

Real World Need for Oblique Test

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Background

- ★ NHTSA laboratory testing showed that head airbags designed for the 90-degree pole impact, in a oblique test were too small to protect occupants or the sensors failed to detect the impact.
- ★ NHTSA investigated real world side crashes where the side airbag failed to deploy.
 - Data sampled from US National Automotive Sampling System/Crashworthiness Data System (NASS/CDS)
 - Crashes occurred in 2002 - 2005

Table V-3

Side Impacts Into A Tree or Poll with Side Airbag Non-deployment
2002-2005 Sample Year (Data Run 5/3/2005)

Case	Veh. Num.	Vehicle	Delta-V (mph)	Comments
2002-47-081	1	2000 BUICK REGAL	UNK.	Sideswipe
2002-48-073	1	2001 GMC FULLSIZE JIMMY/YUKON	UNK.	Sideswipe Non-Horizontal
2003-02-063	1	2002 CHEVROLET TRAILBLAZER (2002 and later)	UNK.	Minor Damage
2003-09-018	1	2001 MITSUBISHI MONTERO	7.5	
2003-09-232	1	2001 LINCOLN NAVIGATOR	5.6	
2003-41-110	1	2002 HONDA ACCORD	33	80° PDOF
2003-43-155	2	1997 INFINITI Q45	UNK.	Minor Damage
2003-43-201	1	2002 ACURA RSX	9.3	
2003-43-263	1	2002 GMC JIMMY/TYPHOON/ENVOY	6.8	
2003-45-209	1	2004 MERCEDES BENZ 200/220/230/240/250/260/280/300/320 SE,CD,D,SD,ETC	5.6	
2003-49-082	1	2003 NISSAN / DATSUN ALTIMA	MOD.	
2003-49-181	1	2000 CHEVROLET FULLSIZE BLAZER (K, Tahoe)	UNK.	Non-Horizontal
2003-73-176	2	2003 HONDA PILOT	UNK.	Sideswipe
2003-82-079	1	2002 VOLKSWAGEN JETTA	UNK.	Sideswipe
2004-02-084	1	2004 HONDA CR-V	UNK.	Sideswipe
2004-04-024	1	2003 SUBARU IMPREZA	MOD.	80° PDOF
2004-04-101	2	2003 HYUNDAI SANTA FE	13.7	50° PDOF
2004-11-213	1	2003 FORD CROWN VICTORIA	8	
2004-12-191	2	2000 CHEVROLET LUMINA APV/VENTURE	7.5	10° PDOF
2004-13-079	1	2003 FORD THUNDERBIRD (ALL SIZES)	UNK.	Minor Damage
2004-47-156	1	2002 CHEVROLET FULLSIZE BLAZER (K, Tahoe)	13.7	290° PDOF, Behind A-Pillar
2004-49-006	1	2001 HYUNDAI SONATA	UNK.	350° PDOF
2004-49-027	2	2000 CADILLAC DEVILLE/FLEETWOOD	31	50° PDOF
2004-79-001	1	2003 LINCOLN LS	17.4 7.5	320° PDOF
2004-81-091	2	2003 CHEVROLET TRAILBLAZER (2002 and later)	5	
2005-08-040	2	2002 BUICK LESABRE/CENTURION/WILDCAT	1.9	
2005-13-045	1	2000 HYUNDAI SONATA	17.4	280° PDOF
2005-50-006	1	2001 HYUNDAI SONATA	MOD.	100° PDOF
2005-50-036	1	2002 TOYOTA AVALON	18	40° PDOF
2005-74-038	2	2003 HONDA ACCORD	UNK.	Non-Horizontal

Note: MOD: moderate; UNK: unknown

- Highlighted crashes are where we believed the airbag should have deployed.
- Table is on page V-15 in document RD-02

Case 2004-47-156

- ★ 2002 Chevrolet Full Size Blazer
- ★ Impacted tree
- ★ Delta-V: 22 km/h
- ★ 290-degree PDOF
- ★ Impact behind A-pillar, near front part of door
- ★ Airbag did not deploy or detect crash

Case 2004-47-156



Case 2005-50-036

- ★ 2002 Toyota Avalon
- ★ Impacted tree
- ★ Delta-V: 29 km/h
- ★ 40 degree PDOF
- ★ Impact near B-pillar
- ★ Seatback mounted side airbag did not deploy in crash

Case 2005-50-036



For More Information

★ Full details of all the crashes listed can be found at

– <http://www.nhtsa.gov/NASS>