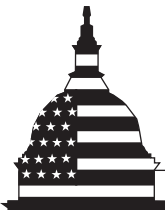


June 2011

# AUTO SAFETY

## NHTSA Has Options to Improve the Safety Defect Recall Process



GAO

Accountability \* Integrity \* Reliability

## Why GAO Did This Study

In 2010, auto manufacturers recalled more vehicles than any other year, according to the National Highway Traffic Safety Administration (NHTSA), the federal oversight authority for vehicle recalls.

However, many recalled vehicles are never fixed, posing a risk to vehicle operators, other drivers, and pedestrians. After the recent recalls of Toyota vehicles, Congress raised questions about the auto safety defect recall process, including the sufficiency of NHTSA's oversight authorities and whether vehicle owners are being effectively motivated to comply with recalls.

In response, GAO reviewed laws and documents and interviewed NHTSA and stakeholders about the (1) extent of NHTSA's role in the recall process, and how its authorities compare to selected federal and foreign agencies that oversee recalls; (2) benefits and challenges of the recall process for NHTSA and manufacturers; and (3) options for improving the recall process. GAO also conducted focus groups with vehicle owners to better understand their perspectives.

## What GAO Recommends

GAO recommends that NHTSA (1) modify requirements for notification letters; (2) enhance and publicize its Web site (3) better use manufacturers' data; and (4) seek legislative authority to notify potential used car buyers of recalls.

NHTSA agreed to consider GAO's recommendations.

View [GAO-11-603](#) or key components. For more information, contact Susan A. Fleming at (202) 512-2834 or [flemings@gao.gov](mailto:flemings@gao.gov).

## AUTO SAFETY

### NHTSA Has Options to Improve the Safety Defect Recall Process

## What GAO Found

NHTSA monitors manufacturers' recall campaigns and completion rates (the number of defective vehicles that are fixed) and provides information and guidance to the public. NHTSA is responsible for reviewing the planning and implementation of recall campaigns to ensure compliance with legal requirements. To this end, the agency is responsible for reviewing, among other things, the manufacturer's description of vehicles affected by a safety defect, actions the manufacturer plans to take to remedy those vehicles through a recall, and notification letters the manufacturer plans to send to the vehicles' owners. NHTSA also monitors the effectiveness of manufacturers' recall campaigns, based in large part on the data manufacturers are required to submit on completion rates. In addition, the agency provides information and guidance to the public on recalls, primarily through its Web site. NHTSA generally has similar authorities to those of selected federal and foreign agencies GAO reviewed that oversee recalls—the Consumer Product Safety Commission, the Food and Drug Administration, the U.S. Department of Agriculture, and agencies in Canada, Germany, Japan and the United Kingdom—although some differences exist in how they can implement their authorities.

Auto industry stakeholders are generally satisfied with the recall process, but several challenges may affect recall completion rates, and thus, the number of defective vehicles that are removed from the road. Manufacturers cited NHTSA's role in the process as a key benefit, reporting clear requirements and open communication. Although franchised dealerships had some concerns related to manufacturers' communication and availability of repair parts, they were also generally satisfied with how manufacturers reimbursed them. Nevertheless, NHTSA faces challenges that may affect recall completion rates; for example, focus group participants reported that 1) they preferred notification letters with certain elements and may be more likely to comply if the letters included the VIN number and clarified the severity of the defect and 2) they were unfamiliar with NHTSA's primary means of communicating defect information to the public—its Web site. Furthermore, according to GAO's review, although recall completion rates vary considerably by certain factors, NHTSA has not consistently used the data it collects to identify which factors make some recalls more successful than others. Finally, NHTSA does not have authority to notify potential used car buyers of a defect.

Based on these challenges, NHTSA has the following and other options for improving the recall process and, more importantly, recall completion rates. First, NHTSA could modify the way manufacturers must present information in safety defect notification letters and publicize information resources, like NHTSA's Web site, so that vehicle owners are better motivated and informed. Second, NHTSA may be able to use manufacturers' data to identify what factors make some recalls more or less successful than others to better target monitoring of recall campaigns and identify best practices. Finally, expanding NHTSA's recall authorities may help identify more defective vehicles and improve recall completion rates.

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## Abbreviations

ACRA	American Car Rental Association
CPSC	U.S. Consumer Product Safety Commission
EU	European Union
FDA	U.S. Food and Drug Administration
MLIT	Ministry of Land, Infrastructure, Transport and Tourism (Japan)
NHTSA	National Highway Traffic Safety Administration
ODI	Office of Defects Investigation
OVSC	Office of Vehicle Safety Compliance
RSS	Really Simple Syndication
TREAD	Transportation Recall Enhancement, Accountability and Documentation
UK	United Kingdom
USDA	U.S. Department of Agriculture
VIN	vehicle identification number

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G A O

Accountability \* Integrity \* Reliability

United States Government Accountability Office  
Washington, DC 20548

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June 15, 2011

The Honorable Elijah Cummings  
Ranking Member  
Committee on Oversight and Government Reform  
House of Representatives

The Honorable Edolphus Towns  
House of Representatives

From 2000 to 2009, manufacturers of motor vehicles and vehicle equipment conducted almost 6,300 recalls to address safety issues ranging from malfunctioning airbags to defective child safety seats. The vast majority of products affected by these recalls were vehicles, such as cars, sport utility vehicles, and pickup trucks. In 2010, a record 14.9 million vehicles were recalled by manufacturers, according to the National Highway Traffic Safety Administration (NHTSA), the federal agency that oversees vehicle recalls. However, owners of vehicles subject to a recall do not always get them fixed, posing a risk to owners, as well as to vehicle passengers, other drivers, and pedestrians. According to NHTSA, on average only about 70 percent of vehicles subject to a recall are fixed within the 18-month period during which manufacturers provide recall completion data to the agency. After the highly publicized recalls regarding the sudden unintended acceleration of Toyota vehicles in 2009 and 2010, Congress expressed concerns about the auto recall process, including whether NHTSA has the authorities it needs and whether vehicle owners are being effectively motivated to get their vehicles remedied.

Congress has also expressed concern about federal oversight of recall processes for other products. For example, in 2008, the Consumer Product Safety Improvement Act was enacted, which gave the Consumer Product Safety Commission (CPSC) enhanced authorities regarding safety standards and recalls.<sup>1</sup> Similarly, the Food and Drug Administration (FDA) Food Safety Modernization Act<sup>2</sup> was signed into law in January 2011 to give FDA enhanced recall authority, allowing it to mandate a manufacturer

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<sup>1</sup>Pub. L. No.110-314, 122 Stat. 3016 (Aug. 14, 2008).

<sup>2</sup>Pub. L. No.111-353, 124 Stat. 3885 (Jan. 4, 2011).

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to recall an unsafe food product.<sup>3</sup> In addition, Congress has raised questions regarding how NHTSA's authorities to regulate motor vehicle safety compare with other countries, such as Canada and Japan.

In this context, this report addresses the following questions: (1) What is the extent of NHTSA's role in the auto safety defect recall process, and how do its authorities compare with those of other selected federal and foreign agencies with safety recall authority? (2) What are the benefits and challenges of the auto safety defect recall process for NHTSA and the manufacturers? (3) What options exist for improving NHTSA's auto safety defect recall process?

To describe the extent of NHTSA's role and authorities in the auto safety defect recall process, we reviewed applicable legislation, including the National Traffic and Motor Vehicle Safety Act, as amended, relevant federal regulations, and NHTSA's guidance on the safety defect recall process. In addition, we conducted interviews with NHTSA officials about the agency's role in the defect recall process and its recall authority. To compare NHTSA's authorities with those of other federal agencies, we reviewed legislation and interviewed officials at selected federal agencies that, similar to NHTSA, have product safety oversight responsibilities, including CPSC, FDA, and the U.S. Department of Agriculture (USDA), to determine what differences and similarities exist between the agencies' recall authorities and those of NHTSA. To compare NHTSA's authorities with selected foreign agencies with safety recall authority, we interviewed officials from agencies in four countries (Canada, Germany, Japan, and the United Kingdom) about their authorities and involvement in the auto safety recall processes of their countries. We selected these agencies based on recommendations from NHTSA and industry officials with whom we spoke and to reflect a range of safety recall processes and authorities. We also interviewed auto industry organizations in the selected countries to get their perspectives on the authorities of the selected foreign agencies, as well as officials from the European Union (EU) to understand how EU legislation may impact two countries in our review, Germany and the United Kingdom (UK).

To examine the benefits and challenges in the auto safety defect recall process, as well as potential options for improving the process, we

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<sup>3</sup>For the purposes of this report, a recall includes the repair, removal, replacement, or refund for a defective or unsafe product.

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conducted and analyzed interviews with stakeholders in the auto safety defect recall process, including NHTSA, auto manufacturers, third-party data providers, franchised and used-car dealerships, rental car companies, consumer groups, and industry organizations. In addition, to determine vehicle owners' awareness of recalls, their understanding of defect notification letters, and their willingness to comply with defect notices, we convened 10 focus groups in five cities—Chicago; Dallas; Richmond, Virginia; Salina, Kansas; and Seattle, Washington. These cities were selected to provide geographic variation and both rural and urban environments. We also analyzed NHTSA data to determine the average completion rate—that is, the number of defective vehicles that are remedied—of auto safety defect recalls from 2000 through 2008 (the last year for which a full six quarters of recall completion rate data is available) and to examine what variations exist across completion rates. See appendix I for more information about our scope and methodology.

We conducted this performance audit from June 2010 through June 2011 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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## Background

The National Traffic and Motor Vehicle Safety Act of 1966 established safety standards for motor vehicles.<sup>4</sup> NHTSA was established by the Highway Safety Act of 1970 to carry out safety activities, which range from setting vehicle safety standards to working with states and local communities to reduce drunken driving.<sup>5</sup> In 2000, in response to the highly publicized recall of Firestone tires due to serious safety defects, Members of Congress expressed concern about NHTSA's oversight of vehicle and equipment safety. Subsequently, the Transportation Recall Enhancement, Accountability and Documentation—TREAD—Act was signed into law, which enhanced NHTSA's authority to ensure that manufacturers provide the agency with early notification of potential safety defects in motor

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<sup>4</sup>Pub. L. No. 89-563, 80 Stat. 718 (Sept. 9, 1966).

<sup>5</sup>Pub. L. No. 91-605, 84 Stat 1713 (Dec. 31, 1970).

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vehicles and equipment and that manufacturers quickly take actions to remedy them.<sup>6</sup>

NHTSA has two primary missions in its oversight of vehicle safety:<sup>7</sup>

- *Oversight of auto and equipment manufacturers' compliance with safety standards established by the agency.* NHTSA's Office of Vehicle Safety Compliance (OVSC) is responsible for ensuring that new vehicles or equipment comply with Federal Motor Vehicle Safety Standards.<sup>8</sup> By law, manufacturers must provide certification indicating that their vehicles and equipment meet these standards, a process also known as self-certification. OVSC also tests and inspects new vehicles to ensure that they meet these standards. Auto manufacturers are also expected to periodically inspect and test vehicles throughout their production period to ensure they comply with safety standards.
- *Oversight of the identification and remedy of vehicle and equipment defects that could pose an unreasonable safety risk—safety defects.* The agency's Office of Defects Investigation (ODI) conducts investigations and identifies possible safety defects in vehicles or equipment that create an unreasonable safety risk and oversees manufacturer actions to remedy them. ODI identifies and reviews a variety of information for trends that could indicate the presence of a safety defect in a motor vehicle or piece of equipment. These information sources include consumer complaints submitted to the agency and information on fatalities, injuries, property damage claims, and consumer complaints collected by manufacturer and provided to the agency. Auto manufacturers also conduct their own investigations of potential safety defects in their motor vehicles.

As part of its mission, NHTSA is responsible for overseeing two types of recalls. Compliance recalls are initiated when vehicles or vehicle equipment is determined to be noncompliant with applicable federal

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<sup>6</sup>Pub. L. No. 106-414, 114 Stat. 1800 (Nov. 1, 2000).

<sup>7</sup>NHTSA also engages in activities targeted at behavioral aspects of traffic safety—for example, through public information campaigns supporting seat belt use and against drunken driving or distracted driving.

<sup>8</sup>According to NHTSA, these federal safety standards are written in terms of minimum safety performance requirements for motor vehicles or items of motor vehicle equipment. These requirements are specified, according to the agency, in such a manner "that the public is protected against unreasonable risk of crashes occurring as a result of the design, construction, or performance of motor vehicles and is also protected against unreasonable risk of death or injury in the event crashes do occur."



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vehicle safety standards, as identified by NHTSA or a manufacturer. Compliance recalls have ranged from design issues with vehicle safety belts to improper placement of warning labels for airbags. From 2000 through 2009, compliance recalls accounted for about 18 percent of vehicle recalls. Safety defect recalls, which accounted for the remaining, majority share of vehicle recalls, are initiated when a defect in a vehicle or vehicle equipment creates an unreasonable safety risk, as determined by NHTSA or a manufacturer. For example, the potential for a steering column to break and suddenly cause partial or complete loss of vehicle control could represent a safety defect and warrant a safety defect recall.

Although NHTSA also oversees compliance recalls, this report focuses on NHTSA's oversight of safety defect recalls, which as previously discussed represent the majority of recalls overseen by the agency and are initiated when a defect poses an unreasonable risk to safety. In addition, we have limited our scope to safety defect recalls that have been initiated for passenger vehicles, including cars, pickup trucks, sport utility vehicles, large passenger vans, and minivans (NHTSA also oversees recalls for other vehicles, such as motorcycles, recreational vehicles, and commercial trucks). Finally, because the U.S. Department of Transportation Office of Inspector General is examining NHTSA's activities related to the investigation of potential safety defects in motor vehicles and equipment, we did not include safety defect investigations in our review.<sup>9</sup>

The auto safety defect recall process for motor vehicles is a concerted effort involving five stakeholders:

- auto manufacturers—businesses that manufacturer, assemble, or import motor vehicles;
- NHTSA—the federal agency that oversees vehicle safety;
- franchised dealerships—businesses that sell or lease an auto manufacturer's new vehicles;

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<sup>9</sup>The Department of Transportation's Office of Inspector General plans to issue this report in the summer of 2011. For more information on the Office of Inspector General, see [www.oig.dot.gov](http://www.oig.dot.gov).

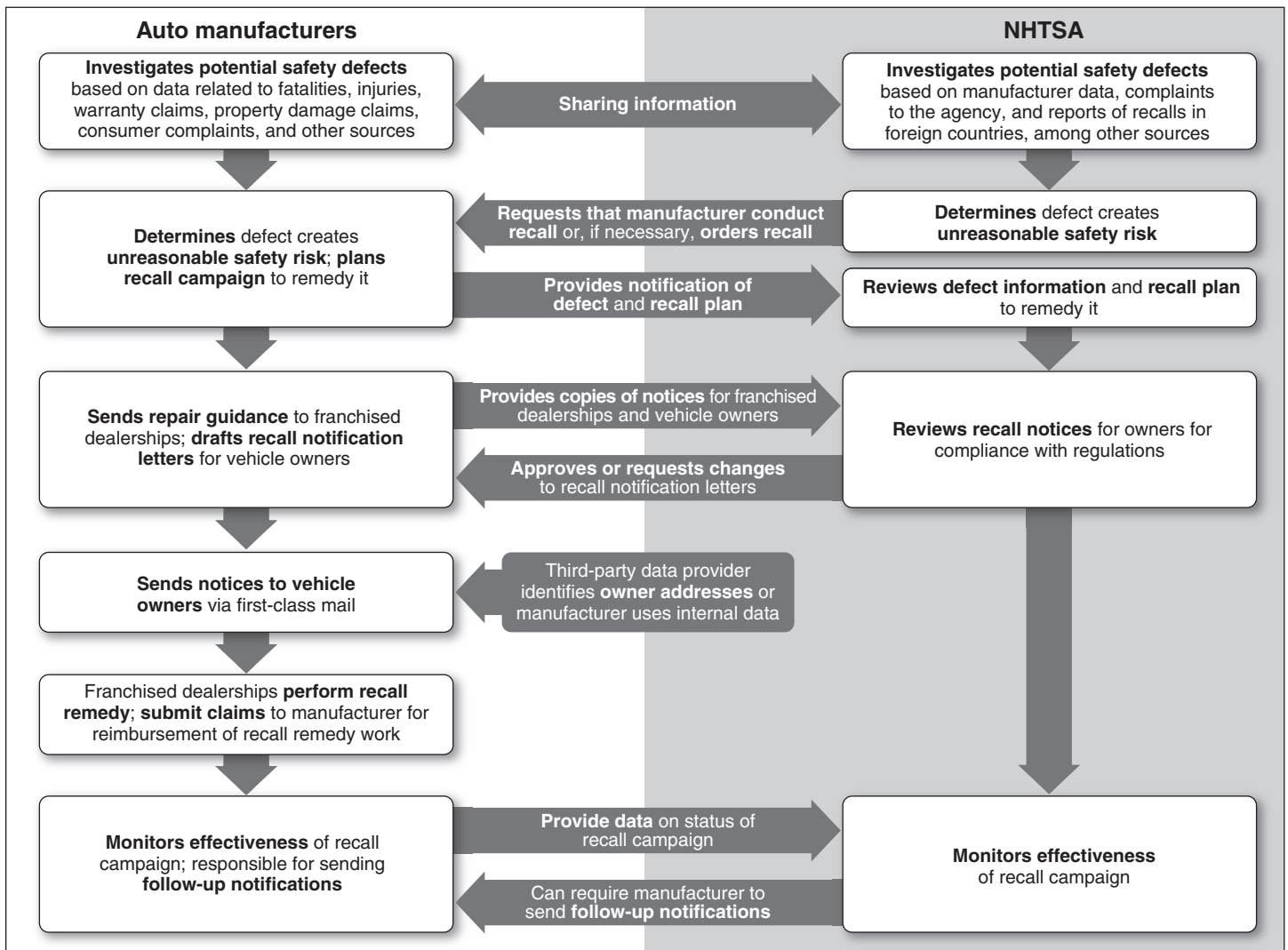
- 
- third-party data providers—businesses that collect and interpret data for clients and assist manufacturers in identifying postal addresses of vehicle owners with a vehicle affected by a recall; and
  - vehicle owners—purchasers or lessors of a vehicle.<sup>10</sup>

As depicted in figure 1, these stakeholders, in particular NHTSA and auto manufacturers, engage in a number of steps during the safety defect recall process.

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<sup>10</sup>Lessor means a person or entity that is the owner, as reflected on the vehicle's title, of any five or more leased vehicles, as of the date of the safety defect notification. Unless a manufacturer notifies lessees—the persons who lease motor vehicles—directly through agreement with a lessor, then the lessor is required to forward the initial follow-up notifications of a recall to lessees within 10 days of receiving them.

**Figure 1: The Role of Stakeholders in the Auto Safety Defect Recall Process**

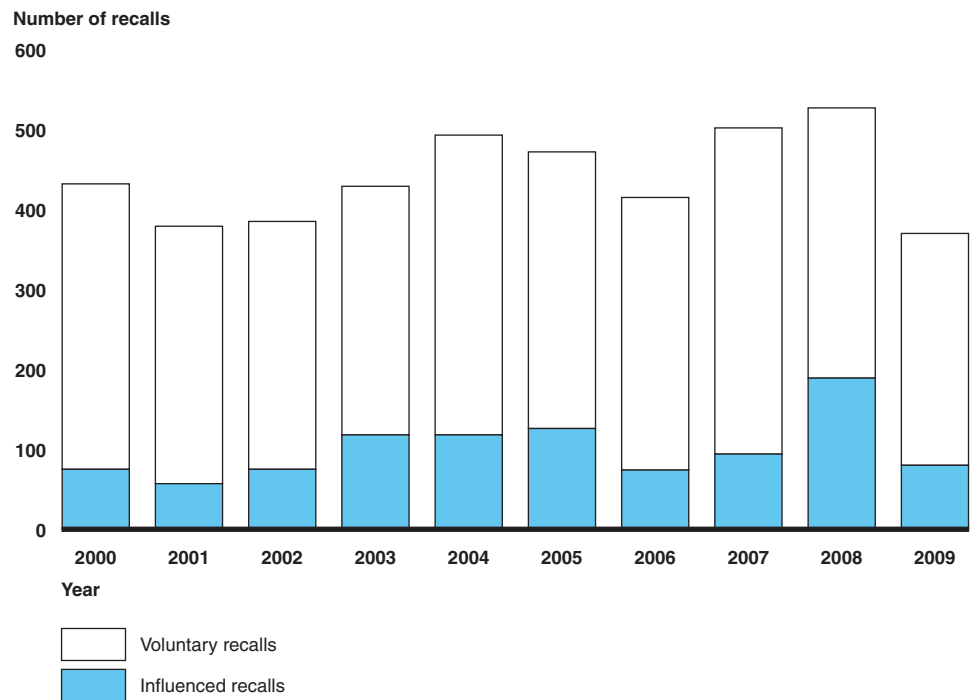


Source: GAO analysis of NHTSA documents and interviews with agency officials, auto manufacturers, and industry organizations.

According to NHTSA officials, since 2000 all safety defect recalls for passenger vehicles have been conducted voluntarily by manufacturers. Although some of these recalls were conducted based on NHTSA’s investigations of safety defects—known as influenced recalls—most were initiated by manufacturers without influence from agency investigations—known as voluntary, or “uninfluenced,” recalls (see fig. 2). For example, in April 2011, a manufacturer expanded the scope of vehicles included in one of the company’s safety defect recalls based, in part, on NHTSA’s own

investigation of the defect. Moreover, NHTSA also has the authority to order a vehicle manufacturer to conduct a recall.<sup>11</sup> According to NHTSA officials, the agency has not ordered any vehicle recalls since prior to 2000, and since the agency was established, it has ordered seven recalls for motor vehicles or equipment.

**Figure 2: Total Voluntary and Influenced Safety Defect Recalls for Motor Vehicles, 2000-2009**



Source: GAO analysis of NHTSA data.

Note: According to NHTSA officials, the agency did not order any vehicle recalls during this time frame.

<sup>11</sup>49 U.S.C. § 30118(b)(2).

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## NHTSA Conducts Oversight of Safety Defect Recalls, and Other Selected Agencies Generally Share Similar Authorities

As part of its oversight role, NHTSA is responsible for reviewing auto manufacturers' planning and implementation of safety defect recalls to ensure compliance with legal requirements. To this end, the agency is responsible for reviewing, among other things, the manufacturer's description of vehicles affected by a safety defect, actions the manufacturer plans take to remedy those vehicles through a recall, and notification letters the manufacturer plans to send to owners of affected vehicles. NHTSA also monitors the effectiveness of recall campaigns being conducted by manufacturers based, in large part, on a manufacturer's quarterly reports showing the completion rate of a campaign. In addition, the agency provides information and guidance to the public on recalls, primarily through its Web site, [www.safercar.gov](http://www.safercar.gov). NHTSA and most other selected federal agencies we reviewed generally share similar authorities in recall processes, but the agencies' authorities differ with regard to penalizing manufacturers and ordering recalls. For example, in contrast to NHTSA's recall authority over motor vehicles, FDA's recall authority over some products includes a mandatory requirement for manufacturers to recall a product regardless of any challenges a manufacturer may have to the order.<sup>12</sup> Foreign agencies we reviewed also generally had similar authorities to NHTSA, with a few exceptions. For example, unlike NHTSA, officials from the Federal Motor Transport Authority—Germany's agency that oversees vehicle safety—told us they can revoke the registration of vehicles with an outstanding safety recall.

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## NHTSA Oversees the Planning and Implementation of Safety Defect Recalls

First, NHTSA is responsible for oversight of planning efforts by auto manufacturers for safety defect recalls. Specifically, NHTSA reviews an auto manufacturer's required notification to the agency that describes a safety defect and the manufacturer's plan to remedy it through a recall. The agency reviews several pieces of information that manufacturers must include in these notifications, including the following:

- a description of vehicles containing the safety defect, including the make, model year, and date the vehicles were manufactured;
- the number of vehicles potentially containing the defect and an estimate of what percentage actually have the defect;

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<sup>12</sup>Pub. L. No. 111-353, § 206.

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- a chronology of principal events leading up to the manufacturer's decision that there is a safety defect in the vehicle; and
  - a description of the manufacturer's plan to remedy the defect through a recall campaign.

As stated earlier, though all recalls since 2000 have been either voluntary recalls or influenced recalls, NHTSA can also order a manufacturer to conduct a recall. Before NHTSA can order a recall, the agency must provide the manufacturer with an opportunity to respond to NHTSA's initial decision. Prior to completion of the administrative process, the manufacturer may conduct the recall voluntarily. According to NHTSA officials, the agency tries to convince manufacturers to conduct influenced recalls based on NHTSA's investigations rather attempt to prove the case for an ordered recall through court, which the officials said can take a long time and require substantial agency resources. NHTSA officials also told us that manufacturers generally conduct a recall voluntarily if the agency informs the manufacturer that it has decided that one is necessary because, according to the officials, a manufacturer does not want to risk receiving negative publicity in an argument against the agency's decision. Similarly, some manufacturers told us that if NHTSA decides that a recall to remedy a safety defect is necessary, it is usually in a manufacturer's best interest to conduct one even if the manufacturer believes it is not necessary due to the risk of negative publicity and consumer opinion.

Second, NHTSA oversees a manufacturer's implementation of a safety defect recall. Among other things, this includes reviewing the manufacturer's letter to vehicle owners notifying them of the safety defect and the manufacturer's recall to remedy it. In particular, NHTSA reviews each manufacturer's draft recall notification letter and envelope to ensure that it includes several pieces of required information about the safety defect, meets the legal requirement to mail the initial notification via first class postage, and adequately motivates owners to make their vehicles available for remedy work.<sup>13</sup> Among other information, a recall notification letter must include the following items:

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<sup>13</sup>Manufacturers are required to submit draft recall notification letters to the agency at least 5 business days prior to the date that the manufacturer plans to mail them to vehicle owners. 49 C.F.R. § 577.5(a).

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- an opening statement that states “This notice was sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act”;
  - a clear description of the safety defect and the malfunction that may result from it;
  - an evaluation of the risk to vehicle safety related to the defect;
  - a description of what a vehicle owner can do to get the defect remedied;
  - a statement of precautions, if any, a vehicle owner should take to reduce the risk that the malfunction will occur before the defect is remedied;
  - a statement indicating that remedy work is free of any cost to the vehicle owners, unless the manufacturer is exempt from providing it free of cost;<sup>14</sup> and
  - on the envelope of the notification letter, inclusion of the words “SAFETY,” “RECALL,” and “NOTICE” in all capital letters and in a font size that is larger than that used in the address information.

NHTSA is also responsible for receiving manufacturer notifications to franchised dealers that perform recall remedy work, which must include information about the safety defect involved in the recall, how to remedy it, and an estimate of when they can expect to be able to conduct the remedy work. According to NHTSA officials, the agency may review these notifications and provide feedback to manufacturers.

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## NHTSA Monitors Recall Campaign Completion Rates

NHTSA evaluates the effectiveness of safety defect recalls based on several considerations, including a recall campaign’s completion rate, which, is calculated by dividing the total population of affected vehicles by the number of vehicles that have been remedied. To determine the completion rate for a recall campaign, NHTSA uses data submitted by the manufacturers. Specifically, manufacturers are required to submit completion rate data to NHTSA through reports to the agency every

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<sup>14</sup>Manufacturers are required to provide the remedy free of cost to vehicle owners who purchased the vehicle within 10 years of the identification of the defect. 49 U.S.C. § 30120(g). However, NHTSA officials told us auto manufacturers generally provide the defect remedy work free of cost to all vehicle owners in all cases.

quarter for six consecutive quarters (18 months) after the start of a recall campaign.<sup>15</sup> These reports must show the total number of vehicles recalled, the number of vehicles inspected and remedied, and the number of vehicles determined by the manufacturer to be unreachable for inspection due to reasons such as theft, scrapping, or export to foreign countries. NHTSA assesses these reports against agency guidelines, or thresholds (see table 1) and considers other factors such as the severity of the defect and the amount of time since and the effectiveness of the manufacturer's last notification to vehicle owners. According to NHTSA, the agency generally uses an internal guideline on completion rates to assess whether renotification is warranted. When the completion rate is considered low, the agency may require a follow-up notification. NHTSA officials could not tell us how frequently they required follow-up notifications.

**Table 1: Minimum Completion Rate for Possible NHTSA Follow-up Notification Request or Requirement**

Quarter of recall campaign	Minimum completion rate (percent)
1	10
2	20
3	30
4	45
5	55
6	65

Source: GAO analysis of NHTSA document.

According to NHTSA officials we spoke with, after the 18-month period in which these quarterly reports are generally required, the agency can require the manufacturer to continue sending reports on the completion rate. Several manufacturers also told us that they often continue to monitor recall campaigns and send follow-up notifications beyond the first 18 months of a recall campaign whether NHTSA requires it or not.

While the factors just described provide some guidance to the agency regarding a campaign's effectiveness, agency officials told us that a variety of factors can also impact a campaign and are taken into account during the agency's review of recall campaigns. For example, agency officials told

<sup>15</sup>The first quarter of reporting is required to begin with the date on which a manufacturer first sends recall notices to vehicle owners.



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us that vehicle owners' perception of the severity of a safety defect may impact the completion rate of a campaign. In addition, the officials said that factors such as the age and type of vehicles in a campaign could impact completion. NHTSA officials also told us that the completion rate of recalls with older vehicles tends to be lower because owners of older vehicles are less likely to make their vehicles available for recall remedy work. Though factors such as these can impact the completion rate of a recall campaign, agency officials told us that they do not analyze trends in completion rate data of recall campaigns.

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### NHTSA Provides Guidance and Information to Public

NHTSA also provides the public with guidance and information on safety recalls, primarily through its Web site, [www.safercar.gov](http://www.safercar.gov). On the Web site, NHTSA maintains a database in which the public can search for safety recalls by entering year, make, and model of a vehicle. The agency's Web site also provides basic guidance on what to do in the event of a safety recall. For example, the Web site offers guidance to vehicle owners about what to do if they do not receive a recall notification letter but believe that their vehicle may be affected by a recall. In addition, NHTSA officials told us they occasionally issue press releases and consumer advisories on safety recalls; in one case, they issued consumer advisories for a recall on faulty cruise control systems in one manufacturer's vehicles that could cause vehicles to catch fire.

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### NHTSA and Other Federal and Foreign Agencies Share Similar Recall Authorities, but a Few Differences Exist

As table 2 shows, NHTSA and most other selected federal agencies we reviewed are generally authorized to order a recall, but differences exist in their ability to implement this authority, which we will describe in this section.

**Table 2: Federal Agencies' Authorities to Order Recalls and Impose Penalties for Selected Products**

Agency	Selected products reviewed	Can issue recall order?	Recall order is mandatory?	Can impose civil money penalties?
NHTSA	Motor vehicles	Yes	No	Yes <sup>b</sup>
CPSC	Consumer products	Yes	No	Yes
FDA	Foods not exclusively regulated by USDA	Yes	Yes	Yes
	Medical devices	Yes	Yes	Yes
	Human drugs	No	No	No
USDA	Meat, poultry, egg products	No <sup>a</sup>	N/A	Yes <sup>c</sup>

Source: GAO analysis of applicable laws and regulations.

<sup>a</sup>USDA officials told us that although they cannot order a recall, they can request manufacturers to conduct one voluntarily. In addition, agency officials told us that USDA's authority to seize and detain products was sufficient and that, therefore, authority to order a recall was not necessary.

<sup>b</sup>In certain cases, where NHTSA does not have authority to impose civil penalties, it can refer the matter to the U.S. Department of Justice for civil proceedings where civil penalties may be imposed.

<sup>c</sup>USDA can impose civil monetary penalties of up to \$7,500 for egg products. Criminal penalties can be imposed for meat and poultry.

All of the agencies can impose penalties for some or all of the selected products<sup>16</sup>; however, there is some variation in the penalties. For example, NHTSA can currently impose fines on manufacturers up to \$17.350 million for violations of requirements relating to the recall process for safety defects.<sup>17</sup> In 2010, the agency twice imposed the maximum penalty of \$16.375 million each from Toyota for failing to timely notify the agency of defects involving accelerator pedals. CPSC can impose a similar maximum fine of \$15 million, while FDA can impose maximum fines that range from

<sup>16</sup>In certain cases, where NHTSA does not have authority to impose civil penalties, it can refer the matter to the U.S. Department of Justice for civil proceedings where civil penalties can be imposed.

<sup>17</sup>NHTSA is authorized to impose a fine of not more than \$5,000 for each violation and a maximum of \$15 million for a related series of violations. 49 U.S.C. § 30165(a). At least every 4 years NHTSA reviews the amount of the fines and, if appropriate, is authorized to adjust the fines. Currently, NHTSA has adjusted the fines to not more than \$6,000 for each violation and to a maximum of \$17.350 million for a related series of violations.

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\$500,000 for food products to \$1 million for medical devices;<sup>18</sup> however, the agency does not have authority to impose monetary fines for violations related to the recall process for human drugs. USDA can impose a maximum fine of \$7,500 for egg products; USDA officials told us they can also impose administrative penalties.<sup>19</sup> For example, the officials told us that USDA can withhold the “USDA Inspected and Passed” mark of inspection, effectively shutting down a manufacturer’s operations. Once a product is in commerce, USDA may detain the product and petition a U.S. court to seize it.

In addition, we found that while three of the four agencies have the authority to order a recall, only one—FDA—has mandatory recall authority, which sets a mandatory requirement for a manufacturer to conduct a recall based on an agency’s determination of a safety defect regardless of any challenge the manufacturer may have to the recall order. Specifically, though NHTSA and CPSC have authority to order manufacturers of selected products that they regulate to conduct a recall, manufacturers can challenge either agency’s order in court and during this challenge can refrain from conducting a recall campaign and continue to sell the potentially unsafe product pending the outcome of the challenge.<sup>20</sup> Unlike NHTSA and CPSC, FDA has mandatory recall authority, meaning manufacturers whose products are subject to this authority face a mandatory requirement to conduct a recall and refrain from distributing their product to retailers, regardless of any challenge the manufacturer may make to the order. In addition, CPSC’s authority applies to retailers of products affected by a recall order, which includes a requirement for retailers to refrain from selling the affected product. Moreover, CPSC has authority to issue public health and safety findings in order to warn the

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<sup>18</sup>CPSC can impose a fine of not more than \$100,000 for each individual violation and a maximum of \$15 million for a related series of violations. 15 U.S.C. § 2069(a)(1). For food products under FDA’s authority, any person who introduces into interstate commerce or delivers for introduction into interstate commerce an article of food that is adulterated or any person who does not comply with a recall order shall be subject to a civil money penalty of not more than \$50,000 in the case of an individual and \$250,000 in the case of any other person for such introduction or delivery, not to exceed \$500,000 for all such violations adjudicated in a single proceeding. 21 U.S.C. § 333(f)(2)(A). For medical devices under FDA’s authority, fines are \$15,000 for each violation and a maximum of \$1 million for all violations adjudicated in a single proceeding. 21 U.S.C. § 333(f)(1)(A).

<sup>19</sup>21 U.S.C. § 1041.

<sup>20</sup>49 U.S.C. § 30118(b)(2); 15 U.S.C. § 2064(d)(1).

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public about products that the agency determines pose a safety risk.<sup>21</sup> CPSC officials added that in some cases this authority has proven sufficient in convincing manufacturers to conduct recalls voluntarily. FDA's mandatory recall authority applies to some, but not all, products regulated by the agency and included in our review. Specifically, although FDA has mandatory recall authority over food products and medical devices, it does not have mandatory recall authority over human drugs.

USDA is the only agency we reviewed that does not have the authority to order a manufacturer to conduct a recall, or require the manufacturer to replace or refund the cost of an unsafe product. USDA officials told us, however, that they do not consider this a challenge in addressing unsafe products regulated by the agency because the agency has the authority to detain products deemed unsafe by the agency for 20 days if a manufacturer does not do so voluntarily. FDA and CPSC also have authority to detain some of the products that they regulate.

NHTSA's authorities in the auto safety recall process are also generally similar to those of agencies with auto safety recall authority in Canada, Germany, Japan, and the UK (see table 3), with some exceptions.<sup>22</sup> For example, officials from all of the agencies we reviewed told us their agency can establish requirements for safety recall campaigns. Moreover, officials from all but one of the selected foreign agencies we reviewed told us manufacturers must notify them of safety defects. Similarly, officials from all but one of the foreign agencies we spoke with told us they have authority to impose penalties, such as fines, if manufacturers do not comply with laws or regulations.

However, the authorities of the foreign agencies we spoke with differed to some extent. For example, unlike NHTSA or the other foreign agencies, Germany's Federal Motor Transport Authority has the authority to revoke

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<sup>21</sup>15 U.S.C. §. 2055(b)(5)(d).

<sup>22</sup>The auto safety recall authorities of Germany and the UK are based, in part, on European Union (EU) directives. Officials from Germany and the UK told us that their national laws pertaining to the recall process are based on laws that apply to safety standards for all consumer products, which, in turn, are based on the EU's law pertaining to general product safety. EU officials told us that the EU requires that all of its member states conduct risk assessments of potential safety defects in products, such as motor vehicles, and ensure that manufacturers take actions to remedy these risks. According to the officials, member states must also report safety defects to the EU so that they can be posted to a Web-based system accessible to the public.

the registration of a vehicle for owners who have not complied with an auto safety recall notice. Specifically, the officials we spoke with from the Federal Motor Transport Authority said that if the risk of the safety defect is determined to pose a threat to persons other than the vehicle owner, then they can revoke the registration on that vehicle until the recall remedy is completed, unlike in the United States, where NHTSA has no such authority. According to the officials, in 2010, Germany revoked owners' registration due to outstanding safety recalls more than 1,000 times, and in general the agency regularly uses this authority. In addition, among the agencies we reviewed, only Transport Canada, Canada's agency that oversees auto safety, does not have the authority to order a manufacturer to conduct a recall. Officials from Transport Canada we spoke with added, however, that the agency can prosecute a manufacturer on criminal charges if the manufacturer does not notify vehicle owners after identifying a safety defect. Moreover, officials from the Ministry of Land, Infrastructure, Transport and Tourism (MLIT)—Japan's agency that oversees auto safety—told us that while auto manufacturers are required to notify the agency about safety recalls, they are not required to notify it about safety defects.

**Table 3: NHTSA and Selected Foreign Agencies' Auto Safety Recall Authorities**

Country	Agency	Requires auto manufacturers to notify agency about safety defects	Can order auto manufacturer to conduct a recall	Can establish requirements for auto manufacturer recalls	Can revoke registration of vehicles with an outstanding safety recall	Can impose penalties on auto manufacturers
United States	NHTSA	Yes	Yes	Yes	No	Yes
Canada	Transport Canada	Yes	No	Yes	No	Yes
Germany	Federal Motor Transport Authority	Yes	Yes	Yes	Yes	Yes
Japan	MLIT	No	Yes	Yes	No <sup>a</sup>	No <sup>b</sup>
United Kingdom	Vehicle Operator and Services Agency	Yes	Yes	Yes	No	Yes

Source: GAO analysis of U.S. laws and regulations and foreign agencies' authorities based on comments of officials representing the foreign agencies.

<sup>a</sup>According to MLIT officials, the agency can order users to repair their vehicles if the defects of the recalled vehicles are serious and should be removed immediately.

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<sup>b</sup>According to MLIT officials, both criminal and administrative penalties are determined by the court according to the provisions in laws. In the case of criminal penalties, including fines and imprisonment, MLIT can report violations to the prosecutor's office. Based on MLIT's report, the prosecutors will indict auto manufacturers or employees of the companies for the violation of the law. Then based on the judgment of the court, auto manufacturers may face such penalties. In the case of administrative penalties including fines, MLIT can report the violation to the court. Then, based on the decision of the court, auto manufacturers pay fines to the government coffer.

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## Auto Industry Stakeholders Are Generally Satisfied with the Recall Process for Safety Defects, but Several Challenges May Affect Recall Completion Rates

Although industry stakeholders were generally satisfied with the recall process for safety defects, certain challenges may affect the completion rate of recalls. For example, about half of the auto manufacturers we spoke with told us that NHTSA's regulatory requirements were clear in conveying what was expected of them in the recall process. Likewise, many manufacturers said NHTSA fostered open communication, allowing for two-way interaction that aided in prompt resolution of problems when they arose. Franchised dealerships were generally pleased with how manufacturers reimbursed them during the recall process for safety defects, although some expressed concerns, such as sometimes learning about safety defect recalls at the same time as the public and not always having the parts available for repair when recalls are announced. In addition, we found five challenges that may affect the completion rate of safety recalls:

- identifying and notifying vehicle owners of auto safety defects,
- motivating vehicle owners to comply with notification letters,
- providing better information to vehicle owners and the public,
- using existing data to improve completion rates of recall campaigns, and
- lacking the authority to require manufacturers to notify used-car dealerships of recalls and to require used-car dealerships to notify potential buyers of the existing defect.

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## Manufacturers Reported Clear Requirements and Open Communication as Benefits of NHTSA's Role in the Recall Process for Safety Defects

Manufacturers we spoke with were generally satisfied with the recall process for safety defects and stated that NHTSA's role in this process is a key benefit. Many manufacturers reported that the process is working well because the regulatory requirements are clear and, as a result, they know exactly what is expected of them in the process and by when. For example, some manufacturers stated that requirements for the auto safety defect recall process were well-defined and, because of this, there is little confusion about what manufacturers needed to do after a recall decision is

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made. Some manufacturers also reported that a benefit of the safety defect recall process is the open and cooperative communications between NHTSA and the manufacturers. For example, some manufacturers pointed out that they and NHTSA have established clear points of contact for addressing issues during recall campaigns. These channels of communication made it easier and less time consuming to resolve issues when they arose. Likewise, manufacturers told us they were generally pleased with how promptly NHTSA approved their defect notification letters—sometimes within 1 to 2 days—which facilitates their ability to implement recalls for safety defects in a timely manner.

Other benefits were cited, as well. Most manufacturers we spoke with stated that the requirement to use first-class mail to notify vehicle owners of safety defects was appropriate and effective because, for example, postal mail is a recognizable form of communication to most vehicle owners, allows uniform delivery of the same message to all affected vehicle owners, and allows the manufacturer to track the receipt of notification letters. Additionally, one manufacturer we spoke with noted that the National Traffic and Motor Vehicle Safety Act had been around for decades, and questions and concerns had already been litigated—resulting in a well-understood law.

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### Franchised Dealerships Reported Reimbursement for Recall Remedy Work as a Benefit of the Recall Process for Safety Defects but Expressed a Few Concerns

Franchised dealerships we spoke with generally told us they were satisfied with how manufacturers reimburse them for remedying vehicles with safety defect recalls. Moreover, several franchised dealerships told us that service work related to recalls is profitable for dealerships. One of these dealerships added that this served as an incentive to the dealer to seek out and repair used vehicles in their inventory that may have an outstanding recall.

However, the franchised dealerships we interviewed also expressed a few concerns. First, some dealerships told us that manufacturers do not notify them as promptly as they would like about recalls; as a result, they learn about some recalls at the same time as the general public through the media. Consequently, the dealership may have inquiries from customers about bringing their cars in for repair before the dealer knows about the recall. Second, dealerships expressed concern that parts are not always readily available when recalls are announced, which they said can be an inconvenience to customers who come to the dealership expecting to immediately have the remedy work completed. Two manufacturers told us that the delay in supplying dealerships with parts has, in part, resulted

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from many parts suppliers going bankrupt or out of business during the recent economic crisis and that they are working to address the problem.<sup>23</sup>

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## Five Key Challenges May Affect Recall Completion Rates

### Identifying and Notifying Vehicle Owners of Auto Safety Defects

Some manufacturers told us that notifying vehicle owners about safety defects can be difficult for a few reasons. For example, one manufacturer said the process was challenging because not all vehicle owners keep their address information up-to-date with state motor vehicle registration offices. In addition, several other manufacturers told us that identifying the current mailing addresses for older vehicles is especially difficult because these vehicles often have multiple changes of ownership and, thus, mailing addresses, which compounds the problem. NHTSA and several manufacturers told us that the completion rates for recall campaigns with older vehicles were generally lower than the rates for campaigns with newer model vehicles, although NHTSA officials stated they have not conducted any formal analyses to confirm this. Third-party data providers that manufacturers use to collect owner information confirmed the challenges associated with identifying current vehicle owner addresses. For example, one of the third-party data providers we spoke with stated that mailing addresses for owners of newer vehicles are more current and become less reliable as vehicle ownership changes hands. In addition, they highlighted several other challenges to obtaining up-to-date information, including state privacy laws—some of which require the signature of the vehicle owner before a state motor vehicle agency can release contact information.

Focus group participants and some manufacturers we spoke with also indicated that new or additional methods of communicating recall information to consumers—in addition to the postal mail notifications

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<sup>23</sup>In November 2009, a survey by the Original Equipment Suppliers Association—a leading auto supply industry group—reported that at least 43 U.S.-based auto suppliers had filed for Chapter 11 bankruptcy protection in 2009. Also in 2009, a consultant group estimated that as many as 30 percent of North American suppliers were at high risk of failure.



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Motivating Vehicle Owners to  
Comply with Notification  
Letters

currently in use—could help increase recall completion rates.<sup>24</sup> For example, some focus group participants indicated that they would be more likely to respond to defect notices if they received notice of the defect by phone or through e-mail, in addition to the standard first-class mailing, and some focus group participants recommended the use of multiple contact methods.

Our focus groups with vehicle owners demonstrated that NHTSA and manufacturers may face difficulties in motivating vehicle owners to comply with recall notification letters. Although manufacturers are responsible for drafting notification letters and notifying vehicle owners of a defect, NHTSA is responsible for approving the letters' contents. As stated earlier, NHTSA is responsible for ensuring that the letters contain certain items that (1) inform owners of defects in a clear and understandable manner and (2) effectively motivate owners to have their vehicles remedied. However, our focus group participants revealed that though some of them would comply with a recall notice in any circumstance, the willingness of others to comply depends on vehicle owners' perceptions of three primary factors:

- the severity of the defect—how urgent vehicle owners perceive the recall to be;
- the convenience of the defect remedy—the time projected to fix the defect, as well as whether the dealership provides an alternate mode of transportation during service; and
- the cost of the recall remedy—the perception of how much it will cost the vehicle owner to have the defect remedied (by law, a recall remedy is free of cost to vehicle owners who purchased the vehicle within 10 years of the defect being identified and, according to NHTSA, is generally provided free in all cases).

Moreover, while NHTSA has no ability to control many aspects of a recall campaign, such as the severity of the defect, the agency can control how these and other issues are presented in the defect notification letters,

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<sup>24</sup>We convened 10 focus groups of vehicle owners in five cities—Chicago; Dallas; Richmond, Virginia; Salina, Kansas; and Seattle—to determine vehicle owners' awareness of auto safety recalls, their willingness to comply with defect notification letters, and potential options for improving safety defect notification letters. For more information, see appendix I.

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which may affect whether vehicle owners are motivated to comply. Focus group participants responded that they preferred letters that included certain elements. As a result, including these elements in a defect letter may positively affect whether and how quickly they respond to a recall. The focus groups we convened reviewed three defect notification letters from three separate manufacturers and indicated they would prefer the following elements in a defect letter, which may lead to higher rates of responding to a defect notice:<sup>25</sup>

- a clear explanation of the severity of the defect, including an explanation that does not use jargon, which can be confusing. For example, instead of using the acronym “ABS,” focus group participants would prefer the words “anti-lock brake system.”
- the word “urgent” to indicate the seriousness of the defect.
- a question-answer format because, as one participant described, it spells out the issue, provides an immediate answer, and allows recipients to pick and choose the parts that are most necessary to read.
- an apology from the manufacturer.
- the owner’s vehicle identification number (VIN) information. As one participant explained, including a VIN in the body of the defect notification letter clarifies whether this recall applies to the owner’s vehicle.
- readable font size.
- an indication of whether there is any cost involved with the recall remedy.

In addition, we asked focus group participants to review three defect notification envelopes to gauge their perceptions of the envelope style and format and the likelihood that they would be willing to open each envelope. Though the focus groups reached less consensus on what style and format of envelope they would be most likely to open, participants did reveal that they preferred envelopes that included the word “urgent,” and some preferred envelopes that did not have technical or confusing language. For example, one participant stated that she liked the envelope

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<sup>25</sup>See appendix II for copies of the three defect notification letters and three envelopes reviewed by the focus group participants.

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Providing Better Information to  
Vehicle Owners and the Public

that said “urgent air bag safety” because it described the issue in concise terms. In addition, several focus group participants liked the use of color—red shadowing, for example—to indicate the envelope’s importance, and were more in favor of envelopes without VIN information on the envelope itself.

Our focus groups revealed that many vehicle owners may not be familiar with the Web site [www.safercar.gov](http://www.safercar.gov)—NHTSA’s primary means of communicating defect information to the public. While the Web site is meant to provide vehicle owners and the public with valuable safety defect information, discussions with focus group participants revealed that few knew that the Web site existed or ever used the Web site to learn of recalls. For example, none of the almost 90 participants said they were familiar with [www.safercar.gov](http://www.safercar.gov) and more noted that they use Google when they search for information related to safety defects.<sup>26</sup>

Among other things, [www.safercar.gov](http://www.safercar.gov) allows vehicle owners and the public:

- to set up an RSS—Really Simple Syndication—feed that provides recall information via a computer or mobile device, updated daily, on safety-related recalls for vehicles, among other things.<sup>27</sup>
- to subscribe to NHTSA’s Recall Notification E-mail System and elect to receive a weekly e-mail that summarizes the vehicle recalls for the past 7 days or to select up to five vehicles by make, model, and year about which to receive recall notifications.
- to search a recall database for vehicle recalls by make, model, year, and component, among other things.

However, the information NHTSA provides on its Web site could be more useful. In particular, a centralized database (developed by NHTSA or another party) that allows consumers to search for recall information by

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<sup>26</sup>CPSC sponsors [www.recalls.gov](http://www.recalls.gov), which provides information on, among other things, consumer product recalls and auto safety recalls. Six federal regulatory agencies, including NHTSA, participate in [recalls.gov](http://recalls.gov). In addition to searching for safety recalls, consumers may access a list of recent recalls issued by each of the six agencies. Consumers may also subscribe to e-mail alerts from four of the six agencies, including NHTSA.

<sup>27</sup>Each new recall will remain available on the RSS feed for 7 days.

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VIN would allow vehicle owners to determine if their specific vehicle is affected by a recall. Several used and franchised car dealerships we spoke with noted that having a database to search for recalls by VIN would allow those who may not have been informed of recalls through a notification letter to determine whether the vehicles they possess have outstanding safety recalls. Although NHTSA has not developed a centralized VIN database, most of the manufacturers we interviewed allow their customers to access VIN-specific recall information for their vehicles in a few ways. Some manufacturers, for example, provided their customers and the public with online access to VIN-specific recall information, but only if their customers registered on the manufacturer's Web site first. Other manufacturers, however, allowed their customers access to this information online without requiring customer registration. Seven of the manufacturers that provide online VIN-specific recall information told us it would be beneficial to have a centralized NHTSA Web page that provides links to online VIN information. Manufacturers that did not provide online access to VIN recall information allowed their customers to call the manufacturers' toll-free customer service number or sign up for e-mail notifications to obtain VIN recall information on their vehicles.

NHTSA officials we spoke with agreed that additional efforts could be made to improve the awareness of [www.safercar.gov](http://www.safercar.gov) and told us that the agency is currently redesigning its Web site to consolidate information so that consumers can more easily find information on vehicle 5-Star Safety Ratings and auto safety recall information.<sup>28</sup> According to agency officials, upgrading the Web site to include VIN information would be helpful for vehicle owners but would require significant resources to implement. However, the agency is in the process of purchasing software to facilitate a VIN-based search engine on its Web site.

## Using Data to Improve Completion Rates of Recall Campaigns

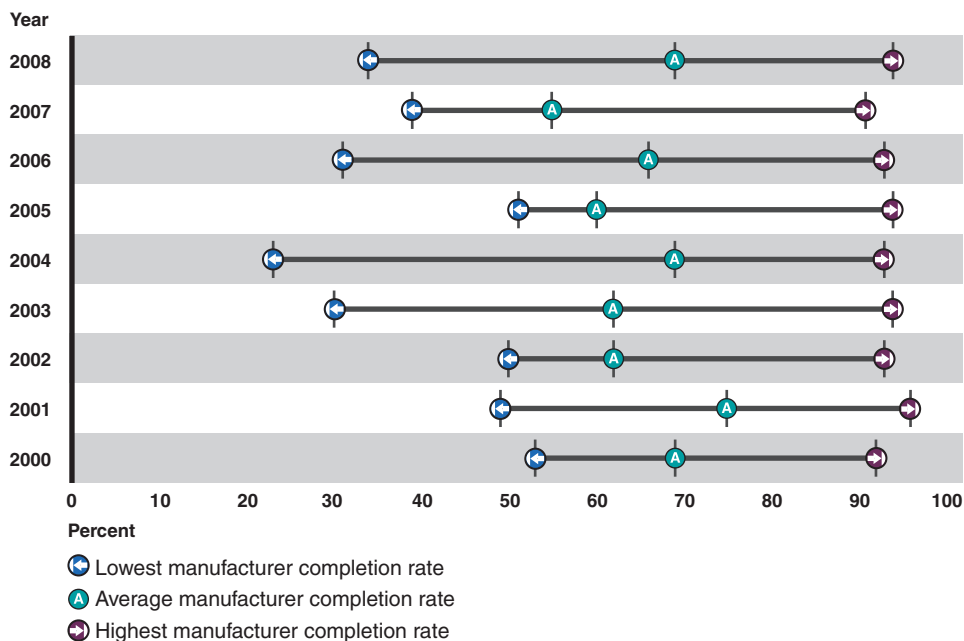
NHTSA is not consistently using the data it collects from manufacturers to improve the completion rates of recall campaigns. As previously discussed, according to NHTSA officials, on average about 70 percent of all vehicles subject to a recall are fixed within the 18-month period during which manufacturers provide recall completion data to the agency. However, our analysis of NHTSA's completion rate data for passenger vehicle recalls from 2000 through 2008 found considerable underlying variation in completion rates in several areas. Overall, we found that

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<sup>28</sup>NHTSA's 5-Star Safety Ratings measure the crash worthiness and rollover safety of vehicles. Five stars indicate the highest rating, one star indicates the lowest.

annual recall completion rates varied substantially by year—from about 55 percent to 75 percent—for all passenger vehicles with safety defect recalls, with an average across all years of about 65 percent.<sup>29</sup> In addition, our analysis revealed that within any given year, some manufacturers have safety defect recall completion rates as low as 23 percent to 53 percent per year, whereas other manufacturers have completion rates between 90 percent and 96 percent (see fig. 3). Furthermore, some manufacturers have consistently higher or lower rates across the 9 years we included in our analysis.

**Figure 3: Average Recall Completion Rates by Manufacturer, 2000 through 2008**



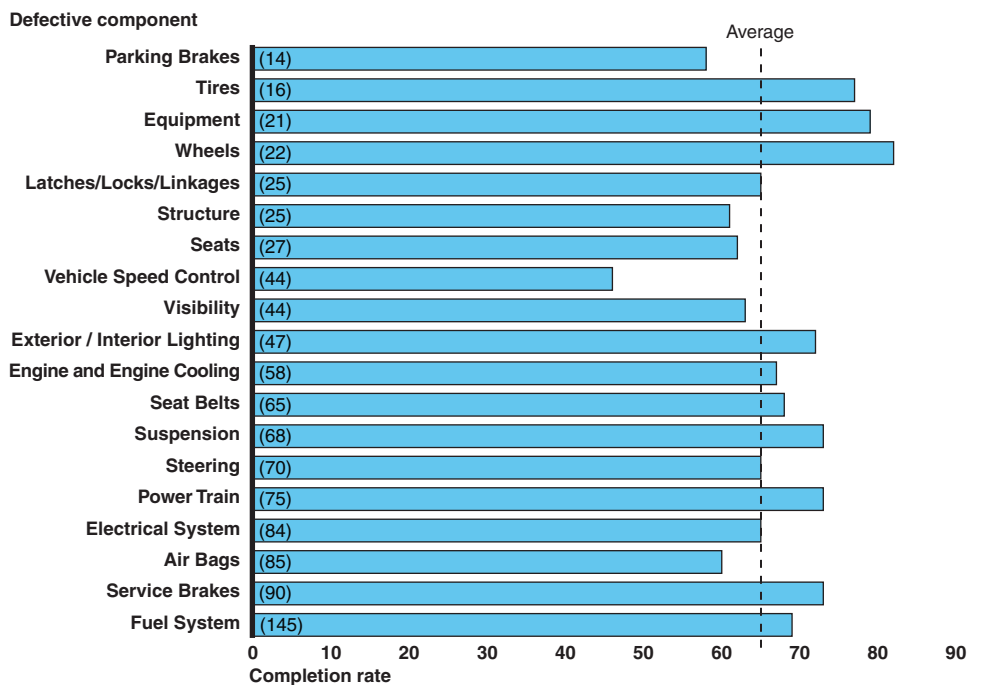
Source: GAO analysis of NHTSA data.

<sup>29</sup>NHTSA does not have a separate category in their data for “passenger vehicles.” For our analysis we excluded motorcycles, commercial vehicles, trailers, recreational vehicles, and car seats. Furthermore, we included only safety defect recalls for vehicles from the top 21 manufacturers in terms of U.S. market share according to Ward’s Automotive Group from 2000 through 2008. All data for 2009 or 2010 was excluded because recall completion data for recalls initiated during late 2009 or 2010 would not have matured a full 18 months (6 quarters) at the time of our analysis. After these exclusions, our analysis included 1,028 safety defect recall campaigns representing about 88 percent of all affected vehicles recalled by manufacturers from 2000 through 2008.

Note: The figure includes the automobile manufacturer completion rates for the 1,028 passenger vehicle recalls that were initiated from 2000 through 2008. The completion rate is calculated after the 6th quarter following the initiation of the recall.

Similarly, completion rates for safety defect recalls involving components—items such as brakes and fuel systems—varied from 46 percent to as high as about 80 percent (see fig. 4). In particular, recall completion rates involving air bags and vehicle speed control (e.g., cruise control) systems resulted in some of the lowest completion rates across all components at 60 percent and 46 percent, respectively.

**Figure 4: Variation in Recall Completion Rates, by Component Recalled**



Source: GAO analysis of NHTSA data.

Notes: The figure includes recall completion rates, averaged across all years, for component categories as defined by NHTSA. The completion rates are associated with passenger vehicle recalls initiated from 2000 through 2008.

Components in the “visibility” category refer to items that affect vehicle lighting such as headlamps, side marker lamps, reflectors, and tail lamps. Components in the “equipment” category include vehicle accessories and after-market equipment, including lighting, trailer hitches, bike racks, and heated car seat covers, among other things.

We found less variation across vehicle types; from 2000 through 2008, the average recall completion rate was 67 percent for passenger cars, 72

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percent for sport utility vehicles and passenger vans, and 65 percent for pickup trucks.

Using the data that NHTSA collects to conduct a broader aggregate-level analysis across all campaigns may help NHTSA determine some of the factors that are associated with higher or lower rates of compliance. As mentioned previously, NHTSA monitors recall campaign completion rates by collecting data on a quarterly basis, including the date a vehicle owner is notified of a recall, the number of vehicles involved, the number of vehicles remedied, and the number of vehicles that are unreachable (e.g., stolen, scrapped, unable to notify owner, and so forth). In particular, NHTSA officials told us they evaluate the effectiveness of a recall campaign by comparing a specific recall campaign's progress to similar campaigns based on factors such as the age of vehicles recalled and the number of vehicles recalled. However, the agency does not currently use the data it collects to conduct a higher-level analysis across all campaigns to systematically look for potential factors related to higher or lower recall completion rates that might be helpful in identifying successful recall campaigns because conducting such analyses is resource intensive. Based on our analysis of NHTSA data, without conducting a broader aggregate-level analysis to look for outliers, patterns, or trends, the agency may be missing an opportunity to identify underlying factors that affect recall campaign completion rates.

NHTSA officials told us that although their goal for each recall campaign is a 100 percent completion rate, there are a number of factors affecting completion rates that are outside of NHTSA's control—such as whether vehicle owners read recall notices or their perception of the severity of a defect. In addition, NHTSA officials explained that monitoring recalls on a campaign-by-campaign basis provides them with the flexibility necessary to capture the unique aspects of each recall campaign and that by focusing on communication and discussion with manufacturers, the agency can develop solutions to improve completion rates when a campaign is achieving a completion rate that is below its expectation. While we agree that completion rates are affected by a number of factors, including a vehicle owner's perception of defect severity, conducting additional analyses could help the agency determine some of the factors that are associated with higher or lower rates of compliance.

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## Limited Authorities

Under federal law, NHTSA can order a manufacturer to give notification of a defect or noncompliance with motor vehicle safety standards to the owners, purchasers, and franchised dealers, as well as order the manufacturer to remedy the defect.<sup>30</sup> However, NHTSA cannot require used-car dealers (or franchised dealerships that sell used vehicles) to notify potential buyers of an outstanding safety defect or require that they get the defect remedied prior to sale.<sup>31</sup> Used-car dealerships we spoke with told us that when they become aware of a vehicle defect, they either remedy the defect before the sale of the vehicle or notify potential buyers of the safety defect because it is a good business practice. Nevertheless, in some instances, a used-car dealer may not be aware that an outstanding safety defect exists in a vehicle. In particular, a used-vehicle dealer association with over 20,000 members told us that because used dealers do not have a franchise agreement with the manufacturers, they do not receive the defect notices that manufacturers send to franchised dealers. Moreover, used-car dealers we spoke with told us that generally they do not receive defect notices from manufacturers, except in certain cases, such as when a used dealer purchases previously leased vehicles directly from a manufacturer.

The rental car companies we spoke with each told us that, unlike used-car dealerships, they generally receive defect notification letters regarding affected vehicles in their fleets, and although they are not required to remedy a defect, they have developed a system for dealing with recalls. One company described a two-tiered system to address safety defects in which vehicles are placed on a “soft-hold”—meaning that the cars can still be rented but will be put in the queue for service—if the defect is not a safety issue. If the defect is a safety issue, these vehicles will be placed on a “hard-hold”—meaning that the cars will be taken out of service immediately and will not be rented until the repair has been made. Each of the rental car companies described a similar system that they used to address recall safety issues.

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<sup>30</sup>49 U.S.C. § 30118(b)(2). While NHTSA can order the manufacturer to remedy the defect, according to NHTSA officials, the process of remedying vehicles is overseen by the manufacturer with minimal involvement from NHTSA. The process of remedying defects primarily involves the manufacturer and franchised dealers.

<sup>31</sup>Franchised dealers that sell new motor vehicles may sell or lease the motor vehicle only if the defect has been remedied before delivery of the motor vehicle under the sale or lease. 49 U.S.C. § 30120.



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The stakeholders we interviewed had mixed views on whether used-vehicle dealerships and rental car companies should be required to notify potential buyers of outstanding safety recalls prior to sale. Several manufacturers we spoke with indicated that it was reasonable to require used-car dealerships to notify the potential buyer of a defect prior to sale. A number of the manufacturers also supported requiring dealerships to get used vehicles with safety defects remedied before selling them to the public. However, the used-vehicle dealer industry association and used-vehicle dealerships we spoke with cited a few difficulties in doing so. First, as previously discussed, used-vehicle dealers do not receive the defect notification letters that manufacturers send to franchised dealers, and as a result, they are generally not notified of a safety defect. Second, there is no single source of information on safety recalls—such as a centralized VIN database—that can be accessed to determine if a car in a dealership’s possession has an outstanding recall. Instead, according to the used-car dealerships we spoke with, they must go through ad-hoc channels to find out about a defect—often by purchasing vehicle history reports such as CarFax (which may not always have up-to-date and accurate information, according to the dealerships) to determine, vehicle by vehicle, whether cars on their lots are subject to outstanding recalls.<sup>32</sup> Since NHTSA cannot require that used-car dealers receive notification of defects, in some cases the used-car dealers may be unable to notify potential buyers of outstanding defects. With over 35 million used cars sold by used and franchised dealerships in the United States in 2009 alone, this could pose a significant risk to the safety of millions of vehicle drivers and may have a negative impact on recall completion rates.<sup>33</sup>

In addition, although NHTSA has the authority to order a recall, the agency does not have “imminent hazard” authority. As initially proposed in the 111th Congress, imminent hazard authority would permit NHTSA to order manufacturers to stop further production, sale, or distribution of vehicles containing a defect found to present an imminent hazard to public safety that may result in death or serious bodily harm.<sup>34</sup> According to NHTSA,

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<sup>32</sup>CarFax reports are available on all used cars and light trucks model year 1981 or later using the unique 17-character VIN. These reports check for information on a vehicle’s history such as title information; accident indicators, including air bag deployment; and recall information.

<sup>33</sup>*National Independent Automobile Dealers Association, Used Car Industry Report* (2010).

<sup>34</sup>Motor Vehicle Safety Act of 2010, S. 3302, 111th Cong. (2010). This bill was not enacted in the 111th Congress.

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imminent hazard authority would allow the agency to bypass the lengthy, resource-intensive court process currently needed to prove that a safety defect exists before ordering a recall. NHTSA officials told us that if they were to obtain imminent hazard authority, they could more expeditiously enforce a recall when severe safety defects are present.

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## Options Exist to Improve NHTSA's Safety Defect Recall Process

Based on our interviews with industry stakeholders, our interviews with focus group participants, foreign agencies, and NHTSA, and legislation proposed in the 111th Congress, we have identified several recurring options or changes that could address some of the challenges to the safety recall process. Most of the options have both advantages and disadvantages that will require careful consideration before they are adopted.

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## Adopting Additional Defect Notification Methods

Notifying vehicle owners of a recall through other methods in addition to postal mail may increase recall completion rates. As we previously described, participants in the focus groups indicated that they might be more encouraged to respond to a recall notice if they were notified of a recall by methods other than postal mail. In fact, other federal agencies and some manufacturers use other notification techniques to notify consumers of a defect:

- FDA and USDA issue press releases about recalls since the owners of many products they regulate are not identifiable through a registration process. However, the level of publicity that press releases receive in the media (for example, on television and in newspapers) is subject to discretion of the media outlets, which one manufacturer noted can be inconsistent and unpredictable.
- A few manufacturers we spoke with encourage dealerships to communicate with vehicle owners through phone calls and e-mails to notify the vehicle owner of a recall and encourage them to bring the vehicle in for service.
- Finally, a few manufacturers have begun or are currently pursuing the use of telematic systems (such as GM's OnStar technology) to alert vehicle owners to recalls in real time by calling or sending messages directly to vehicles notifying owners of outstanding recalls.

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However, according to some manufacturers we interviewed, there are disadvantages to using e-mail and phone calls as ways of communicating recall information to consumers. First, several manufacturers noted that vehicle owners change e-mail addresses and phone numbers frequently. In addition, they noted that there is no requirement that a vehicle owner must register a phone number or an e-mail address with a state motor vehicle agency, unlike postal mailing addresses—which are tied to vehicle registration.

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## Modifying Safety Defect Notification Letters

NHTSA may have opportunities to improve recall completion rates by modifying the requirements for manufacturers' safety defect notification letters. Responses from our focus group participants indicated they would prefer defect notices to include additional information, which would likely lead to higher rates of consumer responses to these notices. Specifically, as we previously noted, focus group participants reported that notification letters they reviewed did not always convey a clear description of the defect or the severity of the defect. Such confusion could affect their willingness to take their vehicles in for service and, ultimately, reduce the recall completion rates for certain recall campaigns. In addition, focus group participants indicated they may be more likely to respond to a notification letter identifying that the defect affected their vehicle specifically and that explained that vehicle owners could have their vehicles repaired at no charge.

Though some information is already required by law and regulations, NHTSA has the ability to add requirements to the defect notification letters, as previously described.<sup>35</sup> Rental car companies we spoke with also stated that a better indication of the severity of the recall would help them determine how to treat recalled vehicles in their fleets and reduce confusion. For example, the rental car companies told us that understanding the urgency of a safety recall is especially important because rental car companies must use the defect notification letters they receive to make decisions about whether to continue to rent vehicles to consumers before the car is repaired or ground an entire fleet of vehicles, which could result in a significant loss in revenue. NHTSA officials told us

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<sup>35</sup>NHTSA requires defect notification letters to have (1) a notation on the envelope that include the words "SAFETY," "RECALL," and "NOTICE" in all capital letters and in a font different from the address information; (2) a clear description of the defect; (3) an evaluation of the risk to vehicle safety related to the defect; and (4) a statement of measures to be taken to remedy the defect. 49 C.F.R. § 577.5.

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that the agency has recommended to the rental car companies that they should not rent recalled vehicles until the defect has been repaired.

In addition, NHTSA officials we spoke with told us that they review and approve each defect owner notification letter to make sure it meets the current requirements but have not developed a standard template for notification letters because each recall is different. In addition, NHTSA officials told us that although they are working toward increasing recall campaign completion rates, they believe that adding content to the notification letters could be distracting and that the fundamental information needed to convey the defect, the actions the owner should take, and the remedy program is covered by the current requirements. While we agree that adding lengthy and complex information to the notification letters is unnecessary, our focus groups have shown that a more clear description of the severity of a defect without the use of jargon and the addition of content such as the owner's VIN may encourage vehicle owners to comply with defect notifications.

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### Publicizing Existing Resources and Making VINs Available to Vehicle Owners and the Public

As previously described, our focus groups with vehicle owners indicated that the public may not be aware of NHTSA's Web site, the primary method of communicating information on recalls to consumers. In addition, a few industry associations told us that it would be useful to provide vehicle owners with the ability to search more easily for recall information using their VINs. As such, NHTSA has an opportunity to make vehicle owners and the public more aware of its Web site and to include more useful information. In order to do so, NHTSA could develop public service announcements and additional press releases or collaborate with auto manufacturers to develop methods of informing vehicle owners about available resources. NHTSA officials we spoke with agreed that additional efforts could be made to improve the awareness of [www.safercar.gov](http://www.safercar.gov) and told us that the agency is currently redesigning its Web site to consolidate information so that consumers can more easily find information on vehicle 5-Star Safety Ratings and auto safety recall information. In addition, legislation from the 111th Congress contained provisions that would have required NHTSA to improve public accessibility to information on its vehicle safety websites.<sup>36</sup>

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<sup>36</sup>S. 3302; Motor Vehicle Safety Act of 2010, H.R.5381, 111th Cong. (2010).

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NHTSA officials told us they are interested in finding additional ways to improve vehicle owners' access to specific information about recalls, and to that end, they are in the process of purchasing software to facilitate a VIN-based search engine on its Web site. However, the agency noted that developing a centralized VIN database would require significant additional resources to fully implement. In addition, agency officials told us that VIN searches can present problems because vehicle owners may not enter VIN information correctly into a Web site. NHTSA officials are currently exploring ways to address this issue.

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## Developing National Standards and Guidance for Vehicle Owners and Operators

Representatives of the rental car industry stated that developing guidance for vehicle owners on how to categorize the severity of a recall and whether to operate a vehicle once that determination has been made could help ensure that recalls are handled consistently and remove confusion from the process. Currently all vehicle owners, including rental companies, must decide whether to continue to operate vehicles subject to a recall based on the information provided by the manufacturer in the recall notice. The law does not require the manufacturer to advise whether the vehicle should continue to be operated until the defect or noncompliance is remedied. All of the rental car companies we spoke with, as well as some of the focus group participants we interviewed, stated that some defect notification letters are confusing and do not provide a clear description of the severity of the defect. In addition, the rental car companies noted that notification letters rarely provide guidance as to whether the vehicle can continue to be operated. Rental car company and industry representatives suggested that clear national standards—as determined by NHTSA and the manufacturers—for how to categorize the nature of a defect (including the potential for harm) and whether the vehicle can continue to be operated would be helpful to consumers and rental car companies. In particular, the American Car Rental Association (ACRA) has proposed that NHTSA issue separate bulletins for when a vehicle can be operated pending completion of a recall or when a vehicle needs to be grounded until the vehicle can be serviced. NHTSA officials stated that while they had not reviewed ACRA's proposal, they are opposed to publishing classifications of defects, ranking them, or otherwise suggesting to vehicle owners that certain safety defects are more serious than others. Moreover, NHTSA officials told us that suggesting that some defects are more risky may have dangerous consequences—namely, that many safety defects, all of which involve an unreasonable risk, will be ignored. This could result in fewer consumers remedying their vehicles due to the fact that NHTSA has categorized the

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recall as “less serious,” and therefore, consumers may perceive the safety risk to be decreased.

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## Using Data More Effectively

Although NHTSA uses manufacturer data to track the average annual recall completion rate for all vehicle recall campaigns, NHTSA does not currently use its data to conduct aggregate analyses of completion rates across factors such as manufacturer, component, and vehicle type or by analyzing completion rates based on the characteristics of the defect notification letters, such as the format of the letter mailed to vehicle owners. Conducting these types of trend analyses could help NHTSA identify risk factors that might be associated with lower recall completion rates. As discussed earlier in this report, our analysis has shown that completion rates vary considerably across manufacturers and components and, to some extent, vehicle types. Additionally, NHTSA officials told us that other factors may also affect completion rates, including the perception of the severity of the defect and the age of a vehicle at the time of the recall. NHTSA has the opportunity to analyze its data in ways that capture the underlying complexities and variation in the risk factors associated with lower completion rates. With that information NHTSA could target new recall campaigns that include such risk factors and take additional steps to monitor those campaigns.

NHTSA officials told us they are interested in improving the completion rates of their recalls. For example, NHTSA officials explained that they contacted a child safety seat manufacturer that had experienced higher rates of recall completion compared with other child safety seat manufacturers, in order to learn how that manufacturer was achieving a relatively higher completion rate. While this method—isolating outliers in the data, then following up with a particular manufacturer to investigate—is not a routine monitoring activity that NHTSA performs, such an approach could be used more systematically when noticing differences in recall rates in other areas identified in the data. NHTSA officials told us they were currently re-evaluating how they used their data and would consider ways that additional data analysis could help increase recall completion rates.

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## Enhancing NHTSA’s Recall Authorities

Legislation proposed in the 111th Congress, if enacted, would have modified the authority NHTSA has to recall vehicles. The proposed bills would have addressed some of the challenges in the recall process discussed previously in this report, such as NHTSA’s authority over used-car sales and the possibility of allowing NHTSA to declare a vehicle an

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“imminent hazard.” S. 3302 proposed a provision that would have protected potential buyers of used cars by requiring that a used-car dealer not sell or lease a used passenger vehicle until (1) the dealer clearly and conspicuously notified the purchaser or lessee, in writing, of any notifications of a defect or noncompliance that have not been remedied; and (2) the purchaser or lessee acknowledged, in writing, the receipt of such notifications. Requiring manufacturers to notify all dealerships that sell used cars about recalls and requiring such dealerships to notify potential buyers of a defect could result in increased awareness of recalls, particularly among the group of vehicle owners that, according to manufacturers and third-party vendors, are the hardest to identify through postal mail—namely second and third owners of a vehicle. However, an industry association and the used-car dealerships we spoke to noted that it is challenging to identify vehicles with outstanding recalls due to the lack of VIN data available to the public and because used-car dealerships are not required to be notified of a safety defect through the use of first-class mail. NHTSA officials agreed that notifying used-car dealers of recalls is a challenge, but the agency has not sought this authority. NHTSA officials indicated that in May 2011, however, the agency identified several policy proposals to Congress on vehicle safety issues. One of these proposals is to prohibit, with certain exceptions, used-car dealers and rental companies from selling or leasing a vehicle subject to a recall prior to the repair having been made.

S. 3302 also included a provision to enhance NHTSA’s authorities to include an “imminent hazard” provision, which would have provided NHTSA with the authority to ensure that vehicles with safety defects posing a substantial likelihood of death or serious injury are recalled faster than they currently can be by giving NHTSA authority to forbid further sales of a vehicle model until the defect has been addressed. However, a number of manufacturers we interviewed stated that NHTSA’s current authority is adequate; they feel the current system is generally cooperative and most passenger vehicle recalls are initiated voluntarily by manufacturers. NHTSA officials stated that imminent hazard authority would give them an additional tool to remove unsafe vehicles from the road by significantly decreasing the time and resources needed currently to order a recall through the judicial system.

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## Conclusions

NHTSA’s oversight of the passenger vehicle recall process—one of the most important safety missions it performs—is generally considered to be balanced and effective by the auto manufacturers and other auto industry stakeholders we interviewed. However, our work has shown that NHTSA

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could do more to monitor the completion rates of recall campaigns and encourage vehicle owners to remedy their vehicles, which could result in removing more unsafe cars from the road. Most of these opportunities are within the scope of NHTSA's current authorities and would require minimal investment of staff and other resources. For example, our focus groups indicated that clearer communication about the severity of the defect, as well as the addition of an owner's VIN in the defect notification letter, may reduce confusion about the defect and encourage more owners to comply with the recalls. In addition, even though our analysis of NHTSA data on recall completion rates revealed considerable underlying variation in completion rates by manufacturers and defective components, NHTSA does not currently use the data it collects to conduct analyses of completion rates across recall campaigns. By doing so, the agency has an opportunity to determine the trends that may be associated with lower rates of completion and target such campaigns for additional monitoring or other actions.

NHTSA also currently lacks the authority to require manufacturers to notify used-car dealerships—which sold 11 million cars in 2009—of recalls or require these dealerships to notify potential buyers of an outstanding recall. As a result, many consumers may be unknowingly putting their lives at risk by purchasing a defective vehicle. Used-car dealerships we interviewed indicated that they may be willing to notify potential buyers of outstanding recalls; however, the lack of a public VIN database for identifying the specific cars that have been recalled makes such notifications difficult. Although additional resources may be necessary for NHTSA to implement such a database, working with manufacturers, many of whom have already developed VIN search functions, could reduce NHTSA's burden. An expansion of the information provided on NHTSA's Web site to include a VIN search capability, as well as publicizing existing and new resources, may help vehicle owners and other vehicle purveyors, such as used-car dealerships, identify outstanding recalls, improve recall completion rates, and increase safety for pedestrians and the motoring public.

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## Recommendations for Executive Action

In order to encourage vehicle owners to comply with safety recalls, provide vehicle owners with specific information about whether their vehicle is involved in a recall, and identify factors that affect recall completion rates, among other things, we recommend that the Secretary of Transportation direct the Administrator of NHTSA to take the following four actions:



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- Modify the requirements for defect notification letters to include additional information such as (1) the word “urgent” in large type to obtain readers’ attention, and (2) the VIN of the recalled vehicle so it is clear that the letter pertains to the owner’s current vehicle.
  - Create a VIN search function on [www.safercar.gov](http://www.safercar.gov) and publicize the Web site to vehicle owners and the public.
  - Develop a plan to use the data it collects on recall campaigns to analyze particular patterns or trends that may characterize successful recalls and determine whether these represent best practices that could be used in other recall campaigns.
  - Seek legislative authority to ensure that potential buyers of used cars are notified of any outstanding recalls prior to sale.

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## Agency Comments

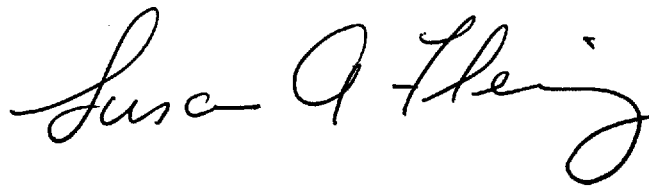
We provided a draft of this report to the Department of Transportation (DOT), as well as CPSC, the Department of Health and Human Services (HHS), and USDA for review and comment. DOT agreed to consider our recommendations and both DOT and USDA provided technical comments, which we have incorporated, as appropriate. CPSC and HHS did not provide comments on this report.

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We are sending copies of this report to the Departments of Transportation, Agriculture, Health and Human Services, the Consumer Product Safety Commission, and other interested parties. In addition, the report is available at no charge on the GAO Web site at <http://www.gao.gov>.

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If you or your staff have any questions about this report, please contact me at (202) 512-2834 or [flemings@gao.gov](mailto:flemings@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix III.

A handwritten signature in black ink that reads "Susan A. Fleming". The signature is written in a cursive style with a large, looping 'S' and 'F'.

Susan A. Fleming  
Director, Physical Infrastructure Issues

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# Appendix I: Scope and Methodology

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This report focuses on the National Highway Traffic Safety Administration's (NHTSA) oversight of safety defect recalls, which represent the majority of recalls overseen by the agency and are initiated when a defect poses an unreasonable risk to safety. In addition, we have limited our scope to safety defect recalls that have been initiated for passenger vehicles, such as cars, pickup trucks, sport utility vehicles, and minivans (NHTSA also oversees recalls for other vehicles, such as motorcycles, buses, recreational vehicles, and commercial trucks). Moreover, because the U.S. Department of Transportation Office of Inspector General is examining NHTSA's activities related to the investigation of potential safety defects in motor vehicles and equipment, we did not include safety defect investigations in our review. Our report addresses the following questions: (1) What is the extent of NHTSA's role in the auto safety defect recall process, and how do its authorities compare with those of other selected federal and foreign agencies with safety recall authority? (2) What are the benefits and challenges of the auto safety defect recall process for NHTSA and the manufacturers? (3) What options exist for improving NHTSA's auto safety defect recall process?

To describe the extent of NHTSA's role and authorities in the auto safety defect recall process, we reviewed applicable legislation, including the National Traffic and Motor Vehicle Safety Act, as amended; relevant federal regulations; and NHTSA's guidance on the safety defect recall process. In addition, we conducted interviews with NHTSA officials about the agency's role in the defect recall process and its recall authority. To compare NHTSA's authorities with those of other federal agencies, we reviewed legislation and interviewed officials at selected federal agencies that, similar to NHTSA, have product safety oversight responsibilities, including the Consumer Product Safety Commission (CPSC), U.S. Food and Drug Administration (FDA), and U.S. Department of Agriculture (USDA) to determine what differences and similarities exist between the agencies' recall authorities and those of NHTSA. We selected these agencies based on discussions with NHTSA and previous GAO reviews of federal agencies with safety recall authority.<sup>1</sup> To compare NHTSA's authorities with selected foreign agencies with safety recall authority, we interviewed officials from agencies in four countries (Canada, Germany,

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<sup>1</sup>GAO, *Food Safety: USDA and FDA Need to Better Ensure Prompt and Complete Recalls of Potentially Unsafe Food*, [GAO-05-51](#) (Washington, D.C.: Oct. 6, 2004); and *Consumer Safety: Better Information and Planning Would Strengthen CPSC's Oversight of Imported Products*, [GAO-09-803](#) (Washington, D.C.: Aug. 14, 2009).

Japan, and the United Kingdom) about their authorities and involvement in the auto safety recall processes of their countries (see table 4). We selected these agencies based on recommendations from NHTSA and industry officials with whom we spoke and to reflect a range of safety recall processes and authorities. We also interviewed representatives of auto industry organizations from the selected countries to get their perspectives on the authorities of the selected foreign agencies, including the Canadian Vehicle Manufacturers’ Association, the European Automobile Manufacturers Associations, the German Association of the Automotive Industry, the Society of Motor Manufacturers and Traders Limited (a United Kingdom-based auto industry organization), and the Japan Automobile Manufacturers Association. To gain a further understanding of the authorities of the agencies we reviewed in the European Union (EU)—specifically, those in Germany and the United Kingdom—we interviewed officials from the European Commission regarding the impact on member states of EU directives related to the vehicle recall process.

**Table 4: Foreign Agencies with Safety Recall Authority That GAO Interviewed**

Foreign agency location	Foreign agency name
Canada	Transport Canada
Germany	Federal Motor Transport Authority
Japan	Ministry of Land, Infrastructure, Transport, and Tourism
United Kingdom	Vehicle Operator and Services Agency

Source: GAO.

To examine the benefits and challenges in the auto safety defect recall process, as well as potential options for improving the process, we conducted and analyzed interviews with stakeholders in the auto safety defect recall process, including NHTSA, auto manufacturers, third-party data providers (Experian and R.L. Polk and Company), franchised and used-car dealerships, rental car companies, consumer groups (Consumers Union, Public Citizen, and the Center for Auto Safety), and industry organizations. We identified stakeholders based on our review of pertinent legislation, regulations, and NHTSA’s guidance documents on the recall process for safety defects, as well as from interviews with officials and stakeholders in the recall process. We interviewed 14 auto manufacturers (see table 5) that together accounted for the majority of U.S. car and light

truck sales in 2009, including those that each had greater than 10 percent market share (e.g., Ford, GM, Honda, and Toyota) and those with smaller market share (e.g., BMW, Daimler, and Hyundai).<sup>2</sup> We also interviewed two organizations representing auto manufacturers that operate in the United States—the Auto Alliance and the Association of Global Automakers (Global Automakers), formerly known as the Association of International Automobile Manufacturers (AIAM)—to get their perspective on the safety defect recalls.

**Table 5: Auto Manufacturers GAO Interviewed**

<b>Auto Manufacturer</b>	<b>Manufacturers' makes included in review</b>
BMW	BMW Mini
Chrysler	Chrysler Dodge Jeep Ram
Daimler	Maybach Mercedes Smart
Ford	Ford Lincoln
GM	Buick Cadillac Chevrolet GMC
Honda	Acura Honda
Hyundai	Hyundai
Isuzu	Isuzu
Jaguar Land Rover	Jaguar Land Rover
Nissan	Nissan
Subaru	Subaru
Toyota	Lexus Scion Toyota

<sup>2</sup>Congressional Research Service, "The U.S. Motor Vehicle Industry: Confronting a New Dynamic in the Global Economy," R41154 (Mar. 26, 2010).

Auto Manufacturer	Manufacturers' makes included in review
VW	Audi Bentley Bugatti Lamborghini VW
Volvo	Volvo

Source: GAO.

To understand the perspective of franchised dealerships and used-car dealerships, we interviewed seven franchised dealerships and two used-car dealerships (see table 6), as well as an industry organization representing franchised dealerships, the National Automobile Dealers Association, and an industry organization representing used vehicle dealerships, the National Independent Automobile Dealers Association. The six franchised dealerships were selected to ensure coverage of multiple vehicle makes. The two used-car dealers we interviewed were selected based on recommendations from the National Independent Automobile Dealers Association.

**Table 6: Franchised Dealerships and Used Dealerships GAO Interviewed**

Franchised dealerships	Location
AutoNation	Fort Lauderdale, FL
Conklin Motors	Salina, KS
DARCARS Automotive Group	Rockville, MD
Fitzgerald Auto Mall	North Bethesda, MD
Honda of Seattle	Seattle
Royal Chevrolet	Richmond, VA
Sewell Automotive Companies	Dallas
Used vehicle dealerships	
Auto Buying Service	Fairfax, VA
Nelson Automotive	Mount Prospect, IL

Source: GAO.

In addition, we interviewed three rental car companies—Avis Budget Group, Incorporated, The Hertz Corporation, and Enterprise Holdings—that had nationwide operations in the United States, and an industry organization representing rental car companies, the American Car Rental Association.

To calculate recall completion rates—that is, the percentage of defective vehicles that are remedied—of safety defect recalls for passenger vehicles and to examine what variations exist across completion rates, we obtained data on vehicle recalls from NHTSA’s Artemis system.<sup>3</sup> The Artemis system is a central repository of data on motor vehicles and motor vehicle equipment defects. NHTSA provided us with data for recalls that were initiated from January 2000 through December 2010. We limited our analysis to safety defect recalls currently being conducted. In addition, we limited our analysis to recalls initiated through 2008 because final completion rates are typically measured at 18 months, or 6 quarters, after a recall campaign begins. Including recall data from 2009 or 2010 would have biased the completion rates for those years downward; that is, they would have had lower rates of completion than earlier year recalls because the data do not extend over a full 18-month period.

Because many of the recalls conducted from 2000 through 2008 were for nonpassenger vehicles—commercial vehicles, recreational vehicles, watercraft, and trailers, among others—we eliminated all recalls that were not passenger vehicles.<sup>4</sup> We examined each vehicle make and model combination and coded them into three categories consisting of (1) passenger cars, (2) pickups, and (3) SUVs and vans. For example, a Chrysler 300 was coded as a passenger car, a Dodge 1500 as a pickup, and a Land Rover Discovery as an SUV. In addition, because there were hundreds of manufacturers (including those for nonpassenger vehicles) in the database—each with their own set of makes and models—we excluded all but the top 21 automobile manufacturers by market share. However, the top 21 manufacturers represent about 99 percent of all automobiles sold in the United States. Therefore, the data set we used to calculate the recall completion rates from 2000 through 2008 included a total of about 1,028 vehicle safety defect recalls after excluding nonpassenger vehicles from the database and some recall records that contained missing or anomalous data affecting nearly 125 million vehicles.

In order to make sure that our universe of passenger vehicle recalls was reasonable, we compared the number of affected vehicles associated with the 1,028 recalls we retained with the total number of affected vehicles

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<sup>3</sup>NHTSA officials told us that they do not have a definition of passenger vehicles. Therefore, we defined passenger vehicles as noncommercial cars, sport utility vehicles, large vans, minivans, and pickup trucks.

<sup>4</sup>We also excluded motorcycles from our analyses.

from a report provided to us by NHTSA. Table 7 shows that, while we analyzed only about 25 percent of the recalls reported by NHTSA from 2000 through 2008, the 1,028 recalls we did analyze include 88 percent of all affected vehicles recalled for safety defects from 2000 through 2008.

**Table 7: Comparison of All NHTSA Recall Data for Safety Defects from 2000 through 2008 to Data Analyzed by GAO**

Year	NHTSA number of recalls†	NHTSA number of affected vehicles (in millions) <sup>a</sup>	Number of recalls analyzed by GAO <sup>b</sup>	Number of affected vehicles (in millions) analyzed by GAO <sup>b</sup>	Percentage of NHTSA recalls analyzed by GAO	Percentage of affected vehicles analyzed by GAO
2000	432	20	163	16.6	38	83
2001	379	11.8	120	10.5	32	89
2002	385	17.6	106	15.3	28	87
2003	429	15.3	112	13.5	26	88
2004	493	28.3	151	24.7	31	87
2005	472	18.2	104	16.3	22	90
2006	415	8.7	96	8	23	92
2007	502	14.2	83	13.7	17	96
2008	527	8.6	93	6.3	18	73
<b>Total</b>	<b>4,034</b>	<b>142.7</b>	<b>1,028</b>	<b>124.9</b>	<b>25</b>	<b>88</b>

Source: NHTSA and GAO analysis of NHTSA data.

<sup>a</sup>The number of recalls and the number of affected vehicles were obtained from a report NHTSA provided us listing all recalls by year from 1966 through 2009. That report also contained information on safety defect recalls and compliance recalls. The numbers above are for safety defect recalls.

<sup>b</sup>These values were obtained from our analysis of safety defect recalls for noncommercial passenger vehicles obtained from NHTSA's Artemis database.

To analyze completion rates for defective components by year, NHTSA provided us with a list of 387 components used by NHTSA to classify the defective component associated with each recall. We recoded these components into 19 main categories. (See table 8.) For the most part, this was a straightforward process, as the component names were grouped into similar hierarchical items such as "Suspension: Front," "Suspension: Front: Shock Absorber," "Suspension: Front: Control Arm," and so forth. All but a few of the components fit into logical, clear categories like steering, suspension, or engine and cooling. However, we had to use our judgment in a few cases, including "traction control"—which we placed in the "steering" category.



**Table 8: Component Categories Used in GAO Analysis of NHTSA’s Artemis Database**

Parking brake	Tires	Wheels
Equipment	Structure	Latches/locks
Seat belts	Visibility	Speed control
Exterior/interior lighting	Engine and cooling	Seats
Suspension	Steering	Power train
Air bags	Electrical system	Service brakes
Fuel system	Other <sup>a</sup>	

Source: GAO analysis of component categories in NHTSA’s Artemis database.

<sup>a</sup>The “Other” category was associated with only three recalls. Those recalls were not included in the component completion rate analysis presented in the report because there were so few of them.

In order to calculate the completion rate across manufacturers, vehicle types, and components, we adopted the formula used by NHTSA. That is, for each recall, we divided the number of involved vehicles reported by the manufacturer (minus those exported, stolen, scrapped, or “other”) by the sum of number of vehicles corrected, the number of vehicles inspected only and not needing correction, and the number of vehicles returned to inventory.

In order to assess the reliability of the data we analyzed, we reviewed NHTSA’s documentation of the Artemis system, interviewed NHTSA officials familiar with the data, and conducted electronic tests of the data, looking for missing values, outliers, or other anomalies. We did find some recall campaign records that contained missing, duplicative, or incomplete data. We had to delete 22 records from the data before we performed our analysis because there were no reported quarterly values for recall completion. Because three additional records contained duplicate reporting quarters, we deleted those duplicate quarters and were able to retain them for our analysis. We deleted a fourth recall record that had anomalous data that could not be explained. Because another recall record had an anomalous first quarter value for affected vehicles that was clearly a data entry error, we deleted that quarter’s value. One final record showed a completion record of slightly more than 100 percent. We capped that record at 100 percent and retained it for our analysis. We determined by the number of affected vehicles for these questionable records that our changes and deletions have no material effect on our analysis and that the data, as analyzed and corrected, were sufficiently reliable for our purposes.

To determine vehicle owners' perspectives about safety defect recalls, we conducted 10 focus group sessions with a total of 89 vehicle owners at five locations. These sessions involved structured small-group discussions designed to gain more in-depth information about specific issues that cannot easily be obtained from another method, such as a survey or individual interviews. Consistent with typical focus group methodologies, our design included multiple groups with varying characteristics but some similarity on one or two homogeneous characteristics. Each group involved 7 to 10 participants. Our overall objective in using a focus group approach was to obtain views, insights, and feelings of vehicle owners regarding their awareness of recalls, understanding of defect notification letters, and willingness to comply with defect notices. By including vehicle owners with recent recall experience and those without recent recall experience, we intended to gather a range of perspectives regarding vehicle owners' awareness of recalls, their understanding of defect notification letters, and their willingness to comply with defect notices.

We conducted 10 separate focus group sessions—5 sessions with vehicle owners that had experienced a recall in the past 3 years and 5 sessions with vehicle owners that had not experienced a recall within the past 3 years. We selected five cities in which to conduct focus groups to provide population and geographic dispersion—Chicago; Dallas; Richmond, Virginia; Salina, Kansas; and Seattle. In addition, we used the USDA's Economic Research Service Rural-Urban Continuum Codes to select a city—Salina, Kansas—that represented a smaller, more isolated community in order to ensure we included the perspectives of vehicle owners in geographically distant or isolated communities.<sup>5</sup> Additionally, we used criteria in selecting participants that ensured a mix of income, gender, and educational level, and that accounted for the race and ethnicity of the area in which the focus groups were located.

Discussions were structured, guided by a moderator who used a standardized list of questions to encourage participants to share their thoughts and experiences, as well as to react to various pieces of communications. Specifically, question topics included perceived responsibility for communicating the recall, expectations for how they should be communicated with during a recall, factors that would affect their decision to bring their recalled vehicle in for service, and suggestions

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<sup>5</sup>See USDA Economic Research Service at <http://www.ers.usda.gov/Briefing/Rurality/RuralUrbCon/>.

for improving communications of auto safety recalls. During the sessions, we assured participants of the anonymity of their responses, promising that their names would not be used. We also conducted two pretest focus groups at GAO and made some revisions to the focus group guide prior to beginning our travel for the sessions.

Each of the 10 focus groups was recorded and transcriptions were created, which served as the record for each group. Those transcripts were then evaluated using content analysis to develop our findings. The analysis was conducted in two steps. In the first step, two analysts independently developed a code book and then worked together to resolve any discrepancies. In the second step, each transcript was coded by an analyst and then those codes were verified by a second analyst. Any coding discrepancies were resolved by both analysts agreeing on what the codes should be. Because we found no differences between the recall and nonrecall groups, a document was created that compiled totals for each question, which was used for the findings that were reported.

Methodologically, focus groups are not designed to (1) demonstrate the extent of a problem or to generalize results to a larger population, (2) develop a consensus to arrive at an agreed-upon plan or make decisions about what actions to take, or (3) provide statistically representative samples or reliable quantitative estimates. Instead, they are intended to generate in-depth information about the reasons for the focus group participants' attitudes on specific topics and to offer insights into their concerns about and support for an issue. The projectability of the information produced by our focus groups is limited for several reasons. First, the information includes only the responses from the vehicle owners from the 10 selected groups. Second, while the composition of the groups was designed to ensure a range of age and education levels, the groups were not randomly sampled. Third, participants were asked questions about their experiences or expectations, and other vehicle owners not in the focus groups may have had other experiences or expectations. Because of these limitations, we did not rely entirely on focus groups, but rather used several different methods to corroborate and support our conclusions.

We conducted this performance audit from June 2010 through June 2011 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence

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obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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# Appendix II: Defect Notification Letters and Envelopes Used in Focus Groups

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For the purposes of the focus groups, identifying information such as manufacturer names, owner addresses, and vehicle identification numbers were redacted. We distributed copies of three defect notification letters and three envelopes, as shown in the following pages:

Defect Notification Letter, Sample A (Original Included Three Pages)

(Page 1 of 3)

[Redacted] ← Manufacturer name and logo

[Redacted] ← Manufacturer name and address

Safety Recall 10[Redacted] ← Recall ID#

October 2010

[Redacted] ← Owner name and address

Your Vehicle Identification Number: [Redacted]

Manufacturer name

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act.

[Redacted] has decided that a defect which relates to motor vehicle safety exists in your vehicle, with the Vehicle Identification Number shown above.

We apologize for this situation and want to assure you that, with your assistance, we will correct this condition. Our commitment, together with your dealer, is to provide you with the highest level of service and support.

**What is the issue?** On your vehicle, the rear axle could potentially fracture when operated in high corrosion areas (where salt is used on the roadways during winter months) for an extended period of time. If the rear axle should completely fracture, vehicle handling may be affected which could increase the risk of a crash.

Manufacturer name

**What will [Redacted] and your dealer do?** [Redacted] has authorized your dealer to inspect the rear axle of your vehicle for cracks or perforations free of charge (parts and labor).

If the axle passes inspection, additional corrosion protection will be applied to the axle before returning the vehicle to you. You will be notified by [Redacted] via mail as soon as parts are available to complete the final repair on your vehicle. Parts to reinforce axles are expected to be available in the 4<sup>th</sup> quarter of 2010. Manufacturer name

If the axle does not pass inspection, a rental vehicle will be provided until a remedy is available. Additional axles are expected to be available in the 1<sup>st</sup> quarter of 2011. At our discretion, [Redacted] may choose to extend an offer to repurchase vehicles with cracked or perforated axles in lieu of replacing the axle.

We apologize for any inconvenience these part shortages may cause you. We are closely working with our suppliers to accelerate part availability.

© Copyright 2010 [Redacted] ← Manufacturer name

**Appendix II: Defect Notification Letters and Envelopes Used in Focus Groups**

(Page 2 of 3)

**How long will it take?** The time needed to inspect the rear axle is less than one-half day. However, due to service scheduling requirements, your dealer may need your vehicle for a longer period of time.

**What should you do?** Please call your dealer without delay and request a service date for Recall 10[REDACTED]. Provide the dealer with the Vehicle Identification Number (VIN) of your vehicle. The VIN is printed near your name at the beginning of this letter.

**Manufacturer name** If you do not already have a servicing dealer, you can access [www.\[REDACTED\].com](http://www.[REDACTED].com) for dealer addresses, maps, and driving instructions. [REDACTED] wants you to have this safety recall completed on your vehicle. The vehicle owner is responsible for making arrangements to have the work completed. [REDACTED] can deny coverage for any vehicle damage that may result from the failure to have this recall performed on a timely basis. Therefore, please have this recall performed as soon as possible.

**Please note: Federal law requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days.**

**Do you need a rental vehicle?** If your vehicle does not pass inspection, your dealer is authorized to provide a rental vehicle for your personal transportation at no charge (except for fuel and tax) while your vehicle is at the dealership for repairs. Please see your dealer for guidelines and limitations.

**Have you previously paid for this repair?** If you have previously paid for a repair that addresses the issue described in this letter, you still need to have this recall performed to ensure the correct parts and procedures were used. You may be eligible for a refund of previously paid repairs. Refunds will only be provided for service related to a cracked or perforated rear axle. To verify eligibility and expedite reimbursement, give your paid original receipt to your dealer.

Refund requests may also be sent directly to [REDACTED]. To request your refund from [REDACTED], send the refund request with all required documentation, including your original repair receipt (no photocopies), to [REDACTED]. Refund requests mailed to this address may take up to 60 days to process. Your original receipt will be returned to you.

Detailed information regarding eligibility for [REDACTED] reimbursement program and documentation requirements may be obtained by contacting the [REDACTED] Customer Relationship Center at [REDACTED].

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**Appendix II: Defect Notification Letters and Envelopes Used in Focus Groups**

(Page 3 of 3)

**What if you no longer own this vehicle?**

If you no longer own this vehicle, and have an address for the current owner, please forward this letter to the new owner. You received this notice because government regulations require that notification be sent to the last known owner of record. Our records are based primarily on state registration and title data, which indicate that you are the current owner.

**Can we assist you further?**

If you have difficulties getting your vehicle repaired promptly and without charge, please contact your dealership's Service Manager for assistance. **RETAIL OWNERS:** If you still have concerns, please contact the [REDACTED] Customer Relationship Center at [REDACTED] and one of our representatives will be happy to assist you. For the hearing impaired call [REDACTED] (TDD). Representatives are available Monday through Friday: 8:00AM - 5:00PM (Your Local Time). If you wish to contact us through the Internet, our address is: [www.\[REDACTED\].com](http://www.[REDACTED].com) **FLEET OWNERS:** If you still have concerns, please contact the Fleet Customer Information Center at [REDACTED], Option #3 and one of our representatives will be happy to assist you. Representatives are available Monday through Friday: 8:00AM - 5:00PM (Your Local Time). Or you may contact us through the Internet at [www.\[REDACTED\].com](http://www.[REDACTED].com). If you are still having difficulty getting your vehicle repaired in a reasonable time or without charge, you may write the Administrator, National Highway Traffic Safety Administration, 1200 New Jersey Ave. S.E., Washington, D.C. 20590 or call the toll free Vehicle Safety Hotline at 1-888-327-4236 (TTY: 1-800-424-9153) or go to [www.safercar.gov](http://www.safercar.gov).

Thank you for your attention to this important matter.

[REDACTED] Customer Service Division

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Source: Defect notification letter used in focus groups.



Defect Notification Letter, Sample B (Original Included One Page)

[Redacted] ← Manufacturer name

**SAFETY RECALL -- LOWER BALL JOINTS**

Dear [Redacted] Owner:

This notice is sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act.

[Redacted] has decided that a defect, which relates to motor vehicle safety, exists in some 2002 and 2003 model year [Redacted] vehicles.

*The problem is...*

Manufacturer name

**Water may enter into the front suspension lower ball joints on your [Redacted].** This can cause the ball joints to corrode and separate. Ball joint separation can result in a loss of steering control and cause a crash without prior warning.

*What [Redacted] and your dealer will do...*

[Redacted] will repair your vehicle free of charge (parts and labor). To do this, your dealer will replace the front suspension lower ball joints on all 2002 and early 2003 model year vehicles. Later 2003 model year vehicles will have the ball joints inspected and replaced if necessary. All vehicles will have ball joint boot shields installed. Shield installation and ball joint replacement (if necessary) will take about 1½ hours. However, additional time may be necessary depending on how dealer appointments are scheduled and processed.

*What you must do to ensure your safety...*

- Simply **contact your dealer** right away to schedule a service appointment. Ask the dealer to hold the parts for your vehicle or to order them before your appointment.
- **Bring the enclosed form with you to your dealer.** It identifies the required service to the dealer.

*If you need help...*

If you have questions or concerns which your dealer is unable to resolve, please contact [Redacted] at [Redacted] ← Manufacturer name and phone number

If you have already experienced a ball joint failure and have paid to have it repaired, you may send your original receipts and/or other adequate proof of payment to the following address for reimbursement: [Redacted]

If your dealer fails or is unable to remedy this defect without charge and within a reasonable time, you may submit a written complaint to the Administrator, National Highway Traffic Safety Administration, 400 Seventh Street, S.W., Washington, DC 20590, or call the toll-free Auto Safety Hotline at 1-888-327-4236.

We're sorry for any inconvenience, but we are sincerely concerned about your safety. Thank you for your attention to this important matter.

Customer Services Field Operations  
[Redacted] C36

*Buckle up  
for Safety*

Note to lessors receiving this recall: Federal regulation requires that you forward this recall notice to the lessee within 10 days.

Source: Defect notification letter used in focus groups.

Defect Notification Letter, Sample C (Original Included One Page in Landscape Format)<sup>1</sup>

**SSC A0B – CERTAIN 2010 MODEL YEAR [REDACTED] VEHICLES ABS ACTUATOR ECU UPDATE SAFETY RECALL NOTICE**

Dear [REDACTED] Customer:

This notice is being sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act. [REDACTED] has decided that a defect, which relates to motor vehicle safety, exists in certain 2010 model year [REDACTED] vehicles.

**What is the condition?**

[REDACTED] has received complaints of inconsistent brake feel during slow and steady application of brakes on rough or slick road surfaces when the anti-lock brake system (ABS) is activated in an effort to maintain tire traction. The system, in normal operation, engages and disengages rapidly (many times per second) as the control system senses and reacts to tire slippage. If the same brake pedal force is applied under these conditions, in the worst case, this may lead to an increase of vehicle stopping distance and thus raise the likelihood of a crash.

Each circumstance may vary, and drivers must use their best judgment, but until the remedy is completed on your vehicle, [REDACTED] advises drivers to depress the brake pedal using firm pressure. Also, please allow additional distance between your vehicle and the vehicle in front of you so as to provide additional stopping distance.

**What will [REDACTED] do?**

[REDACTED] has developed a software update for this condition. Any authorized [REDACTED] dealer will update the ABS Electronic Control Unit ("ECU") with the newly designed software at no charge to the vehicle owner.

**What should you do?**

*This is an important Safety Recall*

Please contact your authorized [REDACTED] dealer to install the newly designed ABS ECU software as soon as possible. The installation will take approximately 30 minutes. However, depending upon the dealer's work schedule, it may be necessary for you to make your vehicle available for a longer period of time.

**We request that you present this notice to the dealer at the time of your service appointment.**

If you would like to update your vehicle ownership or contact information, please go to [www.\[REDACTED\].com](http://www.[REDACTED].com). You will need your full 17-digit Vehicle Identification Number (VIN) to input the new information.

**What if you have other questions?**

Your local [REDACTED] dealer will be more than happy to answer any of your questions and set up an appointment to perform this important Safety Recall. If you require further assistance, you may contact the [REDACTED] Customer Experience Center at [REDACTED] Monday through Friday, 5:00 am to 6:00 pm, Saturday 7:00 am through 4:00 pm Pacific Time.

If you believe that the dealer or [REDACTED] has failed or is unable to remedy the defect within a reasonable time, you may submit a complaint to the Administrator, National Highway Traffic Safety Administration, 1200 New Jersey Avenue S.E., Washington, DC 20590 or call the toll free Vehicle Safety Hot Line at 1-888-327-4236 (TTY: 1-800-424-9153), or go to <http://www.safercar.gov>.

If you are a vehicle lessor, Federal law requires that any vehicle lessor receiving this recall notice must forward a copy of this notice to the lessee within ten days.

We have sent this notice in the interest of your continued satisfaction with our products and we sincerely regret any inconvenience this condition may have caused you.

Thank you for driving a [REDACTED].

Sincerely,

[REDACTED]

Spanish translation on back side  
Traducción en español en el reverso

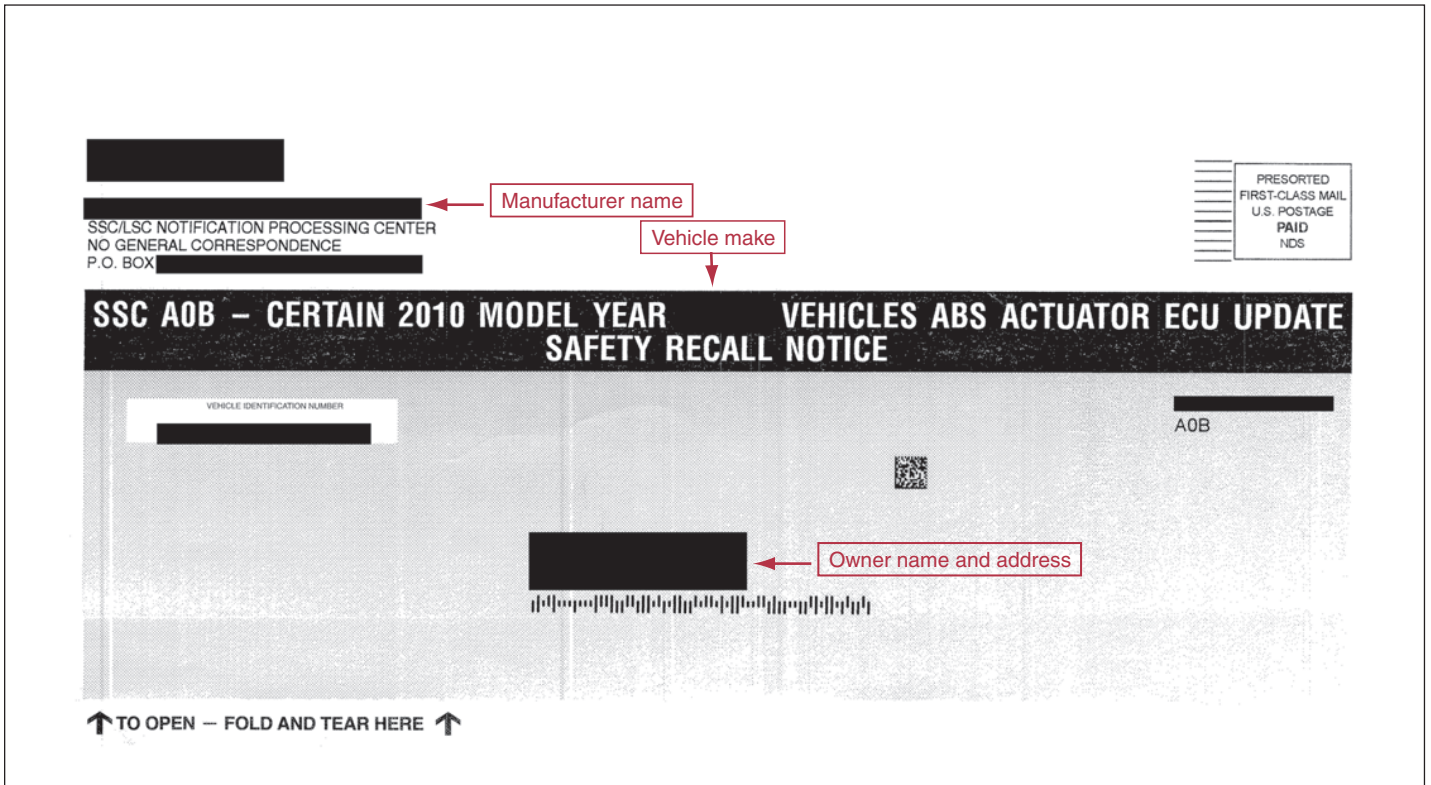
*Manufacturer name*

Source: Defect notification letter used in focus groups.

<sup>1</sup>This defect notification letter was two-sided, with one side in English and the other in Spanish. The Spanish letter (not shown) was not discussed in our focus groups.

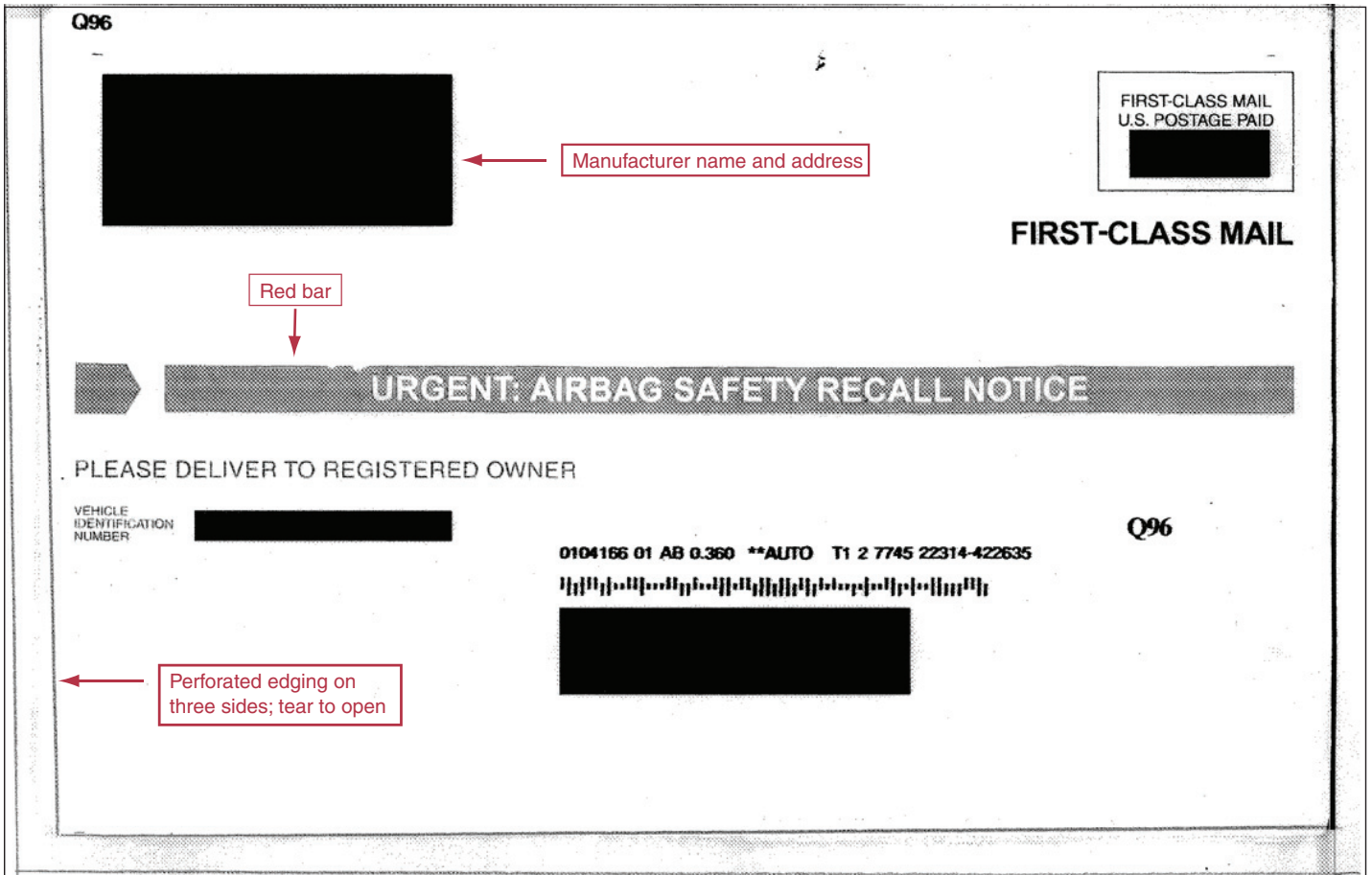
**Appendix II: Defect Notification Letters and Envelopes Used in Focus Groups**

**Defect Notification Letter Envelope, Sample D**



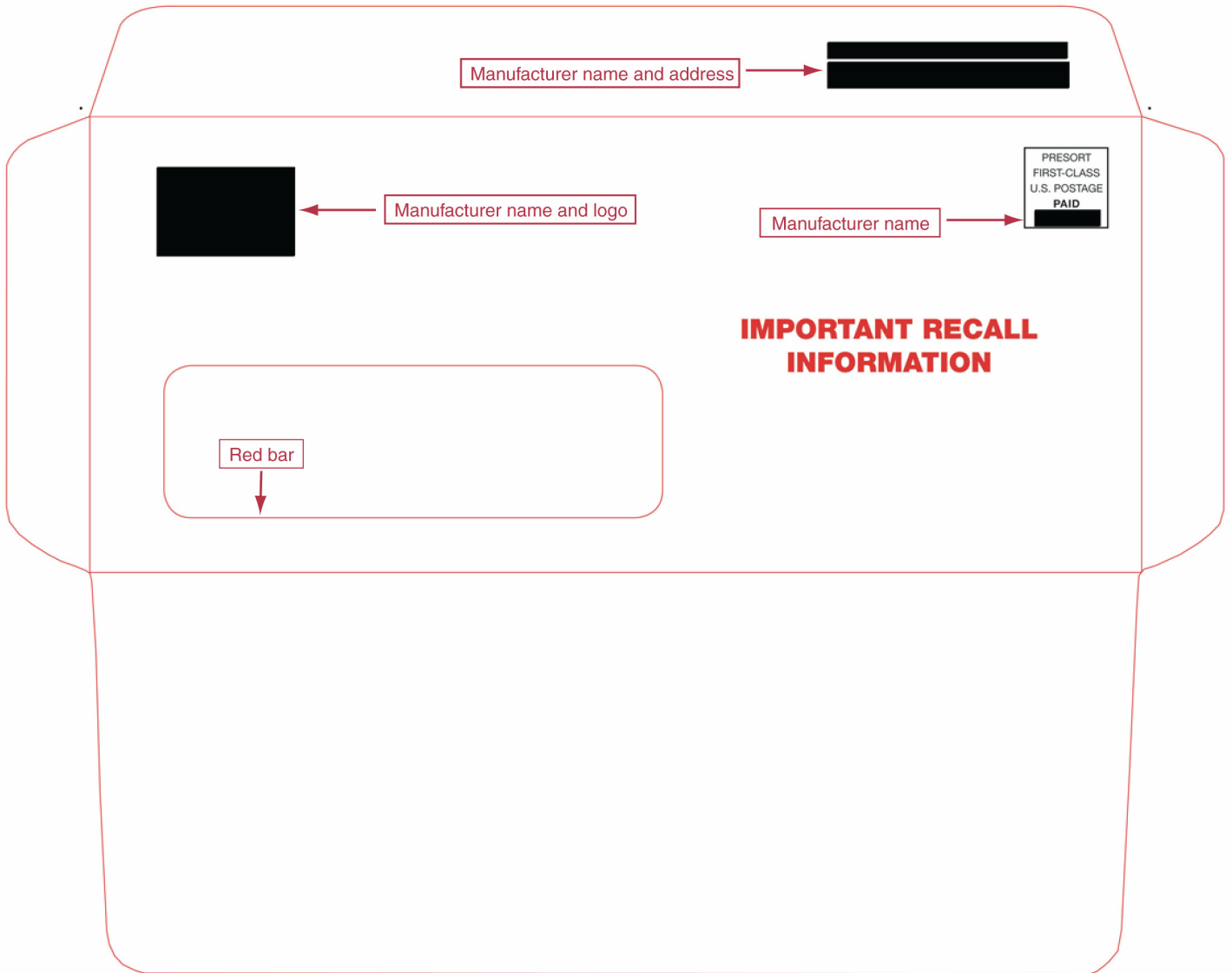
Source: Defect notification envelope used in focus groups.

Defect Notification Letter Envelope, Sample E



Source: Defect notification envelope used in focus groups.

Defect Notification Letter Envelope, Sample F



Source: Defect notification envelope used in focus groups.

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# Appendix III: GAO Contact and Staff Acknowledgments

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## GAO Contact

Susan A Fleming, (202) 512-2834 or [flemings@gao.gov](mailto:flemings@gao.gov)

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## Staff Acknowledgments

In addition to the contact named above, Ray Sendejas (Assistant Director), Jennifer Clayborne, H. Brandon Haller, Terence Lam, James Leonard, Grant Mallie, Josh Ormond, Steve Rabinowitz, Amy Rosewarne, Kelly Rubin, Tina Won Sherman, Susan Michal-Smith, Andrew Stavisky, Crystal Wesco, Chad Williams, and Susan Zimmerman made key contributions to this report.

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Automated answering system: (800) 424-5454 or (202) 512-7470

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