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Survey of Volvo Dealers about Effects of Small Overlap Frontal Crash Test Results on Business

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Abstract

Objective: On August 14, 2012, announcement of the Volvo S60 model's good performance in the Insurance Institute for Highway Safety's new small overlap frontal crash test was announced. A survey of Volvo dealerships in the United States was conducted to determine if dealers had experienced increased interest in the Volvo S60 from consumers.

Methods: Between August 28 and September 6, 2012, managers at 206 of the 314 U.S. Volvo dealerships were interviewed.

Results: Following the August 14 release of the small overlap frontal crash test results, 49 percent of dealers reported an increase in the number of customers calling or visiting the dealership because they were interested in purchasing a Volvo S60. Fifty-five percent of dealers reported an increase in the number of customers naming the safety performance of Volvo as a reason they were considering purchasing a Volvo, and 68 percent reported that any customer had mentioned the performance of Volvo in recent crash tests as a reason they were considering Volvo. The dealers that reported sales figures experienced an 18 percent increase in sales of all Volvo models from the week before the announcement to the week after and a 41 percent increase in Volvo S60 sales.

Conclusion: The Volvo S60's good performance in the Insurance Institute for Highway Safety's small overlap frontal crash test appears to have positively influenced consumer opinion soon after the results were released. As with other types of crashworthiness ratings, it is hoped that the increased consumer interest in vehicles that perform well in the small overlap frontal crash test will encourage all automakers to improve vehicle design.

Introduction

The Insurance Institute for Highway Safety (IIHS) has rated vehicles based on performance in a moderate overlap frontal crash test since 1995. In this test, 40 percent of a vehicle's front end is crashed into a deformable barrier just more than 2 feet tall at 40 mi/h. A good rating in the moderate overlap test is associated with 74 percent lower odds of a driver fatality in a head-on collision as compared with a poor rating (Farmer, 2005). Since the test was introduced, advances in vehicle design have led to marked improvements in frontal crashworthiness ratings (Lund and Nolan, 2003).

In 2012, IIHS introduced a new small overlap frontal crash test. The test is designed to replicate the vehicle damage and motion that occurs in a head-on collision where a small portion of the vehicle's front end contacts the struck object, such as when the front corner of a vehicle collides with another vehicle, or when a vehicle strikes a tree or utility pole. In the test, 25 percent of a vehicle's front end on the driver's side is crashed into a 5-foot-tall rigid barrier at 40 mi/h. Compared with the moderate overlap frontal crash test, the small overlap test puts higher stress on the outer part of the vehicle's frame, which typically is less protected by the vehicle's crush-zone structures. IIHS was the first non-automaker in the United States and Europe to use this test to provide consumer information on this aspect of vehicle occupant protection.

On August 14, 2012, IIHS released results of the performance of 11 midsize luxury and near-luxury cars in the small overlap frontal crash test. Only 2 of the 11 vehicles tested received the top rating of good. One of these, the Volvo S60, performed the best structurally. Results of this inaugural crash test received extensive media coverage, which reached an estimated audience of 204 million viewers in the U.S. through 2,550 broadcasts.

Surveys of customers and car dealerships have shown that new car purchase decisions are influenced by crashworthiness ratings (Ferguson, 1992; IIHS, 1990; McCartt and Wells, 2010), but it is unknown to what extent crash test results translate directly into increased consumer interest in top-performing vehicles. To gather information on consumer interest in the Volvo S60 shortly after release of the small overlap frontal crash test results, IIHS conducted a telephone survey of U.S. Volvo dealerships during the 2 weeks following the release.

Method

OpinionAmerica Group surveyed the 314 U.S. Volvo dealerships listed on Volvo’s (2012) website as of August 21, 2012 between August 28 and September 6, 2012. The interviewer asked to speak with the dealership’s sales manager or with the general manager or owner if the sales manager was unavailable. Six to eight attempts were made to contact each dealership. Interviews were completed with 206 dealerships (67 percent). Of the 108 dealerships that did not respond, 102 reported that they did not have time to complete the survey when called and two refused to participate. Additionally, four phone numbers that were called were non-working. The survey took approximately 5 minutes to complete and consisted of nine questions.

Results

As summarized in Table 1, 67 percent of those interviewed were sales managers, 15 percent were general managers or owners, and 15 percent were sales representatives. Ninety-four percent of respondents reported that they knew about the Volvo S60’s performance in the small overlap frontal crash test prior to the interview.

Table 1

<u>Job title of dealer representative that completed survey</u>	<u>Percent (N=206)</u>
Sales manager	67
General manager or owner	15
Sales representative	15
Business manager	1
Assistant sales manager	<1
Internet manager	<1
Master sales consultant	<1
New car manager	<1
Volvo manager	<1

Dealer representatives were asked if there was a change in the number of people who had contacted or visited their dealerships since the August 14 release because they were interested in purchasing a Volvo S60, and if more or fewer customers who had contacted the dealership since the release had mentioned the safety performance of Volvo as a reason for considering a Volvo (Table 2). Nearly half of dealers reported an increase in calls and visits from customers interested in purchasing a Volvo S60, and 55 percent reported that more customers had mentioned the safety performance of Volvo as a reason for considering a Volvo. Dealer representatives also were asked how many people contacted or visited the dealership because they are interested in purchasing a Volvo S60 in a typical week and in the weeks since the August 14 release. The 202 dealers that provided this information for both a typical week and since the release reported an average of 12.9 contacts and visits per week before the release and 16.5 since the release.

Table 2
Change in interest in Volvo S60 and mention of Volvo's safety
since release of IIHS small overlap frontal crash test results

		Percent (N=206)
Number of customers considering purchasing a Volvo S60 contacting or visiting dealership	More	49
	Same	50
	Less	1
Number of customers who mentioned safety performance as reason for considering Volvo	More	55
	Same	44
	Less	<1
	Don't know/Refused	<1
		(N=202)
Average number of contacts or visits to dealerships per week by customers considering Volvo S60	Typical week	12.9
	Since announcement	16.5

Sixty-eight percent of dealers reported that since the release any customer had mentioned Volvo's performance in recent crash tests as a reason they are considering a Volvo (Table 3). Twenty-seven percent of dealers said that at least half of their customers who were considering buying a Volvo mentioned Volvo's recent crash test performance.

Table 3
Proportion of customers that mentioned Volvo's performance in recent
crash tests since release of IIHS small overlap frontal crash test results

	Percent (N=206)
Three-quarters or more	11
Between half and three-quarters	16
Between one-quarter and half	23
Less than one quarter	18
None	30
Don't know/refused	2

Finally, respondents were asked about the dealership's sales of the Volvo S60 and of all Volvo models for four weeks in 2012: July 29 to August 4, August 5 to 11 (the week before the release), August 12 to 18 (the week of the release), and August 19 to 25 (the week after the release). Sales numbers for all Volvo models and for the Volvo S60 model for the week before the release and the week after the release were provided by 158 dealers. These dealers reported an increase of 18 percent in total sales for all Volvos (from a total of 809 the week before to a total of 956 the week after) and an increase of 41 percent in total sales for the Volvo S60 model (from a total of 267 the week before to a total of 376 the week after) (Table 4).

Table 5 presents the sales figures for all 4 weeks, based on the 156 dealers who provided information for all 4 weeks.

Table 4
Total sales of S60 and of all Volvo models the week before and after release of IIHS small overlap frontal crash test results

	(N=158)	
	All Volvo models	Volvo S60 model
Week before	809	267
Week after	956	376

Table 5
Total sales of S60 and of all Volvo models July 29 to August 25

	(N=156)	
	All Volvo models	Volvo S60 model
July 29-August 4	1,046	317
August 5-11 (week before release)	798	261
August 12-18 (week of release)	822	329
August 19-25 (week after release)	944	369

Discussion

This study collected information from about two-thirds of U.S. Volvo dealers on interest from customers and on sales immediately after the August 14, 2012 announcement of the Volvo S60's good performance in the IIHS new small overlap frontal crash test. After the release, more customers were interested in the S60 and mentioned Volvo's safety, and many customers mentioned Volvo's performance in crash tests. The increase in interest in the Volvo S60 model appears to have translated into an increase in sales. The sales figures cover a short span of time, and sales can vary from week to week, but the percentage increase in Volvo S60 sales surpassed the percentage increase in overall Volvo sales.

Previous surveys have demonstrated that some consumers factor vehicle safety ratings into their opinions of vehicles and purchase choices (e.g., McCart and Wells, 2010), and the current results suggest that some consumers seem to be factoring performance in IIHS's new small overlap frontal crash test into their purchasing decisions. In turn, this may encourage vehicle manufacturers to improve vehicle design so that more models receive a good rating, as has happened in response to IIHS's moderate overlap frontal and side impact crash tests (Lund and Nolan, 2003; Teoh and Lund, 2011). In a study of

vehicles with good ratings in IIHS's moderate overlap frontal crash test, small overlap crashes accounted for nearly a quarter of the frontal crashes involving serious or fatal injury to front seat occupants (Brumbelow and Zuby, 2009). Thus, improved crashworthiness in small overlap crashes has the potential to save many lives.

Acknowledgment

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