FINAL REPORT NUMBER: SPNCAP-TRC-16-001

NEW CAR ASSESSMENT PROGRAM (NCAP)
SIDE IMPACT POLE TEST

Ford Motor Company
2016 F-250 SuperCrew Pickup Truck
NHTSA NUMBER: M20160200

PREPARED BY:
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Report Date: February 15, 2016

FINAL REPORT

PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Office of Crashworthiness Standards
Mail Code: NVS-111
1200 New Jersey Ave, SE
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Washington, D.C. 20590

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Melinda Lackey, Project Manager

Approval Date: February 15, 2016

FINAL REPORT ACCEPTANCE BY OCWS:

Division Chief, New Car Assessment Program
NHTSA, Office of Crashworthiness Standards

Date: _____

FINAL REPORT ACCEPTANCE BY OCWS:

COTR, New Car Assessment Program
NHTSA, Office of Crashworthiness Standards

Date: _____

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16. Abstract

A 32.2 km/h (20 mph), 75° oblique impact Side NCAP Test was conducted on the subject vehicle, a 2016 F-250 SuperCrew Pickup Truck, in accordance with the specifications of the Office of Crashworthiness Standards Side NCAP Pole Laboratory Test Procedure for the generation of consumer information on vehicle side pole crash protection. This test was conducted by Transportation Research Center Inc. in East Liberty, Ohio, on October 15, 2015.

The impact velocity was 32.24 km/h, and the ambient temperature at the struck (left) side of the target vehicle at the time of impact was 21° C. The test vehicle's post-test maximum crush was 603 mm at Level 1.

The test or target vehicle's performance is given below:

	Unit	Threshold	Front SID-IIs
Head Injury Criteria (HIC_{36}):	NA	1000	322
Resultant Lower Spine Acceleration:	g's	82	58.0
Total Pelvic Force: (sum of acetabular and iliac forces)	N	5525	3782.1
Maximum Thoracic Rib Deflection	mm	38	33.8
Maximum Abdomen Rib Deflection	mm	45	38.5

The door struck by the pole did not separate from the body at the hinges or latches and the opposite doors did not open during the side impact event.

17. Key Words New Car Assessment Program (NCAP) Side Impact Pole Part 572V SID-IIs	18. Distribution Statement Copies of this report are available from: National Highway Traffic Safety Administration Technical Information Services Division, NPO-411 1200 New Jersey Ave Washington, DC 20590 e-mail: tis@nhtsa.dot.gov FAX: 202-493-2833

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SECTION 1
TEST PURPOSE AND PROCEDURE

TEST PURPOSE AND PROCEDURE

This side impact test was conducted as part of the MY16 New Car Assessment Program Side Impact Test Program, sponsored by the National Highway Traffic Safety Administration (NHTSA), under Contract No. DTNH22-14-D-00354. The purpose of this test is to generate comparative side impact performance in a 2016 F-250 SuperCrew Pickup Truck manufactured by Ford Motor Company. The side impact test was conducted in accordance with the Office of Crashworthiness Standard's Side NCAP Pole Laboratory Test Procedure, dated September 2013.

SECTION 2
SUMMARY OF TEST RESULTS

A rigid pole side impact test was conducted on a model year 2016 F-250 SuperCrew Pickup Truck. The subject vehicle was towed into the rigid pole at an angle of 75° and a velocity of 32.24 km/h. The side impact test was conducted by Transportation Research Center Inc. in East Liberty, OH, on October 15, 2015. Pre-test and post-test photographs of the test vehicle and the side impact dummy (SID-IIs) are included in Appendix A of this report.

One Part 572V (SID-IIs) dummy was placed in the driver designated seating position according to instructions specified in the OCWS Side NCAP Pole Laboratory Test Procedure, dated September 2013. Camera locations and other pertinent camera information are included in this report.

The Part 572V (SID-IIs) dummy was instrumented accordingly:

Head CG Triaxial Accelerometers
Thorax Upper, Middle, and Lower Rib Displacement Potentiometers
Abdomen Upper and Lower Rib Displacement Potentiometers
Lower Spine (T12) Triaxial Accelerometers
Iliac Load Cell
Acetabulum Load Cell

Appendix B contains the vehicle and dummy response data. Dummy configuration and performance verification data can be found in Appendix C of this report.

Injury readings for the SID-IIs dummy were recorded as follows:

Measurement Description	Driver ATD (SID-IIs)		
	Units	IARV	Result
Head Injury Criteria (HIC_{36})	NA	1000	322
Lower Spine Acceleration Resultant	G	82	58.0
Total Pelvic Force (sum of acetabular and iliac forces)	N	5525	3782.1
Maximum Thoracic Rib Deflection	mm	38*	33.8
Maximum Abdominal Rib Deflection	mm	45*	38.5

* Proposed IARV

Supplemental restraint information is given below:

Restraint Type	Left Front (Driver) Occupant Location 1		Left Rear (Passenger) Occupant Location 4	
	Mounted	Deployed	Mounted	Deployed
Frontal Airbag	Yes	No		
Knee Airbag	No	N/A		
Curtain	Yes	Yes	Yes	Yes
Side Torso/Pelvis Airbag	Yes	Yes	No	N/A
Pelvis Airbag	No	N/A	No	N/A
Seat Belt Pretensioner	Yes	N/A	No	N/A
Seat Belt Load Limiter	Yes	N/A	No	N/A
Center Seat Airbag	No	N/A	No	N/A

GENERAL COMMENTS

None

SECTION 3
OCCUPANT AND VEHICLE INFORMATION

DATA SHEET NO. 1
GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2016 Ford F-250 SuperCrew Pickup Truck NHTSA No.: M20160200
Test Program: SPNCAP Side Impact Test Date: 10/15/15

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA No.	M20160200
Model Year	2016
Make	Ford
Model	F250
Body Style	Pickup Truck
VIN	1FT7W2A67GEA02126
Body Color	Caribou
Odometer Reading (km/mi)	15.9 mi
Engine Displacement (L)	6.2
Type/No. Cylinders	Gas/8
Engine Placement	Front/Longitudinal
Transmission Type	Automatic
Transmission Speeds	6
Overdrive	Yes
Final Drive	RWD
Roof Rack	No
Sunroof/T-Top	No
Running Boards	Yes
Tilt Steering Wheel	Yes
Power Seats	Driver
Anti-Lock Brakes (ABS)	Yes

Traction Control System (TCS)	Yes
Auto-Leveling System	No
Automatic Door Locks (ADL)	Yes
Power Window Auto-Reverse	Yes
Other Optional Feature	No
Driver Front Airbag	Yes
Driver Curtain Airbag	Yes
Driver Head/Torso Airbag	No
Driver Torso Airbag	No
Driver Torso/Pelvis Airbag	Yes
Driver Pelvis Airbag	No
Driver Knee Airbag	No
Rear Pass. Curtain Airbag	Yes
Rear Pass. Head/Torso Airbag	No
Rear Pass. Torso Airbag	No
Rear Pass. Torso/Pelvis Airbag	No
Rear Pass. Pelvis Airbag	No
Driver Seat Belt Pretensioner	Yes
Rear Pass. Seat Belt Pretensioner	No
Driver Load Limiter	Yes
Rear Pass. Load Limiter	No
Other Safety Restraint	No

Does owner's manual provide instructions to turn off automatic door locks? Yes

DATA FROM CERTIFICATION LABEL

Manufactured By	Ford Motor Company
Date of Manufacturer	05/15
Vehicle Type	Truck

GVWR (kg)	4536
GAWR Front (kg)	1928
GAWR Rear (kg)	2767

VEHICLE SEATING AND WEIGHT CAPACITY DATA

	Front	Rear	Third	Total
Designated Seating Capacity (DSC)	2	3	N/A	5
Vehicle Capacity Weight (VCW) (kg)				1468.0
DSC X 68.04 kg				340.2
Rated Cargo and Luggage Weight (RCLW) (kg)[1]				1127.8

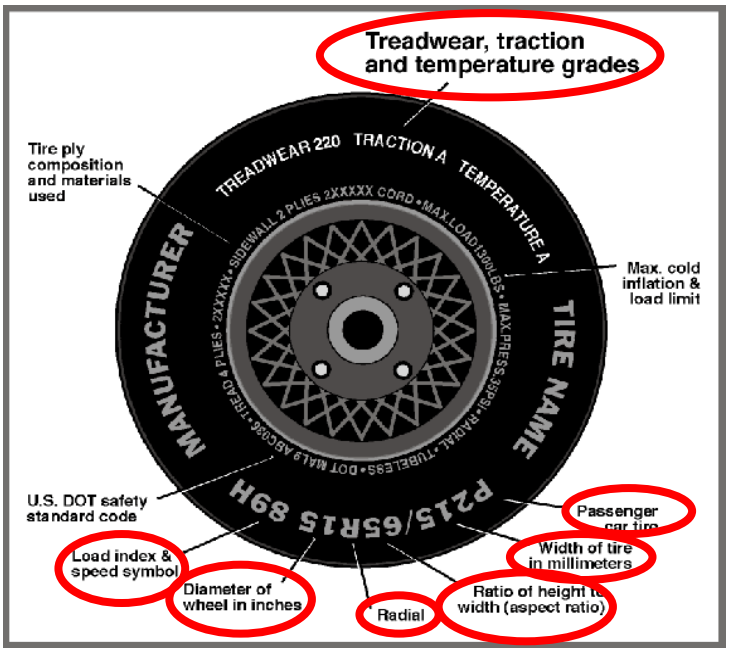
VEHICLE SEAT TYPE

Seating Location	Type of Seat Pan				Type of Seat Back		
	Bucket	Bench	Split Bench	Contoured	Fixed	Adjustable	
						W/ Lever	W/ Knob
Front Seat	Yes	N/A	N/A		N/A	Yes	N/A
Rear or Second Row Seat	N/A	N/A	Yes	N/A	Yes	N/A	N/A
Third row seat	N/A	N/A	N/A	N/A	N/A	N/A	N/A

[1] RCLW is limited to 136.0 kg

DATA SHEET NO. 1 (CONTINUED)
GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2016 Ford F-250 SuperCrew Pickup Truck NHTSA No.: M20160200
Test Program: SPNCAP Side Impact Test Date: 10/15/15



DATA FROM TIRE PLACARD

Measured Parameter	Front	Rear
Maximum Tire Pressure (kPa)	550	550
Cold Pressure (kPa)	420	480
Recommended Tire Size	LT275/65R18	LT275/65R18
Tire Size on Vehicle	LT275/65R18	LT275/65R18
Tire Manufacturer	Continental	Continental
Tire Model	Contitrac	Contitrac
Treadwear	N/A	N/A
Traction	N/A	N/A
Temperature Grades	N/A	N/A
Tire Plies Sidewall	2	2
Tire Plies Body	6	6
Load Index/Speed Symbol	123/120 S	123/120 S
Tire Material	Polyester, Steel, Polyamide	Polyester, Steel, Polyamide
DOT Safety Code Left	A3B9 HOOR 1315	A3B9 HOOR 1315
DOT Safety Code Right	A3B9 HOOR 1315	A3B9 HOOR 1315

DATA SHEET NO. 1 (CONTINUED)
GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2016 Ford F-250 SuperCrew Pickup Truck NHTSA No.: M20160200
Test Program: SPNCAP Side Impact Test Date: 10/15/15

TIRE PRESSURES

	Units	LF	RF	LR	RR
As Delivered	kPa	379	386	441	448
Tire Placard	kPa	420	420	480	480
Owner's Manual	kPa	N/A	N/A	N/A	N/A
As Tested	kPa	420	420	480	480

TEST VEHICLE AXLE WEIGHTS

	Units	As Delivered (UVW)			As Tested (ATW)			Fully Loaded		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	831.0	686.2		856.4	768.2		874.0	757.6	
Right	kg	834.0	660.6		816.4	748.4		824.4	741.4	
Ratio	%	55.3	44.7		52.4	47.6		53.1	46.9	
Totals	kg	1665.0	1346.8	3011.8	1672.8	1516.6	3189.4	1698.4	1499.0	3197.4

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value	
Total As Delivered Weight (UVW)	kg	3011.8	(A)
Actual Weight of 1 P572V ATD (SID-IIs) Dummy Used	kg	49.0	(B)
Rated Cargo/Luggage Weight (RCLW) [1]	kg	136.0	(C)
Calculated Vehicle Target Weight (TVTW)	kg	3196.8	(A+B+C)

Does the measured As Tested Vehicle Weight lie within the required weight range (i.e. Calculated Test Vehicle Target Weight – 4.5 kg to 9 kg)? X YES □ NO

WEIGHT OF BALLAST AND VEHICLE COMPONENTS REMOVED TO MEET TVTW

Component Description	Weight (kg)
Ballast: Steel plate mounted in cargo area	99.8
Components removed: None	0.0

TEST VEHICLE ATTITUDES AND CG

	Units	As Delivered	As Tested	Fully Loaded	Meets Requirement***
Driver Door Sill Angle (front-to-rear)*	Deg.	-1.5	-1.1	-1.0	Yes
Front Passenger Sill Angle (front-to-rear)*	Deg.	-1.7	-1.4	-1.3	Yes
Front Bumper-Line Angle (left-to-right)**	Deg.	-0.4	-0.2	-0.2	Yes
Rear Bumper-Line Angle (left-to-right)**	Deg.	-0.2	-0.1	-0.1	Yes
Vehicle CG (Aft of Front Axle)	mm	1783	1896	1870	
Vehicle CG (Left (+) / Right (-) from longitudinal Centerline)	mm	+6.5	+16.2	+17.8	

*ND=Nose Down (-), NU=Nose Up (+) **LD=Left Down (-), LU=Left Up (+)
*** The "As Tested" vehicle attitude measurements must be equal to or between the "As Delivered" and "Fully Loaded" vehicle attitude measurements. Indicate "Yes" or "No" for "Meets Requirements".

[1] RCLW limited to 136.0 kg

DATA SHEET NO. 2

SEAT, SEAT BELT, STEERING WHEEL ADJUSTMENT AND FUEL SYSTEMS DATA

Test Vehicle: 2016 Ford F-250 SuperCrew Pickup Truck NHTSA No.: M20160200
Test Program: SPNCAP Side Impact Test Date: 10/15/15

SEAT POSITIONING

The driver seat, front center seat (if applicable), and right front passenger's seat should be set to the forward-most, mid-height, mid-angle position. The struck-side rear passenger's seat, rear center seat, and non-struck side rear passenger's seats should be set to the rear-most, lowest, mid-angle position.

SCRL ANGLE RANGE

Seat	SCRL(°)		
	Max.	Min.	Mid
Driver Seat	19.9	9.9	14.9
Front Passenger Seat	N/A	N/A	13.4
Front Center Seat*	N/A	N/A	N/A
Struck Side Rear Seat	N/A	N/A	10.1
Non-Struck Side Rear Seat	N/A	N/A	9.5
Rear Center Seat*	N/A	N/A	9.2

* If applicable.

SEAT HEIGHT AND ANGLE

Seat	As Tested SCRL Angle (Mid) (°)	As Tested SCRP Height (mm)	SCRP Height Position	SCRP Height (mm)		
				Rearmost	Mid-Fore/Aft	Forward-Most
Driver Seat	14.9	382	Max	405	409	412
			Mid	376	379	382
			Min	347	349	352
Front Passenger Seat	13.4	350	Max	N/A	N/A	N/A
			Mid	342	346	350
			Min	N/A	N/A	N/A
Front Center Seat*	N/A	N/A	Max	N/A	N/A	N/A
			Mid	N/A	N/A	N/A
			Min	N/A	N/A	N/A
Struck Side Rear Seat	10.1	Fixed	Max	N/A	N/A	N/A
			Mid	N/A	N/A	N/A
			Min	N/A	N/A	N/A
Non-Struck Side Rear Seat	9.5	Fixed	Max	N/A	N/A	N/A
			Mid	N/A	N/A	N/A
			Min	N/A	N/A	N/A
Rear Center Seat*	9.2	Fixed	Max	N/A	N/A	N/A
			Mid	N/A	N/A	N/A
			Min	N/A	N/A	N/A

* If applicable.

DATA SHEET NO. 2 (CONTINUED)
SEAT, SEAT BELT, STEERING WHEEL ADJUSTMENT AND FUEL SYSTEMS DATA

Test Vehicle: 2016 Ford F-250 SuperCrew Pickup Truck NHTSA No.: M20160200
Test Program: SPNCAP Side Impact Test Date: 10/15/15

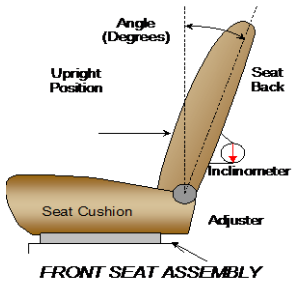
SEAT FORE/AFT POSITION

Seat	Total Fore/Aft Travel		Test Position from Forwardmost Position	
	mm	Detents*	mm	Detent*
Driver Seat	216	N/A	0	N/A
Front Passenger Seat	218	51	0	0
Front Center Seat*	N/A	N/A	N/A	N/A
Struck Side Rear Seat	Fixed	N/A	Fixed	N/A
Non-Struck Side Rear Seat	Fixed	N/A	Fixed	N/A
Rear Center Seat*	Fixed	N/A	Fixed	N/A

* If applicable.

SEAT BACK ANGLE ADJUSTMENT

The driver's seat back is positioned such that the dummy's head is level. The front center and front passenger's seat backs are positioned in a similar manner as the driver's seat back. The struck-side rear passenger seat back is positioned in accordance with the information provided by the manufacturer on Form No. 1. For the 5th percentile female dummy in a Side NCAP MDB test. The rear center and non-struck side rear passenger's seat back is set to match the struck-side rear seat back.



Seat	Total Seat Back Angle Range		Test Position from Most Upright	
	Degrees	Detents*	Degrees	Detent*
Driver Seat w/ Seated Dummy	49.4	N/A	13.3 rwd	N/A
Front Passenger Seat	49.0	27	13.7 rwd	8
Front Center Seat*	N/A	N/A	N/A	N/A
Struck Side Rear Seat	Fixed	N/A	Fixed	N/A
Non-Struck Side Rear Seat	Fixed	N/A	Fixed	N/A
Rear Center Seat*	Fixed	N/A	Fixed	N/A

* If applicable.

SEAT BELT ANCHORAGE ADJUSTMENT

Seat belt anchorages are adjusted with the information provided by the manufacturer on Form No. 1

	Total # of Positions	Placed in Position #
Driver Seat	4, numbered from 0 to 3	0, Uppermost

HEAD RESTRAINT ADJUSTMENT

Head restraints are adjusted to the lowest and most full forward in-use position.

	Total # of Positions	Placed in Position #
Driver Seat	3, numbered from 0 to 2	2, Lowermost

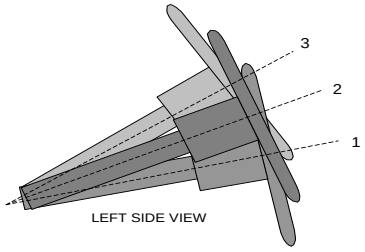
DATA SHEET NO. 2 (CONTINUED)
SEAT, SEAT BELT, STEERING WHEEL ADJUSTMENT AND FUEL SYSTEMS DATA

Test Vehicle: 2016 Ford F-250 SuperCrew Pickup Truck NHTSA No.: M20160200
Test Program: SPNCAP Side Impact Test Date: 10/15/15

STEERING COLUMN ADJUSTMENT

Steering wheel and column adjustments are made so that the steering wheel geometric locus it describes when moved through its full range of motion.

	Degrees	Fore/Aft Position, mm
Lowermost, Position No. 1	68.1	300
Geometric Center, Position No. 2	66.4	312
Uppermost, Position No. 3	64.6	324
Telescoping Steering Wheel Travel		24
Test Position	66.4	312

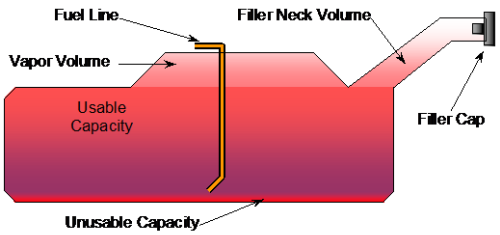


STEERING COLUMN ASSEMBLY

FUEL PUMP

Describe the fuel pump type, deta1LS about how it operates and the location of the fuel filler neck:

Fuel tank is located in front of the rear axle. Filler neck enters the right side of the tank. Cap is on right rear quarter panel. Fuel pump will run when engine is running. Also, it will run briefly when ignition key is turned to the "ON" position without starting the engine.



VEHICLE FUEL TANK ASSEMBLY

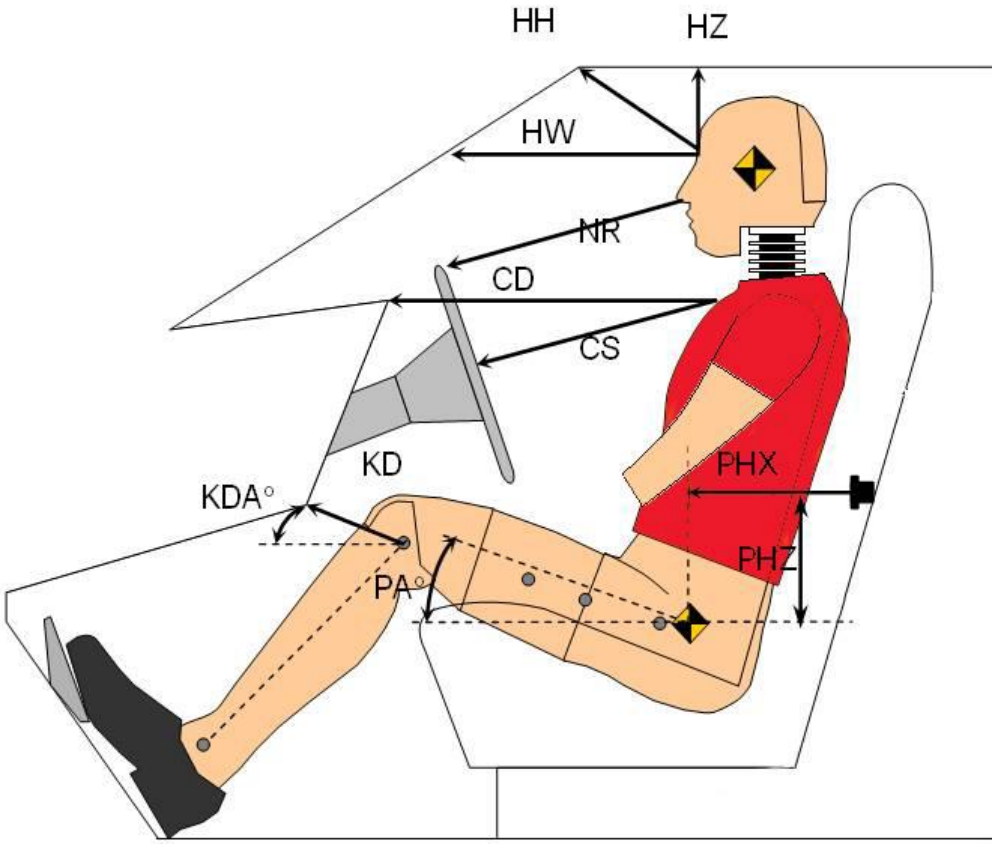
FUEL TANK CAPACITY

	Liters
Usable Capacity of "Standard Tank" (see Form No. 1)	132.5
Usable Capacity of "Optional" Tank (see Form No. 1)	N/A
Usable Capacity of Standard Tank (see Owner's Manual)	132.0
Usable Capacity of Optional Tank (see Owner's Manual)	N/A
93% of Usable Capacity	123.2
Actual Amount of Solvent Used in Test	123.2
1/3 of Usable Capacity	41.1

Is the Actual Amount of Solvent Used in the test equal to 93% +/- 1% of the Usable Capacity stated on Form No. 1? X YES □ NO

DATA SHEET NO. 3
DUMMY LONGITUDINAL CLEARANCE DIMENSIONS

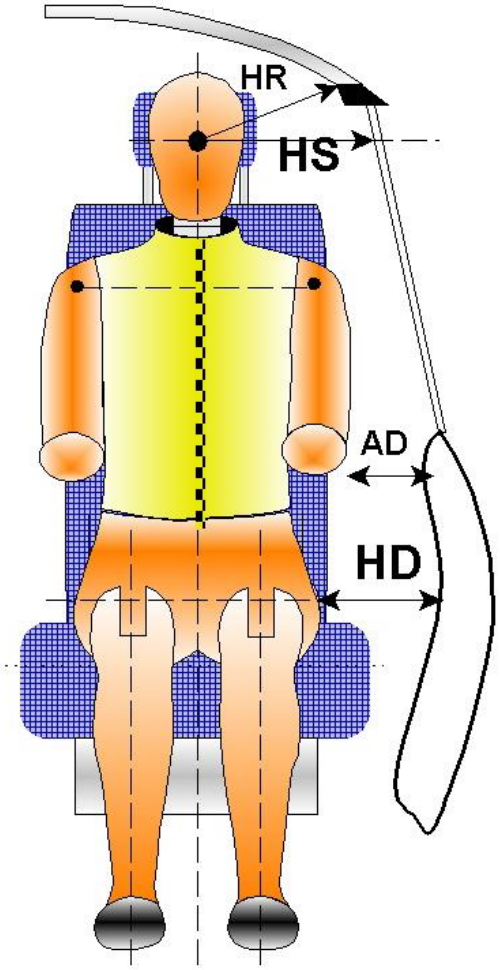
Test Vehicle: 2016 Ford F-250 SuperCrew Pickup Truck NHTSA No.: M20160200
Test Program: SPNCAP Side Impact Test Date: 10/15/15



Code	Measurement Description	Driver	
		Length (mm)	Angle (°)
HH	Head to Header	357	
HW	Head to Windshield	572	
HZ	Head to Visor	199	
NR	Nose to Rim	268	
CD	Chest to Dashboard	457	
CS	Chest to Steering Wheel	218	
KDL/KDLA°	Left Knee to Dash	136	27
KDR/KDRA°	Right Knee to Dash	128	27
PAX°	Pelvic Tilt Angle (X-axis)		0.4
PAY°	Pelvic Tilt Angle (Y-axis)		21.7
PHX	Hip Point to Striker (X-Axis)	467	
PHZ	Hip Point to Striker (Z-Axis)	63	

DATA SHEET NO. 4
DUMMY LATERAL CLEARANCE DIMENSIONS

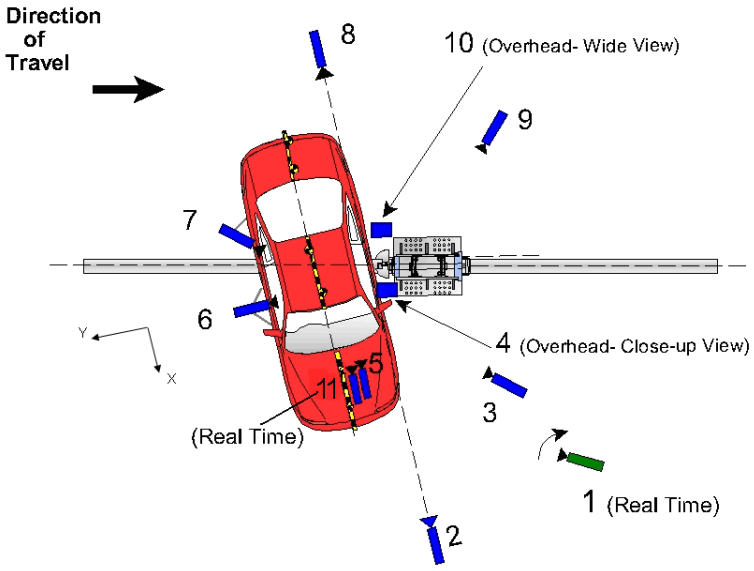
Test Vehicle: 2016 Ford F-250 SuperCrew Pickup Truck NHTSA No.: M20160200
Test Program: SPNCAP Side Impact Test Date: 10/15/15



Code	Measurement Description	Length (mm)
HR	Head to Side Header	245
HS	Head to Side Window	382
AD	Arm to Door	168
HD	Hip Point to Door	243

DATA SHEET NO. 5
CAMERA AND INSTRUMENTATION DATA

Test Vehicle: 2016 Ford F-250 SuperCrew Pickup Truck NHTSA No.: M20160200
Test Program: SPNCAP Side Impact Test Date: 10/15/15



REFERENCE: (from point of impact for X and Y; from ground for Z)
+ X = Forward of vehicle, + Y = Right of vehicle, + Z = Down

Camera No.	View	Coordinates (mm)			Lens Length (mm)	Operating Frame Rate (fps)
		X	Y	Z		
1	Real time (24-30 fps) pan view of impact				Zoom	30
2	Front ground level – impact view	5013	-125	-1639	20	1000
3	Impact side 45° – forward pole view	3312	-1218	-1606	20	1000
4	Overhead Close-up view of impact	-275	-130	-5685	Zoom	1000
5	Onboard – dummy front view				25	1000
6	Onboard – dummy side view				12.5	1000
7	Onboard – dummy rear oblique view				12.5	1000
8	Rear ground level – impact view	-6765	0	-1635	20	1000
9	Impact side 45° – rearward pole view	-3991	-2685	-1739	20	1000
10	Overhead wide view of impact	-310	200	-5685	8.5	1000
11	Real time dummy front view				Zoom	30

All measurements accurate to +/- 6 mm.

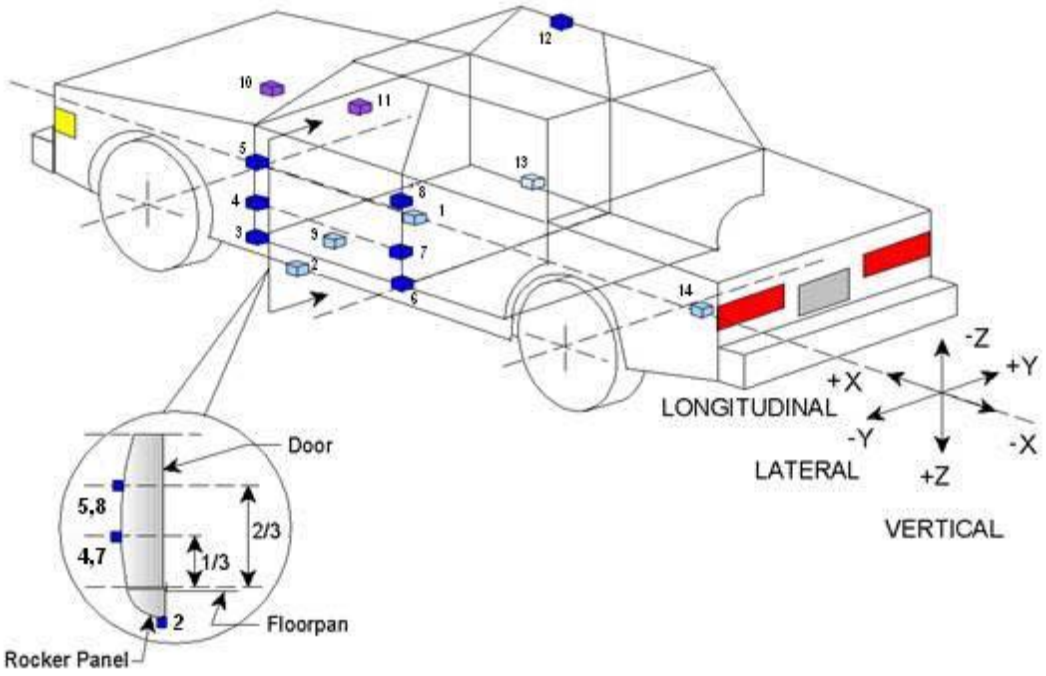
NOTE: Vehicle was at a 75° angle to the rigid pole.
If applicable, explain why camera(s) did not run: Not Applicable

INSTRUMENTATION

	Number of Channels
Driver Dummy	19
Vehicle Structure	18
Pole Load Cells	8
TOTAL	45

DATA SHEET NO. 6
VEHICLE ACCELEROMETER DATA

Test Vehicle: 2016 Ford F-250 SuperCrew Pickup Truck NHTSA No.: M20160200
Test Program: SPNCAP Side Impact Test Date: 10/15/15



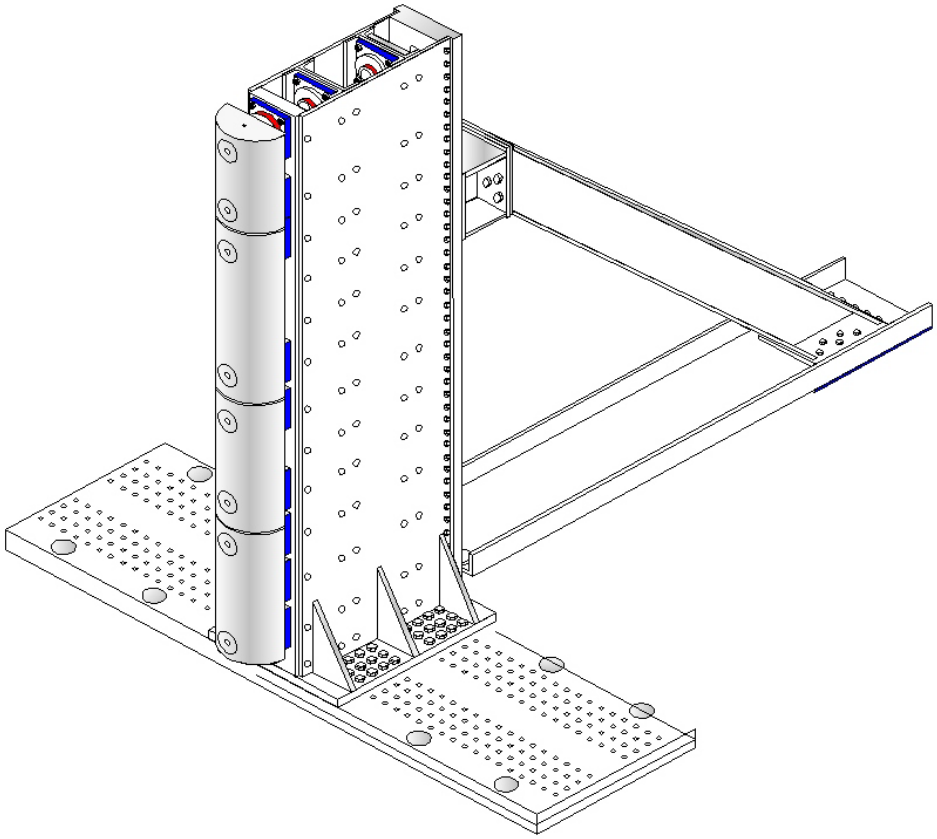
	Accelerometer/Sensor Location			
	ID	Coordinates (mm)		
		X	Y	Z
1	Vehicle CG	4253	195	-719
2	Left Floor Sill	4223	-705	-570
3	A-Pillar Sill	4393	-775	-533
4	A-Pillar Low	4588	-875	-746
5	A-Pillar Mid	4598	-875	-1107
6	B-Pillar Sill	3418	-722	-605
7	B-Pillar Low	3448	-930	-708
8	B-Pillar Mid	3468	-905	-1150
9	Driver Seat Track	3808	-690	-754
10	Engine Top	5245	290	-1102
11	Firewall	5045	0	-1287
12	Right Roof	3888	690	-1888
13	Right Floor Sill	4048	655	-608
14	Rear Floorpan	1023	0	-819

Reference: *X - Test Vehicle Rear Bumper (+ forward)*
Y - Test Vehicle Centerline (+ to right)
Z - Ground Plane (+ down)

DATA SHEET NO. 7
RIGID POLE LOAD CELL DATA

Test Vehicle: 2016 Ford F-250 SuperCrew Pickup Truck NHTSA No.: M20160200
Test Program: SPNCAP Side Impact Test Date: 10/15/15

FOIL 300K RIGID POLE



Load Cell Locations	
ID	**Height From Top of Carrier (mm)**
1	87
2	468
3	648
4	978
5	1168
6	1651
7	1816
8	2057

DATA SHEET NO. 8
POST TEST OBSERVATIONS

Test Vehicle: 2016 Ford F-250 SuperCrew Pickup Truck NHTSA No.: M20160200
Test Program: SPNCAP Side Impact Test Date: 10/15/15

TEST DUMMY INFORMATION AND CONTACT POINTS

Dummy Body Part	Driver SID-IIs Dummy
Face	SCAB
Top of Head	SCAB
Left Side of Head	SCAB
Back of Head	SCAB
Left Shoulder	Torso Airbag
Upper Torso	Torso Airbag
Lower Torso	None
Left Hip	Door Panel
Left Knee	Door Panel

POST TEST DOOR PERFORMANCE

Description	Struck Side		Non-Struck Side		Rear Hatch/ Other Door
	Front	Rear	Front	Rear	
Remained Closed and Operational	No	No	No	Yes	Yes
Total Separation from Vehicle at Hinges or Latches	No	No	No	No	No
Latch or Hinge Systems Pulled Out of Their Anchorages	No	No	No	No	No
Disengaged from Latched Position	No	No	No	No	No
Latch Separated from Striker	No	No	No	No	No
Jammed Shut	Yes	Yes	Yes	No	No
If Door Opened at Striker, Record Width of Opening at Striker (mm)	N/A	N/A	N/A	N/A	N/A

* Indicate “Yes”, “No”, or “NA”.

POST-TEST SEAT PERFORMANCE

Description	Struck Side		Non-Struck Side	
	Front	Rear	Front	Rear
Seat Movement Along Seat Track	No	N/A	None	N/A
Seat Disengagement from Floor pan	No	No	No	No
Seat Back Movement from Initial Position	Yes	No	None	None
Seat Back Collapse	Yes	No	No	No

* Indicate “Yes”, “No”, or “NA”.

POST TEST STRUCTURAL OBSERVATIONS

Critical Areas of Performance	Observations and Conclusions
Pillar Performance	Severe Deformation
Sill Separation	None Visible
Windshield Damage	Broken
Side Window Damage	Shattered
Other Notable Effects	None

DATA SHEET NO. 8 (CONTINUED)
POST TEST OBSERVATIONS

Test Vehicle: 2016 Ford F-250 SuperCrew Pickup Truck NHTSA No.: M20160200
Test Program: SPNCAP Side Impact Test Date: 10/15/15

SUPPLEMENTAL RESTRAINT SYSTEM INFORMATION

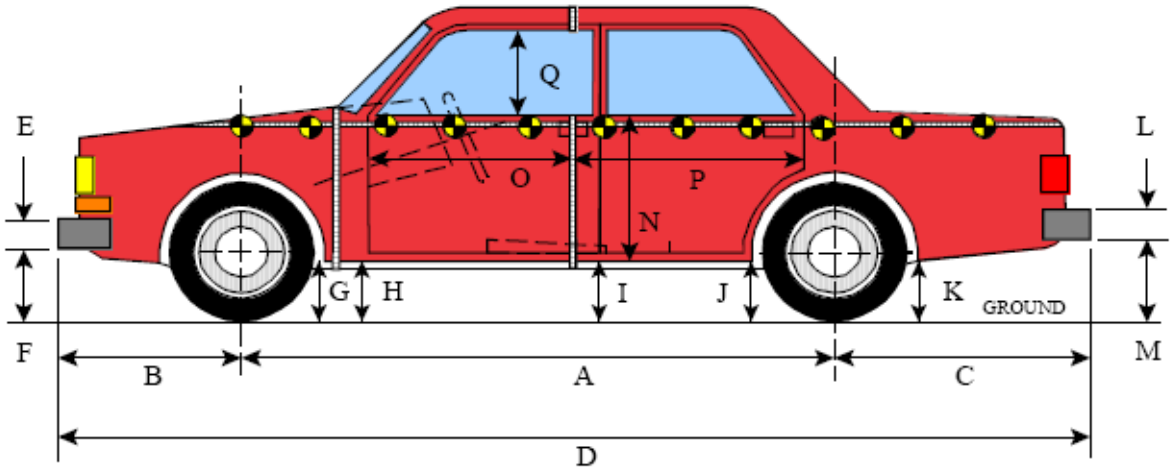
Restraint Type	Struck Side (Driver)		Struck Side (Rear Passenger)	
	Mounted	Deployed	Mounted	Deployed
Front Airbag	Yes	No		
Knee Airbag	No	N/A		
Curtain	Yes	Yes	Yes	Yes
Side Torso/Pelvis Airbag	Yes	Yes	No	N/A
Seat Belt Pretensioner	Yes	N/A	No	N/A
Seat Belt Load Limiter	Yes	N/A	No	N/A
Center Seat Airbag	No	N/A	No	N/A

VEHICLE SPEED, VEHICLE ANGLE AT IMPACT AND IMPACT POINT LOCATION DATA

Measured Parameter	Units	Tolerance	Value
Vertical Impact Reference Line (Aft of Front Axle) (Intended Impact Point)	mm		1335
Actual Impact Point (Aft of Front Axle)	mm		1336
Horizontal Offset (+ forward / - rearward)	mm	+/- 38 of Intended Impact point	-1
Angle Between Vehicle's Longitudinal Centerline and Line of Motion	degrees	75 +/- 3	75
Trap No. 1 Velocity (Primary)	km/h	31.4 to 33.0	32.24
Trap No. 2 Velocity (Redundant)	km/h	31.4 to 33.0	32.20

DATA SHEET NO. 9
VEHICLE PROFILE MEASUREMENTS

Test Vehicle: 2016 Ford F-250 SuperCrew Pickup Truck NHTSA No.: M20160200
Test Program: SPNCAP Side Impact Test Date: 10/15/15



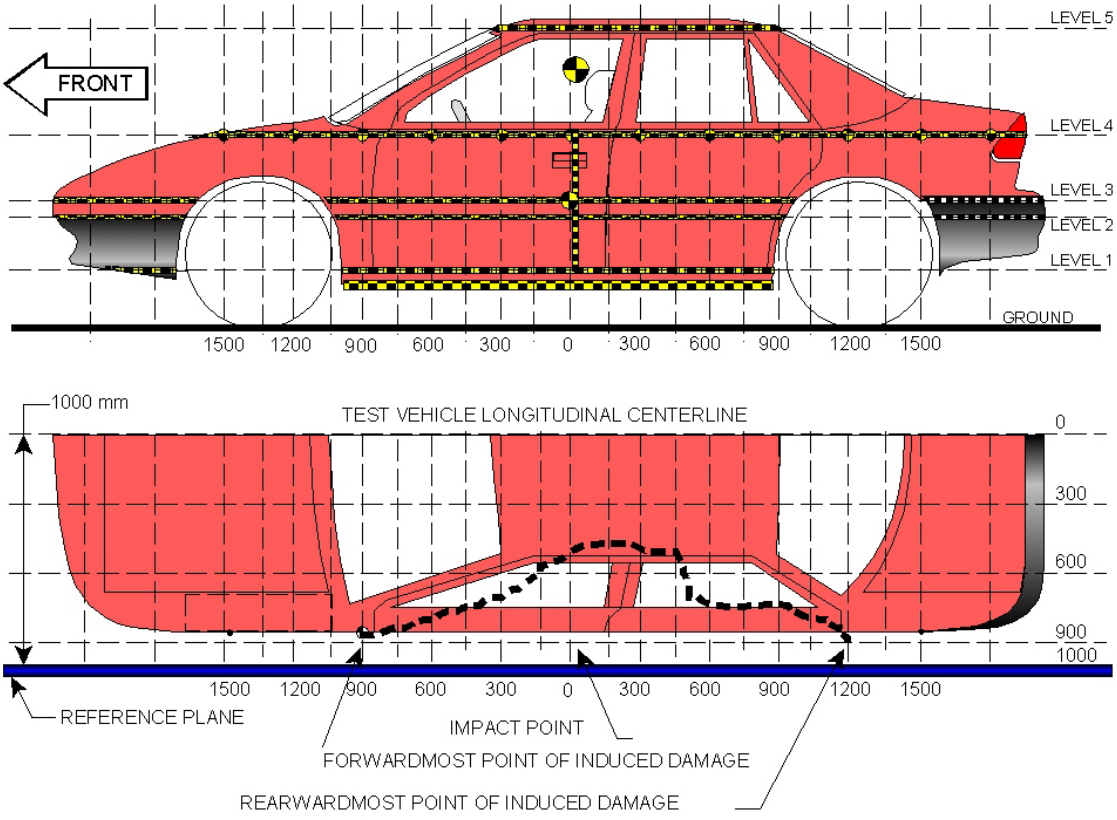
LEFT SIDE VIEW
All MEASUREMENTS IN (mm) WITH TOLERANCE OF ± 3mm

VEHICLE PRE- AND POST-TEST MEASUREMENT INFORMATION

Code	Measurement Description	Pre-Test	Post-Test	Difference
A	Wheelbase	3988	3835	153
B	Front Axle to Front Surface of Vehicle	972	953	19
C	Rear Axle to Rear Surface of Vehicle	1320	1327	-7
D	Total Length at Centerline	6280	6212	68
E	Front Bumper Thickness	225	225	0
F	Front Bumper Bottom to Ground	395	460	-65
G	Sill Height at Front Wheel Well	450	466	-16
H	Sill Height at Front Door Leading Edge	456	485	-29
I	Sill Height at B-Pillar	478	503	-25
J1	Sill Height at Rear Wheel Well	510	540	-30
J2	Pinch Weld Height at Rear Wheel Well	417	422	-5
K	Sill Height Aft of Rear Wheel Well	549	618	-69
L	Rear Bumper Thickness	195	195	0
M	Rear Bumper Bottom to Ground	512	594	-82
N	Sill Height to Bottom of Front Window Sill	900	905	-5
O	Front Door Leading Edge to Impact CL	781	440	341
P	Rear Door Trailing Edge to Impact CL	1404	1242	162
Q	Front Window Opening	536	505	31
R	Right Side Length	6190	6205	-15
S	Left Side Length	6188	6024	164
T	Vehicle Width at "B" Pillars	2025	1803	222

DATA SHEET NO. 10
VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2016 Ford F-250 SuperCrew Pickup Truck NHTSA No.: M20160200
Test Program: SPNCAP Side Impact Test Date: 10/15/15



NOTE: All measurements are in millimeters (mm)

MAXIMUM EXTERIOR CRUSH MEASUREMENTS

Level	Measurement Description	Height Above Ground	Maximum Exterior Static Crush	Distance from Impact
1	Sill Top	580	603	0
2	Occupant H-Point	859	591	0
3	Mid-Door	991	595	0
4	Window Sill	1184	553	0
5	Window Top	1848	279	0

NOTE: The above measurements should be taken along the vertical impact reference line. Vehicle measurements forward of the vertical impact reference line are negative.

DATA SHEET NO. 10 (CONTINUED)
VEHICLE EXTERIOR CRUSH MEASUREMENTS

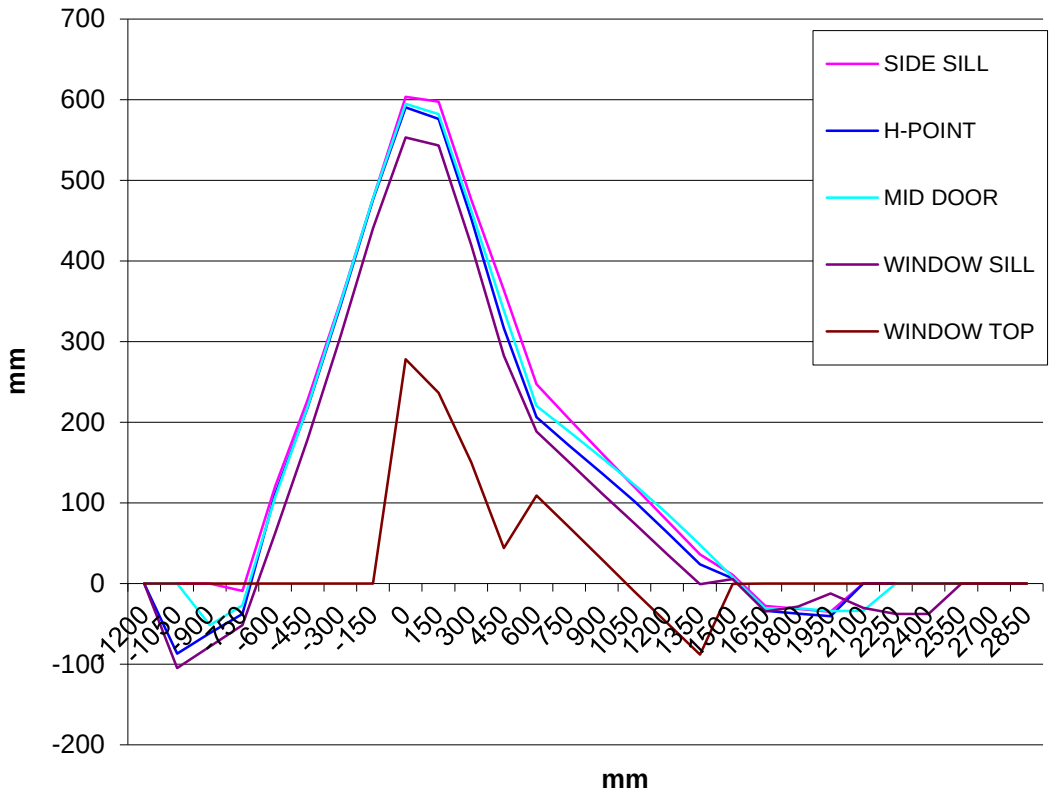
Test Vehicle: 2016 Ford F-250 SuperCrew Pickup Truck NHTSA No.: M20160200
Test Program: SPNCAP Side Impact Test Date: 10/15/15

	Pre-Test					Post-Test					Difference				
	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
-900	0	15	30	-12	0	0	77	81	66	0	0	-62	-51	-78	0
-750	3	17	14	-12	0	13	55	41	40	0	-10	-38	-27	-52	0
-600	4	22	17	-13	0	-116	-89	-90	-75	0	120	111	107	62	0
-450	5	24	18	-8	0	-223	-195	-202	-187	0	228	219	220	179	0
-300	6	26	19	-2	0	-343	-318	-328	-308	0	349	344	347	306	0
-150	6	27	20	4	0	-471	-449	-457	-436	0	477	476	477	440	0
0	6	27	21	8	-239	-597	-564	-574	-545	-518	603	591	595	553	279
150	6	27	21	13	-232	-592	-549	-561	-530	-468	598	576	582	543	236
300	5	28	22	16	-229	-471	-425	-441	-404	-379	476	453	463	420	150
450	4	29	22	17	-225	-360	-288	-317	-266	-269	364	317	339	283	44
600	3	28	20	17	-222	-244	-178	-200	-172	-331	247	206	220	189	109
750	2	29	20	18	-220	-202	-142	-168	-132	-290	204	171	188	150	70
900	1	29	20	20	-219	-161	-108	-136	-92	-249	162	137	156	112	30
1050	-1	29	20	21	-217	-121	-73	-102	-54	-207	120	102	122	75	-10
1200	-2	29	20	21	-215	-80	-34	-67	-15	-167	78	63	87	36	-48
1350	-5	29	20	20	-213	-41	5	-28	21	-125	36	24	48	-1	-88
1500	-8	26	18	18	-228	-19	20	11	13	-228	11	6	7	5	0
1650	-18	16	8	8	0	10	50	39	43	0	-28	-34	-31	-35	0
1800	-19	15	7	9	0	12	53	38	37	0	-31	-38	-31	-28	0
1950	-21	16	8	9	0	14	56	42	21	0	-35	-40	-34	-12	0
2100	-2	17	27	8	0	36	50	61	39	0	-38	-33	-34	-31	0
2250	0	34	0	8	0	0	67	0	46	0	0	-33	0	-38	0

NOTE: Pre-test measurements are taken when the vehicle is in the “As Tested” weight condition. Vehicle measurements forward of the vertical impact reference line are negative. The crush profile grid is established prior to the test based on an estimated impact point. The final distance from impact is determined after the final dummy positioning and the pole is aligned with the center of gravity of the dummy’s head.

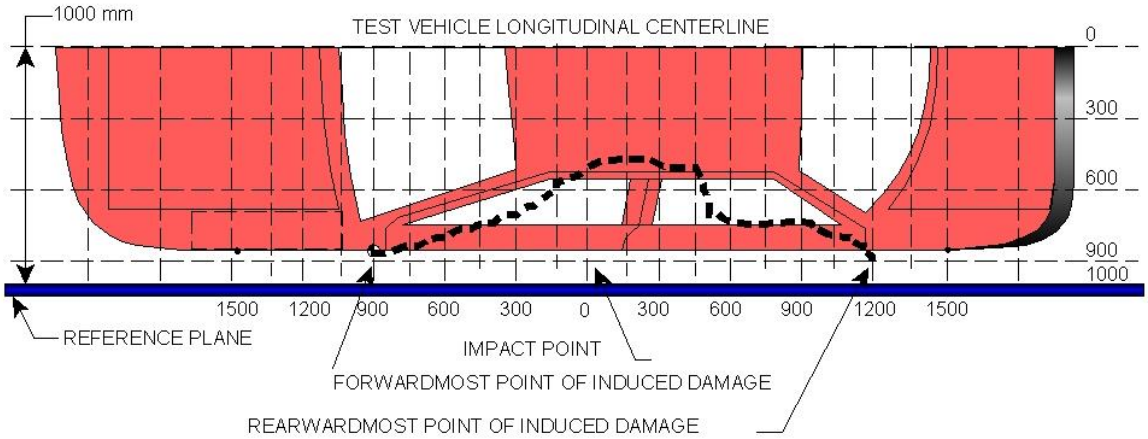
DATA SHEET NO. 10 (CONTINUED)
VEHICLE EXTERIOR CRUSH MEASUREMENTS

Test Vehicle: 2016 Ford F-250 SuperCrew Pickup Truck NHTSA No.: M20160200
Test Program: SPNCAP Side Impact Test Date: 10/15/15



DATA SHEET NO. 11
VEHICLE DAMAGE PROFILE DISTANCES

Test Vehicle: 2016 Ford F-250 SuperCrew Pickup Truck NHTSA No.: M20160200
Test Program: SPNCAP Side Impact Test Date: 10/15/15



VEHICLE DAMAGE PROFILE DISTANCES[1]

DPD	Distance From Impact Point (mm)	Level	Post-Test (mm)	Pre-Test (mm)	Crush (mm)
1	1500	1	-19	-8	0
2	1050	3	-102	20	122
3	600	1	-244	3	247
4	300	1	-471	5	476
5[2]	-150	1	-471	6	477
6	-600	1	-116	4	0

[1] DPD 1 and 6 defined as zero crush since the crush doesn't extend to the end of the vehicle.

[2] DPD 5 has a max crush of 477 at two locations; sill top (level 1) and mid door (level 3).

DATA SHEET NO. 12

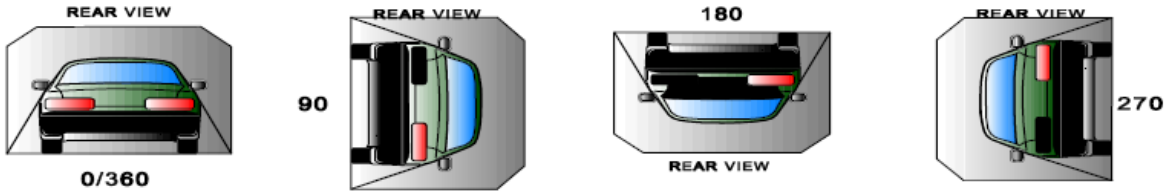
FMVSS NO. 301 FUEL SYSTEM INTEGRITY POST-IMPACT DATA

Test Vehicle: 2016 Ford F-250 SuperCrew Pickup Truck NHTSA No.: M20160200
Test Program: SPNCAP Side Impact Test Date: 10/15/15

Test Time: 17:09 **Temperature:** 21.1ºC

A. From impact until vehicle motion ceases: 0 oz.
(Maximum allowable is 1 ounce)
B. For the 5 minute period after motion ceases: 0
(Maximum allowable is 5 ounces)
C. For the following 25 minutes: 0
(Maximum allowable is 1 ounce/minute)
D. Spillage Deta1LS: None

FMVSS 301 STATIC ROLLOVER DATA



ROLLOVER SOLVENT COLLECTION TIME TABLE IN SECONDS

Test Phase	Rotation Time	Hold Time	Total Time
0 to 90	90	330	420
90 to 180	90	330	840
180 to 270	90	330	1260
270 to 360	90	330	1680

FMVSS NO. 301 ROLLOVER SPILLAGE TABLE

Test Phase	First 5 Minutes	Sixth Minute	Seventh Minute	Eighth Minute
0 to 90	0	0	0	N/A
90 to 180	0	0	0	N/A
180 to 270	0	0	0	N/A
270 to 360	0	0	0	N/A

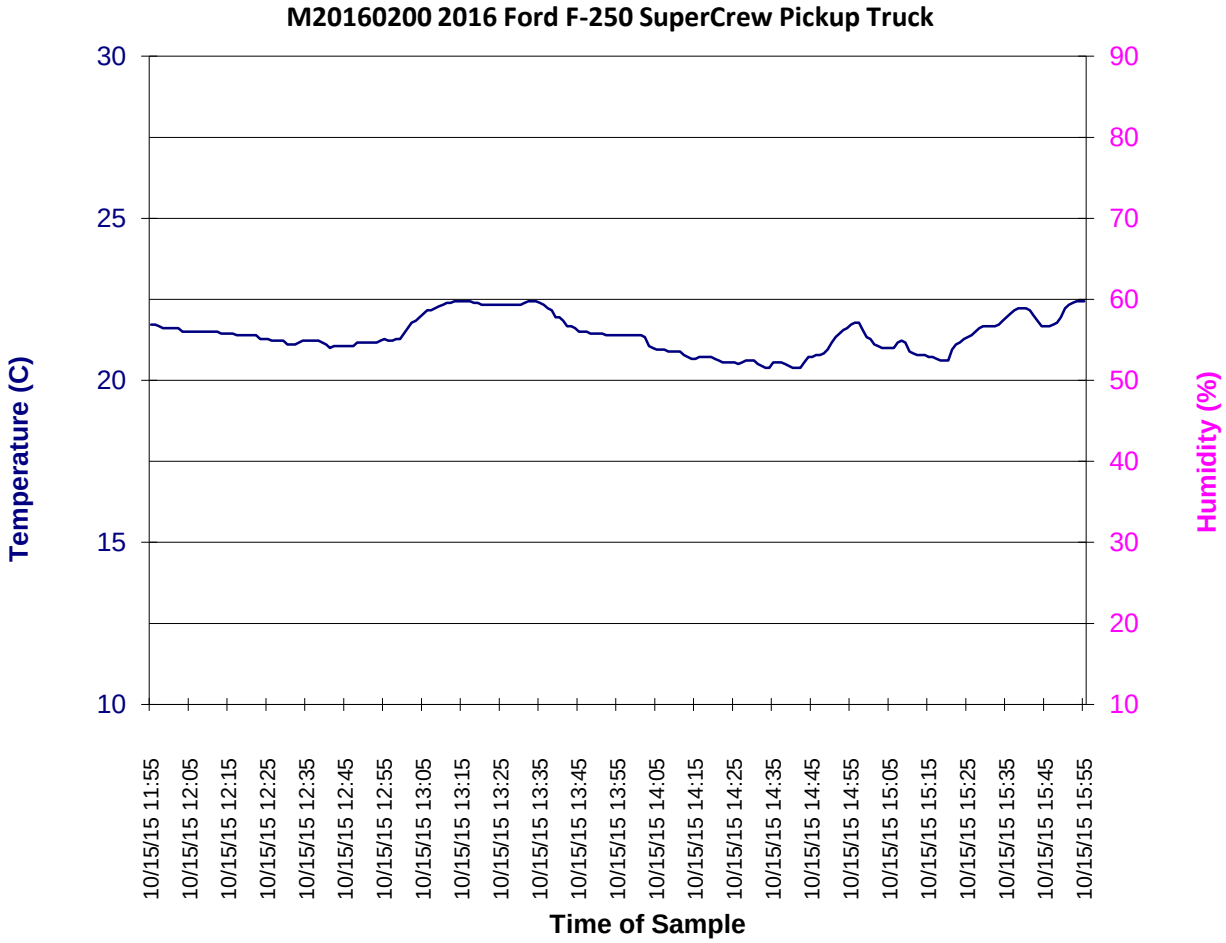
ROLLOVER SOLVENT SPILLAGE LOCATION TABLE

Test Phase	Spillage Location
0 to 90	None
90 to 180	None
180 to 270	None
270 to 360	None

DATA SHEET NO. 13[1]

DUMMY/VEHICLE TEMPERATURE AND HUMIDITY STABILIZATION DATA

Test Vehicle: 2016 Ford F-250 SuperCrew Pickup Truck NHTSA No.: M20160200
Test Program: SPNCAP Side Impact Test Date: 10/15/15



[1] The humidity was not recorded for this test.

APPENDIX A

PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

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38	Pre-Test Close-Up Left Side View of Driver Seat Back	**A-22**
39	Pre-Test Close-Up View of Driver Seat Back or Head Restraint	**A-23**
40	Pre-Test Dummy and Door Clearance View	**A-23**
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50	Post-Test Dummy Close-Up Pelvis Contact with Vehicle Interior View	**A-28**
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52	Post-Test Dummy Close-Up Knee Contact with Vehicle Interior View	**A-29**
53	Pre-Test View of Fuel Filler Cap or Fuel Filler Neck	**A-30**
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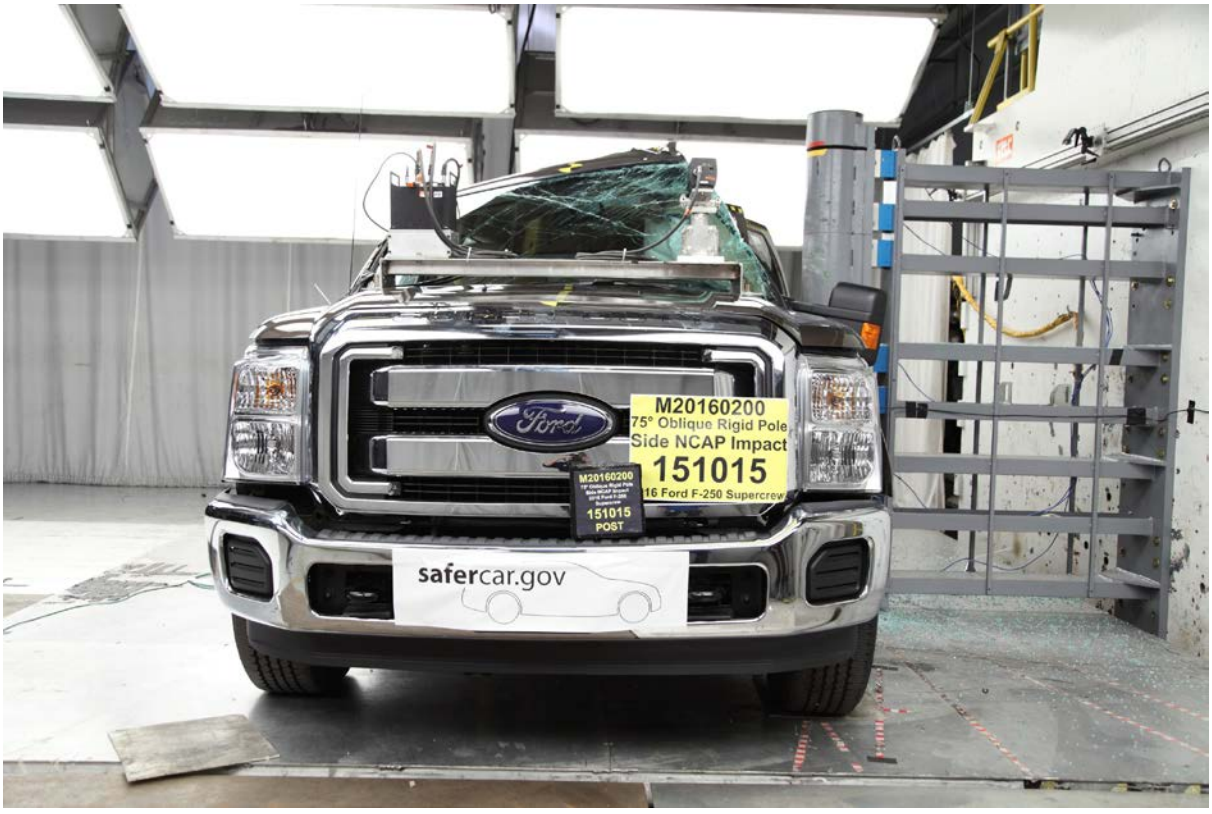
70	Head Restraint Use and Adjustment Information from Vehicle Owner's Manual	**A-39**
71	Post-Test View of Shattered Vehicle Inner Door Panel	**A-40**

001 As Delivered Right Front 3-4 View of Test Vehicle

002 As Delivered Left Rear 3-4 View of Test Vehicle

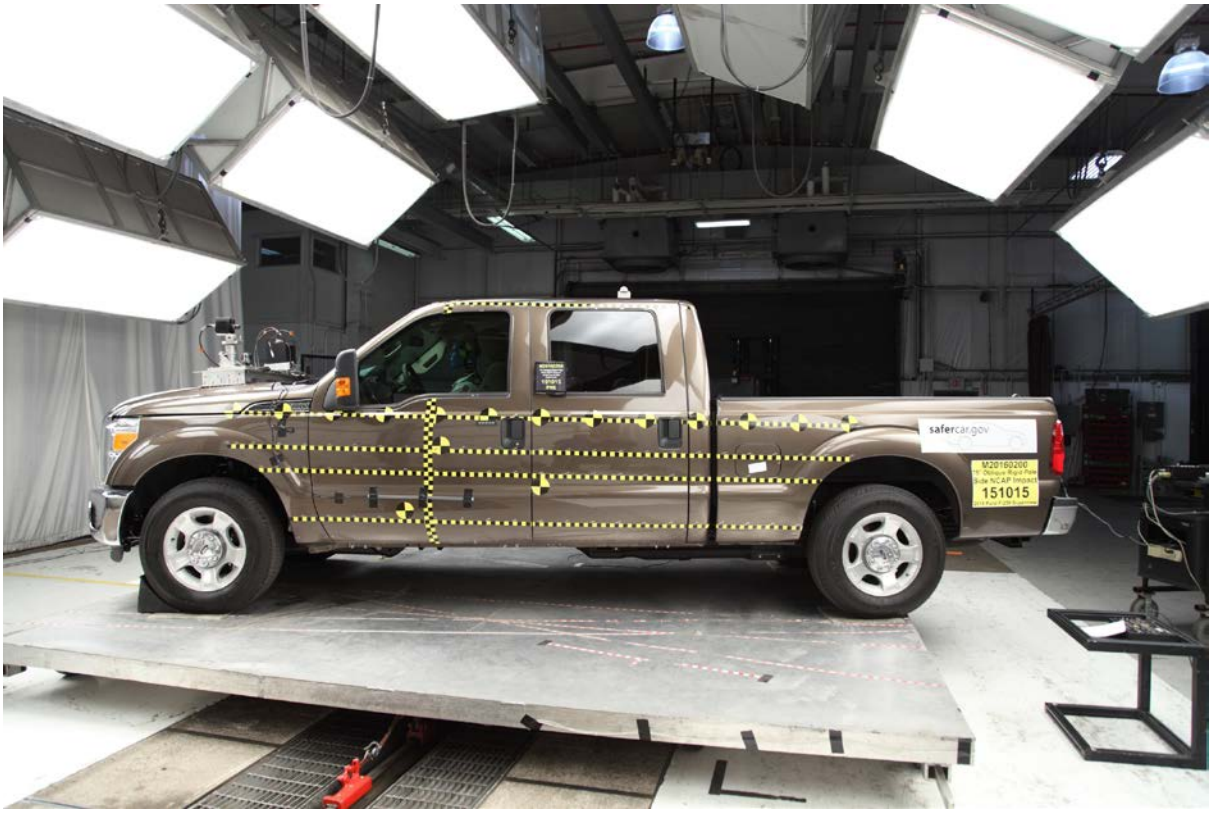
003 Pre-Test Frontal View of Test Vehicle



004 Post-Test Frontal View of Test Vehicle

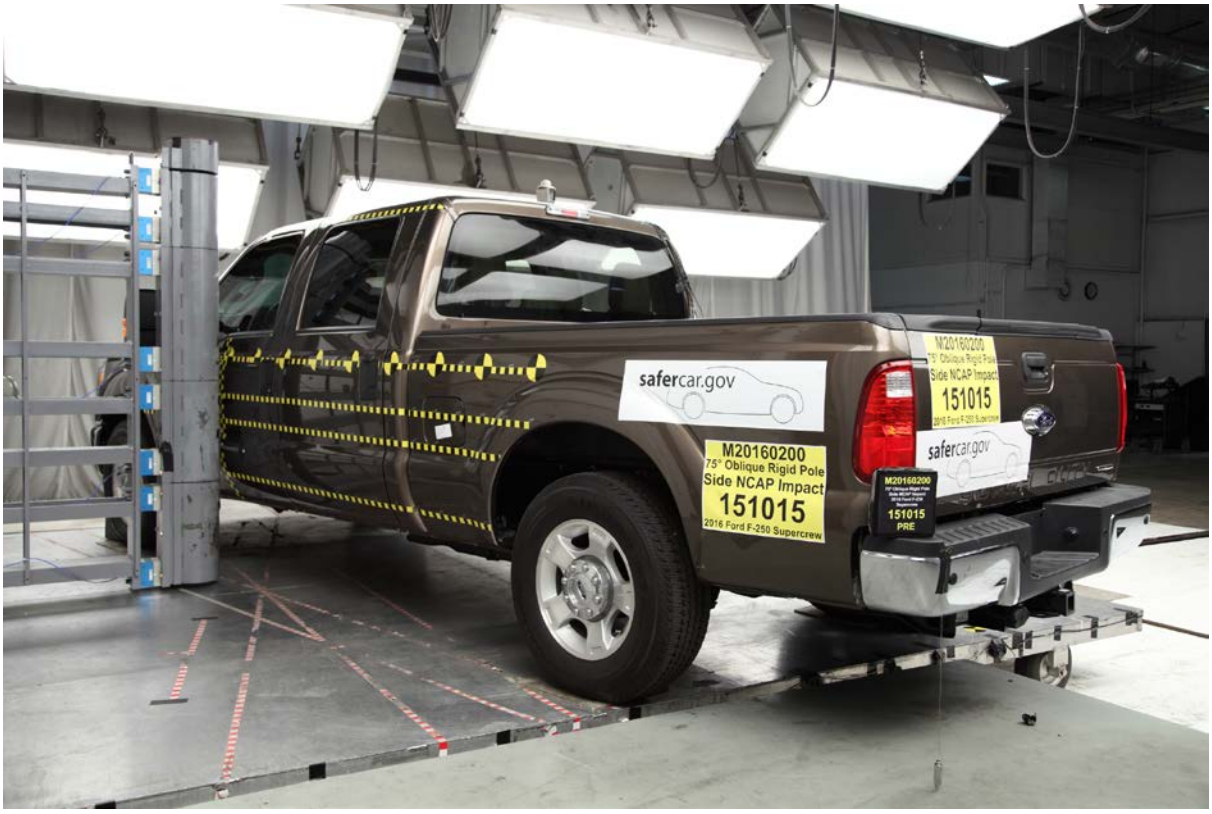
005 Pre-Test Left Front 3-4 View of Test Vehicle

006 Post-Test Left Front 3-4 View of Test Vehicle



007 Pre-Test Left Side View of Test Vehicle

008 Post-Test Left Side View of Test Vehicle



009 Pre-Test Left Rear 3-4 View of Test Vehicle

010 Post-Test Left Rear 3-4 View of Test Vehicle

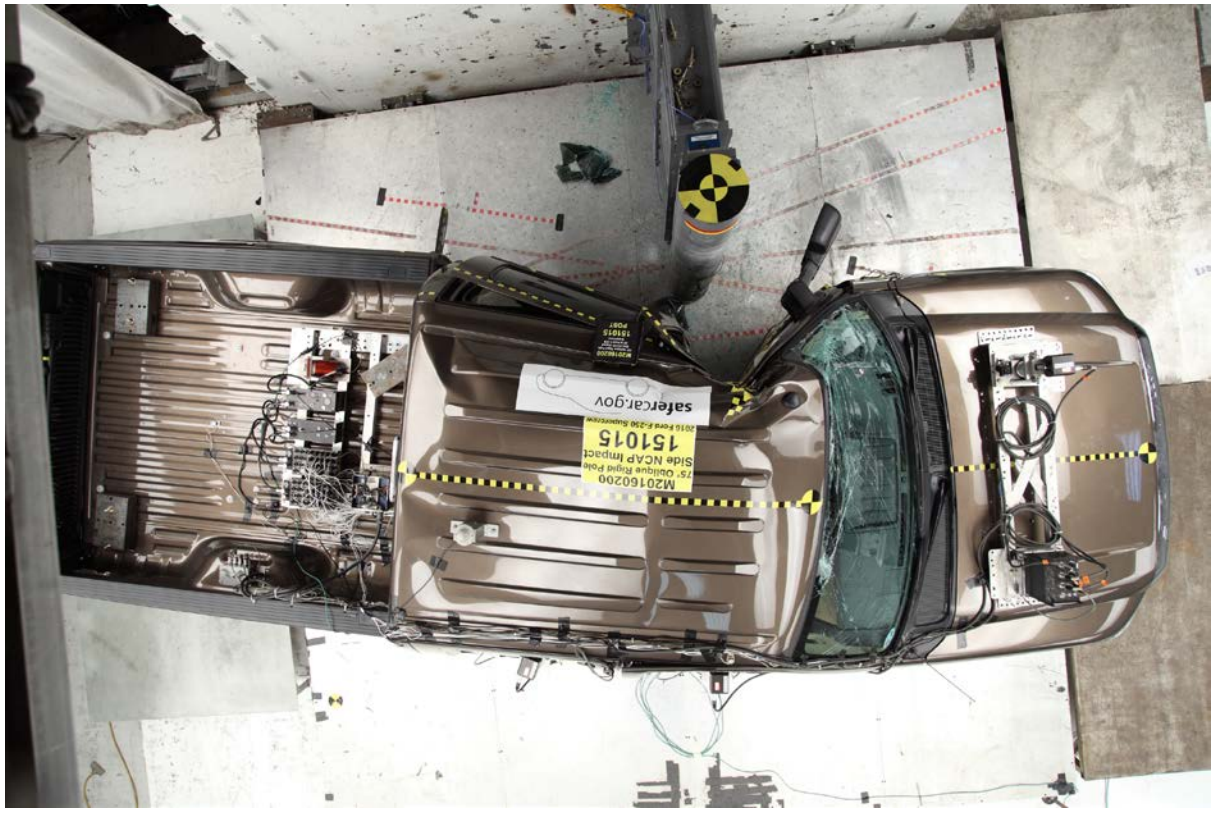
011 Pre-Test Rear View of Test Vehicle

012 Post-Test Rear View of Test Vehicle

013 Pre-Test Right Side View of Test Vehicle

014 Post-Test Right Side View of Test Vehicle

015 Pre-Test Overhead View of Test Area

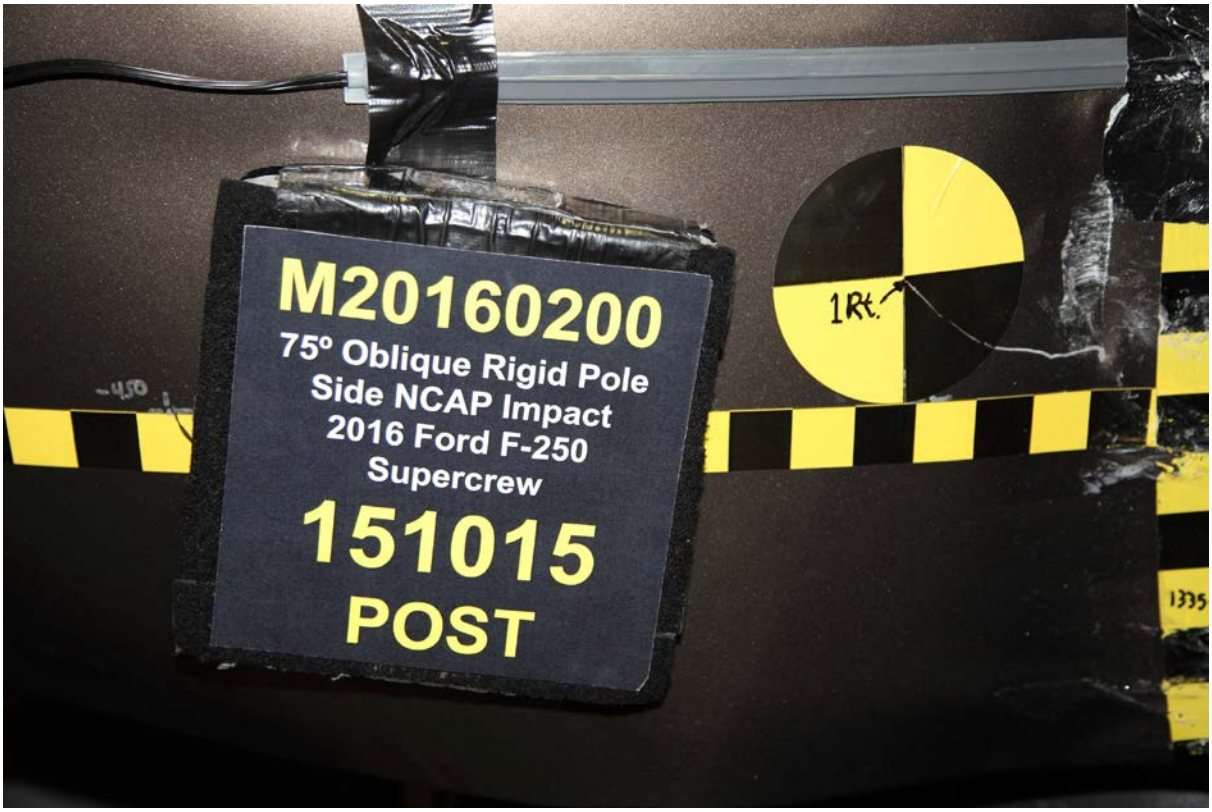


016 Post-Test Overhead View of Test Area

017 Pre-Test Left Side View of Pole Positioned Against Side of Vehicle

018 Pre-Test Right Side View of Pole Positioned Against Side of Vehicle

019 Pre-Test Close-Up View of Impact Point Target



020 Post-Test Close-Up View of Impact Point Target Showing Impact Location

021 Pre-Test Front Close-Up View of Dummy Head and Chest

022 Post-Test Front Close-Up View of Dummy

023 Pre-Test Left Side View of Dummy Showing Belt and Chalking

024 Pre-Test Left Side View of Dummy Shoulder and Door Top View

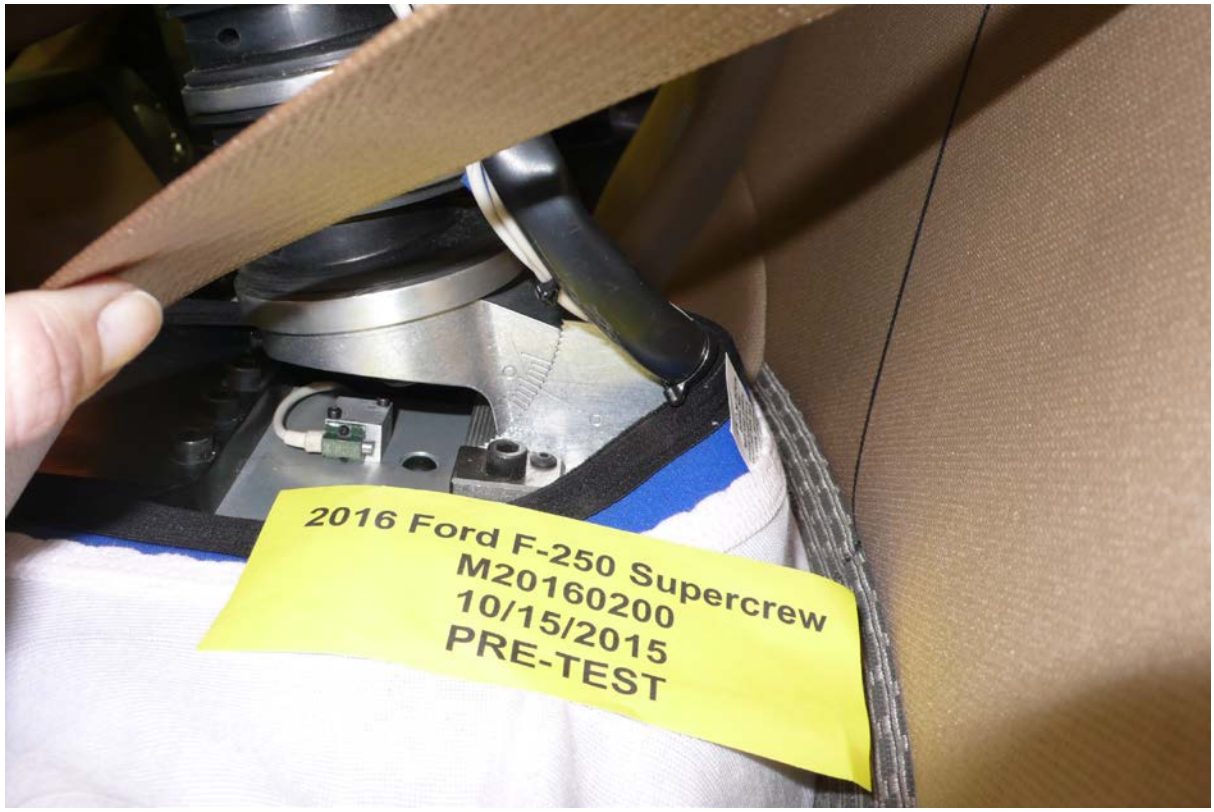
025 Post-Test Left Side View of Dummy Shoulder and Door Top View

026 Pre-Test Front View of Seat Back Prior to Dummy Positioning

027 Pre-Test Front View of Dummy Head and Shoulders in Relation to Head Restraint

028 Pre-Test Front View of Seat Pan Prior to Dummy Positioning

029 Pre-Test Overhead View of Dummy Thighs on Seat Pan



030 Pre-Test Left Side View of Dummy Neck Showing Position of Adjustable Neck Bracket

031 Pre-Test Left Side View of Dummy Head Showing Dummy Head is Level

032 Pre-Test Placement of Dummy Feet

033 Pre-Test View of Belt Anchorage for Dummy

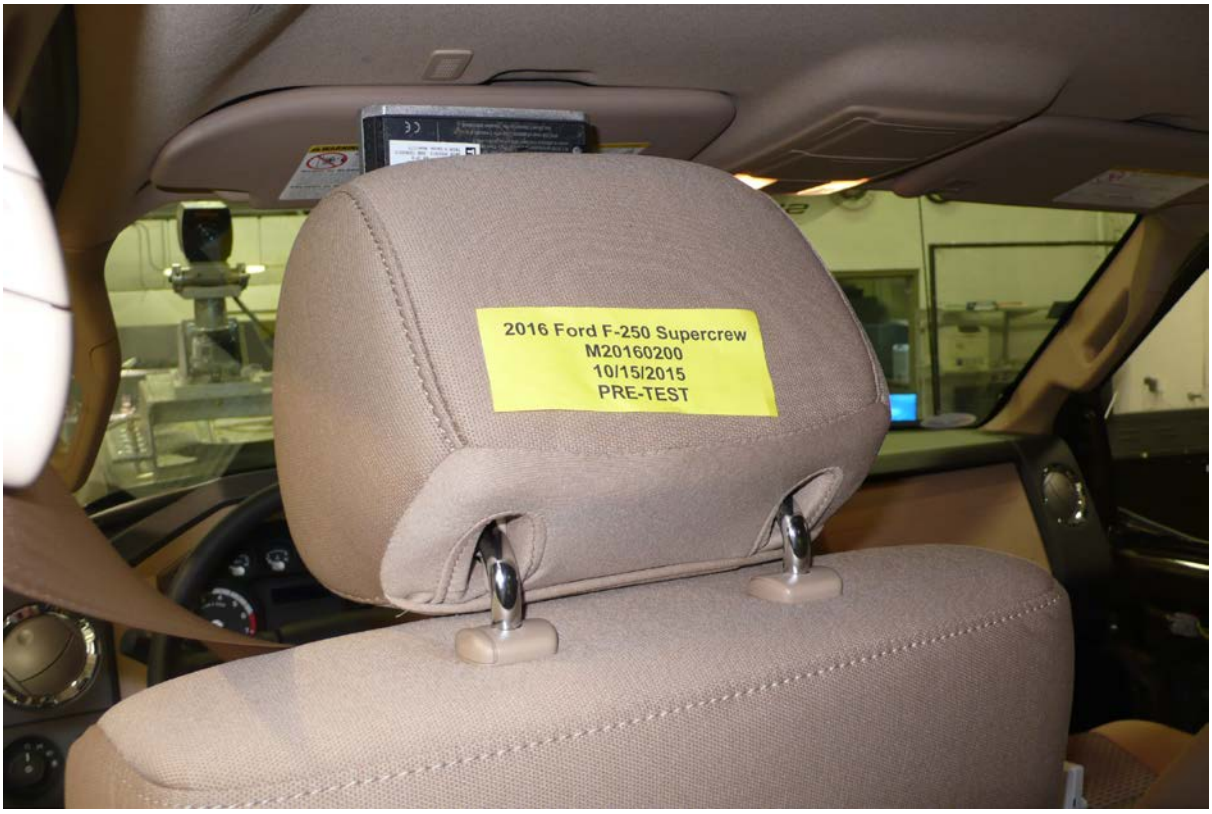
034 Pre-Test Left Side View of Steering Wheel

035 Pre-Test View of Disengaged Parking Brake

036 Pre-Test View of Parking Brake

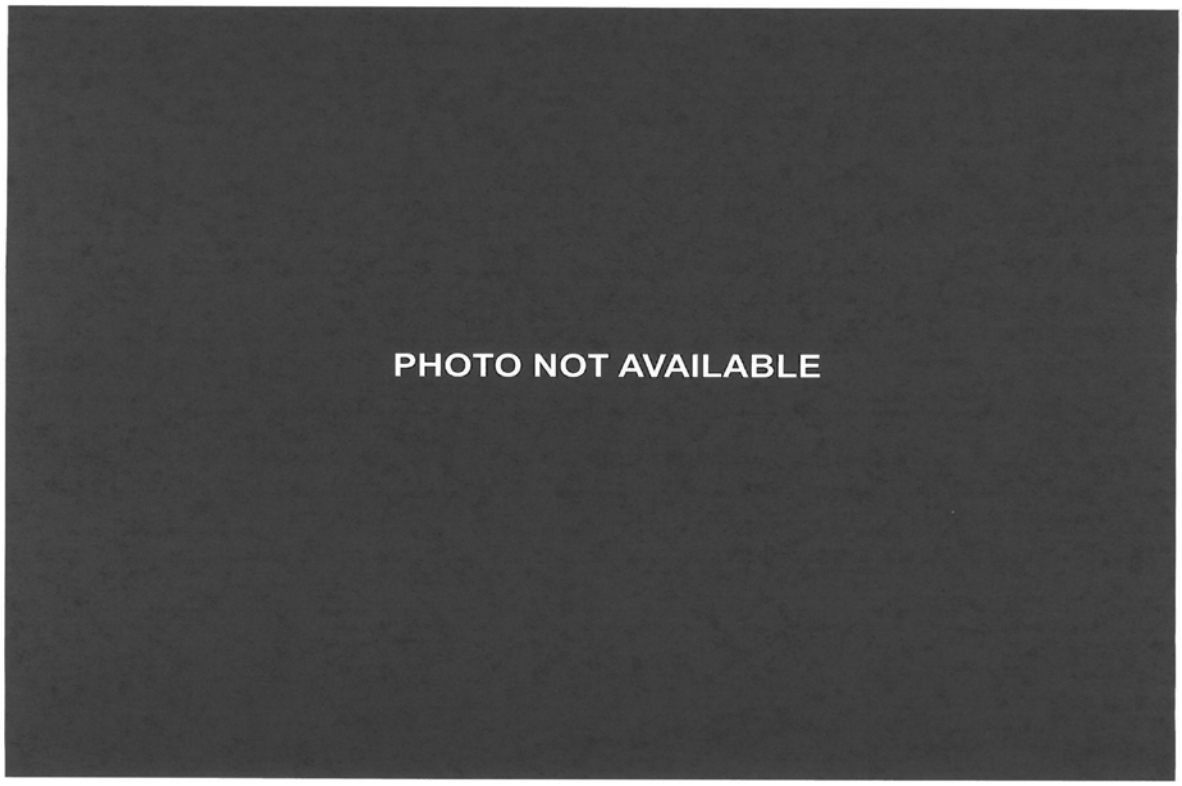
037 Pre-Test Close-Up Left Side View of Driver Seat Track

038 Pre-Test Close-Up Left Side View of Driver Seat Back

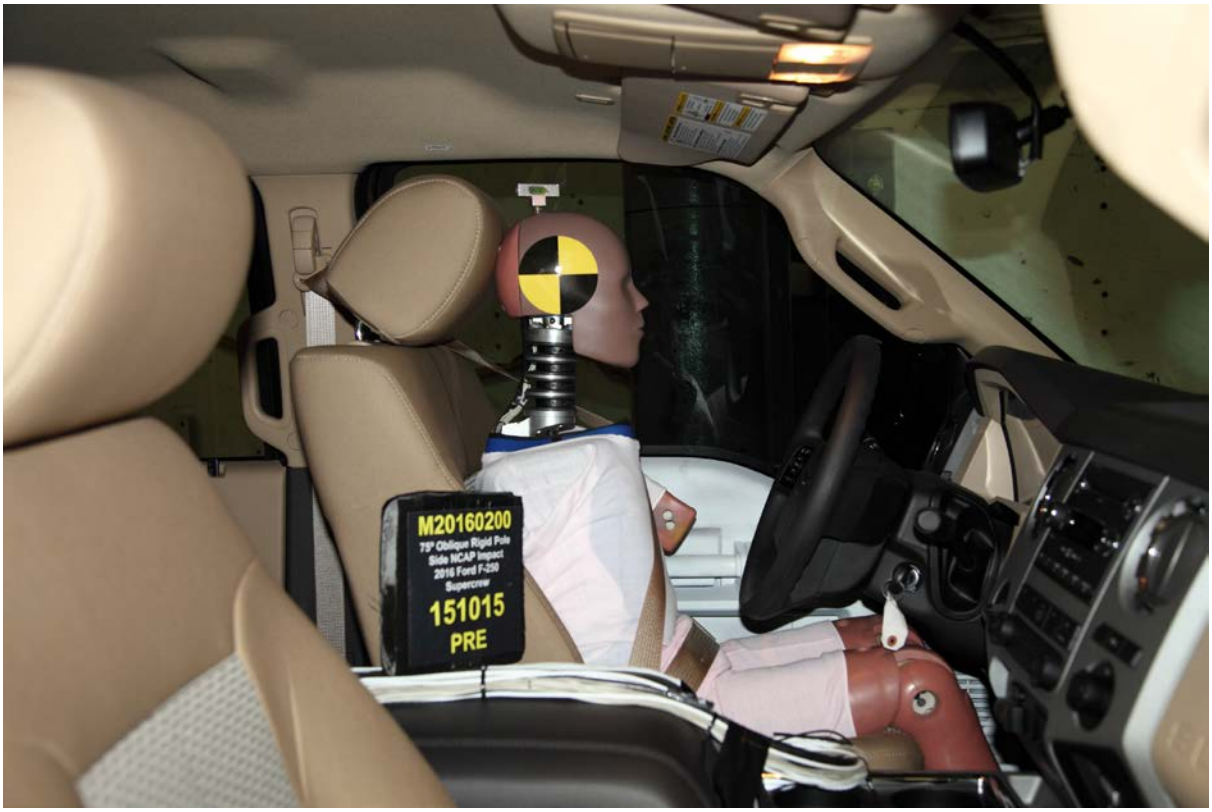


039 Pre-Test Close-Up View of Driver Seat Back or Head Restraint

040 Pre-Test Dummy and Door Clearance View



041 Post-Test Dummy and Door Clearance View

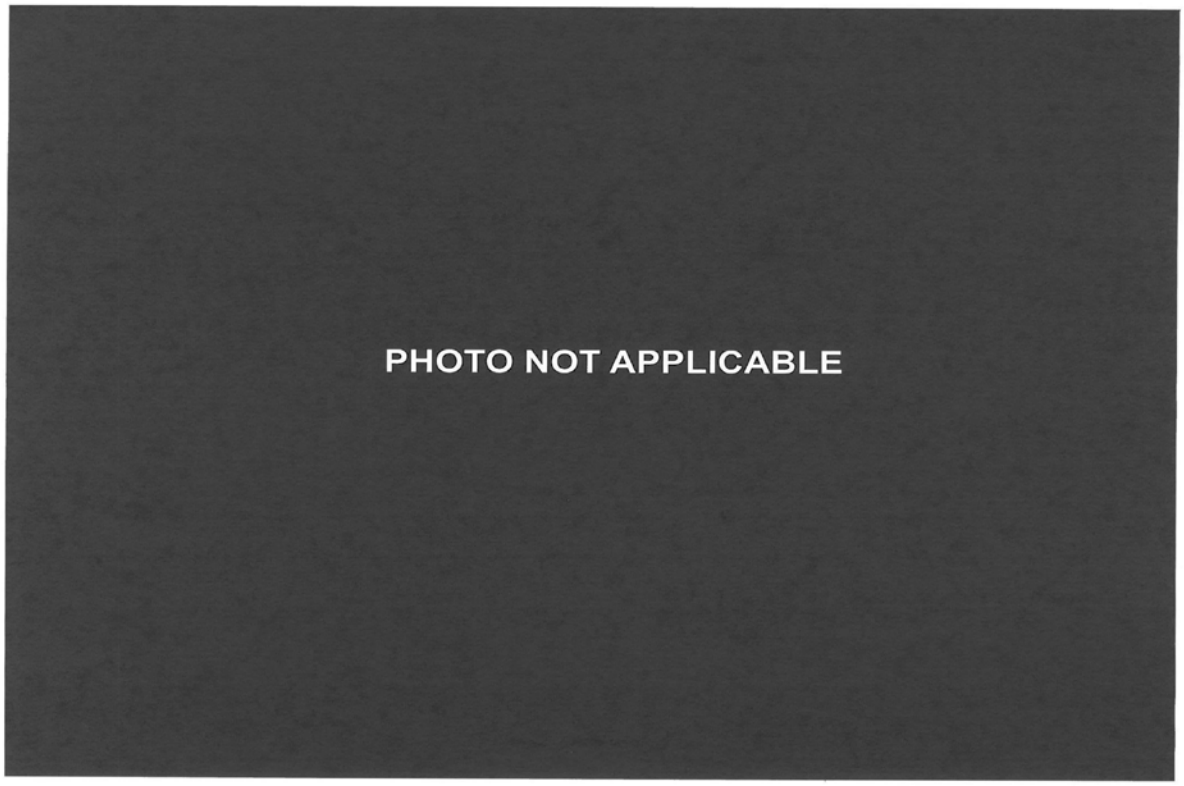


042 Pre-Test Right Side View of Dummy and Front Seat of Occupant Compartment

043 Post-Test Right Side View of Dummy and Front Seat of Occupant Compartment

044 Pre-Test Inner Driver Door Panel View

045 Post-Test Inner Driver Door Panel View Showing Dummy Contact Location



046 Post-Test Dummy Close-Up Head Contact with Vehicle View

047 Post-Test Dummy Close-Up Head Contact with Side Airbag View

048 Post-Test Dummy Close-Up Torso Contact with Vehicle Interior View

049 Post-Test Dummy Close-Up Torso Contact with Side Airbag View

050 Post-Test Dummy Close-Up Pelvis Contact with Vehicle Interior View

051 Post-Test Dummy Close-Up Pelvis Contact with Side Airbag View

052 Post-Test Dummy Close-Up Knee Contact with Vehicle Interior View

053 Pre-Test View of Fuel Filler Cap or Fuel Filler Neck

054 Post-Test View of Fuel Filler Cap or Fuel Filler Neck

055 Close-Up View of Vehicle Certification Label

056 Close-Up View of Vehicle Tire Information Placard or Label

057 Pre-Test Pole Barrier Front View

058 Post-Test Pole Barrier Front View

059 Pre-Test Pole Barrier Side View

060 Post-Test Pole Barrier Side View

061 Pre-Test Ballast View 1

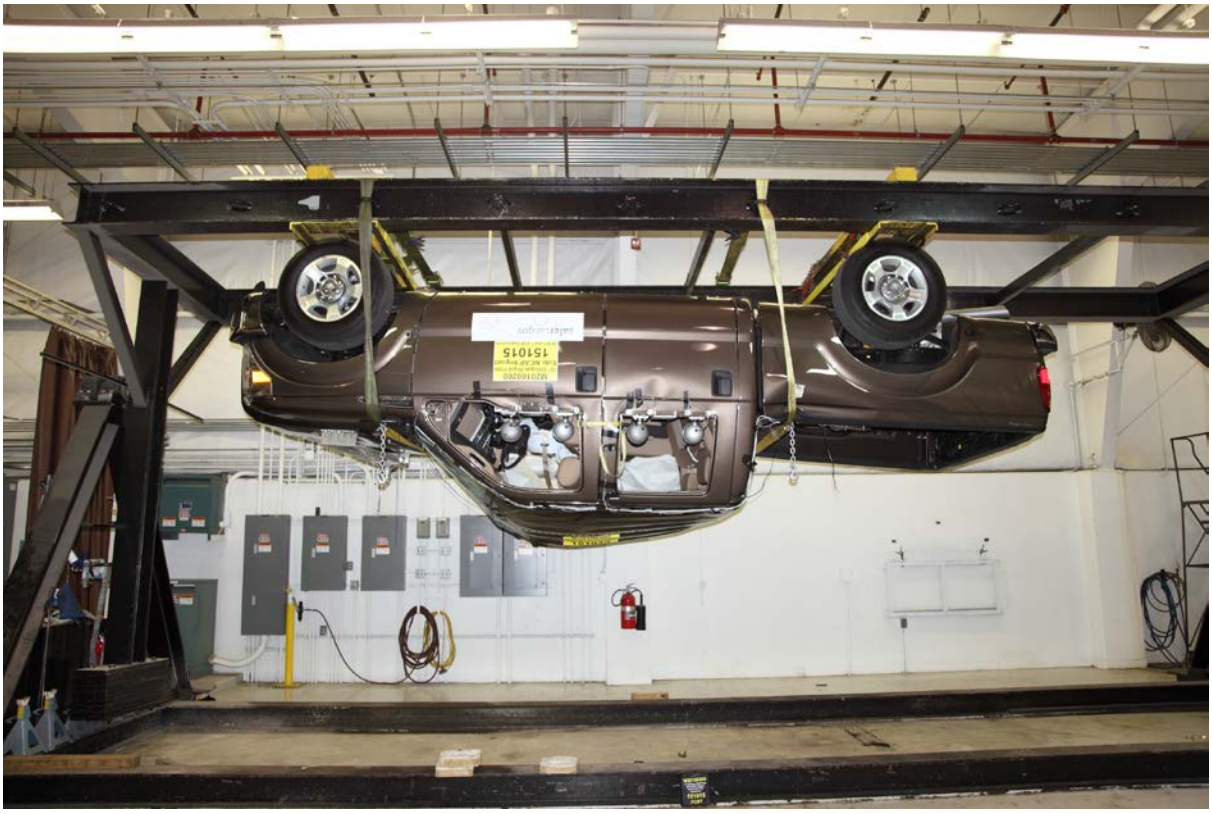
061a Pre Test Ballast View 2

061b Pre Test Ballast View 3

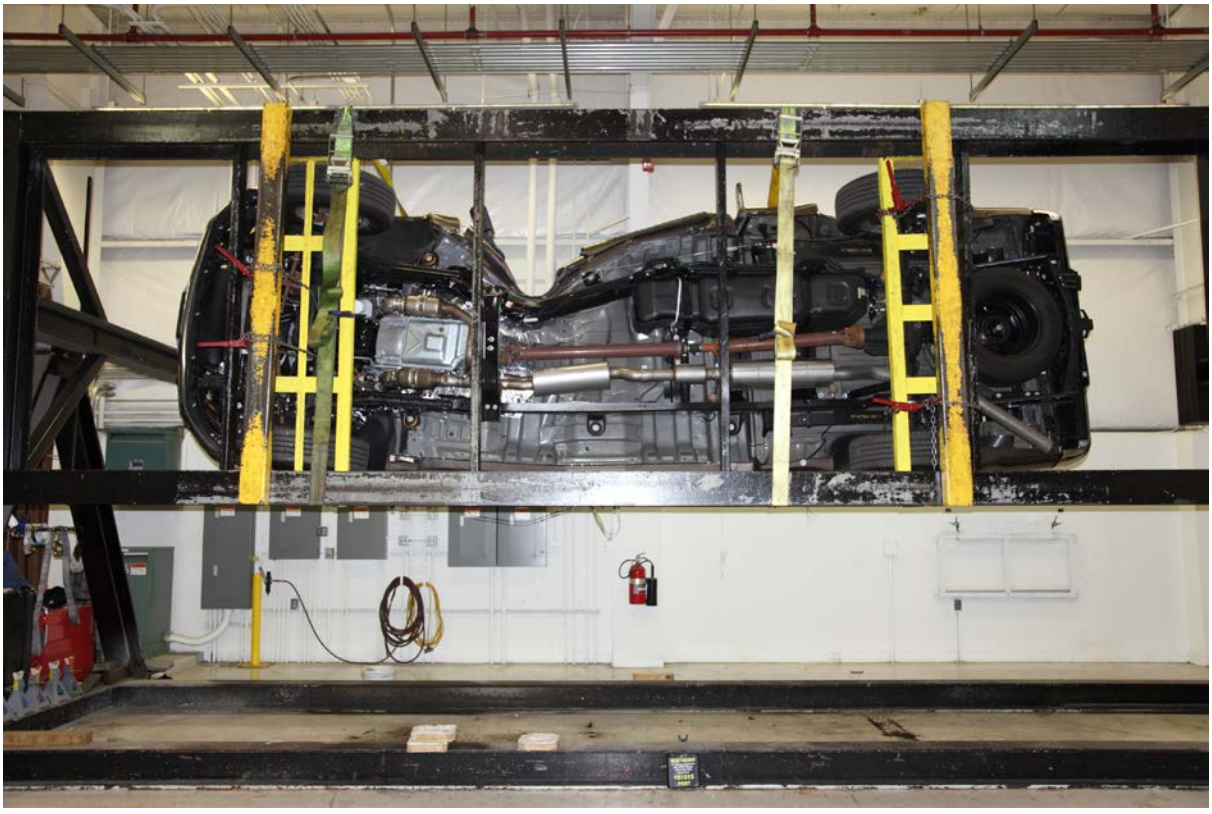
062 Post-Test Primary and Redundant Speed Trap Read-Out

063 FMVSS No. 301 Static Rollover 0 Degrees

064 FMVSS No. 301 Static Rollover 90 Degrees



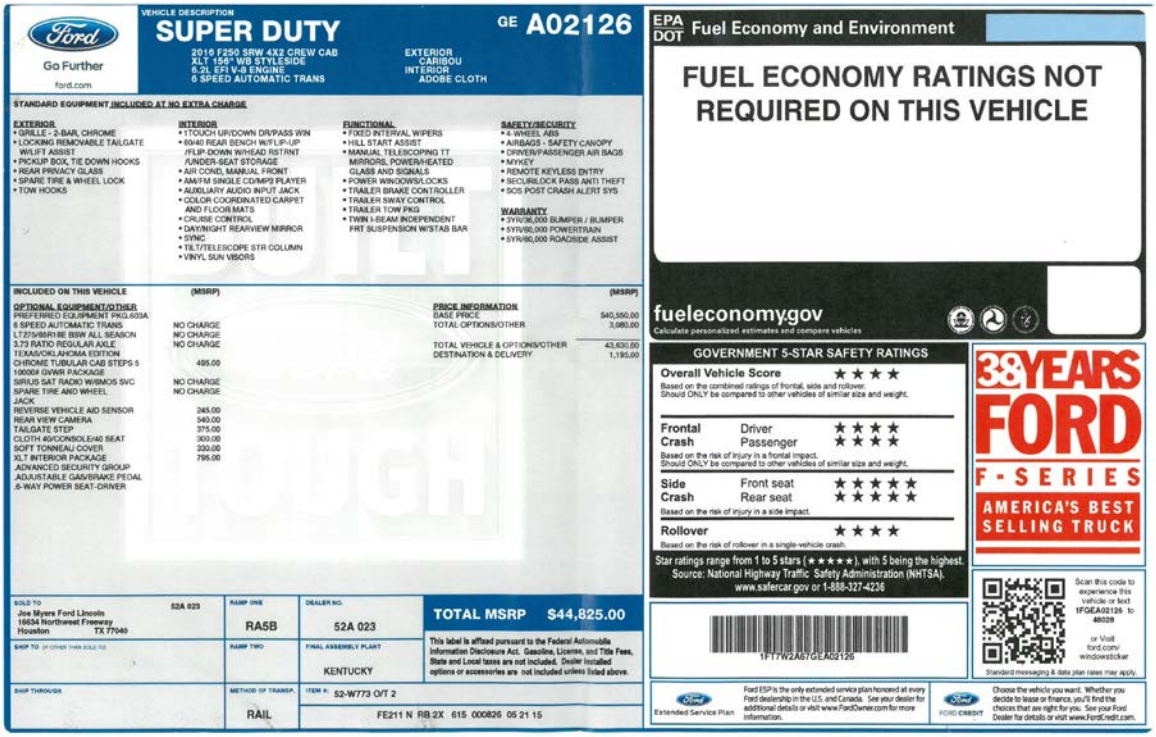
065 FMVSS No. 301 Static Rollover 180 Degrees



066 FMVSS No. 301 Static Rollover 270 Degrees

067 FMVSS No. 301 Static Rollover 360 Degrees

068 Impact Event



VEHICLE DESCRIPTION
SUPER DUTY
GE A02126
2010 F250 SRW 4X2 CREW CAB
XLT 156" WB STYLESIDE
6.2L EFI V-8 ENGINE
6 SPEED AUTOMATIC TRANS
EXTERIOR CARIBOU
INTERIOR ADOBE CLOTH

Ford Go Further ford.com

STANDARD EQUIPMENT INCLUDED AT NO EXTRA CHARGE

EXTERIOR
• GRILLE - 2-BAR, CHROME
• LOCKING REMOVABLE TAILGATE W/LIFT ASSIST
• PICKUP BOX, TIE DOWN HOOKS
• REAR PRIVACY GLASS
• SPARE TIRE & WHEEL LOCK
• TOW HOOKS

INTERIOR
• 1TOUCH UP/DOWN DR/PASS WIN
• 60/40 REAR BENCH W/TLP-UP /FLIP-DOWN W/HEAD RSTRNT /UNDER-SEAT STORAGE
• AIR COND, MANUAL, FRONT
• AM/FM SINGLE CD/MP3 PLAYER
• AUXILIARY AUDIO INPUT JACK
• COLOR-COORDINATED CARPET AND FLOOR MATS
• CRUISE CONTROL
• DAY/NIGHT REARVIEW MIRROR
• SYNC
• TILT/TELESCOPE STR COLUMN
• VINYL SUN VISORS

FUNCTIONAL
• FIXED INTERVAL WIPERS
• HILL START ASSIST
• MANUAL TELESCOPING TT MIRRORS, POWER/HEATED GLASS AND SIGNALS
• POWER WINDOWS/LOCKS
• TRAILER BRAKE CONTROLLER
• TRAILER SWAY CONTROL
• TRAILER TOW PKG
• TWIN I-BEAM INDEPENDENT FRT SUSPENSION W/STAB BAR

SAFETY/SECURITY
• 4-WHEEL ABS
• AIRBAGS - SAFETY CANOPY
• DRIVER/PASSENGER AIR BAGS
• MYKEY
• REMOTE KEYLESS ENTRY
• SECURILOCK PASS ANTI THEFT
• SOS POST CRASH ALERT SYS

WARRANTY
• 3YR/36,000 BUMPER / BUMPER
• 5YR/60,000 POWERTRAIN
• 5YR/60,000 ROADSIDE ASSIST

INCLUDED ON THIS VEHICLE	(MSRP)
OPTIONAL EQUIPMENT/OTHER	
PREFERRED EQUIPMENT PKG.603A	
6 SPEED AUTOMATIC TRANS	NO CHARGE
LT275/65R18E BSW ALL SEASON	NO CHARGE
3.73 RATIO REGULAR AXLE	NO CHARGE
TEXAS/OKLAHOMA EDITION	
CHROME TUBULAR CAB STEPS 5	495.00
10000# GVWR PACKAGE	
SIRIUS SAT RADIO W/6MOS SVC	NO CHARGE
SPARE TIRE AND WHEEL	NO CHARGE
JACK	
REVERSE VEHICLE AID SENSOR	245.00
REAR VIEW CAMERA	540.00
TAILGATE STEP	375.00
CLOTH 40/CONSOLE/40 SEAT	300.00
SOFT TONNEAU COVER	330.00
XLT INTERIOR PACKAGE	795.00
ADVANCED SECURITY GROUP	
ADJUSTABLE GAS/BRAKE PEDAL	
6-WAY POWER SEAT-DRIVER	

PRICE INFORMATION	(MSRP)
BASE PRICE	$40,550.00
TOTAL OPTIONS/OTHER	3,080.00
TOTAL VEHICLE & OPTIONS/OTHER	43,630.00
DESTINATION & DELIVERY	1,195.00

SOLD TO: Joe Myers Ford Lincoln, 16634 Northwest Freeway, Houston TX 77040 — 52A 023
SHIP TO
SHIP THROUGH
RAMP ONE: RA5B
RAMP TWO
METHOD OF TRANSP.: RAIL
DEALER NO.: 52A 023
FINAL ASSEMBLY PLANT: KENTUCKY
ITEM #: 52-W773 O/T 2
FE211 N RB 2X 615 000826 05 21 15

TOTAL MSRP $44,825.00

This label is affixed pursuant to the Federal Automobile Information Disclosure Act. Gasoline, License, and Title Fees, State and Local taxes are not included. Dealer installed options or accessories are not included unless listed above.

EPA DOT Fuel Economy and Environment

FUEL ECONOMY RATINGS NOT REQUIRED ON THIS VEHICLE

fueleconomy.gov
Calculate personalized estimates and compare vehicles

GOVERNMENT 5-STAR SAFETY RATINGS

Overall Vehicle Score ★★★★
Based on the combined ratings of frontal, side and rollover. Should ONLY be compared to other vehicles of similar size and weight.

Frontal Crash — Driver ★★★★ — Passenger ★★★★
Based on the risk of injury in a frontal impact. Should ONLY be compared to other vehicles of similar size and weight.

Side Crash — Front seat ★★★★★ — Rear seat ★★★★★
Based on the risk of injury in a side impact.

Rollover ★★★★
Based on the risk of rollover in a single-vehicle crash.

Star ratings range from 1 to 5 stars (★★★★★), with 5 being the highest. Source: National Highway Traffic Safety Administration (NHTSA). www.safercar.gov or 1-888-327-4236

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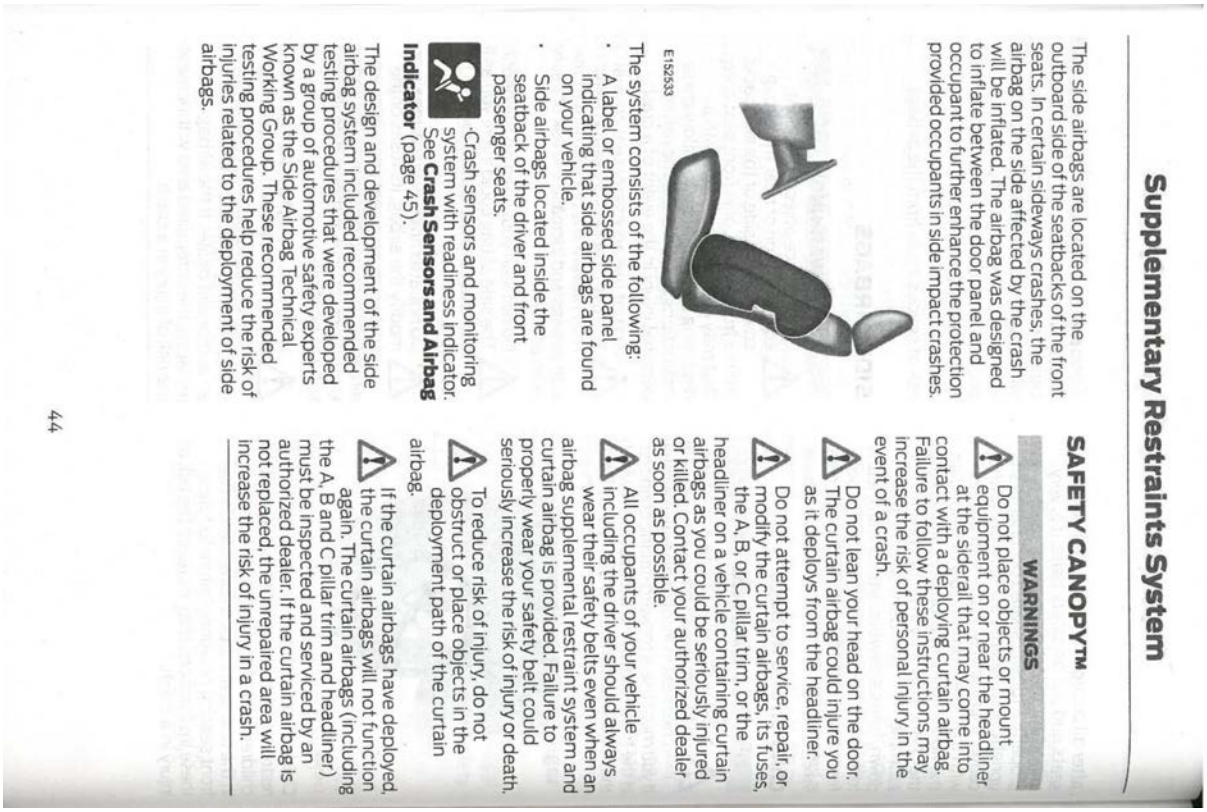
1FT7W2A67GEA02126

Scan this code to experience this vehicle or text 1FGEA02126 to 48028 or Visit ford.com/windowsticker
Standard messaging & data plan rates may apply.

Ford Extended Service Plan — Ford ESP is the only extended service plan honored at every Ford dealership in the U.S. and Canada. See your dealer for additional details or visit www.FordOwner.com for more information.

Ford Credit — Choose the vehicle you want. Whether you decide to lease or finance, you'll find the choices that are right for you. See your Ford Dealer for details or visit www.FordCredit.com.

069 Monroney Label



Supplementary Restraints System

The side airbags are located on the outboard side of the seatbacks of the front seats. In certain sideways crashes, the airbag on the side affected by the crash will be inflated. The airbag was designed to inflate between the door panel and occupant to further enhance the protection provided occupants in side impact crashes.

E152533

The system consists of the following:

- A label or embossed side panel indicating that side airbags are found on your vehicle.
- Side airbags located inside the seatback of the driver and front passenger seats.
- Crash sensors and monitoring system with readiness indicator. See **Crash Sensors and Airbag Indicator** (page 45).

The design and development of the side airbag system included recommended testing procedures that were developed by a group of automotive safety experts known as the Side Airbag Technical Working Group. These recommended testing procedures help reduce the risk of injuries related to the deployment of side airbags.

SAFETY CANOPY™

WARNINGS

Do not place objects or mount equipment on or near the headliner at the sliderail that may come into contact with a deploying curtain airbag. Failure to follow these instructions may increase the risk of personal injury in the event of a crash.

Do not lean your head on the door. The curtain airbag could injure you as it deploys from the headliner.

Do not attempt to service, repair, or modify the curtain airbags, its fuses, the A, B, or C pillar trim, or the headliner on a vehicle containing curtain airbags as you could be seriously injured or killed. Contact your authorized dealer as soon as possible.

All occupants of your vehicle including the driver should always wear their safety belts even when an airbag supplemental restraint system and curtain airbag is provided. Failure to properly wear your safety belt could seriously increase the risk of injury or death.

To reduce risk of injury, do not obstruct or place objects in the deployment path of the curtain airbag.

If the curtain airbags have deployed, the curtain airbags will not function again. The curtain airbags (including the A, B and C pillar trim and headliner) must be inspected and serviced by an authorized dealer. If the curtain airbag is not replaced, the unrepaired area will increase the risk of injury in a crash.

44

070 Head Restraint Use and Adjustment Information from Vehicle Owner Manual

071 Post-Test View of Shattered Vehicle Inner Door Panel

APPENDIX B
VEHICLE AND DUMMY RESPONSE DATA PLOTS

TABLE OF DATA PLOTS

No.	Description	Page
1	Driver Head Acceleration (X) vs. Time	B-4
2	Driver Head Acceleration (Y) vs. Time	B-4
3	Driver Head Acceleration (Z) vs. Time	B-4
4	Driver Head Acceleration Resultant vs. Time	B-4
5	Driver Lower Spine T12 Acceleration (X) vs. Time	B-5
6	Driver Lower Spine T12 Acceleration (Y) vs. Time	B-5
7	Driver Lower Spine T12 Acceleration (Z) vs. Time	B-5
8	Driver Lower Spine T12 Acceleration Resultant vs. Time	B-5
9	Driver Iliac Wing Force on Impact Side (Y) vs. Time	B-6
10	Driver Acetabulum Force on Impact Side (Y) vs. Time	B-6
11	Driver Total Pelvis Force on Impact Side (Y) vs. Time	B-6

The following additional data for this test can be obtained from the Research and Development section of the NHTSA website. The website can be found at: www.nhtsa.dot.gov.

Additional Driver Dummy Instrumentation Data

Driver Head Acceleration (X) Redundant
Driver Head Acceleration (Y) Redundant
Driver Head Acceleration (Z) Redundant
Driver Upper Thorax Rib Deflection (Y)
Driver Middle Thorax Rib Deflection (Y)
Driver Lower Thorax Rib Deflection (Y)
Driver Upper Abdomen Rib Deflection (Y)
Driver Lower Abdomen Rib Deflection (Y)

Vehicle Instrumentation Data

Vehicle Center of Gravity Acceleration (X)
Vehicle Center of Gravity Acceleration (Y)
Vehicle Center of Gravity Acceleration (Z)
Left Floor Sill Acceleration (Y)
Left A-Pillar Sill Acceleration (Y)
Left Lower A-Pillar Acceleration (Y)
Left Mid A-Pillar Acceleration (Y)
Left B-Pillar Sill Acceleration (Y)
Left Lower B-Pillar Acceleration (Y)
Left Mid B-Pillar Acceleration (Y)
Driver Seat Track at Dummy Hip Point Acceleration (Y)
Engine Top Acceleration (X)
Engine Top Acceleration (Y)
Firewall Center Acceleration (Y)
Right Roof at Vertical Impact Reference Line Acceleration (Y)
Right Sill at Vertical Impact Reference Line Acceleration (Y)
Rear Floorpan Behind Rear Axle at Centerline Acceleration (X)
Rear Floorpan Behind Rear Axle at Centerline Acceleration (Y)

Pole Instrumentation Data

Load Cell Pole Barrier #1 Force (Y)
Load Cell Pole Barrier #2 Force (Y)
Load Cell Pole Barrier #3 Force (Y)
Load Cell Pole Barrier #4 Force (Y)
Load Cell Pole Barrier #5 Force (Y)
Load Cell Pole Barrier #6 Force (Y)
Load Cell Pole Barrier #7 Force (Y)
Load Cell Pole Barrier #8 Force (Y)

NHTSA

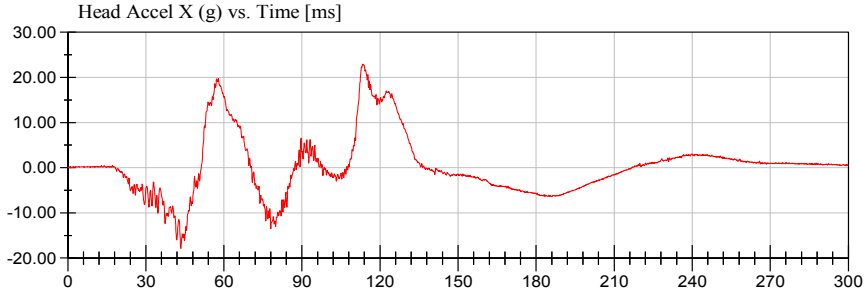
Test Date: 10/15/2015

Position #1 SID IIs Dummy (DI8818)

Test Lab: CTF

Test Number: 151015 (M20160200)

Head Accel X (g) vs. Time [ms]



<Max>

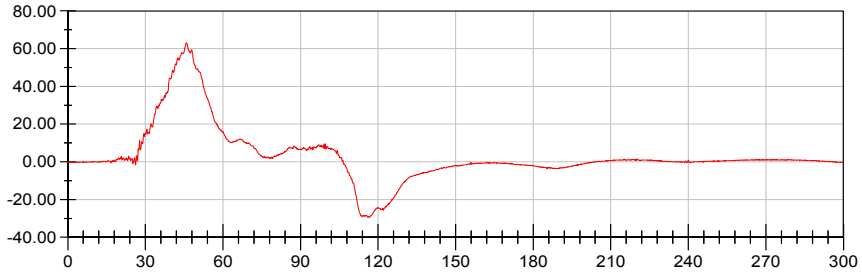
22.95 g at 113.28 ms

<Min>

-17.88 g at 43.44 ms

CFC_1000

Head Accel Y (g) vs. Time [ms]



<Max>

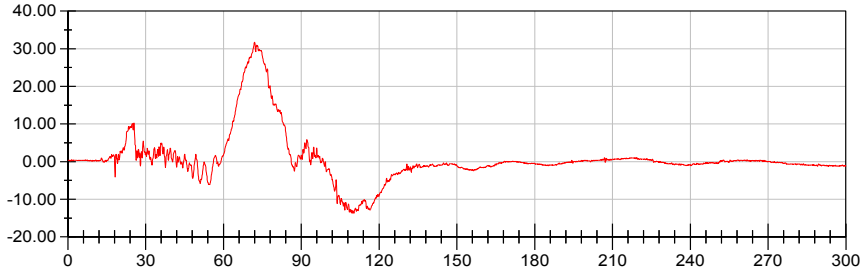
63.02 g at 45.84 ms

<Min>

-29.40 g at 116.08 ms

CFC_1000

Head Accel Z (g) vs. Time [ms]



<Max>

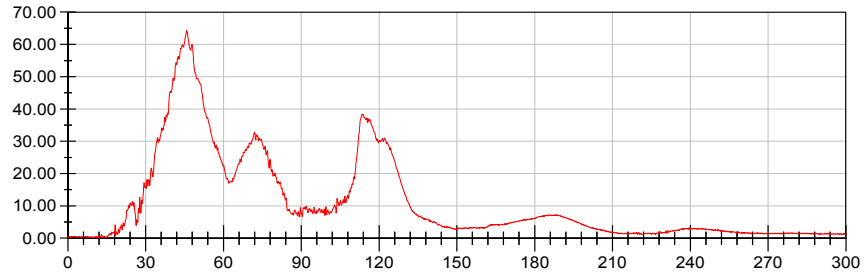
31.76 g at 72.00 ms

<Min>

-13.75 g at 109.60 ms

CFC_1000

Driver Head Acceleration Resultant (g) vs. Time [ms]



<Max>

64.27 g at 45.84 ms

<Min>

0.13 g at 14.80 ms

CFC_1000

NHTSA

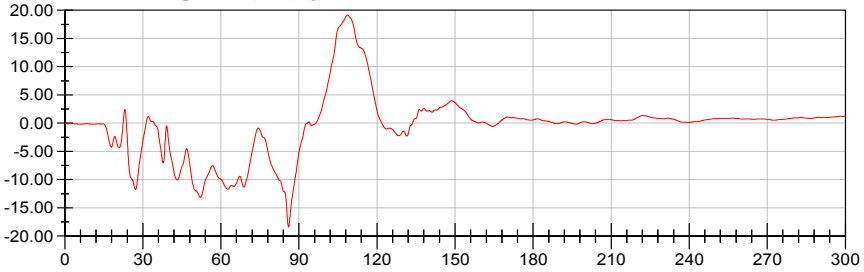
Test Date: 10/15/2015

Position #1 SID IIs Dummy (DI8818)

Test Lab: CTF

Test Number: 151015 (M20160200)

Abdominal Spine X (T12) (g) vs. Time [ms]



<Max>

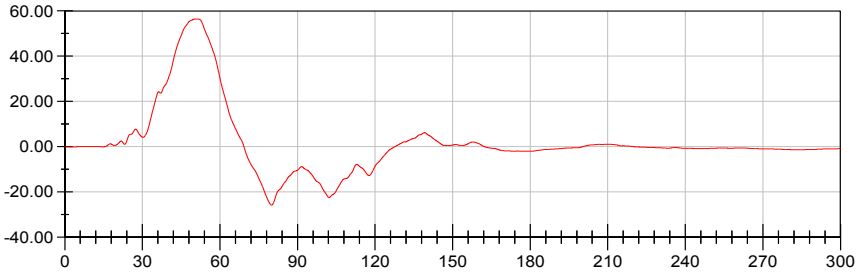
19.16 g at 108.64 ms

<Min>

-18.41 g at 86.00 ms

CFC_180

Abdominal Spine Y (T12) (g) vs. Time [ms]



<Max>

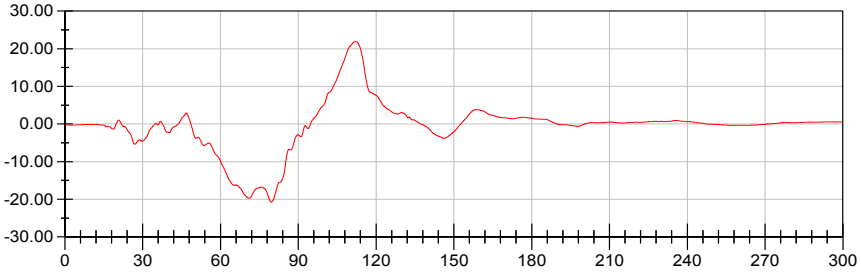
56.43 g at 50.32 ms

<Min>

-25.77 g at 80.00 ms

CFC_180

Abdominal Spine Z (T12) (g) vs. Time [ms]



<Max>

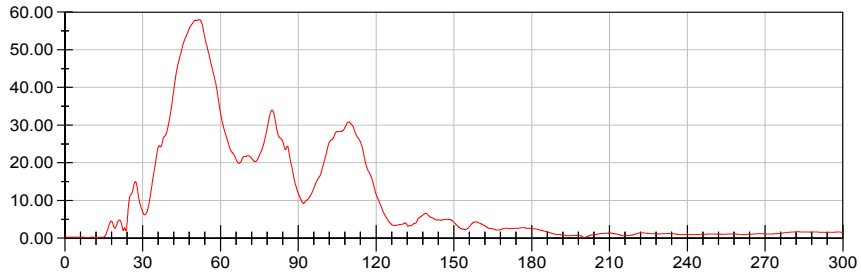
21.90 g at 112.16 ms

<Min>

-20.72 g at 79.60 ms

CFC_180

Driver Lower Spine T12 Resultant (g) vs. Time [ms]



<Max>

57.99 g at 51.84 ms

<Min>

0.18 g at 8.56 ms

CFC_180

NHTSA

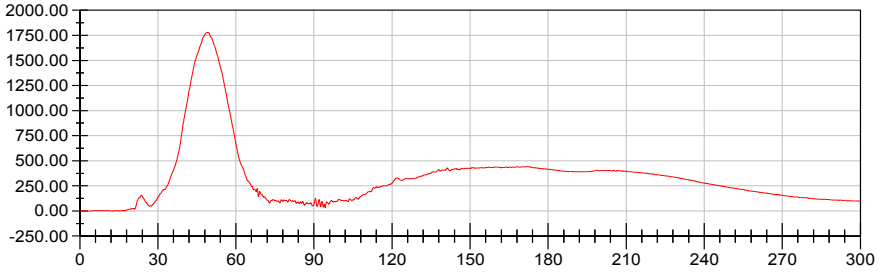
Test Date: 10/15/2015

Position #1 SID IIs Dummy (DI8818)

Test Lab: CTF

Test Number: 151015 (M20160200)

Left Iliac Force Y (N) vs. Time [ms]



<Max>

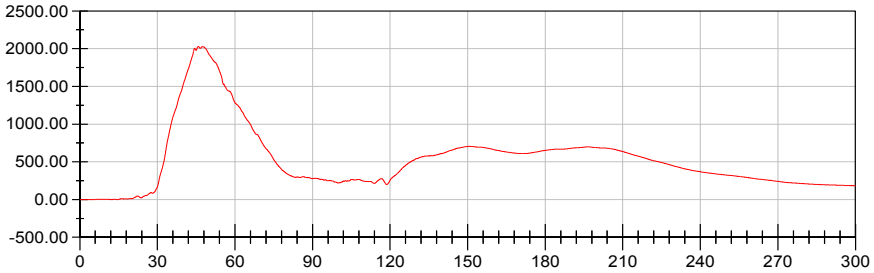
1,778.48 N at 49.12 ms

<Min>

-1.54 N at 2.16 ms

CFC_600

Left Acetabulum Force Y (N) vs. Time [ms]



<Max>

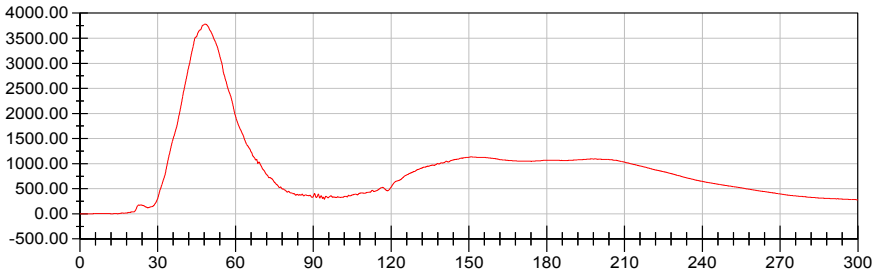
2,028.56 N at 45.84 ms

<Min>

-0.47 N at 1.52 ms

CFC_600

Driver Total Pelvis Force on Impact Side (Y) (N) vs. Time [ms]



<Max>

3,782.06 N at 48.40 ms

<Min>

-1.73 N at 2.16 ms

CFC_600

APPENDIX C
DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA

TABLE OF CALIBRATION MEASUREMENTS AND PLOTS
SID-IIs (Driver) Dummy
Description

Table 1. External Measurements
Table 2. Head Drop Test
- Resultant Head Acceleration (G's) vs. Time (ms)
- Head (X) Acceleration (G's) vs. Time (ms)
- Head (Y) Acceleration (G's) vs. Time (ms)
- Head (Z) Acceleration (G's) vs. Time (ms)

Table 3. Lateral Neck Pendulum Test
- Pendulum Velocity (m/s) vs. Time (ms)
- Flexion Angle (°) vs. Time (ms)
- Moment About Occipital Condyle (Nm) vs. Time (ms)

Table 4. Shoulder Impact Test
- Impactor Acceleration (G's) vs. Time (ms)
- Shoulder Displacement (mm) vs. Time (ms)
- Upper Spine Acceleration (G's) vs. Time (ms)

Table 5. Thorax (With Arm) Impact Test
- Impactor Acceleration (G's) vs. Time (ms)
- Shoulder Displacement (mm) vs. Time (ms)
- Upper Rib Displacement (mm) vs. Time (ms)
- Middle Rib Displacement (mm) vs. Time (ms)
- Lower Rib Displacement (mm) vs. Time (ms)
- Upper Spine Acceleration (G's) vs. Time (ms)
- Lower Spine Acceleration (G's) vs. Time (ms)

Table 6. Thorax (Without Arm) Impact Test
- Impactor Acceleration (G's) vs. Time (ms)
- Upper Rib Displacement (mm) vs. Time (ms)
- Middle Rib Displacement (mm) vs. Time (ms)
- Lower Rib Displacement (mm) vs. Time (ms)
- Upper Spine Acceleration (G's) vs. Time (ms)
- Lower Spine Acceleration (G's) vs. Time (ms)

Table 7. Abdomen Impact Test
- Impactor Acceleration (G's) vs. Time (ms)
- Upper Abdominal Rib Displacement (mm) vs. Time (ms)
- Lower Abdominal Rib Displacement (mm) vs. Time (ms)
- Lower Spine Acceleration (G's) vs. Time (ms)

Table 8. Pelvis Plug Quasi-Static Test (Optional*)
Table 9. Pelvis Acetabulum Impact Test
- Impactor Acceleration (G's) vs. Time (ms)
- Pelvis (Y) Acceleration (G's) vs. Time (ms)
- Acetabulum Force (N) vs. Time (ms)

Table 10. Pelvis Iliac Impact Test
- Impactor Acceleration (G's) vs. Time (ms)
- Pelvis (Y) Acceleration (G's) vs. Time (ms)
- Iliac Force (N) vs. Time (ms)

Driver S/N DI8818

Pre-Test Calibration Sheets

Transportation Research Center Inc.
SIDIIs Dummy - Level D
External Dimensions
Serial No. DI8818 Calibration No.16

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Sitting Height	772.0 - 788.0	781	Yes
B	Shoulder Pivot Height	437.0 - 453.0	442	Yes
C	H-Point Height	79.0 - 89.0	84	Yes
D	H-Point from Seat Back	141.0 - 151.0	144	Yes
E	Shoulder Pivot from Backline	97.0 - 107.0	100	Yes
F	Thigh Clearance	119.0 - 135.0	130	Yes
G	Head Breadth	140.0 - 148.0	143	Yes
H	Head Back from Backline	40.0 - 46.0	45	Yes
I	Head Depth	178.0 - 188.0	182	Yes
J	Head Circumference	541.0 - 551.0	544	Yes
K	Buttock to Knee Length	514.0 - 540.0	534	Yes
L	Popliteal Height	343.0 - 369.0	352	Yes
M	Knee Pivot to Floor Height	393.0 - 409.0	400	Yes
N	Buttock Popliteal Length	416.0 - 442.0	427	Yes
O	Chest Depth without Jacket	195.0 - 211.0	201	Yes
P	Foot Length (right)	216.0 - 232.0	220	Yes
P	Foot Length (left)	216.0 - 232.0	220	Yes
Q	Hip Breadth	313.0 - 323.0	313	Yes
R	Arm Length	249.0 - 259.0	255	Yes
S	Knee Joint to seat Back	478.0 - 493.0	485	Yes
V	Shoulder Width (only one arm installed)	341.0 - 357.0	350	Yes
W	Foot Width (right)	78.0 - 94.0	84	Yes
W	Foot Width (left)	78.0 - 94.0	84	Yes
Y	Chest Circumference with Jacket	851.0 - 881.0	867	Yes
Z	Waist Circumference	761.0 - 791.0	775	Yes

Technician

Approved

Revised 9/29/2005

Transportation Research Center Inc.

Left Lateral Head Drop
SID IIs Serial No. DI8818 Certification No. 16-1
Test Date: 10/6/2015

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	49 %	Yes
Peak Head Resultant Acceleration	115 - 137 g	131.8 g	Yes
Peak Head Longitudinal Acceleration	(-15) - 15 g	6.4 g	Yes
Is Head Resultant Acceleration Curve Unimodal within 15% of Peak?	Yes	Yes	Yes

Test meets specifications.

Comments:

Technician

Approved

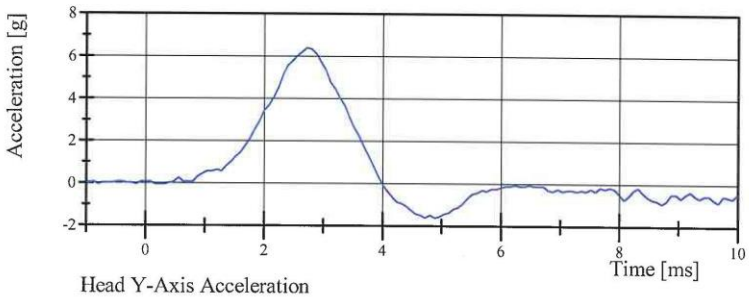
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.06.2015 10:05:30 231

Transportation Research Center Inc.

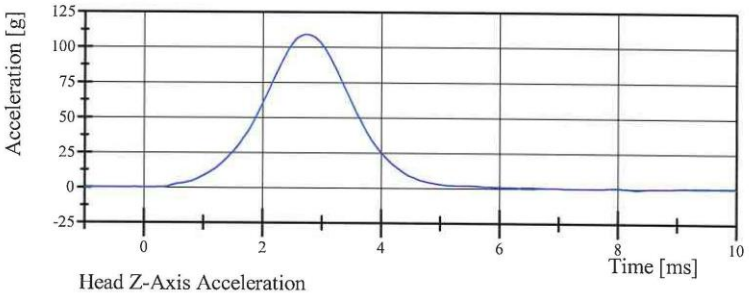
Left Lateral Head Drop
SID IIs Serial No. DI8818 Certification No. 16-1
Test Date: 10/6/2015

Head X-Axis Acceleration



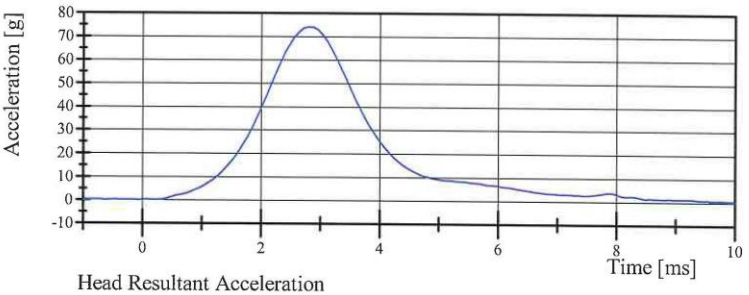
Filter Class: CFC_1000
Max: 6.4 g at 2.7 ms
Min: -1.6 g at 4.7 ms

Head Y-Axis Acceleration



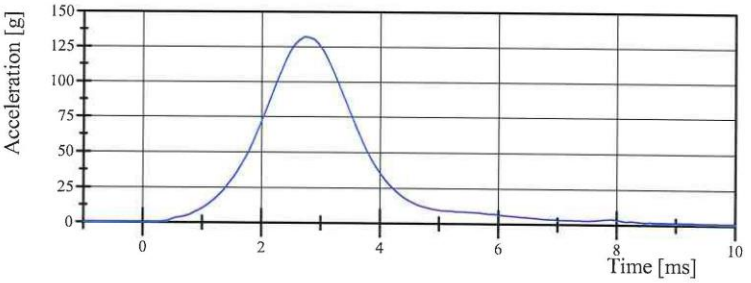
Filter Class: CFC_1000
Max: 109.1 g at 2.7 ms
Min: -0.8 g at 8.3 ms

Head Z-Axis Acceleration



Filter Class: CFC_1000
Max: 74.1 g at 2.8 ms
Min: -0.1 g at -0.6 ms

Head Resultant Acceleration



Filter Class: CFC_1000
Max: 131.8 g at 2.7 ms
Min: 0.0 g at -1.0 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.06.2015 10:05:37 231

Transportation Research Center Inc.

Left Lateral Neck
SID IIs Serial No. DI8818 Certification No. 16-1
Test Date: 10/6/2015

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	50 %	Yes
Pendulum Velocity	(-5.51) - (-5.63) m/s	-5.595 m/s	Yes
Pendulum Integrated Velocity Change at 10 ms	2.20 - 2.80 m/s	2.550 m/s	Yes
Change at 15 ms	3.30 - 4.10 m/s	3.744 m/s	Yes
Change at 20 ms	4.40 - 5.40 m/s	4.994 m/s	Yes
Change at 25 ms	5.40 - 6.10 m/s	5.832 m/s	Yes
Change at 25 to 100 ms	5.50 - 6.20 m/s	5.855 m/s	Yes
Maximum Headform Flexion occurring between 50ms and 70ms.			
Peak	(-71) - (-81) deg	-78.7 deg	Yes
Time of Peak	50 - 70 ms	68.6 ms	Yes
Total Neck Occipital Condyles Moment	36 - 44 N·m	41.5 N·m	Yes
Total Neck Occipital Condyles Moment Decay Time to 0 N·m	102 - 126 ms	119.1 ms	Yes

Test meets specifications.

Comments:

Technician

Approved

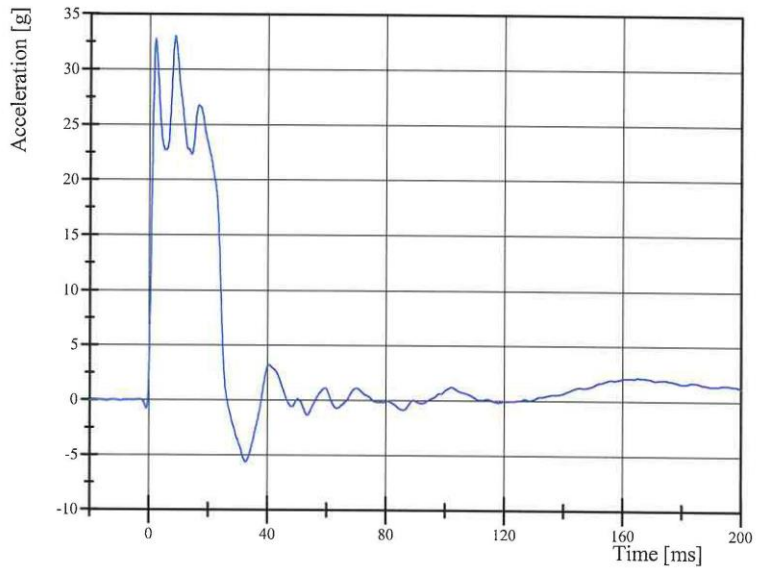
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.06.2015 11:11:56 642

Transportation Research Center Inc.

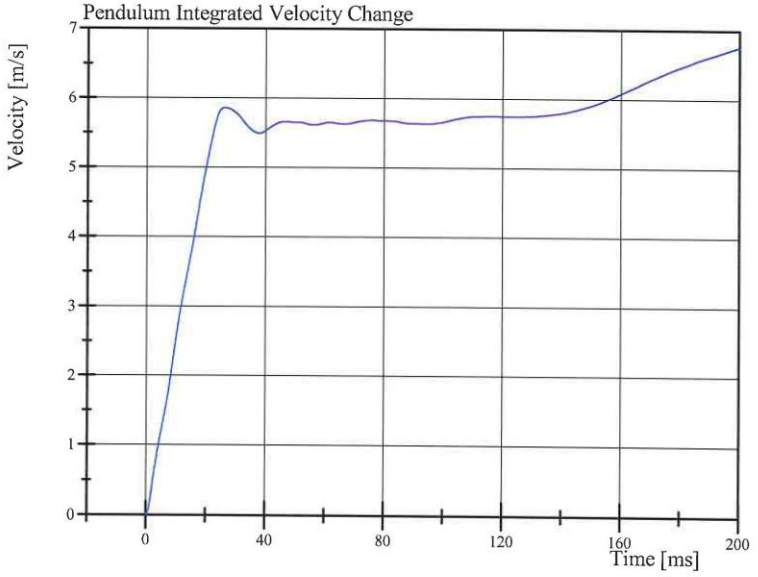
Left Lateral Neck
SID IIs Serial No. DI8818 Certification No. 16-1
Test Date: 10/6/2015

Pendulum Acceleration



Filter Class: CFC_180
Max: 33.0 g at 8.6 ms
Min: -5.6 g at 32.6 ms

Pendulum Integrated Velocity Change



Filter Class: CFC_180
Max: 6.8 m/s at 200.0 ms
Min: 0.0 m/s at 0.0 ms

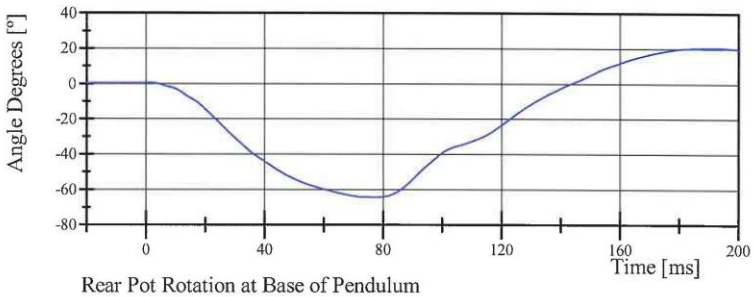
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.06.2015 11:12:05 642

Transportation Research Center Inc.

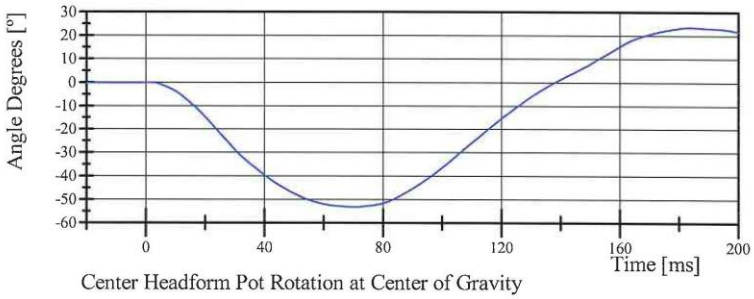
Left Lateral Neck
SID IIs Serial No. DI8818 Certification No. 16-1
Test Date: 10/6/2015

Forward Pot Rotation at Base of Pendulum



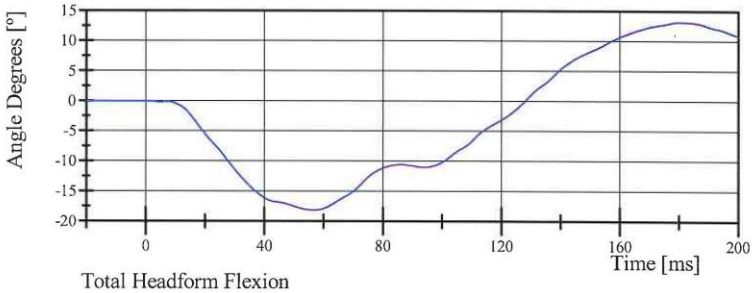
Filter Class: CFC_60
Max: 20.5 ° at 191.4 ms
Min: -64.3 ° at 77.5 ms

Rear Pot Rotation at Base of Pendulum



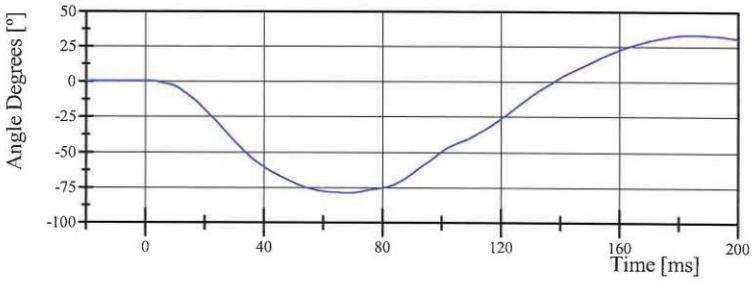
Filter Class: CFC_60
Max: 23.6 ° at 183.5 ms
Min: -53.3 ° at 70.3 ms

Center Headform Pot Rotation at Center of Gravity



Filter Class: CFC_60
Max: 13.1 ° at 180.2 ms
Min: -18.2 ° at 56.8 ms

Total Headform Flexion



Filter Class: CFC_60
Max: 33.1 ° at 184.1 ms
Min: -78.7 ° at 68.6 ms

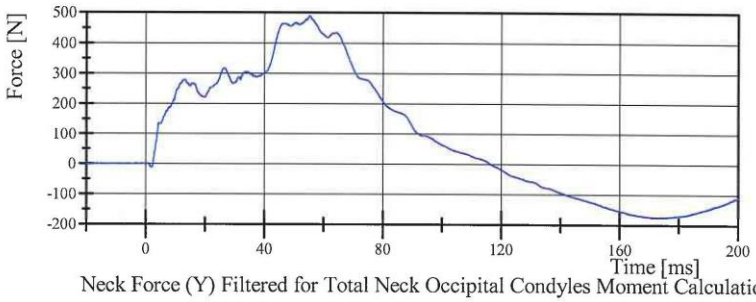
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.06.2015 11:12:06 642

Transportation Research Center Inc.

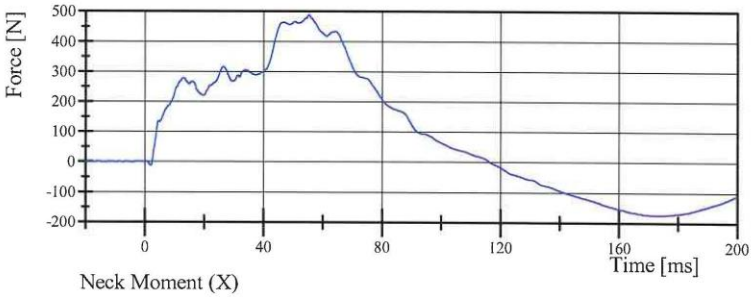
Left Lateral Neck
SID IIs Serial No. DI8818 Certification No. 16-1
Test Date: 10/6/2015

Neck Force (Y)



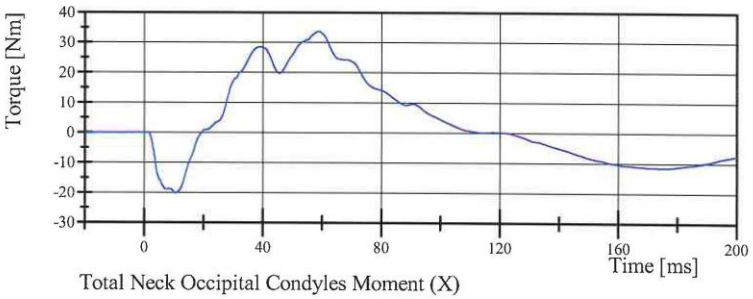
Filter Class: CFC_1000
Max: 490.1 N at 55.2 ms
Min: -175.2 N at 172.6 ms

Neck Force (Y) Filtered for Total Neck Occipital Condyles Moment Calculation



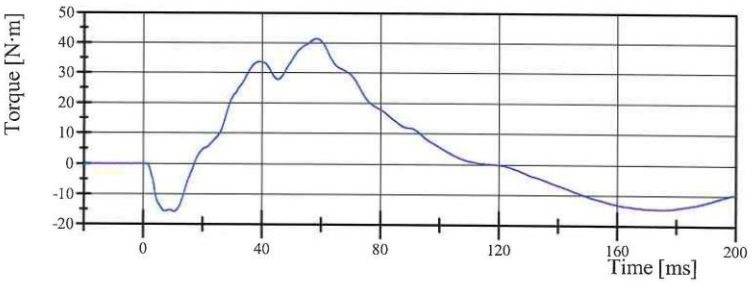
Filter Class: CFC_600
Max: 489.7 N at 55.2 ms
Min: -174.9 N at 173.4 ms

Neck Moment (X)



Filter Class: CFC_600
Max: 33.6 Nm at 58.7 ms
Min: -20.3 Nm at 10.6 ms

Total Neck Occipital Condyles Moment (X)



Filter Class: Without_(Constai
Max: 41.5 N·m at 58.6 ms
Min: -15.8 N·m at 10.5 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.06.2015 11:12:07 642

Transportation Research Center Inc.

Left Lateral Shoulder
SID IIs Serial No. DI8818 Certification No. 16-1
Test Date: 10/6/2015

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.9 °C	Yes
Relative Humidity	10 - 70 %	49 %	Yes
Impactor Velocity	4.2 - 4.4 m/s	4.29 m/s	Yes
Impactor Acceleration	(-13) - (-18) g	-14.4 g	Yes
Shoulder Displacement	28 - 37 mm	32.1 mm	Yes
Upper Spine Lateral Acceleration	17 - 22 g	18.8 g	Yes

Test meets specifications.

Comments:

Technician

Approved

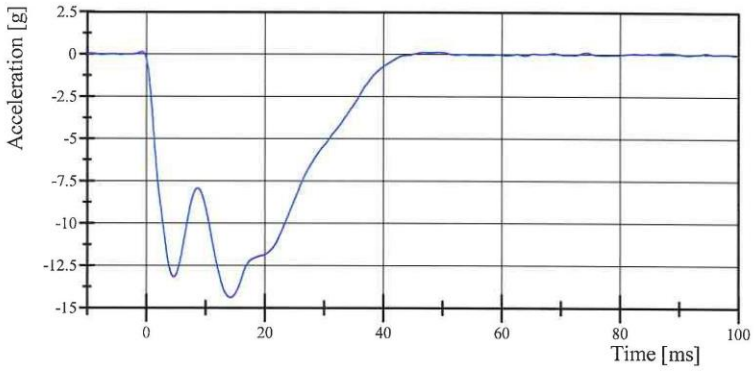
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.06.2015 12:42:29 844

Transportation Research Center Inc.

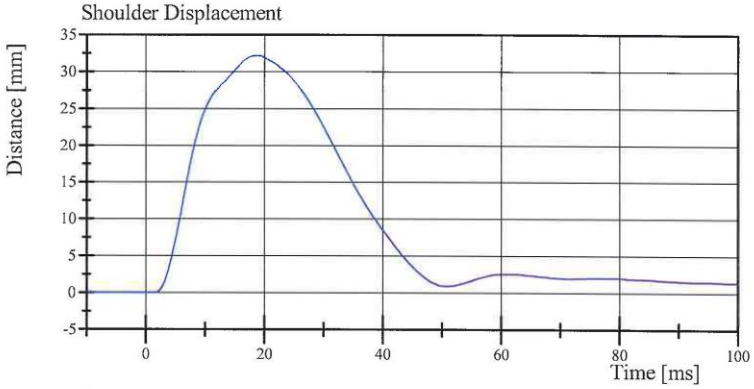
Left Lateral Shoulder
SID IIs Serial No. DI8818 Certification No. 16-1
Test Date: 10/6/2015

Probe Acceleration



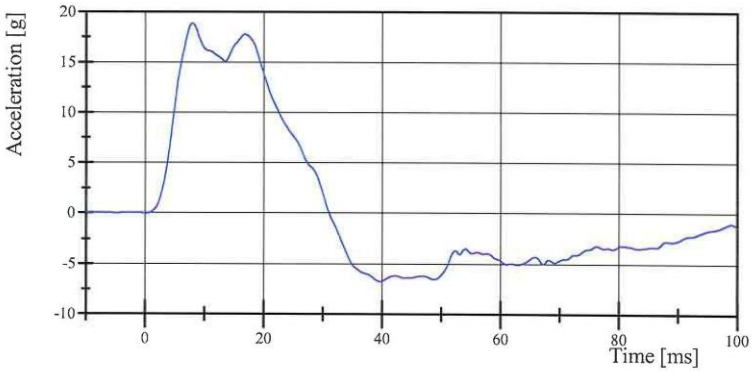
Filter Class: CFC_180
Max: 0.1 g at -0.8 ms
Min: -14.4 g at 14.2 ms

Shoulder Displacement



Filter Class: CFC_600
Max: 32.1 mm at 18.7 ms
Min: -0.0 mm at 1.4 ms

Upper Spine Acceleration (Y)



Filter Class: CFC_180
Max: 18.8 g at 8.0 ms
Min: -6.8 g at 39.7 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.06.2015 12:42:36 844

Transportation Research Center Inc.

Left Lateral Thorax with Arm
SID IIs Serial No. DI8818 Certification No. 16-5
Test Date: 10/9/2015

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.2 °C	Yes
Relative Humidity	10 - 70 %	48 %	Yes
Impactor Velocity	6.60 - 6.80 m/s	6.736 m/s	Yes
Impactor Acceleration	(-30) - (-36) g	-33.8 g	Yes
Shoulder Displacement	31 - 40 mm	38.7 mm	Yes
Upper Thorax Rib Displacement	25 - 32 mm	29.9 mm	Yes
Center Thorax Rib Displacement	30 - 36 mm	32.5 mm	Yes
Lower Thorax Rib Displacement	32 - 38 mm	33.9 mm	Yes
Upper Spine Lateral Acceleration	34 - 43 g	36.6 g	Yes
Lower Spine Lateral Acceleration	29 - 37 g	34.3 g	Yes

Test meets specifications.

Comments:

Technician

Approved

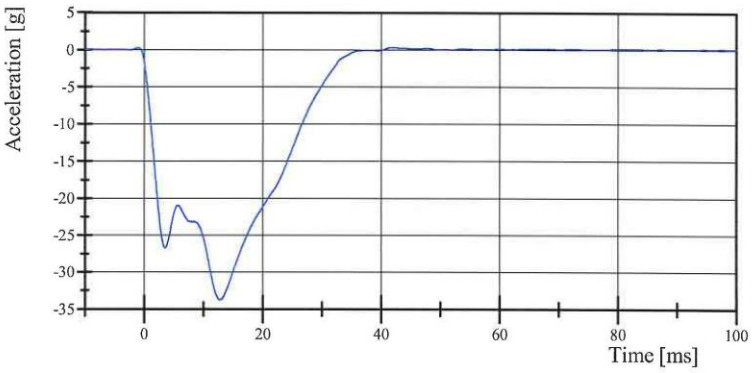
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.09.2015 09:45:23 622

Transportation Research Center Inc.

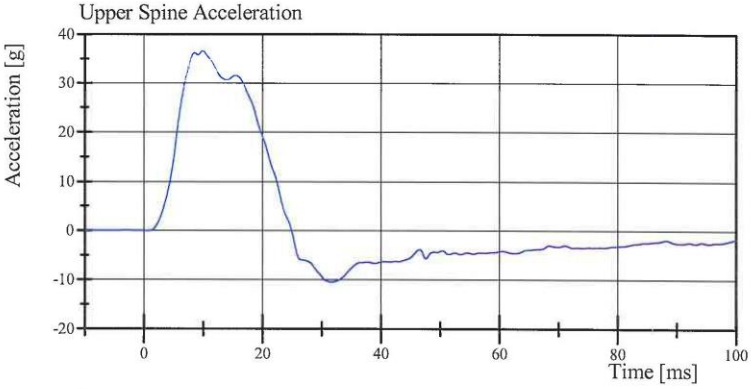
Left Lateral Thorax with Arm
SID IIs Serial No. DI8818 Certification No. 16-5
Test Date: 10/9/2015

Probe Acceleration



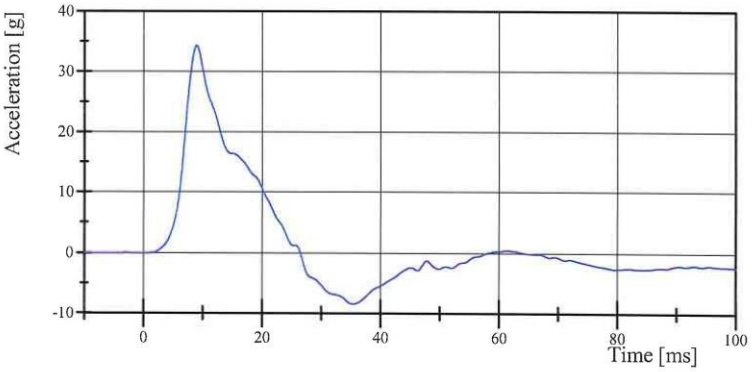
Filter Class: CFC_180
Max: 0.3 g at 41.4 ms
Min: -33.8 g at 12.8 ms

Upper Spine Acceleration



Filter Class: CFC_180
Max: 36.6 g at 9.9 ms
Min: -10.5 g at 31.7 ms

Lower Spine Acceleration



Filter Class: CFC_180
Max: 34.3 g at 9.0 ms
Min: -8.4 g at 35.4 ms

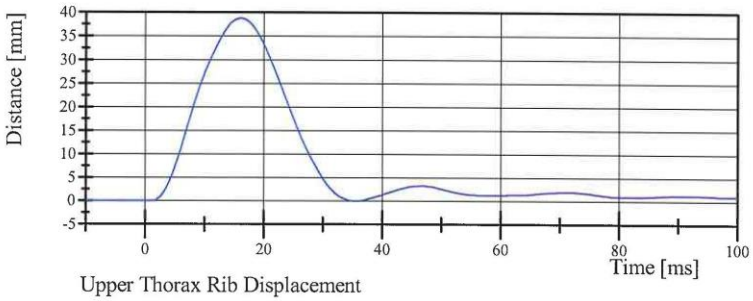
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.09.2015 09:45:32 622

Transportation Research Center Inc.

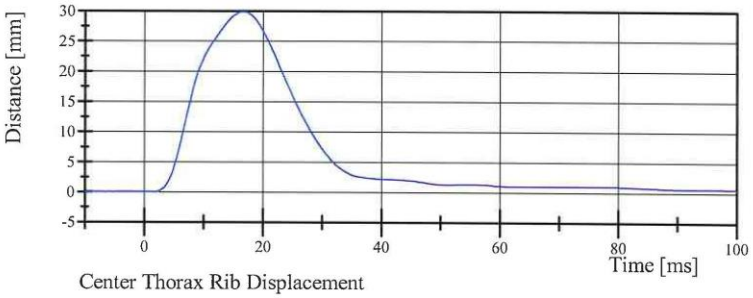
Left Lateral Thorax with Arm
SID IIs Serial No. DI8818 Certification No. 16-5
Test Date: 10/9/2015

Shoulder Rib Displacement



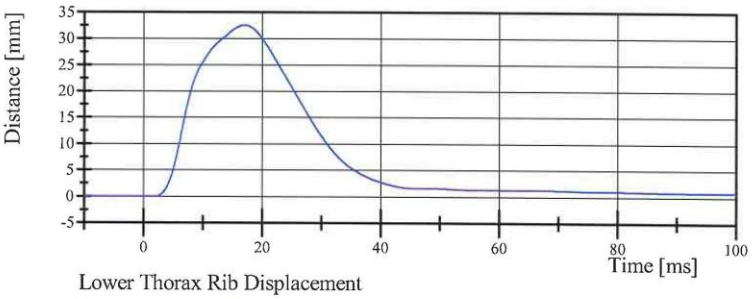
Filter Class: CFC_600
Max: 38.7 mm at 16.1 ms
Min: -0.0 mm at 35.4 ms

Upper Thorax Rib Displacement



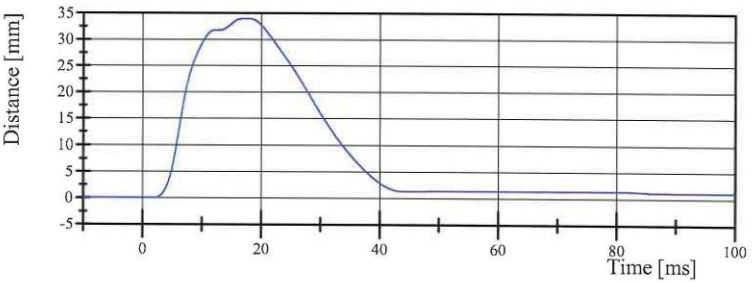
Filter Class: CFC_600
Max: 29.9 mm at 16.6 ms
Min: -0.0 mm at 1.8 ms

Center Thorax Rib Displacement



Filter Class: CFC_600
Max: 32.5 mm at 17.0 ms
Min: -0.0 mm at 2.1 ms

Lower Thorax Rib Displacement



Filter Class: CFC_600
Max: 33.9 mm at 17.0 ms
Min: -0.0 mm at 1.8 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.09.2015 09:45:32 622

Transportation Research Center Inc.

Left Lateral Thorax without Arm
SID IIs Serial No. DI8818 Certification No. 16-2
Test Date: 10/9/2015

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.6 °C	Yes
Relative Humidity	10 - 70 %	51 %	Yes
Impactor Velocity	4.20 - 4.40 m/s	4.285 m/s	Yes
Impactor Acceleration	(-14) - (-18) g	-15.7 g	Yes
Upper Thorax Rib Displacement	32 - 40 mm	37.7 mm	Yes
Center Thorax Rib Displacement	39 - 45 mm	42.1 mm	Yes
Lower Thorax Rib Displacement	35 - 43 mm	38.7 mm	Yes
Upper Spine Lateral Acceleration	13 - 17 g	14.2 g	Yes
Lower Spine Lateral Acceleration	7 - 11 g	8.9 g	Yes

Test meets specifications.

Comments:

Technician

Approved

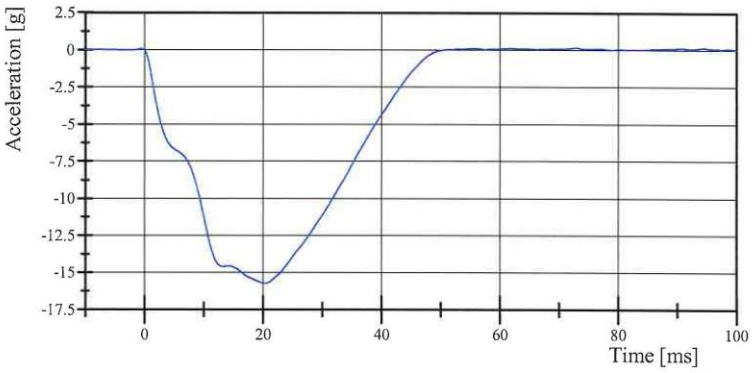
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.09.2015 08:03:23 844

Transportation Research Center Inc.

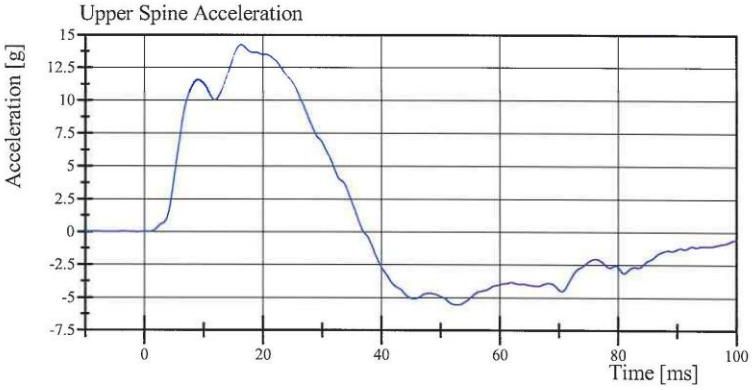
Left Lateral Thorax without Arm
SID IIs Serial No. DI8818 Certification No. 16-2
Test Date: 10/9/2015

Probe Acceleration



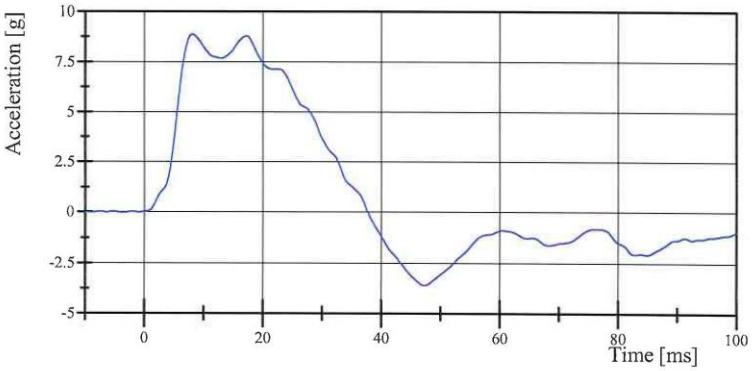
Filter Class: CFC_180
Max: 0.1 g at 72.8 ms
Min: -15.7 g at 20.3 ms

Upper Spine Acceleration



Filter Class: CFC_180
Max: 14.2 g at 16.3 ms
Min: -5.6 g at 52.8 ms

Lower Spine Acceleration



Filter Class: CFC_180
Max: 8.9 g at 8.1 ms
Min: -3.6 g at 47.3 ms

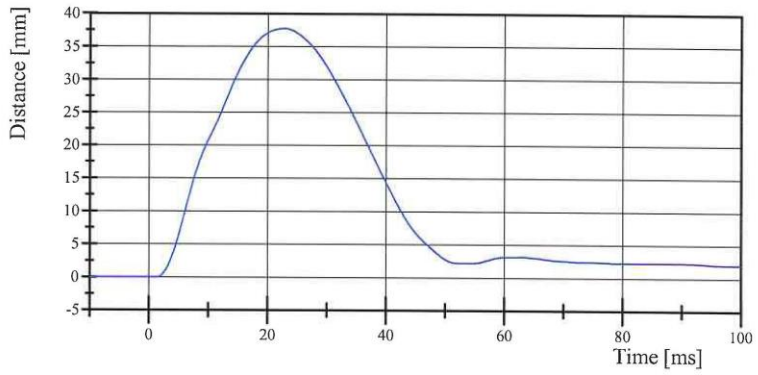
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.09.2015 08:03:31 844

Transportation Research Center Inc.

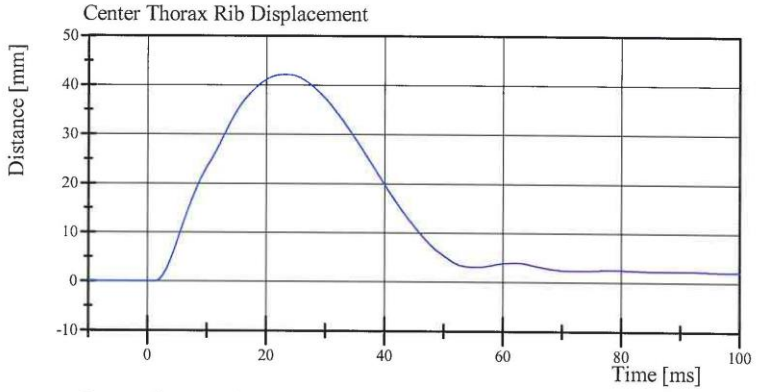
Left Lateral Thorax without Arm
SID IIs Serial No. DI8818 Certification No. 16-2
Test Date: 10/9/2015

Upper Thorax Rib Displacement



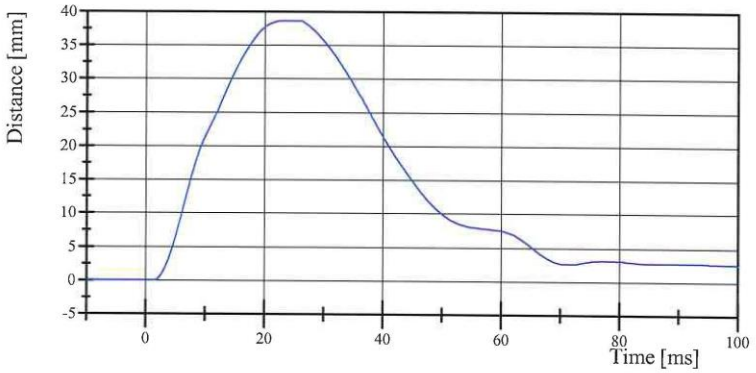
Filter Class: CFC_600
Max: 37.7 mm at 22.8 ms
Min: -0.0 mm at 1.4 ms

Center Thorax Rib Displacement



Filter Class: CFC_600
Max: 42.1 mm at 23.1 ms
Min: -0.0 mm at 1.1 ms

Lower Thorax Rib Displacement



Filter Class: CFC_600
Max: 38.7 mm at 25.8 ms
Min: -0.0 mm at 1.3 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.09.2015 08:03:32 844

Transportation Research Center Inc.

Left Lateral Abdomen
SID IIs Serial No. DI8818 Certification No. 16-1
Test Date: 10/6/2015

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	48 %	Yes
Impactor Velocity	4.2 - 4.4 m/s	4.28 m/s	Yes
Impactor Acceleration	(-12) - (-16) g	-14.0 g	Yes
Upper Abdominal Rib Displacement	36 - 47 mm	39.3 mm	Yes
Lower Abdominal Rib Displacement	33 - 44 mm	39.2 mm	Yes
Lower Spine Lateral Acceleration	9 - 14.0 g	11.02 g	Yes

Test meets specifications.

Comments:

Technician

Approved

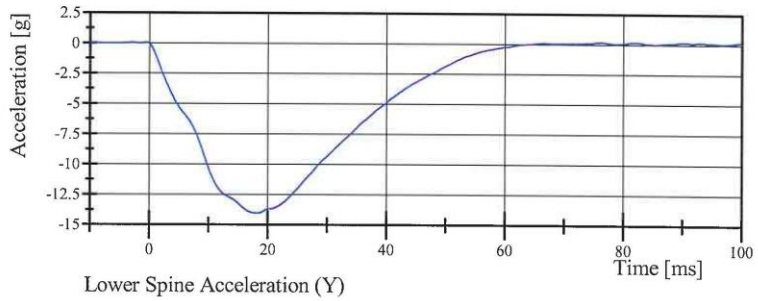
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.06.2015 12:47:28 667

Transportation Research Center Inc.

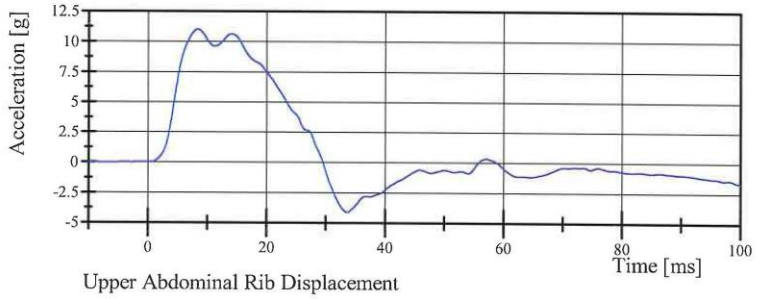
Left Lateral Abdomen
SID IIs Serial No. DI8818 Certification No. 16-1
Test Date: 10/6/2015

Probe Acceleration



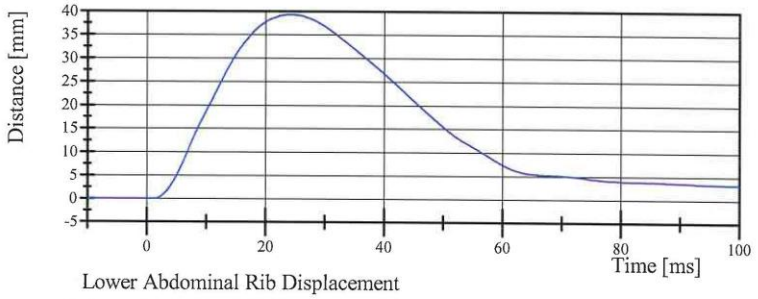
Filter Class: CFC_180
Max: 0.2 g at 76.2 ms
Min: -14.0 g at 18.2 ms

Lower Spine Acceleration (Y)



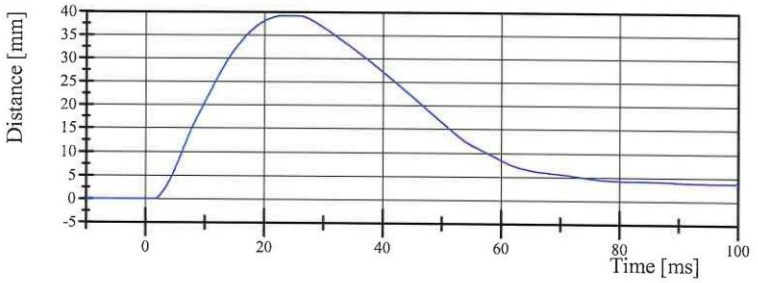
Filter Class: CFC_180
Max: 11.0 g at 8.3 ms
Min: -4.1 g at 33.6 ms

Upper Abdominal Rib Displacement



Filter Class: CFC_600
Max: 39.3 mm at 23.9 ms
Min: -0.0 mm at 1.4 ms

Lower Abdominal Rib Displacement



Filter Class: CFC_600
Max: 39.2 mm at 24.6 ms
Min: -0.0 mm at 1.5 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.06.2015 12:47:35 667

Transportation Research Center Inc.

Left Lateral Pelvis
SID IIs Serial No. DI8818 Certification No. 16-3
Test Date: 10/9/2015

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.1 °C	Yes
Relative Humidity	10 - 70 %	51 %	Yes
Pendulum Velocity	6.6 - 6.8 m/s	6.66 m/s	Yes
Impactor Acceleration	(-38.0) - (-47.0) g	-44.16 g	Yes
Peak Pelvis Lateral Acceleration after 6ms	34 - 42 g	40.5 g	Yes
Acetabulum Force	3,600 - 4,300 N	4,227.0 N	Yes

Test meets specifications.

Comments:

Technician

Approved

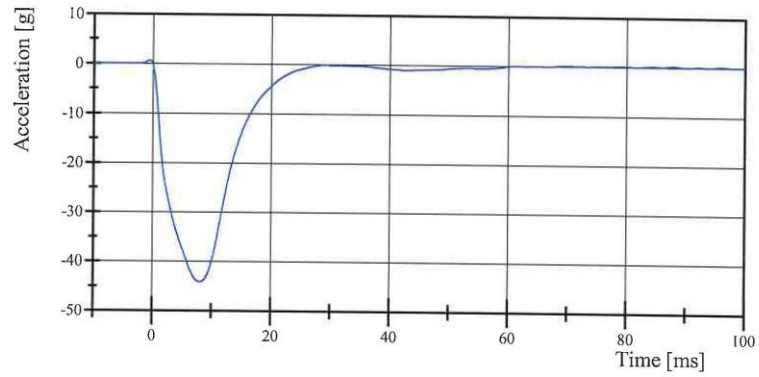
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.09.2015 15:11:03 434

Transportation Research Center Inc.

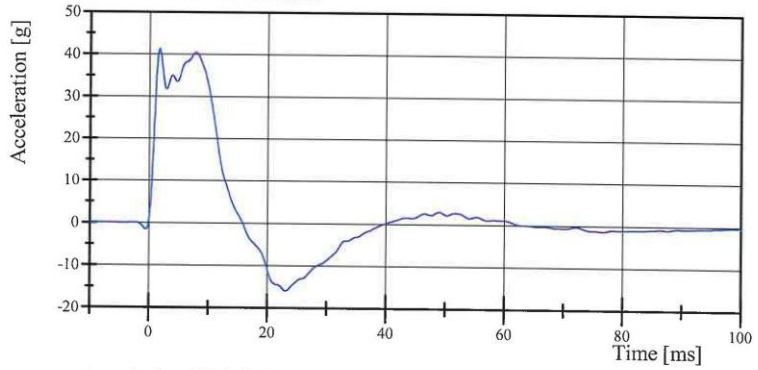
Left Lateral Pelvis
SID IIs Serial No. DI8818 Certification No. 16-3
Test Date: 10/9/2015

Probe Acceleration



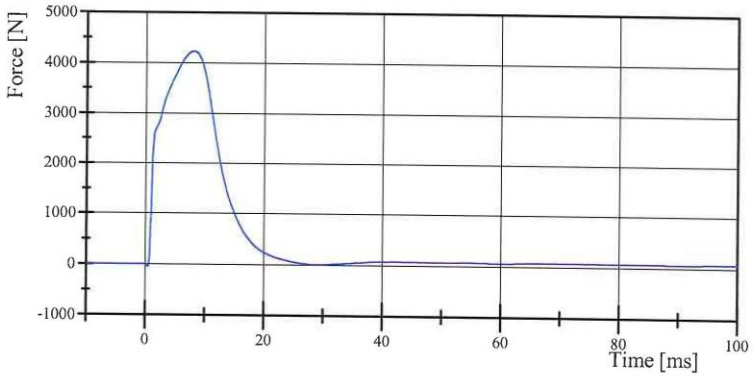
Filter Class: CFC_180
Max: 0.6 g at -0.6 ms
Min: -44.2 g at 8.1 ms

Pelvis Y-Axis Acceleration



Filter Class: CFC_180
Max: 41.4 g at 1.7 ms
Min: -15.9 g at 23.1 ms

Acetabulum Y-Axis Force



Filter Class: CFC_600
Max: 4,227.0 N at 8.0 ms
Min: -51.2 N at 0.5 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.09.2015 15:11:12 434

Transportation Research Center Inc.

Left Lateral Iliac
SID IIs Serial No. DI8818 Certification No. 16-2
Test Date: 10/12/2015

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.7 °C	Yes
Relative Humidity	10 - 70 %	40 %	Yes
Pendulum Velocity	4.2 - 4.4 m/s	4.38 m/s	Yes
Impactor Acceleration	(-36) - (-45) g	-42.0 g	Yes
Peak Pelvis Lateral Acceleration	28 - 39 g	30.6 g	Yes
Iliac Force	4,100 - 5,100 N	4,771.0 N	Yes

Test meets specifications.

Comments:

Technician

Approved

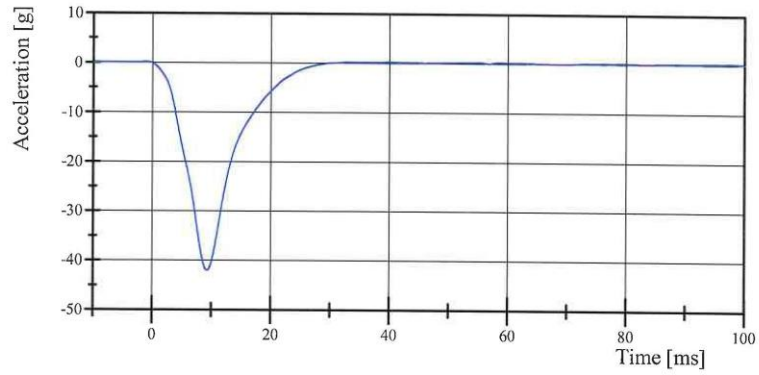
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.12.2015 09:31:52 638

Transportation Research Center Inc.

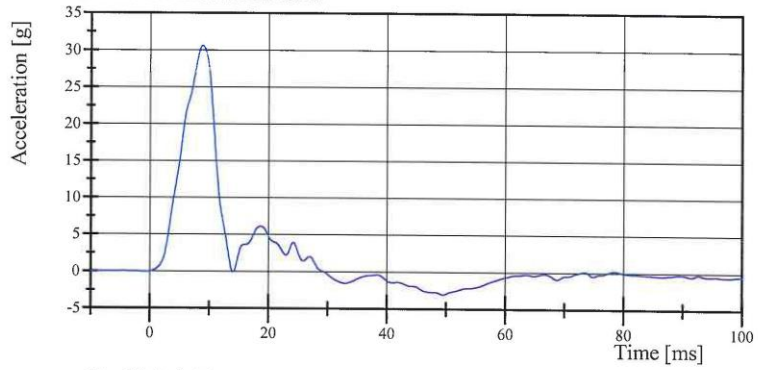
Left Lateral Iliac
SID IIs Serial No. DI8818 Certification No. 16-2
Test Date: 10/12/2015

Probe Acceleration



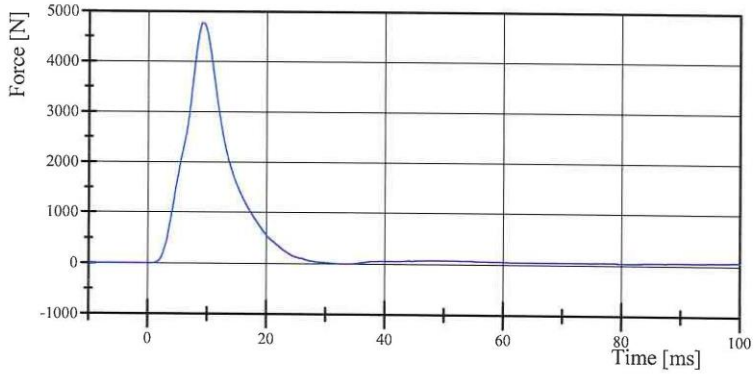
Filter Class: CFC_180
Max: 0.2 g at 39.9 ms
Min: -42.0 g at 9.3 ms

Pelvis Y-Axis Acceleration



Filter Class: CFC_180
Max: 30.6 g at 8.8 ms
Min: -3.0 g at 49.5 ms

Iliac Y-Axis Force



Filter Class: CFC_600
Max: 4,771.0 N at 9.3 ms
Min: -0.8 N at -3.6 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.12.2015 09:32:01 638

Driver S/N DI8818

Post-Test Calibration Sheets

Transportation Research Center Inc.
SIDIIs Dummy - Level D
External Dimensions
Serial No. DI8818 Calibration No.17

Symbol	Description	Specification	Results	Pass
		mm	mm	
A	Sitting Height	772.0 - 788.0	780	Yes
B	Shoulder Pivot Height	437.0 - 453.0	441	Yes
C	H-Point Height	79.0 - 89.0	84	Yes
D	H-Point from Seat Back	141.0 - 151.0	144	Yes
E	Shoulder Pivot from Backline	97.0 - 107.0	100	Yes
F	Thigh Clearance	119.0 - 135.0	131	Yes
G	Head Breadth	140.0 - 148.0	143	Yes
H	Head Back from Backline	40.0 - 46.0	45	Yes
I	Head Depth	178.0 - 188.0	182	Yes
J	Head Circumference	541.0 - 551.0	544	Yes
K	Buttock to Knee Length	514.0 - 540.0	534	Yes
L	Popliteal Height	343.0 - 369.0	352	Yes
M	Knee Pivot to Floor Height	393.0 - 409.0	400	Yes
N	Buttock Popliteal Length	416.0 - 442.0	427	Yes
O	Chest Depth without Jacket	195.0 - 211.0	200	Yes
P	Foot Length (right)	216.0 - 232.0	220	Yes
P	Foot Length (left)	216.0 - 232.0	220	Yes
Q	Hip Breadth	313.0 - 323.0	313	Yes
R	Arm Length	249.0 - 259.0	255	Yes
S	Knee Joint to seat Back	478.0 - 493.0	485	Yes
V	Shoulder Width (only one arm installed)	341.0 - 357.0	350	Yes
W	Foot Width (right)	78.0 - 94.0	84	Yes
W	Foot Width (left)	78.0 - 94.0	84	Yes
Y	Chest Circumference with Jacket	851.0 - 881.0	867	Yes
Z	Waist Circumference	761.0 - 791.0	775	Yes

Technician

Approved

Revised 9/29/2005

Transportation Research Center Inc.

Left Lateral Head Drop
SID IIs Serial No. DI8818 Certification No. 17-2
Test Date: 10/16/2015

Test Parameter	Specification	Test Results	Pass
Temperature	18.9 - 25.6 °C	22.0 °C	Yes
Relative Humidity	10 - 70 %	27 %	Yes
Peak Head Resultant Acceleration	115 - 137 g	128.5 g	Yes
Peak Head Longitudinal Acceleration	(-15) - 15 g	2.5 g	Yes
Is Head Resultant Acceleration Curve Unimodal within 15% of Peak?	Yes	Yes	Yes

Test meets specifications.

Comments:

Technician

Approved

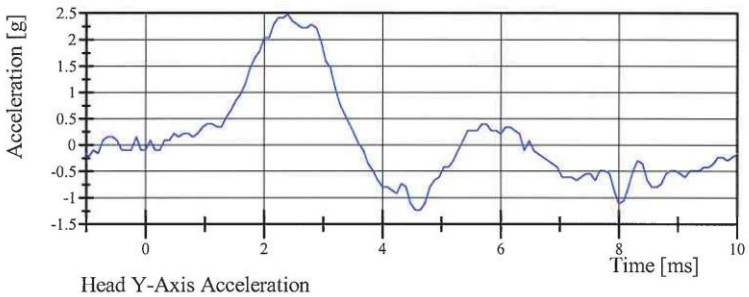
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.16.2015 15:12:09 233

Transportation Research Center Inc.

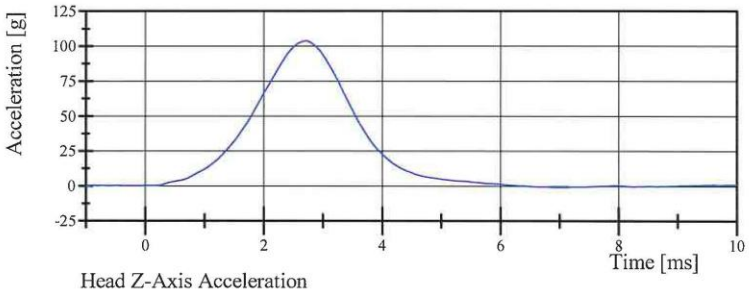
Left Lateral Head Drop
SID IIs Serial No. DI8818 Certification No. 17-2
Test Date: 10/16/2015

Head X-Axis Acceleration



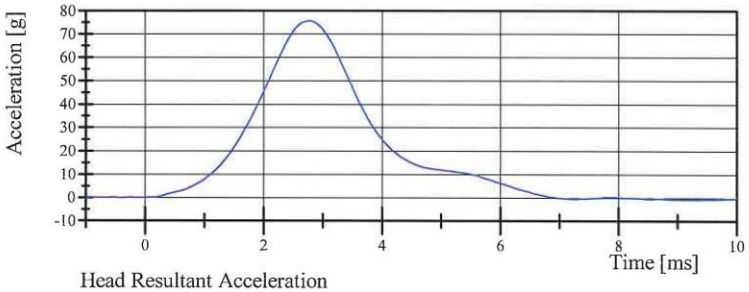
Filter Class: CFC_1000
Max: 2.5 g at 2.4 ms
Min: -1.2 g at 4.6 ms

Head Y-Axis Acceleration



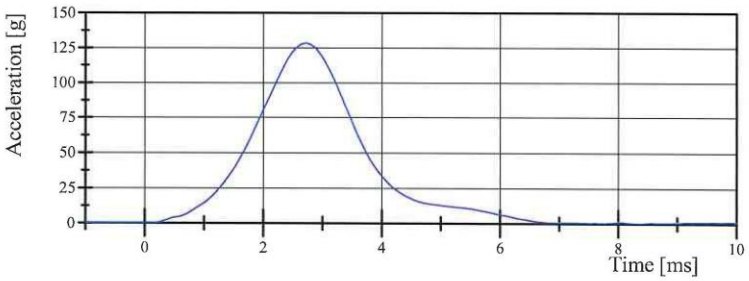
Filter Class: CFC_1000
Max: 103.8 g at 2.7 ms
Min: -0.7 g at 6.9 ms

Head Z-Axis Acceleration



Filter Class: CFC_1000
Max: 75.8 g at 2.8 ms
Min: -0.7 g at 9.0 ms

Head Resultant Acceleration



Filter Class: CFC_1000
Max: 128.5 g at 2.7 ms
Min: 0.1 g at -0.3 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.16.2015 15:12:17 233

Transportation Research Center Inc.

Left Lateral Neck
SID IIs Serial No. DI8818 Certification No. 17-1
Test Date: 10/16/2015

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.3 °C	Yes
Relative Humidity	10 - 70 %	30 %	Yes
Pendulum Velocity	(-5.51) - (-5.63) m/s	-5.589 m/s	Yes
Pendulum Integrated Velocity Change at 10 ms	2.20 - 2.80 m/s	2.497 m/s	Yes
Change at 15 ms	3.30 - 4.10 m/s	3.676 m/s	Yes
Change at 20 ms	4.40 - 5.40 m/s	4.904 m/s	Yes
Change at 25 ms	5.40 - 6.10 m/s	5.773 m/s	Yes
Change at 25 to 100 ms	5.50 - 6.20 m/s	5.851 m/s	Yes
Maximum Headform Flexion occurring between 50ms and 70ms.			
Peak	(-71) - (-81) deg	-76.1 deg	Yes
Time of Peak	50 - 70 ms	67.0 ms	Yes
Total Neck Occipital Condyles Moment	36 - 44 N·m	40.6 N·m	Yes
Total Neck Occipital Condyles Moment Decay Time to 0 N·m	102 - 126 ms	114.5 ms	Yes

Test meets specifications.

Comments:

Technician

Approved

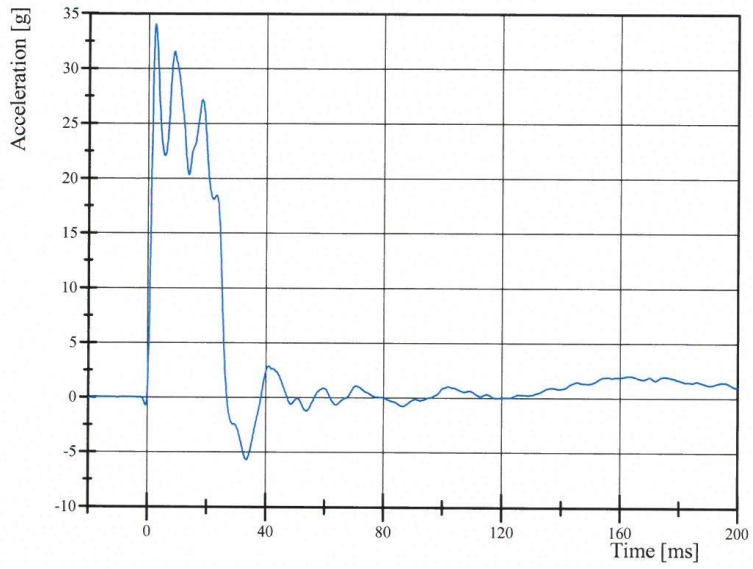
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.16.2015 09:03:34 639

Transportation Research Center Inc.

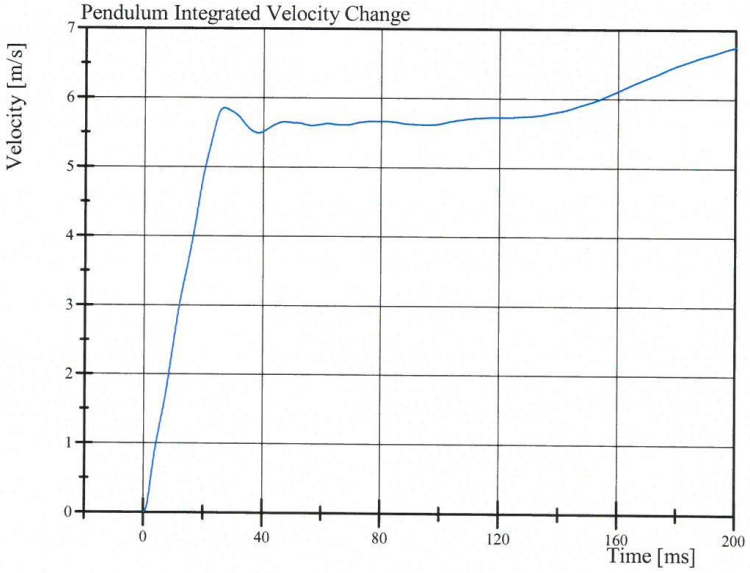
Left Lateral Neck
SID IIs Serial No. DI8818 Certification No. 17-1
Test Date: 10/16/2015

Pendulum Acceleration



Filter Class: CFC_180
Max: 34.0 g at 2.4 ms
Min: -5.7 g at 33.5 ms

Pendulum Integrated Velocity Change



Filter Class: CFC_180
Max: 6.8 m/s at 200.0 ms
Min: 0.0 m/s at 0.0 ms

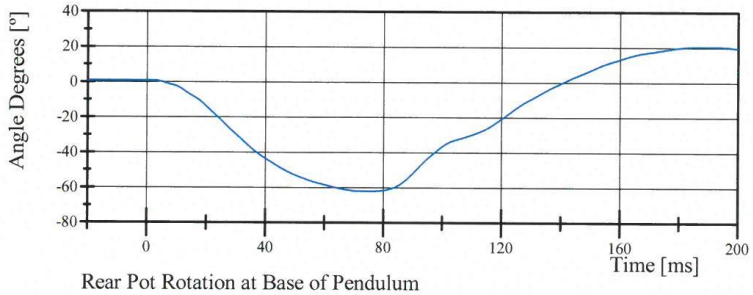
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.16.2015 09:03:42 639

Transportation Research Center Inc.

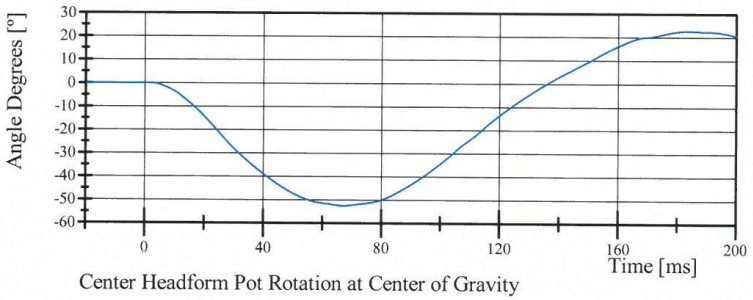
Left Lateral Neck
SID IIs Serial No. DI8818 Certification No. 17-1
Test Date: 10/16/2015

Forward Pot Rotation at Base of Pendulum



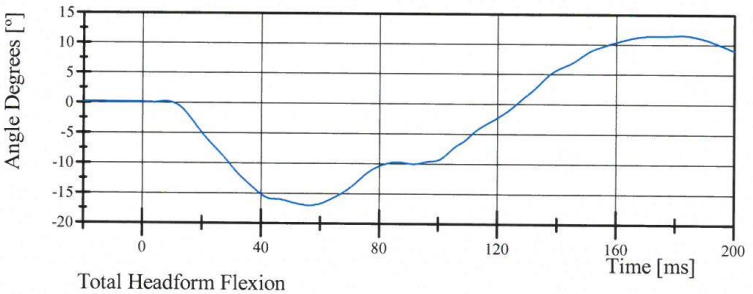
Filter Class: CFC_60
Max: 20.5 ° at 187.4 ms
Min: -62.0 ° at 72.3 ms

Rear Pot Rotation at Base of Pendulum



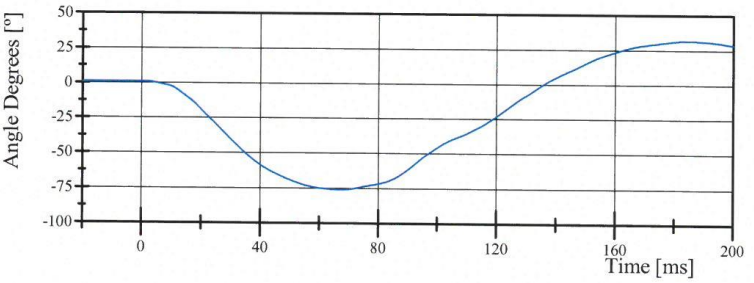
Filter Class: CFC_60
Max: 22.8 ° at 183.5 ms
Min: -52.5 ° at 67.1 ms

Center Headform Pot Rotation at Center of Gravity



Filter Class: CFC_60
Max: 11.6 ° at 182.2 ms
Min: -17.0 ° at 56.3 ms

Total Headform Flexion



Filter Class: CFC_60
Max: 32.0 ° at 184.3 ms
Min: -76.1 ° at 67.0 ms

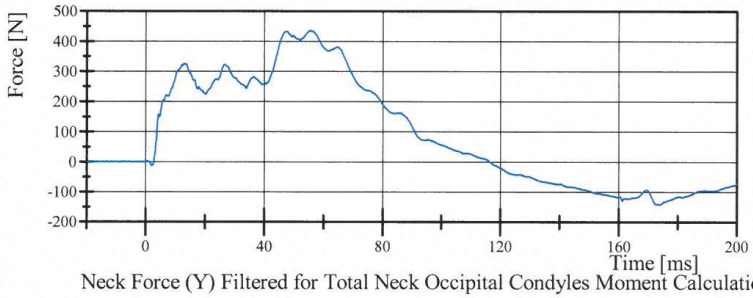
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.16.2015 09:03:43 639

Transportation Research Center Inc.

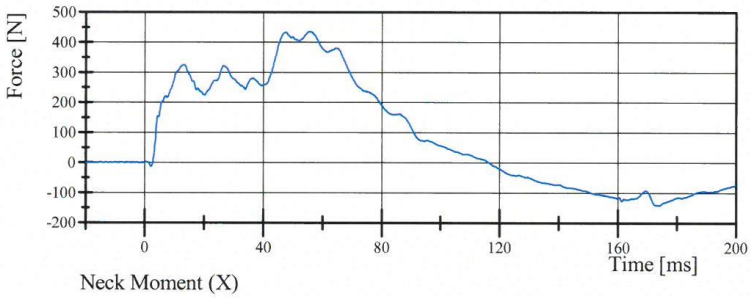
Left Lateral Neck
SID IIs Serial No. DI8818 Certification No. 17-1
Test Date: 10/16/2015

Neck Force (Y)



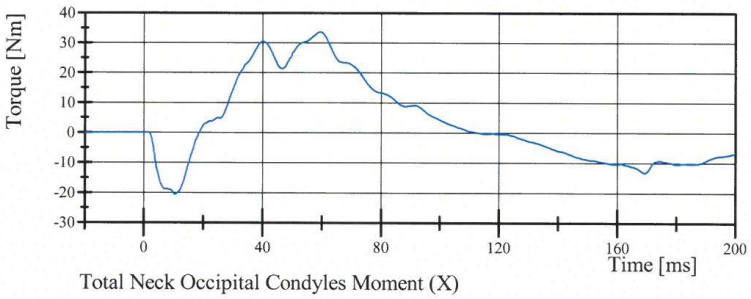
Filter Class: CFC_1000
Max: 435.4 N at 55.4 ms
Min: -140.7 N at 174.1 ms

Neck Force (Y) Filtered for Total Neck Occipital Condyles Moment Calculation



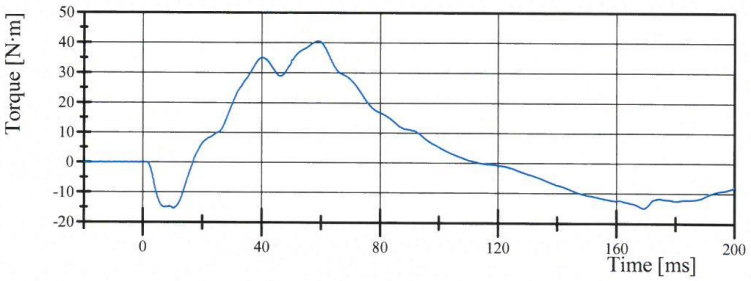
Filter Class: CFC_600
Max: 435.2 N at 55.3 ms
Min: -140.5 N at 174.1 ms

Neck Moment (X)



Filter Class: CFC_600
Max: 33.7 Nm at 59.4 ms
Min: -20.6 Nm at 10.5 ms

Total Neck Occipital Condyles Moment (X)



Filter Class: Without_(Constar
Max: 40.6 N·m at 59.0 ms
Min: -15.4 N·m at 10.3 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.16.2015 09:03:44 639

Transportation Research Center Inc.

Left Lateral Shoulder
SID IIs Serial No. DI8818 Certification No. 17-1
Test Date: 10/16/2015

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.5 °C	Yes
Relative Humidity	10 - 70 %	31 %	Yes
Impactor Velocity	4.2 - 4.4 m/s	4.29 m/s	Yes
Impactor Acceleration	(-13) - (-18) g	-14.3 g	Yes
Shoulder Displacement	28 - 37 mm	32.3 mm	Yes
Upper Spine Lateral Acceleration	17 - 22 g	18.9 g	Yes

Test meets specifications.

Comments:

Technician

Approved

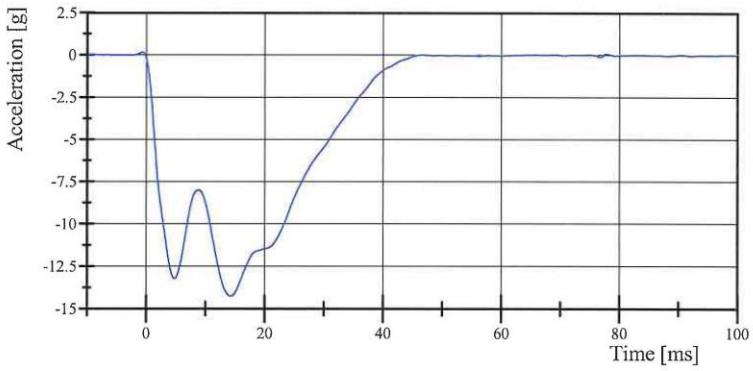
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.16.2015 12:31:51 877

Transportation Research Center Inc.

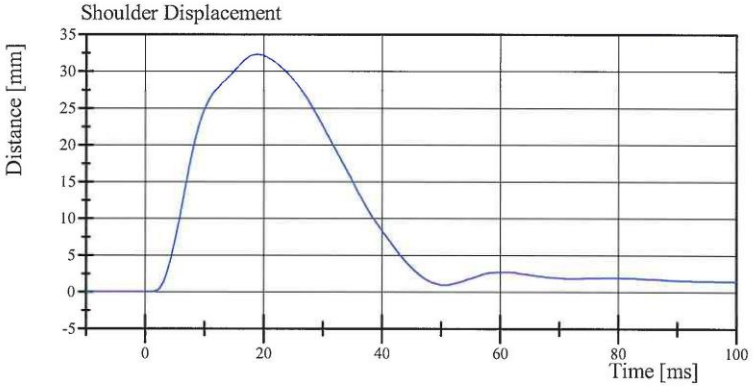
Left Lateral Shoulder
SID IIs Serial No. DI8818 Certification No. 17-1
Test Date: 10/16/2015

Probe Acceleration



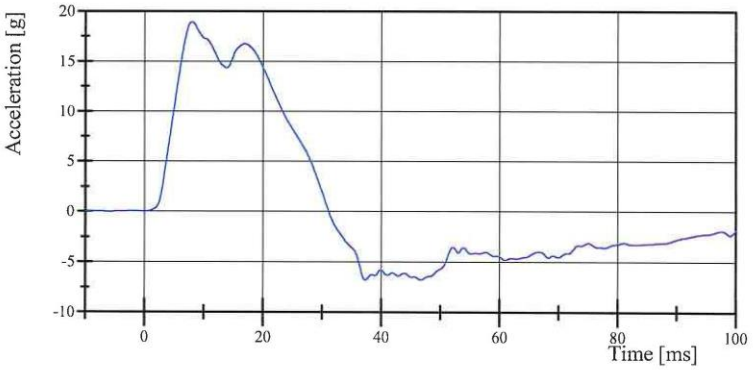
Filter Class: CFC_180
Max: 0.1 g at -0.6 ms
Min: -14.3 g at 14.3 ms

Shoulder Displacement



Filter Class: CFC_600
Max: 32.3 mm at 19.0 ms
Min: -0.0 mm at -5.3 ms

Upper Spine Acceleration (Y)



Filter Class: CFC_180
Max: 18.9 g at 8.0 ms
Min: -6.8 g at 37.3 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.16.2015 12:31:59 877

Transportation Research Center Inc.

Left Lateral Thorax with Arm
SID IIs Serial No. DI8818 Certification No. 17-1
Test Date: 10/16/2015

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.5 °C	Yes
Relative Humidity	10 - 70 %	30 %	Yes
Impactor Velocity	6.60 - 6.80 m/s	6.731 m/s	Yes
Impactor Acceleration	(-30) - (-36) g	-33.1 g	Yes
Shoulder Displacement	31 - 40 mm	37.4 mm	Yes
Upper Thorax Rib Displacement	25 - 32 mm	29.3 mm	Yes
Center Thorax Rib Displacement	30 - 36 mm	32.5 mm	Yes
Lower Thorax Rib Displacement	32 - 38 mm	34.0 mm	Yes
Upper Spine Lateral Acceleration	34 - 43 g	37.1 g	Yes
Lower Spine Lateral Acceleration	29 - 37 g	34.0 g	Yes

Test meets specifications.

Comments:

Technician

Approved

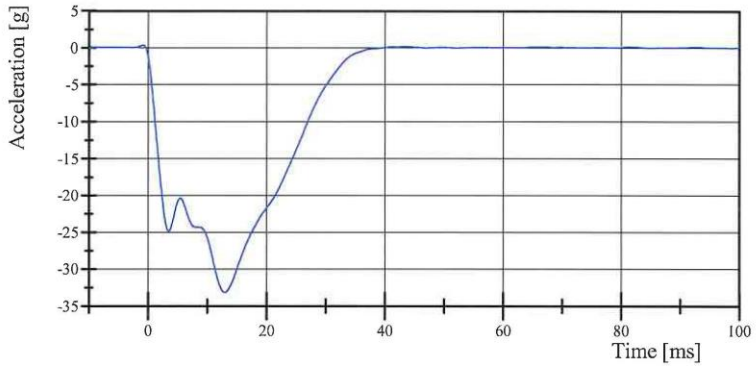
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.16.2015 13:46:34 638

Transportation Research Center Inc.

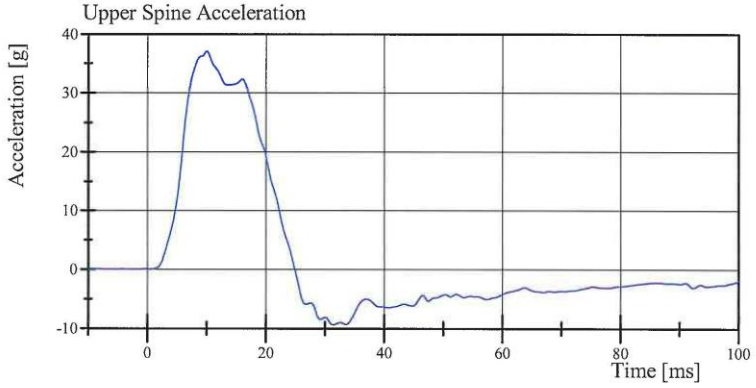
Left Lateral Thorax with Arm
SID IIs Serial No. DI8818 Certification No. 17-1
Test Date: 10/16/2015

Probe Acceleration



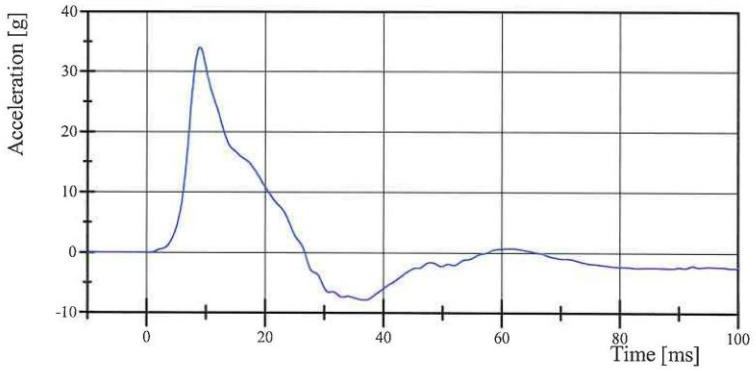
Filter Class: CFC_180
Max: 0.3 g at -0.9 ms
Min: -33.1 g at 13.0 ms

Upper Spine Acceleration



Filter Class: CFC_180
Max: 37.1 g at 10.0 ms
Min: -9.4 g at 31.4 ms

Lower Spine Acceleration



Filter Class: CFC_180
Max: 34.0 g at 9.0 ms
Min: -7.9 g at 36.8 ms

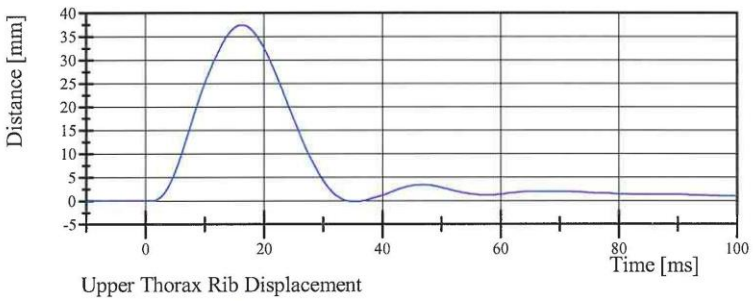
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.16.2015 13:46:42 638

Transportation Research Center Inc.

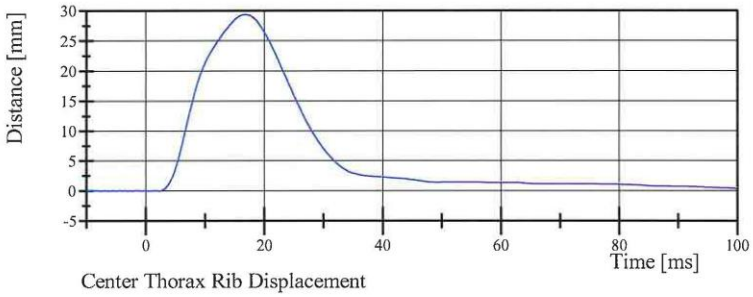
Left Lateral Thorax with Arm
SID IIs Serial No. DI8818 Certification No. 17-1
Test Date: 10/16/2015

Shoulder Rib Displacement



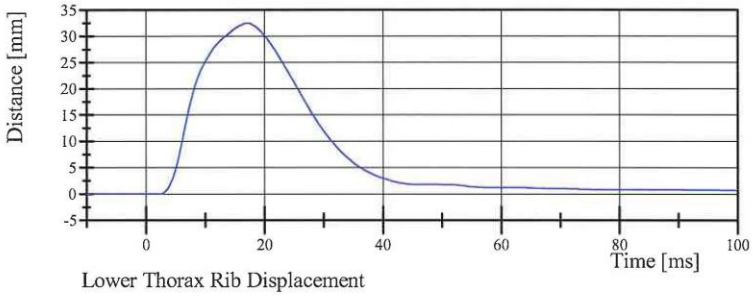
Filter Class: CFC_600
Max: 37.4 mm at 16.2 ms
Min: -0.2 mm at 35.1 ms

Upper Thorax Rib Displacement



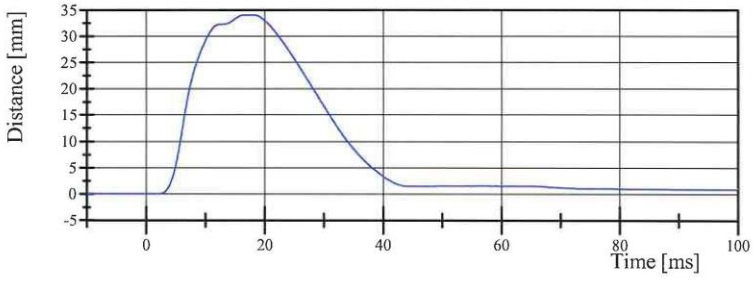
Filter Class: CFC_600
Max: 29.3 mm at 16.8 ms
Min: -0.0 mm at 2.3 ms

Center Thorax Rib Displacement



Filter Class: CFC_600
Max: 32.5 mm at 17.3 ms
Min: -0.0 mm at 2.4 ms

Lower Thorax Rib Displacement



Filter Class: CFC_600
Max: 34.0 mm at 16.8 ms
Min: -0.0 mm at -7.4 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.16.2015 13:46:43 638

Transportation Research Center Inc.

Left Lateral Thorax without Arm
SID IIs Serial No. DI8818 Certification No. 17-1
Test Date: 10/16/2015

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.4 °C	Yes
Relative Humidity	10 - 70 %	30 %	Yes
Impactor Velocity	4.20 - 4.40 m/s	4.286 m/s	Yes
Impactor Acceleration	(-14) - (-18) g	-15.9 g	Yes
Upper Thorax Rib Displacement	32 - 40 mm	35.8 mm	Yes
Center Thorax Rib Displacement	39 - 45 mm	41.9 mm	Yes
Lower Thorax Rib Displacement	35 - 43 mm	39.8 mm	Yes
Upper Spine Lateral Acceleration	13 - 17 g	14.3 g	Yes
Lower Spine Lateral Acceleration	7 - 11 g	9.6 g	Yes

Test meets specifications.

Comments:

Technician

Approved

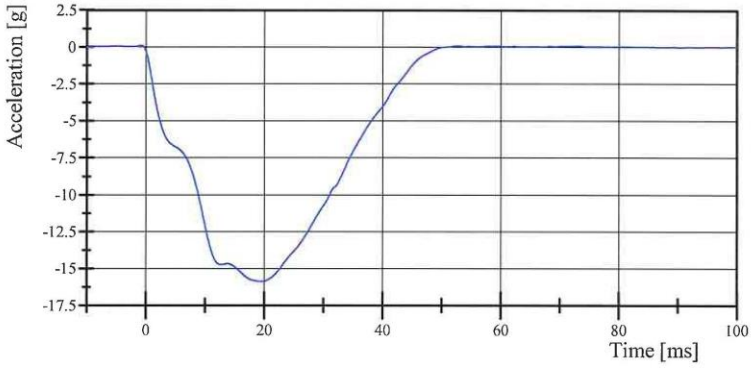
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.16.2015 12:56:47 875

Transportation Research Center Inc.

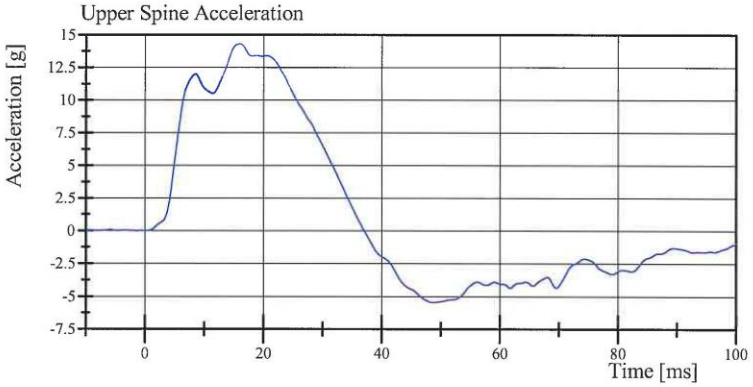
Left Lateral Thorax without Arm
SID IIs Serial No. DI8818 Certification No. 17-1
Test Date: 10/16/2015

Probe Acceleration



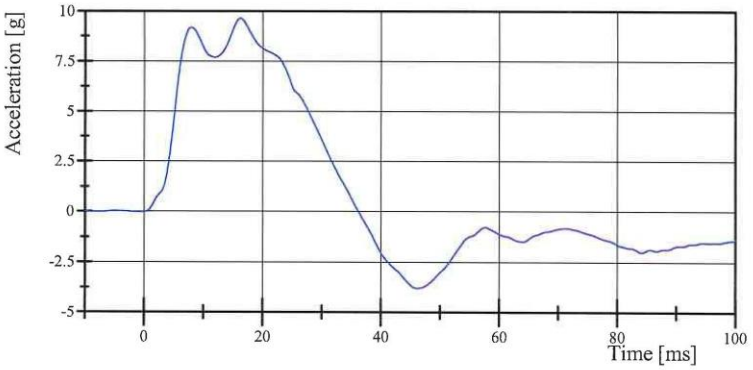
Filter Class: CFC_180
Max: 0.1 g at 73.0 ms
Min: -15.9 g at 19.5 ms

Upper Spine Acceleration



Filter Class: CFC_180
Max: 14.3 g at 16.0 ms
Min: -5.5 g at 48.6 ms

Lower Spine Acceleration



Filter Class: CFC_180
Max: 9.6 g at 16.2 ms
Min: -3.8 g at 46.2 ms

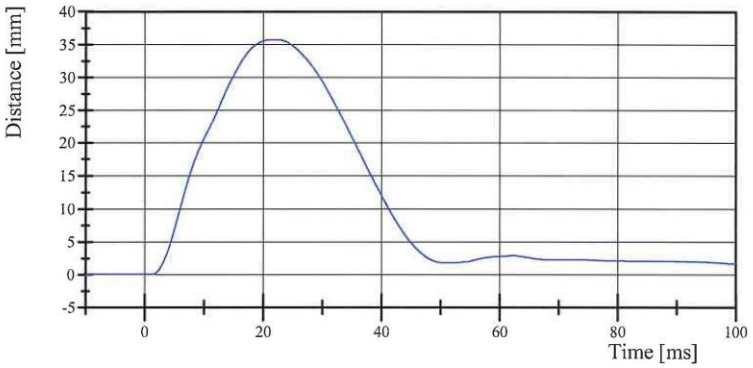
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.16.2015 12:56:54 875

Transportation Research Center Inc.

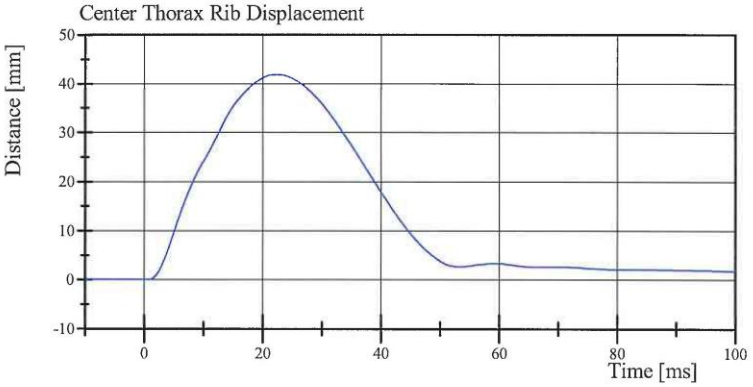
Left Lateral Thorax without Arm
SID IIs Serial No. DI8818 Certification No. 17-1
Test Date: 10/16/2015

Upper Thorax Rib Displacement



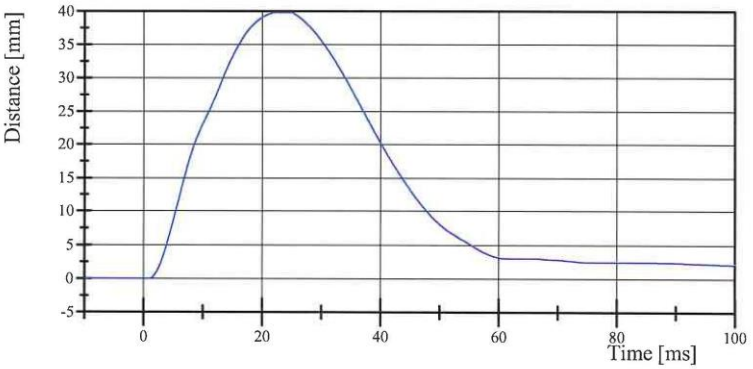
Filter Class: CFC_600
Max: 35.8 mm at 21.9 ms
Min: -0.0 mm at 1.2 ms

Center Thorax Rib Displacement



Filter Class: CFC_600
Max: 41.9 mm at 22.3 ms
Min: -0.0 mm at 0.8 ms

Lower Thorax Rib Displacement



Filter Class: CFC_600
Max: 39.8 mm at 24.8 ms
Min: -0.0 mm at 0.9 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.16.2015 12:56:55 875

Transportation Research Center Inc.

Left Lateral Abdomen
SID IIs Serial No. DI8818 Certification No. 17-1
Test Date: 10/16/2015

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.9 °C	Yes
Relative Humidity	10 - 70 %	30 %	Yes
Impactor Velocity	4.2 - 4.4 m/s	4.29 m/s	Yes
Impactor Acceleration	(-12) - (-16) g	-14.0 g	Yes
Upper Abdominal Rib Displacement	36 - 47 mm	40.1 mm	Yes
Lower Abdominal Rib Displacement	33 - 44 mm	38.8 mm	Yes
Lower Spine Lateral Acceleration	9 - 14.0 g	11.03 g	Yes

Test meets specifications.

Comments:

Technician

Approved

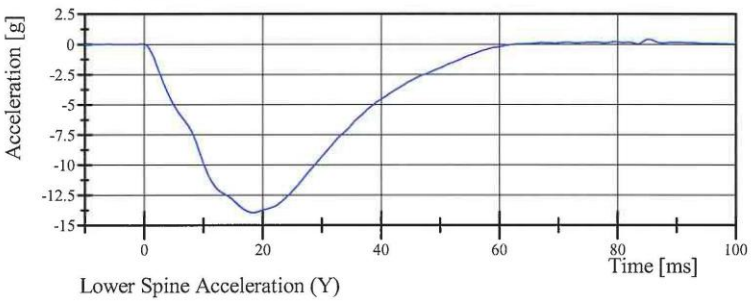
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.16.2015 12:45:14 693

Transportation Research Center Inc.

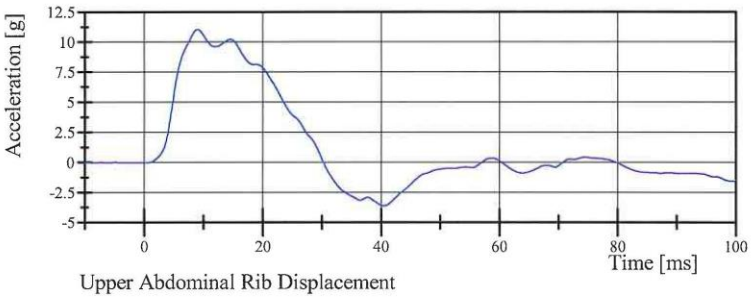
Left Lateral Abdomen
SID IIs Serial No. DI8818 Certification No. 17-1
Test Date: 10/16/2015

Probe Acceleration



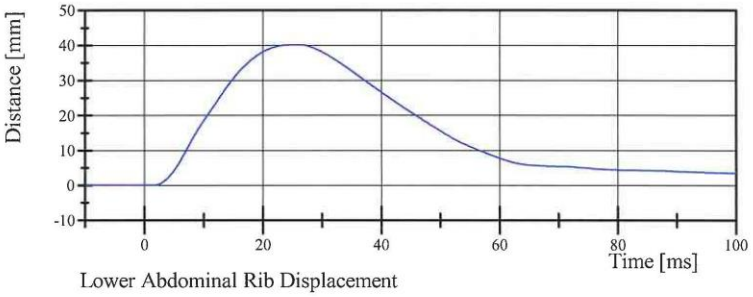
Filter Class: CFC_180
Max: 0.4 g at 85.2 ms
Min: -14.0 g at 18.4 ms

Lower Spine Acceleration (Y)



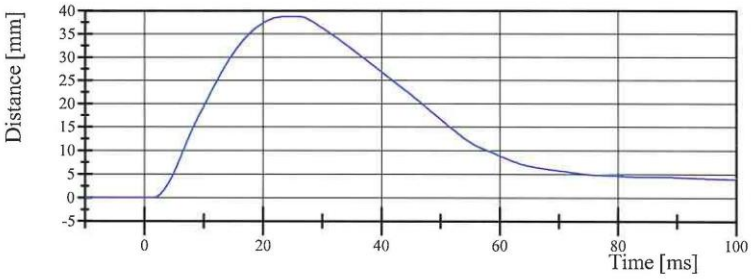
Filter Class: CFC_180
Max: 11.0 g at 9.0 ms
Min: -3.6 g at 40.4 ms

Upper Abdominal Rib Displacement



Filter Class: CFC_600
Max: 40.1 mm at 25.2 ms
Min: -0.0 mm at 1.7 ms

Lower Abdominal Rib Displacement



Filter Class: CFC_600
Max: 38.8 mm at 24.1 ms
Min: -0.0 mm at 1.5 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.16.2015 12:45:23 693

Transportation Research Center Inc.

Left Lateral Pelvis
SID IIs Serial No. DI8818 Certification No. 17-2
Test Date: 10/19/2015

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.8 °C	Yes
Relative Humidity	10 - 70 %	20 %	Yes
Pendulum Velocity	6.6 - 6.8 m/s	6.67 m/s	Yes
Impactor Acceleration	(-38.0) - (-47.0) g	-44.39 g	Yes
Peak Pelvis Lateral Acceleration after 6ms	34 - 42 g	41.9 g	Yes
Acetabulum Force	3,600 - 4,300 N	4,129.1 N	Yes

Test meets specifications.

Comments:

Technician

Approved

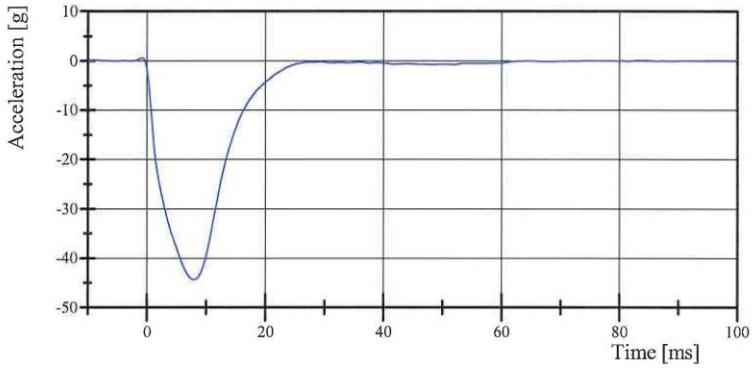
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.19.2015 08:12:32 461

Transportation Research Center Inc.

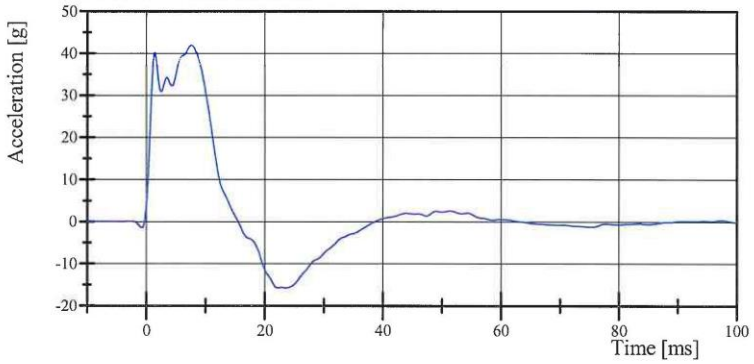
Left Lateral Pelvis
SID IIs Serial No. DI8818 Certification No. 17-2
Test Date: 10/19/2015

Probe Acceleration



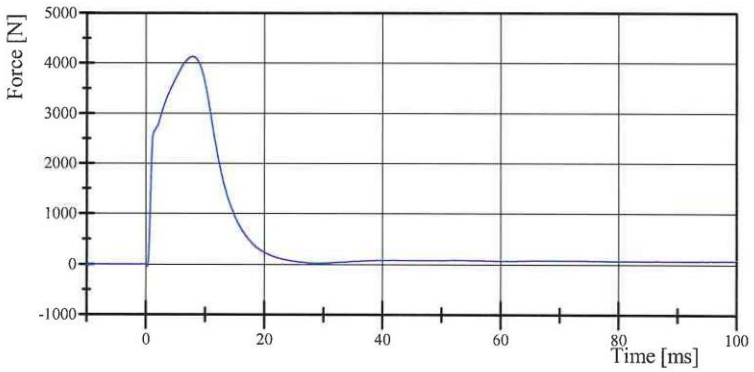
Filter Class: CFC_180
Max: 0.5 g at -0.8 ms
Min: -44.4 g at 7.9 ms

Pelvis Y-Axis Acceleration



Filter Class: CFC_180
Max: 41.9 g at 7.5 ms
Min: -15.8 g at 23.6 ms

Acetabulum Y-Axis Force



Filter Class: CFC_600
Max: 4,129.1 N at 7.8 ms
Min: -43.9 N at 0.2 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.19.2015 08:12:39 461

Transportation Research Center Inc.

Left Lateral Iliac
SID IIs Serial No. DI8818 Certification No. 17-1
Test Date: 10/16/2015

Test Parameter	Specification	Test Results	Pass
Temperature	20.6 - 22.2 °C	21.9 °C	Yes
Relative Humidity	10 - 70 %	31 %	Yes
Pendulum Velocity	4.2 - 4.4 m/s	4.34 m/s	Yes
Impactor Acceleration	(-36) - (-45) g	-39.7 g	Yes
Peak Pelvis Lateral Acceleration	28 - 39 g	28.3 g	Yes
Iliac Force	4,100 - 5,100 N	4,330.7 N	Yes

Test meets specifications.

Comments:

Technician

Approved

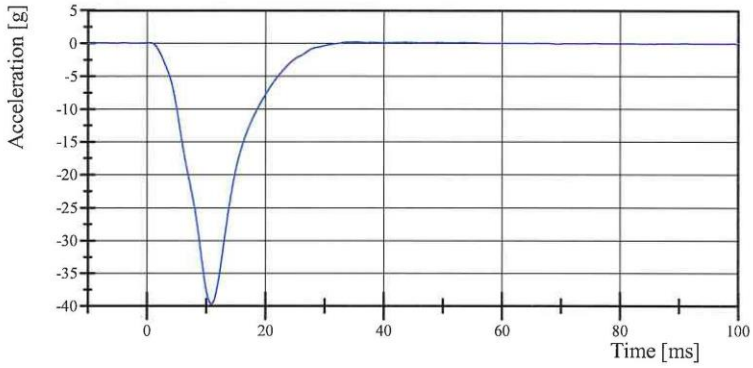
Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.16.2015 11:41:11 671

Transportation Research Center Inc.

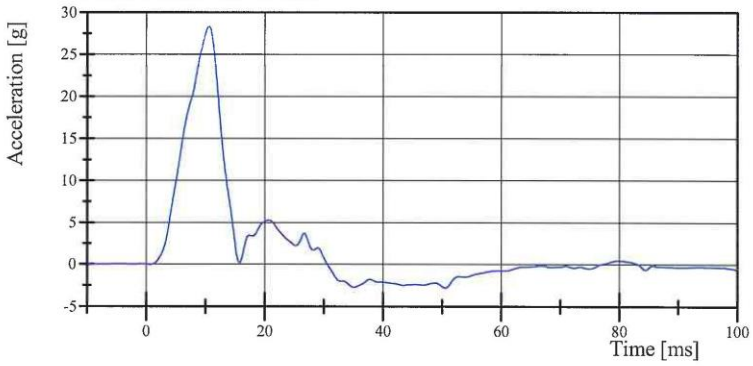
Left Lateral Iliac
SID IIs Serial No. DI8818 Certification No. 17-1
Test Date: 10/16/2015

Probe Acceleration



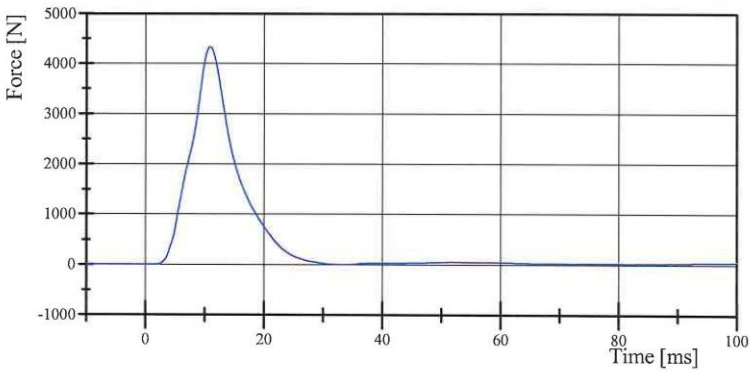
Filter Class: CFC_180
Max: 0.2 g at 35.4 ms
Min: -39.7 g at 10.9 ms

Pelvis Y-Axis Acceleration



Filter Class: CFC_180
Max: 28.3 g at 10.6 ms
Min: -2.8 g at 50.5 ms

Iliac Y-Axis Force



Filter Class: CFC_600
Max: 4,330.7 N at 10.9 ms
Min: -0.4 N at -0.6 ms

Specification Source: Procedures based on Final Rule effective 8/24/2009
Polarity in accordance with SAE J211.

10.16.2015 11:41:38 671

APPENDIX D
TEST EQUIPMENT AND INSTRUMENTATION CALIBRATION DATA

TABLE 1 – Dummy Instrumentation (SID-IIs)

				SID-IIs S/N DI8818		
				Serial Number	Manufacturer	Calibration Date
Head Accelerometers			X	J32214	Endevco	29-Apr-2015
			Y	J27040	Endevco	29-Apr-2015
			Z	AGAC4	Endevco	29-Apr-2015
Displacement Potentiometers	Shoulder		Y	N/A	N/A	N/A
	Thoracic Rib	Upper	Y	3787-047	Servo	29-Apr-2015
		Middle	Y	3745-01815	Servo	29-Apr-2015
		Lower	Y	3787-043	Servo	7-Oct-2015
	Abdominal Rib	Upper	Y	3745-01811	Servo	29-Apr-2015
		Lower	Y	3787-051	Servo	29-Apr-2015
Lower Spine Accelerometers (T12)			X	P64150	Endevco	29-Apr-2015
			Y	P64142	Endevco	29-Apr-2015
			Z	P64100	Endevco	29-Apr-2015
Acetabulum Load Cell			Y	235-FY	FTSS	16-Jun-2015
Iliac Wing Load Cell			Y	113-FY	FTSS	29-Apr-2015
Pelvis Plug (struck side)				71046	Humanetics	18-Dec-2013
Pelvis Plug (non-struck side)				63609	Humanetics	15-Feb-2013

TABLE 2 – Vehicle Instrumentation

Vehicle Instrumentation		Serial Number	Manufacturer	Calibration Date
Vehicle Center of Gravity	X	P88551	Endevco	7-Aug-2015
Vehicle Center of Gravity	Y	P89124	Endevco	7-Aug-2015
Vehicle Center of Gravity	Z	P88541	Endevco	7-Aug-2015
Left Floor Sill	Y	P90282	Endevco	12-Oct-2015
A-Pillar Sill	Y	P90291	Endevco	12-Oct-2015
A-Pillar Low	Y	P87172	Endevco	26-Jun-2015
A-Pillar Mid	Y	P87464	Endevco	21-May-2015
B-Pillar Sill	Y	P90295	Endevco	12-Oct-2015
B-Pillar Low	Y	P75523	Endevco	21-Jul-2015
B-Pillar Mid	Y	P87582	Endevco	28-May-2015
Driver Seat	Y	P90298	Endevco	12-Oct-2015
Engine Top	X	P46078	Endevco	20-Jul-2015
Engine Top	Y	P45023	Endevco	6-May-2015
Firewall	Y	P90281	Endevco	12-Oct-2015
Right Roof	Y	P91084	Endevco	12-Oct-2015
Right Floor Sill	Y	P90868	Endevco	12-Oct-2015
Rear Floor Pan	X	P29069	Endevco	15-May-2015
Rear Floor Pan	Y	P81064	Endevco	17-Jun-2015

TABLE 3 – Pole Instrumentation

Pole Instrumentation	Serial Number	Manufacturer	Calibration Date
Load Cell 1	5763-88-FX	Denton	11-May-2015
Load Cell 2	5763-77-FX	Denton	9-Dec-2014
Load Cell 3	5764-103-FX	Denton	11-May-2015
Load Cell 4	5764-95-FX	Denton	9-Dec-2014
Load Cell 5	5763-92-FX	Denton	9-Dec-2014
Load Cell 6	5763-84-FX	Denton	9-Dec-2014
Load Cell 7	5764-97-FX	Denton	9-Dec-2014
Load Cell 8	5763-87-FX	Denton	9-Dec-2014