



Annie Searle & Associates LLC

Research Note

With a Nod and a Shrug: A Flawed Switch and Failures at General Motors and the National Highway Traffic and Safety Association

By Kristine Tomasovic Nelson

Copyright © 2015, ASA Institute for Risk & Innovation

Applicable Sectors: Manufacturing

Keywords: Manufacturing, General Motors, Regulations, Auto-Industry

Abstract: A faulty ignition switch designed into General Motors' vehicles led to thirteen deaths and dozens of accidents. It is well understood that these tragedies resulted from a series of systemic failures at General Motors. However, a complete analysis also takes into account risk factors contributed by GM's regulating agency, the National Highway Traffic and Safety Administration.

In 2002, a General Motors (GM) engineer named Ray DeGiorgio made a decision with catastrophic results. He included in the design of certain GM automobiles an ignition switch that was below GM's own specifications for torque. In other words, the switch turned with too little force. This allowed the engine to be turned off inadvertently, even with the bump of a knee or the swing of a heavy key chain. Cars containing the part, such as the Chevrolet Cobalt, were prone to shut off even while in motion; something called a "moving stall" (Valukas, 2014).

This small decision ballooned to catastrophic impact. By the time the problem of the moving stalls was traced to its source, eleven years had passed, at least 54 accidents occurred, and more than 13 people had lost their lives. GM incurred tremendous reputational and financial damage. In 2014, the company was forced to recall 29mm vehicles worldwide, pay a \$35 million fine (the maximum allowable) to the National Highway Traffic and Safety Administration (NHTSA), and send its CEO to testify in front of Congress, where senators accused the company of "criminal" behavior and of fostering a "culture of cover-up" (Beech & Klayman, 2014).

How did one employee's design decision cause such damage? Not surprisingly, there were multiple contributing factors and events. Numerous people and process control failures occurred both internal and external to the GM organization. GM had no plan in place to prevent, identify, and mitigate its own operational errors, and the NHTSA, the regulating agency for auto industry safety, was cited in a congressional investigation for shortfalls and failures. Each organization's role will be considered in turn, but neither one demonstrated a strong control of operational risk. In fact, the ignition switch tragedy falls

across five of the seven operational risk categories as defined by Basel II (Girling, 2013, p. 4). These include:

- Internal fraud - Committed by DeGiorgio
- Clients, Products, and Business Practices – Employees within both organizations failed to meet professional duties.
- Damage to Physical Assets – Flawed vehicles, subsequent recall and maintenance requirements.
- Execution, Delivery, and Process Management -- Lack of processes to identify the cause and repercussions of the faulty part.

It is somewhat reassuring that in hindsight GM has a clear picture of and has taken responsibility for its shortcomings. Shortly after initiating its first round of recalls, GM's CEO Mary Barra and its Board of Directors commissioned former United States Attorney Anton Valukas to conduct a thorough independent investigation in order to present "the unvarnished truth about what happened, why it happened, and what GM should do to ensure that it never happens again" (Valukas, 2014). The investigation cleared top management of wrongdoing and found no sign of a cover-up. However, Valukas and his team found "a lack of urgency, lack of ownership, lack of oversight, and lack of understanding of the consequences of the problem." The report revealed that GM even had a name for this: the "GM nod", meaning that everyone nods in agreement to a plan of action but no one makes sure it gets done.

Indeed, GM had multiple opportunities to identify and fix the problem, but in every instance, the organization – more exactly, its people and processes -- failed. Customers began complaining about the issue and reporting moving stalls as early as 2004, but more than one committee assembled to size and address the problem from the years 2004-2013 deemed it a convenience issue, not a safety issue. They failed to recognize that in the case of a moving stall, the airbags would shut off shortly after power from the engine was cut, leaving the airbags unoperational at precisely the moment when the safety feature was most crucial. As accident reports involving fatalities began to trickle in, GM engineers and even in-house counsel still failed to see the connection between the switch and the airbags. Investigators were in part misled by GM engineer DeGiorgio who had replaced the part for the 2007 model year car but did not renumber it, as protocol would require. Because investigators did not discover that the part had changed, they could not figure out why some (early) model year switches were failing while other (later) model years' were not. (Later DeGiorgio claimed he did not remember the change.) However, as early as 2007 a state trooper investigating a fatal accident figured out the switch/airbag connection. Similarly, outside investigators employed by plaintiffs' lawyers did the same in 2013 simply by comparing the "same" part from two different cars. The company lacked either the investigative process or willpower to do what others did relatively easily.

The Valukas report also found that while critical information passed through numerous hands within the company, no one brought it to the highest levels of the company. In addition, information crucial to decisions at multiple levels was often found lacking. For example, the trooper's report was found in GM's files as early as 2007, but not one GM engineer admitted to seeing it before the year 2014. And in late 2013, GM's recall committee deferred their decision on whether to recall vehicles with the switch for six weeks because the presentation given to them failed to contain information about fatalities (Valukas,

2014). Clearly, GM's processes and culture were inadequately configured to prevent and mitigate the risks that occurred.

There is no single, obvious explanation for why these inadequacies came to be, but one former employee, William J. McAleer, raised alarm bells about GM's culture (and its failures) more than fifteen years ago. In 2014 in light of the ignition switch recalls, he presented his theories to the media. McAleer was an auditor who ran a program at GM from 1985 to 1998 called Global Delivery Survey. This program sent teams of GM personnel, including managers, to conduct checks on finished vehicles delivered from GM's assembly plants. The teams conducted "root-cause analysis," assigning fault and responsibility for any identified defects. McAleer says the program discovered and mitigated many production problems early, but he believes that when Congress began requiring auto manufacturers to report more details about possible vehicle defects to the government in late 2000, GM stopped looking for the defects and cancelled its program. McAleer is quoted as saying, "It was no longer acceptable to have a problem at General Motors, whether it was a safety problem or any kind of problem, problems were not acceptable." In response to McAleer's claims, GM countered that the audit function was moved and conducted under a program handled by the plants (Gutierrez & Gardella, 2014). But an audit program run by the same employees who produced the cars could easily be less rigorous than one run by an external team.

Another potential cause of the culture and process inadequacies has been offered by GM expert Maryann Keller, who wrote two books on the company. She has attributed the problems to cost cutting. She asserts that modern GM was dominated by "bean counters" who had only one objective: to make the numbers, sometimes by sacrificing quality.

In hindsight, it is abundantly clear that GM lacked the controls and risk management processes needed to prevent this disaster. During the course of the growing crisis, GM failed to accomplish any of the five key operational risk management tasks as identified by risk expert Philippa Girling. These tasks include: 1) identifying operational risks, 2) assessing the size of operational risks, 3) monitoring and controlling operational risks, 4) mitigating operational risk, and 5) calculating capital to protect against operational risk losses (Girling, 2013, p. 4). Evidence suggests that the organization lacked or cancelled programs like McAleer's that identified risks. It is also clear that its committees and teams were unable or unwilling to connect the dots on the faulty switch, the airbag failures, and fatalities. Moreover, GM's people were neither motivated nor required to take responsibility for fixing or mitigating problems. Finally, no processes ensured that GM's senior leaders received the information needed to calculate the impact of operational risk losses.

However, the responsibility for the ignition switch crisis was not GM's alone. While the NHTSA accused GM of hiding information and being "slow to act" and "slow to communicate", frustrating the NHTSA's efforts to investigate and resolve the switch issues (Bunkley, 2014), a House of Representatives' report issued in the fall of 2014 also found that the NHTSA made critical mistakes in its investigation of the company and the switch problems (Energy and Commerce Committee, Majority Staff, 2014). The NHTSA's shortcomings – like GM's – were both procedural and cultural. For example, the House Report determined that the NHTSA also had access to and reviewed the trooper's 2007 accident report but failed to understand the implications. The NHTSA's failures, spread across several years, were at least three-

part: 1) as early as 2008 the agency declined to explore the link between the switches and the airbags despite receiving several reports suggesting a connection. 2) The agency failed to track similarities in three independent investigations it conducted into non-deploying airbags in the Chevy Cobalt. And, 3) the NHTSA representatives appeared to lack crucial understanding of how the airbags worked – that the airbags would lose power if the engine was turned off. The report further pointed to the root causes of these dysfunctions: inadequate training, information silos, and the NHTSA “shrug.” The report’s wording on the “shrug” is scathing: “The agency does not hold itself to the same standard of accountability as those it regulates. There is a tendency to deflect blame and point the finger at others rather than accept responsibility and learn from its own failures. It is no different than the ‘GM salute.’” (The GM salute is a reference to a gesture where its employees crossed their arms and pointed fingers at others – a sign of deflecting responsibility (Vlasic, 2014).)

To move forward, each organization, the auto manufacturer and its regulating agency, must change. These fixes are already underway. GM’s CEO has vowed to correct the culture of “incompetence and neglect.” She pledged to overhaul GM product-development organization and legal department to make sure that information about safety problems is communicated. Moreover, the company has fired 15 employees and created a new position, Vice President of Global Vehicle Safety (Bennett & Ramsey, 2015). The Valukas report contains nearly 20 pages of recommendations ranging from the organizational structure to individual accountability to investigation processes to the role of lawyers. To prevent a recurrence, GM will need to address all of the recommendations and more. Meanwhile, at the NHTSA, a newly appointed head has pledged to improve the agency’s defect analysis and recall processes in part by requesting additional resources and authority from Congress (Beene, 2015). Industry watchers and members of Congress have also suggested raising the maximum fine allowable from \$35 million to as much as ten times that amount.

Each of these proposed solutions seem reasonable and appropriate. However, it is clear that both organizations must also change their cultures. To do so, both should thoroughly evaluate and develop or improve processes that identify and mitigate risks. Perhaps more importantly, each must create a culture where accountability and responsibility are highly valued. The Valukas report recommendations certainly encompass this goal. Other sources validate the importance of culture and conduct in preventing problems such as the ignition switch crisis. Risk expert Annie Searle has written about several practical steps that both GM and the NHTSA could employ to generate the necessary transformation. Three stand out as particularly applicable here. First, ask senior leaders to verbally and physically reinforce ethical conduct. The leaders of GM and NHTSA are saying the right things and taking the right steps. All layers of management must do so. Second, incent employees to do the right thing. Stories of accountability and responsibility should be shared and celebrated. Third, build a fraud misconduct plan, identify weaknesses and programs to identify and report fraud (Searle, 2012). It cannot be ignored that one engineer’s misleading – if not fraudulent – actions were left unchecked and allowed to destroy the credibility of not one, but two institutions.

We can hope that the increased oversight and scrutiny resulting from the ignition switch tragedies will have a positive effect. However, a cynic could point out that this is not the first auto industry safety cover up. For example, in 1978 Ford recalled nearly 15 million vehicles based on studies which showed the gas



Annie Searle & Associates LLC

tanks were prone to exploding during collisions, and in 2010 Toyota recalled 9 million cars at a cost of billions due to gas pedals that got stuck in the down-mode, causing acceleration and fatalities. In fact, since the National Traffic and Motor Vehicle Safety Act was enacted in 1966 giving the government the power to recall unsafe cars, more than 425 million vehicles have been recalled (bankrate.com, 2011) -- GM's ignition switch recall is just one unfortunate example among many. While it may seem pessimistic to say so, the only way to prevent future tragedy is to assume that history is doomed to repeat itself.

Works Cited

bankrate.com. "The 8 Most Infamous Car Recalls in History." 1 August 2011. www.foxbusiness.com. 3 February 2015 <<http://www.foxbusiness.com/personal-finance/2010/08/20/infamous-car-recalls-history/>>.

Beech, E. and B. Klayman. "U.S. Senator Accuses GM of 'culture of cover-up' in Recalls." 2 April 2014. www.reuters.com. 3 February 2015 <<http://www.reuters.com/article/2014/04/02/us-gm-recall-congress-senate-idUSBREA3118S20140402>>.

Beene, R. "Rosekind says NHTSA must improve defect analysis system." 7 January 2015. www.onlineautonews.com. 3 February 2015 <<http://www.onlineautonews.com/uncategorized/rosekind-says-nhtsa-must-improve-defect-analysis-system/>>.

Bennett, J. and M. Ramsey. "GM Fires 15 Employees Over Recall Failures." The Wall Street Journal 5 June 2015.

Bunkley, N. "'Slow to act' GM Rankled NHTSA, Email Shows." 19 April 2014. www.automotivenews.com. 3 February 2015 <<http://www.autonews.com/article/20140916/OEM11/140919878/house-report-citing-critical-mistakes-blasts-nhtsa>>.

Energy and Commerce Committee, Majority Staff. Staff Report on the GM Ignition Switch Recall: Review of NHTSA. Washington, DC: U.S. House of Representatives Committee on Energy and Commerce, 2014.

Girling, P. Operational Risk Management. Hoboken, NJ: John Wiley & Sons, 2013.

Gutierrez, G. and R. Gardella. "'Willful Ignorance': Ex-Auditor Blasts GM for Cutting Safety Program." 11 July 2014. www.nbcnews.com. 7 February 2015 <<http://www.nbcnews.com/storyline/gm-recall/willful-ignorance-ex-auditor-blasts-gm-cutting-safety-program-n152311>>.

LeBeau, P. and J. Pohlman. "The corporate culture: Behind the scenes at General Motors." 16 May 2014. www.cnn.com. 5 February 2015 <<http://www.cnn.com/id/101673363#>>.

Searle, A. "Ethical misconduct: Is it your biggest risk?" The Risk Universe November 2012: 20-23.

Valukas, A. Report to Board of Directors of General Motors Company Regarding Ignition Switch Recalls. Chicago: Jenner & Block, Attorneys at Law, 2014.

Vlasic, B. "'G.M. Inquiry Cites Years of Neglect Over Fatal Defect'." The New York Times 5 June 2014.