STATUS REPORT

INSURANCE INSTITUTE FOR HIGHWAY SAFETY

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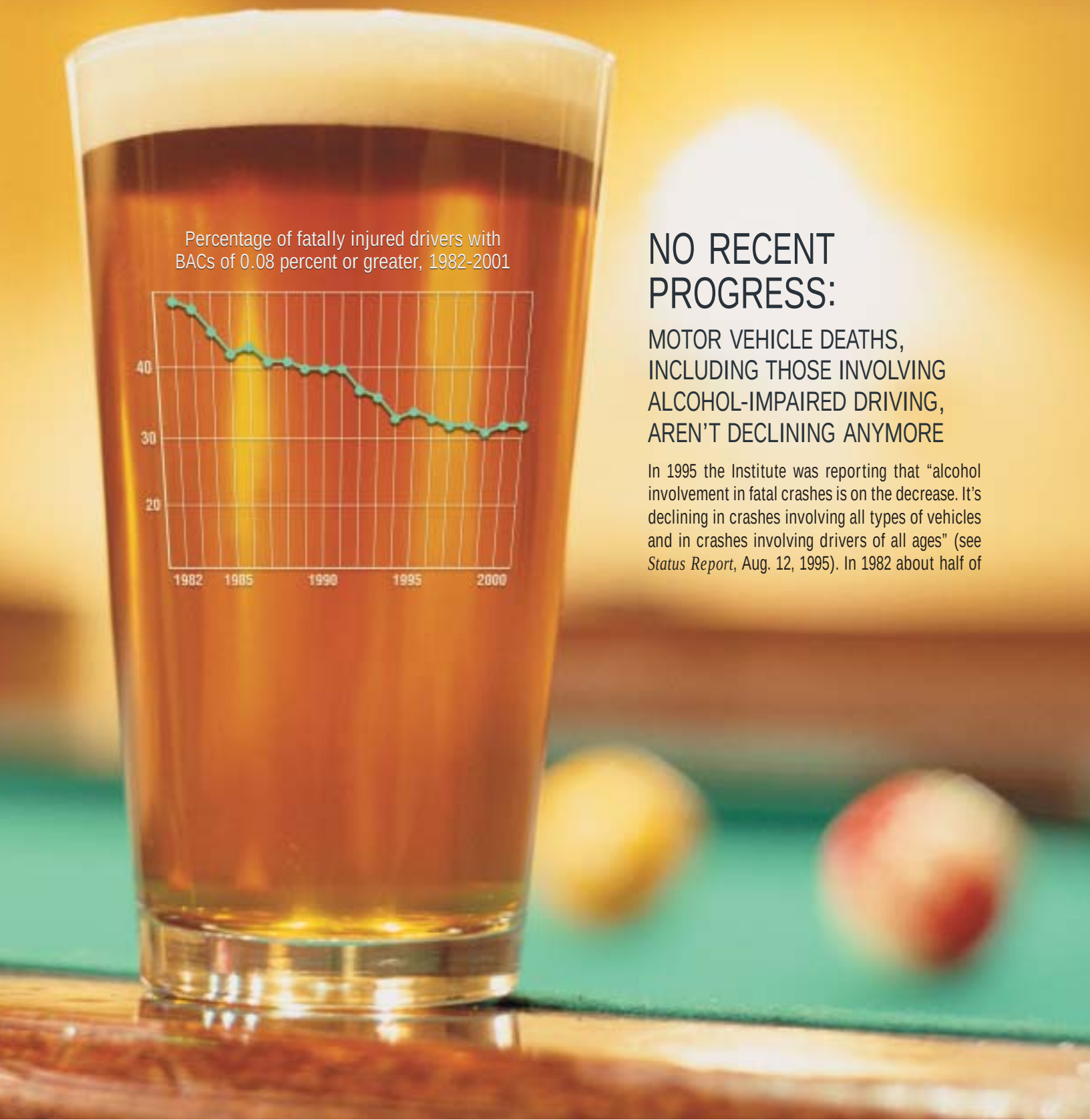


NO RECENT PROGRESS:

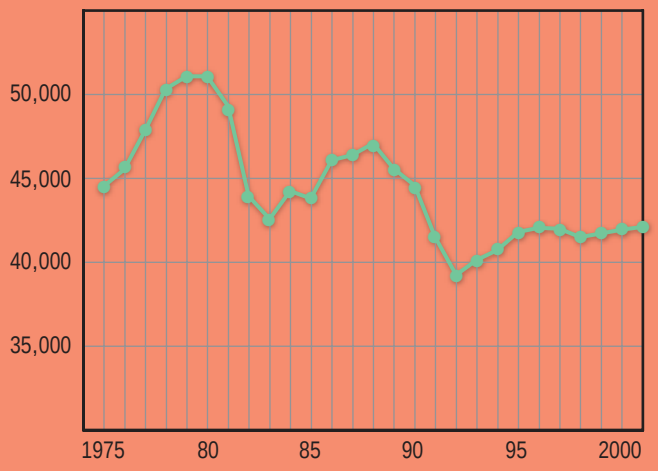
MOTOR VEHICLE DEATHS, INCLUDING THOSE INVOLVING ALCOHOL-IMPAIRED DRIVING, AREN'T DECLINING ANYMORE

In 1995 the Institute was reporting that "alcohol involvement in fatal crashes is on the decrease. It's declining in crashes involving all types of vehicles and in crashes involving drivers of all ages" (see *Status Report*, Aug. 12, 1995). In 1982 about half of

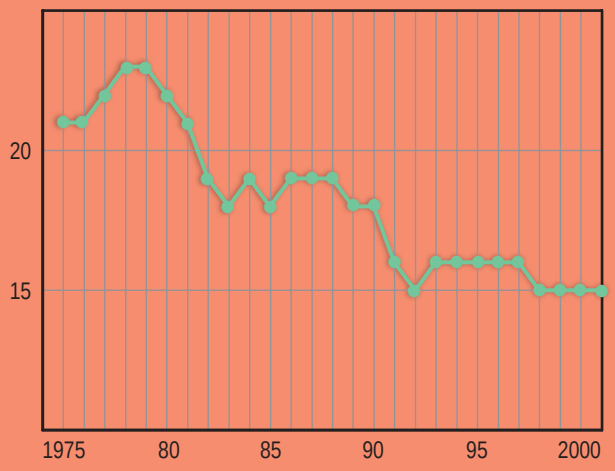
all drivers killed in crashes had blood alcohol concentrations (BACs) of 0.08 percent or more. By 1997 this proportion had declined to 32 percent. But the progress hasn't continued. Since 1997 there has been virtually no change in the proportion of drivers with BACs of 0.08 percent or more who were killed in crashes.

"No matter how you define the problem, whether you define alcohol impairment as a BAC of 0.08 or a BAC much higher, there's been a clear leveling off of progress," says Institute chief scientist Allan Williams. The proportion of fatally injured people with very high BACs (0.15 percent or higher) declined from 35 percent in 1982 to

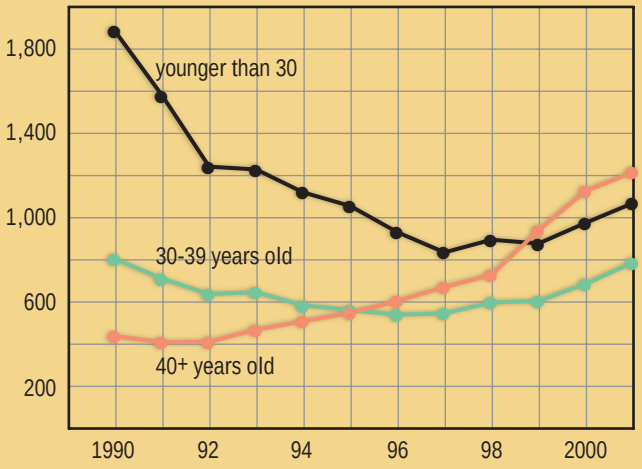
MOTOR VEHICLE DEATHS
Total number of deaths, 1975-2001



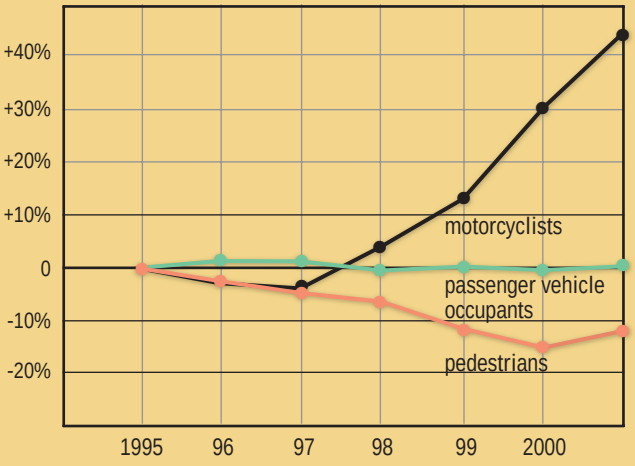
Death rates per 100,000 people, 1975-2001



MOTORCYCLIST DEATHS
Deaths by age of rider, 1990-2001



Percent change in deaths since 1995



23 percent in 1997. Since then, the proportion has remained at 22 or 23 percent.

"It's particularly interesting that the same trend is apparent in both groups, those with very high BACs and those with lower BACs," Williams says. "Often it has been assumed that the people with the higher BACS are hard-core drinkers who weren't affected by the inroads against alcohol-impaired driving during the 1980s and '90s. But they were affected. Deaths did decline among these drivers. They declined substantially, and now the decline has leveled off, just like among drivers with BACs of 0.08 to 0.14 percent."

The trend is apparent among passenger vehicle drivers, tractor-trailer drivers, and motorcyclists. In each group progress was made during the 1980s and '90s to reduce deaths involving alcohol-impaired driving, but by 1997 the inroads had stopped. MADD president Wendy Hamilton blames "public and political complacency" for the lack of progress.

Williams adds, "We do know what will reduce the problem. For example, sobriety checkpoints have been shown to be effective in numerous studies including a recent one from the Centers for Disease Control [see accompanying story]. But the countermeasures we know are effective aren't being widely used."

Alcohol-impaired driving deaths are most common among drivers 21-30 years old. In this group, half of the passenger vehicle drivers who were killed in crashes during 2001 had BACs of 0.08 percent or more. This compares with 9 percent among drivers older than 60.

Among drivers of all ages, the problem is worse among men than women. Thirty-nine percent of male drivers killed in 2001 had BACs of 0.08 or more. The comparable proportion of females was 19 percent.

More facts: Total motor vehicle fatalities aren't changing much year to year (42,116 in 2001 compared with 41,821 in 2000). The death rate per 100,000 people has been constant at 15 since 1998.

Motorcycle deaths go up again: Deaths of motorcyclists have gone up every year since a low of 2,056 in 1997. In 2001 the cyclist toll was 3,109. Deaths of older cyclists have been going up even longer, since 1993. But until 1997 the decline in deaths among younger riders was enough to offset the increase among *(continues on p.4)*

DWI CHECKPOINTS WORK

CDC review finds consistent reductions in crashes, including fatal crashes, involving drivers who have been drinking alcohol

Conducting regular sobriety checkpoints can significantly reduce crashes that involve drivers who have consumed alcohol. This is the major finding of an international review by the Centers for Disease Control of 23 studies of checkpoints. The researchers found that checkpoints reduce "alcohol-related crashes and associated fatal and nonfatal injuries .... Despite differences across studies in design, periods of observation, and outcome measures evaluated, the results were generally consistent in direction and size."

Sobriety checkpoints reduced the crashes involving alcohol by about 20 percent, the researchers found. They pointed to the effectiveness of checkpoints that were conducted at the city, state, and national levels. Checkpoints conducted on both urban and rural roads were effective, CDC reported.

The researchers reviewed studies of two types of checkpoints — those involving random breath tests at which every driver passing through is tested and those at which police must have a reason to suspect a driver has been drinking to demand a breath test. Both types proved equally effective in reducing crashes involving drivers who had consumed alcohol.

"Checkpoints are primarily about deterrence, and both kinds of checkpoints increase the perception among drivers that arrest is likely if they drive while impaired. The result is that drivers aren't as likely to drink and drive in the first place, and alcohol-related crashes are reduced," Institute chief scientist Allan Williams points out. "Checkpoints counter a driver's belief that he or she can drive well enough after drinking to avoid being apprehended. Seeing a checkpoint in progress or going through one reinforces in drivers' minds that enforcement has been stepped up and arrest is likely."

There's a perception in some quarters that checkpoints are less effective than other enforcement strategies because they don't yield as many arrests. "But this is missing the point. The main purpose is to deter alcohol-impaired drivers, and checkpoints do this very well," Williams says.

"Effectiveness of sobriety checkpoints for reducing alcohol-involved crashes" by R.W. Elder et al. appears in *Traffic Injury Prevention* 3:266-74.

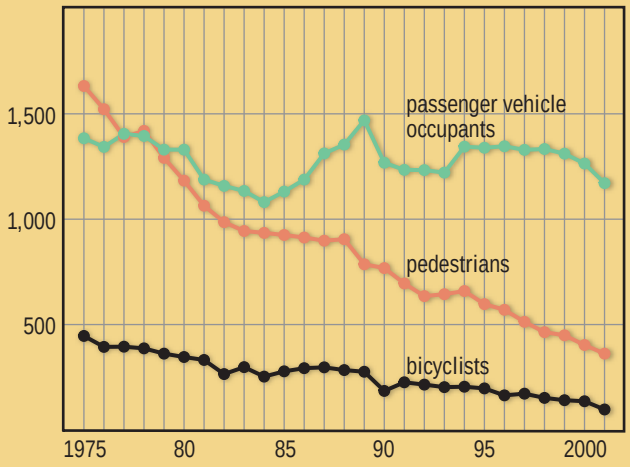
(continued from p.3) older riders. By 1999 riders 40 and older were accounting for more motorcyclist deaths than riders 29 and younger (see *Status Report*, Jan. 12, 2002; on the web at www.highwaysafety.org). Thirty-nine percent of all cyclist deaths in 2001 were riders 40 and older. This group accounted for 14 percent of rider deaths in 1990.

Helmet use is one of the most important factors in fatal motorcycle crashes. An unhelmeted rider is 40 percent more likely than a helmeted one to suffer a fatal head injury. In the 20 states and the District of Columbia where all motorcyclists are required to wear helmets, the use rate approaches 100 percent. This compares with about 50 percent of riders wearing helmets in other states where the laws don't apply to all riders.

Helmet use also is a factor in bicycle deaths. Eighty-two percent of bicyclists killed in 2001 weren't wearing helmets.

Child occupant, pedestrian, and bicyclist deaths: A positive finding is that deaths of children 12 and younger are declining. Pedestrian and bicyclist deaths have declined fairly steadily since 1975. However, child passenger vehicle occupant deaths have been on the decline only since the mid-1990s, following the launch of a national outreach campaign to move kids to the rear seats of vehicles and ensure they ride properly restrained. Thirty-one percent of all fatally injured child passengers in 2001 were riding in front seats, down from 44 percent a decade earlier.

DEATHS OF CHILDREN YOUNGER THAN 13
as passenger vehicle occupants, pedestrians, and bicyclists, 1975-2001



Williams points out that "there's still room for improvement. For example, in some states children who are too old to be covered by child restraint laws are protected by adult belt laws that apply only to people riding in front seats. So it's perfectly legal for children to ride unrestrained in rear seats. This makes no sense because the back seat is where we tell parents it's safest for their children to ride. Every restraint law should cover every child who rides in the back seat."

Pedestrians: Deaths inched up in 2001, increasing by 2 percent to 4,882. Older people (65+ years old) are particularly hard hit. Pedestrian deaths per 100,000 people in this group are 2.5 times higher than among younger people.

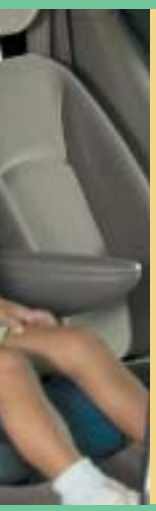
For more information: This information is from the Institute's latest edition of Fatality Facts, which is derived largely from the federal Fatality Analysis Reporting System (FARS). Publication of facts sheets is tardy this year in large part because the National Highway Traffic Safety Administration no longer makes FARS data available on a timely basis. The Institute's set of 13 fact sheets is available on the web at www.highwaysafety.org. Click on "IIHS Research by Topic" and then click on "Fatality Facts." Or write: Fatality Facts, Insurance Institute for Highway Safety, 1005 N. Glebe Rd., Arlington, VA 22201.

DOESN'T WORK

Four-year-old Alexander has outgrown the child seat he used to ride in, but this adult belt doesn't fit. The shoulder portion cuts across his face and neck, and the lap belt is positioned much too high across his stomach instead of lower on his upper legs or pelvis. His knees don't bend at the edge of the seat so he's likely to scoot forward.

BETTER BUT STILL NOT GOOD

A booster seat might help Alexander. The key is to get the right booster because every one doesn't work for every child in every car. For example, this booster seat routes the shoulder belt better, but the lap belt still is positioned too high across Alexander's stomach. Choosing the right booster seat is difficult because it depends on the specific child, the specific seat, and the specific car model in which the two are positioned.



MUCH BETTER

The law recently signed by President Bush is intended to make it easier for parents to find booster seats like this one, which routes both the lap and shoulder belt portions across Alexander for a better fit.

BOOST UP BIGGER KIDS

New law tells NHTSA to develop standards to protect children as they outgrow their child seats but aren't ready for adult belts

Late last year President Bush signed a law that's an important step toward protecting children of all ages and sizes when they ride in motor vehicles. Current federal child restraint standards don't cover kids who weigh more than 50 pounds.

The new law, sponsored by Sen. Peter Fitzgerald (R-Illinois), requires the National Highway Traffic Safety Administration to create a comprehensive definition of a booster seat and to develop performance requirements for child restraints and boosters for kids who weigh more than 50 pounds. To help set the requirements, which are due by July 2005, the agency is directed to develop and use a dummy representing a 10-year-old child in crash tests.

Additional provisions direct the agency to complete a rule requiring lap and shoulder belts for each rear seating position and to evaluate the merits of integrated, or built-in, child restraints and boosters, including their cost effectiveness and ease of use.

"The key provision is to develop standards for booster seats for children who have outgrown the seats designed for younger kids. These children may still be too small for adult belts. We know the belts prevent injuries to children, but the protection may not be optimized. Booster seats can help," says Institute chief operating officer Adrian Lund. "However, the boosters being sold for these children haven't been held to a common standard or testing."

A parent buying a booster seat doesn't know if it will improve the fit of an adult belt system until after the booster has been purchased and tried. Some boosters could make adult belts fit worse.

"The new law puts us on the road to preventing such problems," Lund says.

Fitzgerald introduced the federal legislation with a provision to promote state booster seat laws. However, the provision was dropped from the final language.

"It's not time yet for state laws requiring booster seat use. Until we have standards for boosters, just like we already do for the child seats that protect smaller children, more emphasis should be placed on getting children of all ages buckled up, either with or without a booster seat," Lund concludes.

Is that a functional airbag in your repaired car?

It might be a damaged airbag or a module filled with trash instead of a bag that will protect you in a crash

Some of the replacement airbags being used to repair cars are turning out to be salvaged, stolen, or even fake. Stolen or salvaged airbags are believed to be far more common than fakes, which may be detected only after they fail to deploy in a crash. At least one death has been linked to a fake airbag.

This problem doesn't appear to be widespread yet, but it may be growing. Federal law doesn't require airbag replacement in vehicles that are repaired after crashes. It's up to states whether to require replacement, and some states leave it up to consumers.

"But consumers cannot easily recognize a salvaged or stolen bag once it's installed in a vehicle," says Adrian Lund, the Institute's chief operating officer. "A salvaged or stolen bag may not deploy as designed, potentially reducing its effectiveness."

The high cost of factory replacement airbags creates an opportunity for an unscrupulous repair shop to replace an airbag with a cheaper black market one but still charge for a new one. The thief and the repair shop split the proceeds, while the customer gets an airbag that might or might not be designed for the repaired vehicle.

Due to running vehicle design changes, a replacement airbag must match up with not just the make, model, and year of the vehicle in which it's being installed but sometimes even the month the vehicle was manufactured. Without the vehicle identification number and airbag serial number, a mechanic cannot be sure a replacement airbag will operate as designed.

There are worse cases than a stolen airbag — cases of airbags being refolded and repacked without an inflator or the modules being stuffed with shop rags or even trash. The California Highway Patrol has reported at least one death in a crash involving a car with a fake airbag. A nonfunctional bag made up of parts from several salvaged bags has been blamed in the death of a driver in Canada.

For protection when having a car repaired or buying a used car, check the airbag indicator light that comes on when the ignition is turned on. It should blink for a few seconds and then go out as the car's electronics test the system. If the light fails to come on or if it stays on, the airbag may be nonfunctional or fake. Take the car to a dealer to find out for sure.

Airbags are essential to the restraint systems in modern cars. Safety belt design has evolved around airbags, with many cars now equipped with belts that include force limiters. These are intended to reduce forces on the chest of an occupant during a crash, and they accomplish this by allowing more forward movement of an occupant's upper body in a crash than would occur with an older belt design. The airbag prevents the forward moving occupant's head or face from striking the steering wheel or dashboard. If the airbag isn't fully functional, restraint system protection will be reduced.

Salvaged airbags: These are question marks. Most of the time a properly handled and installed one that matches a car's make and model should work. However, airbags that have gotten wet may not deploy correctly.

"Getting wet isn't uncommon. Large numbers of cars are salvaged in this country due to flood damage," Lund points out. After recent

flooding in Houston, for example, more than 95,000 cars were totaled. Hurricanes that hit the east coast in 1996 totaled almost 50,000 cars.

Airbag Testing Technologies, a New York-based company that tests and recertifies salvaged airbags, claims its recertified bags perform to the same specifications as new bags. The company says it can test for flood damage and eliminate damaged airbags, having worked closely with the Insurance Corporation of British Columbia (ICBC) to research the safety of salvaged bags.

ICBC encourages the use of salvaged airbags in vehicle repairs. This is different from the United States, where U.S. insurers specify the use only of new original-equipment airbags for repair purposes. ICBC can take the different approach as a way of reducing costs because it can identify flood bags. As the sole provider of insurance in British Columbia, the company's monopoly allows it to control the entire chain of supply from wrecked car to salvaged parts. This means ICBC can reliably eliminate questionable salvaged airbags from the system and prevent them from being installed in repaired vehicles.

To make sure this happens, ICBC created a four-hour training course for salvage employees, instructing them on how to remove, handle, and store salvaged airbags. Only recyclers certified by this training are authorized to resell airbags from salvaged cars. Because the wrecked cars supplied to the recyclers come from ICBC customers, the insurer can flag and eliminate parts from flood- or fire-damaged cars. This keeps suspect airbags out of the supply chain.

Stolen airbags: Another concern with the use of salvaged airbag modules is that it could encourage theft. Thieves steal airbags only to sell to repair shops. Approximately 7,500 airbags were reported stolen in 2001, according to State Farm estimates. This represents an increase compared with the previous year but fewer than the approximately 10,000 airbags that were stolen in 1999.

Last August police in south Florida began cracking down on repair shops that buy stolen airbags. Police in and around Miami found four shops that each possessed 15 to 45 stolen airbags. Airbag Testing Technologies hopes to address this issue with tamper-proof labeling of recertified bags.

Fake airbags: A recent rise in the number of fake airbags being discovered has alarmed the Automotive Occupant Restraint Council. Unlike a salvaged or stolen airbag, a fake contains no propellant charge and won't function at all.

California is one of the few states where fake airbags are outlawed, but a specialty shop in Long Beach that inspects cars with suspected airbag problems has found more than 60 fakes. In January a California insurer testified before a state legislative committee that the company had received more than 350 claims involving cars that had been in collisions and subsequently found to have fake bags.

In some cases involving fakes, the existing airbag cover has been repaired. In other cases replacement covers, easily available on the internet, were used.

Investigators of a fatal crash in California discovered empty packs of cigarettes and other garbage in place of the airbag in a salvaged Ford Escort. The car had been repaired by someone who salvages cars as a second job. The salvager said he was proud of his work and unaware that repacking an airbag was illegal in California. In many states it's not.

Few state laws address the problem: California outlaws fake airbags, but only Utah requires a deployed airbag to be repaired to its original operating condition. The District of Columbia, Hawaii, Massachusetts, Maine, Rhode Island, Vermont, and West Virginia require working airbags to pass safety inspections. Other states have attempted to address this issue, but virtually no comprehensive laws have been enacted. For example, Wisconsin prohibits the installation of a previously deployed airbag and the removal of an operational airbag. However, there's no restriction on installing fake, salvaged, or inoperable airbags or substituting other objects in lieu of airbags.

"Without a requirement for functional airbags that's enforced, people in most states are left to fend for themselves when it comes to ensuring the integrity of their cars' restraint systems," Lund says.

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On the inside

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The Insurance Institute for Highway Safety is an independent, nonprofit, scientific and educational organization dedicated to reducing the losses — deaths, injuries, and property damage — from crashes on the nation's highways. The Institute is wholly supported by automobile insurers:

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