Air Bags: A Chronological History of Delay

INSURANCE INSTITUTE FOR HIGHWAY SAFETY
WATERGATE 600
WASHINGTON, DC 20037

Editor: Anne Fleming
International Standard Book Number: 0-932016-05-7


The Insurance Institute for Highway Safety is an independent, nonprofit, scientific and educational organization. It is dedicated to reducing the losses—deaths, injuries, and property damage—resulting from crashes on the nation’s highways. The Institute is supported by the American Insurance Highway Safety Association, the American Insurers Highway Safety Alliance, the National Association of Independent Insurers Safety Association, and several individual insurance companies.

Contents of this publication may be published whole, or in part, with attribution.
In 1952, the first of a series of patents was filed for automatic air bags to protect occupants of motor vehicles in crashes. In 1968, prototype development of air bags became advanced enough to signal the start of active federal government interest. Yet, except for a few Mercedes-Benz models, air bags still are not available to car buyers as either standard equipment or options. Attached is a chronology of the delay in making air bags available.

March 1967: William Haddon, Jr., Administrator of the National Traffic Safety Agency and the National Highway Safety Agency,* tells the Senate Commerce Committee that automatic (or passive) restraints will be mandated as soon as the technology permits. Haddon adds, "We would far prefer to adopt only standards that pose no problem to anyone and that do not require any active cooperation on the part of the user. This is the approach, after all, which has been used in public health going back 50 and 100 years with such programs as pasteurization of milk, chlorination of water supplies, and so forth."1

July 1968: At the request of Eaton, Yale & Towne, Inc. (EY&T), National Highway Safety Bureau* Administrator William Haddon, Jr., meets with officials of EY&T (subsequently Eaton Corporation), American Motors, Chrysler, Ford, and General Motors. In lengthy discussion, participants address ways to facilitate the introduction of air bags into American cars. Haddon states that air bags are "the highest priority that the industry and the government and anyone else concerned with highway safety should have."2

August 1970: In a submission to the National Highway Safety Bureau (NHSB) and a letter to 82 members of Congress who had urged NHSB to stand fast on its passive restraint proposal (issued July 2, 1969), General Motors (GM) pledges to provide air bags voluntarily, first as options and then as standard equipment, on all its cars by the 1975 model year. Describing the plan to NHSB, GM says: "For the 1974 model year, the air cushion would be made standard on those 1973 models on which it was an optional item while extending the customer option to several additional models of General Motors passenger cars. We estimate approximately one million 1974 model General Motors cars could be equipped with the air cushion in this second year. In the fall of 1974, the air bag would be made standard equipment on all 1975 General Motors passenger cars."3

On the strength of that promise, the National Highway Traffic Safety Administration* eventually delays implementation of its proposed passive restraint standard.4

December 1970: Ford Motor Company petitions the National Highway Safety Bureau to develop and require ignition interlocks instead of air bags. According to Ford, "a more sophisticated ignition interlock system, exterior warning device, etc., can be developed" to bring belt use up to acceptable levels.5

November 1970: The National Highway Safety Bureau issues a standard requiring passive restraint protection effective July 1, 1973—a six-month delay from the January 1, 1973 date that it had been proposing.6

December 1970: General Motors petitions the National Highway Safety Bureau to slide the effective date of its passive restraint standard an additional two to six months.7

1971: General Motors (GM) learns, in a survey not made public until 1979, that a significant consumer preference exists for air bags—between 40 and 50 percent of customers surveyed by the company would pay some significant amount for such protection. GM's summary of the survey results states that "the air cushion restraint concept is a viable one to the consumer" and is "preferred over the passive harness system because it afforded equal protection, but was judged far superior in all areas of style and convenience."8

March 1971: The National Highway Traffic Safety Administration grants a two-year delay in the passive restraint standard—until the 1976 model year—because of Nixon Administration fears about its economic impact on the automobile industry.9

February 1972: After meeting with automobile company executives, the White House tells the Department of Transportation to allow the use of ignition interlocks as an alternative to automatic protection on cars manufactured between August 15, 1973 and August 15, 1975.10

**December 1972:** The Sixth Circuit Court of Appeals upholds the Department of Transportation's authority to mandate passive restraints, including air bags. Judges reject automakers' contention that development of a reliable air bag is still in doubt.  

**August 1973:** General Motors (GM) President Edward M. Cole writes the Department of Transportation (DOT) that GM is cutting its planned production of air bag-equipped cars during the 1974-75 model years from more than a million to no more than 150,000 units. Cole blames both DOT's standard-making process and GM tooling problems.

**October 1973:** Allstate Insurance Company, subsequently followed by other insurers, announces a 30 percent discount on medical and no-fault personal injury protection coverages for air bag-equipped cars.

**February 1974:** A General Motors spokesman acknowledges to the Insurance Institute for Highway Safety that it is unlikely the company will build even 150,000 air bag-equipped cars in the 1974-75 model years. (Only about 10,000 eventually are built.)

**March 1974:** The National Highway Traffic Safety Administration proposes a revised passive restraint standard to take effect with the 1977 model year.

**April 1974:** The Insurance Institute for Highway Safety (IIHS) notes that the passive restraint standard—scheduled to take effect no earlier than the 1977 model year—already has been outpaced by the performance levels of some existing air bag systems. IIHS summarizes a range of research, including the Department of Transportation's own Research Safety Vehicle, demonstrating that air bags can substantially exceed the standard, even in small cars.

**May 1974:** Honorable John E. Moss, Chairman of the House Subcommittee on Commerce and Finance, receives evidence that "the White House ordered the Department of Transportation to allow the ignition interlock in 1974 automobiles."

**June 1974:** General Motors asks the Department of Transportation for further delays in the proposed passive restraint standard's effective date, claiming that the proposal "does not meet the need for safety. Moreover, it has not been demonstrated that the rule would be practicable . . . "

**September 1974:** Edward M. Cole, a supporter of air bag technology, retires as President of General Motors.

**September 1974:** Two former General Motors officials, John Z. DeLorean and Robert F. McLean, tell a National Highway Traffic Safety Administration meeting that air bags for front-seat occupants should cost about $148 per car, not $225 to $335 as automobile companies have claimed. DeLorean adds that industry "hesitancy" about air bags is "very misplaced . . . I think the air restraint system could be a very powerful marketing plus."

**October 1974:** Congress passes an amendment to the National Traffic and Motor Vehicle Safety Act of 1966 that eliminates the ignition interlock and buzzer requirement of its occupant crash protection standard but allows continuation of passive restraint rulemaking.

**December 1974:** The National Highway Traffic Safety Administration (NHTSA) issues a cost-benefit analysis showing that air bags are superior to lap/shoulder belts. NHTSA's projected annual benefit of air bags is 11,600 lives saved, compared to 2,700 lives saved with belts.

**April 1975:** A General Motors (GM) spokesman tells the Insurance Institute for Highway Safety that the company may abandon all plans to offer air bags even as optional equipment on 1977 and 1978 models. GM says the decision will make "a hell of a dent" in any possible federal passive restraint requirements for those years.

**May 1975:** During the National Highway Traffic Safety Administration's five-day public meeting on passive restraints, General Motors (GM) reports extensively on successful laboratory and field experience with air bags. Stating that its evidence "has not indicated a significant deployment-induced injury or loss of control hazard," GM says it does "not plan to offer the air cushion option beyond the 1976 model year."

**June 1975:** The Insurance Institute for Highway Safety crash tests two 1975 Oldsmobiles, one of which is equipped with air bags. In the Oldsmobile with air bags, the test dummy remains erect and in position during the crash. The unrestrained dummy is out of position and is hit by the glove compartment and other interior components that were torn loose in the crash.

**August 1976:** An Insurance Institute for Highway Safety poll finds that "a great majority of car-buying Americans prefer automobiles with increased crash protection that is completely or at least partly auto-
matic—such as air bags, or belts and bags in combination," rather than non-automatic protection.  

**November 1976:** A front-page expose in *The Wall Street Journal:* examines claims by General Motors (GM) that consumers do not want air bags. It finds that although GM put air bags in 10,000 luxury cars during the 1974-76 model years—and sold all those cars—GM "failed to push" the system. The air bag "received no wholehearted promotion," the *Journal:* reports. "Instead, the company and its dealers actively discouraged sales."  

**December 1976:** Department of Transportation Secretary William Coleman declares that air bags in all cars would "probably save over 12,000 lives annually and prevent or reduce in severity over 100,000 moderate to critical injuries per year." Coleman calls for agreements under which General Motors (GM) and other automakers will voluntarily build air bag-equipped cars. A maximum of 300,000 such cars are promised by GM, with a minimum commitment of 30,000 cars over two models years. GM's air bag-equipped cars are to be intermediate-sized models, and the air bags are to retail for $100. GM agrees to "specific measures to assure that the cars are mar-

keted effectively," Coleman says. The program is to begin in September 1979.  

**January 1977:** Former General Motors President, Edward M. Cole, in letters to Insurance Institute for Highway Safety President, William Haddon, Jr., says: "I firmly believe the air cushion system can be made to work successfully at a reasonable cost . . . The technology is available and the need is there. I think the only way passive restraints are going to get to first base is to make them mandatory. Another test will prove nothing. Let the passive air cushion evolve like all other systems."

Cole also lists numerous reasons why seat belt systems cannot protect as effectively as inflatable systems in crashes.  

**March 1977:** Department of Transportation Secretary Brock Adams reopens the passive restraint case: "I am concerned that the negotiated contracts between the Department of Transportation and the automakers represent a 5-8 year delay in any decision to install passive restraints in all passenger cars."

**May 1977:** General Motors expresses to the Department of Transportation its pessimism that the
public will accept automatic restraints, based on its experience with the air bag/lap belt system marketed in 1974-76 models. 30

**June 1977:** A Gallup Poll shows that by a vote of 46 to 37 percent, the public endorses the installation of air bags in all new cars. 31

**July 1977:** Putting aside the 1976 Coleman decision, Secretary of Transportation Brock Adams announces a decision to require front-seat passive protection in all new automobiles on the following schedule: September 1, 1981 for new cars with 115-inch wheelbases or greater; September 1, 1982 for new cars with 101-inch wheelbases or greater; and September 1, 1983 for all new cars. 32

**August 1977:** The General Accounting Office (GAO) begins a review of the passive restraint standard. Comptroller General Elmer B. Staats says the review is based on GAO's continuing interest in automobile safety and intense Congressional interest in passive restraints. The GAO review, released in July 1979, finds that automatic restraints "offer lifesaving and injury prevention potential." 33

**September 1977:** At a Senate hearing on the Adams decision, the Insurance Institute for Highway Safety provides the results of its analysis of General Motors (GM) data comparing real-world crashes of GM air bag-equipped cars with those of non-air bag cars. The analysis shows "serious head, face, neck and torso injuries" (that is, injuries that produce the overwhelming bulk of fatal and disabling conditions) to occupants of non-air bag cars. 34

**September 1977:** At a hearing before the House Subcommittee on Consumer Protection, General Motors (GM) testifies that still another demonstration program is needed to provide real-world data. GM says it would support such a program, promising to put air bags in its full-sized cars in 1981. GM also says it will pursue a program to introduce automatic belts in a small Chevrolet model and a luxury model in the 1979 model year. 35

**October 1977:** By a vote of 65 to 31, the Senate rejects a concurrent resolution to overturn the Adams decision of July 1977. The resolution is also twice voted down in House committee. 36

**1978:** A General Motors' (GM) study involving more than 1,000 GM car owners—not made public until 1979—concludes: "The air cushion restraint system . . . received the highest ratings on all operation, comfort, and appearance items evaluated." 37

**January 1978:** Calspan Corporation of Buffalo announces development of a new air bag restraint system for compact cars. The system is designed to offer increased protection to out-of-position children as well as adults. 38

**January 1978:** Eaton, Yale & Towne (EY&T), a leader in air bag development, drops out of the supply business because it fears that future sales will not justify its investment. EY&T says automobile companies will probably equip smaller cars with passive belts instead of air bags. 39

**June 1978:** Former General Motors' (GM) official Robert McLean writes the National Highway Traffic Safety Administration that in mid-1970 he was relieved of his position as project manager for air cushion system development because GM's Washington office had decided that "I was too aggressive in promoting the air cushion systems, and it was known that I was in disagreement with the tendency on the part of GM to slow down on the pace of air cushion development in the second half of 1970." 40

**June 1978:** House and Senate conferees agree to limit federal spending on air bag research and development. 41

**August 1978:** Two surveys, one by Volvo and another by Peter D. Hart Associates under contract to the National Highway Traffic Safety Administration, find that air bags are overwhelmingly favored over passive seat belts. On questions concerning consumer attitudes toward manual belts, respondents who indicated they don't wear belts say it is because the belts are uncomfortable and inconvenient. Thirty-seven percent say nothing could be done to make them wear their belts most of the time. 42

**December 1978:** Allied Chemical, a pioneer in air cushion restraint development, announces it is "reluctantly" dropping out of the business. It cites its own projections that a "great majority of automobiles" would be equipped with passive belts instead of air bags to meet the Department of Transportation's standard. 43

**1979:** A General Motors (GM) study based on in-depth interviews with Chicago owners of large GM cars reports: "With passive belts and an air cushion
restraint system available, 70 percent of the total principal-driver sample selected the air bag even when they were told its cost would be more than four times the cost of a passive belt system.44

January 1979: The U.S. Court of Appeals for the District of Columbia unanimously upholds the Department of Transportation's passive restraint rule by denying a petition for review from the Pacific Legal Foundation. The Supreme Court later declines to review the ruling.45

May 1979: The National Highway Traffic Safety Administration disputes General Motors' (GM) estimated price of $581 for air bags in new cars. In a letter to GM, the agency notes that the estimate is substantially higher than Ford's and that it is "more than double your earlier estimates" at higher production levels.46

July-August 1979: Representative John Dingell of Michigan introduces an amendment to the Department of Transportation's appropriations bill that would limit air bag spending. He also announces a legislative initiative to prohibit manufacturers from meeting an automatic occupant restraint standard by installing air bags in cars.47

August 1979: The Automatic Occupant Protection Association, whose members are air bag component suppliers, warns that continued delay in the offering of air bags by car companies seriously threatens the existence of the industry.48

September 1979: In answer to a question from Phil Donahue on a national television program, E.M. Estes, President of General Motors, agrees that the company did not really push air bags when it made them available as options in a few 1974-76 luxury models.49

September 1979: The House of Representatives votes to block 1980 spending on implementation and enforcement of the automatic occupant protection standard.50

October 1979: General Motors (GM) warns of alleged problems with air bags concerning possible hazards to out-of-position children. Safety experts doubt the problems are valid or that they should hold up the availability of air bags. However, GM says that because of the problems, it will not offer air bags as options during the 1981 model year.51

December 1979: General Motors announces it has solved its supposed problems involving air bags and hazards to out-of-position children. The company promises to "offer the fully inflatable restraint system as an option at the start of the 1982 model year."52

December 1979: John Burton, Chairman of the House Government Activities and Transportation Subcommittee, announces that in response to a subcommittee request, General Motors has reluctantly turned over to him three internal consumer surveys. The surveys—carried out in 1971, 1978, and 1979—all show very strong consumer demand for air bags in new cars.53

December 1979: The House of Representatives agrees to compromise legislation offered by David Stockman of Michigan that ostensibly would allow consumers to choose between automatic seat belts and air bags. In fact, the legislation would threaten automatic protection.54

March 1980: Mercedes-Benz announces it will equip all 1982 model cars sold in the United States with air bags—including cars not covered by the Department of Transportation's standard.55

March 1980: General Motors informs the National Highway Traffic Safety Administration that, earlier commitments to the contrary, it "does not plan to offer inflatable restraints on medium- or small-size cars" in the 1982-86 model years but may still offer them on full-size 1982 cars.56

March 1980: An informal survey of dealer showrooms by the Insurance Institute for Highway Safety reveals a dearth of cars available with Chevrolet's highly touted automatic safety belt.57

April 1980: A General Motors memorandum circulated on Capitol Hill in support of the Stockman amendment says the company plans to "accommodate" a level of air bag demand in 1982 models involving about 250,000 full-size cars, a reduction from previous plans to produce 400,000.58

June 1980: General Motors (GM) announces it has cancelled plans to provide air bags as options in its large 1982 models—despite having promised to do so only a few months earlier both in its 1980 Public Interest Report and in a filing with the National Highway Traffic Safety Administration. This means GM
will offer no air bag-equipped cars in the 1982 model year. Some 100 companies supplying air bag components to GM stand to be affected so severely that they may not be able to stay in business.\(^{69}\)

**June 1980:** At a meeting with reporters at the National Press Club, General Motors Chairman Thomas Murphy estimates the company will save $20 million by delaying optional air bags from the 1982 to the 1983 model year. He is then asked by a reporter for Newhouse Newspapers, “What about the 7,000 lives?” Murphy responds: “Well, the 7,000 lives, that’s when you put air bags in every car. So, we’re only talking about air bags when the air restraints are on every vehicle on the road. When is that going to happen? As I keep trying to remind you, it isn’t going to happen for probably 15 years. You’re not going to replace all those other cars on the road.”\(^{60}\)

**June 1980:** General Motors, Ford, and Volkswagen of America executives press presidential aides not only for a moratorium on new vehicle safety regulation but also for a sweeping rollback of regulations already in place. General Motors wants the Department of Transportation to “eliminate passive restraint requirements.”\(^{61}\)

**July 1980:** The National Highway Traffic Safety Administration reports that in more than 600 million miles of actual travel of air bag-equipped cars, there have been no inflator malfunctions and no failures to deploy. The agency estimates air bag reliability at “99.95 percent or higher.”\(^{62}\)

**July 1980:** In a letter of July 24 to Secretary of Transportation Neil Goldschmidt, General Motors President E.M. Estes says the company will provide inflatable restraints as an option to “be offered on about one million cars per year” for the model years 1983, 1984, and 1985.\(^{63}\)

**August 1980:** In discussions with a representative of America’s high school debating teams, General Motors staff describe air bag reliability as “highly acceptable.” They add that “if you are wearing a lap belt, and also have an air bag, that combination is probably the best restraint system available.”\(^{64}\)

**October 1980:** Volvo announces that during 1982 it will offer air bags “in certain cars on the American market.”\(^{65}\)

**December 1980:** The House of Representatives kills compromise legislation that would have delayed implementation of the automatic restraint standard for one year and reversed its sequence, requiring 1983 installation of automatic restraints in small cars. The compromise also would have required the top five automobile producers to “tool and offer for sale” air bag-equipped models on at least one car line for three of the four model years between 1982 and 1985. Although General Motors originally formulated the proposal and Ford supported it, the automakers switch signals several times, contributing to the bill’s defeat.\(^{66}\)

**December 1980:** Newly-appointed Office of Management and Budget Director David Stockman personally assures General Motors and Ford that “the air bag is a dead issue.”\(^{67}\)

**January 1981:** In a hearing before the Senate Surface Transportation Subcommittee, Ford and General Motors representatives support an immediate moratorium on new regulations and extensive revision of some standards now in place. Top on each automaker’s list for revision is the automatic restraint standard.\(^{68}\)

**February 1981:** Secretary of Transportation Drew Lewis proposes a one-year delay in the effective date of the automatic restraint standard as it applies to full-size cars in 1982. The reason, he says, is the industry’s movement away from production of large cars and the fact that the standard, as currently written, may be “unintentionally discriminatory” against domestic manufacturers because foreign automakers produce mostly small cars. Lewis says the Department of Transportation will “review” the entire issue.\(^{69}\)

**April 1981:** During a hearing before the House Subcommittee on Telecommunications, Consumer Protection, and Finance, General Motors (GM) representative Betsy Ancker-Johnson says GM has decided to scrap its air bag program entirely. The decision was not based on technological considerations, she says, but was “a purely business decision.” Claiming air bags cost too much and the public “will not support” automatic belts, GM urges outright rescission of the safety rule—even though Ancker-Johnson says GM “can demonstrate that we produce a highly effective device.”\(^{70}\)

**May 1981:** Yale economist William Nordhaus tells the Department of Transportation that rescinding the automatic restraint standard will cost society 3½ times the benefits. A total rescission will cost society more than $30 billion, he says.\(^{71}\)

**June 1981:** The Automatic Ocuppant Protection Association, whose members are air bag component
suppliers, says full front-seat air bags installed in new cars should cost consumers $185 based on 2,000,000 annual production. This figure covers the entire air bag system, including sensors, diagnostic systems, inflators, air bags, sheet metal housings, decorative covers, associated wiring, and labor—plus a profit for both automaker and dealer.72

October 1981: The National Highway Traffic Safety Administration (NHTSA) cancels the automatic restraint standard, citing "uncertainty" about the public acceptability and use of automatic seat belts of the type "which the car manufacturers planned to make available to most new car buyers" and "the relative substantial cost of automatic restraints." Vehicle price increases of "approximately $1 billion a year would have resulted from the standard," NHTSA said.73

November 1981: State Farm Mutual Automobile Insurance Company, the nation's largest, petitions the U. S. Court of Appeals for the District of Columbia for a review of the National Highway Traffic Safety Administration's (NHTSA) rescission of the automatic restraint standard. Separately, the National Association of Independent Insurers files a motion seeking a stay of the NHTSA rescission pending review. Also, in accordance with legal procedure, both parties petition NHTSA to stay the rescission until the court reaches a decision.74

May 1982: The U. S. Court of Appeals for the District of Columbia sends back to the National Highway Traffic Safety Administration (NHTSA) its decision to rescind the automatic restraint standard. The court says the rescission "failed to heed the goals that Congress has asked [the agency] to meet" and was supported by "not one iota of evidence." "NHTSA's arbitrary action presents a paradigm of ineffective regulation," the court says, adding that the action represents "an expensive example of ineffective regulation of the worst kind."75

December 1982: The General Services Administration announces it will purchase 5,000 Ford Tempos equipped with driver-side air bags for the federal fleet.76

January 1983: Mercedes-Benz of North America announces it will offer driver-side air bags, beginning with 1984 models.77

June 1983: The United States Supreme Court unanimously finds that the National Highway Traffic Safety Administration's decision to revoke the automatic restraint standard was "arbitrary and capricious" and must be reconsidered. The Court terms the automobile industry's resistance to air bag crash protection "the regulatory equivalent of war"—a war it said the industry had "lost—the inflatable restraint was proven sufficiently effective."78

October 1983: The Department of Transportation issues a Notice of Proposed Rulemaking and timetable for action on the automatic restraint standard. Multiple options are proposed, including reinstatement of the standard, amending the standard, and total rescission.79

December 1983: Ford Motor Company advises the Department of Transportation to mandate automatic restraints (air bags or automatic belts) in new cars by ordering manufacturers to equip 5 percent of the automobile fleet with such restraints over four years as a "demonstration." Mercedes-Benz endorses Ford's proposal.80

December 1983: More than 90 percent of respondents in an Insurance Institute for Highway Safety survey say that automatic restraints should be available on new cars either as standard equipment (56 percent) or as options. Forty percent say that at a price of $350 they would definitely or probably buy a car with air bags.81

May 1984: The Department of Transportation requests comments on four new alternatives for implementing the automatic restraint standard. Central are the issues of public acceptability of automatic seat belts and the "suitability of air bags as a mandatory crash protection system."82

July 1984: The Department of Transportation orders that all new 1990 model cars must be equipped with automatic restraints unless two-thirds of the nation's population is covered by state laws requiring seat belt use by 1989. Ten percent of all 1987 model cars, 25 percent of 1988 models, and 40 percent of 1989 models must be equipped with automatic restraints.83

Citations begin on page 8.
Citations


2. United States Department of Transportation, National Highway Safety Bureau, Transcript of briefing on air bag research and development, July 19, 1968.


13. See #12 above.


37. See #7 above.


44. See #7 above.


47. Statement by Congressman John Dingell, United States House of Representatives, July 13, 1979, at a briefing on air bags and safety belts.


50. Congressional Record, roll call vote on amendment to H.R. 4440, September 18, 1979.


53. See #7 above.


64. Transcript of question-and-answer session in General Motors’ office in Washington, D.C., August 18, 1980. Statements on behalf of General Motors were made by representatives of GM’s environmental activities, industry/government relations, and public relations staff. See also “Quoted Without Comment,” Status Report (Insurance Institute for Highway Safety), Vol. 16, No. 3, February 25, 1981.


73. 46 Federal Register 53419, October 29, 1981.


79. 48 Federal Register 48622, October 19, 1983.


82. 49 Federal Register 20460, May 14, 1984.

83. 49 Federal Register 28962, July 17, 1984.