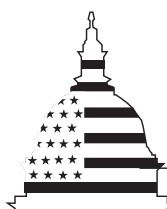


January 2001

# MOTOR VEHICLE SAFETY

## NHTSA's Ability to Detect and Recall Defective Replacement Crash Parts Is Limited



G A O

Accountability \* Integrity \* Reliability



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## Abbreviations

ARA	Automotive Recyclers Association
CAPA	Certified Automotive Parts Association
ICBC	Insurance Corporation of British Columbia
IIHS	Insurance Institute for Highway Safety
NHTSA	National Highway Traffic Safety Administration
ODI	Office of Defects Investigation
OEM	original equipment manufacturer

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United States General Accounting Office  
Washington, D.C. 20548

January 31, 2001

The Honorable Byron L. Dorgan  
United States Senate

The Honorable John F. Tierney  
House of Representatives

The National Highway Traffic Safety Administration (NHTSA), the federal agency responsible for reducing accidents, deaths, and injuries resulting from motor vehicle crashes on the nation's highways, estimates that over 6 million automobile accidents occurred in the United States in 1999. To repair crash-damaged vehicles, consumers spent over \$8 billion and bought over 61 million sheet metal and plastic body parts (including exterior fenders, bumpers, hoods, and doors). Consumers and body shops that repair crash-damaged vehicles have a choice in many instances of buying new replacement parts from either the original equipment manufacturer or other sources, commonly called aftermarket manufacturers. These aftermarket manufacturers produce their parts by copying the design of the original vehicle parts.

Concerns have been raised for many years about the quality and safety of aftermarket crash parts.<sup>1</sup> A number of auto manufacturers and repair shop owners argue that aftermarket crash parts are inferior to original parts and pose a possible safety risk. Conversely, many aftermarket manufacturers and auto insurers argue that aftermarket crash parts can be equal in quality to original parts, are safe, and can cost up to 65 percent less than the original equipment manufacturer's parts. Public awareness was heightened in October 1999 after judgments totaling over \$1 billion were entered against State Farm Mutual Automobile Insurance Company in response to a class action complaint concerning the use of aftermarket crash parts. The trial court concluded that State Farm breached its insurance policies by requiring the use of aftermarket parts that did not return damaged vehicles to their precrash condition. The court also found that State Farm's conduct violated the Illinois Consumer Fraud and Deceptive Business Practices Act.

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<sup>1</sup>Crash parts are generally made of sheet metal or plastic and installed on the exterior of a motor vehicle. These parts include bumper components, hoods, doors, fenders, and trunk lids. Crash parts exclude mechanical parts such as batteries, filters, shock absorbers, and spark plugs.

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State Farm has appealed this decision. In light of the decision, State Farm has suspended its specification of aftermarket crash parts in repairs.

Concerns have also been raised about the safety of replacing deployed airbags with nondeployed airbags taken from old or otherwise damaged vehicles. Many maintain that the airbag is such an important safety item that only new bags produced by the original manufacturer should be used to replace deployed bags. Others contend that recycled airbags pose no safety issues when properly handled and installed and that their use can save the consumer hundreds of dollars in repair costs.

Because of potential concerns about the safety of aftermarket crash parts and recycled airbags, you asked us to provide information on

- studies on the safety of aftermarket crash parts and recycled airbags,
- NHTSA's authority over aftermarket crash parts and recycled airbags, and
- NHTSA's ability to identify and remove unsafe aftermarket crash parts and recycled airbags from the nation's roadways.

To respond to these questions, we identified and reviewed existing safety studies on aftermarket crash parts and recycled airbags; reviewed NHTSA's legal authority over aftermarket crash parts and recycled airbags; reviewed NHTSA's defect identification, investigation and recall processes; toured two crash test facilities; and interviewed representatives of over 40 government and industry organizations. Appendix I provides a detailed discussion of our scope and methodology.

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## Results in Brief

We identified seven studies of aftermarket crash parts or recycled airbags. Five studies examined issues relating to the safety of aftermarket crash parts, but their results do not conclusively resolve the issue of safety. One of the studies, published by Consumer Reports, concluded that aftermarket crash parts are generally of poorer quality, fit improperly, rust more quickly, and may compromise safety. Another study, conducted by Ford, stated that aftermarket crash parts are inferior to Ford genuine parts and are not of "like kind and quality." The three other studies, sponsored by vehicle insurance companies and related associations, concluded that crash parts, whether original or aftermarket, do not influence motor vehicle safety. Two studies on the safety of recycled airbags concluded that recycled airbags function within their original specifications when undamaged and properly handled and installed. Although these studies are useful, they do not

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resolve the debate over the safety of aftermarket crash parts and recycled airbags because they reach different conclusions and are limited in number and scope.

NHTSA has broad authority to set safety standards for aftermarket crash parts.<sup>2</sup> The Motor Vehicle Safety Act provides NHTSA with the authority to prescribe safety standards for new motor vehicles and new motor vehicle equipment sold in interstate commerce—a category that includes aftermarket crash parts. Although NHTSA has the authority to regulate aftermarket crash parts, it has not determined that these parts pose a significant safety concern and therefore has not developed safety standards for them. The act also provides NHTSA with more limited authority to prescribe safety performance standards for used motor vehicles in order to encourage and strengthen state motor vehicle inspection programs. Because NHTSA may set motor vehicle safety standards for vehicle systems (like brakes and lights) as well as for an entire vehicle, the agency could elect to develop safety standards for occupant restraint systems, which could incorporate airbags, under the used vehicle provision. NHTSA has not developed such standards because it has not identified significant problems with occupant restraint systems that could be addressed by state motor vehicle inspection programs.

NHTSA's ability to identify and recall unsafe aftermarket parts is limited. The agency relies heavily on a database of complaints from vehicle owners and other concerned people to identify possibly unsafe automotive products—whether from the original equipment manufacturer or the aftermarket crash parts manufacturer. However, limitations in the database may hamper NHTSA's ability to identify trends in defects. For example, the database may contain only a small fraction of the complaints that customers make to manufacturers. In addition, aftermarket crash parts may not be identified as such in the database because consumers who complain to NHTSA may not know they have aftermarket crash parts or their complaints may not indicate that such parts are involved. Because existing studies of aftermarket crash parts do not conclusively resolve the issue of safety, NHTSA needs to have an effective oversight program that

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<sup>2</sup>NHTSA was established in 1970 as a separate operating administration within the Department of Transportation to administer the Department's motor vehicle and highway safety programs. NHTSA carries out safety programs under the National Traffic and Motor Vehicle Safety Act of 1966 and the Highway Safety Act of 1966. The Motor Vehicle Safety Act was subsequently recodified under title 49 of the U.S. Code in chapter 301, Motor Vehicle Safety.

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will detect safety-related defects, regardless of the type or source of the unsafe parts. Furthermore, even if NHTSA's database were to identify unsafe aftermarket crash parts, the agency might not be able to require manufacturers to recall them because some of these parts do not identify the product manufacturer and documentation on their purchasers is limited. Recent legislation gives NHTSA an opportunity to look at ways to improve its systems so that it will be in a better position to identify defective automotive parts and require manufacturers to recall them.

This report contains recommendations to strengthen NHTSA's ability to detect and order the recall of unsafe vehicle parts from the nation's roadways. NHTSA generally agreed with these recommendations. However, in commenting on a draft of this report, NHTSA clarified its regulatory authority over recycled airbags. We modified the report to reflect NHTSA's comments.

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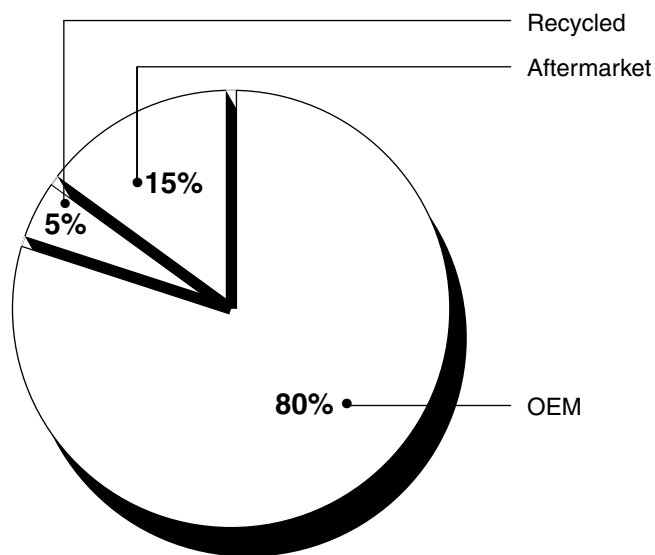
## Background

Crash parts are generally made of sheet metal or plastic and installed on the exterior of a motor vehicle. These parts include hoods, doors, fenders, and trunk lids. Crash parts exclude mechanical parts such as batteries, filters, shock absorbers, and spark plugs. Body shops often use a mix of parts in collision repairs, but we use the term "crash parts" in this report to refer to parts used on the exterior of a vehicle. Aftermarket crash parts are the replacement automotive crash parts that are not made by the original equipment manufacturer (OEM). Many of these aftermarket crash parts manufacturers are located overseas. Recycled airbags are salvaged nondeployed airbags removed from damaged or old vehicles.

Crash parts are big business. In 1999, drivers had an estimated 6 million automobile crashes in the United States costing over 40,000 lives and about \$8 billion in damage—of which \$1.2 billion represents the costs of aftermarket crash parts. Overall, about 60 cents out of every dollar of automobile insurance claims is spent on repairing collision damage to vehicles. Insurance companies estimate that using aftermarket instead of OEM parts saves hundreds of millions of dollars each year. Until the mid-1980s, consumers and auto body shops could purchase new replacement crash parts only from the original automobile manufacturer. At that time, independent parts manufacturers began offering aftermarket replacement parts at substantially lower prices. Still, the crash parts industry remains highly concentrated, and OEM parts account for about 80 percent of the market. Figure 1 shows the replacement crash parts market by source.



**Figure 1: Replacement Automobile Crash Parts by Source, December 2000**



Source: Center for Auto Safety.

Some aftermarket crash parts are certified as to their quality. In 1987, the insurance industry funded the nonprofit Certified Automotive Parts Association (CAPA), whose objective is to ensure the quality of aftermarket crash parts. To determine the quality of these parts, the association examines a manufacturer's plant, equipment, manufacturing processes, and resulting products. If the association finds the aftermarket crash parts to be equivalent in appearance, fit, material composition, and mechanical properties to new OEM parts, it certifies the parts as functionally equivalent to OEM parts. In addition, it periodically purchases parts in the open market and checks them to ensure they meet the association's standards. According to the association, in 1999, about 35 percent of all aftermarket crash parts were certified. This represents about 5 percent of the total aftermarket crash parts market—which would include OEM, aftermarket, and recycled parts combined.

More recently, in 2000, Global Validators, an automotive quality consultant, started a new certification process directed at improving the quality of aftermarket crash parts. The Manufacturers' Qualification and Validation Program, similar to the CAPA program, is a set of guidelines that outline policies and quality management practices designed to ensure that aftermarket crash parts are equal in form, fit, function, performance,

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durability and appearance to OEM parts. This program is based on the QS-9000 standard, a production quality standard developed in the automotive industry. Consumers can search an on-line database to determine if a specific part has been reviewed under the program.

At the federal level, NHTSA is responsible for reducing accidents, deaths, and injuries resulting from motor vehicle crashes. NHTSA accomplishes this, in part, by setting and enforcing safety performance standards that apply to new motor vehicles and motor vehicle equipment. Under these standards, manufacturers of motor vehicles and equipment must assure that their products comply with all applicable safety standards and certify such compliance. The federal standards are written in terms of minimum safety performance requirements for motor vehicles and equipment. Examples of standards include hydraulic brake system requirements to ensure safe braking performance, vehicle lamp requirements to provide adequate illumination, and hood latch requirements to ensure that hoods remain fastened securely.

The Motor Vehicle Safety Act requires manufacturers to inform NHTSA when a vehicle or equipment is defective or when a vehicle or equipment does not comply with an applicable motor vehicle safety standard. These requirements also apply to persons who import motor vehicles and equipment into the United States. NHTSA does not approve vehicles or equipment. Instead, federal law establishes a “self-certification” process under which each manufacturer is responsible for certifying that its products meet all applicable safety standards. The law also gives NHTSA the authority to investigate possible safety-related defects, to decide whether a defect exists, and to order a manufacturer to notify consumers and to remedy any defect.

NHTSA’s process for identifying a possible defect in motor vehicles and motor vehicle equipment begins with screening the complaints it receives in its Office of Defects Investigation (ODI). Sources of complaints include a toll-free hotline, a Web page, e-mail, telephone calls, and letters. In an average year, ODI receives between 40,000 and 50,000 complaints. These complaints are entered into a complaint database, which ODI analyzes to identify potential defect trends.

When the screening identifies a potential problem, ODI opens an investigation called a preliminary evaluation. This evaluation involves notifying the manufacturer and the public and gathering information on the potential defect. If this process continues to indicate that a defect trend

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may exist, the investigation moves to a second stage called an engineering analysis. In this stage, ODI analyzes the character and scope of the potential defect in more detail. This analysis may include inspections, surveys, tests, and efforts to obtain additional information from the manufacturer. If ODI continues to believe that a defect trend may exist, a panel of experts from the agency may be convened to review the data.

If the expert panel concurs with ODI, a recall request letter is sent to the manufacturer. If the manufacturer declines to conduct a recall in response to the letter, NHTSA's Associate Administrator for Safety Assurance may issue an initial decision that a defect exists and convene a public meeting on the issue. After the meeting, the NHTSA Administrator may issue a final decision and order the manufacturer to conduct a recall. If necessary, the agency will then go to court to enforce such an order. In almost all cases, the manufacturer agrees to conduct the recall without NHTSA's forcing it to do so. According to NHTSA officials, the agency opens between 80 and 100 defect investigations each year, of which more than half result in recalls. In addition, manufacturers conduct an average of 200 defect recalls each year that are not influenced by NHTSA's investigations. In 2000, there were over 385 recalls for safety-related defects affecting over 18 million vehicles.

States are also involved in the regulation of aftermarket crash parts and recycled airbags. According to the National Association of Independent Insurers, 40 states have enacted some form of legislation governing the use of aftermarket crash parts in vehicle repairs.<sup>3</sup> Most of this legislation is directed at ensuring that vehicle owners are aware that aftermarket parts are being used in repairs. For example, 33 states require that written repair estimates contain a disclosure statement notifying consumers that aftermarket crash parts will be used in the repair, and 8 states require the consent of the consumer to use aftermarket crash parts. Furthermore, according to the Automotive Occupants Restraints Council, New York was the only state that had enacted a law regulating the sale and installation of recycled airbags as of December 2000. Appendix II provides a summary of state law provisions covering aftermarket crash parts and recycled airbags. In addition, in early 2000, the Massachusetts Auto Damage Appraiser Licensing Board conducted two hearings to discuss the safety of OEM, aftermarket, and recycled parts used in collision repair. In September 2000, the Board voted three to two that aftermarket cosmetic parts are not exact

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<sup>3</sup>The National Association of Independent Insurers represents about 675 insurance companies.

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duplicates of OEM parts and may jeopardize the safety and value of a vehicle.

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## The Debate on Aftermarket Crash Parts

The debate on the quality and safety of aftermarket crash parts is highly polarized, reflecting a range of opinions on the safety of aftermarket crash parts:

- Aftermarket crash parts are unsafe. According to this position—held generally by many collision-repair associations and repair shop owners—aftermarket crash parts are inferior to OEM parts in fit and finish and are dangerous. The evidence for this argument is mostly anecdotal, although we saw aftermarket crash parts that were clearly different from their OEM counterparts.
- Aftermarket crash parts may be unsafe. According to this position—held generally by new vehicle manufacturers—the impact of aftermarket crash parts on occupants’ safety is unknown. Therefore, the manufacturers recommend that only OEM parts be used to ensure that repaired vehicles perform to their original safety specifications.
- Aftermarket crash parts are safe. According to this position—held generally by insurance companies and aftermarket manufacturers—aftermarket crash parts are cosmetic only and do not affect vehicle safety.

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## The Debate on Recycled Airbags

The debate on the use of recycled airbags is also divided. General opinions include the following:

- Recycled airbags may be unsafe. Advocates of this position—generally OEMs, some insurance companies, and body shop owners—maintain that deployed airbags should be replaced only with new OEM airbags. Advocates of this position maintain that airbags are a vital safety feature and the potential risks of recycled airbags should preclude replacing a deployed airbag with anything other than a new airbag. Furthermore, they argue that recycled airbags do not undergo the same intensive quality checks as newly manufactured units. They add that many undetectable variables, like water damage to the airbag, could prevent a recycled airbag from deploying properly. Finally, they contend that the existence of a recycled airbag market will further increase airbag theft.
- Recycled airbags are safe. Advocates of this position—generally recycling organizations and some insurance companies—maintain that reusing nondeployed OEM airbags is a viable, economical, and safe

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alternative to using new, more costly OEM airbags when the recycled airbags are properly matched, handled, and installed. The advocates add that lower-income drivers may not be able to afford to replace their airbags with new, more expensive OEM airbags. Therefore, recyclers are creating a market in which drivers can purchase replacement airbags that are 50 percent to 70 percent cheaper than new airbags.

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## Studies of Aftermarket Crash Parts and Recycled Airbags Do Not Conclusively Resolve Safety Issues

We identified seven studies of aftermarket crash parts or recycled airbags, but their results do not conclusively resolve the issue of safety. Five studies—one by consumer advocates, one by an auto manufacturer, and three by the insurance industry—examined the use of aftermarket crash parts. Two studies—one by the recycling industry and the other by an insurance company—focused on the safety of recycled airbags. Although these studies are useful, they do not resolve the debate over the safety of aftermarket crash parts and recycled airbags because they reach different conclusions and are limited in number and scope.

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## Consumer Reports Test

In February 1999, Consumer Reports published the results of its study and fueled the debate on the quality of aftermarket crash parts.<sup>4</sup> Consumer Reports compared OEM and aftermarket bumpers and CAPA-certified fenders for a 1993 Honda Accord and a 1993 Ford Taurus. It tested fender corrosion resistance, bumper protection, and the overall quality of the parts' fit. Consumer Reports found that CAPA-certified aftermarket fenders rusted more quickly and did not always fit properly. The report also stated that aftermarket bumpers did not fit properly and did not provide sufficient protection in low-speed collisions. The aftermarket bumpers tested, which were not CAPA-certified, shattered in a variety of tests at 5 miles per hour or less. One aftermarket bumper did not prevent damage to the Ford headlight mounting panel, radiator support, and air conditioner condenser. Another bumper allowed damage to the Honda radiator, air conditioner condenser, radiator support, and other parts. The report concluded that (1) aftermarket crash parts are inferior to OEM parts, (2) consumers are ill served by the use of aftermarket crash parts, and (3) aftermarket crash parts may influence vehicle safety. Consumer Reports' study also noted that comprehensively determining the safety of aftermarket crash parts through testing is very difficult, if not impossible. According to Consumer

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<sup>4</sup>"Cheap Car Parts Can Cost You a Bundle," Consumer Reports, Feb. 1999.

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Reports, crash testing—which would ultimately resolve questions about the safety of these parts—is very complex and expensive to conduct for all combinations of replacement crash parts and original vehicles.

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## Ford Test

In 1994, Ford compared its replacement crash parts to certified and noncertified aftermarket crash parts. Ford tested the parts for fit, finish, structural integrity, corrosion resistance, material composition, and dent resistance. According to the study, Ford replacement parts outperformed the aftermarket replacement parts for all quality factors. On the basis of this testing, Ford concluded that aftermarket crash parts are inferior to Ford replacement parts and are not of “like kind and quality.” The Ford testing, like the Consumer Reports testing, focused on the quality, not the safety, of aftermarket crash parts.

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## Insurance Industry Tests

The Insurance Institute for Highway Safety (IIHS) conducted two studies of aftermarket crash parts.<sup>5</sup> IIHS sought to determine whether aftermarket crash parts pose a safety risk. In its 1987 study, IIHS crashed a 1987 Ford Escort without its front fenders, door skins, and grill and with an aftermarket hood installed. The Escort complied with all front-into-barrier crash test performance requirements specified in federal standards. IIHS concluded that aftermarket crash parts do not affect occupants’ safety during a collision. In February 2000, IIHS released the results of a similar test with a 1997 Toyota Camry and reached the same conclusion. In that test, IIHS compared the results of a crash test of two vehicles—(1) a 1997 Toyota Camry with the front fenders, door skins, and front bumper removed and a CAPA-certified aftermarket hood installed and (2) a factory original 1997 Camry. The study found no significant difference in the performance of the two vehicles, leading IIHS to conclude that crash parts are irrelevant to safety with the possible exception of hoods. IIHS noted two possible safety-related concerns with hoods: (1) a hood latch could fail while driving, allowing the hood to fly up suddenly, obscuring the driver’s view, and (2) a hood may not buckle properly during a crash, allowing it to be driven back near or into the windshield in a collision.

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<sup>5</sup>The Institute is a nonprofit scientific and educational organization funded by automobile insurers. Its mission is to reduce the losses—deaths, injuries, and property damage—from crashes on the nation’s highways.

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In 1995, Thatcham—an insurance industry research facility located in England—conducted a test similar to the 1987 IIHS study.<sup>6</sup> Thatcham crash-tested a 1995 Vauxhall Astra with the front fenders, door skins, and front bumper removed and an aftermarket hood installed. It found that the Astra complied with all front-into-barrier crash test performance requirements specified in federal standards—consistent with IIHS’ findings. The Thatcham study concluded that aftermarket crash parts do not affect the crashworthiness of a vehicle.

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## Recycled Airbag Tests

The Automotive Recyclers Association (ARA) funded a study in 1998 at Garwood Laboratories in California to test 196 recycled airbags and 5 new OEM airbags.<sup>7</sup> The study showed that 195 out of 196 recycled airbags deployed within the manufacturer’s specifications. An association official stated that the laboratory pre-identified one flood-damaged airbag and was not surprised when the airbag did not deploy within the manufacturer’s specifications. Thus, the association concluded that recycled airbags are a viable, economical, and safe alternative to new, more costly OEM airbags when properly handled, shipped, and professionally installed.

In 2000, the Insurance Corporation of British Columbia (ICBC) tested 136 recycled airbags from various automobiles.<sup>8</sup> This study sought to determine if there was any appreciable difference in deployment between factory-new OEM airbags and recycled airbags.<sup>9</sup> An official with ICBC stated that the study showed that there is no appreciable difference between OEM and recycled airbags when the airbags are properly replaced and have not been exposed to flood damage. ICBC expects to begin specifying that repairers use recycled airbags in early 2001. An official from ICBC stated that it expects to use only certified recycled airbags in replacing deployed units.

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<sup>6</sup>Thatcham was established in 1969 by the British Insurance Association and undertakes a wide range of automotive research.

<sup>7</sup>The Automotive Recyclers Association represents approximately 2,000 automotive recyclers that provide replacement parts.

<sup>8</sup>The Insurance Corporation of British Columbia is a government-operated corporation and the sole automobile insurance provider in British Columbia.

<sup>9</sup>As of December 2000, ICBC had not issued a paper on the results of its testing.

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## Recycled Airbag Certification Company Tests

We identified two U.S. companies that are developing testing procedures to certify the safety and reliability of recycled airbags. Both organizations use electrical engineering and other methods to detect flood damage, foreign matter, and electronic problems. One of the companies said that it had tested 58 recycled airbags and found that the recycled airbags it tested deployed within the manufacturer's specifications. These companies said that their approaches could ensure that a recycled airbag performs within the manufacturer's specifications. Both organizations stated that the key to the safety of recycled airbags is the proper matching, handling and installation of the recycled airbags. One company has begun certifying recycled airbags, and the other plans to start certifying airbags in early 2001.

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## Studies Do Not Definitively Answer the Question of Safety

While the studies and tests conducted on aftermarket crash parts and recycled airbags provide useful information, they do not appear sufficient to resolve the question of whether aftermarket crash parts and recycled airbags are safe. The limited number and scope of the studies make it difficult to draw conclusions about all parts. In the studies of aftermarket crash parts, only three vehicles were crash-tested—a 1987 Ford Escort, a 1997 Toyota Camry, and a 1995 Vauxhall Astra. These vehicle models represent only a small percentage of the hundreds of makes, models, and years of vehicles on the roads today. The primary focus of the Consumer Reports study was on the quality of aftermarket crash parts, although it raised questions about their safety. The study also stated that the large number of vehicles and parts available may make it impossible to answer the safety question through testing. Although the two recycled airbag studies conducted by ARA and ICBC showed that undamaged and properly installed airbags will deploy within the manufacturer's specifications, they did not develop measures to ensure that recycled airbags are undamaged. They highlighted the need to develop testing procedures to ensure that recycled airbags are undamaged and not taken from flood-damaged vehicles.



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## NHTSA's Authority Over Aftermarket Crash Parts and Recycled Airbags

The Motor Vehicle Safety Act gives the Secretary of Transportation broad authority to prescribe safety standards to reduce traffic accidents, deaths, and injuries on the nation's roads. The act authorizes the Secretary to prescribe safety standards for new motor vehicles and motor vehicle equipment.<sup>10</sup> The Motor Vehicle Safety Act prohibits, in part, the manufacturing, selling, and importing of new vehicles and new vehicle equipment that do not comply with NHTSA's safety standards. These provisions could apply to both new OEM and new aftermarket crash parts since new parts are classified as new motor vehicle equipment. Although NHTSA has the authority to regulate aftermarket crash parts, the agency has not determined that these parts pose a significant safety concern and therefore has not developed safety standards for them. According to agency officials, the agency has not developed safety standards for aftermarket crash parts because

- testing by IIHS concluded that the use of aftermarket crash parts does not affect vehicle safety;
- problems with aftermarket crash parts tend to focus on the fit and finish of the parts, rather than on safety;
- the agency has not identified any trends in the complaints it receives about the safety of aftermarket crash parts and recycled airbags; and
- those who voiced concerns about the use of aftermarket crash parts, including manufacturers of original replacement parts, have not provided conclusive evidence that aftermarket crash parts pose a significant safety concern.

The act's provisions that apply to aftermarket parts do not apply to recycled airbags because they are used rather than new equipment. For used vehicles, the Motor Vehicle Safety Act directs the Secretary to prescribe safety performance standards for used motor vehicles, in order to encourage and strengthen state motor vehicle inspection programs. Under this provision, the agency could elect to develop safety standards for occupant restraint systems, which might incorporate airbags. NHTSA has not developed such standards because it has not identified significant problems with occupant restraint systems that could be addressed by state motor vehicle inspection programs. The agency has, however, determined that water damage can undermine the performance of airbag systems. Through its defect investigation process, NHTSA has identified several

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<sup>10</sup>The Secretary has delegated the authority over these matters to NHTSA.

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safety defects in motor vehicles that were related to the failure of the airbags to operate properly after being exposed to flood damage or the intrusion of other liquids. The resulting recalls affected over 725,000 vehicles. Several other manufacturers have recalled vehicles to address similar problems without being influenced by NHTSA's investigations. According to NHTSA officials, the agency could conduct a study of recycled airbags and, if appropriate, issue consumer warnings or issue a report to the Congress on its findings.

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## NHTSA's Ability to Detect and Order the Recall of Unsafe Aftermarket Crash Parts Is Limited

NHTSA has the authority to order manufacturers of replacement parts that contain a safety-related defect to recall the defective items. Manufacturers must notify owners, purchasers, and dealers of the defect and remedy the defect (either through repair or replacement) free of charge. However, NHTSA's ability to detect parts with safety-related defects is limited because the agency's database of complaints from vehicle owners and others contains only a fraction of the complaints that manufacturers receive. Moreover, even if NHTSA were to identify unsafe aftermarket crash parts, it would likely have difficulty having them recalled. Recent legislation creates opportunities for NHTSA to gather additional information needed for identifying possible defects and improve its management and analysis of vehicle safety data.

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## NHTSA's Complaint Database Has Limitations

An essential component of NHTSA's overall process is the agency's ability to detect safety-related defects. To decide whether to investigate a possible safety-related defect, including any relating to OEM and aftermarket crash parts, NHTSA relies heavily on its complaint database. However, this database contains only a fraction of the complaints that customers report to manufacturers. In addition, aftermarket crash parts may not be identified as such in the database because consumers who complain to NHTSA may not know they have aftermarket crash parts or their complaints may not indicate that such parts are involved.

NHTSA's ODI receives consumer complaints about possible defects in motor vehicles and motor vehicle equipment from a toll-free consumer hotline, an on-line computer Web page, e-mail, telephone calls, surveys, and letters. As of August 2000, the database contained about 400,000 complaints gathered over the last 10 years. In an average year, ODI receives between 40,000 and 50,000 complaints.

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The number of complaints in the database may represent only a small percentage of all complaints being made about possible defects. For example, in September 2000, the Administrator of NHTSA testified on the investigation and recall of Firestone tires. The Administrator said that by the end of 1999, NHTSA had received 46 reports of incidents involving these tires. NHTSA did not open a defect investigation at that time because of the large number of tires in use and the variety of possible causes of tire failure. However, after press reports in February 2000 highlighted two fatalities and alluded to a number of other crashes and fatalities, NHTSA opened an investigation. After obtaining additional information from the manufacturers involved and the attendant publicity, the Administrator reported that as of August 31, 2000, NHTSA had received over 1,400 complaints. In addition, according to the former Chief of ODI's Trends and Analysis Division, the complaints NHTSA receives about safety-related defects may represent only 10 percent of all the complaints that manufacturers receive. This estimate was based on the results of past requests for information made to manufacturers after ODI had opened investigations. For example, in February 2000, ODI began an investigation of plastic door garnish moldings on 1998 and 1999 Sebring Coupe vehicles. This investigation responds to 21 consumer complaints of partial and complete detachment, some of which occurred while the consumer was driving.<sup>11</sup> During the preliminary evaluation phase of the investigation, ODI requested information from DaimlerChrysler Corporation and obtained 276 additional complaints that the manufacturer had received. According to NHTSA officials, the agency has made efforts over the past few years to encourage repair shops and others to report safety-related problems with either OEM or aftermarket crash parts; however, the agency has received relatively few complaints about these parts.

Aftermarket crash parts may not be identified as such in NHTSA's database because consumers who complain to NHTSA may not know they have aftermarket crash parts or their complaints may not indicate that such parts are involved. According to data supplied by the National Association of Independent Insurers, 10 states do not have any form of legislation addressing the use of aftermarket crash parts. In these states, it is not necessary to tell an owner specifically about the use of an aftermarket part in a vehicle repair or to receive the owner's consent to use the parts. Furthermore, there are no requirements for informing the purchaser of a

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<sup>11</sup>The door garnish molding is the trim panel that attaches to the lower portion of the vehicle. It is composed of a molded thermoplastic and is 50 inches long and 14 inches high.

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used vehicle that aftermarket crash parts have been used in an earlier repair. In these instances, the complainant would be unlikely to identify the defective part as an aftermarket part. In addition, in submitting a complaint to NHTSA, a complainant is free to describe the problem in any way he or she chooses. The choice of words in a complaint is important because the process NHTSA follows in identifying potential defect trends begins with a search of key words in the database. For example, we asked NHTSA to search for “aftermarket” and found six complaints that contained that term. However, complainants could have used a variety of other words to describe their complaint or might not have thought to mention the term.

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## Recalling Unsafe Aftermarket Crash Parts May Be Difficult

Even if NHTSA were to conclude that certain aftermarket crash parts contained a safety-related defect, its ability to recall them would be hampered because the parts do not always indicate the manufacturer and it may be difficult to identify the vehicles on which the parts were used.

According to Consumer Reports, many aftermarket crash parts are essentially invisible to NHTSA’s complaint and recall system, mainly because the parts have no manufacturer’s name stamped on them. During our review, we also saw several aftermarket crash parts that did not carry the manufacturer’s identification. However, the extent to which parts are unlabeled is unknown. Taiwan Auto Body Parts Association officials stated that, since 1994, nearly all of the aftermarket crash parts its members manufacture are stamped with the manufacturer’s name and a production lot number.<sup>12</sup> Furthermore, according to a CAPA official, the aftermarket parts certification process requires manufacturers to mark each part with the manufacturer’s name and production lot number to facilitate identification and recall if necessary. However, CAPA recognizes that its certified parts represent only a third of all aftermarket crash parts and some noncertified parts do not indicate the manufacturer.

Even if the manufacturers of aftermarket parts were clearly identified, little information exists on the purchasers of those parts, making the recall process difficult. When automotive manufacturers recall vehicles, they rely on information they obtained when the vehicles were purchased and on registration records maintained by state departments of motor vehicles to identify and locate vehicle owners. With aftermarket crash parts, however,

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<sup>12</sup>The Taiwan Auto Body Parts Association represents nearly 40 Taiwan-based aftermarket crash parts manufacturers.

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this information is typically not available. Vehicle owners may purchase aftermarket crash parts at automotive retail stores and install the parts themselves, or body shops may install aftermarket parts that they obtained through parts distributors. In either instance, it is unlikely that the owners of vehicles with unsafe aftermarket crash parts could be specifically identified because it is unlikely that shops or distributors would maintain the information needed to locate the owners of the unsafe parts. Consequently, it would be necessary to recall unsafe aftermarket crash parts using a broad-based approach similar to a consumer product safety recall. Under this approach, public announcements are made to alert consumers to the product's safety-related defect. NHTSA officials recognize that it would be very difficult to identify and recall aftermarket crash parts using this approach.

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### Recent Legislation Identifies Weaknesses in NHTSA's Ability to Identify Safety-Related Defects

The Firestone tire recall, together with the subsequent congressional investigations and legislative initiatives, focused attention on weaknesses in NHTSA's regulatory and enforcement program. Likewise, congressional oversight reports expressed concerns about the effectiveness and efficiency of NHTSA's process of gathering and analyzing data on vehicle defects and initiating investigations and recalls. The Transportation Recall Enhancement, Accountability, and Documentation Act was signed into law in November 2000. In addition to requirements specifically addressing tires, the act sought to increase NHTSA's legal authority, improve its regulatory programs and access to safety information, and increase its funding levels by \$9.1 million. For example, the act requires manufacturers to report to NHTSA safety recalls of their products (which would include OEM and aftermarket crash parts) in other countries, increases civil penalties, and establishes criminal penalties for persons who knowingly violate the act. The act also requires NHTSA to conduct a comprehensive review of all standards, criteria, procedures, and methods, including the data management and analysis systems it uses to open a defect or noncompliance investigation.

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### Conclusions

The validity of concerns about the use of aftermarket crash parts and recycled air bags has been debated for many years. As a result, a number of states have enacted legislation to ensure that vehicle owners are aware that aftermarket crash parts are being used in repairs. Existing studies on the safety of aftermarket crash parts and recycled airbags show mixed results, are limited in number and scope, and fail to resolve the debate. Although NHTSA has the authority to regulate aftermarket crash parts, the agency

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has not developed safety standards for them because it has not determined that any aftermarket crash parts contain safety-related defects. NHTSA has more limited authority to regulate the use of recycled airbags. NHTSA could elect to develop safety standards for occupant restraint systems under the used vehicle provisions of the Motor Vehicle Safety Act. These standards could apply to systems containing recycled airbags, but the standards would apply to the restraint system as a whole and not to its individual components. NHTSA has not developed such standards because it has not identified significant problems with occupant restraint systems that could be addressed by state motor vehicle inspection programs.

Absent a comprehensive study that resolves the issue of safety, NHTSA is left to rely on its complaint system to identify possible safety-related defects in aftermarket crash parts and recycled airbag systems. However, NHTSA's defect identification and recall system has limitations. The key database used to identify unsafe parts contains only a small fraction of the complaints received by manufacturers. Apparently, many vehicle owners are either unaware of NHTSA's complaint program or choose not to participate in it. In addition, aftermarket crash parts may not be identified as such in the database because consumers who complain to NHTSA may not know they have aftermarket crash parts or their complaints may not indicate that aftermarket parts are involved. These limitations may hamper NHTSA's ability to detect safety-related trends through broad key-word searches of its complaint database and make it unlikely that NHTSA can identify all unsafe parts. In addition, the ability to recall unsafe aftermarket crash parts is limited because some parts are not stamped with the manufacturer's name and there is no trail leading from the manufacturer to the ultimate user of the part. Therefore, even if an aftermarket part were found to contain a safety-related defect, the product might have to be recalled using a broad-based announcement similar to a consumer product safety recall.

The two studies on the safety of recycled airbags that we identified concluded that they can be a potentially safe, economical alternative to new airbags as long as they are undamaged and properly handled and installed. However, the failure of some flood-damaged air bags to deploy correctly also demonstrates the potential for serious safety consequences. Resolving the safety issues associated with using recycled airbags is important because it appears likely that their use will grow, especially if the Insurance Corporation of British Columbia begins specifying their use in early 2001.

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The recently enacted Transportation Recall Enhancement, Accountability, and Documentation Act gives NHTSA an opportunity to improve its systems for detecting and recalling defective products. It provides NHTSA with the authority to require additional data from manufacturers and others that it can consider in determining the need to initiate an investigation. In addition, the act's provisions requiring a comprehensive review of all standards, criteria, procedures, and methods used to open a defect or noncompliance investigation give NHTSA an opportunity to improve its processes for identifying potentially unsafe parts.

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## Recommendations for Executive Action

The Secretary of Transportation should direct the Administrator of the National Highway Traffic Safety Administration, as part of the legislatively required review, to consider taking the following actions:

- Identify additional sources of information to include in the agency's complaint database. This might include obtaining additional data from manufacturers and insurance companies.
- Heighten consumers' awareness of NHTSA's complaint reporting system with the goal of increasing consumers' participation.
- Investigate the safety of using recycled airbag systems, particularly those taken from flood-damaged vehicles, and determine if any action is appropriate concerning their use.

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## Agency Comments and Our Evaluation

We provided copies of a draft of this report to the Department of Transportation for its review and comment. We discussed the report with NHTSA officials, including the Associate Administrator for Safety Assurance, the acting Chief Counsel, and the Director of the Office of Defects Investigation. They emphasized that NHTSA has statutory authority to issue standards only if they would meet the need for motor vehicle safety and to seek recalls only if there is evidence that particular products made by a specific manufacturer contain a safety-related defect. They added that NHTSA has not taken action to regulate aftermarket crash parts because studies conducted to date and other data and analyses do not demonstrate that there are safety-related problems with the parts. They also maintained that NHTSA does not have statutory authority to regulate recycled airbags. They indicated that their authority over used vehicles is limited to prescribing standards applicable to used motor vehicles for the purpose of encouraging and strengthening state inspections of those vehicles. As a result, NHTSA can issue performance-based standards for

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used vehicle inspections, but cannot differentiate between new or used individual parts or the history of those parts. We revised this report to reflect NHTSA's comments on its authority over recycled airbags. NHTSA also provided other technical clarifications and information, which we incorporated in the report as appropriate.

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As arranged with your offices, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days after the date of this letter. At that time, we will send copies of this report to the Honorable Norman Y. Mineta, Secretary of Transportation and the Honorable Robert Shelton, Acting Administrator of the National Highway Traffic Safety Administration. We will also make copies available to others on request.

If you have any questions about the report, please contact me at (202) 512-2834. Key contributors to this report were Samer Abbas, Bert Japikse, David Lehrer, John Rose, and Glen Trochelman.

Sincerely yours,

A handwritten signature in black ink that reads "Phyllis F. Scheinberg". The signature is written in a cursive style with a large, sweeping initial "P".

Phyllis F. Scheinberg  
Director, Physical Infrastructure Issues



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# Scope and Methodology

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To determine whether any studies have been conducted on the safety of aftermarket crash parts and recycled airbags, we conducted a literature search using the Internet, periodicals, trade journals, and Lexis/Nexis. To identify additional studies, we interviewed federal, state, and industry experts. At the federal level, we interviewed officials from the National Highway Traffic Safety Administration's (NHTSA) Office of Defects Investigation, Office of Regulatory Analysis and Evaluation, Office of Vehicle Safety Compliance, and Office of Vehicle Safety Research. At the state level, we interviewed officials from New York and Ohio. To gain an industry perspective, we interviewed representatives from organizations representing manufacturers and distributors of aftermarket and original equipment manufacturers' parts, collision repair shops and collision repair specialists, consumer advocacy groups, insurance providers, and vehicle safety experts. (A complete listing of the organizations we contacted appears at the end of this appendix.) In addition, we met with representatives of eight collision repair shops located in Illinois and Massachusetts to obtain their views on the safety and quality of aftermarket crash parts and recycled airbags. Illinois was selected because it was the site of the State Farm case and Massachusetts because the Massachusetts Auto Damage Appraisers Licensing Board recently conducted two hearings to discuss the safety of original, aftermarket, and recycled parts used in collision repair.

To determine the extent of NHTSA's authority over aftermarket crash parts and recycled airbags, we reviewed applicable legislation, regulations, program guidance, and other documentation on NHTSA's vehicle safety process and procedures. We also interviewed officials in NHTSA's Office of Defects Investigation, Office of Regulatory Analysis and Evaluation, Office of Vehicle Safety Compliance, Office of Vehicle Safety Research, and Office of General Counsel to gain an understanding of NHTSA's rules, regulations, policies, and procedures.

To determine NHTSA's ability to identify and remove unsafe aftermarket crash parts and recycled airbags from the nation's roadways, we reviewed NHTSA's policies and procedures for identifying safety-related defects. We reviewed consumer complaints on aftermarket crash parts contained in NHTSA's complaint database and reviewed the data and reports on the complaints. We also gathered information on the actions NHTSA has taken with respect to the safety of aftermarket crash parts. To identify potential ways to improve the effectiveness of NHTSA's safety program, we interviewed NHTSA officials, industry associations, and consumer advocacy groups.

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We did not analyze the accuracy or quality of the over 400,000 complaints contained in NHTSA's database because such an analysis was beyond the scope of our review. We performed our review from June 2000 through January 2001 in accordance with generally accepted government auditing standards.

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## Organizations Interviewed by GAO

Aeromotive Automotive Electrical Engineering Field Services  
Airbag Testing Technology, Inc.  
Alliance of American Insurers  
Alliance of Automotive Manufacturers  
American Insurance Association  
Auto Body Parts Association  
Automotive Aftermarket Industry Association  
Automotive Occupant Restraints Council  
Automotive Engine Rebuilders Association  
Automotive Parts Rebuilders Association  
Automotive Recyclers Association  
Automotive Service Association  
California Autobody Association  
Center for Auto Safety  
Certified Automotive Parts Association  
Coalition for Auto Repair Equality  
Consumer's Union (Consumer Reports)  
DaimlerChrysler Corporation  
Detroit Testing Laboratories  
Eagle Automotive, Inc.  
Entela Laboratories  
Ford Motor Company  
General Motors Corporation  
Insurance Corporation of British Columbia  
Insurance Institute for Highway Safety  
Keystone Automotive Industries, Inc.  
Massachusetts Auto Body Association  
Massachusetts Auto Damage Appraisers Licensing Board  
Mitsubishi Motors America, Inc.  
National Association of Independent Insurers  
National Association of Mutual Insurance Companies  
Nationwide Insurance companies  
New York State Department of Motor Vehicles  
Nissan North America, Inc.  
North Star Automotive Group

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**Appendix I**  
**Scope and Methodology**

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Ohio Board of Motor Vehicle Collision Repair Registration  
Specialty Equipment Manufacturers Association  
Society of Collision Repair Specialists  
Taiwan Auto Body Parts Association  
Tech-Cor, Inc.  
Toyota Motor Sales, U.S.A., Inc.  
USAA Property and Casualty Insurance  
Volkswagen of America, Inc.

# State Legislation Governing Aftermarket Crash Parts and Recycled Airbags

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Forty states have enacted some form of legislation governing the use of aftermarket crash parts in vehicle repairs, according to data supplied by National Association of Independent Insurers. According to the association's data, of the 40 states with existing legislation, 90 percent (36 states) require that repair estimates identify each aftermarket crash part used in the repair, and about 83 percent (33 states) require that the repair estimate disclose that aftermarket crash parts are being used in the repair. A manufacturer's warranty is required by 68 percent (27 states), and about 58 percent (23 states) require a manufacturer's identification on any aftermarket crash parts used. The provisions that the states have enacted vary but can be grouped in nine categories. Figure 1 summarizes the states' aftermarket crash parts legislative provisions.

**Appendix II  
State Legislation Governing Aftermarket  
Crash Parts and Recycled Airbags**

**Figure 2: State Aftermarket Crash Parts Legislative Provisions as of November 2000**

State	Disclosure statement required on consumer's estimate <sup>a</sup>	Consumer consent required <sup>b</sup>	Estimate must identify aftermarket parts <sup>c</sup>	Aftermarket parts must be "of like kind and quality" to OEM parts <sup>d</sup>	Manufacturer's warranty required <sup>e</sup>	Disclosure required about the effect of part's use on vehicle warranty <sup>f</sup>	Insurer cannot require use of aftermarket parts <sup>g</sup>	Manufacturer's identification required on part <sup>h</sup>	No regulation <sup>i</sup>
Ala.	■		■		■			■	
Alaska									■
Ariz.	■		■	■	■			■	
Ark.	■	■	■		■			■	
Calif.	■		■		■			■	
Colo.	■		■		■			■	
Conn.	■		■		■				
Del.									■
Fla.	■		■		■				
Ga.	■		■		■			■	
Hawaii	■	■	■	■	■				
Idaho	■		■		■			■	
Ill.	■		■	■	■			■	
Ind.		■							
Iowa			■		■			■	
Kans.	■		■		■				
Ky.			■	■					
La.	■		■		■			■	
Maine									■
Md.	■					■			
Mass.	■		■		■				
Mich.	■		■		■				
Minn.							■		
Miss.	■		■		■			■	
Mo.	■		■		■			■	
Mont.									■

**Appendix II  
State Legislation Governing Aftermarket  
Crash Parts and Recycled Airbags**

State	Disclosure statement required on consumer's estimate <sup>a</sup>	Consumer consent required <sup>b</sup>	Estimate must identify aftermarket parts <sup>c</sup>	Aftermarket parts must be "of like kind and quality" to OEM parts <sup>d</sup>	Manufacturer's warranty required <sup>e</sup>	Disclosure required about the effect of part's use on vehicle warranty <sup>f</sup>	Insurer cannot require use of aftermarket parts <sup>g</sup>	Manufacturer's identification required on part <sup>h</sup>	No regulation <sup>i</sup>
Nebr.	■		■	■				■	
Nev.									■
N.H.	■		■	■				■	
N.J.	■		■	■	■			■	
N.Mex.									■
N.Y.			■	■	■				
N.C.	■		■	■					
N.Dak.									■
Ohio	■	■	■		■			■	
Okla.	■		■		■			■	
Oreg.		■	■		■	■		■	
Pa.									■
R.I.	■	■	■						
S.C.									■
S.Dak.	■		■		■			■	
Tenn.	■		■		■			■	
Tex.		■							
Utah	■		■		■			■	
Vt.									■
Va.	■		■			■			
Wash.	■		■						
W.Va.	■		■			■			
Wis.	■		■		■			■	
Wyo.	■	■	■	■				■	
<b>Total</b>	<b>33</b>	<b>8</b>	<b>36</b>	<b>10</b>	<b>27</b>	<b>4</b>	<b>1</b>	<b>23</b>	<b>10</b>

<sup>a</sup>Some states require that written repair estimates contain a disclosure statement notifying consumers that aftermarket crash parts will be used in the repair.

<sup>b</sup>Some states specify that aftermarket crash parts can only be used after the consumer has signed a written consent for their use.

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**Appendix II**  
**State Legislation Governing Aftermarket**  
**Crash Parts and Recycled Airbags**

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<sup>c</sup>Some states require that written repair estimates contain a detailed listing of any aftermarket crash parts that will be used in the repair.

<sup>d</sup>Some states require that any aftermarket crash parts used must be comparable in kind and quality to original equipment parts.

<sup>e</sup>Some states require that the manufacturers of aftermarket crash parts provide a written warranty covering each part used in the repair.

<sup>f</sup>Some states require that consumers be notified when the use of an aftermarket crash part will change the terms of their vehicle warranty.

<sup>g</sup>Some states require that insurance companies give consumers the option of using either aftermarket or original equipment crash parts in the repair.

<sup>h</sup>Some states require that all aftermarket crash parts used in a repair indicate the manufacturer of those parts.

<sup>i</sup>Some states have no aftermarket crash parts legislation.

Source: National Association of Independent Insurers.

According to an Automotive Occupant Restraints Council official, only New York had laws governing the sale and installation of recycled airbags. New York requires that each recycled airbag be certified according to standards established by an approved, nationally recognized testing, engineering, and research body. <sup>1</sup> On May 2, 2000, the New York Supreme Court for Albany County granted a preliminary injunction concerning the requirement that all recycled airbags be certified before installation. The judge determined that, since there was no existing way to certify recycled airbags, it was impossible to abide by the law. The New York State Department of Motor Vehicles has since begun reviewing one company's recycled airbag certification procedures to determine whether the procedures address the concerns of the court.

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<sup>1</sup>New York Consolidated Laws, chapter 71, section 415-c.



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