher than the overall rate for these years and more than 500 percent higher than the rate for the heaviest cars. The most fuel efficient 1984 through '87 cars included the Honda Civic CRX HF and Chevrolet Sprint ER, the weights of which put them in this especially high-risk group," O'Neill states.

Teens: More Than Double Injury Claim Frequencies of Adults

Cars insured for use by teenagers have more than double the injury claim frequencies and overall collision losses of cars insured for adult use only. That's the principal finding of "Injury and Collision Loss Experience by Rated Driver," a new report by the Highway Loss Data Institute (HLDI).

The special report presents comparative loss results for passenger cars insured for various rated driver groups. The term "rated driver" refers to the insured driver of record, not necessarily the driver involved in the crash. Rated drivers are classified by age, gender, and marital status. First-party losses under both personal injury protection coverages and collision coverages are presented.

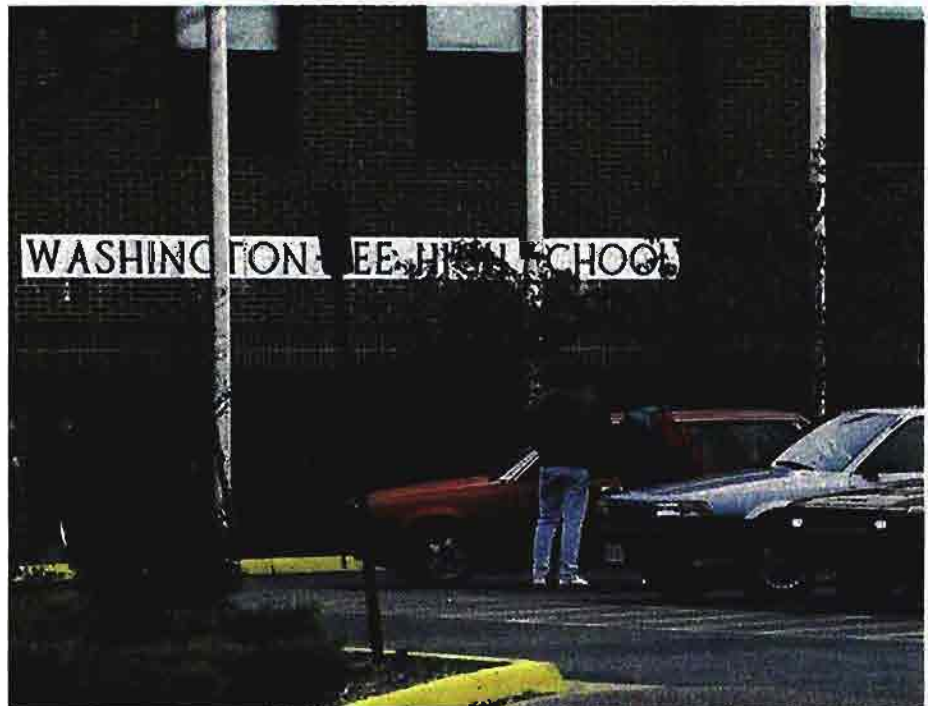
Collision results are for 1988 model year cars in their first three years of availability. Injury results combine the first three years of experience for 1987 and 1988 model year cars with the first two

years of experience for 1989 model year vehicles.

When teenage drivers are separated by gender, the HLDI report shows that cars insured for female teenagers have much higher injury claim frequencies than do those insured for male teenagers, although cars insured for male teenagers generate higher percentages of more costly injury claims. Collision losses are much higher for cars insured for teenage boys than for those insured for teenage girls.

Injury claim frequencies for all rated driver categories, in general, are worse for smaller vehicles, with the notable exception that midsize sports models generated higher injury losses than small sports models. Collision losses for three rated driver groups, adults, all teenagers, and all other youthful operators (males ages 21-24 and unmarried females ages 21-24) were highest for small and midsize sports models and lowest for large station wagons and passenger vans.

For a copy of the report "Injury and Collision Loss Experience by Rated Driver" (A-37) write: Highway Loss Data Institute, 1005 North Glebe Rd., Arlington, Va. 22201.



Data on Restraint Systems Should Be Included in VINs

Vehicle identification numbers (VINs) provide a wide range of information to motor vehicle departments and the public. The 17-digit code lists not only the make and model but country of origin, manufacturing plant, and production sequence



number. VINs for passenger cars are required to contain information on the restraint system, but VINs for pickups, vans, and utility vehicles are not.

This will make it difficult for researchers to evaluate the performance of various automatic restraints as they become more widespread in these vehicles, says the Insurance Institute for Highway Safety, in a letter asking the National Highway Traffic Safety Administration to amend

the VIN safety standard 115. Research opportunities are being lost, the Institute says. Chrysler, for example, provided optional air bags in 1991 passenger vans, but researchers cannot study air bag performance because their VINs do not include that information.

Caprice: Fewest Injury Claims in Recent Models

The Chevrolet Caprice four-door, a large car, had the fewest injury claims among 1988, '89, and '90 passenger car models analyzed by the Highway Loss Data Institute (HLDI). It led a field of 28 other large and midsize vehicles with results more than 30 percent better than the all-car average.

Two small cars, the two-door and four-door Hyundai Excel models, had the highest claim frequencies of the 123 vehicle series reported. Small cars accounted for all but four of 19 cars with results more than 30 percent worse than average.

These are among the highlights of HLDI's recent "Insurance Injury Report." It presents the frequency of injury claims and the frequencies of claims with medical payments exceeding \$250, \$500, and \$1,000 for those vehicles with sufficient exposure.

In addition to passenger cars, the HLDI

report covers 1988, '89, and '90 cargo vans, pickups, and utility vehicles. The results show that large utility vehicles, the Chevrolet and GMC Suburbans, had the fewest injury claims, while small pickups and small utility vehicles fared worst.

Although, in general, small passenger cars had the highest claim frequencies and large cars the lowest, there was still considerable variation among the vehicle series within each size group. For example among midsize four-door models the highest relative claim frequency of 132 for the Nissan Stanza was more than double the lowest result of 65 for the Buick Century. The average for all 1988, '89, and '90 cars is represented by 100.

For a copy of "Insurance Injury Report (190-1); 1988-'90 Passenger Cars, Cargo Vans, Pickups, and Utility Vehicles," write: Highway Loss Data Institute, 1005 North Glebe Road, Arlington, Va. 22201.

Mature Driver Course Fails to Lower Crash Involvement

A mature driver improvement course has had no positive effect on drivers' subsequent crash involvements, researchers for California's Department of Motor Vehicles report.

Evaluation of the driving records of 121,994 persons who took the mature driver course from 1988 through 1990 shows that graduates consistently had far fewer subsequent convictions for traffic violations than did the 216,258 comparison drivers aged 55 or more who did not take the course. But "no evidence was found that the mature driver improvement program has any consistent positive short- or long-term effect, as evidenced by adjusted rates, on subsequent casualty accident (or total accident) risk," the researchers say.

Although participating drivers had fewer subsequent convictions, the education may not be the reason, the researchers point out. So far, those who choose to take the course have had fewer convictions than the comparison groups, even prior to taking the course.

The driver education course is available to California residents 55 years or more, who are then eligible for an insurance discount. The course is given by driver improvement schools and the American Association of Retired Persons (AARP) and must be repeated every three years to keep the discount. Attendees learn about defensive driving, traffic laws, the effects of fatigue, and other issues.

Each year the department reports on the program's effects to the legislature. An earlier study of the 1988 graduates found that after six months, that group had fewer subsequent crashes, but the effect disappeared over time and subsequent studies of 1989 and 1990 graduates found no difference in the six-month crash rates.

The researchers also analyzed the six-month driver records of 1990 graduates to

see whether courses sponsored by the AARP might have a different effect than the other mature driver courses. Although AARP graduates had slightly fewer subsequent crashes and convictions, the differences were not significant, the researchers said.

For a copy of "Annual Tabulations of Mature Driver Program Driving Record Comparisons — 1991," by Kevin K. Foster, write Research and Development Section, Program and Policy Administration, California Department of Motor Vehicles, P.O. Box 932345, Sacramento, Calif. 94232-3440.

NHTSA Moves To Allow Daytime Running Lights

In response to a petition filed by General Motors, the National Highway Traffic Safety Administration (NHTSA) has issued a proposal to permit the installation of daytime running lights on vehicles. If adopted the regulation would preempt state laws that unintentionally bar their use.

The Insurance Institute for Highway Safety supports the proposal, having filed similar petitions in 1985 and 1988, saying studies have repeatedly shown that daytime running lights are an inexpensive way to reduce the incidence of daylight collisions between vehicles. In a fleet study recently sponsored by the Institute in Saskatchewan, researchers found most types of daytime two-vehicle frontal and side crashes were reduced by 28 percent. Since 1989 all new cars sold in Canada must be equipped with daytime running lights. Although some argue there is no need for a nationwide running light requirement in the United States, the Institute says there was a 22 percent effect on relevant crashes during periods of full daylight, "suggesting that there will be a substantial positive effect of daytime running lights at more southern latitudes."

GM requested the rule after receiving queries from fleet buyers seeking bids on

trucks equipped with daytime running lights. A review of state lighting laws indicated the special lights could be affected by the laws of 40 to 45 states. The American Association of Motor Vehicle Administrators has already adopted a resolution in favor of changing state laws to permit their use.

GM asked the agency to adopt Canadian daytime running light specifications in order to facilitate the transfer of existing daytime running light designs to models designated for sale in the United States. NHTSA says the Canadian regulations permit light intensity levels of up to 7,000 candela. That could result in excessive glare, the agency says, proposing that lights manufactured for use as daytime running lights be no brighter than 2,600 candela, slightly less than the brightness of a headlamp's low beam.

That may be too restrictive, says the Institute, and a number of manufacturers who commented on the proposal. The reason that this may be too restrictive is that NHTSA's own research showed that daytime running lights did not help peripheral detection until the intensity was raised to 1,600 candela, the highest intensity studied. This suggests that 1,600 candela may be a minimum requirement and that substantial improvements in conspicuity and crash reduction may be achieved with brighter lamps. The discomfort glare that NHTSA reported was for headlamps from cars located very close behind and seen with sustained viewing in the rear view mirror. In the real world, glare would be much more transient.

Navistar, a manufacturer of medium and heavy trucks, Honda, Chrysler, Volvo, Ford, Volkswagen, and the U.S. Motor Vehi-

cle Manufacturers Association all asked the safety agency to adopt the Canadian standard, saying there is no evidence of a glare problem. But California's Highway Patrol says that although headlamp use proves helpful on open roads, they are concerned that in urban areas increased use of headlamps might reduce motorists' ability to distinguish turn signals. Ohio's Highway Safety Department, however, supports the NHTSA proposal as written, as does the Virginia State Police.

Daytime Running Lights Reduce Two-Vehicle Crashes in Canadian Study

A Saskatchewan fleet of government-owned vehicles was involved in dramatically fewer crashes after being equipped with lights that operate during daytime, a Canadian study supported by the Insurance Institute for Highway Safety shows.

Among vehicles equipped with the day-



time running lights, crashes involving two vehicles approaching from the front or side were reduced 28 percent, researchers report. The 28 percent reduction in these crashes, in which daytime running lights are most likely to increase conspicuity, translates into an overall 15 percent reduction in all daytime two-vehicle crashes, the researchers say.

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U.S. Strongly Supports Efforts to Combat Drinking and Driving

A survey of driver attitudes by the Gallup Organization for Mothers Against Drunk Driving (MADD) shows continuing and widespread public support for efforts to combat drinking and driving.

When asked what they considered to be major highway safety problems, 39 percent of the 9,028 respondents cited drinking and driving or drunk driving, and 22 percent picked speeding. When asked to rate six safety problems, 95 percent identified drivers under the influence of alcohol as a major problem and 68 percent tagged speeding.

Over 70 percent said they favor or strongly favor the use of sobriety checkpoints to screen for impaired drivers and 59 percent supported stronger penalties for repeat offenders.

The survey, funded by State Farm Insurance Companies and the Gallup Foundation, also found that the public is deeply concerned about teenage and young adult drinking and driving. The perception that this group has a particular problem ought to encourage greater efforts to reach younger drivers, said George Gallup, Jr., cochairman of the foundation.

The survey also shows that many people have been personally affected by drinking and driving. Forty-two percent say they knew someone who had been killed or injured by a drunk driver. Fifty-five percent said they knew someone who had been convicted of drunk driving, and nearly

one-half of those said those experiences had affected their own attitudes toward drinking and driving.

Micky Sadoff, MADD's outgoing president, said the organization will focus on achieving stricter enforcement of state laws prohibiting the sale of alcohol to minors and legislation to suspend the license of drivers under the age of 21 caught with any measurable level of alcohol. Four states—Arizona, North Carolina, Oregon, and Wisconsin—have enacted "not a drop laws" prohibiting minors from driving with any measurable alcohol in their bloodstream. MADD also will work to lower the legal BAC limit for drivers 21 or older to 0.08, a step already taken by California, Maine, Oregon, Utah, and Vermont and will

encourage state passage of administrative license revocation laws and greater use of sobriety checkpoints.

Sadoff also was joined by Edward B. Rust, Jr., president of State Farm, and James L. Koistad, chairman

of the National Transportation Safety Board, a strong supporter of administrative license revocation laws. State Farm, Rust says, has become concerned that the nation's downward trend in alcohol-related deaths is beginning to weaken. During the winter holidays, the company will write to policyholders, asking them to use the designated driver concept and to support such efforts in their communities. State Farm also plans a national advertising campaign to bolster the effort. "In tandem with that," says Rust, "State Farm will move legislatively to lower the legal blood alcohol content limit for drivers of private and commercial vehicles in every state."

Daytime Running Lights Reduce Two-Vehicle Crashes in Canadian Study

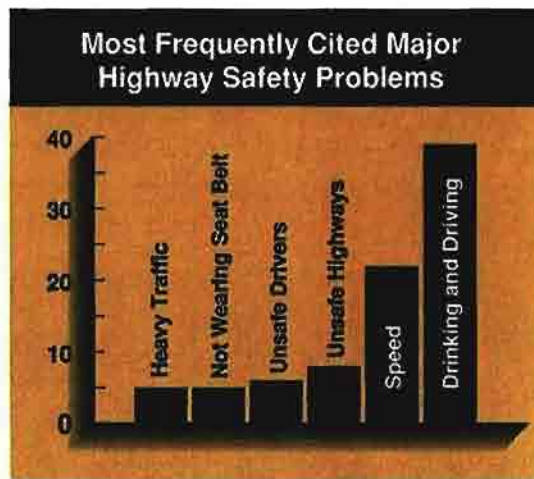
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The researchers examined crashes of vehicles with and without daytime running lights owned by the Central Vehicle Agency of the Province of Saskatchewan between Jan. 1, 1982, through Dec. 31, 1989, comparing them with a random selection of police-reported two-vehicle collisions. With a few exceptions, all types of two-vehicle side and frontal crashes occurring during daylight or twilight, defined as within 45 minutes of the hours of sunrise and sunset, were included in the analysis.

"There are indications that the crashes that daytime running lights prevent caused more than average levels of injury and fatality and higher than average repair costs," the researchers say. "This means that the reduction in crashes due to daytime running lights may be even more important than would be implied by this large number of potentially prevented crashes."

Beginning with the 1989 model year, the Canadian Ministry of Transport required new vehicles to be equipped with daytime running lights. A number of studies in Scandinavia and the United States demonstrate that daytime running lights could increase the ability of drivers to detect oncoming vehicles in time to avert crashes. The reported relevant crash reductions in Scandinavian countries have ranged from 23 to 40 percent and in the United States from 7 to 32 percent.

For a copy of "The Effect of Daytime Running Lights on Crashes Between Two Vehicles in Saskatchewan: A Study of a Government Fleet," by Gordon A. Sparks, Russell D. Neudorf, Anne E. Smith, Kenneth R. Wapman, and Paul L. Zador, write: Publications, Insurance Institute for Highway Safety, 1005 North Glebe Rd., Arlington, Va. 22201.





Thirty-eight percent of pedestrians hospitalized for crash injuries at the Royal Adelaide Hospital in **South Australia** had been drinking, university researchers report. Of the 213 out of 232 patients tested for alcohol during a 22-month period, 29 percent had blood alcohol concentrations (BACs) of 0.10 percent or more and 13 percent had extremely high BACs of 0.20 or more. In the United States, 37 percent of the adult pedestrians killed in crashes during 1990 had BACs of 10 percent or more.

A record 85 percent of **Canadians** are now wearing seat belts, up from 82 percent in 1990. Newfoundland scored the most impressive gain: Its seat belt use rate rose from 84 percent last year to 92 percent in 1991. It becomes the third Canadian province to achieve a use rate of over 90 percent. Quebec and Saskatchewan also have seat belt use rates of 92 percent each, essentially unchanged from last year.

A resolution adopted by the **European Conference of Ministers of Transport (ECMT)** calls on member countries to foster the development of strong automobile advertising codes "compatible with road safety requirements." Concerned that "over 65,000 people are killed each year in road accidents" in member countries, the ECMT says that governments should encourage manufacturers and others who advertise automobiles to formulate agreements on appropriate and inappropriate themes and "to monitor the content of advertising messages." For example the ECMT labels as inappropriate content that "extols performance or power and treats driving as a sport" and urges that it be replaced with appropriate content, such as

"objective information which helps the safety-conscious purchaser to make a rational choice." **Great Britain's** Automobile Association has called on the country's two self-regulatory advertising bodies to voluntarily adopt the ECMT resolution, or to have it imposed by legislation. Britain's Advertising Standards Authority monitors newspaper ads and has no specific language regarding auto advertisements, while the Independent Television Commission code does specifically refer to car ads, although "it is not as stringent as the resolution stipulated by the ECMT," according to the Automobile Association.

For Patrol Officers, Alcohol Sensors Are Helpful Screening Tool

Officers on regular patrol duties significantly increase their chances of detecting alcohol-impaired drivers if they use passive alcohol sensors when they stop motorists for infractions, new research by the Insurance Institute for Highway Safety discloses.

On nights when Columbus, Ohio, police officers used the sensors, the number of drivers detected with blood alcohol concentrations (BACs) of 0.10 percent or more increased from 69 percent to 77 percent. And the sensor functioned accurately, warning of likely alcohol impairment for 81 percent of the drivers with BACs of 0.10 or more. When combined with other field studies of their effectiveness in alcohol patrols, the researchers report, "the results indicate a statistically significant increase in the detection of alcohol-impaired drivers when patrol officers use passive alcohol sensors in routine traffic stops."

Passive alcohol sensors are screening devices that officers can use to analyze the alcohol content of air near a subject's

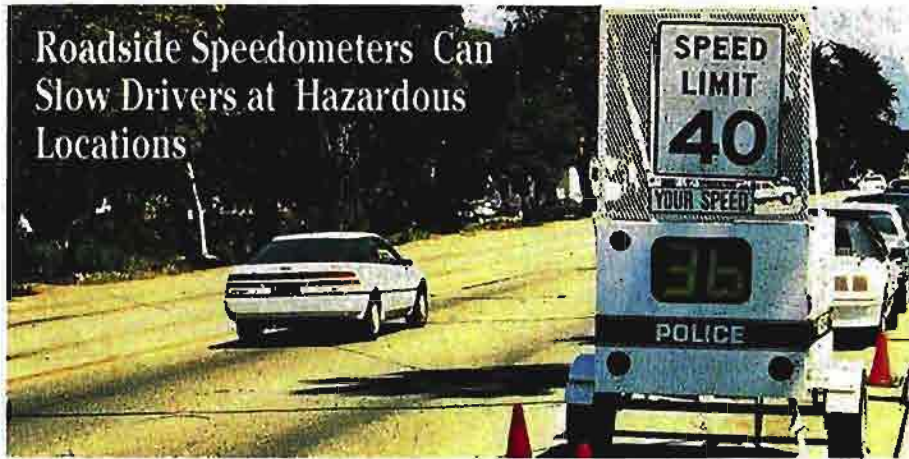
mouth. Properly used, they alert officers to drivers who have consumed alcohol and to the need for more detailed assessment of whether they are impaired.

The sensors also greatly increased the likelihood that drivers with BACs of 0.05 percent to 0.99 percent would be detected and arrested. On nights officers used the sensors, 37 percent of the drivers encountered with BACs in this range were arrested for driving under the influence, compared with 4 percent on nights when the sensors were not employed. Drivers with BACs of 0.05 percent to 0.99 percent usually are not the target of enforcement efforts by Columbus police, the researchers noted. Nonetheless, everyone's driving skills are significantly impaired in that range. "As more states pass laws lowering the per se blood alcohol concentration threshold from 0.10 to 0.08 percent," they point out, "the use of passive alcohol sensors will become even more important."

Although the effectiveness of passive alcohol sensors has been demonstrated in alcohol checkpoint studies, the authors say, this is the first evaluation of their utility for officers on routine city and highway patrol. Sixteen officers participated in the project. Half were assigned to patrol duties in various city precincts, and half were assigned to traffic patrol on local freeways. During the study they performed their usual duties and, on alternate nights, were assigned the sensors to use in conjunction with their usual procedures for screening drivers for signs of alcohol impairment. Observers accompanied the officers on each shift and performed voluntary follow-up breath testing on persons not arrested for driving under the influence. Breath alcohol test results were obtained for 82 percent of the drivers contacted in the study.

For a copy of "Passive Alcohol Sensors in Law Enforcement Screening for Alcohol-Impaired Drivers," by Steven M. Kiger, Diane C. Lestina, and Adrian K. Lund, write: Publications, Insurance Institute for Highway Safety, 1005 North Glebe Rd., Arlington, Va. 22201.





One low-cost way to slow drivers down at hazardous locations such as construction sites and school zones may be to use mobile roadside speedometers and intermittently ticket speeders, a California study indicates.

In urban areas where traffic is dense, police departments often don't have the resources to conduct traditional speed limit enforcement. Recently the Institute supported an evaluation of mobile roadside speedometers in Santa Barbara, California.

Travel speeds were measured using radar calibrated to avoid detection by radar detectors. At the outset the researchers found the speedometers lowered traffic speeds near the speedometer and for short distances beyond. But the downstream reductions were smaller than those seen near the speedometer, and the effect was limited to the times the speedometer was deployed.

The devices were particularly effective when deployed in school zones. Average speeds dropped significantly, with reductions of about 14 percent in school zones where the average speed was 10 mph over the speed limit, and about 7 percent in zones where speeds were about 5 mph over the limit. Unless police conduct some enforcement activities, however, drivers do begin to ignore the speed feedback they receive, the researchers say. But with enforcement, "the effect of the speedometer appeared to last for at least three weeks. This suggests that occasional police enforcement in the vicinity of roadside speedometers

could extend these devices' effect over long periods." For a copy of "The Effects of Mobile Roadside Speedometers on Traffic Speeds: Santa Barbara, California, 1990," by Steven M. Casey and Adrian K. Lund, write: Publications, Insurance Institute for Highway Safety, 1005 North Glebe Rd., Arlington, Va. 22201.

Institute Rebutts 'Absurd' Paper On 65 MPH Speed Limit

A claim that higher speed limits have led to fewer traffic deaths has been labeled "absurd" by the Insurance Institute for Highway Safety. In a paper entitled "Did the 65 mph Speed Limit Save 3,113 Lives?", by Charles A. Lave, of the University of California at Irvine, contends that the decision by 38 states in 1987 to raise the speed limits on their rural interstates to 65 mph resulted in an overall decline in traffic fatalities in 1987 and 1988, compared with the eight states that retained 55.

This claim contradicts a consistent body of evidence that higher speed limits have led to additional fatalities and injuries. Studies by the U.S. Department of Transportation, the Insurance Institute for Highway Safety, and other researchers estimate that a 20 percent increase in fatalities on rural interstates is directly attributable to the higher limits.

The Institute faults Lave's statistical methods as well as his conclusion. For ex-

ample Lave uses the eight states that retained the 55 mph speed limit as a control group for the 38 states that raised limits. A control group should be similar enough to a treated group to enable a researcher to determine what would have happened if no change had occurred. The eight states in question are located primarily in the densely populated northeast, and Lave provides no evidence that they could have been expected to perform similarly to the 38 states that raised speed limits.

In addition the Institute points out that the 65 mph speed limit on rural interstates became effective in the 38 affected states between April and November of 1987, and many of the states had the higher limit for no more than half of that year. Yet more than two-thirds of the fatality rate reduction that Lave attributed to speed limit changes occurred between 1986 and 1987. The much smaller fatality rate reduction that occurred in the 38 states between 1987 and 1988 was more than matched by the eight states that retained 55 mph. Thus Lave's data indicate no further reduction in fatality rate in 1988, implying that much of his claimed effect of raising speed limits preceded the actual limit change. As the Institute notes, no effect can precede its cause.

Fatality rates are also known to be affected by factors such as the economy, laws to control alcohol-impaired driving, and seat belt use laws and their enforcement. Changes in these factors that occurred between '86 and '88 are ignored by Lave in his analysis.

Although Lave provides no evidence that the change in the speed limit was responsible for the change in the fatality rate, he assumes a cause and effect relationship between the two variables. He attempts to justify this claim with the supposition that higher speed limits on rural interstates led to a reallocation of police enforcement resources to other roads and to other problems although there is scant evidence for this supposition.

"Unfortunately, the highway safety field seems to be plagued with this kind of non-

sensical research, which the competent researchers have to spend time rebutting," said Brian O'Neill, Institute president.

For a copy of "Comments on 'Did the 65 mph Speed Limit Save 3,113 Lives?'" by Paul Zador and Adrian Lund, write: Publications, Insurance Institute for Highway Safety, 1005 North Glebe Rd., Arlington, Va. 22201.

Congress Gives NHTSA Increase for Research

Under the 1992 Department of Transportation (DOT) spending bill signed by President George Bush, the National Highway Traffic Safety Administration research programs received a 20 percent increase, which the House and Senate appropriations committees say is designed to support aggressive policymaking.

Altogether Congress earmarked \$122.7 million for NHTSA's operations and research programs. Another \$130 million was appropriated for state and community highway safety grants, and \$20 million for alcohol safety incentive grants. NHTSA's research program budget received \$57.2 million, a 7 percent increase over the administration's budget request and \$9.4 million more than the \$47.8 million appropriated in 1991.

NHTSA was directed to "move aggressively to follow up the existing side impact rule" with a supplementary rulemaking to limit head injuries in side crashes. The recently adopted rule limits chest and pelvic injuries in side crashes, but head impacts, the chief cause of death and serious injuries, are not addressed by the regulation. Five million dollars is set aside for biomechanical research, in large part to support the new side impact rule. Another \$500,000 was appropriated for work on the relationship between occupant injuries and passenger compartment intrusion in high speed crashes.

Crash avoidance research associated with DOT's intelligent vehicle and highway systems (IVHS) programs will receive \$7.5 million. NHTSA must provide a detailed

five-year research program before May 1, 1992, to outline human factors research essential to development of IVHS technology. A \$1.5 million request for a \$32 million advanced driving simulator was denied.

The Senate report cited an Insurance Institute for Highway Safety study that disclosed that underage youths without false identification were able to purchase beer in 97 out of 100 attempts in Washington, D.C., and provided \$225,000 for a model program to reduce underage drinking and driving in the Washington, D.C., area.

The final measure also directs the Federal Highway Administration to issue by Jan. 15, 1992, a proposal to ban the use of radar detectors in commercial interstate trucking operations. Such a rulemaking has been sought by the Institute and seven other organizations.

The Senate report urged NHTSA to require antilock brakes for heavy trucks and buses soon and directed the agency to report on the test results of antilock systems and other braking improvements.

The agency must also provide detailed reports on improving roof crush resistance, a rollover prevention standard, and pedestrian impact protection.

Separately NHTSA was directed to compare data from new car assessment program (NCAP) crash tests with actual injury and fatality data by make and model. The \$2 million for NCAP includes funds for developing new ways to ensure that results are accessible to consumers.

National Belt Use Campaign Clicks Across the Country

During a summer long national belt use campaign, seat belt use rose from 50 to 54 percent among drivers in 19 urban regions, the largest three-month gain in the nation's history, says Samuel K. Skinner, Secretary of the U.S. Department of Transportation.

The 19-city survey was conducted prior to Labor Day, when state police conducted their third special enforcement blitz aimed at raising seat belt and child restraint use and clamping down on drinking drivers. The surveys, conducted quarterly for the National Highway Traffic Safety Administration (NHTSA), provide the most reliable national data on driver belt use.

Surveys conducted by the states "indicate a composite 59 percent use rate for the nation," Skinner says. At the start of the year, only Hawaii had reported belt use in excess of 70 percent. By the end of the summer, three more—California, Maryland, and Oregon—reported belt use had risen to 70 percent or more. The key to the campaign's success, says Jerry Curry, NHTSA administrator, is emphasis on enforcement. NHTSA officials say more than 3,700 police agencies have adopted belt use policies for their own employees, and more than 1,800 agreed to participate in the belt use campaign to achieve a national belt use average of 70 percent by 1992.



Vigorous enforcement is the key to higher belt use rates, says Jerry R. Curry, NHTSA administrator.

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