REACHING ZERO CRASHES
A DIALOGUE ON THE ROLE OF ADVANCED DRIVER ASSISTANCE SYSTEMS

OCTOBER 27, 2016

National Transportation Safety Board
National Safety Council
ACTIVE SAFETY SYSTEMS

How Consumer Reports Advances Automotive Safety

Shawn Sinclair
Automotive Engineer
For 80 years, Consumer Reports has been testing products and working to create a fairer, safer, and healthier marketplace.
Consumer Reports Nationwide Survey

1,097 Respondents likely to purchase car in next two years

Most Important Buying Factor

- Safety
- Cost
- Reliability
- Fuel Economy
- Powertrain
- Style/Design
- Performance
- Interior Space
- Comfort Features
- Interior Tech

0% 10% 20% 30%
Among those who Value Safety #1

**Most Important Safety Feature**

- Crash Test Scores
- Brand Reputation
- Advanced Safety Features
- Handling
- Recalls
- Braking Distance
- Emergency Response
- Other/Unsure
FCW - Forward Collision What?

- Pre-Safe
- Avoidance Assistant
- Turning Assistant
- Multicollision brake assist
- Active Protection
- Active Driving Assistant
- Driving Assistant Plus
- City Brake Activation
- Approach and Pedestrian Warning
- Forward Collision Alert
- Front Automatic Braking
- Forward Collision Warning
- Full-Speed Forward Collision Warning
- Advanced Brake Assist
- City Brake Control
- Collision Warning
- Collision Mitigation Brake System
- Smart City Brake Support

- Brake Assist BAS Plus
- Pre-Safe Brake
- Cross Traffic Assist
- Forward Collision Mitigation
- Brake Assist with Preview
- Intelligent Brake Assist
- Forward Emergency Braking
- Predictive Forward Collision Warning
- Forward Emergency Braking
- EyeSight
- Collision Avoidance Assist
- Pre-Collision System
- Advanced Pre-Collision System
- Emergency Assist
- Collision Warning with Auto Brake
- IntelliSafe
- City Safety
- City Safety with Pedestrian Detection
Safety Tech not Understood
Dealers don’t even understand
City Safety: Standard - Pedestrian Detection: Optional
The LDW system is more of an annoyance than a safety feature. Unless you drive perfectly & never drift within your lane, it beeps at you.” - ‘14 Honda Odyssey
Lane Keeping Assist Problems
Educating the Consumer
CR Overall Score

- Road tests scores
- Reliability and owner satisfaction surveys
- Frontal crash prevention system
- Independent crash test results

<table>
<thead>
<tr>
<th>Make &amp; Model</th>
<th>Price</th>
<th>Overall Score</th>
<th>Survey Results</th>
<th>Safety</th>
<th>Road-Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Luxury Sedans</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Infiniti Q70 (V6)</td>
<td>$53,825</td>
<td>88</td>
<td></td>
<td>Opt. 90 21 128 5.8 54.5</td>
</tr>
<tr>
<td>2</td>
<td>Lexus GS 350**</td>
<td>$56,888</td>
<td>85</td>
<td></td>
<td>Std./Opt. 83 21 131 6.2 53.5</td>
</tr>
<tr>
<td>3</td>
<td>Audi A6 3.0 Premium Plus Quattro</td>
<td>$56,295</td>
<td>84</td>
<td></td>
<td>Opt. 90 22 132 5.7 52.5</td>
</tr>
<tr>
<td>4</td>
<td>Cadillac CT6 Luxury (3.6L, AWD)</td>
<td>$64,485</td>
<td>81</td>
<td></td>
<td>Opt. 95 22 125 6.5 55.0</td>
</tr>
<tr>
<td>5</td>
<td>Genesis G80 3.8 (AWD)</td>
<td>$52,450</td>
<td>80</td>
<td></td>
<td>Std./Opt. 89 20 129 7.2 53.0</td>
</tr>
<tr>
<td>6</td>
<td>Cadillac XTS Premium</td>
<td>$57,260</td>
<td>77</td>
<td></td>
<td>Opt. 82 22 128 7.2 53.0</td>
</tr>
<tr>
<td>7</td>
<td>Acura RLX Tech</td>
<td>$55,345</td>
<td>75</td>
<td></td>
<td>Std./Opt. 75 23 128 6.5 51.5</td>
</tr>
<tr>
<td>8</td>
<td>BMW 535i</td>
<td>$56,375</td>
<td>73</td>
<td></td>
<td>Opt. 81 23 131 6.1 51.5</td>
</tr>
<tr>
<td>9</td>
<td>Cadillac CTS Luxury (3.6L, AWD)</td>
<td>$56,760</td>
<td>71</td>
<td></td>
<td>Opt. 83 22 127 6.5 54.5</td>
</tr>
<tr>
<td>10</td>
<td>Jaguar XF Prestige (V6, AWD)</td>
<td>$66,586</td>
<td>68</td>
<td></td>
<td>Opt. 83 21 128 5.8 51.0</td>
</tr>
</tbody>
</table>
Safety in CR’s Overall Score

Standard Safety Features

- Points Add to CR Overall Score

- Forward Collision Warning
- Low Speed Automatic Emergency Braking <= 55 mph
- High Speed Automatic Emergency Braking > 55 mph
Most Reliable SUVs, Cars, and Trucks

Recommended Safety Features

Blind-spot detection: A blind-spot monitoring system warns drivers of vehicles in their blind spots. A visual display or auditory alert warns drivers of any vehicles in their blind spots. Some systems even warn drivers of vehicles that are turning into their path.

Cross-traffic alert: A system warns drivers of vehicles crossing in front of their vehicle. It can be used to warn drivers of vehicles approaching from the opposite direction.

Forward collision warning (FCW): A system warns drivers of impending collisions. It can also apply the brakes if the driver does not respond. Some systems can even apply the brakes automatically to avoid collisions.

Lane departure warning (LDW): A system alerts drivers if they are drifting out of their lane. It can also apply the brakes to keep the vehicle in its lane.

Lane Keeping Assist (LKA): A system helps drivers keep their vehicle in their lane by applying the brakes to the appropriate wheel.
Forward Collision Warning and Automatic Braking

“collision warning system goes off randomly sometimes applying the brakes. This occurs when no other vehicles in front of it! Its crazy, scares the hell out of you” - ‘14 Jeep Grand Cherokee

“On cold days or when the sensor is obstructed by dirt the auto braking system will engage for no reason.” - ‘15 Infiniti Q50

“The system provides very little in the way of safety. 95% of the warnings are false, 2% are accurate and real warnings and the other 3% of the time the system fails to identify a real safety issue.” - ‘14 Honda Accord

“The Forward Collision Warning message kept coming on with no traffic nearby. The dealer said that my E-Z Pass transponder was interfering with the electronics.” - ‘15 Acura TLX

Automatic Braking System?
What can we do?

- Standard Names for Systems
- Tune to eliminate false alerts
- Allow drivers to adjust sensitivity
- Make Effective Safety Systems Standard
- Limitation on misleading marketing

Thank you!