



**LABORATORY TEST REPORT
FOR SLED IMPACT TESTING**

1996 Ford F-150 2-Door 'Buck'

Prepared for:

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Test Report No. TR-P26069-01-NC

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March 14, 2006

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1. INTRODUCTION

On March 14, 2006, an impact test was conducted on a 1996 Ford F-150 2-Door passenger compartment. The purpose of this experimental study was to examine the probability for injury with a timely deployment of an airbag for an unbelted occupant. The test was conducted with the specimen mounted with 5 degrees of yaw, counter-clockwise to the path of travel with a 10 degree pitch upward. One (1) unbelted instrumented Hybrid III 50% male Anthropomorphic Test Device (crash test dummy) was placed in the left front seating position (P1). The seat track was full rearward and the seat back angle was 16.9 @ headrest. The headrests were full down. The vehicle was instrumented with a tri-axial accelerometer placed behind the bench seat at the vehicle's longitudinal centerline. The sled was instrumented with a tri-axial accelerometer placed at its approximate CG.

This report is organized in sections containing pertinent Test information and data tables as follows:

- Section 2 - Test Procedure and Summary
- Section 3 - Test Results and Data Sheets
- Appendix A - Photographs
- Appendix B - Dummy and Vehicle Response Data Traces
- Appendix C - Sensor Data Tables
- Appendix D - Dummy Calibration Data

2. TEST PROCEDURE AND SUMMARY

This 1996 Ford F-150 2-Door 'Buck' sled test was conducted on March 14, 2006 at a velocity of 17.12 miles per hour (mph).

The test procedure is comprised of the following steps:

1. Mounting of vehicle on test sled
2. Test sled preparation
3. Instrumentation and photography preparation
4. Dummy installation and positioning
5. Test conduct
6. Post-test measurements and data reduction

The test was conducted following the above steps.

3. TEST RESULTS AND DATA SHEETS

The results of the 1996 Ford F-150 2-Door sled test are presented in this section. The test 'Buck' was prepared and mounted to the sled by Karco Engineering. The airbag was fired at 35 ms by means of Karco's delay timer. The seat track did not shift during the impact. Photographic documentation and plots of the impact event are presented in Appendices A and B.

DATA SHEET NO. 1

TEST VEHICLE INFORMATION

Test Vehicle: 1996 Ford F-150 2-Door 'Buck'

Project No.: P26069-01

Test Program: Sled Impact Testing

Test Date: 03/14/06

TEST VEHICLE INFORMATION			
Manufacturer (Basic Vehicle)	Ford Motor Company	VIN	1FTEF15N5TLB62823
Manufacturer (Modifier)	None	Manufacturing Date	1996
Odometer Reading	Unknown	Fuel Type	Gas
Engine Displacement	Unknown	Cylinders	Unknown
Transmission	Unknown	Final Drive	Unknown
Engine Placement	Unknown	Color	White
GVWR (Basic Vehicle)	6100 lbs	Cargo Capacity (Basic Vehicle)	Unknown
GAWR Front (Basic Vehicle)	2725 lbs	GAWR Rear (Basic Vehicle)	3800 lbs
Driver Airbag	Yes	Passenger Airbag	No

TEST WEIGHT OF VEHICLE (LBS.)						
WEIGHT OF VEHICLE AS RECEIVED *				WEIGHT OF TEST ASSEMBLY		
	FRONT	REAR	TOTAL	FRONT	REAR	TOTAL
Right	Unknown	Unknown	Unknown	1540	1064	2604
Left	Unknown	Unknown	Unknown	1322	922	2244
Total	Unknown	Unknown	Unknown	2862	1986	4848
Percent of Total	Unknown	Unknown	Unknown	59.0%	41.0%	100%

* Vehicle received at Karco as an incomplete body buck

DATA SHEET NO. 2

TEST VEHICLE SEATING INFORMATION

Test Vehicle: 1996 Ford F-150 2-Door 'Buck'

Project No.: P26069-01

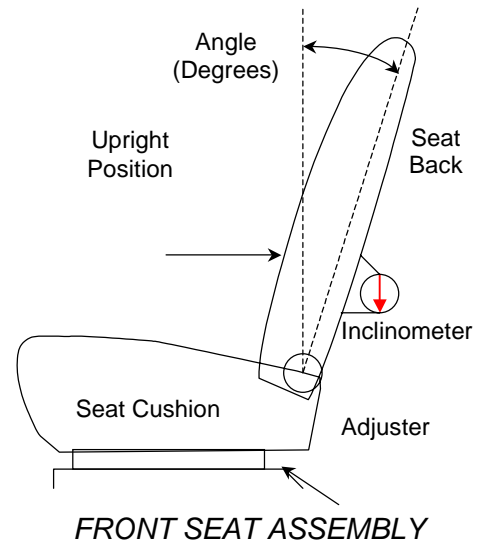
Test Program: Sled Impact Testing

Test Date: 03/14/06

NOMINAL DESIGN RIDING POSITION

The driver seat back angle was measured at the headrest of the seat back using a digital inclinometer.

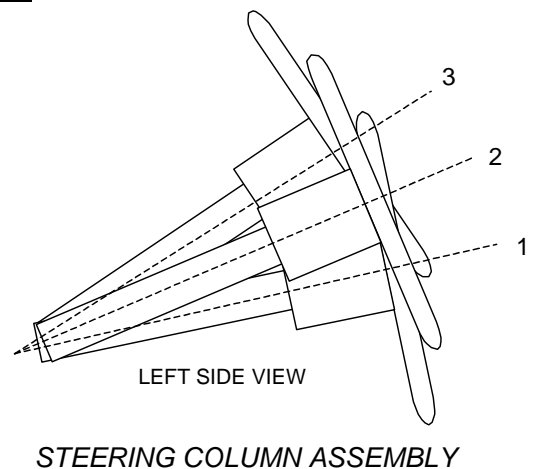
Driver seat back angle: 16.9° at headrest



STEERING COLUMN ADJUSTMENT

An aluminum plate is placed across the rim of the steering wheel, an inclinometer is placed onto the plate and the angle is measured. The steering column was fixed.

Steering Column angle: 14.8°



DATA SHEET NO. 3

DUMMY POSITIONING IN VEHICLE

Test Vehicle: 1996 Ford F-150 2-Door 'Buck'

Project No.: P26069-01

Test Program: Sled Impact Testing

Test Date: 03/14/06

PRE-TEST TEST DUMMY POSITION MEASUREMENTS

Code	Measurement Description	Driver	
		Length (mm)	Angle (°)
SWA	Steering Wheel Angle		14.8
SCA	Steering Column Angle		75.2
SA	Seat Back Angle		16.9@headrest
HZ	Head to Roof (Z)	185	90.0
HH	Head to Header	525	
HW	Head to Windshield	700	
HR	Head to Side Header (Y)	270	
NR	Nose to Rim	430	6.8
CD	Chest to Dash	440	
CS	Chest to Steering Hub	610	
RA	Rim to Abdomen	245	
KDL	Left Knee to Dash		
KDR	Right Knee to Dash		
PA	Pelvic Angle		21.0
TA	Tibia Angle		41.6
KK	Knee to Knee (Y)	280	
ST	Striker to Outboard Knee	620	12.9
SK	Striker to Head	745	82.9
HHX	Head to Headrest	300	45.6
HHZ	Head to top of Headrest	200	14.7

DATA SHEET NO. 4

SUMMARY OF TESTS

Test Vehicle: 1996 Ford F-150 2-Door 'Buck'
 Test Program: Sled Impact Testing

Project No.: P26069-01
 Test Date: 03/14/06

TEST DATE:	03/14/06	TIME:	12:08 PM	TEMPERATURE:	66° F
WIND SPEED and DIRECTION:		2 mph West			
IMPACT VELOCITY:	17.12 mph	CONTRACT NO.		P26069-01	
TEST WEIGHT OF DUMMIES:		SERIAL NUMBER OF DUMMIES:			
DRIVER (P1)	168 lbs.	DRIVER (P1)	002		
RF PASSENGER (P2)		RF PASSENGER (P2)			
LR PASSENGER (P4)		LR PASSENGER (P4)			
RR PASSENGER (P3)		RR PASSENGER (P3)			
TEST DUMMY INFORMATION:					
HEAD CONTACT		Airbag			
CHEST CONTACT		Airbag			
ABDOMEN CONTACT		None			
SEAT TRACK INFORMATION:					
SEAT TRACK SHIFT (MM)		None			
SEAT BACK FAILURE		None			

DATA SHEET NO. 5

STEERING COLUMN DEFORMATION

Test Vehicle: 1996 Ford F-150 2-Door 'Buck'

Project No.: P26069-01

Test Program: Sled Impact Testing

Test Date: 03/14/06

X-axis	Pre-Test	Post-Test	Difference
Center of Steering Wheel	-653	-639	14 *
Top of Steering Wheel	-827	-850	-23
Bottom Side of Steering Wheel	-601	-596	5
Right Side of Steering Wheel	-642	-666	-24
Left Side of Steering Wheel	-613	-606	7
Top of Instrument Panel	-827	-850	-23

All measurement in MM. Measurements made relative to the top striker bolt.

* After airbag deployment

DATA SHEET NO. 8

CAMERA VIEWS AND FILM SPEEDS

Test Vehicle: 1996 Ford F-150 2-Door 'Buck'

Project No.: P26069-01

Test Program: Sled Impact Testing

Test Date: 03/14/06

No.	Camera View	Location (mm)			Angle (Deg.)	Lens (mm)	Speed (fps)
		X	Y	Z			
1	Real Time Inrun	-12372	29175	3072	-1		30
2	Real Time Right Side	-2167	-8255	-1767	-2		30
3	Driver Side Overall	-1859	7010	1188	0	20mm	1000
4	Driver Side Closeup	-2103	6979	1188	0	50mm	1000
5	Passenger Side Overall	-1859	-7010	1188	0	20mm	1000
6	Passenger Side Closeup	-2103	-6979	1188	0	50mm	1000
7	Onboard 1	-548	457	1767	-4	25mm	1000
8	Onboard 2	-2286	-914	1249	0	12.5mm	1000
9	Onboard 3	-2286	-914	1463	0	12.5mm	1000
10	Onboard 4	-3383	-457	1463	1	25mm	1000

All camera measurements were made relative to the point of impact.

APPENDIX A
PHOTOGRAPHS



FIGURE 1. Vehicle VIN Identification



FIGURE 2. Manufacturer's Label



FIGURE 3. Test Set-Up Left Side View



FIGURE 4. Pre-Test Impact Area



FIGURE 5. Pre-Test Left Side View



FIGURE 6. Post-Test Left Side View



FIGURE 7. Pre-Test Driver Dummy



FIGURE 8. Post-Test Driver Dummy



FIGURE 9. Pre-Test Driver Dummy Front View (Through Windshield)



FIGURE 10. Post-Test Driver Dummy Front View (Through Windshield)



FIGURE 11. Pre-Test Driver Side Seat Track



FIGURE 12. Post-Test Driver Side Seat Track



FIGURE 13. Pre-Test Impact Area



FIGURE 14. Post-Test Impact Area

APPENDIX B
DUMMY AND VEHICLE RESPONSE DATA TRACES

DATA SHEET NO. 6 - HYBRID III ATD INJURY CRITERIA AND SENSOR DATA

Test Vehicle: 1996 Ford F-150 2-Door Buck

Project No.: P26069-01

Test Program: Sled Impact Testing

Test Date: 03/14/06

HEAD PEAK ACCELERATIONS

Location	Axis	Units	Driver (50th Male)			
			Max	Time	Min	Time
Head CG	X	G's	5.7	49.9	-24.0	92.9
Head CG	Y	G's	3.8	51.4	-5.2	51.7
Head CG	Z	G's	9.6	114.5	-9.2	93.2
Head CG Resultant	N/A	G's	25.5	92.9		

CHEST PEAK ACCELERATIONS

Location	Axis	Units	Driver (50th Male)			
			Max	Time	Min	Time
Chest CG	X	G's	1.5	169.6	-20.3	99.2
Chest CG	Y	G's	1.3	55.9	-1.9	109.7
Chest CG	Z	G's	4.4	116.9	-11.7	94.2
Chest CG Resultant	N/A	G's	22.4	99.0		

FEMUR PEAK FORCES

Location	Axis	Units	Driver (50th Male)			
			Max	Time	Min	Time
Left Femur Force	Z	Newtons	435.8	89.2	-533.7	42.8
Right Femur Force	Z	Newtons	524.3	84.1	-663.2	56.9

HEAD INJURY CRITERIA (HIC36)

Location	Driver (50th Male)			
	HIC	T ¹	T ²	Avg G
Head CG	59.1	79.5	115.5	19.3

CHEST CLIP (3MSEC)

Location	Driver (50th Male)		
	CLIP	T ¹	T ²
Chest CG	21.7	127.3	130.3

AIRBAG TRIGGER

Location	Axis	Units	Driver (50th Male)			
			Max	Time	Coss %	Time
Airbag Trigger	N/A	%	107.6	35.5	50.0	35.2

DATA SHEET NO. 6...(CONTINUED)

Test Vehicle: 1996 Ford F-150 2-Door Buck

Project No.: P26069-01

Test Program: Sled Impact Testing

Test Date: 03/14/06

UPPER NECK PEAK FORCES AND MOMENTS

Location	Axis	Units	Driver (50th Male)			
			Max	Time	Min	Time
Upper Neck Force	X	Newtons	606.7	97.1	-91.1	163.4
Upper Neck Force	Y	Newtons	88.3	115.0	-68.7	176.6
Upper Neck Force	Z	Newtons	148.8	64.5	-548.9	92.9
Upper Neck Force Res.	N/A	Newtons	806.9	96.8		
Upper Neck Moment	X	Nm	6.9	120.6	-4.6	164.1
Upper Neck Moment	Y	Nm	64.8	94.1	-6.8	52.5
Upper Neck Moment	Z	Nm	7.6	150.3	-1.9	57.8
Upper Neck Moment Res.	N/A	Nm	64.8	94.1		

NIJ VALUES

Location	Driver (50th Male)			
	NTF	NTE	NCF	NCE
Upper Neck	0.09	0.06	0.26	0.06

DATA SHEET NO. 7 - VEHICLE ACCELEROMETER DATA

Test Vehicle: 1996 Ford F-150 2-Door Buck

Project No.: P26069-01

Test Program: Sled Impact Testing

Test Date: 03/14/06

VEHICLE ACCELEROMETER PEAK ACCELERATIONS

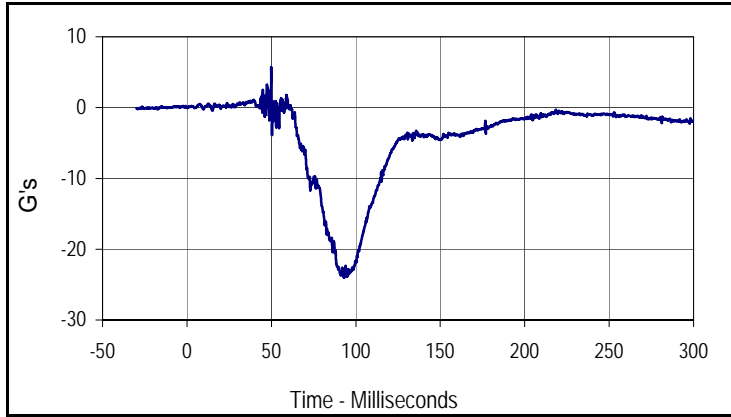
Location	Axis	Units	Vehicle			
			Max	Time	Min	Time
Vehicle	X	G's	1.4	157.0	-15.5	51.2
Vehicle	Y	G's	2.3	71.3	-2.3	64.3
Vehicle	Z	G's	3.0	137.7	-8.5	64.2
Vehicle Resultant	N/A	G's	15.9	51.3		

SLED ACCELEROMETER PEAK ACCELERATIONS

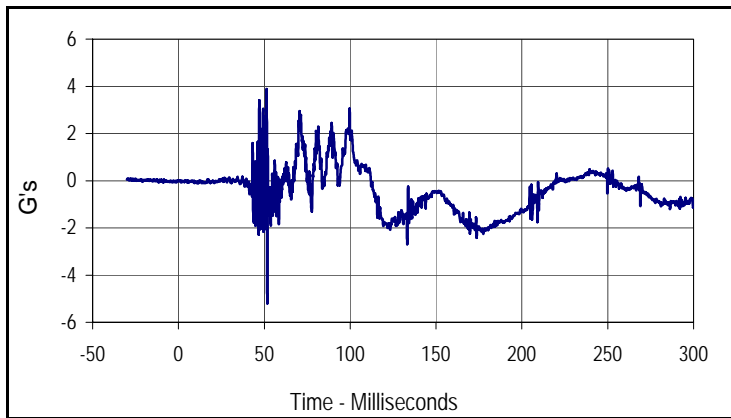
Location	Axis	Units	Sled			
			Max	Time	Min	Time
Sled	X	G's	0.3	189.0	-13.9	55.7
Sled	Y	G's	1.3	13.5	-1.1	30.2
Sled	Z	G's	6.2	17.5	-8.9	19.9
Sled Resultant	N/A	G's	14.7	55.3		

Test Vehicle: 1996 Ford F-150 2-Door Buck
 Test Program: Sled Impact Testing

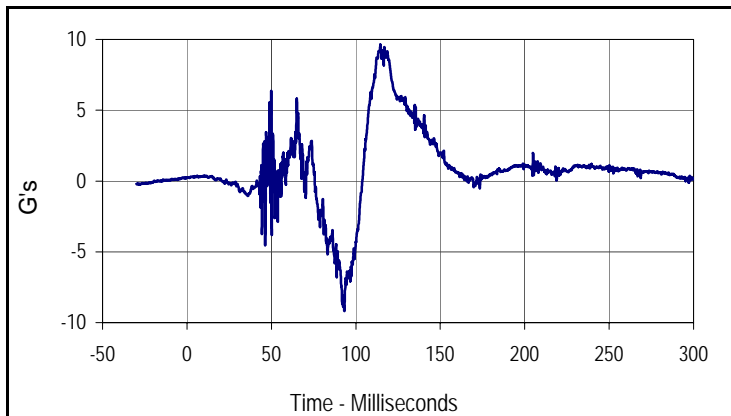
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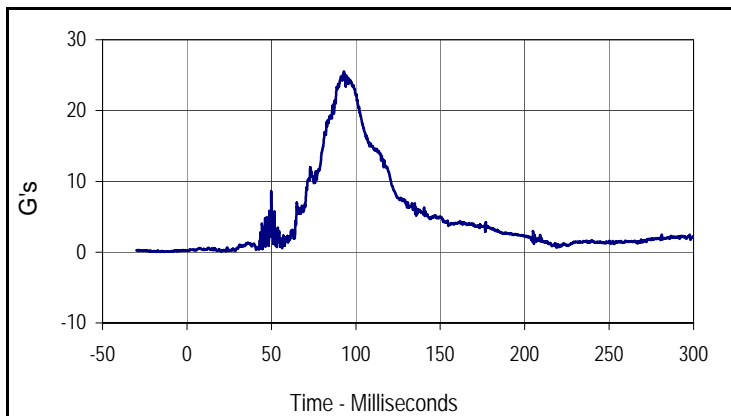
Curve Description			
Driver (50th Male) Head X			
CURNO	Type	SAE Class	Units
001	FIL	1000	G's
Max	Time	Min	Time
5.7	49.9	-24.0	92.9



Curve Description			
Driver (50th Male) Head Y			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
3.8	51.4	-5.2	51.7



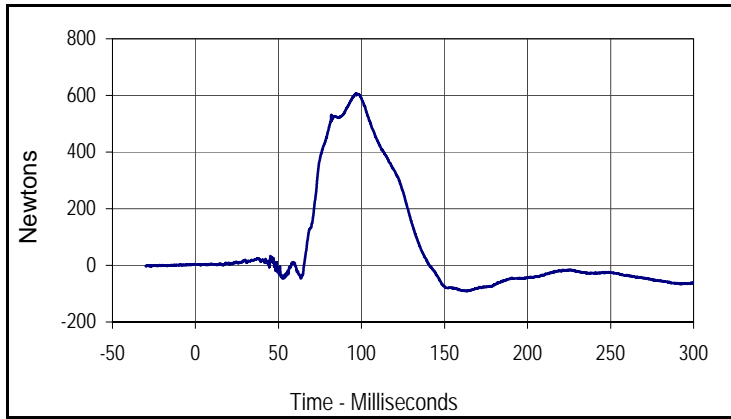
Curve Description			
Driver (50th Male) Head Z			
CURNO	Type	SAE Class	Units
003	FIL	1000	G's
Max	Time	Min	Time
9.6	114.5	-9.2	93.2



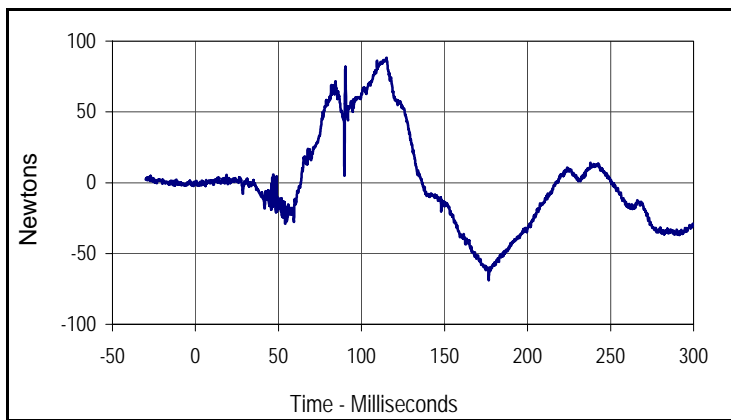
Curve Description			
Driver (50th Male) Head Resultant			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
25.5	92.9	0.1	23.1

Test Vehicle: 1996 Ford F-150 2-Door Buck
 Test Program: Sled Impact Testing

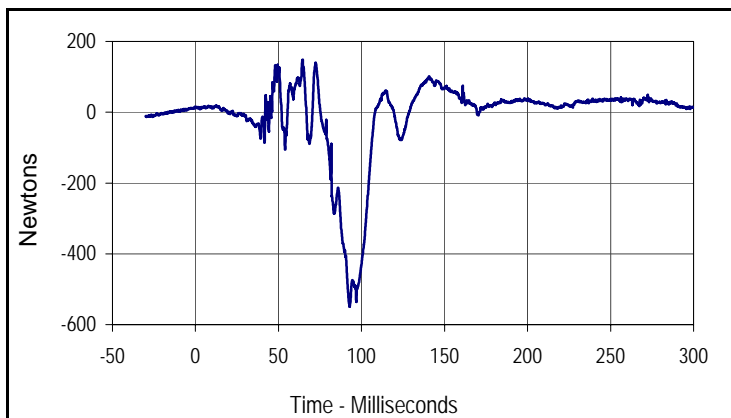
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 Project No.: P26069-01



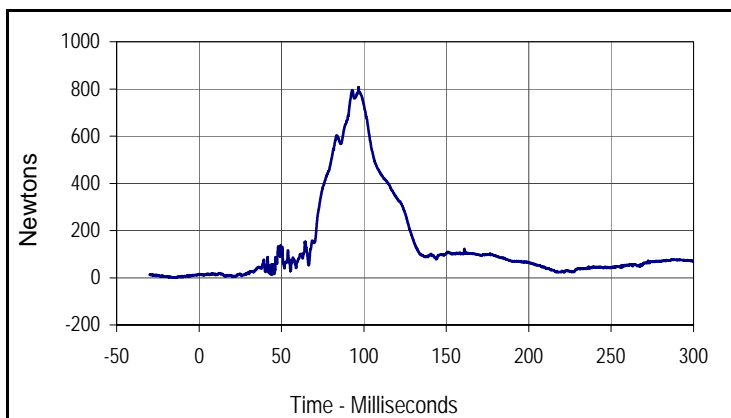
Curve Description			
Driver (50th Male) Upper Neck Force X			
CURNO	Type	SAE Class	Units
004	FIL	1000	Newtons
Max	Time	Min	Time
606.7	97.1	-91.1	163.4



Curve Description			
Driver (50th Male) Upper Neck Force Y			
CURNO	Type	SAE Class	Units
005	FIL	1000	Newtons
Max	Time	Min	Time
88.3	115.0	-68.7	176.6



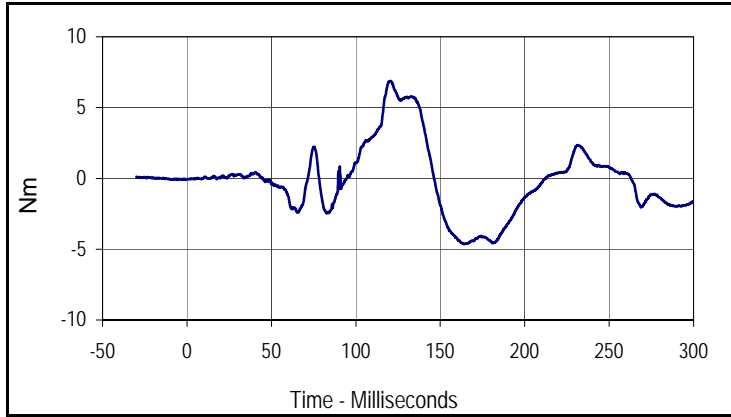
Curve Description			
Driver (50th Male) Upper Neck Force Z			
CURNO	Type	SAE Class	Units
006	FIL	1000	Newtons
Max	Time	Min	Time
148.8	64.5	-548.9	92.9



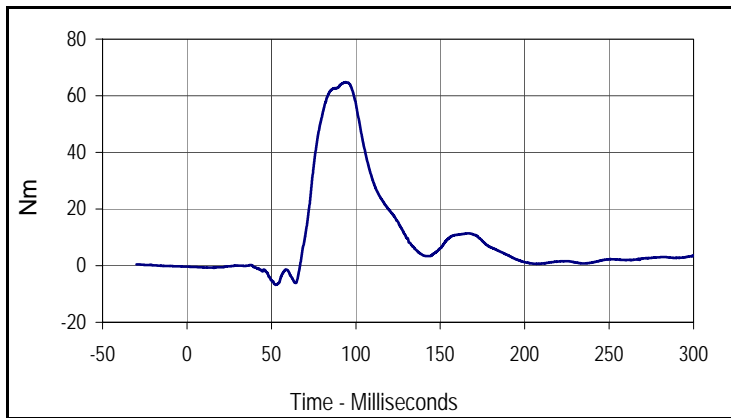
Curve Description			
Driver (50th Male) Upper Neck Force Res.			
CURNO	Type	SAE Class	Units
004	RES	1000	Newtons
Max	Time	Min	Time
806.9	96.8	2.7	20.6

Test Vehicle: 1996 Ford F-150 2-Door Buck
 Test Program: Sled Impact Testing

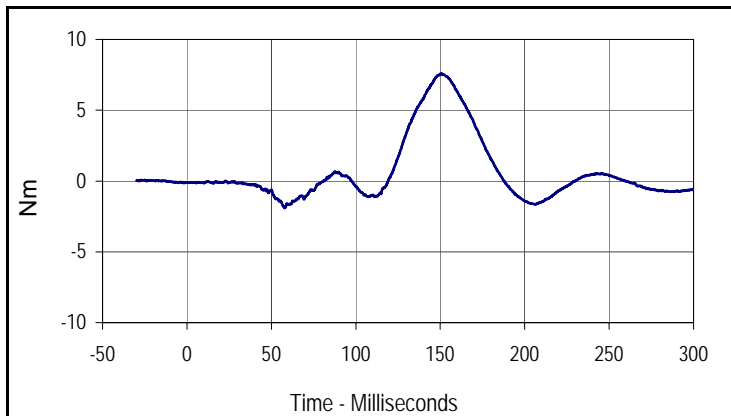
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 Project No.: P26069-01



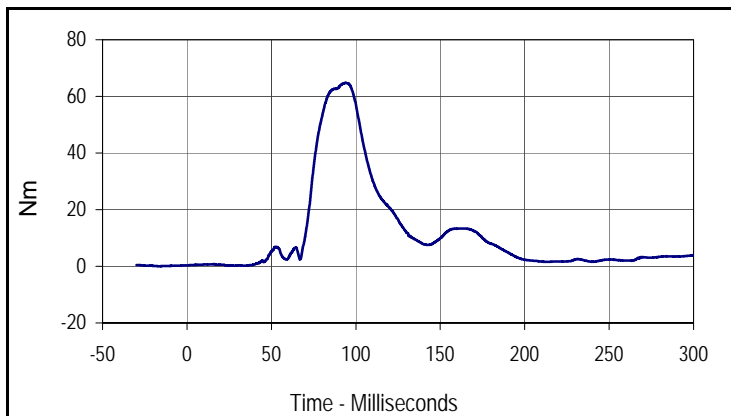
Curve Description			
Driver (50th Male) Upper Neck Moment X			
CURNO	Type	SAE Class	Units
007	FIL	600	Nm
Max	Time	Min	Time
6.9	120.6	-4.6	164.1



Curve Description			
Driver (50th Male) Upper Neck Moment Y			
CURNO	Type	SAE Class	Units
008	FIL	600	Nm
Max	Time	Min	Time
64.8	94.1	-6.8	52.5



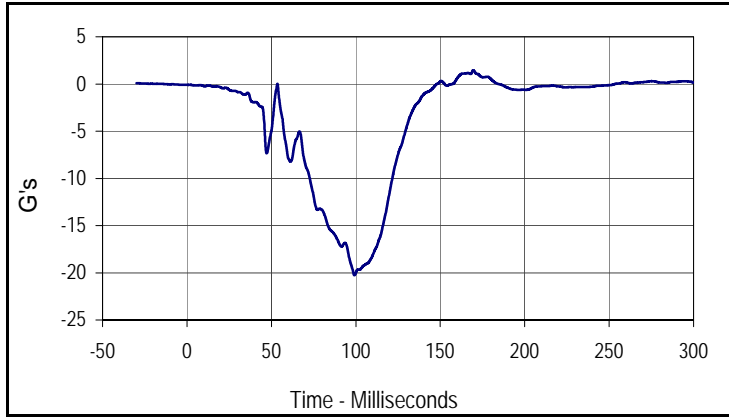
Curve Description			
Driver (50th Male) Upper Neck Moment Z			
CURNO	Type	SAE Class	Units
009	FIL	600	Nm
Max	Time	Min	Time
7.6	150.3	-1.9	57.8



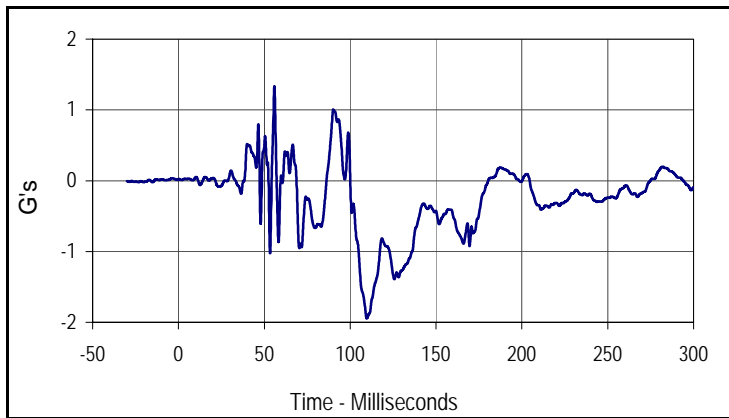
Curve Description			
Driver (50th Male) Upper Neck Moment Res.			
CURNO	Type	SAE Class	Units
007	RES	600	Nm
Max	Time	Min	Time
64.8	94.1	0.2	32.8

Test Vehicle: 1996 Ford F-150 2-Door Buck
 Test Program: Sled Impact Testing

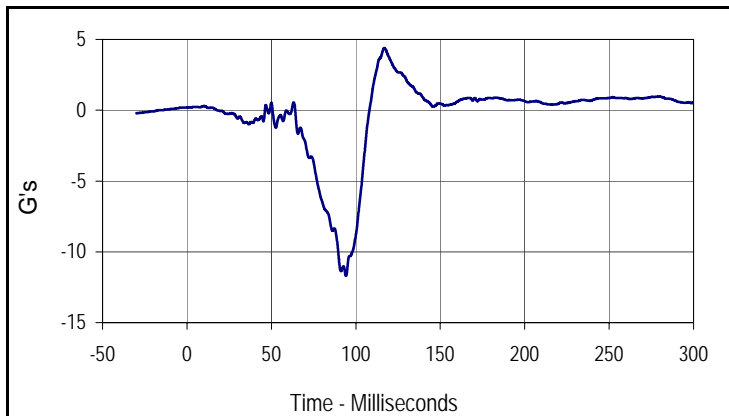
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 Project No.: P26069-01



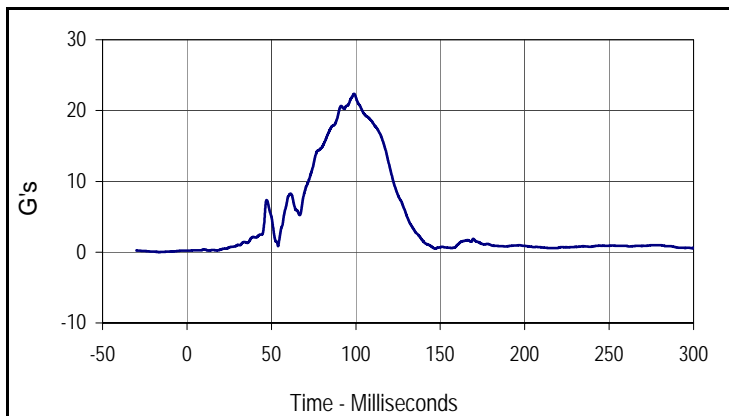
Curve Description			
Driver (50th Male) Chest X			
CURNO	Type	SAE Class	Units
010	FIL	180	G's
Max	Time	Min	Time
1.5	169.6	-20.3	99.2



Curve Description			
Driver (50th Male) Chest Y			
CURNO	Type	SAE Class	Units
011	FIL	180	G's
Max	Time	Min	Time
1.3	55.9	-1.9	109.7



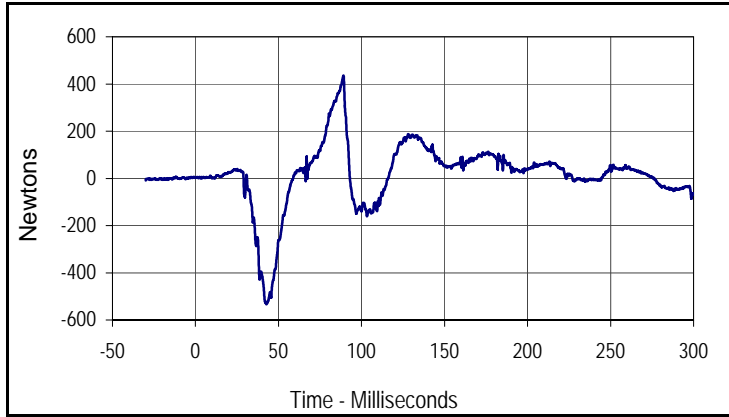
Curve Description			
Driver (50th Male) Chest Z			
CURNO	Type	SAE Class	Units
012	FIL	180	G's
Max	Time	Min	Time
4.4	116.9	-11.7	94.2



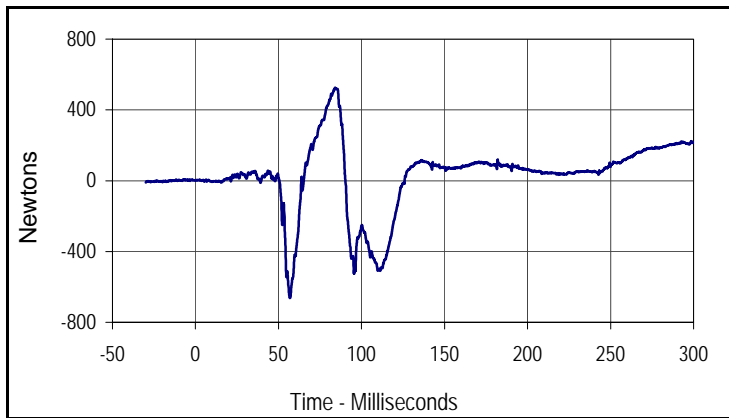
Curve Description			
Driver (50th Male) Chest Resultant			
CURNO	Type	SAE Class	Units
010	RES	180	G's
Max	Time	Min	Time
22.4	99.0	0.2	2.0

Test Vehicle: 1996 Ford F-150 2-Door Buck
 Test Program: Sled Impact Testing

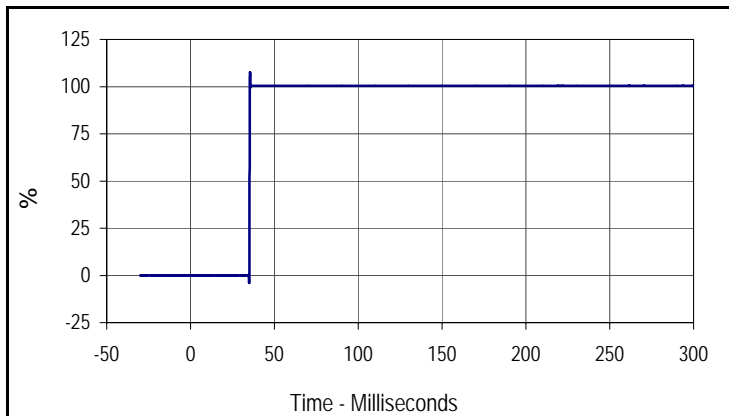
Test Date: 3/14/06
 Project No.: P26069-01



Curve Description			
Driver (50th Male) Left Femur Force			
CURNO	Type	SAE Class	Units
013	FIL	600	Newtons
Max	Time	Min	Time
435.8	89.2	-533.7	42.8



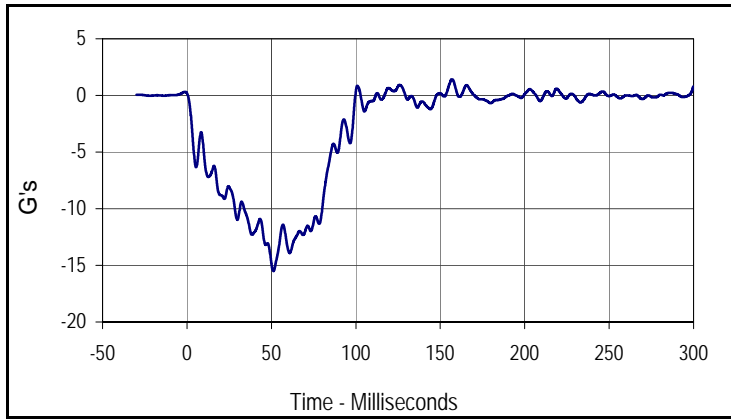
Curve Description			
Driver (50th Male) Right Femur Force			
CURNO	Type	SAE Class	Units
014	FIL	600	Newtons
Max	Time	Min	Time
524.3	84.1	-663.2	56.9



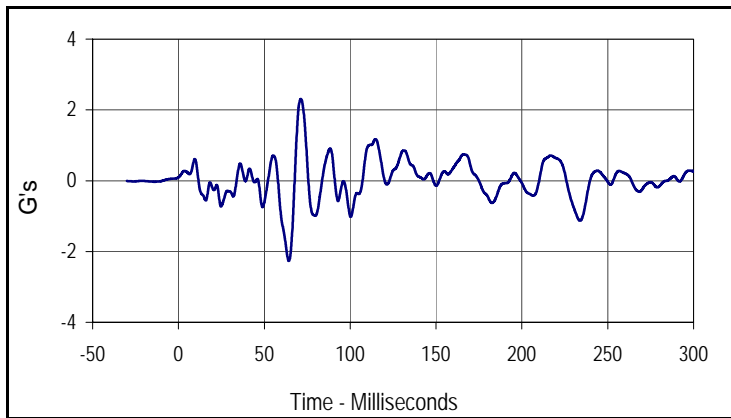
Curve Description			
Driver (50th Male) Airbag Trigger Signal			
CURNO	Type	SAE Class	Units
018	FIL	1000	%
Max	Time	Cross %	Time
107.6	35.5	50.0	35.2

Test Vehicle: 1996 Ford F-150 2-Door Buck
 Test Program: Sled Impact Testing

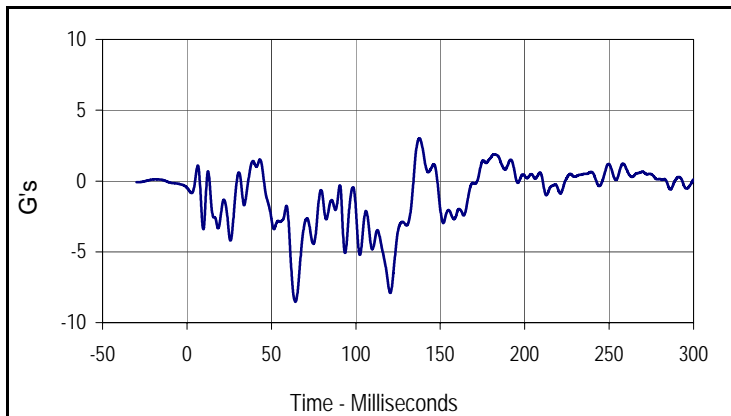
Test Date: 3/14/06
 Project No.: P26069-01



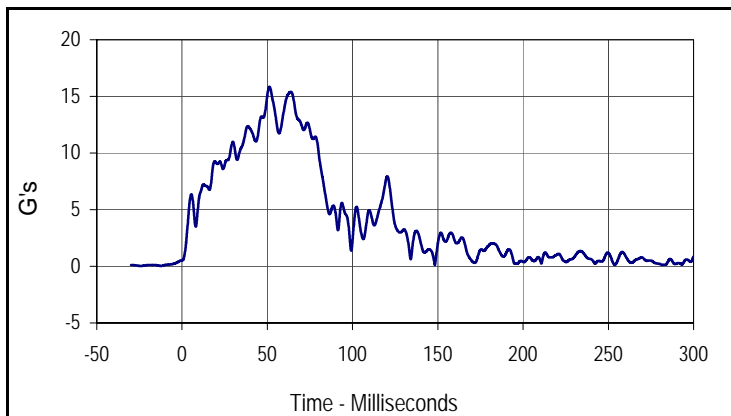
Curve Description			
Vehicle X			
CURNO	Type	SAE Class	Units
015	FIL	60	G's
Max	Time	Min	Time
1.4	157.0	-15.5	51.2



Curve Description			
Vehicle Y			
CURNO	Type	SAE Class	Units
016	FIL	60	G's
Max	Time	Min	Time
2.3	71.3	-2.3	64.3



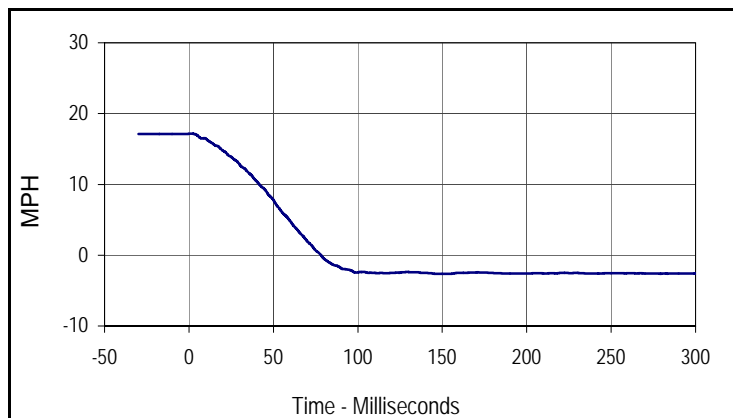
Curve Description			
Vehicle Z			
CURNO	Type	SAE Class	Units
017	FIL	60	G's
Max	Time	Min	Time
3.0	137.7	-8.5	64.2



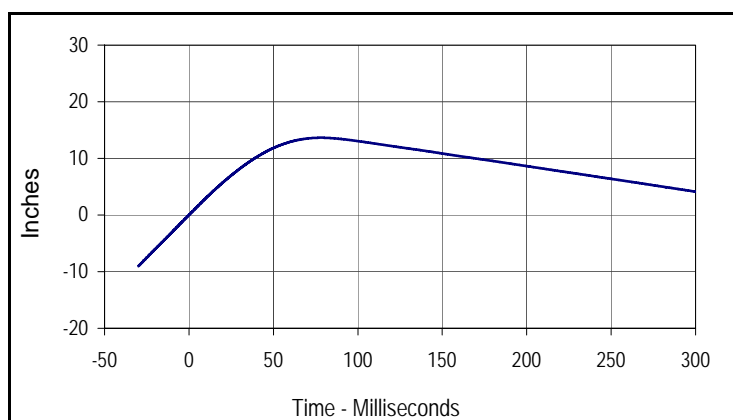
Curve Description			
Vehicle Resultant			
CURNO	Type	SAE Class	Units
015	RES	60	G's
Max	Time	Min	Time
15.9	51.3	0.1	148.3

Test Vehicle: 1996 Ford F-150 2-Door Buck
 Test Program: Sled Impact Testing

Test Date: 3/14/06
 Project No.: P26069-01



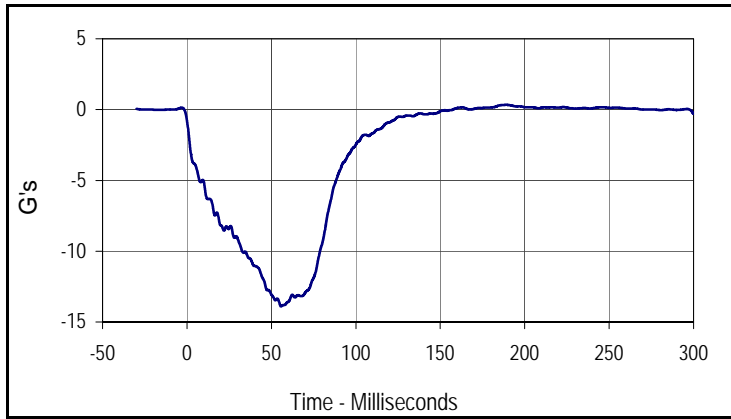
Curve Description			
Vehicle X Velocity			
CURNO	Type	SAE Class	Units
015	IN1	180	MPH
Max	Time	Min	Time
17.1	1.8	-2.7	146.7



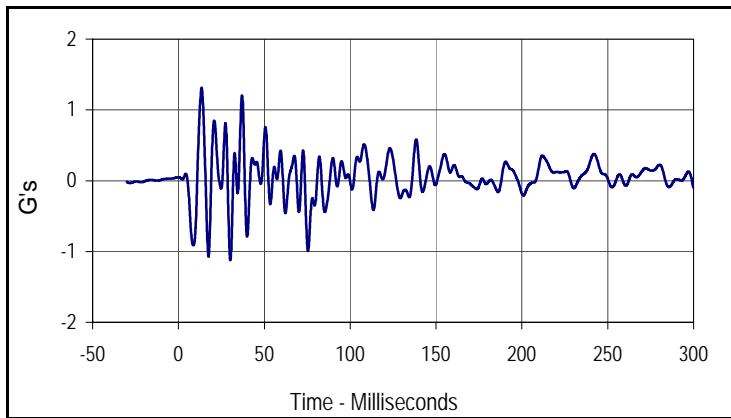
Curve Description			
Vehicle X Displacement			
CURNO	Type	SAE Class	Units
015	IN2	180	Inches
Max	Time	Min	Time
13.7	78.2	0.0	0.0

Test Vehicle: 1996 Ford F-150 2-Door Buck
 Test Program: Sled Impact Testing

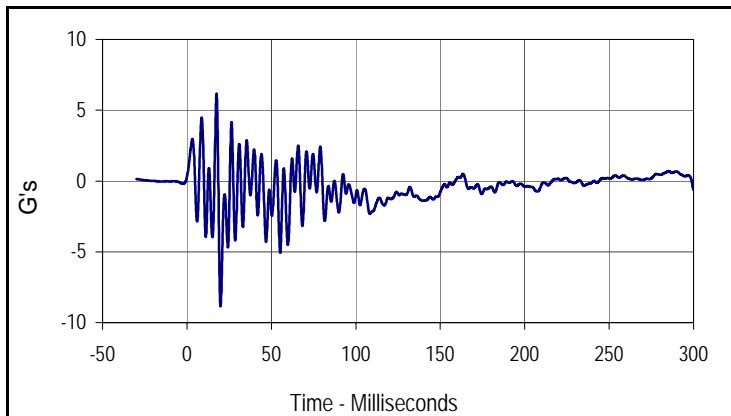
Test Date: 3/14/06
 Project No.: P26069-01



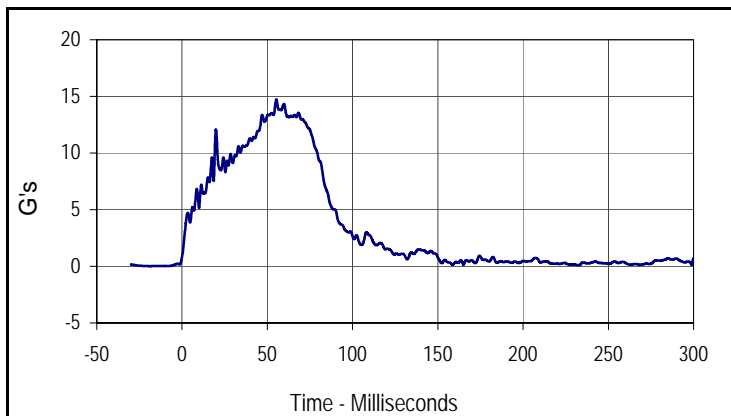
Curve Description			
Sled X			
CURNO	Type	SAE Class	Units
015	FIL	60	G's
Max	Time	Min	Time
0.3	189.0	-13.9	55.7



Curve Description			
Sled Y			
CURNO	Type	SAE Class	Units
016	FIL	60	G's
Max	Time	Min	Time
1.3	13.5	-1.1	30.2



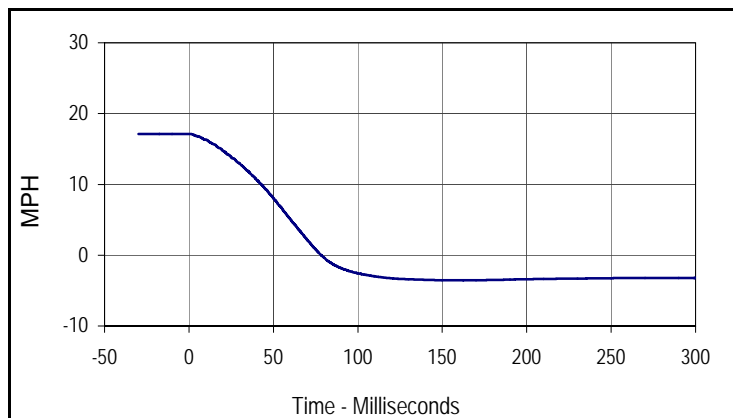
Curve Description			
Sled Z			
CURNO	Type	SAE Class	Units
017	FIL	60	G's
Max	Time	Min	Time
6.2	17.5	-8.9	19.9



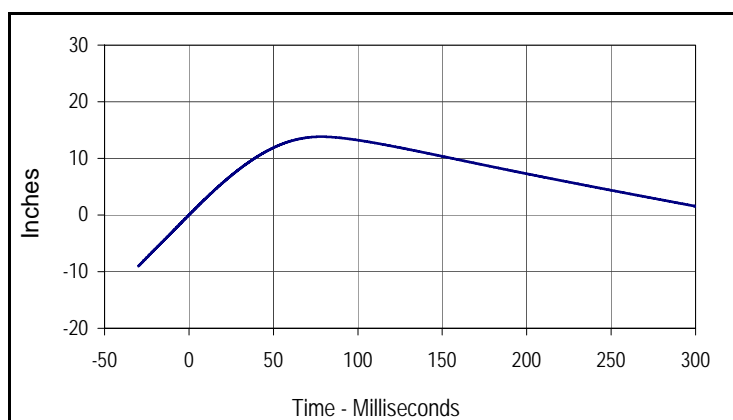
Curve Description			
Sled Resultant			
CURNO	Type	SAE Class	Units
015	RES	60	G's
Max	Time	Min	Time
14.7	55.3	0.1	231.8

Test Vehicle: 1996 Ford F-150 2-Door Buck
 Test Program: Sled Impact Testing

Test Date: 3/14/06
 Project No.: P26069-01



Curve Description			
Sled X Velocity			
CURNO	Type	SAE Class	Units
015	IN1	180	MPH
Max	Time	Min	Time
17.1	0.0	-3.6	157.5



Curve Description			
Sled X Displacement			
CURNO	Type	SAE Class	Units
015	IN2	180	Inches
Max	Time	Min	Time
13.8	78.3	0.0	0.0

APPENDIX C
SENSOR DATA TABLES

Sled Impact Testing
Instrumentation Data Channel Assignments
Driver 50th Percentile Male A.T.D. Serial Number 001
3/14/06
1996 Ford F-150 2-Door Buck

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
1	HEAD CG	X	KEAC086	Accel., 1/2 bridge	Endevco	7264-2000	G
2	HEAD CG	Y	KEAC087	Accel., 1/2 bridge	Endevco	7264-2000	G
3	HEAD CG	Z	KEAC088	Accel., 1/2 bridge	Endevco	7264-2000	G
4	UPPER NECK FORCE	X	GPUN02FX	Load cell, six axis neck	R. A. Denton	1716A	N
5	UPPER NECK FORCE	Y	GPUN02FY	Load cell, six axis neck	R. A. Denton	1716A	N
6	UPPER NECK FORCE	Z	GPUN02FZ	Load cell, six axis neck	R. A. Denton	1716A	N
7	UPPER NECK MOMENT	X	GPUN02MX	Load cell, six axis neck	R. A. Denton	1716A	Nm
8	UPPER NECK MOMENT	Y	GPUN02MY	Load cell, six axis neck	R. A. Denton	1716A	Nm
9	UPPER NECK MOMENT	Z	GPUN02MZ	Load cell, six axis neck	R. A. Denton	1716A	Nm
10	CHEST CG	X	KEAC014	Accel., 1/2 bridge	Endevco	7264-2000	G
11	CHEST CG	Y	KEAC010	Accel., 1/2 bridge	Endevco	7264-2000	G
12	CHEST CG	Z	KEAC017	Accel., 1/2 bridge	Endevco	7264-2000	G
13	LEFT FEMUR FORCE	N/A	FF1348	Load cell, Femur	R. A. Denton	2021A	N
14	RIGHT FEMUR FORCE	N/A	FF1347	Load cell, Femur	R. A. Denton	2021A	N

C-1

TR-P26069-01-NC

Sled Impact Testing
Instrumentation Data Channel Assignments
Vehicle/Sled Accelerometers and Airbag Trigger Timing
3/14/06
1996 Ford F-150 2-Door Buck

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
15	VEHICLE	X	KETX5A	Accel., Vehicle block	I.C. Sensor	3031-500	G
16	VEHICLE	Y	KETX5B	Accel., Vehicle block	I.C. Sensor	3031-500	G
17	VEHICLE	Z	KETX5C	Accel., Vehicle block	I.C. Sensor	3031-500	G
18	SLED	X	KETX6A	Accel., Vehicle block	I.C. Sensor	3031-500	G
19	SLED	Y	KETX6B	Accel., Vehicle block	I.C. Sensor	3031-500	G
20	SLED	Z	KETX6C	Accel., Vehicle block	I.C. Sensor	3031-500	G
21	AIRBAG TRIGGER	N/A	TRIGG	Airbag Trigger	Karco	N/A	%

APPENDIX D
DUMMY CALIBRATION DATA

Test Program: Hybrid III 50th Percentile Male Head Drop Test

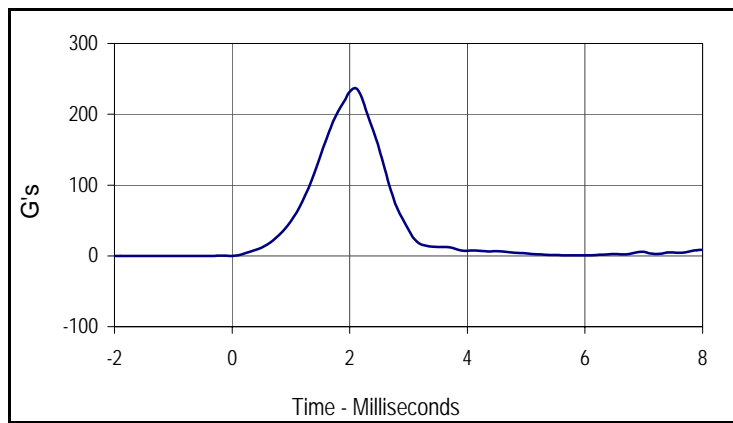
Test Date: 3/10/06

ATD Serial No.: 001

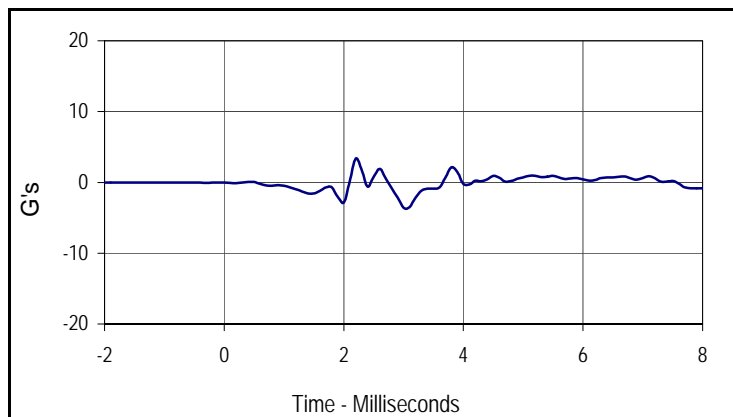
Test I.D.: HD03V



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Peak Resultant Acceleration	G's	225.0 to 275.0	236.9	Pass
Peak Lateral Acceleration	G's	≤15.0	3.6	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Overall Test Results				Pass



Curve Description			
Head Resultant			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
236.9	2.1	0.0	-1.2



Curve Description			
Head Y			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
3.4	2.2	-3.6	3.0