U.S. DEPARTMENT OF TRANSPORTATION

OFFICE OF INSPECTOR GENERAL

NHTSA's Management of Light Passenger Vehicle Recalls Lacks Adequate Processes and Oversight

NHTSA

Report No. ST2018062

July 18, 2018

U.S. DEPARTMENT OF TRANSPORTATION
OFFICE OF INSPECTOR GENERAL

Highlights

NHTSA's Management of Light Passenger Vehicle Recalls Lacks Adequate Processes and Oversight

Mandated by the 2015 Fixing America's Surface Transportation (FAST) Act

National Highway Traffic Safety Administration| ST2018062 | July 18, 2018

What We Looked At

Since 2008, auto manufacturers have issued dozens of recalls for vehicles equipped with defective airbags manufactured by Takata. To date, 15 fatalities and more than 220 injuries in the United States alone have been linked to the defective airbags. In addition, the National Highway Traffic Safety Administration (NHTSA) estimates that, as of January 2018, the Takata recalls have affected 37 million vehicles.

In December 2015, Congress passed the Fixing America's Surface Transportation (FAST) Act, which required our office to audit NHTSA's recall processes. This mandate stemmed from congressional concerns about the Agency's handling of the Takata airbag recall. Accordingly, our audit objectives were to assess NHTSA's processes for (1) monitoring manufacturers' proposed recall remedies and scope and (2) overseeing safety recall implementation, including the sufficiency of recall completion rates.

What We Found

NHTSA's process for monitoring for light passenger vehicle recalls lacks documentation and management controls, and does not ensure that remedies are reported completely and in a timely manner. The Agency also does not verify recall completion rates, although it has the authority to do so, and it lacks sufficient management controls to ensure staff assess risk when deciding whether to use oversight tools to improve recall completion rates. Finally, while NHTSA expanded its oversight of the Takata recalls in 2015, by increasing the reporting requirements for manufacturers, it did not follow its own procedures to address low recall completion rates for earlier Takata recalls. Overall, inadequate controls and processes for verifying and collecting manufacturer-reported information have hindered NHTSA's ability to oversee safety recall implementation.

Our Recommendations

We made six recommendations to improve NHTSA's processes for monitoring recall remedies and scope, and overseeing safety recall implementation. NHTSA concurred in full with three of the recommendations and partially concurred with the others.

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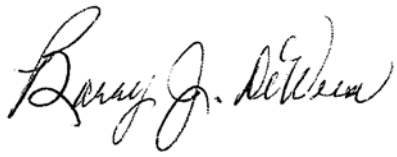
Memorandum

Date: July 18, 2018

Subject: NHTSA's Management of Light Passenger Vehicle Recalls Lacks Adequate Processes and Oversight | Report No. ST2018062

From: Barry J. DeWeese
Assistant Inspector General for Surface Transportation Audits



To: National Highway Traffic Safety Administrator

Since 2008, auto manufacturers have issued dozens of recalls for vehicles equipped with Takata[1] airbags that could deploy improperly in the event of a crash and severely injure vehicle occupants with metal shrapnel. According to the National Highway Traffic Safety Administration (NHTSA),[2] in 2017 there were 17 vehicle manufacturers with ongoing recalls for these defective airbags. In January 2017, Takata pleaded guilty to fraud based on repeated, systematic falsification of test data the company provided to vehicle manufacturers that purchased its airbags.[3] This falsification of test data, starting in 2000, disguised a design defect. To date, 15 fatalities and more than 220 injuries in the United States alone have been linked to the defective airbags. As of January 2018, NHTSA estimates that the Takata recalls affected a total of 37 million vehicles.

In December 2015, Congress passed the Fixing America's Surface Transportation (FAST) Act,[4] which required our office to audit the recall processes in NHTSA's Office of Defects Investigation (ODI). This mandate stemmed from congressional concerns about NHTSA's handling of the Takata airbag recall. Accordingly, our audit objectives were to assess NHTSA's processes for (1) monitoring

[1] Takata Corporation is a Japanese automotive parts company whose products include seatbelts and steering wheels as well as airbags. Due in part to the airbag recalls, the company declared bankruptcy in June 2017. The vehicles recalled for Takata airbags fall into the light passenger vehicle category.
[2] NHTSA was established by the Highway Safety Act of 1970. Its mission is to reduce deaths, injuries, and economic losses from motor vehicle crashes by issuing and enforcing vehicle performance standards and requiring manufacturers to recall defective vehicles and equipment.
[3] United States v. Takata Corporation, Case No. 16-20810 (E.D. Mich.), plea agreement, January 13, 2017. The Federal Bureau of Investigation and our office partnered to investigate this case.
[4] Pub. L. No. 114-94.

manufacturers' proposed recall remedies and scope[5] and (2) overseeing safety recall implementation, including the sufficiency of recall completion rates.

We conducted our work from February 2017 through May 2018 in accordance with generally accepted Government auditing standards. To assess NHTSA's recall process and procedures, we collected and analyzed safety recall data from NHTSA's Artemis database. We analyzed a simple random sample of 94 of the 1,384 total light passenger vehicle recalls implemented between 2012 and 2016 to project compliance with recall reporting and monitoring requirements. Exhibit A details our scope and methodology. Exhibit B lists the entities we visited or contacted.

We appreciate the courtesies and cooperation of Department of Transportation representatives during this audit. If you have any questions concerning this report, please call me at (202) 366-5630 or Wendy Harris, Program Director, at (202) 366-2794.

cc: The Secretary
DOT Audit Liaison, M-1
NHTSA Audit Liaison, NPO-330

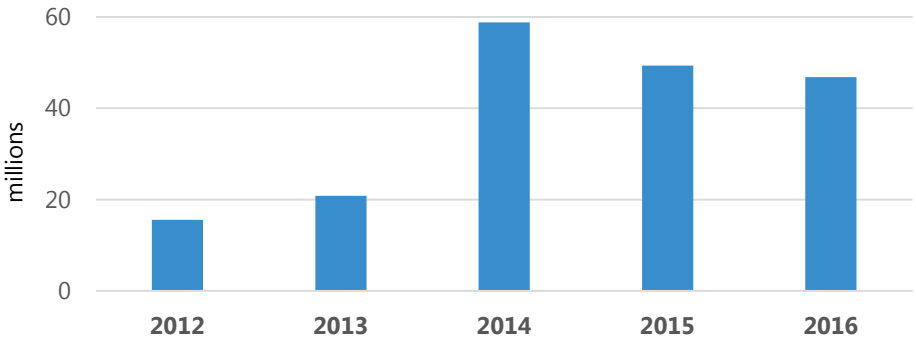
[5] Recall scope refers to the number and types of vehicles affected by the recall.

Background

NHTSA administers Title 49 of the United States Code (U.S.C.), chapter 301, which authorizes the monitoring of vehicle and equipment recalls. Specifically, NHTSA prescribes information that manufacturers must include in their recall notifications; may order a manufacturer to send a second recall notification if recall completion rates are inadequate; may require a manufacturer to accelerate its remedy program if it is not likely to be completed within a reasonable time, particularly if there is a risk of serious injury or death; and may conduct hearings to decide whether a manufacturer has appropriately initiated a recall or met remedy requirements. In addition, NHTSA may conduct inspections or investigations and may reasonably require a manufacturer to keep records and make reports to determine compliance with the law and regulations.

NHTSA's Office of Defects Investigation is responsible for investigating potential safety defects and overseeing safety recall campaigns to assess recall effectiveness. ODI oversaw an average of 277 passenger vehicle[6] recalls per year between 2012 and 2016. At the same time, the number of light passenger vehicle recalls per year increased from 180 to 346 (a 92-percent increase), while the number of light passenger vehicles involved in recalls each year went from 15.6 million to 46.8 million (a 199-percent increase), as shown in figure 1. Sixty-five percent of these recalls involved components from a third-party equipment supplier, like Takata. Manufacturers reported that, during this time period, between 60 and 70 percent of recalled vehicles received the remedy prescribed for the defect or noncompliance.

Figure 1. Number of Vehicles Involved in Light Passenger Vehicle Recalls



Total number of vehicles involved in light passenger vehicle recalls, 2012–2016:

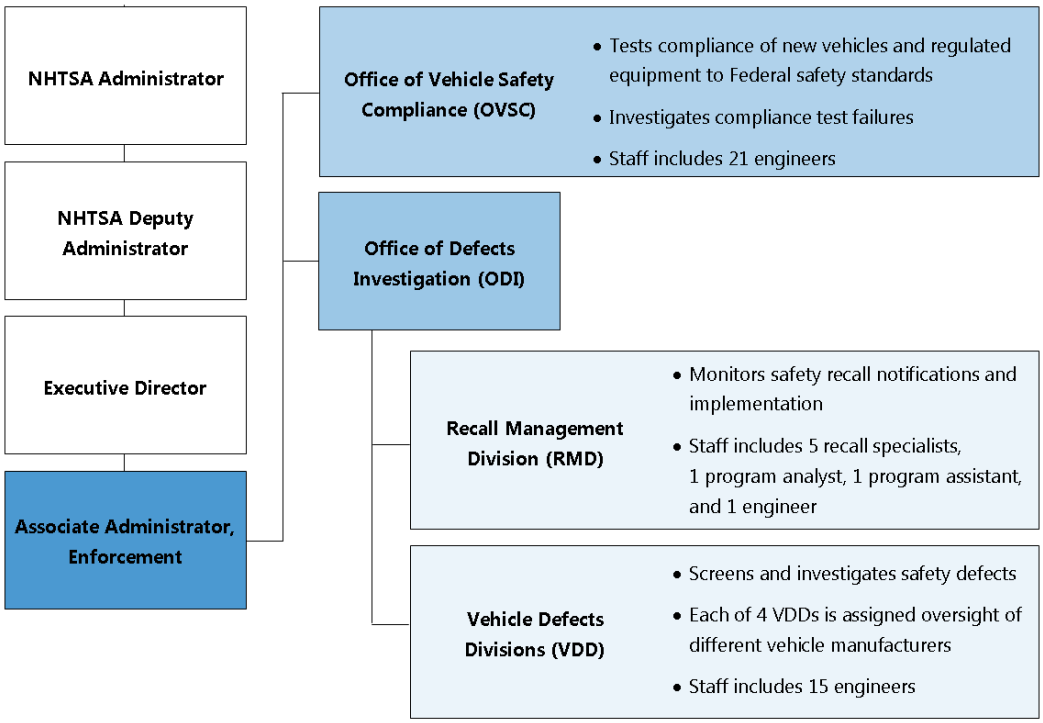
191.3 million

Source: OIG analysis

[6] Although NHTSA oversees recalls of cars, trucks, motorcycles, car seats, tires, and other vehicle equipment, we limited the scope of this audit to light passenger vehicles.

According to its mission statement and procedures, ODI reviews vehicle safety data, investigates potential vehicle safety defects, and oversees manufacturers' vehicle and equipment recalls. Within ODI, the Recall Management Division (RMD) is responsible for monitoring safety defect and noncompliance recalls. ODI's Vehicle Defects Divisions (VDD), which are comprised of engineers who investigate potential safety defects, provide technical reviews of engineering issues as needed. In addition, NHTSA's Office of Vehicle Safety Compliance (OVSC) tests new vehicles for compliance with Federal safety standards and investigates compliance test failures (see figure 2).

Figure 2. NHTSA Organizational Structure for Recalls



Source: OIG

Vehicle and equipment manufacturers are required by law to notify NHTSA within 5 working days after determining that a defect or noncompliance with one of the Federal Motor Vehicle Safety Standards (FMVSS) exists in a vehicle or item of equipment. NHTSA regulations require the notifications to include the number and types of vehicles affected by the recall (i.e., the recall scope), the manufacturer's basis for determining the recall population, and a description of the defect or noncompliance. NHTSA requires equipment manufacturers to report all vehicle manufacturers that purchased recalled equipment to help the Agency identify the appropriate recall scope.

Agency regulations also require manufacturers to inform vehicle owners in writing about a recall within 60 days of notifying NHTSA. Manufacturers must submit proposed notification letters to NHTSA for review before sending them to owners. If the recall remedy is not available within the 60-day timeframe, the manufacturer must send a second notification to vehicle owners when it is available. Once a manufacturer has notified vehicle owners that the recall remedy is available, it must submit progress reports to NHTSA for 18 consecutive months to report how many vehicles were inspected and how many were remedied. RMD procedures call for tracking these completion rates to determine whether the recall is effective and if further action, for example, ordering manufacturers to resend recall notices to vehicle owners, is needed. See exhibit D for a flow chart of the recall process.

In June 2011, the Government Accountability Office (GAO) reported that NHTSA could improve its safety defect recall process. GAO recommended that NHTSA develop a plan to use the data it collects on recall campaigns to analyze patterns and trends and identify any best practices. This recommendation remains open.[7]

Results in Brief

ODI's monitoring process for light passenger vehicle recall remedies and scope lacks adequate management controls.

ODI's monitoring process for light passenger vehicle recalls is too limited to ensure that remedies are reported completely and in a timely manner. In addition, while RMD policy requires coordination with VDD, OVSC, and RMD engineers for technical reviews of recall remedies, the process lacks documentation and management controls. ODI did not clearly justify its decisions on whether to investigate potential safety concerns about recall remedies and scope. ODI's Takata experience demonstrates the impact that can result from a lack of strong management controls. Managers did not ensure their staff sufficiently monitored the remedy or scope of Takata recalls initiated before NHTSA's May 2015 consent order with the company.[8] Additionally, ODI did not act quickly on an August 2013 consumer complaint that indicated the Takata recall scope was inadequate, which may have delayed recalls of affected vehicles. Overall, ODI's RMD lacks procedures

[7] *Auto Safety: NHTSA Has Options To Improve the Safety Defect Recall Process* (GAO-11-603), June 15, 2011.
[8] In the consent order, Takata agreed to provide test data and other information about the safety of remedy inflators. The consent order was soon followed by additional special orders (June and August 2015) and a coordinated remedy program (about which NHTSA issued a notice in June 2015) about the Takata airbag defect. Since recall reports submitted after May 18, 2015, were conducted in the context of the consent order, which came with special requirements not common to other recalls, we excluded them from our analysis.

to ensure staff follow up with manufacturers when remedy documents or scope information are missing.

RMD lacks an adequate process for overseeing the effectiveness of recall implementation.

RMD does not verify recall completion rates, although it has the authority to do so. Also, while RMD procedures emphasize the importance of assessing risk in deciding when to use oversight tools to improve recall completion rates, RMD lacks sufficient management controls to ensure staff follow these procedures. For example, in 2014 NHTSA updated its regulations to require that manufacturers provide additional recall risk information in order to help the Agency assess the adequacy of the manufacturer's campaign and corrective actions. However, RMD has not taken steps to ensure compliance with this new risk reporting requirement, and based on our sample, we estimate that roughly three-quarters[9] of manufacturers' recall reports are missing this information. Finally, NHTSA expanded its oversight of the Takata recalls, increasing the reporting requirements for manufacturers, but did not follow its procedures to address the low recall completion rates. Our analysis of all 36 Takata recall reports submitted to NHTSA under its routine process, and prior to the 2015 consent order, found that manufacturers did not include the required risk information in 43.3 percent of initial recall reports. In addition, RMD did not notify manufacturers about this missing information. In their final recall reports, manufacturers submitted only 3.9 percent of the missing risk information. Overall, RMD's inadequate controls and processes for verifying and collecting manufacturer-reported information and using oversight tools impede the Agency's ability to oversee recall implementation.

We made six recommendations to improve NHTSA's processes for monitoring recall remedies and scope, and overseeing safety recall implementation.

NHTSA Lacks an Adequate Process for Monitoring Light Passenger Vehicle Recalls

NHTSA's ODI lacks adequate procedures for determining whether manufacturers have submitted all required recall remedy documents and coordinating reviews of manufacturers' technical remedy instructions. ODI's monitoring of recall scope is limited, and thus it cannot verify that all unsafe vehicles have been recalled. In

[9] Our 77.8-percent estimate has a precision of +/-10.8 percentage points at the 95-percent confidence level.

addition, ODI did not clearly justify decisions on whether to investigate potential concerns with recall remedies or scope. Finally, due to ODI's limited monitoring of Takata recalls prior to May 2015, it did not sufficiently or promptly follow up on missing recall information and consumer complaints.

ODI's Process for Monitoring Recall Remedies for Light Passenger Vehicles Is Limited

ODI's monitoring process for light passenger vehicles is too narrow to ensure that manufacturers report recall remedies completely and timely. By law, manufacturers identify the appropriate recall remedy and submit documentation describing the remedy. ODI and OVSC generally do not question the appropriateness of a manufacturer's selected remedy unless there is some reason to believe that it is not adequate. However, RMD's documentation of coordination of remedy reviews with VDD and OVSC engineers is incomplete.

RMD Did Not Follow Up on Missing Remedy Document Submissions as Required

ODI's processes for monitoring manufacturers' submission of recall remedy documents lacked management controls and, as a result, some remedy documents required by law were not submitted. We identified 10 recalls in our sample of 94 recalls that were missing at least one remedy document. For example, in September 2012, a manufacturer notified NHTSA about a recall of 6,146 vehicles with a defect that caused loss of engine coolant and could potentially set a vehicle on fire. The manufacturer initiated the recall after receiving a report of a vehicle fire from a dealership. NHTSA did not receive the manufacturer's dealer notification about the recall or the technical instructions for correcting the defect. RMD did not document any attempt to collect the missing documents. Based on our analysis of 94 of the 1,384 light passenger vehicle recalls issued between 2012 and 2016, we project that 10.6 percent[10] of recall files are missing remedy documents required by law.

By law, manufacturers are required to submit communications about a defect or noncompliance they send to dealers or vehicles owners. These documents include notifications to owners that a recall remedy is available and instructions to dealers on providing the remedies. Failure to provide them makes the manufacturer liable for a civil penalty. However, NHTSA did not determine why

[10] Our 10.6-percent estimate has a precision of +/-6.0 percentage points at the 95-percent confidence level.

remedy documents were missing or whether a civil penalty action for the noncompliance was appropriate:

- RMD procedures direct staff to refer missing owner notification letters to NHTSA's Chief Counsel for further action. However, they do not provide guidance on a risk-based approach for referring other missing remedy documents—dealer recall notices and technical remedy instructions. According to NHTSA's Office of the Chief Counsel, taking action on each missing remedy document is not a good use of Agency resources because penalizing companies for untimely recalls is more critical. NHTSA has investigated and imposed civil penalties for noncompliance with recall requirements after a series of violations, but these actions are primarily related to how quickly the Agency receives the initial recall notification report, not to missing remedy documents.[11] As a result, NHTSA has not taken action against manufacturers that do not submit dealer notifications and technical remedy instructions.

- Furthermore, RMD lacks controls for ensuring its staff identify and follow up on missing remedy information. For example, in November 2013 a manufacturer notified ODI that it was recalling vehicles for steering failure, and had directed owners not to drive the affected vehicles until they had been inspected. In February 2014, a RMD program assistant noted in the recall file that she had attempted to get the final owner notification letter, but the manufacturer never submitted it. While there is evidence that RMD's lead safety recall specialist reviewed this recall, RMD did not take further action or refer the missing letter to NHTSA's Chief Counsel.

GAO's *Standards for Internal Control in the Federal Government* requires management to conduct ongoing supervisory monitoring activities. The RMD manager's position description states that the manager reviews division staff's completed work for adequacy and accuracy. However, the RMD manager has delegated supervisory review of RMD's monitoring of remedy document submissions to a nonsupervisory team lead position. Management actions to ensure data are submitted as required by law are not being taken.

In 2016, for the first time, RMD instituted a process to review recall records to identify missing information from recalls issued the previous year. RMD found that of the 869 recalls included in the review, 180 (20.7 percent) were missing 1 or

[11] In September 2015, NHTSA issued a special order to BMW during an investigation into multiple suspected violations of the Safety Act. The special order listed seven recalls that BMW issued during 2014 and 2015 and requested copies of communications to dealers for recalls 14V-815, 15V-034, 15V-148, 15V-189, 15V-450. In December 2015, NHTSA executed a consent order with BMW for violating multiple parts of the Safety Act, including failing to submit copies of recall communications timely. The total civil penalty amount was $40 million.

more required remedy documents. The RMD compliance review procedures for missing information instruct staff to email the manufacturer with a request for copies of the missing documents. RMD provided us with an example email, which shows that in April 2016 RMD staff followed up on missing or late remedy documents from three separate 2015 recalls; the first one was issued in March 2015. RMD requested that the manufacturer submit the missing information in May 2016, almost a year after the manufacturer submitted its first recall completion rate report.

While 49 U.S.C. § 30165(a)(3) provides a tool for enforcing this requirement by making the violator liable for a civil penalty,[12] NHTSA only imposed civil penalties as part of a consent order in one of seven civil penalty cases for light passenger vehicle recalls between 2012 and 2016.[13] Had NHTSA imposed civil penalties for the missing documents related to the 2015 recalls covered in RMD's first compliance review, manufacturers would have been liable for a maximum of $1.26 million (or 180 × $7,000[14]) in civil penalties for each day those violations continued.

While civil penalties may not be appropriate in all cases, NHTSA is not taking full advantage of an available tool to promote compliance and encourage companies to provide all the required information.

RMD's Documentation of Coordination and Review of Manufacturers' Technical Instructions for Recall Remedies Is Incomplete

RMD policy requires staff to coordinate with VDD or OVSC engineers on technical reviews of remedies for recalls related to a defect or noncompliance investigation. However, we were unable to verify that this coordination occurred between 2012 and 2016. A VDD manager told us that RMD and VDD rarely coordinate, and he was not aware of a process to document their coordination. According to the OVSC Director, there is limited communication between OVSC engineers and RMD, and what contact did occur was mostly about motorcycle helmets.

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[12] In July 2012, the Moving Ahead for Progress in the 21st Century Act (MAP–21) specified that, in determining the amount of a civil penalty or compromise, NHTSA must consider the nature, circumstances, extent, and gravity of the violation.

[13] NHTSA has imposed civil penalties for violations of 49 U.S.C. § 30166 for recalls outside the scope of our audit. For example, in August 2013 NHTSA received its first installment of a $1.5 million civil penalty for a series of violations related to motor coach recalls. This audit focused exclusively on light passenger vehicle recalls.

[14] In 2015, the maximum civil penalty amount was $7,000.

In addition, RMD policy requires an engineer to review the technical remedy instructions associated with high- and medium-priority[15] recalls. However, RMD did not document the engineer's technical reviews in its official records. Instead, the engineer kept informal records of this work. We compared those informal records for light passenger vehicle recalls between 2012 and 2016 to ODI's official records to confirm whether the RMD engineer took action on potential safety concerns with recall remedies. Of the six recalls the RMD engineer recommended pursuing for potential recall remedy concerns, we verified that ODI staff took action on three of them by conducting an additional engineering analysis.[16] Due to the lack of documentation for the remaining 1,381 recalls, NHTSA cannot be sure that VDD, OVSC, and RMD staff conduct appropriate technical reviews of recall remedy documents and that additional action is not needed.

VDDs Identified Potential Recall Remedy Safety Concerns but Did Not Document a Risk-Based Process for Choosing Which Concerns To Investigate

Our review of ODI's screening records showed that between 2012 and 2016, staff identified 24 cases of potential safety concerns connected to recall remedies. Eighteen of those (75 percent) were prompted by consumer complaints, while two of the cases (8 percent) were prompted by ODI staff concerns about the recalls. The remaining four were prompted by consumer advisories, a technical service bulletin, and early warning data. Records show that ODI staff proposed investigating 5 of the 24 cases, but ODI management decided none required investigation (see table 1). ODI did not clearly justify its decisions about whether to investigate these potential concerns with recall remedies.

[15] To prioritize its technical reviews of remedy documents, RMD has a non-engineer contractor categorize the recalls into high, medium, and low categories. The RMD engineer reviews the high and medium categories, while the contractor reviews the low category. The RMD manager stated that the categories are based on the amount of outside attention the recall attracts.

[16] The absence of records prevents us from reviewing the rationale for not conducting additional engineering analysis on the remaining three recalls.

Table 1. Light Passenger Vehicle Recall Remedies: Sources of Potential Safety Concerns and Investigative Actions, 2012–2016

Sources of Potential Safety Concerns Identified by ODI Staff						
	2012	**2013**	**2014**	**2015**	**2016**	**Total**
Consumer complaints	0	2	5	4	7	**18**
Recalls	0	1	0	0	1	**2**
Other	2	1	0	1	0	**4**
ODI's Investigative Actions						
	2012	**2013**	**2014**	**2015**	**2016**	**Total**
No investigation into concern proposed	1	3	4	4	7	**19**
Investigation into concern proposed but denied by ODI management	1	1	1	1	1	**5**
Investigation opened but source of initial concern not documented	0	1	3	3	0	**7**

Source: OIG analysis

For example, in April 2015, NHTSA received a complaint from a consumer who alleged that, after receiving a recall remedy for rear-axle failure, the vehicle's rear axle had failed, causing a rollover crash. ODI's records show that the safety defects specialist who reviewed this complaint had recommended opening an investigation. ODI had reviewed this defect in 2013 after receiving 40 similar complaints. In 2014, however, after a discussion with the manufacturer, ODI determined that it did not need to investigate the issue. ODI management directed staff not to act on further complaints unless they saw something "dramatic." Based on the April 2015 complaint, ODI requested that NHTSA's Vehicle Research and Test Center (VRTC) inspect vehicles that could potentially contain the defect. VRTC reported to ODI that it had inspected 22 vehicles in which the recall remedy was performed and found 6 vehicles (27 percent) had compromised rear axles. Despite the inspection results, ODI did not open an investigation, and did not document the reason for that decision.

In June 2015, we reported[17] that ODI lacked consensus on when to open investigations and recommended that NHTSA develop and implement guidance on the amount and type of information needed. In response, ODI developed a risk-based process intended to provide consistency and credibility to decisions on whether to open investigations. Although ODI had committed to using this risk-based approach to open investigations, it is not documented in the records of recent recall remedy cases that we reviewed. For example, in September 2016, VDD staff began to follow up on consumer complaints about the adequacy of a recall remedy for a brake light defect. ODI documented multiple discussions about this concern with the manufacturer in September, October, and November 2016. In April 2017, a VDD manager noted 19 consumer complaints indicating that the recall remedy did not correct the defect. According to ODI's risk matrix analysis, the issue met the standards for opening an investigation, but ODI did not open one in this case.

Between 2012 and 2016, ODI opened seven investigations into the adequacy of light passenger vehicle recall remedies in which staff did not document their screening work in the office's records. Of the seven investigations, four were prompted by consumer complaints, while the other three were based on outside expert reports or discussions with the manufacturer.

ODI's Processes for Monitoring Recall Scope Do Not Include Adequate Management Controls

ODI processes for monitoring recall scope, including its process for equipment recalls, are incomplete, as they do not include management controls to ensure compliance with the specific regulatory reporting requirements. The RMD staff responsible for recall scope monitoring lack adequate guidance and training, and their work is not subject to supervisory review. Furthermore, ODI does not use safety risk to prioritize its investigations into the adequacy of recall scope.

NHTSA regulations state that its role in monitoring recall scope is to ensure that recalls adequately cover vehicles affected by defects or noncompliance. NHTSA requires manufacturers to describe how they determined the recall scope and to explain the difference between recalled and non-recalled items. The regulations state that identifying the full recall scope for defective equipment may require

[17] *Inadequate Data and Analysis Undermine NHTSA's Efforts To Identify and Investigate Vehicle Safety Concerns* (OIG Report Number ST2015063), June 18, 2015. OIG reports are available on our website: https://www.oig.dot.gov/.

coordination with multiple vehicle manufacturers, and equipment manufacturers to report all vehicle manufacturers that purchased the recalled equipment.

RMD Does Not Monitor Manufacturers' Compliance With Submitting Complete Scope Information

Based on our analysis of a sample of the 1,384 light passenger vehicle recalls issued between 2012 and 2016, we project that manufacturers did not submit 28.1 percent[18] of the required scope information[19] in their initial recall reports, and submitted only 4.1 percent[20] of the missing scope information in their final reports. While some information may not be available to manufacturers when they submit an initial recall notification, they must notify NHTSA within 5 working days after determining any additional scope information. Furthermore, NHTSA failed to notify manufacturers about 96.5 percent[21] of the missing scope information. See table 2 for the initial report results and additional details about the specific scope information we reviewed, and exhibit E for the full results.

Since August 2014, manufacturers have been required to use the Agency's online portal to report recall scope information to NHTSA. In August 2017, NHTSA updated the portal with several more regulatory requirements related to recall scope, including the basis for determining the recall population and a description of how the recalled vehicles differ from similar vehicles produced by the manufacturer. However, the portal does not identify all the regulatory requirements, and the Agency lacks written guidance to show manufacturers how to meet those requirements. The RMD manager was unable to explain why the recall portal did not align with regulatory requirements. Based on our analysis, manufacturers submitted the requirements specifically identified in the recall portal at a much higher rate than requirements that were not identified (see table 2).

[18] Our 28.1-percent estimate has a precision of +/-3.5 percentage points at the 95-percent confidence level.
[19] 49 CFR Part 573 (2016).
[20] Our 4.1-percent estimate has a precision of +/-2.9 percentage points at the 95-percent confidence level.
[21] Our 96.5-percent estimate has a precision of +/-2.7 percentage points at the 95-percent confidence level.

Table 2. NHTSA's Monitoring of Light Passenger Vehicle Recalls Scope, 2012–2016

Information required by the Code of Federal Regulations (CFR)	% initial recall reports missing required information
CFR requirements *not* identified in Recall Portal	
Total number of affected vehicles for each different type of vehicle included in the recall	**79.7%** *+/- 10.0%*
Description of how the vehicles to be recalled differ from similar vehicles that the manufacturer has not included in the recall	**61.7%** *+/- 9.5%*
Description of the manufacturer's basis for its determination of the recall population	**45.7%** *+/- 9.8%*
CFR requirements identified in Recall Portal	
Identify the defective or noncompliant component manufacturer by name, business address, and country	**16.2%** *+/- 8.5%*
Inclusive dates of manufacture for recalled vehicles	**8.5%** *+/- 5.5%*
Total number of vehicles potentially containing the defect or noncompliance	**0.0%** *+ 3.2%*
Identify the vehicles by make, model, and year potentially containing the defect or noncompliance	**0.0%** *+ 3.2%*

Note: From August 2014, when NHTSA first required manufacturers to use the recall portal, until the end of our period of analysis, December 2016, NHTSA specifically identified some but not all CFR requirements in the portal.

All estimates are at 95-percent confidence level.

Source: OIG analysis

Additionally, *Standards for Internal Control in the Federal Government* requires management to conduct ongoing supervisory monitoring activities. The RMD manager's position description states that the manager reviews division staff's completed work for adequacy and accuracy. However, the RMD manager has delegated these supervisory review activities to a nonsupervisory team lead position. For example, on August 26, 2013, a manufacturer submitted an initial recall report for 355,000 vehicles potentially affected by a defect that could result in loss of steering control. The manufacturer's report did not identify the production dates of the affected vehicles, the number of vehicles for each of the three vehicle types affected, or how the manufacturer determined the recall

population. On August 30, 2013, RMD sent the manufacturer a recall acknowledgement letter but did not request this missing information. This letter bears the RMD manager's signature. However, the staff is authorized to electronically sign letters the manager has not reviewed. This lack of management review limits the effectiveness of a significant RMD tool to flag missing recall report information and remind manufacturers about their reporting requirements.

VDD Engineers Screened Potential Safety Concerns Related to Recall Scope but Generally Did Not Take Further Action

Our review of ODI's screening documentation showed that between 2012 and 2016, they identified 52 recall scopes with potential safety concerns, 44 of which (85 percent) were prompted by consumer complaints. ODI considered 9 of the 52 concerns (17 percent) for investigation and opened 1 in 2016, but did not clearly justify decisions on whether to pursue investigations (see table 3).

Table 3. Light Passenger Vehicle Recall Scope: Sources of Potential Safety Concerns and Investigative Actions, 2012–2016

Sources of Potential Safety Concerns Identified by ODI Staff						
	2012	**2013**	**2014**	**2015**	**2016**	**Total**
Consumer complaints	3	6	14	6	15	**44**
Recalls	0	1	0	0	0	**1**
Other	1	3	2	1	0	**7**
ODI's Investigative Actions						
	2012	**2013**	**2014**	**2015**	**2016**	**Total**
No investigation proposed	2	9	11	7	14	**43**
Investigation proposed but denied by ODI management	2	1	5	0	0	**8**
Investigation proposed and approved by ODI management	0	0	0	0	1	**1**
Investigation opened but source of original concern not documented	0	3	2	1	1	**7**

Source: OIG analysis

For example, starting in October 2011, complaints describing a loss of steering without prior warning prompted ODI to consider investigating the issue in October 2012. An ODI engineer found that the allegedly defective vehicle was model year 2007, which was outside the scope of a similar recall that included the 2006 vehicle model. The engineer proposed investigating whether the recall scope should be expanded, but a safety defects specialist did not agree that the frequency and severity of the defect warranted an investigation. In November 2012, the manufacturer decided to expand the 2006 steering shaft recall to include 2007, 2008, and 2009 models. In its recall report, the manufacturer explained that the steering shaft could wear out over time, leading to steering loss. However, ODI did not document further assessment of the recall scope and did not clearly justify why it did not open an investigation.

Between 2012 and 2016, ODI opened seven investigations into the adequacy of light passenger vehicle recall scopes, but staff did not document their screening work in the Case Management System. Four of the seven investigations were prompted by consumer complaints. For example, in February 2013 ODI opened an investigation into the scope of a January 2009 brake-light recall after it received 197 complaints about the issue starting in February 2009. As a result of the investigation, the manufacturer issued another recall in May 2014, which increased the scope of the original recall from 8,012 to 2.4 million vehicles. Since the concern was not documented in the Case Management System, it is not clear why the investigation was not opened before February 2013.

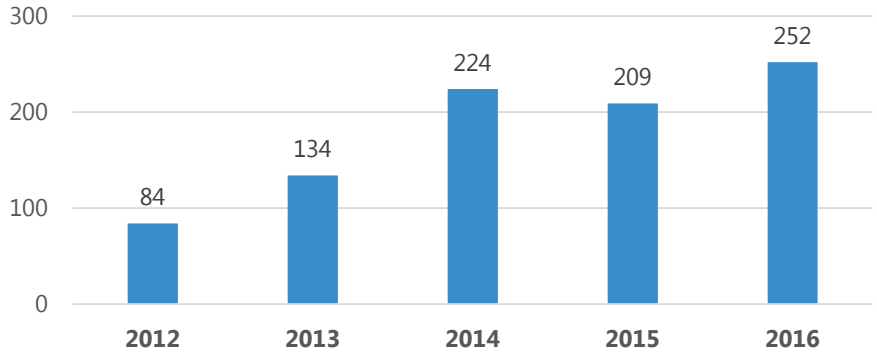
This 4-year delay demonstrates how ODI's ability to ensure the adequacy of recall scope is hindered by its lack of timely follow up on consumer complaints about defective or noncompliant vehicles not included in manufacturer recalls.

RMD Does Not Regularly Assess Light Passenger Vehicle Recalls Involving Defective or Noncompliant Equipment

RMD's staff includes a position that primarily reviews incoming recalls to determine if recalled equipment might also be in non-recalled vehicles, and alert the affected manufacturers when necessary. However, RMD does not have an adequate process for assessing scope for recalls involving defective or noncompliant equipment.

Specifically, ODI's process for equipment recall monitoring does not have sufficient written guidance or management controls, and there is no related training for staff. This has resulted in a lack of consensus in RMD about when to intervene. Additionally, when the person who was dedicated to this work left the Agency in 2015, RMD did not fill the position until 2017. RMD records show that no staff members monitored equipment recall scope between May 18, 2015, and February 1, 2017. As shown in figure 3, RMD received 252 light passenger vehicle recalls in 2016 in which the manufacturer reported the involvement of a component supplier, such as Takata.

Figure 3. Number of Light Passenger Vehicle Recalls Involving Component Supplier, 2012–2016



Total number of light passenger vehicle recalls involving component supplier, 2012–2016:

903

Source: OIG analysis

RMD's insufficient written guidance, management controls, and training for monitoring equipment recalls may result in the staff not understanding when follow up is needed. For example, records show that in 2014, the staff member responsible for equipment recall scope monitoring understood the RMD manager to say stop monitoring airbag or compliance-related recalls. As a result, the individual did not monitor 55 instances of those types of recalls. However, the RMD manager does not review records of equipment recall scope monitoring, and told us that there may have been a misunderstanding about the guidance provided at the time.

One of those skipped compliance recalls was an October 2014 recall for a vehicle that failed to conform to Federal standards for protecting car occupants during crashes. The manufacturer stated that because the passenger-side instrument panel covers in some vehicles were manufactured incorrectly, the passenger-side airbag did not deploy consistently. The manufacturer identified the equipment supplier that had provided the defective instrument panel cover. The RMD staff member did not determine if the equipment supplier had sold defective parts to any other vehicle manufacturers, writing that follow-up was unnecessary since it was a compliance recall.

Due to the lack of an adequate process, including guidance, management controls, and training for staff on when follow-up is needed, NHTSA did not sufficiently monitor the scope of equipment recalls.

ODI Relied on Insufficient Management Controls To Monitor Takata Recalls

ODI's inadequate process for monitoring the remedy and scope of recalls affected the Takata recalls submitted between November 2008, when Honda submitted the first Takata recall report, and May 2015, when Takata signed a consent order. Although improved ODI processes would not have prevented the Takata recalls, they may have prompted a faster determination of the recalls' full scope.

RMD Did Not Ensure Manufacturers Reported the Remedy and Scope of Takata Recalls

Our analysis of 36 Takata recalls submitted before May 18, 2015, found that 2 recall files were missing remedy documentation. In their recall acknowledgement letters, RMD notified the manufacturers that they were required to submit these remedy documents, but did not follow up to ensure compliance. This is because RMD did not initiate a process to check for missing remedy documents until 2016, and that process only reviewed certain 2015 recalls.

For example, in June 2014, RMD received a recall notification for Takata airbag inflators in over 140,000 vehicles. The notification stated that the manufacturer planned to tell owners to take their vehicles to dealerships for repairs in February 2015. However, as of February 2018, RMD had not received the manufacturer's remedy documents, and ODI's recall recordkeeping system does not indicate that RMD staff requested those documents.

Vehicle manufacturers did not submit 85 of the 249 (34.1 percent) required scope elements in the initial recall reports. RMD analysts informed manufacturers about 9 of the 85 (10.6 percent) missing elements, and manufacturers provided 38 of the 85 (44.7 percent) missing elements in amended reports. See table 4 for the initial report results and exhibit E for the full results.

Table 4. Vehicle Manufacturers Reporting on the Scope of Takata Recalls, 2008–2015

Information required by the Code of Federal Regulations (CFR)	% initial recall reports missing required information
CFR requirements *not* identified in Recall Portal	
Total number of affected vehicles for each different type of vehicle included in the recall	72.7%
Description of how the vehicles to be recalled differ from similar vehicles that the manufacturer has not included in the recall	61.1%
Description of the manufacturer's basis for its determination of the recall population	38.9%
CFR requirements identified in Recall Portal	
Total number of vehicles potentially containing the defect or noncompliance	30.6%
Inclusive dates of manufacture for recalled vehicles	25.0%
Identify the defective or noncompliant component manufacturer by name, business address, and country	8.3%
Identify the vehicles by make, model, and year potentially containing the defect or noncompliance	5.6%

Note: From August 2014, when NHTSA first required manufacturers to use the recall portal, until the end of our period of analysis, May 2015, NHTSA specifically identified some but not all CFR requirements in the portal.

Source: OIG analysis

In November 2009, ODI initiated an investigation into the scope of Honda's 2008 and 2009 Takata recalls. ODI relied on information from Takata, which said the defect was due to a manufacturing flaw that involved a limited number of inflators sold exclusively to Honda. ODI closed the investigation in May 2010, concluding—based on Takata's explanation—that the recall scope was appropriate. During the investigation, Takata informed NHTSA it had used the same propellant chemistry in more than 100 million inflators. However, RMD did not follow its equipment recall process to determine if vehicle manufacturers other than Honda had used the defective inflators. NHTSA's Office of the Chief Counsel told us that an equipment investigation was not necessary since Takata had stated the defective inflators were only in Honda vehicles. The Counsel's Office also maintained that ODI had no reason to further investigate Takata's explanation of the recall scope until it received information—for example, if more inflators exploded—that suggested the defect scope or remedy was not as Takata had explained.

Between April and May 2013, NHTSA received new Takata airbag recall notifications from Honda, Mazda, Nissan, Toyota, BMW, and Takata, which increased the total number of vehicles involved to 4.4 million. In June 2013, the recall specialist responsible for assessing the adequacy of the recall scope noted there was no need for additional follow-up because the vehicle manufacturers that Takata had identified as using the defective inflators were already conducting recalls. However, in August 2013, ODI received a complaint that an inflator—outside the scope of the existing recalls—had exploded, and a vehicle driver lost sight in an eye and needed 100 stitches in his nose. The staff person who reviewed the complaint in September initiated the pre-investigative process in October, writing in ODI's recordkeeping system that "it may be appropriate for NHTSA to request information from Takata as to how the [Honda] Civic airbag is different from those of other manufacturers." But the staff person recommended "continued surveillance of the issue and dialogue with involved parties" in place of an investigation.

In January 2014, a Reuters article detailed Takata's poor recordkeeping and production practices and noted the August 2013 complaint NHTSA had received. Also in January 2014, an ODI manager went back to the August 2013 complaint and noted "media interest" in the issue. In June 2014, ODI opened an investigation. In the investigation's opening résumé, the investigator noted that ODI had received complaints about three injuries that resulted from Takata inflators, but they "appeared to be minor." These injuries included the vehicle driver who lost sight in one eye and required 100 stitches in his nose. Between June and October 2014, NHTSA received an additional 18 Takata airbag recall notifications, bringing the total number of vehicles involved to 12.4 million. According to Honda, there were two fatalities due to Takata inflators in Honda vehicles in September 2014. In October 2014, NHTSA issued a consumer advisory to urge vehicle owners to repair the vehicles. Later in 2014, Congress began the first of several hearings on the matter.

ODI's partial collection of required information and delayed action to investigate consumer complaints may have delayed the expansion of the Takata recalls, exposing the driving public to increased risk.

ODI Lacks an Effective Process for Overseeing Recall Implementation

RMD does not take action to verify recall completion rates. Also, while RMD procedures emphasize the importance of assessing risk in deciding when to use oversight tools to improve recall completion rates, RMD does not follow these procedures. NHTSA has expanded its oversight of the Takata recalls, increasing

the reporting requirements for manufacturers. The Takata monitor also identified some best practices for communicating with vehicle owners affected by the recalls. However, neither the Agency nor the Takata monitor verifies recall completion rates or the accuracy of the information submitted by manufacturers.

RMD Does Not Take Action To Verify Completion Rates

RMD has oversight of recall implementation, but it lacks procedures to take action to verify completion rates. We spoke to officials at several vehicle manufacturers, who said they obtain completion rate data from their dealerships. The manufacturers' employees then manually input the data into RMD's online recall reporting tool. One company official said that this manual process has resulted in reporting errors. The RMD manager told us that the Division is not obligated to detect incorrect reporting. If RMD is aware that reports of completion rates are incorrect, the RMD manager uses informal follow-up processes, such as phone calls and emails. If those methods are not successful, the RMD manager said, the Division uses "enforcement tools" against the manufacturer, but could not provide an example related to light passenger vehicle recalls.

As required by the FAST Act, NHTSA presented an analysis of completion rates to Congress in a May 2017 report. While the Agency identified six primary factors as having a statistically significant impact on recall completion rates, the report did not draw any conclusions about the true drivers of higher recall completion rates because of a lack of available data. The report further stated that the Agency was unable to verify the numbers of remedied vehicles reported by manufacturers.

However, NHTSA has the statutory authority to verify the number of remedied vehicles reported by manufacturers. Specifically, NHTSA can conduct inspections and investigations that may be necessary to enforce reporting recall completion rates. Additionally, other DOT Operating Administrations tasked with transportation safety oversight have procedures, often involving risk-based processes, for verifying safety-related information under statutory authorities similar to NHTSA's. For example, the Federal Railroad Administration (FRA) has a risk-based National Inspection Plan that directs FRA inspectors to conduct regular audits of the safety data reported by railroads. FRA's data has indicated that audits of the process had improved the compliance of the railroads' reporting.[22] The Federal Motor Carrier

[22] *FRA Has Taken Steps To Improve Safety Data Reporting but Lacks Standard Procedures and Training for Compliance Audits* (OIG Report Number ST2017045), May 3, 2017.

Safety Administration uses a high-risk prioritization policy to conduct compliance reviews that address safety performance.

Outside DOT, the U.S. Consumer Product Safety Commission (CPSC) has a recall monitoring process for product recalls that includes verification inspections. CPSC staff and State investigators visit retailers of recalled products and confirm they have received recall notifications and that recalled products are quarantined and no longer sold. CPSC field investigators may conduct close-out recall inspections, during which they evaluate the effectiveness of the recall and assess any post-recall incidents. According to CPSC, field investigators visit company headquarters, distributors, and retailers to verify the information it has received for roughly 60 percent of product recalls.

RMD Does Not Use Its Risk-Based Oversight Tools To Mitigate Risk During Light Passenger Vehicle Recalls

Consistent with its statutory authority,[23] RMD has several risk-based tools to oversee recall implementation. These tools include Quarterly Report Performance Notifications (QRP), orders to conduct follow-up owner notifications, specialized investigations, enforcement of regulations that require recall risk reporting, and reviews of draft notification letters to owners. However, RMD has not established a systematic, risk-based process to implement these tools. As a result, it has not directed manufacturers to take action to improve low recall completion rates or ensured that manufacturers comply with NHTSA's risk-reporting requirement.

RMD performance standards state that the RMD supervisor will work to raise completion rates, and position descriptions state that recall specialists will assess completion rates. However, RMD staff rely on their own professional judgement to assess risk. This is contrary to GAO's *Standards for Internal Control*, which states that management should identify, analyze, and respond to risks related to achieving the defined objectives and use performance measures to assess whether risk-response actions are adequate.

RMD procedures state that if a recall does not meet defined performance standards, such as an adequate completion rate, within its first 6 months, the

[23] For example, 49 U.S.C. § 30119 states that the Secretary of Transportation may order a manufacturer to send a second recall notification if recall completion rates are inadequate, and 49 U.S.C. § 30166 states that the Secretary may conduct inspections or investigations that may be necessary to enforce chapter 301 and regulations prescribed or orders issued under that chapter. Under § 30166, the Secretary can require reports, conduct hearings, administer oaths, take testimony, and subpoena witnesses and records.

RMD analyst will use a QRP to notify the manufacturer that NHTSA is aware of the poor performance and that the manufacturer should strive to improve it. However, NHTSA's recall recordkeeping system does not document whether RMD issued any QRPs for light passenger vehicle recalls between 2012 and 2016, although 134 of these recalls did not meet RMD's 6-month completion rate threshold. However, the RMD safety recall specialist responsible for monitoring recall completion rates was unaware of the QPR tool.

The procedures also state that if the number of unremedied vehicles is "unreasonably high" 9 months after a recall is issued, the analyst will review the campaign to determine whether the manufacturer should conduct a follow-up notification. It also lists several factors to consider in making this decision, including completion rates and the seriousness of the safety risk arising from the defect or noncompliance. The procedures direct RMD staff to rely on the explanation of risk included in the initial recall reports, their own "expert judgment," and documentation of VDD or OVSC investigations. RMD staff are advised to consult with VDD or OVSC when applicable.

Although 133 recalls fell below the 9-month completion rate threshold, an indication of an "unreasonably high" number of unremedied vehicles, RMD staff could not provide an example of RMD ordering a manufacturer to conduct a follow-up notification. According to NHTSA, manufacturers voluntarily re-notified vehicle owners affected by 73 recalls during this time period. A recall specialist told us that when recall completion rates are low after 9 months, RMD follows up with phone calls rather than documented correspondence. Additionally, this work is reviewed by the RMD manager during meetings where the two of them discuss whether completion rates "should be better." The recall specialist estimated that these meetings are held twice a year, adding that the last re-notification order was in 2011.

RMD procedures further state that should the completion rate remain below a satisfactory level after 18 months, the analyst will recommend that an audit be conducted.[24] An audit examines issues specifically related to the recall campaign as well as the processes and procedures the manufacturer used to conduct all safety recall campaigns. Its purpose is to identify systemic issues and to require corrective action. We found that 205 recalls fell below the 18-month threshold. However, neither of the two audits RMD initiated between 2012 and 2016 for recalls of light passenger vehicles were prompted by low completion rates. Rather, they were opened because the manufacturers either failed to submit

[24] RMD procedures also refer to these audits as performance audits, audit queries (AQ), and specialized investigations.

recall communications to NHTSA in a timely manner or did not have enough parts to send to dealers.[25]

In 2014, NHTSA updated its recall reporting regulations to require manufacturers to report the safety risk(s) associated with each recall. Specifically, the regulations state that if the defect or noncompliance may result in a crash, the manufacturer must report any prior warning to the vehicle driver. If there is no potential for causing a crash, the manufacturer must report the general type of injury that could result from the defect or noncompliance. NHTSA explained that the additional risk information would help it assess the adequacy of the manufacturer's campaign and corrective actions. In addition, a description of the risk is included in the Agency's summary of the defect or noncompliance, which is available on its website to inform owners about the safety risk and motivate them to perform the recommended recall remedy. In December 2017, GAO reported that risk was the most important factor vehicle owners consider when deciding whether to proceed with a recall remedy. Furthermore, owners are more likely to have their vehicles repaired if the defect sounds "serious."

However, since this requirement has been in place, we project that, based on our sample of recalls, manufacturers have not included the risk assessment in 77.8 percent[26] of initial recall reports, and RMD analysts failed to note the omissions in 95.2 percent[27] of these recalls. In addition, we project that manufacturers did not submit any[28] of this information in amended reports. Therefore, we project that more than three-quarters of manufacturers' required risk assessments are not available to NHTSA or the public.

In addition, NHTSA regulations[29] require manufacturers to submit proposed notification letters to NHTSA for review. RMD procedures direct recall analysts to review a draft of the letter to "ensure that it meets all requirements…and that it is clear and understandable." While RMD staff do conduct this review, there is no process in place to verify that manufacturers include their edits in the final letters. For example, OVSC management told us that it prioritizes oversight of front- and side-impact standards because those accidents result in the most fatalities. In December 2014, a manufacturer issued a recall for 3,085 vehicles that did not

[25] As a result of one of these audits, in July 2015 NHTSA issued a consent order for Fiat Chrysler that carried a $105 million civil penalty. Fiat Chrysler admitted to multiple violations of the Safety Act, including failing to provide an adequate and timely remedy for defective vehicles, and was required to submit additional reports on its recall completion rates. NHTSA provided us with 36 reports submitted by Fiat Chrysler that detail the company's recall completion rates and ongoing challenges to improving the rates. But when we asked for the documented feedback NHTSA gave to the company, the Agency could provide written comments on only 1 of the 36 reports.
[26] Our 77.8-percent estimate has a precision of +/-10.8 percentage points at the 95-percent confidence level.
[27] Our 95.2-percent estimate has a precision of +/-6.3 percentage points at the 95-percent confidence level.
[28] Our 100-percent estimate has a precision of -7.3 percentage points at the 95-percent confidence level.
[29] 49 CFR § 577.5.

meet side-impact crash-worthiness standards, per FMVSS.[30] According to NHTSA's recall acknowledgement letter, the consequence is that "rear seat passengers may be at a higher risk of injury during a crash." But in April 2015, a RMD program assistant approved a final letter from a manufacturer that suggested the risk was not serious. The letter informed consumers that a vehicle "may marginally exceed a NHTSA test requirement," and that as a result, rear passengers may be at a "slightly higher risk of injury in a severe side impact."

In July 2015, the manufacturer expanded the recall to include 30,456 vehicles. This time, the RMD program assistant removed the words "marginally" and "slightly" from the draft letter. But the final notification letter that the manufacturer sent to owners in September 2015 still had those words, and there is no evidence that NHTSA assessed whether the final letter met all the requirements or that it was clear.

RMD's failure to assess final owner notification letters may affect recall completion rates. More important, it limits NHTSA's ability to ensure that vehicle owners have been clearly informed about risks affecting recalled vehicles.

NHTSA Has Increased Its Oversight but Does Not Verify Manufacturers' Implementation of Takata Recalls

To augment its oversight of the Takata recalls, NHTSA put in place a consent order in May 2015 and a coordinated remedy order[31] in November 2015. This was the first time NHTSA used a coordinated remedy order to facilitate its oversight of recall implementation. The consent order established an Independent Monitor, tasked with, among other things, overseeing the increased reporting requirements for these recalls. For example, manufacturers must submit completion rates on a biweekly basis, rather than the quarterly basis required by regulations. In addition, manufacturers must report on their efforts to implement the Takata monitor's recommendations for improving completion rates. While the Takata monitor has issued best practices for improving recall completion rates, RMD does not use them to help manufacturers improve other recalls.

While reporting requirements have increased, neither the Takata monitor nor NHTSA verifies whether the recall completion rates are correct. The monitor team reported that they review reporting practices and correct reporting mistakes

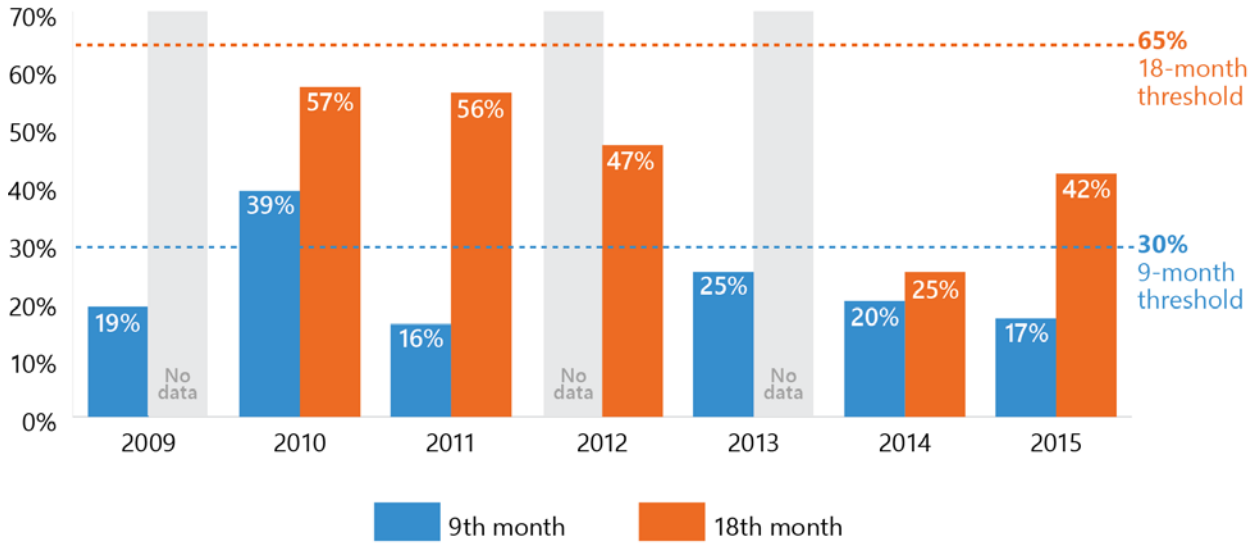
[30] Federal Motor Vehicle Safety Standard 214.
[31] NHTSA authorized the Takata-coordinated remedy order under 49 U.S.C. § 30120 and 49 CFR 573.14.

when encountered, but they do not have a process for ongoing verification of recall completion rates. They also could not provide evidence that they had corrected reporting mistakes. The lack of documented verification increases the risk that recall completion rates may not be accurate.

According to the manufacturers we spoke with, NHTSA has established clear thresholds for completion rates for the Takata recalls, but they expressed doubts about whether they could meet those expectations. One manufacturer compared the Takata recalls to the General Motors ignition switch recall, noting that the ignition switch recall reached roughly 70 percent completion, while NHTSA expects completion rates for the Takata recalls to reach 100 percent.

The high completion rate goal for Takata set after the May 2015 consent order contrasts with the low completion rates achieved before that date. For Takata recalls initiated between November 2008 and May 2015, 26 of the 32 recalls (81.3 percent) fell below NHTSA's 9-month threshold of 30 percent, and 22 of 24 (91.7 percent) were below NHTSA's 18-month completion rate threshold of 65 percent (see figure 4).

Figure 4. Average Completion Rates for Takata Recalls Initiated Before the Takata Consent Order



Source: OIG analysis of NHTSA data

Staff did propose some actions to address the low completion rates prior to the consent order, and NHTSA procedures call for actions in certain cases. However, there is no evidence that NHTSA took the recommended actions or complied with its procedures to follow up on Takata recall completion rates between January 2010 and May 2015. Specifically, in January 2010, a NHTSA official noted that the Honda Takata recall completion rates were low, only at 20 percent after

12 months, and recommended that Honda issue a follow-up notification to vehicle owners. If completion rates are unreasonably low after 9 months, RMD procedures direct recall analysts to determine whether to require the manufacturer to re-notify vehicle owners. If the completion rate remains low after 18 months, RMD procedures state that analysts should recommend an audit of the manufacturer. Our analysis of the 36 Takata recall reports submitted to NHTSA prior to the consent order found that manufacturers did not include the required risk information in 43.3 percent of initial recall reports, and RMD failed to note any of this missing information in recall acknowledgement letters. In their final recall reports, manufacturers submitted 3.9 percent of the missing risk information.

NHTSA's minimal action to address low Takata recall completion rates and its poor oversight of manufacturers' reporting on recall risk may have contributed to the slow implementation of these recalls between 2008 and 2015.

Conclusion

NHTSA's mission is to save lives, prevent injuries, and reduce economic losses resulting from motor vehicle crashes. NHTSA's Office of Defects Investigation (ODI) is charged with requiring manufacturers to recall vehicles in accordance with Federal laws and regulations. However, ODI has not developed and implemented a system of strong management controls with procedures intended to ensure compliance with these laws and regulations. ODI also has not fully demonstrated a risk-based approach to decision-making and prioritizing its oversight of scope, remedies, and implementation of light passenger vehicle recalls. As a result, ODI cannot reasonably be sure that light passenger vehicle recalls are adequate or that critical safety information is collected and clearly communicated to the public. NHTSA's lack of internal accountability and risk-based oversight inhibits the Agency's ability to meet its safety mission, as evidenced by the series of ineffective Takata recalls between 2008 and 2015.

Recommendations

To improve NHTSA's processes for monitoring recall remedies and scope, and overseeing safety recall implementation, we recommend that the National Highway Traffic Safety Administrator:

1. Develop and implement a risk-based process to monitor manufacturers' reporting of recall remedy, scope, and risk information. The process should include taking appropriate steps with manufacturers that are not

in compliance, including enforcement actions when necessary, as well as verifying information submitted by manufacturers, and identifying and addressing potential inadequacies of recall remedies and scope.

2. Develop and implement a risk-based process—with specific timelines—that provides guidance for Office of Defects Investigation staff on identifying recalls with missing communications (e.g., dealer notifications, technical service bulletins), taking appropriate action to resolve the deficiency, and documenting the outcomes in an official recordkeeping system.

3. In accordance with the Government Accountability Office's *Standards for Internal Control in the Federal Government* and NHTSA's procedures, develop, implement, and document management controls, including a supervisory review process, for monitoring recall remedies, scope, and risk reporting and oversight of recall implementation.

4. Develop a training curriculum on staff responsibilities for updated recall monitoring and oversight processes, and provide this training to Office of Defects Investigation and Office of Vehicle Safety Compliance staff.

5. Update the recall reporting portal and issue written guidance to identify all recall scope, risk, and completion rate information that regulations require manufacturers to submit.

6. Document lessons learned from the Takata recalls, and develop and implement a plan for applying those lessons to help manufacturers improve completion rates of other recalls.

Agency Comments and OIG Response

We provided NHTSA with our draft report on May 8, 2018, and received its formal response on June 21, 2018. NHTSA's response is included in its entirety as an appendix to this report. NHTSA concurred with recommendations 3 through 5 and provided appropriate planned actions and completion dates.

NHTSA partially concurred with recommendation 1, stating that optimizing safety through compliance can be achieved largely through non-enforcement actions. However, NHTSA provided a target action date and agreed to take investigative or enforcement action when necessary and to consider appropriate steps if there are indications manufacturers have provided inaccurate information. Therefore, we consider these actions responsive to the recommendation.

NHTSA also partially concurred with recommendation 2, stating that the Agency does not believe it can establish a specific deadline for submitting communications because they vary widely from recall to recall. However, NHTSA agreed to update its procedures to include general timelines for resolving missing communications and documenting the outcomes of these actions and provided a target action date. This process will be part of a risk-based approach. Therefore, we consider this action responsive to the recommendation.

Finally, NHTSA partially concurred with recommendation 6, stating that it documented lessons learned from the Takata recalls in its November 2017 Independent Monitor Report and, when appropriate, applies this knowledge to help manufacturers improve completion rates for other recalls. Nevertheless, the Agency agreed to implement the recommendation as written and provided a target action date.

Actions Required

We consider recommendations 1 through 6 resolved but open pending completion of planned actions.

Exhibit A. Scope and Methodology

We conducted this performance audit between February 2017 and May 2018 in accordance with generally accepted Government auditing standards as prescribed by the Comptroller General of the United States. 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.

The scope of our audit included ODI's process for monitoring and overseeing light passenger vehicle recalls. We did not assess the processes for the Agency's other types of recalls, such as for heavy trucks and motorcycles.

To assess NHTSA's processes for monitoring manufacturers' proposed recall remedies and scope, we reviewed relevant legislation and regulations and ODI's recall processes and procedures, and collected and analyzed safety recall data from ODI engineers' work documentation and Case Management System and Artemis databases. We interviewed NHTSA staff, industry stakeholders, and the Takata Independent Monitor, and conducted site visits to vehicle manufacturers.

Before conducting our analyses, we tested the reliability of the safety recall data in each database. For the Artemis database, we met with RMD staff to identify the relevant recall fields and then compared flat file data from those fields to the actual recall field outputs in Artemis to verify their accuracy. For the Case Management System database, we coordinated with IT staff from NHTSA and OIG to gain access to "front end" and "back end" data sets. We compared 10 cases from the front-end data set to the same 10 cases in the back-end data set. Our test determined the data from the Artemis and Case Management System databases were reliable for the purpose of assessing ODI's processes for monitoring recall remedies and scope.

After completing these data-reliability tests, in coordination with OIG's statistician, we identified a simple random sample of 94 of the 1,384 total light passenger vehicle recalls between 2012 and 2016. Our sample design allowed us to estimate noncompliance with regulatory recall reporting requirements related to recall remedy and scope with a precision no greater than +/-10.8 percent at the 95-percent confidence level.

To calculate the civil penalty liabilities, we assigned the maximum civil penalty for each day manufacturers did not submit remedy documents (technical service bulletins, manufacturer notices to dealers, and owner notification letters). The maximum civil penalty amount in 2015 was $7,000, which was subsequently increased to $21,000.

To assess ODI's processes for identifying potential safety concerns related to recall remedies and scope, we compared the engineers' recall remedy review documentation to our universe of recalls. We also identified specific data field criteria in the Case Management System that showed whether the safety concerns identified by ODI staff were within the scope of the audit. We then determined aggregate totals of safety concerns that ODI staff documented as related to recall scope or remedy for light vehicle recalls in each year between 2012 and 2016.

To assess ODI's process for overseeing safety recall implementation, including the sufficiency of recall completion rates, we reviewed relevant legislation and regulations, as well as NHTSA's policies and procedures, and requested documentation from RMD of analysis of completion rates, communication with manufacturers about low recall completion rates, and verification of information submitted by vehicle manufacturers. We interviewed the RMD staff member primarily responsible for the collection and review of completion rate reports between January 2012 and September 2015, as well as that individual's direct supervisor. We also interviewed vehicle manufacturers to gain industry perspective on the completion rate reporting process. To compare NHTSA's practices to those of other U.S. Government agencies, we spoke with officials from the U.S. Consumer Product Safety Commission about their recall oversight processes.

To calculate recall completion rate averages, we used information from NHTSA's Artemis database. Our data-reliability testing was limited because there was no other source of information for our analysis. We interviewed vehicle manufacturers to determine their processes for generating and submitting the data to RMD. While we found some minor anomalies, the completion rate data provided a reasonable basis for drawing conclusions about the oversight process.

To calculate average recall completion rates by year, we used the final completion rate report submitted in the calendar year for each light passenger vehicle recall. In general, the final completion rate report was the 18-month report, but this was not the case for every recall. For example, if a manufacturer chose to submit 11 reports over 3-plus years, we used the 11th report. If the recall reached 100 percent after one report and the manufacturer then stopped issuing reports, we used the first report. We calculated recall completion rates using NHTSA's formula:

(# remedied vehicles ÷ {# recalled vehicles - other vehicles*}) × 100

*Vehicles exported, stolen, scrapped, or disposed of in another manner.

However, if the recall included less than six reports and had not reached 100 percent or the manufacturer had not submitted at least six reports by December 2017, we eliminated those recalls from the analysis.

For the Takata recalls, we calculated rates for both the 9-month and 18-month reports submitted per calendar year. For example, to calculate the 9-month report rate for calendar year 2011, we examined all the reports submitted during that period. We then applied the aforementioned formula to the totals in each recall completion reporting category to calculate the average completion rate.

To analyze NHTSA's use of audits or investigations in response to low recall completion rates, we searched NHTSA's database to find audits or investigations conducted between 2012 and 2016 related to light vehicles. We then reviewed the documentation to determine if the purpose was to evaluate low recall completion rates.

To analyze risk information provided by manufacturers and requested by NHTSA, we analyzed the recall reports and acknowledgement letters for the random statistical sample and compared those to regulatory requirements.

To determine how NHTSA's recall oversight processes might have affected the Takata recalls, we interviewed ODI and NHTSA Chief Counsel staff involved in Takata recall oversight, as well as the Independent Monitor responsible for the Takata coordinated remedy program. We also examined recall reports from NHTSA's Artemis database to analyze the risk information provided by manufacturers and requested by NHTSA, as well as completion rate data for Takata recalls.

Exhibit B. Organizations Visited or Contacted

NHTSA Facilities

National Highway Traffic Safety Administration Headquarters, Washington, DC

Other Organizations

The Auto Alliance, Washington, DC

BMW of North America, LLC, Woodcliff Lake, NJ

The Center for Auto Safety, Washington, DC

Fiat Chrysler Automobiles/FCA US LLC, Auburn Hills, MI

Ford Motor Company, Dearborn, MI

General Motors, Warren, MI

Global Automakers, Washington, DC

Insurance Institute for Highway Safety, Arlington, VA

Motor & Equipment Manufacturers Association, Washington, DC

Takata Independent Monitor, New York, NY

U.S. Consumer Product Safety Commission, Bethesda, MD

Volkswagen Group of America, Auburn Hills, MI

Exhibit C. List of Acronyms

CFR	Code of Federal Regulations
CPSC	Consumer Product Safety Commission
DOT	Department of Transportation
FMVSS	Federal Motor Vehicle Safety Standards
GAO	Government Accountability Office
ODI	Office of Defects Investigation
OIG	Office of Inspector General
OVSC	Office of Vehicle Safety Compliance
NHTSA	National Highway Traffic Safety Administration
QRP	Quarterly Report Performance Notifications
RMD	Recall Management Division
VDD	Vehicle Defects Division
VRTC	Vehicle Research and Test Center
U.S.C.	United States Code

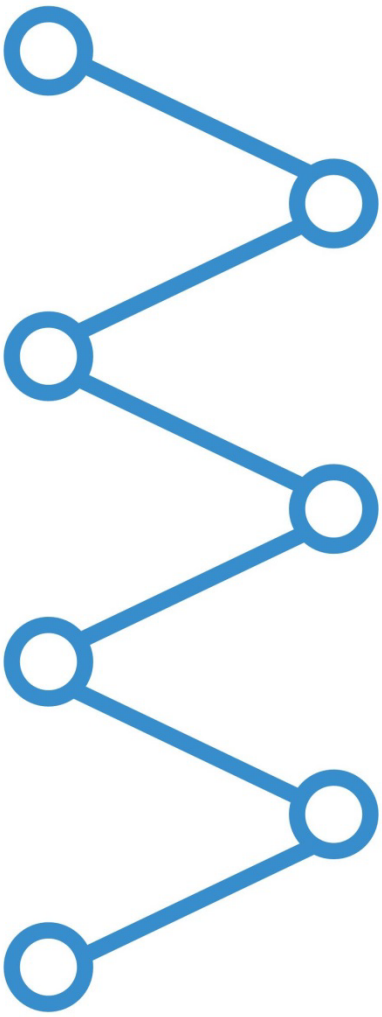
Exhibit D. Recall Process Flow Chart

IDENTIFICATION
NHTSA investigation or manufacturer identifies safety defect or noncompliance.

ADDITIONAL INFO
Manufacturer submits additional information (e.g. amended information reports, owner notices, dealer notices, and Technical Service Bulletins) to RMD

NHTSA LETTER
RMD sends manufacturer an acknowledgement letter requesting any missing information. Manufacturer submits additional information as needed.

MONITORING
RMD monitors completion rates to determine need for re-notification orders or investigations. VDD monitors other data to determine need for scope or remedy investigations.



INITIAL INFO REPORT
Manufacturer submits initial information report on safety defect or noncompliance to RMD

NHTSA REVIEW
RMD reviews reports for compliance. RMD and engineers review manufacturer's additional information.

MANUFACTURER RECALL
After manufacturer determines remedy, it initiates recall campaign and reports completion rates to RMD for 6 quarters.

Key
Each blue circle represents a stage at which NHTSA can intervene

Exhibit E. Monitoring of Recall Scope Reporting

CFR Requirement	% initial recall reports missing required information		% times RMD identified missing information in acknowledgement letter		% amended recall reports providing missing information	
	All light passenger vehicle	Takata only	All light passenger vehicle	Takata only	All light passenger vehicle	Takata only
Total number of affected vehicles for each different type of vehicle included in the recall	**79.7%** *+/- 10.0%*	72.7%	**0.0%** *+ 6.4%*	0.0%	**2.1%** *+4.0%. - 2.0%*	41.7%
Description of how the vehicles to be recalled differ from similar vehicles that the manufacturer has not included in the recall	**61.7%** *+/- 9.5%*	61.1%	**0.0%** *+ 5.2%*	0.0%	**0.0%** *+ 5.2%*	13.6%
Description of the manufacturer's basis for its determination of the recall population	**45.7%** *+/- 9.8%*	38.9%	**0.0%** *+ 7.0%*	0.0%	**0.0%** *+ 7.0%*	21.4%
Identify the defective or noncompliant component manufacturer by name, business address, and country	**16.2%** *+/- 8.5%*	8.3%	Sample size too small to estimate	0.0%	Sample size too small to estimate	33.3%
Inclusive dates of manufacture for recalled vehicles	**8.5%** *+/- 5.5%*	25.0%	Sample size too small to estimate	22.2%	Sample size too small to estimate	100.0%
Total number of vehicles potentially containing the defect or noncompliance	**0.0%** *+ 3.2%*	30.6%	N/A	54.5%	N/A	90.9%
Identify the vehicles by make, model, and year potentially containing the defect or noncompliance	**0.0%** *+ 3.2%*	5.6%	N/A	50.0%	N/A	100.0%

Note: All bold numbers are estimates are at 95-percent confidence level. Estimates are based on our sample of light passenger vehicle recalls initiated between 2012 and 2016. Takata recalls were initiated between 2008 and May 2015.

Source: OIG analysis

Exhibit F. Major Contributors to This Report

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OLIVIA **STARR**	PROJECT MANAGER
JAMES **LONERGAN**	SENIOR FINANCIAL ANALYST
JASON **BEACH**	ANALYST
BRIAN **PERSSE**	ANALYST
KENT **BYERS**	CRIMINAL INVESTIGATOR
PETRA **SWARTZLANDER**	SENIOR STATISTICIAN
MAKESI **ORMOND**	STATISTICIAN
JANE **LUSAKA**	WRITER-EDITOR
SETH **KAUFMAN**	SENIOR COUNSEL
CHRISTOPHER **CIALEO**	HONORS ATTORNEY
CHRISTINA **LEE**	VISUAL COMMUNICATIONS SPECIALIST

Memorandum

U.S. Department
of Transportation

National Highway
Traffic Safety
Administration

Subject: INFORMATION: Management Response to Office of Inspector General (OIG) Draft Report on Light Passenger Vehicle Recalls

Date: June 21, 2018

From: Heidi R. King
Deputy Administrator, National Highway Traffic Safety Administration

To: Barry J. DeWeese
Assistant Inspector General for Surface Transportation Audits

The National Highway Traffic Safety Administration (NHTSA) is firmly committed to continuous improvement of the risk-based processes addressing potential safety defects and recalls, and has recently updated and improved many of those processes and has initiated work on others to ensure effective recall activities. We do not concur with all of the OIG findings and remain concerned that the report may leave the public with misconceptions regarding NHTSA's oversight of recalls in general, and the Takata recalls in particular.

NHTSA believes that the process for receiving, reviewing, and acting on vehicle safety information requires rigorous and risk-based processes that are subject to strong management controls. For that reason, NHTSA undertook a thorough third-party risk management expert review and has implemented a number of changes to its processes.

NHTSA has made several additional improvements in recent years including, but not limited to, the following:

- Expanded public outreach and deployed a Vehicle Identification Number (VIN) search tool on NHTSA's website to raise awareness of recalls;
- Adopted standardized, documented risk-based processes for the assessment of vehicle safety complaints and other potential defect information to improve timely and appropriate investigative action by NHTSA; and
- Implemented enhancements to the Office of Defect Investigation's (ODI's) organization, processes and technology to improve consistency and efficiency in identifying safety-related defects.

In addition, NHTSA implemented key recall initiatives such as:

- Establishing an online portal for manufacturer recall submissions;
- Enhancing the requirements for owner notice letters;
- Issuing consent orders with specific recall-related performance obligations;

- Working with industry to encourage the development of recall best practices;
- Implementing the *Safe Cars Save Lives* campaign to enhance consumer awareness of recalls; and
- Managing the largest automotive recall in U.S. history, involving 19 different manufacturers and over 50 million Takata air bag inflators.

We have an additional third-party expert risk management review currently underway that will facilitate further continuous improvement of NHTSA's recall management processes. NHTSA welcomes the OIG's recommendations as part of its continuous improvement efforts and offers the following comments.

Recommendation 1: NHTSA concurs, in part, and is updating written procedures implementing the agency's current risk-based approach. NHTSA plans to implement the recommendation by June 3, 2019. NHTSA believes that optimizing safety through compliance can be achieved largely through non-enforcement actions of formal and informal communications and, where necessary and appropriate, investigative or enforcement actions. NHTSA does not agree that all consumer complaints or concerns merit formal or informal investigative action.

NHTSA does not agree that it should divert resources to verify manufacturer-submitted information as a matter of course, absent a reason to question its accuracy. NHTSA's statutory system of self-certification provides that manufacturers may be subject to both civil and criminal penalties for providing false or inaccurate information, and NHTSA agrees that it should consider appropriate steps when there are indicators that information provided is inaccurate.

Recommendation 2: NHTSA concurs, in part, and plans to implement the recommendation by June 3, 2019. NHTSA will continue its ongoing work to update written procedures to document actions to resolve missing communications under its existing risk-based approach, including general timelines and outcomes. NHTSA does not believe it is reasonable to establish specific, one-size-fits-all timelines for submitting documents that vary widely across recalls, and which may not be required for every recall. Additionally, as some of these actions may not be appropriate to document in NHTSA's ARTEMIS database system, documentation will reside outside of that system unless appropriate (i.e., when related to a formal investigation).

Recommendation 3: NHTSA concurs and plans to implement the recommendation by June 3, 2019. NHTSA will continue to refine management controls and update procedures to better document its supervisory review processes and oversight of recall implementation. NHTSA does not agree with the draft report statements regarding supervisory review or management actions, as these statements omit information that was provided to the OIG throughout the audit.

Recommendation 4: NHTSA concurs and will implement this recommendation by enhancing ODI's existing training plan by January 2, 2019. NHTSA will include updated training for all staff involved in recall-related activities on a regular basis, while noting that training is already provided to staff.

Recommendation 5: NHTSA concurs and will update the recall reporting portal to ensure guidance reflects current regulatory requirements by February 2, 2019.

Recommendation 6: NHTSA concurs, in part, and plans to implement the recommendation by December 3, 2018. NHTSA has already documented lessons learned from the Takata recalls through the Independent Monitor Report published on NHTSA's website in November 2017. NHTSA routinely uses the knowledge gained from the Takata recalls to facilitate manufacturers' improvement of completion rates in other recalls through ongoing in-person, telephonic, or written interactions and communications.

However, not all the lessons learned or methods employed in the Takata recalls will be generalizable or appropriate for other recalls.

Safety is NHTSA's top priority. The Agency is committed to its mission of saving lives, preventing injuries, and reducing the costs of roadway crashes. A key element of any risk-based system is openness to feedback and continuous improvement and NHTSA will continue to enhance its risk-based processes.

NHTSA appreciates the opportunity to respond to the OIG draft report. Please contact Jeff Giuseppe, Associate Administrator for Enforcement, if you have any questions or require additional information.

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Our Mission

OIG conducts audits and investigations on behalf of the American public to improve the performance and integrity of DOT's programs to ensure a safe, efficient, and effective national transportation system.

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