

REPORT NUMBER TR-P25001-12-NC

**NEW CAR ASSESSMENT PROGRAM
FRONTAL BARRIER IMPACT TEST**

**NISSAN MOTOR COMPANY, LTD
2005 NISSAN MURANO S AWD
5-DOOR MPV**

NHTSA NUMBER: M55203

**PREPARED BY:
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FEBRUARY 1, 2005

FINAL REPORT

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16. Abstract A 35 mph (56.3 km/h) frontal barrier impact was conducted on a 2005 Nissan Murano S AWD 5-Door MPV at Karco Engineering, LLC on February 1, 2005. This test was conducted to obtain data indicant of FMVSS 208, 212, 219 (partial), 301, and footwell intrusion performance. The impact velocity was 56.52 km/h. The ambient temperature at the barrier face at the time of impact was 15.6 degrees Celsius. The vehicle's maximum post-test static crush was 482 mm at center of the vehicle. The test vehicle is equipped with a 3-point continuous belt system and second generation supplemental airbags in both front outboard seating positions. With respect to FMVSS 208 "Occupant Crash Protection", the occupant injury criteria summary is as follows:					
Measurement Description		Units	Threshold	Driver ATD	Passenger ATD
Head Injury Criteria (HIC ₃₆)		N/A	1000	480.1	353.7
Max. Chest Accel. (3 msec Clip)		G's	60	49.0	46.4
Left Femur Force		Newtons	10008	-2864.6	-2424.5
Right Femur Force		Newtons	10008	-2931.3	-1146.2
17. Key Words 56.3 km/h NCAP Frontal Barrier Impact Test New Car Assessment Program (NCAP) 2005 Nissan Murano S AWD 5-Door MPV NHTSA No. M55203				18. Distribution of Statement Copies of this report available from: NHTSA Technical Reference Division National Highway Traffic Safety Admin. 400 Seventh St., SW, Room 5108 Washington, D.C. 20590	
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SECTION 1

PURPOSE AND SUMMARY OF TEST M55203

1.1 PURPOSE

This 35 mph (56.3 km/h) frontal barrier impact test is part of the New Car Assessment Program (NCAP) sponsored by the National Highway Traffic Safety Administration (NHTSA) under Contract No. DTNH22-01-D-02005. The purpose of this test was to obtain vehicle crashworthiness and occupant restraint system performance data for an impact speed in excess of the current 30 mph (48.3 km/h) requirements.

This 56.3 km/h frontal barrier impact test was conducted in accordance with the Office of Crashworthiness Standards (OCS) New Car Assessment Program (NCAP) Laboratory Indicant Test Procedure, dated December 1999. Data was obtained indicant of FMVSS 208 "Occupant Crash Protection"; FMVSS 212, "Windshield Retention"; FMVSS 219, "Windshield Zone Intrusion (Partial)"; and FMVSS 301 "Fuel System Integrity" performance. Procedures for receiving, inspection testing and reporting of test results are described in the test procedures and are not repeated in this report.

1.2 SUMMARY

A load cell barrier consisting of 36 load cells was impacted by a 2005 Nissan Murano S AWD 5-Door MPV at a velocity of 56.52 km/h (35.13 mph). The test was performed at Karco Engineering, LLC on February 1, 2005.

Three (3) real-time video cameras and thirteen (13) high-speed cameras were used to document the frontal barrier impact event. Camera locations and other pertinent camera information can be found in data sheet number 15 (page number: 27) of this report.

Two Part 572E, 50th percentile male anthropomorphic test devices (ATDs), were placed in the driver and right-front passenger seating positions according to dummy placement instructions specified in the Laboratory Indicant Test Procedure.

Both ATDs were fully instrumented with head (primary and redundant), chest (primary and redundant) and pelvic triaxial accelerometers, chest displacement potentiometers, six-axis upper neck transducers, right/left femur load cells, and lower leg instrumentation. Seat belt load cells were placed on the driver and passenger's lap and shoulder belts to measure dummy torso and pelvic section loading. The driver (position 1) ATD (Serial No. 035) and the right-front passenger (position 2) ATD (Serial No. 034) were calibrated one test prior to this test.

Ninety seven (97) channels of data were recorded using an on-board data acquisition system. Appendix A contains Pre and Post-Test Photographs, Appendix B contains the vehicle and dummy response data traces. Appendix C contains Load Cell Barrier information. Appendix D contains the Instrumentation Data Channel assignments. Appendix E contains the Dummy Calibration data. Appendix F contains the Child Restraint data.

There was 100 percent windshield retention and no intrusion into the protected zone of the windshield during the impact event. There was no Stoddard solvent leakage after the event or during any phase of the static rollover.

The maximum static crush of the vehicle was 482 mm and both the driver and passenger side doors remained closed during the impact and were operable after the impact.

The driver's visible contact points were as follows: The driver ATD head, chest and abdomen contacted the airbag and on rebound the head contacted the headrest, both knees contacted the knee bolster.

The passenger's visible contact points were as follows: The passenger ATD head, chest and abdomen contacted the airbag and on rebound the head contacted the headrest, both knees contacted the glove box.

Occupant injury data is contained in table below.

OCCUPANT DATA SUMMARY

ATD Position	HIC ₃₆	Clip (g)	Chest Def. (mm)	Left Femur (N)	Right Femur (N)	Belt Spool (mm)
Driver	480.1	49.0	-28.2	-2864.6	-2931.3	*
Passenger	353.7	46.4	-30.8	-2424.5	-1146.2	*

* Not used per manufacturer's request.

SECTION 2
OCCUPANT AND VEHICLE INFORMATION/DATA SHEETS

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

CONVERSION FACTORS USED IN THIS REPORT*

Quantity	Typical Application	Std Units	Metric Unit	Multiply By
Mass	Vehicle Weight	lb	kg	0.4536
Linear Velocity	Impact Velocity	mile/h	km/h	1.609
Length or Distance	Measurements	in	mm	25.4
Volume	Fuel Systems	gal	liter	3.785
Volume	Small Fluids	oz	mL	29.573
Pressure	Tire Pressures	lbf/in ²	kPa	7.0
Volume	Liquid	gal	liter	3.785
Temperature	General Use	°F	°C	$=(t_f - 32)/1.8$
Force	Dynamic Forces	lbf	N	4.448
Moment	Torque	lbf/ft	Nm	1.355

* Based on the Recommended Practice in SAE J916, May 85

DATA SHEET NO. 1
CRASH TEST SUMMARY

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

PRIMARY IMPACT DATA

Measured Parameter	Units	Value
Velocity at Impact	km/h	56.52
Test Weight	kg	1993
Impact Angle	degrees	0
Average Rebound	mm	893
Maximum Static Crush	mm	482

DOOR OPENING AND SEAT TRACK INFORMATION

Description	Driver	Passenger
Front Door opening	Remained closed, opened w/o tools	Remained closed, opened w/o tools
Rear Door Opening	Remained closed, opened w/o tools	Remained closed, opened w/o tools
Seat Track Shift (mm)	0	0
Seat Back Failure	No	No

TEST DUMMY INFORMATION

Description	Driver	Passenger
Dummy Type/ Serial No.	50% Male Hybrid III No. 035	50% Male Hybrid III No. 034
Head Contact	Airbag, Head Rest	Airbag, Head Rest
Chest Contact	Airbag	Airbag
Abdomen Contact	Airbag	Airbag
Left Knee Contact	Knee Bolster	Glove Box
Right Knee Contact	Knee Bolster	Glove Box

16mm MOVIE COVERAGE

Description	Standard	Additional
High Speed	13	0
Real Time	1	2
Total	14	2

DATA CHANNELS

Driver ATD Sensors	40
Passenger ATD Sensors	40
Belt Assessment Sensors	8
Vehicle Structure Accelerometers	9
Rigid Barrier Load Cells	36
Total	133

DATA SHEET NO. 2
GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

TEST VEHICLE INFORMATION AND OPTIONS

NHTSA No.	M55203	Anti-Lock Brakes	Yes
Make	Nissan	All Wheel Drive	Yes
Model	Murano S AWD	Power Steering	Yes
Body Style	5-Door MPV	Driver Front Airbag	Yes
Vin No.	JN8AZ08W05W403441	Driver Side Airbag	Yes
Color	Silver	Driver Head Airbag	No
Delivery Date	1/25/2005	Driver Curtain Airbag	Yes
Odometer (mi)	182	Pass. Airbag	Yes
Dealer	Soutars	Pass. Side Airbag	Yes
Transmission	5-Speed Automatic	Pass. Head Airbag	No
Final Drive	AWD	Pass. Curtain Airbag	Yes
Type/No. Cyl.	V6	Pre-Tensioners	Yes
Engine Disp. (L)	3.5	Load Limiters	Yes
Engine Placement	Transverse	Bucket Seats	Yes
Roof Rack	No	Air Cond.	Yes
Sunroof/T-Top	No	AM/FM Cassette	Yes
Tinted Glass	Yes	Tilt Steering	Yes
Traction Control	Yes	Automatic Door Locks	Yes
Power Brakes	Yes	Power Windows	Yes
Front Disc	Yes	Power Seats	Yes
Rear Disc	Yes	Other	

Does Owners Manual provide instructions to turn off automatic door locks.

Yes

DATA FROM CERTIFICATION LABEL

Manufactured By	Nissan Motor Company, Ltd.	GVWR (kg)	2292
Date of Manufacture	Sep-04	GAWR Front (kg)	1216
		GAWR Rear (kg)	1136

VEHICLE SEATING AND CAPACITY WEIGHT INFORMATION

Measured Parameter	Front	Rear	Third	Total
Type of Seats	Bucket	Bucket	Bench	
Number of Occupants	2	3	0	5
Capacity Weight (VCW) (kg)				390
Cargo Weight (RCLW) (kg)				50

DATA SHEET NO. 2...(CONTINUED)
GENERAL TEST AND VEHICLE PARAMETER DATA

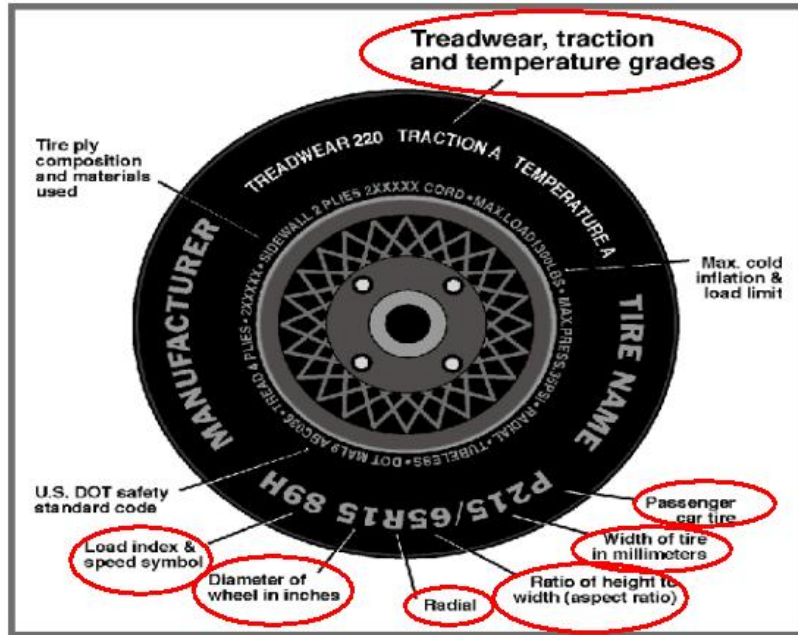
Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

Collect year, make, model, VIN, items circled in red, and tire manufacturer and tire name.



TIRE INFORMATION

Measured Parameter	Front	Rear
Max. Tire Pressure (kpa)	300	300
Cold Pressure (kpa)	230	230
Recommended Tire Size	P235/65R18	P235/65R18
Tire Size on Vehicle	P235/65R18	P235/65R18
Tire Manufacturer	Goodyear	Goodyear
Treadwear	360	360
Traction	A	A
Temperature Grades	B	B
Tire Plies Sidewall	2 Plies Polyester	2 Plies Polyester
Tire Plies Body	2 Polyester + 2 Steel + 1 Nylon	2 Polyester + 2 Steel + 1 Nylon
Load Index/Speed Symbol	104T	104T
Tire Material	Polyester + Steel + Nylon + Rubber	Polyester + Steel + Nylon + Rubber
DOT Safety Code Right	UZVK-3MLR-3704	UZVK-3MLR-3704
DOT Safety Code Left	UZVK-3MLR-3704	UZVK-3MLR-3704

DATA SHEET NO. 2...(CONTINUED)
GENERAL TEST AND VEHICLE PARAMETER DATA

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

TEST VEHICLE WEIGHTS

	Units	As Delivered Weights (UVW)			As Tested Weights (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	534	367	901	571	429	1000
Right	kg	533	365	898	566	427	993
Ratio	%	59.3	40.7	100%	57.0	43.0	100%
Totals	kg	1067	732	1799	1137	856	1993

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value
Total Delivered Weight (UVW)	kg	1799
Weight of 2 P572 ATD's	kg	152
Rated Cargo/Luggage Wt. (RCLW)	kg	50
Calculated Vehicle Target Wt. (TVTW)	kg	2001

TEST VEHICLE ATTITUDE AND CG

	Units	LF	RF	LR	RR	CG (aft of front axle)
As Delivered	mm	847	838	868	868	1152
As Tested	mm	832	826	845	845	1216

Vehicle Wheel Base (mm) 2830

Weight of Ballast Secured in cargo area (kg) 0

Vehicle Components Removed Rear Bumper, Tail Lights, Spare Tire, Hinged Back Door

* Ballast weight does not include cameras, instrumentation and brake abort system.

FUEL SYSTEM DATA

Fuel System Capacity From Owners Manual (L) 78.08

Usable Capacity Furnished by COTR (L) N/A

Actual Test Volume with entire fuel System Filled (L) 34.07

1/3 of Usable Capacity (L) 26.03

Test Fluid Type: Stoddard Solvent

Kinematic Viscosity: as per ASTM Standard D484-71 Purple

Is Vehicle Fuel Pump Electric or Mechanical? Electric

If electric, does pump operate with ignition switch "On" & engine "OFF" Yes

Fuel System Particulars: None

DATA SHEET NO. 3
POST-TEST IMPACT DATA

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

SPEED TRAP DATA

Measured Parameter	Units	Requirement	Value
Trap No.1 Velocity (Primary)	km/h	55.51 to 57.12	56.52
Trap No. 1 Entry Distance	mm	<1524	1524
Trap No.1 Exit Distance	mm	<1524	305
Trap No.2 Velocity (Redun.)	km/h	55.51 to 57.12	56.48
Trap No.2 Entry Distance	mm	<1524	1524
Trap No.2 Exit Distance	mm	<1524	305

VEHICLE STATIC CRUSH

Measured Parameter	Units	Pre-Test	Post-Test	Difference
Left Side	mm	4447	4267	-180
Center	mm	4757	4275	-482
Right Side	mm	4447	4267	-180

VEHICLE REBOUND FROM BARRIER

Measured Parameter	Units	Value
Left Side	mm	850
Center	mm	920
Right Side	mm	910
Average	mm	893

DATA SHEET NO. 4 **TEST VEHICLE INFORMATION**

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

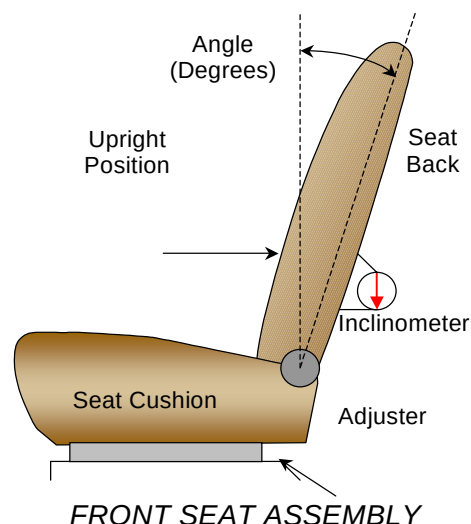
NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

NOMINAL DESIGN RIDING POSITION

The driver and passenger seat backs are positioned to the manufacturers designated angle. The procedure is as follows: A special application tool with pointed probes is inserted through the fabric to make contact with the rigid portion of the lower seat frame assembly, approximately 13 inches above the pivot point of the seat back. An inclinometer is placed against the flat surface of the tool and the seat back angle is measured directly from the dial face.



SEAT BACK ANGLES

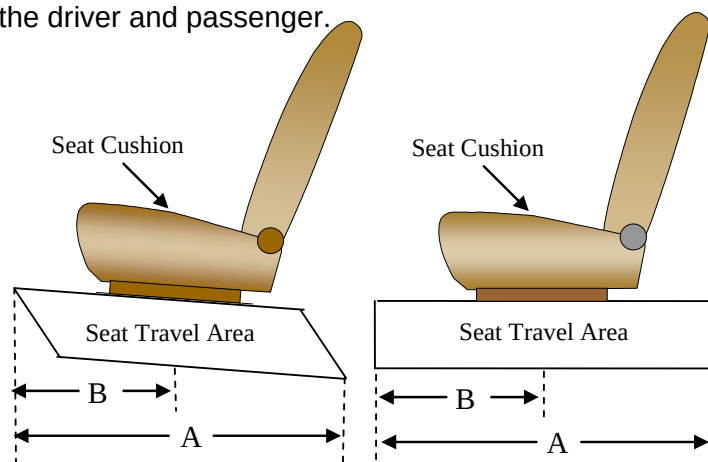
	Angle (Deg.)
Driver w/seated Dummy	21.0
Passenger w/seated Dummy	21.0

SEAT FORE/AFT POSITIONS

The total seat travel was measured from forward most position to rearmost position, irrespective of vertical seat height in those positions. The seat was set at the longitudinal mid position with vertical adjustment at the lowest position obtainable for both the driver and passenger.

SEAT FORE/AFT POSITIONING

	Total Fore/Aft Travel	Placed in Position #
Driver	238 mm	119 mm
Passenger	21 Detents	11th Detent



SEAT BELT UPPER ANCHORAGE

Position number one (1) is the uppermost position.

SEAT BELT UPPER ANCHORAGE

	Total # of Positions	Placed in Position #
Driver	4	1
Passenger	4	1

DATA SHEET NO. 4...(CONTINUED)
TEST VEHICLE INFORMATION

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

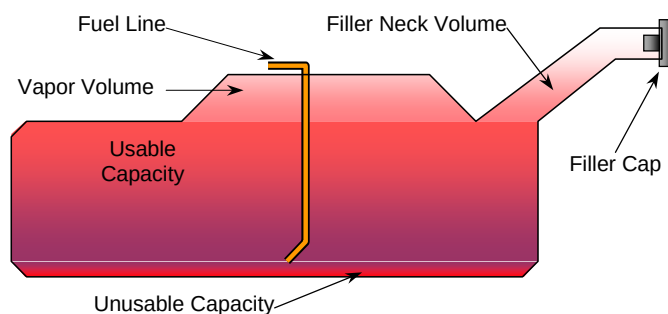
Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

FUEL TANK CAPACITY

	Liters
Usable Capacity of "Standard Tank"	78.08
Usable Capacity of "Optional" Tank	
Usable Capacity used for FMVSS 301	71.84 to 73.40
Actual Amount of Solvent used	34.07
1/3 of Usable Capacity	26.03

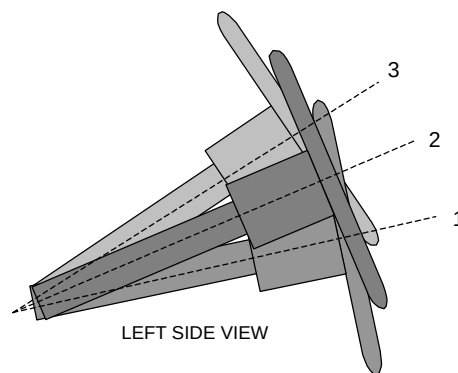
The test vehicle is equipped with an electric fuel pump. The fuel pump operates for approximately two seconds after the ignition is placed in the "ON" position, after which the fuel pump automatically shuts off. The fuel filler door is located on the right rear fender. The standard fuel tank occupies the area under the rear seat.



VEHICLE FUEL TANK ASSEMBLY

STEERING COLUMN ADJUSTMENT

Steering wheel and column adjustments are made so that the steering wheel hub is at the geometric center of the locus it describes when moved through its full range of motion. An aluminum plate is placed across the rim of the steering wheel, an inclinometer is placed on the plate and the angle is measured.



STEERING COLUMN ASSEMBLY

STEERING COLUMN POSITIONS

	Fore/Aft Positon (mm)	Degrees
Lowermost positon No. 1		20.0
Geometric center position No. 2		29.0
Uppermost position No. 3		38.0

DATA SHEET NO. 5
DUMMY POSITIONING IN VEHICLE

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

TEST DUMMY POSITION MEASUREMENTS

Code	Measurement Description	Driver		Passenger	
		Length (mm)	Angle (deg)	Length (mm)	Angle (deg)
WA	Windshield Angle		66.0		
SWA	Steering Wheel Angle		61.0		
SCA	Steering Column Angle		29.0		
SA	Seat Back Angle		21.0		21.0
HZ	Head to Roof (Z)	195	90.0	175	90.0
HH	Head to Header	405		405	
HW	Head to Windshield	750		720	
HR	Head to Side Header (Y)	268		270	
NR	Nose to Rim	435	12.1		
CD	Chest to Dash	565		730	
CS	Chest to Steering Hub	355			
RA	Rim to Abdomen	205			
KDL	Left Knee to Dash	210	4.9	210	
KDR	Right Knee to Dash	205		225	3.9
PA	Pelvic Angle		23.0		20.0
TA	Tibia Angle		46.9		42.9
KK	Knee to Knee (Y)	293		270	
SK	Striker to Knee	620	1.5	633	3.0
ST	Striker to Head	565	82.0	590	81.0
SH	Striker to H-Point	235	27.0	265	26.0
SHY	Striker to H-Point (Y)	255		245	
HS	Head to Side Window	360		345	
HD	H-Point to Door (Y)	170		150	
AD	Arm to Door (Y)	115		55	

DATA SHEET NO. 5...(CONTINUED) **DUMMY POSITIONING IN VEHICLE**

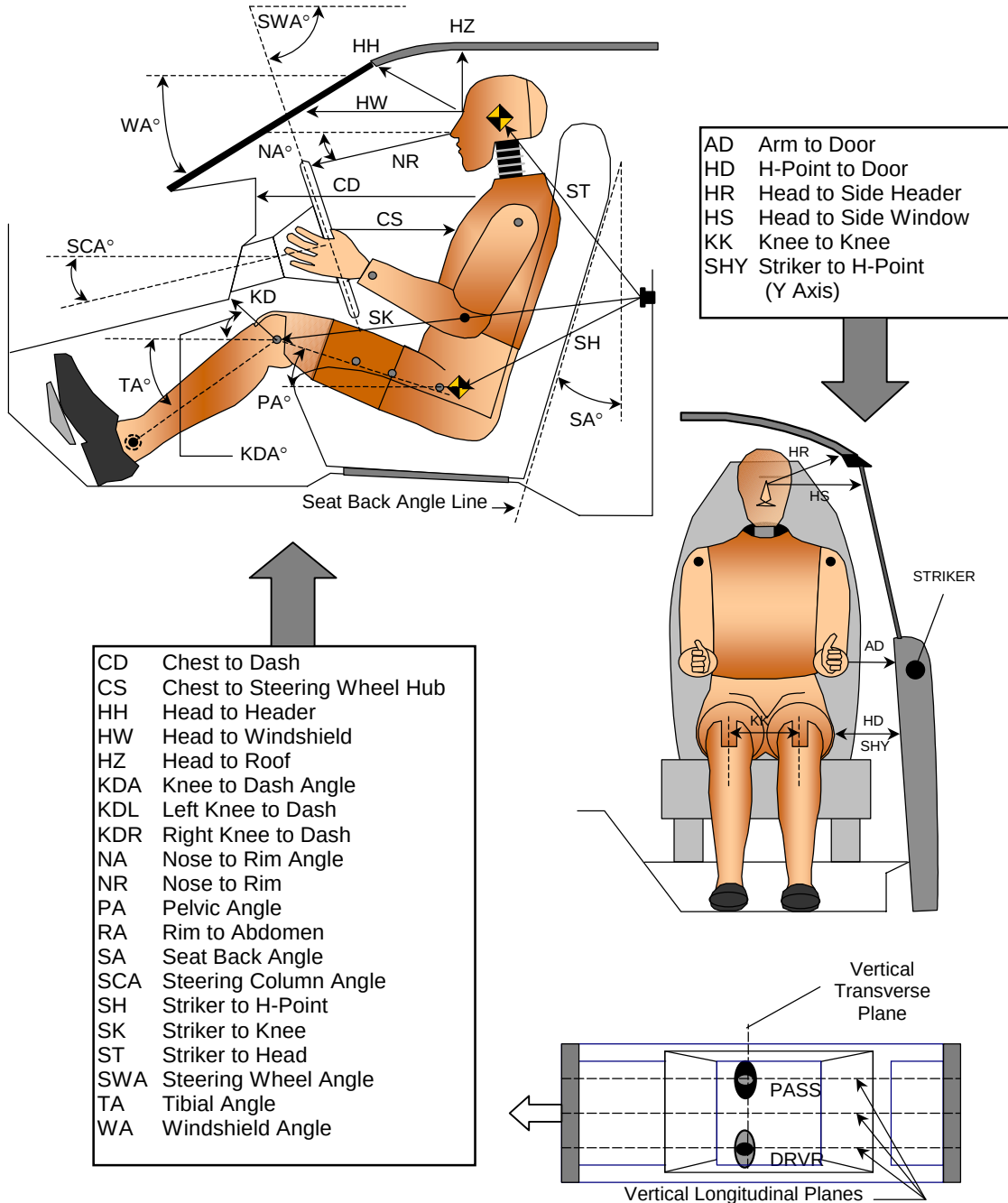
Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

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DUMMY MEASUREMENTS FOR FRONT SEAT OCCUPANTS



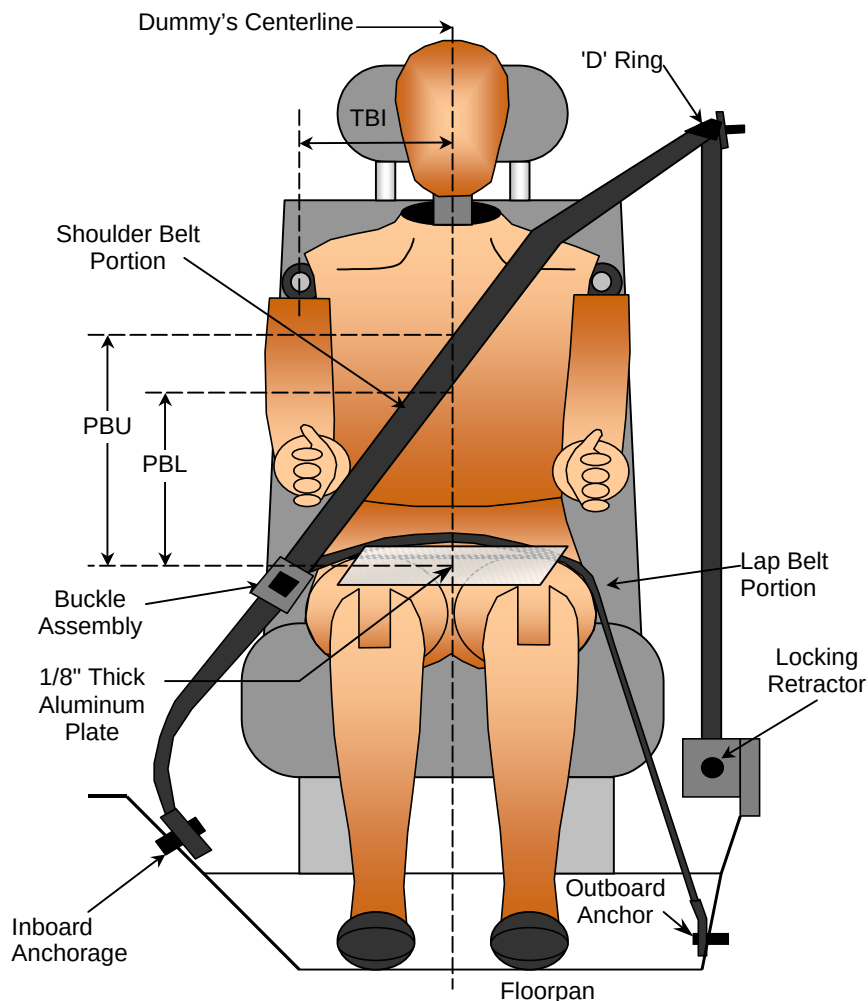
DATA SHEET NO. 6
SEAT BELT POSITIONING DATA

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05



SEAT BELT POSITIONING MEASUREMENTS

Measured Parameter	Units	Driver	Passenger
TBI -Dummy C/L to Lap/Shoulder Belt Intersect	mm	225	240
PBU - Top Surface of reference to belt upper edge	mm	335	345
PBL - Top Surface of reference to belt lower edge	mm	265	260
Lap Belt Tension	Newtons	10	10
Shoulder Belt Tension	N/A	Retractor	Retractor

DATA SHEET NO. 7 - VEHICLE ACCELEROMETER LOCATION AND DATA SUMMARY

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

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VEHICLE ACCELEROMETER PEAK DATA AND PRE-TEST LOCATIONS

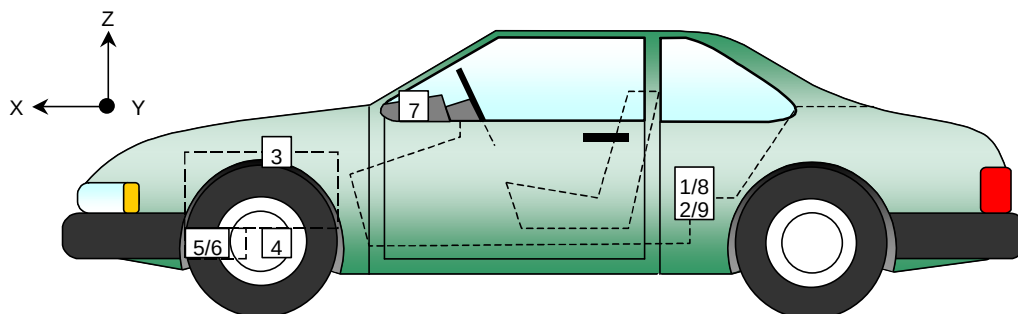
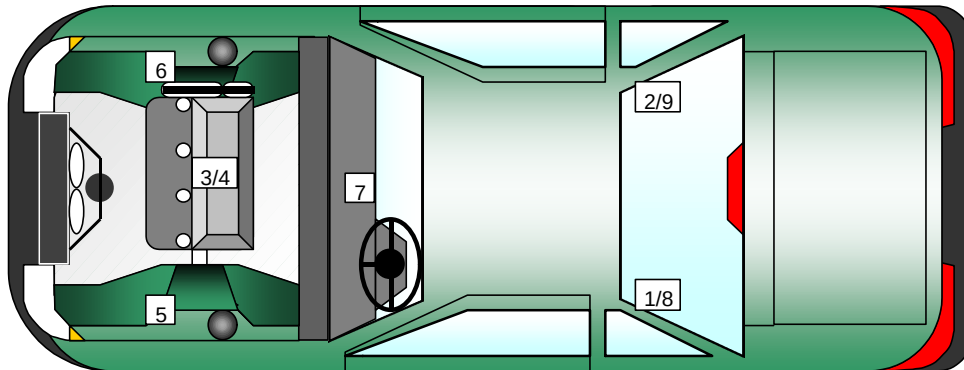
No.	Accelerometer Location	Measurements (mm)			Peak Values				
		X	Y	Z	Units	Max	Time	Min	Time
1	Left Rear X-Member	1880	-725	420	G's	2.4	98.1	-48.1	40.2
2	Right Rear X-Member	1880	725	420	G's	2.5	119.0	-50.6	39.5
3	Engine Top	3990	-20	945	G's	62.6	42.2	-203.0	27.8
4	Engine Bottom	4020	-290	240	G's	5.7	34.0	-177.7	26.5
5	Left Brake Caliper	3940	-760	320	G's	27.0	33.8	-106.6	40.0
6	Right Brake Caliper	3940	760	320	G's	1.0	9.6	-67.7	26.1
7	Instrument Panel	3020	0	1005	G's	0.0	0.0	0.0	0.0
8	Left Rear X-Member (Z-Axis)	1920	-725	420	G's	7.3	14.7	-9.8	66.8
9	Right Rear X-Member (Z-Axis)	1920	725	420	G's	6.2	15.0	-6.8	21.0

Reference Planes: X=From Rear Surface of Vehicle, Y=Vehicle Centerline, Z=Ground Plane

1.) Channel failed at 30.0 msec.

2.) Channel failed at 51.4 msec.

3.) Channel failed, no data



DATA SHEET NO. 8 - HYBRID III ATD INJURY CRITERIA AND SENSOR DATA

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

HEAD PRIMARY PEAK ACCELERATIONS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Head CG	X	G's	8.2	200.0	-50.7	81.9	1.5	196.5	-52.6	78.8
Head CG	Y	G's	4.3	51.3	-4.2	42.2	9.7	93.4	-4.2	68.5
Head CG	Z	G's	25.6	61.2	-24.3	86.1	18.5	66.2	-5.9	87.5
Head CG Resultant	N/A	G's	54.3	81.9			53.2	78.8		

CHEST PRIMARY PEAK ACCELERATIONS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Chest CG	X	G's	5.5	174.2	-49.0	63.3	2.1	159.3	-47.4	69.4
Chest CG	Y	G's	4.8	62.7	-2.9	46.2	5.2	72.2	-7.0	95.3
Chest CG	Z	G's	14.6	61.8	-15.3	99.9	7.5	49.3	-10.4	86.7
Chest CG Resultant	N/A	G's	50.6	63.0			47.5	69.4		

FEMUR PEAK FORCES

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Left Femur	Z	Newtons	1425.9	50.6	-2864.6	62.6	1246.3	44.0	-2424.5	58.2
Right Femur	Z	Newtons	1834.5	48.7	-2931.3	56.9	1291.8	51.9	-1146.2	56.2

1.) Driver channel failed at 63.1 msec.

SEAT BELT SENSOR PEAK VALUES

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Shoulder Belt Pullout	N/A	MM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Shoulder Belt Stretch	N/A	MM/CM	0.0	0.0	0.0	0.0	0.00	0.0	0.00	0.0
Lap Belt Force	N/A	Newtons	11550.5	60.1	-0.9	0.6	10332.0	63.4	-10.2	150.8
Shoulder Belt Force	N/A	Newtons	7578.2	58.6	-76.2	194.8	6962.9	53.2	-55.6	149.9

1.) Not used with pre-tensioners

2.) Sensors not installed

PRIMARY HEAD INJURY CRITERIA (HIC36)

Location	Driver				Passenger			
	HIC	T ¹	T ²	Avg G	HIC	T ¹	T ²	Avg G
Head CG Primary	480.1	57.6	93.6	44.6	353.7	60.4	96.4	39.5

PRIMARY CHEST CLIP (3MSEC)

Location	Driver			Passenger		
	CLIP	T ¹	T ²	CLIP	T ¹	T ²
Chest CG Primary	49.0	61.3	64.3	46.4	68.9	71.9

DATA SHEET NO. 8...(CONTINUED)

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

PELVIC PEAK ACCELERATIONS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Pelvis	X	G's	10.8	102.1	-67.4	56.7	7.3	98.1	-64.2	55.3
Pelvis	Y	G's	7.3	88.2	-14.0	57.1	7.0	47.3	-7.4	101.0
Pelvis	Z	G's	2.8	28.4	-30.7	64.5	3.3	25.9	-27.5	71.9
Pelvis Resultant	N/A	G's	72.0	56.7			66.7	55.3		

UPPER NECK PEAK FORCES AND MOMENTS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Neck Force	X	Newtons	222.8	96.8	-460.4	143.7	312.5	64.4	-345.5	123.0
Neck Force	Y	Newtons	97.1	83.8	-170.0	55.8	199.5	93.9	-74.0	62.8
Neck Force	Z	Newtons	1773.4	68.3	-530.8	97.0	1271.2	51.3	-133.8	102.9
Neck Force Resultant	N/A	Newtons	1776.6	68.3			1307.4	51.4		
Neck Moment	X	Nm	6.1	200.0	-9.3	48.6	8.5	62.1	-12.4	75.2
Neck Moment	Y	Nm	44.3	130.7	-38.9	82.9	31.6	62.4	-37.8	79.1
Neck Moment	Z	Nm	3.1	113.2	-7.1	61.0	3.4	149.9	-11.0	68.1
Neck Moment Resultant	N/A	Nm	44.8	130.7			39.3	79.0		

FOOT PEAK ACCELERATIONS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Left Foot Aft	X	G's	22.7	68.5	-32.5	26.8	33.6	57.5	-152.3	47.2
Left Foot Aft	Z	G's	2.6	95.1	-43.9	28.4	30.9	41.5	-54.0	49.4
Left Foot Fore	Z	G's	14.5	95.2	-57.9	52.2	63.8	40.0	-216.1	45.3
Right Foot Aft	X	G's	28.6	56.6	-115.9	45.0	4.0	88.6	-64.6	44.4
Right Foot Aft	Z	G's	21.1	55.2	-174.9	58.0	10.1	21.7	-33.0	49.1
Right Foot Fore	Z	G's	0.0	0.0	0.0	0.0	17.1	22.6	-49.8	49.2

1.) Driver channel failed, no data

UPPER AND LOWER TIBIA PEAK FORCES AND MOMENTS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Left Upper Moment	X	Nm	21.7	55.9	-36.4	88.9	75.9	48.6	-46.3	67.5
Left Upper Moment	Y	Nm	15.3	132.6	-90.7	56.0	105.6	57.8	-179.2	45.4
Right Upper Moment	X	Nm	47.6	54.6	-71.9	56.2	43.6	63.7	-12.3	24.6
Right Upper Moment	Y	Nm	29.8	111.2	-201.5	62.1	21.5	125.2	-83.6	49.1
Left Lower Moment	X	Nm	51.5	56.8	-11.7	30.2	50.6	48.2	-77.9	59.7
Left Lower Moment	Y	Nm	35.1	93.9	-45.7	52.5	80.1	58.1	-169.9	44.2
Left Lower Force	Z	Newtons	216.7	65.4	-2411.9	30.9	306.7	28.3	-3509.4	47.6
Right Lower Moment	X	Nm	21.3	52.9	-152.8	56.6	16.9	84.5	-11.1	70.2
Right Lower Moment	Y	Nm	141.8	57.2	-74.9	45.7	15.8	138.0	-29.5	49.4
Right Lower Force	Z	Newtons	314.7	50.9	-6046.5	57.1	123.2	165.2	-2246.6	43.5

1.) Driver channels failed at 96.0 msec.

DATA SHEET NO. 8...(CONTINUED)Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPVNHTSA No.: M55203Test Program: 2005 NHTSA 35mph NCAPTest Date: 2/1/05**CHEST PEAK DEFLECTIONS**

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Chest	X	MM	0.0	1.4	-28.2	69.6	0.0	7.9	-30.8	68.5

HEAD REDUNDANT PEAK ACCELERATIONS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Head CG	X	G's	8.0	200.0	-51.7	80.4	1.7	198.5	-51.6	78.9
Head CG	Y	G's	6.5	53.0	-5.0	41.1	10.4	91.2	-4.8	68.5
Head CG	Z	G's	25.1	61.7	-25.1	87.8	18.2	66.2	-5.9	87.5
Head CG Resultant	N/A	G's	54.6	82.5			52.3	78.9		

CHEST REDUNDANT PEAK ACCELERATIONS

Location	Axis	Units	Driver				Passenger			
			Max	Time	Min	Time	Max	Time	Min	Time
Chest CG	X	G's	5.9	174.5	-48.5	63.2	2.0	151.8	-47.8	69.4
Chest CG	Y	G's	4.6	62.8	-2.8	46.4	5.2	49.3	-7.1	77.4
Chest CG	Z	G's	14.9	61.8	-15.1	99.9	7.7	49.3	-10.8	86.7
Chest CG Resultant	N/A	G's	50.2	62.9			47.8	69.4		

REDUNDANT HEAD INJURY CRITERIA (HIC36)

Location	Driver				Passenger			
	HIC	T ¹	T ²	Avg G	HIC	T ¹	T ²	Avg G
Head CG Redundant	487.0	57.5	93.5	44.9	354.9	60.2	96.2	39.6

REDUNDANT CHEST CLIP (3MSEC)

Location	Driver			Passenger		
	CLIP	T ¹	T ²	CLIP	T ¹	T ²
Chest CG Redundant	48.8	61.2	64.2	46.8	68.8	71.8

DATA SHEET NO. 9
SEAT BELT ASSESSMENT TEST DATA

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

SEAT BELT POSITIONING MEASUREMENTS

Measurement Description	Units	Driver	Passenger
TBI -Dummy C/L to Lap/Shoulder Belt Intersect	mm	225	240
PBU - Top Surface of reference to belt upper edge	mm	335	345
PBL - Top Surface of reference to belt lower edge	mm	265	260
Lap Belt Tension	Newtons	10	10
Shoulder Belt Tension		Retractor	Retractor

SEAT BELT POSITIONING MEASUREMENTS

Measurement Description	Units	Driver	Passenger
Retractor Reel to "D" ring	mm	1020	1020
Shoulder Belt length as measured on ATD	mm	930	930
Lap Belt length as measured on ATD	mm	920	870
Remainder of belt on reel	mm	650	785
Total belt length for continuous webbing systems	mm	3520	3605

SHOULDER BELT SPOOL-OFF DATA

Measurement Description	Units	Driver	Passenger
As determined mechanically	mm	180.0	35.0
As determined electronically	mm	*	*

* Not used per manufacturer's request.

BELT STRETCH DATA

Measurement Description	Units	Driver	Passenger
Electronically between belt load cell and "D" ring	mm/cm	*	*
Mechanically	mm/cm		

* Not used with shoulder belt pre-tensioner systems.

DATA SHEET NO. 10
SUMMARY OF FMVSS 212 DATA

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

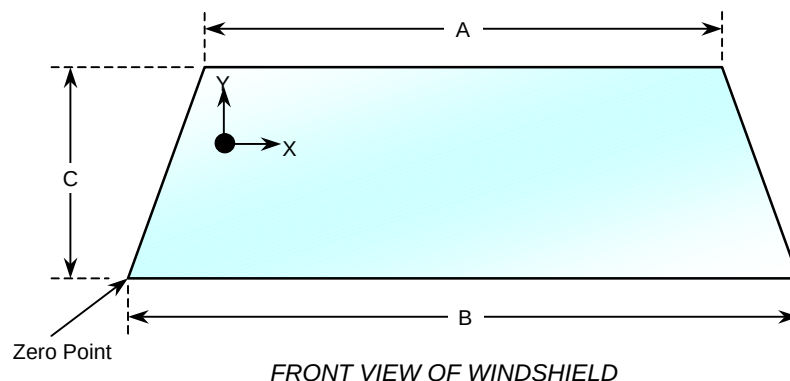
Windshield Mounting Details: Windshield glass is secured to the vehicle frame with a rubber type adhesive. No molding covers the windshield periphery at any point.

The standard requires that the post-test retention measurement be a minimum of 75 percent of the pretest total periphery measurement for vehicles not equipped with occupant passive restraints and 50 percent for each side of the windshield for vehicles that are equipped with occupant passive restraints.

Temperature of windshield molding during test: 21.1 °C

WINDSHIELD PERIPHERY MEASUREMENTS

Measurement	Pre-Test(mm)	Post-Test(mm)	% of Retention
Left Side	2365	2365	100
Right Side	2365	2365	100
Total	4730	4730	100



WINDSHIELD DIMENSIONS

Item	Units	Segment Length	Molding Width
A	mm	1295	5
B	mm	1615	
C-Left	mm	910	10
C-Right	mm	910	10

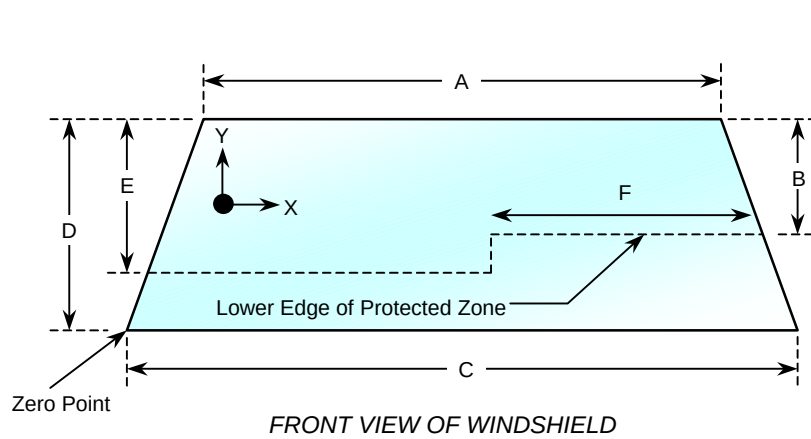
DATA SHEET NO. 11
WINDSHIELD ZONE INTRUSION FMVSS 219 DATA (PARTIAL)

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05



**WINDSHIELD AND
PROTECTED ZONE**

Item	Units	Value
A	mm	1295
B	mm	522
C	mm	1615
D	mm	910
E	mm	530
F	mm	435

AREA OF PROTECTED ZONE FAILURES

- A. Provide coordinates of the area that the protected zone was penetrated more than 0.25 in. by a vehicle component other than one that is normally in contact with the windshield.

X	Y

- B. Provide coordinates of the area beneath the protected zone that the inner surface of the windshield was penetrated by a vehicle component.

X	Y

DATA SHEET NO. 12
FMVSS 301 FUEL SYSTEM INTEGRITY POST IMPACT DATA

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV NHTSA No.: M55203
Test Program: 2005 NHTSA 35mph NCAP Test Date: 2/1/05

Test Time: 1:57 PM Temperature: 15.6 Deg. C.

STODDARD SOLVENT SPILLAGE MEASUREMENTS

- A. From impact until vehicle motion ceases: 0.0 oz.
(Maximum Allowable = 1 ounce)
- B. For the 5-minute period after motion ceases: 0.0 oz.
(Maximum Allowable = 5 ounces)
- C. For the following 25 minutes: 0.0 oz.
(Maximum Allowable = 1 oz./minute)
- D. Spillage Location Details: No leakage occurred

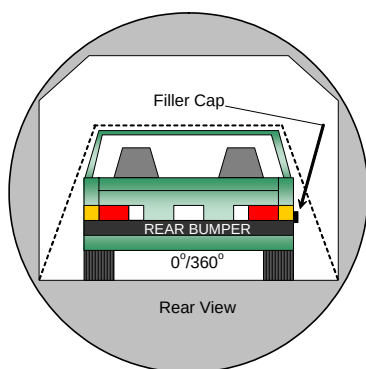
DATA SHEET NO. 13
FMVSS 301 STATIC ROLLOVER DATA

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

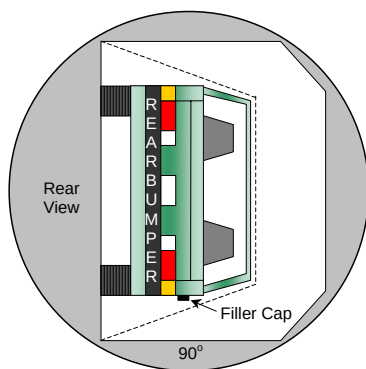
NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

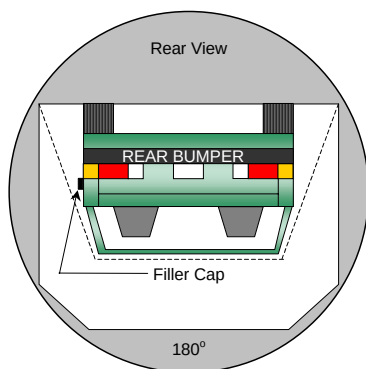
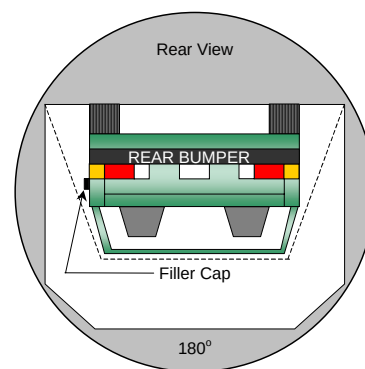
Test Date: 2/1/05



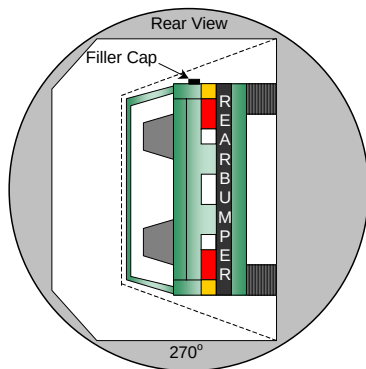
0° to 90°



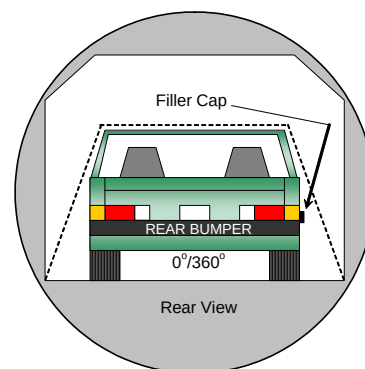
90° to 180°



180° to 270°



270° to 360°



1. The specified fixture rollover rate for each 90° of rotation is 60 to 120 seconds.
2. The position hold time at each position is 300 seconds (minimum).
3. No solvent leakage occurred during rollover.

DATA SHEET NO. 13...(CONTINUED)
FMVSS 301 STATIC ROLLOVER DATA

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

SOLVENT COLLECTION TIME TABLE IN SECONDS

Test Phase	Rotation Time	Hold Time	Total Time
0° to 90°	77	300	377
90° to 180°	80	300	380
180° to 270°	80	300	380
270° to 360°	76	300	376

FMVSS 301 SPILLAGE TABLE REQUIREMENT (oz.)

First 5 Minutes	5
Sixth Minute	1
Seventh Minute	1
Eighth Minute	1

ACTUAL TEST VEHICLE SOLVENT SPILLAGE TABLE (oz.)

Test Phase	First 5 Minutes	Sixth Minute	Seventh Minute	Eighth Minute
0° to 90°	0	0	0	0
90° to 180°	0	0	0	0
180° to 270°	0	0	0	0
270° to 360°	0	0	0	0

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. 14
VEHICLE MEASUREMENTS

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

VEHICLE MEASUREMENT TABLE

No.	Measurement Description	Units	Pre-Test	Post-Test	Diff.
1	Total length of vehicle at centerline	mm	4757	4275	-482
2	RSOV to front of engine	mm	4287	4017	-270
3	RSOV to firewall centerline	mm	3872	3797	-75
4	RSOV to leading edge of right door	mm	3305	3300	-5
5	RSOV to leading edge of left door	mm	3302	3304	2
6	RSOV to lower leading edge of right door	mm	3275	3260	-15
7	RSOV to lower leading edge of left door	mm	3269	3256	-13
8	RSOV to upper trailing edge of right door	mm	2185	2180	-5
9	RSOV to upper trailing edge of left door	mm	2180	2184	4
10	RSOV to lower trailing edge of right door	mm	2178	2160	-18
11	RSOV to lower trailing edge of left door	mm	2173	2164	-9
12	RSOV to bottom of right 'A' pillar	mm	3251	3236	-15
13	RSOV to bottom of left 'A' pillar	mm	3251	3243	-8
14	RSOV to firewall on right side	mm	3847	3807	-40
15	RSOV to firewall on left side	mm	3875	3757	-118
16	RSOV to steering column	mm	2825	2890	65
17	Center of steering column to left 'A' pillar	mm	434	440	6
18	Center of steering column to headlining	mm	435	440	5
19	RSOV to right side of front bumper	mm	4447	4267	-180
20	RSOV to left side of front bumper	mm	4447	4267	-180
21	Length of engine block	mm	620	620	0
RD	RSOV to right side of dash panel	mm	3081	3076	-5
CD	RSOV to center of dash panel	mm	2980	2950	-30
LD	RSOV to left side of dash panel	mm	3076	3080	4

DATA SHEET NO. 14...(CONTINUED)
VEHICLE STRUCTURAL MEASUREMENTS

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

VEHICLE STRUCTURAL MEASUREMENT TABLE

No.	Measurement Description	Units	Pre-Test	Post-Test	Diff.
1	Total length	mm	4757	4275	-482
2	Total width	mm	1857	1859	2
3	Bumper top height	mm	790	760	-30
4	Bumper bottom height	mm	280	243	-37
5	Longitudinal member top height	mm	670	698	28
6	Longitudinal member bottom height	mm	580	607	27
7	Distance between longitudinal members	mm	950	980	30
8	Longitudinal member width	mm	70	70	0
9	Engine top height	mm	915	900	-15
10	Engine bottom height	mm	263	244	-19
11	Engine and gear box width	mm	900	890	-10
12	Front bumper to engine distance	mm	460	210	-250
13	Front shock absorber fixing width	mm	1068	990	-78
14	Bonnet leading edge height	mm	903	980	77
15	Front shock absorber fixing width	mm	1260	1100	-160
16	Front bumper to front axle distance	mm	950	540	-410
17	Front axle to 'A' pillar distance	mm	505	460	-45
18	'A' pillar to 'B' pillar distance	mm	1122	1115	-7
19	'B' pillar to rear axle distance	mm	1202	1200	-2
20	'B' pillar to 'C' pillar distance	mm	1002	970	-32
21	Roof sill bottom height	mm	1478	1460	-18
22	Roof sill top height	mm	1629	1610	-19
23	Floor sill bottom height	mm	320	390	70
24	Floor sill top height	mm	434	420	-14

DATA SHEET NO. 14...(CONTINUED)

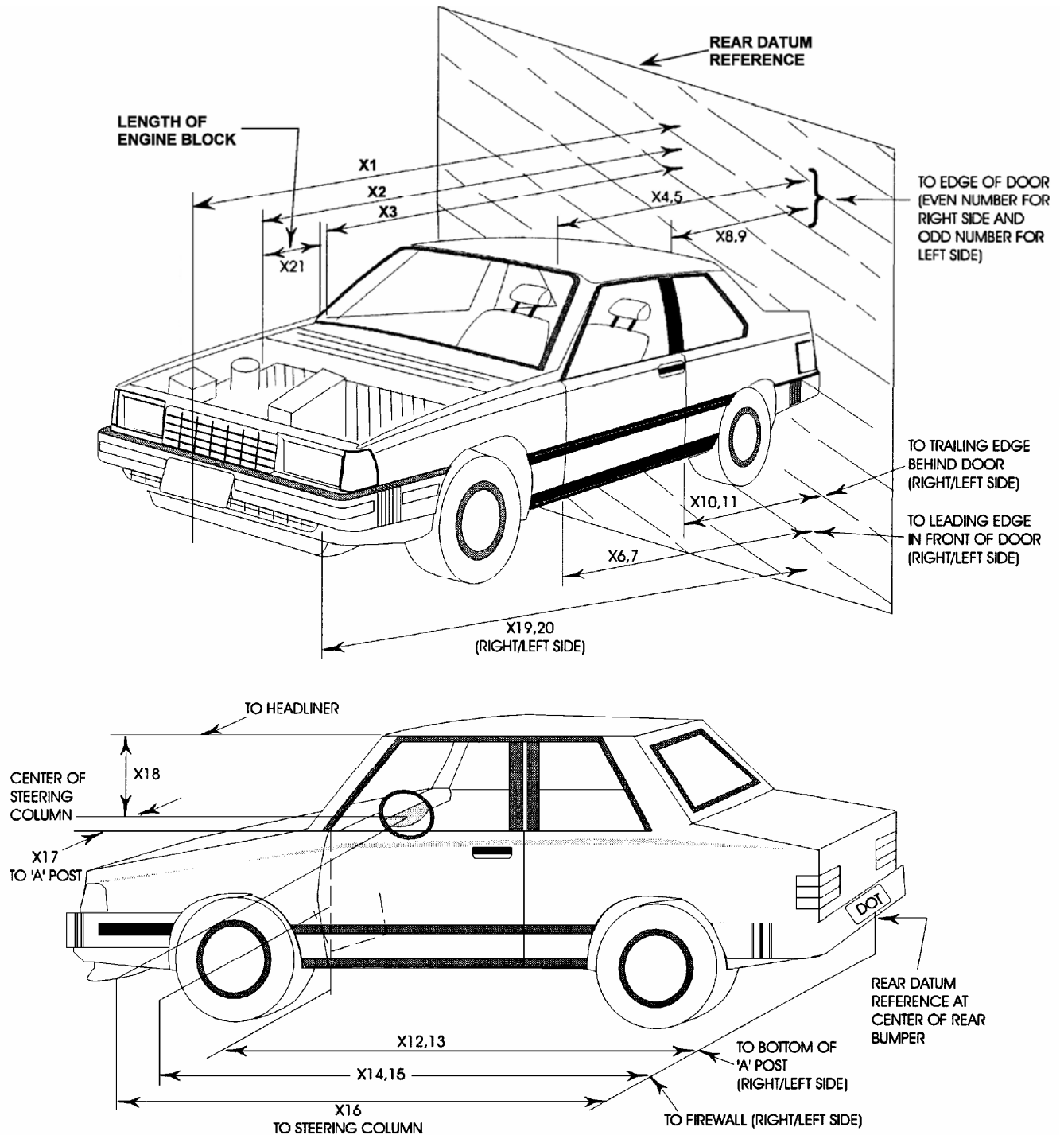
VEHICLE MEASUREMENTS

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05



DATA SHEET NO. 15
CAMERA LOCATIONS

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

VEHICLE CAMERA MEASUREMENT TABLE

No.	Camera View	Location (mm)			Angle (deg.)	Film Plane to Head (mm)	Lens (mm)	Speed (fps)
		X	Y	Z				
1	Real Time Camera (Panning)	-12192	-6096	-1651	-10	N/A	Zoom	30
2	Overall Left Side	-2489	-8280	-1143	-4	7748	24	1000
3	Left Side View	-1677	-7620	-1329	-4	7122	50	1000
4	Steering Column (Bottom)	-2134	-8230	-2997	-16	7892	19	
5	Steering Column (Top)	-2134	-8230	-3404	-20	7991	19	
6	Overall Right Side	-2083	8230	-1270	-6	7703	13	
7	Right Side View	-1677	7316	-1422	-4	6821	50	1000
8	Passenger and Interior View	-6781	9144	-2997	9819	9819	65	
9	Right Side View	-1829	7316	-1422	-4	6807	28	1000
10	Windshield View	-610	0	-5944	-90	N/A	13	
11	Driver Front View	610	-432	-2667	-40	N/A	13	
12	Passenger Front View	610	432	-2667	-40	N/A	13	
13	Pit View of Engine	-914	0	1499	90	N/A	6	
14	Pit View of Fuel Tank	-2438	0	1499	90	N/A	6	

ADDITIONAL CAMERAS

1	Real Time Camera (Still)	-1219	-8585	-1372	0	8137	Zoom	30
2	Real Time Camera (Still)	-1067	7976	-991	0	7623	Zoom	30

X = Barrier Face Y = Monorail Centerline Z = Ground DNR = Did Not Run NTM = No Timing Marks

DATA SHEET NO. 16
PHOTOGRAPHIC REFERENCE TARGET LOCATIONS

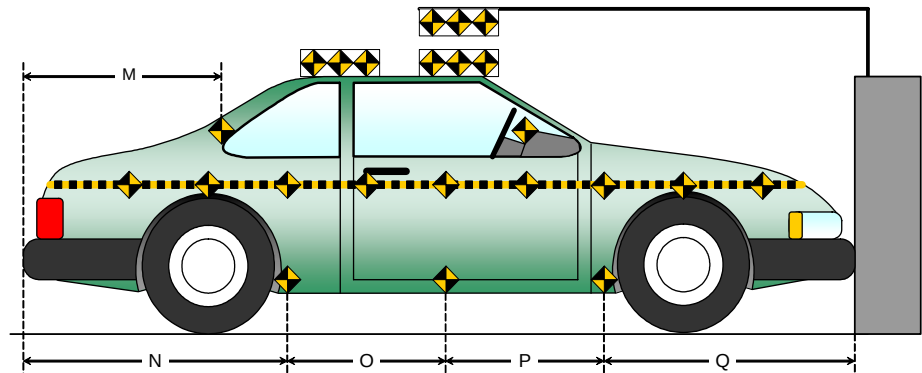
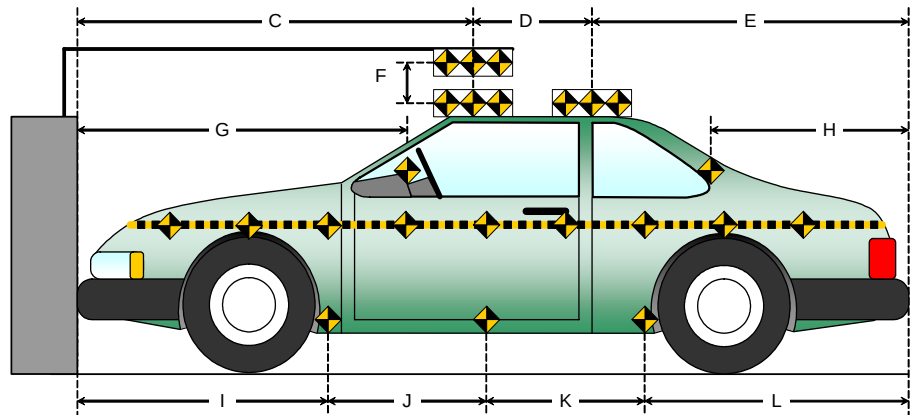
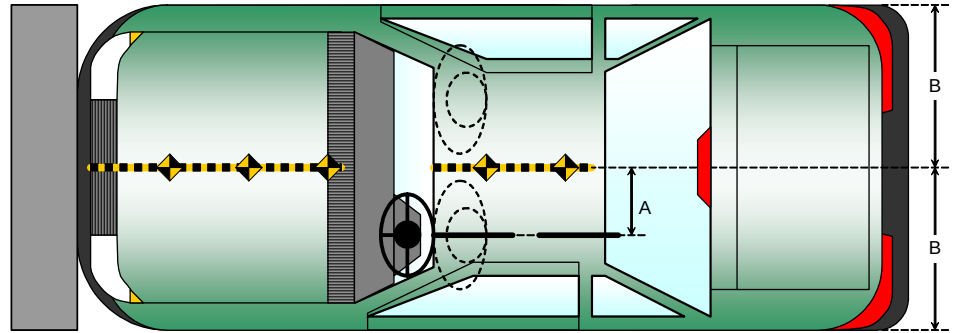
Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

All Dimensions in (mm)	
Item	Value
A	380
B	928
C	2265
D	610
E	1874
F	150
G	1880
H	1305
I	1447
J	902
K	902
L	1490
M	1300
N	1495
O	902
P	902
Q	1500



DATA SHEET NO. 17
VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

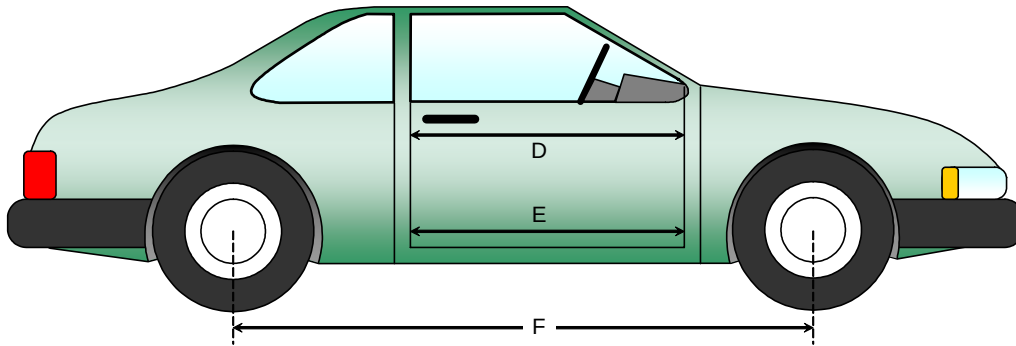
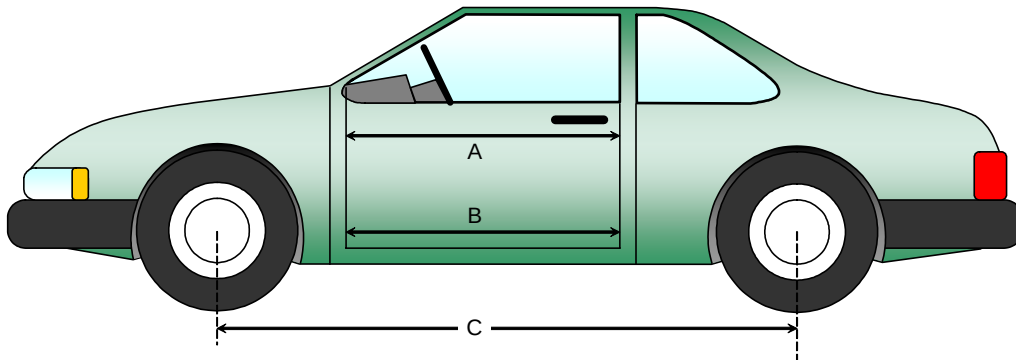
Test Date: 2/1/05

DOOR OPENING WIDTH TABLE

Item	Description	Units	Pre-Test	Post-Test	Diff.
A	Left Side Upper	mm	1030	1021	-9
B	Left Side Lower	mm	996	991	-5
D	Right Side Upper	mm	1026	1011	-15
E	Right Side Lower	mm	988	974	-14

WHEELBASE MEASUREMENT TABLE

Item	Description	Units	Pre-Test	Post-Test	Diff.
C	Left Side Wheel Base	mm	2830	2800	-30
F	Right Side Wheel Base	mm	2830	2780	-50



DATA SHEET NO. 17...(CONTINUED)
VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

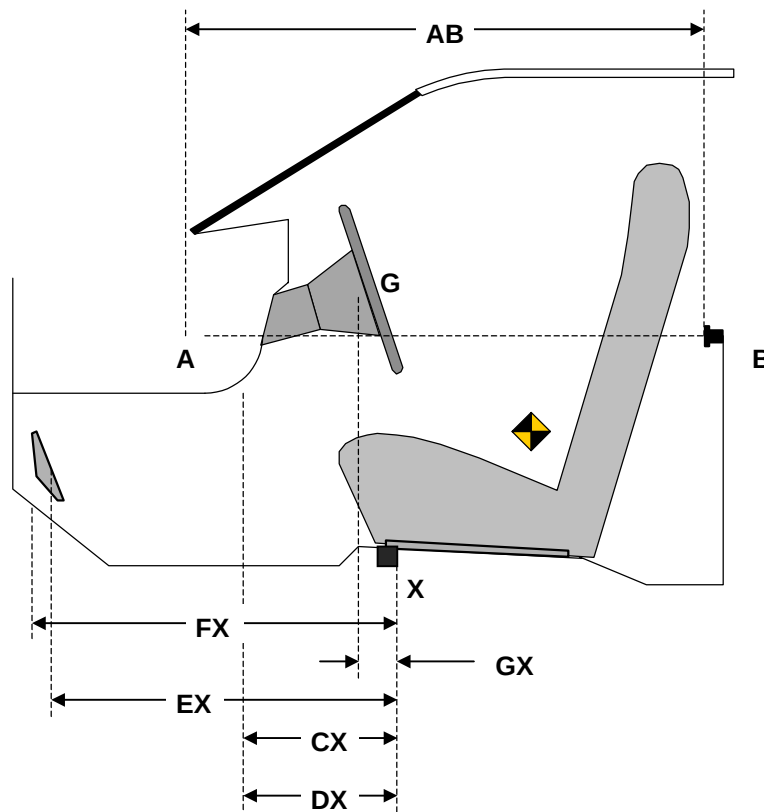
Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

DRIVER COMPARTMENT INTRUSION TABLE

Item	Description	Units	Pre-Test	Post-Test	Diff.
AB	Door Opening (Inside window jam)	mm	1030	1021	-9
CX	Left Knee Bolster to X	mm	322	330	8
DX	Right Knee Bolster to X	mm	315	340	25
EX	Brake Pedal to X	mm	585	480	-105
FX	Foot Rest to X	mm	580	560	-20
GX	Center of Steering Wheel Hub to X	mm	30	80	50

X = Left Front Seat Outboard Anchor Bolt Head



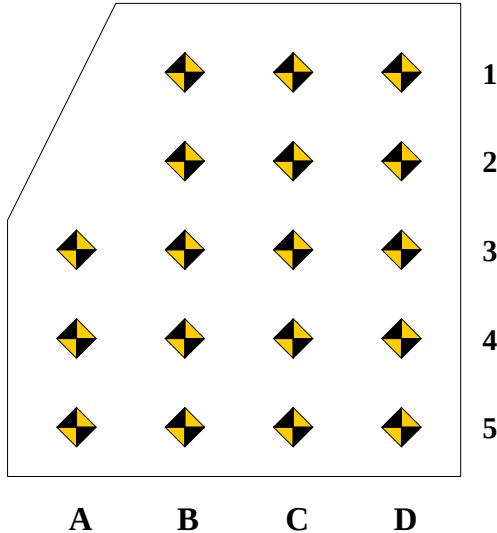
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VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05



Measurement reference point for X and Z-axis is the forward outboard seat mounting bolt.

Columns A through D are evenly spaced.

Rows 1 and 2 are on the toe kick portion of the floor pan. Rows 3, 4 and 5 are located on the most level portion of the floor pan.

Row 3 will be at the intersection of the toe kick and the level sections of the floor pan.

DRIVER FLOOR PAN X-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1		700	692	683		681	686	699		-19	-6	16
2		615	619	625		608	620	625		-7	1	0
3	579	550	547	555	501	509	530	515	-78	-41	-17	-40
4	493	487	485	473	409	410	402	415	-84	-77	-83	-58
5	395	408	395	398	311	314	307	320	-84	-94	-88	-78

DRIVER FLOOR PAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1		-75	-65	-65		-50	-43	-39		25	22	26
2		-11	10	28		10	24	27		21	14	-1
3	80	51	81	84	63	10	60	27	-17	-41	-21	-57
4	92	94	85	104	53	26	30	65	-39	-68	-55	-39
5	108	99	88	102	50	25	29	66	-58	-74	-59	-36

DATA SHEET NO. 17...(CONTINUED)
VEHICLE INTRUSION MEASUREMENTS

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

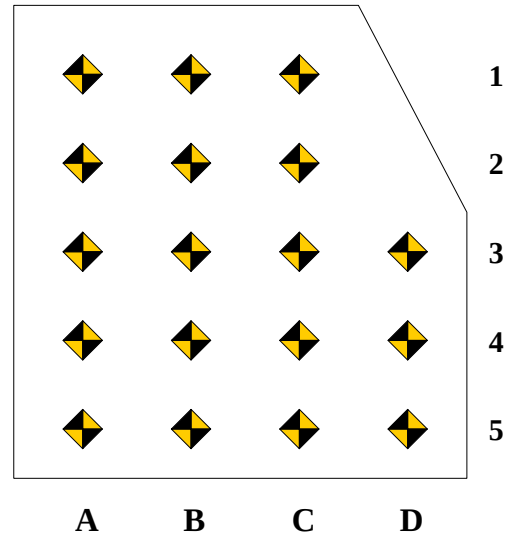
Test Date: 2/1/05

Measurement reference point for X and Z axis is the forward outboard seat mounting bolt.

Columns A through D are evenly spaced.

Rows 1 and 2 are on the toe kick portion of the floor pan. Rows 3, 4 and 5 are located on the most level portion of the floor pan.

Row 3 will be at the intersection of the toe kick and the level sections of the floor pan.



PASSENGER FLOOR PAN X-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	689	680	670		733	711	672		44	31	2	
2	613	612	620		701	701	682		88	89	62	
3	558	560	601	606	619	610	616	615	61	50	15	9
4	494	513	514	509	512	512	512	518	18	-1	-2	9
5	391	417	414	411	421	414	416	416	30	-3	2	5

PASSENGER FLOOR PAN Z-AXIS

	Pre-Test				Post-Test				Difference			
	A	B	C	D	A	B	C	D	A	B	C	D
1	-47	-61	-59		-99	-98	-99		-52	-37	-40	
2	16	9	9		-11	-18	-25		-27	-27	-34	
3	110	100	109	116	49	20	44	52	-61	-80	-64	-64
4	94	101	112	126	30	34	62	72	-64	-67	-50	-54
5	88	118	112	129	31	33	66	66	-57	-85	-46	-63

DATA SHEET NO. 18
FIXED BARRIER LOAD CELL LOCATIONS

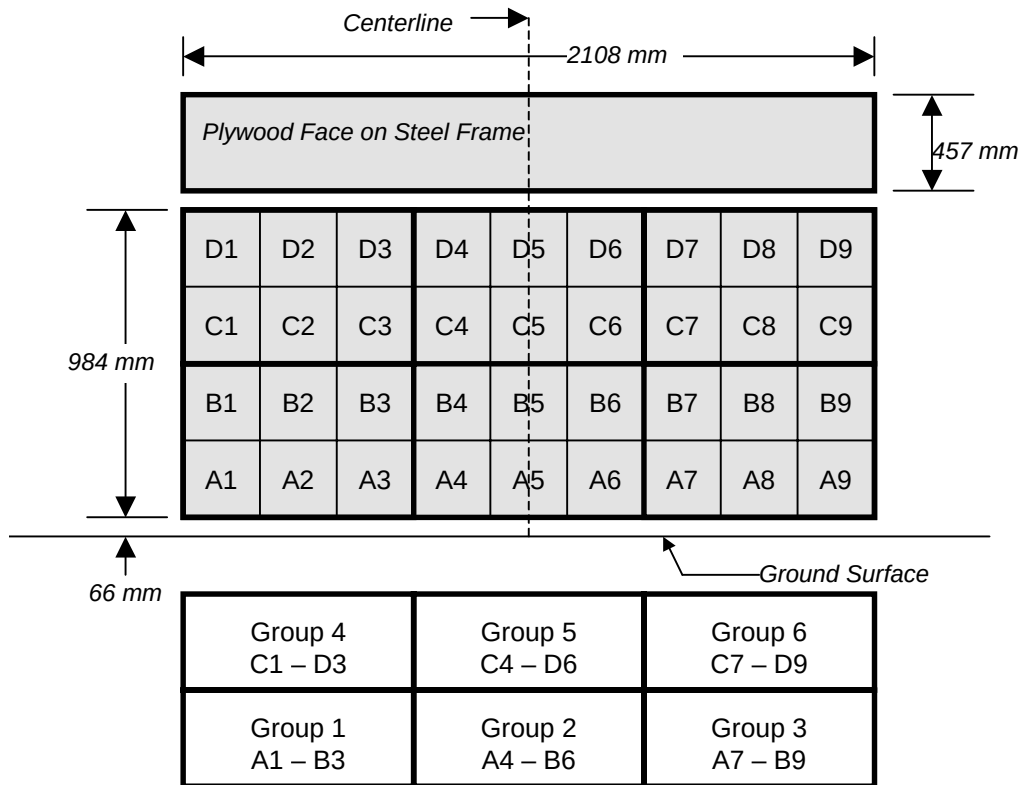
Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

36 Load Cell Rigid Barrier (NHTSA Standard)
Load Cell Locations on Fixed Barrier



6 Groups of 6 Load Cells Each

The Data is presented in Appendix C with the following requirements:

- 1.) Data from 36 individual load cells
- 2.) Sum data from 6 groupings shown above (6 cells/group)
- 3.) Total or sum of all 36 individual load cells
- 4.) Sum of all 36 individual load cells vs. vehicle dynamic crush

DATA SHEET NO. 19
POST-TEST AIRBAG DATA

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

POST-TEST AIRBAG DATA

	DRIVER	PASSENGER
No. of vent holes	2	2
Size of vent (mm ²)	495	1981
Total vent area (mm ²)	990	3962

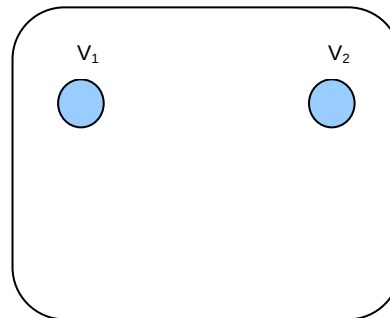
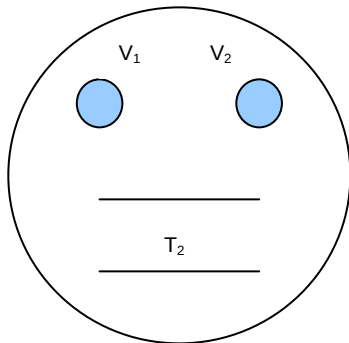
Deflated Airbag Length and Width Dimensions or, If Round, Diameter (mm)		
Length		540
Width		600
Depth or Diameter	500	590

Tethering Information		
Is the airbag tethered?	No	No
Record length of tether (mm)		

Airbag Manufacturing Information		
Manufacturer	*	*
Part No.	*	*
Gas Generator	Z03D4162921	NK70S-N10-02

* Manufacturer's and part no. label was burned due to airbag deployment.

Sketch the airbag showing the location of the vent holes, how the bag is tethered, and where the bag is tethered. Also describe how the tethers are attached to the bag and the steering wheel:



DATA SHEET NO. 20
ACCIDENT INVESTIGATION DIVISION DATA

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

VEHICLE INFORMATION

VIN: JN8AZ08W05W403441

Wheelbase (mm): 2830

Vehicle Size Category: 5-Door MPV

Test Weight (kg): 1993

ACCELEROMETER DATA

Accelerometer Location: Left Rear Sill

Cal. Procedure/Interval: 6 months / drop test

Integration Algorithm: NHTSA Standard

Linearity: Good

Impact Velocity (km/h): 56.52

Velocity Change (km/h): 65.91

Time of Separation (msec): 63.6

CRUSH PROFILE

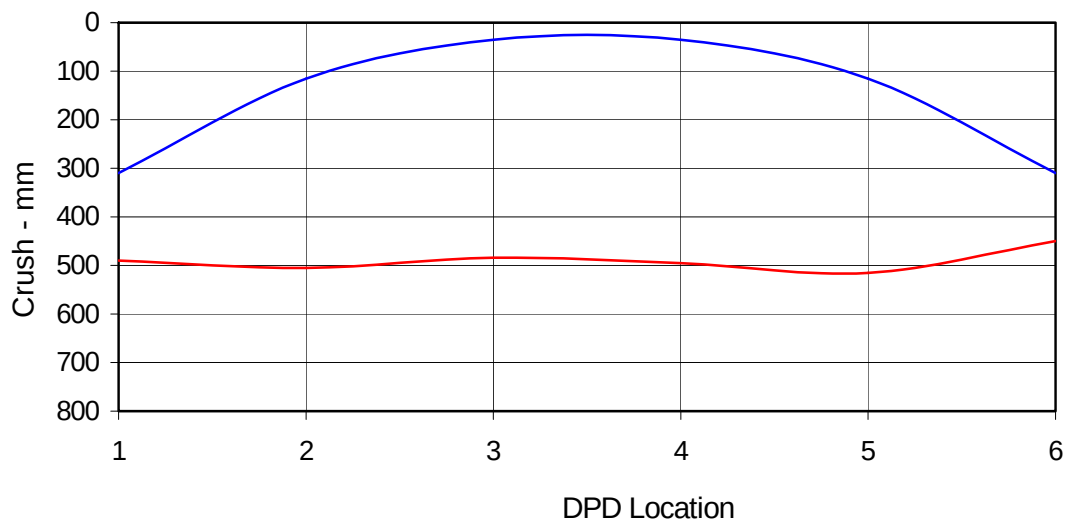
Collision Deformation Classification: 12FDEW6

Maximum Damage: Center of Vehicle

Damage Region Length (mm): 1544

Impact Mode: Full Frontal

No.	Measurement Description	Units	Pre-Test	Post-Test	Difference
C1	Crush zone 1 at left side	mm	310	490	-180
C2	Crush zone 2 on left side	mm	115	505	-390
C3	Crush zone 3 on left side	mm	35	484	-449
C4	Crush zone 4 on right side	mm	35	495	-460
C5	Crush zone 5 on right side	mm	115	515	-400
C6	Crush zone 6 at right side	mm	310	450	-140



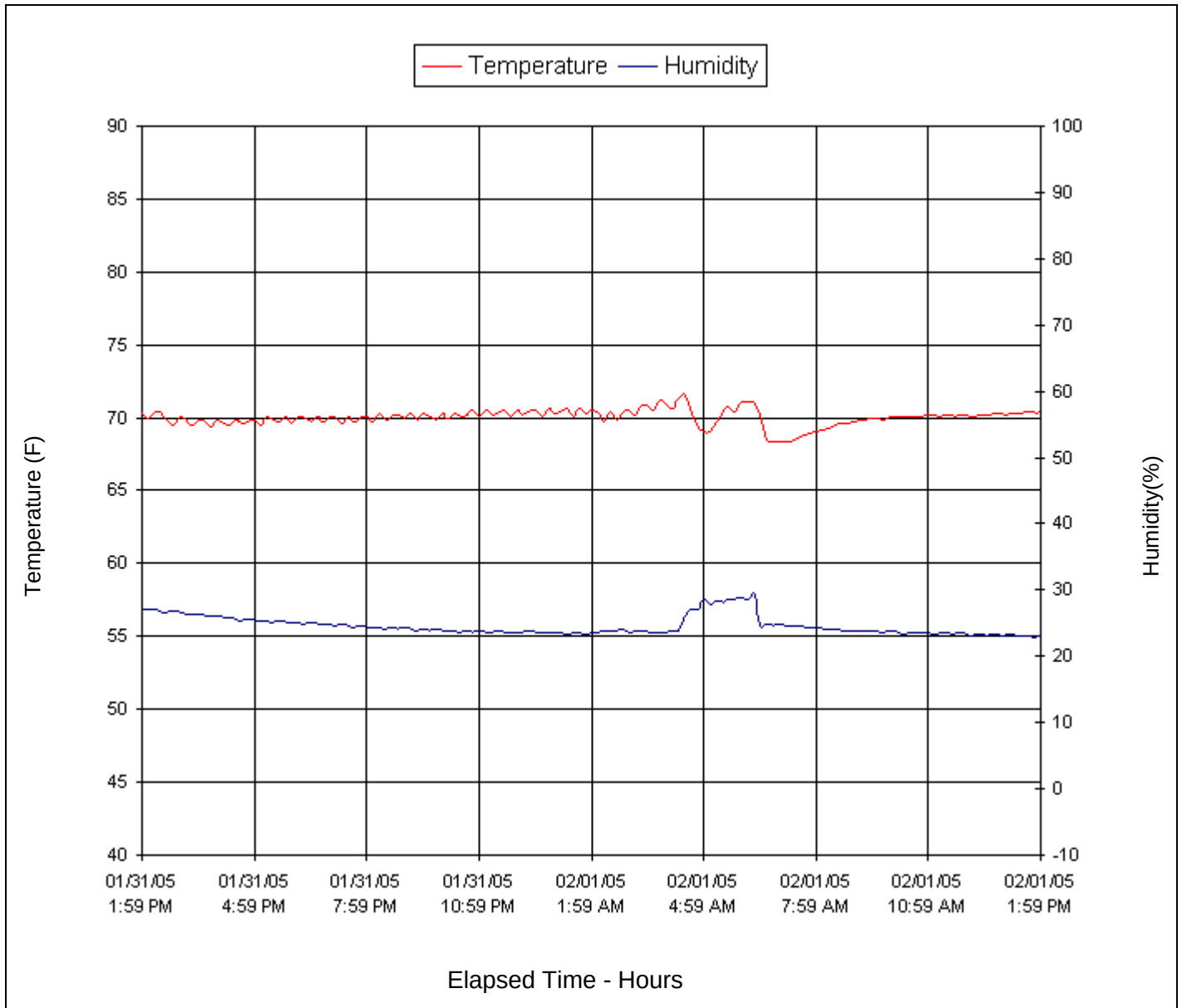
DATA SHEET NO. 21
DUMMY/VEHICLE TEMPERATURE STABILIZATION

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05



APPENDIX A
PHOTOGRAPHS

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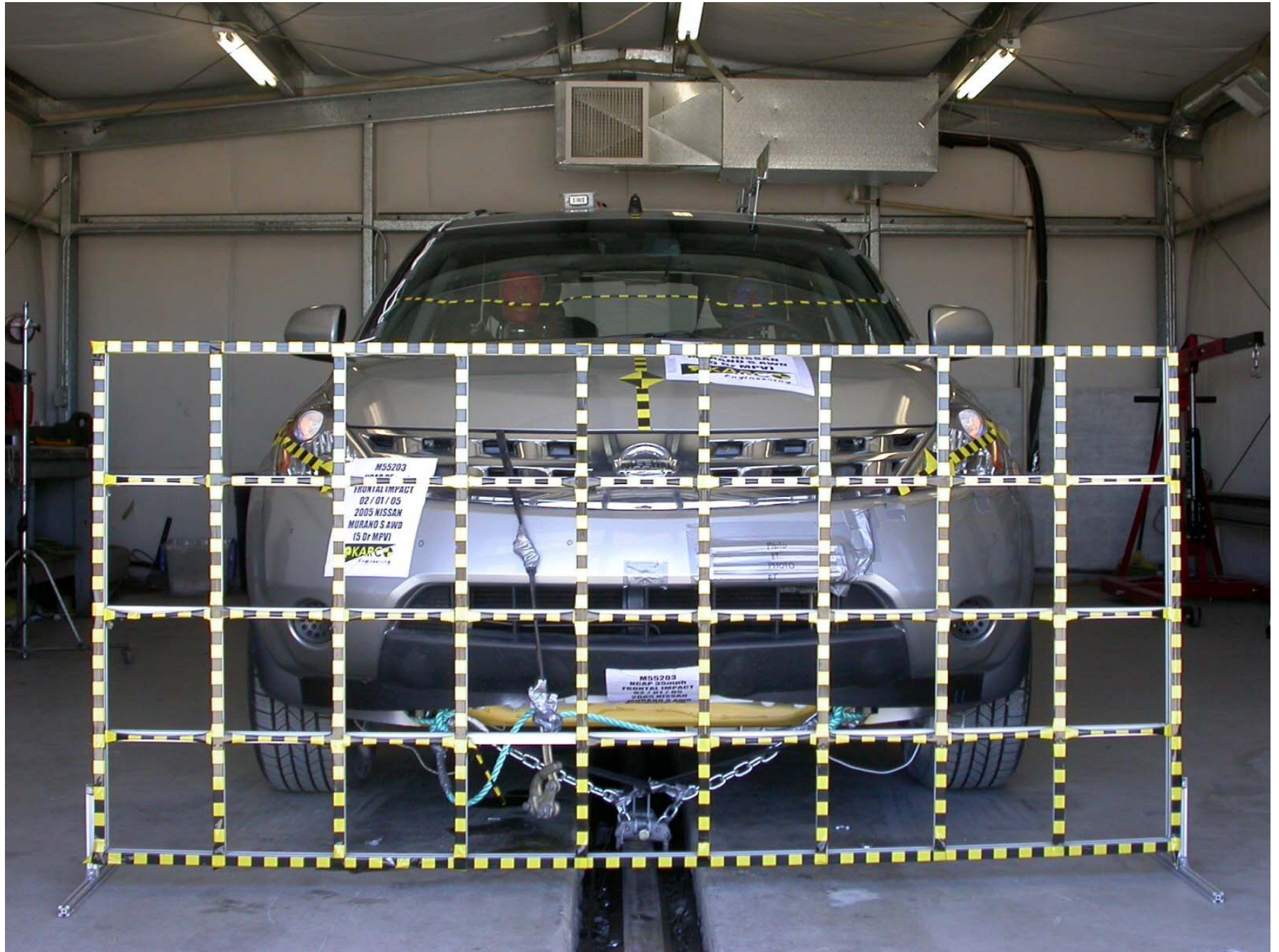
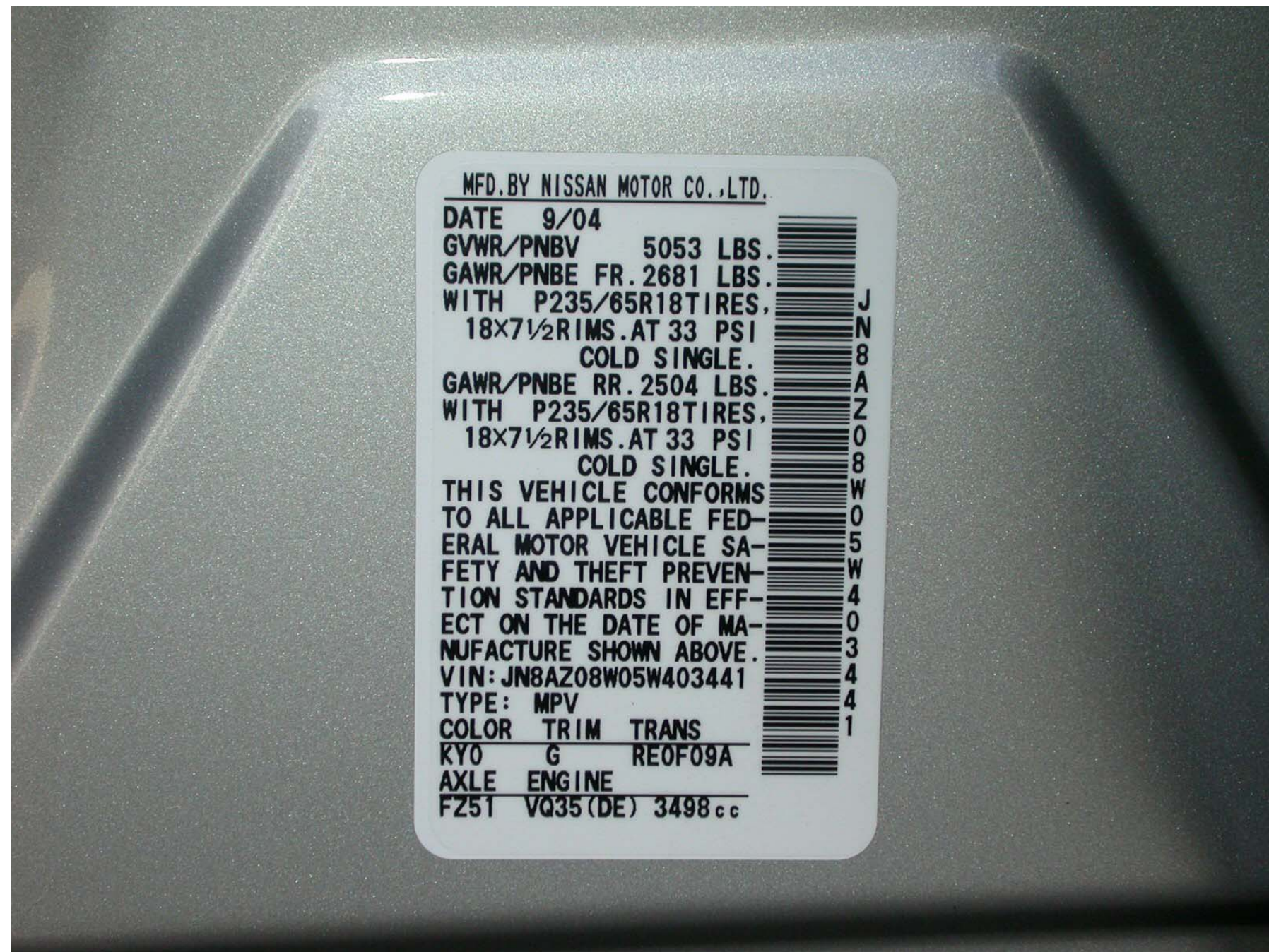


Figure A-1: Load Cell Location

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MFD. BY NISSAN MOTOR CO., LTD.
DATE 9/04
GVWR/PNBV 5053 LBS.
GAWR/PNBE FR. 2681 LBS.
WITH P235/65R18 TIRES,
18x7½ RIMS. AT 33 PSI
COLD SINGLE.
GAWR/PNBE RR. 2504 LBS.
WITH P235/65R18 TIRES,
18x7½ RIMS. AT 33 PSI
COLD SINGLE.
THIS VEHICLE CONFORMS
TO ALL APPLICABLE FED-
ERAL MOTOR VEHICLE SA-
FETY AND THEFT PREVEN-
TION STANDARDS IN EFF-
ECT ON THE DATE OF MA-
NUFACTURE SHOWN ABOVE.
VIN: JN8AZ08W05W403441
TYPE: MPV
COLOR TRIM TRANS
KYO G REOF09A
AXLE ENGINE
FZ51 VQ35 (DE) 3498 cc



Figure A-2: Manufacturer's Label



Figure A-3: Tire Placard



Figure A-4: Right Front $\frac{3}{4}$ View, As Received



Figure A-5: Left Rear $\frac{3}{4}$ View, as Received



Figure A-6: Pre-Test Front View

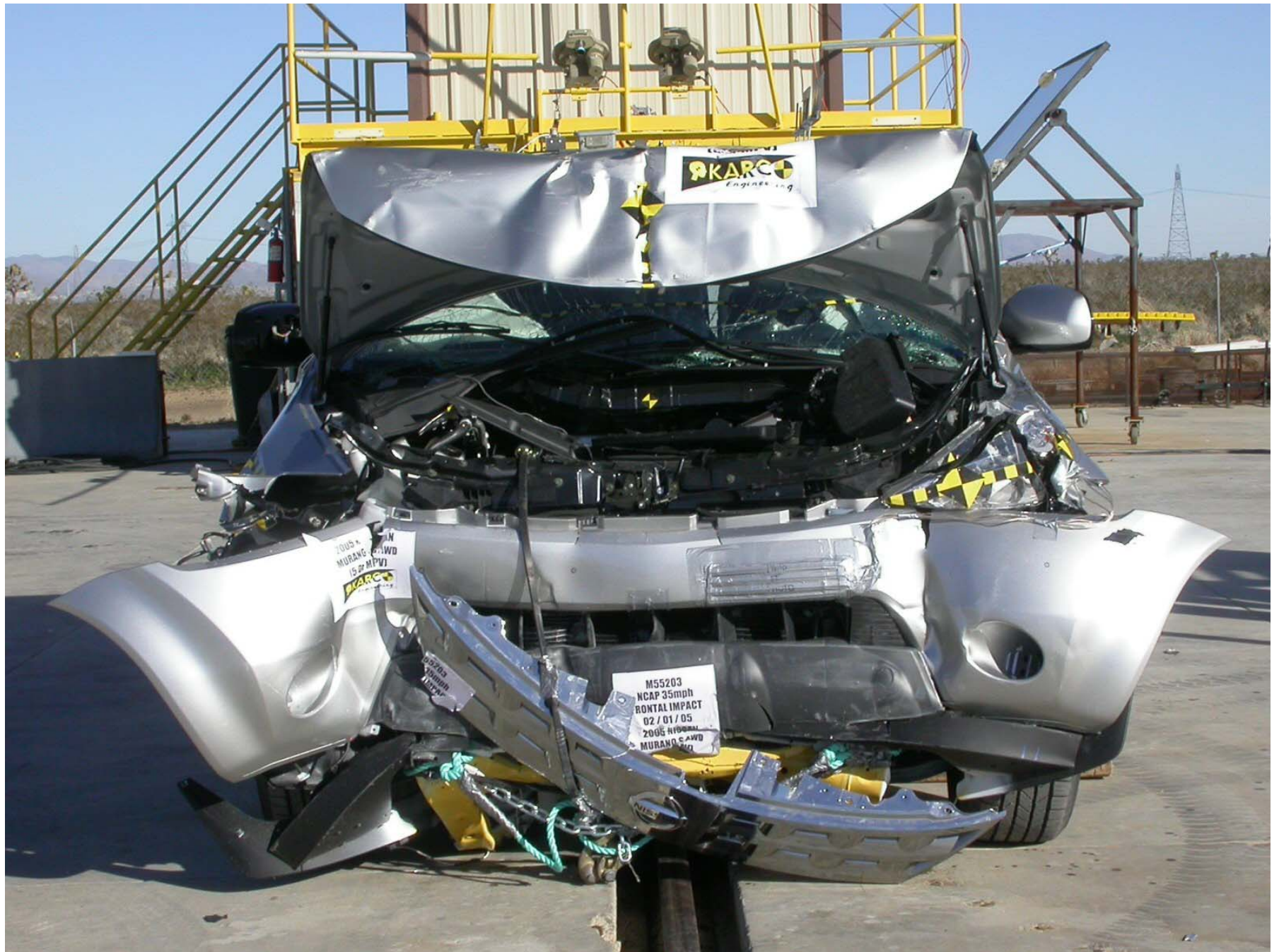


Figure A-7: Post-Test Front View (Vehicle Moved)



Figure A-8: Pre-Test Left Side View



Figure A-9: Post-Test Left Side View



Figure A-10: Pre-Test Right Side View



Figure A-11: Post-Test Right Side View (Vehicle Moved)



Figure A-12: Pre-Test Right Front ¾ View



Figure A-13: Post-Test Right Front ¾ View (Vehicle Moved)



Figure A-14: Pre-Test Left Rear $\frac{3}{4}$ View



Figure A-15: Post-Test Left Rear $\frac{3}{4}$ View



Figure A-16: Post-Test Left Side ¾ View of Doors After Impact



Figure A-17: Post-Test Right Side $\frac{3}{4}$ View of Doors After Impact

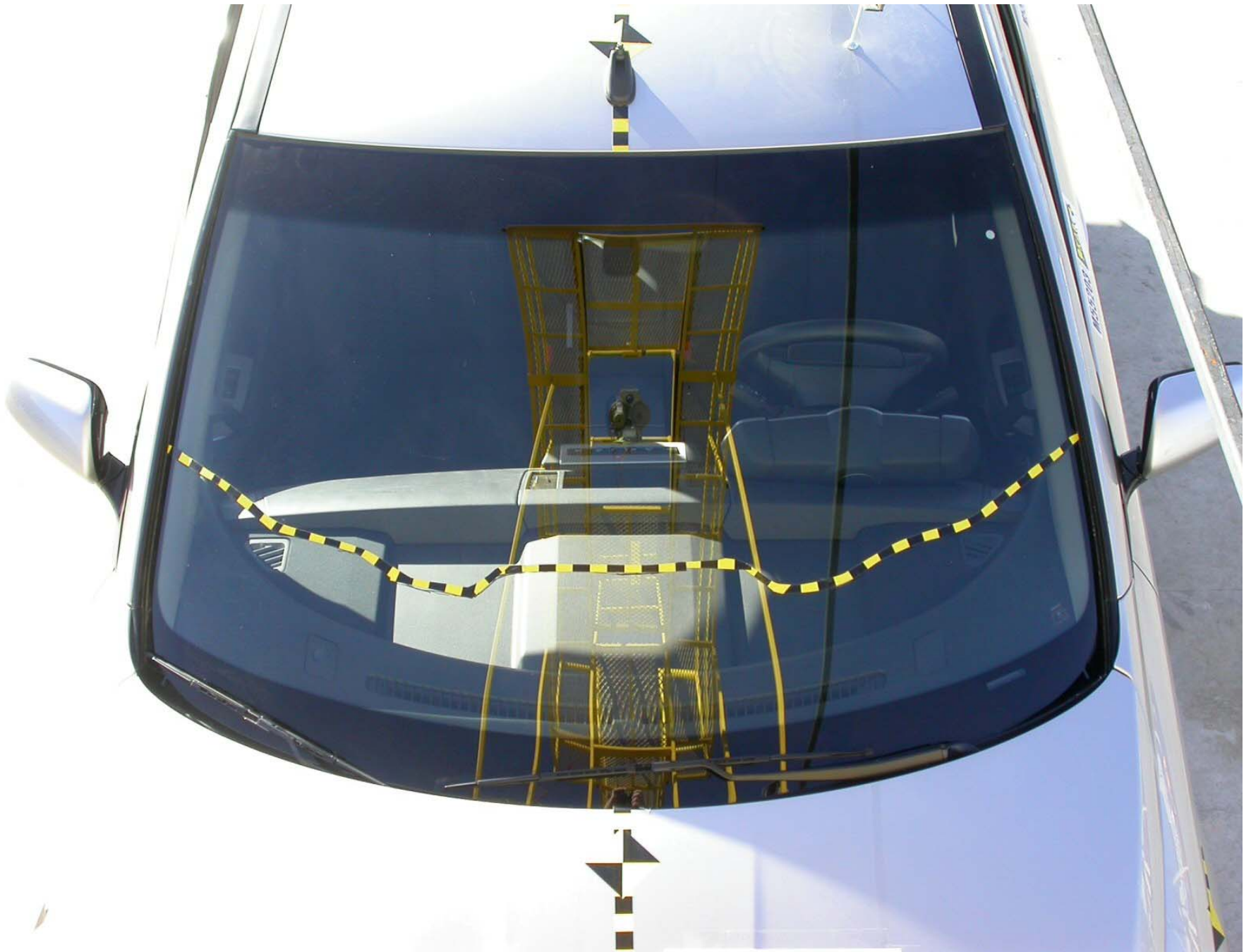


Figure A-18: Pre-Test Windshield



Figure A-19: Post-Test Windshield



Figure A-20: Pre-Test Engine Compartment

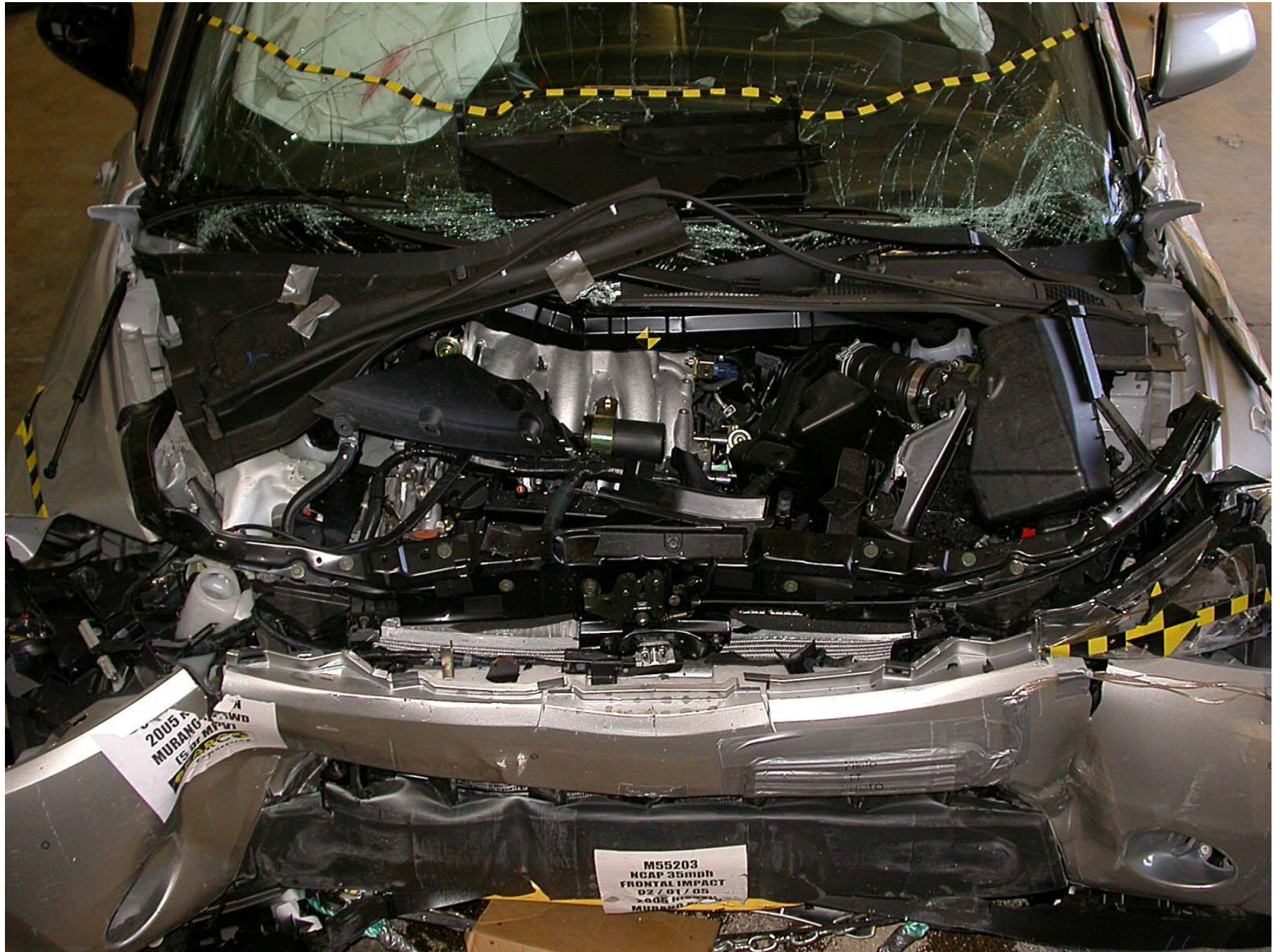


Figure A-21: Post-Test Engine Compartment (Vehicle Moved)



Figure A-22: Pre-Test Fuel Cap



Figure A-23: Post-Test Fuel Cap

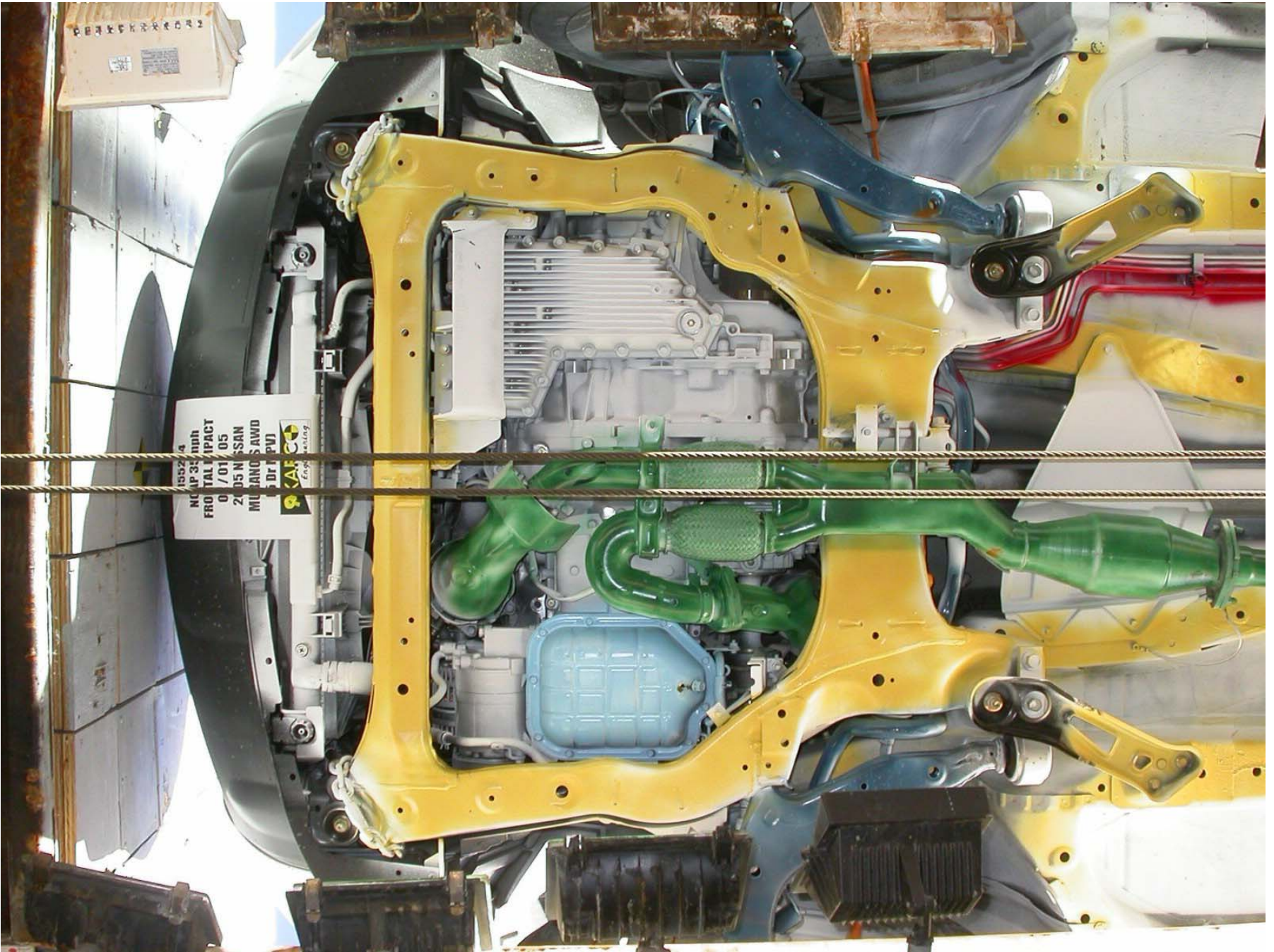


Figure A-24: Pre-Test Front Underbody

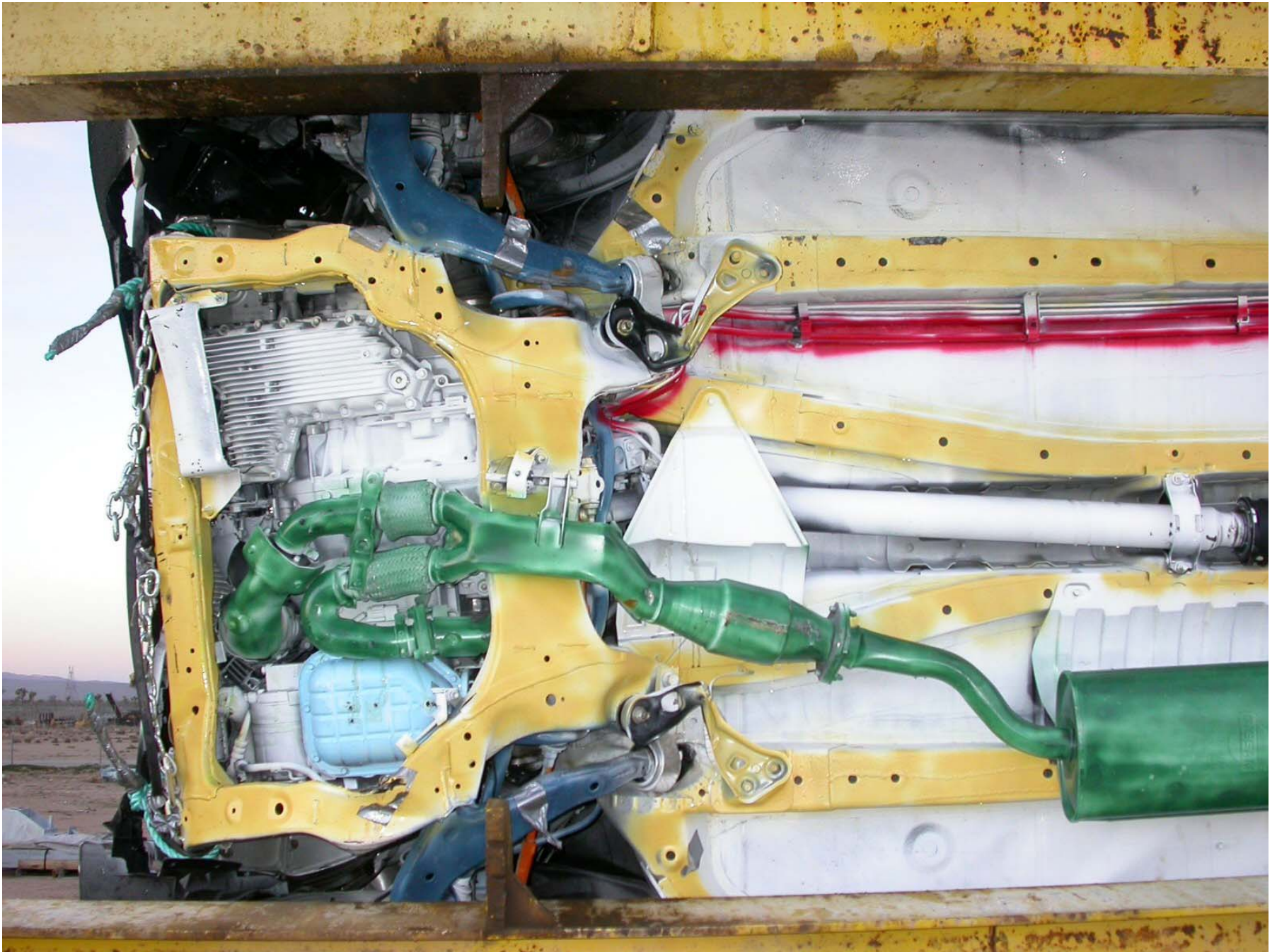


Figure A-25: Post-Test Front Underbody

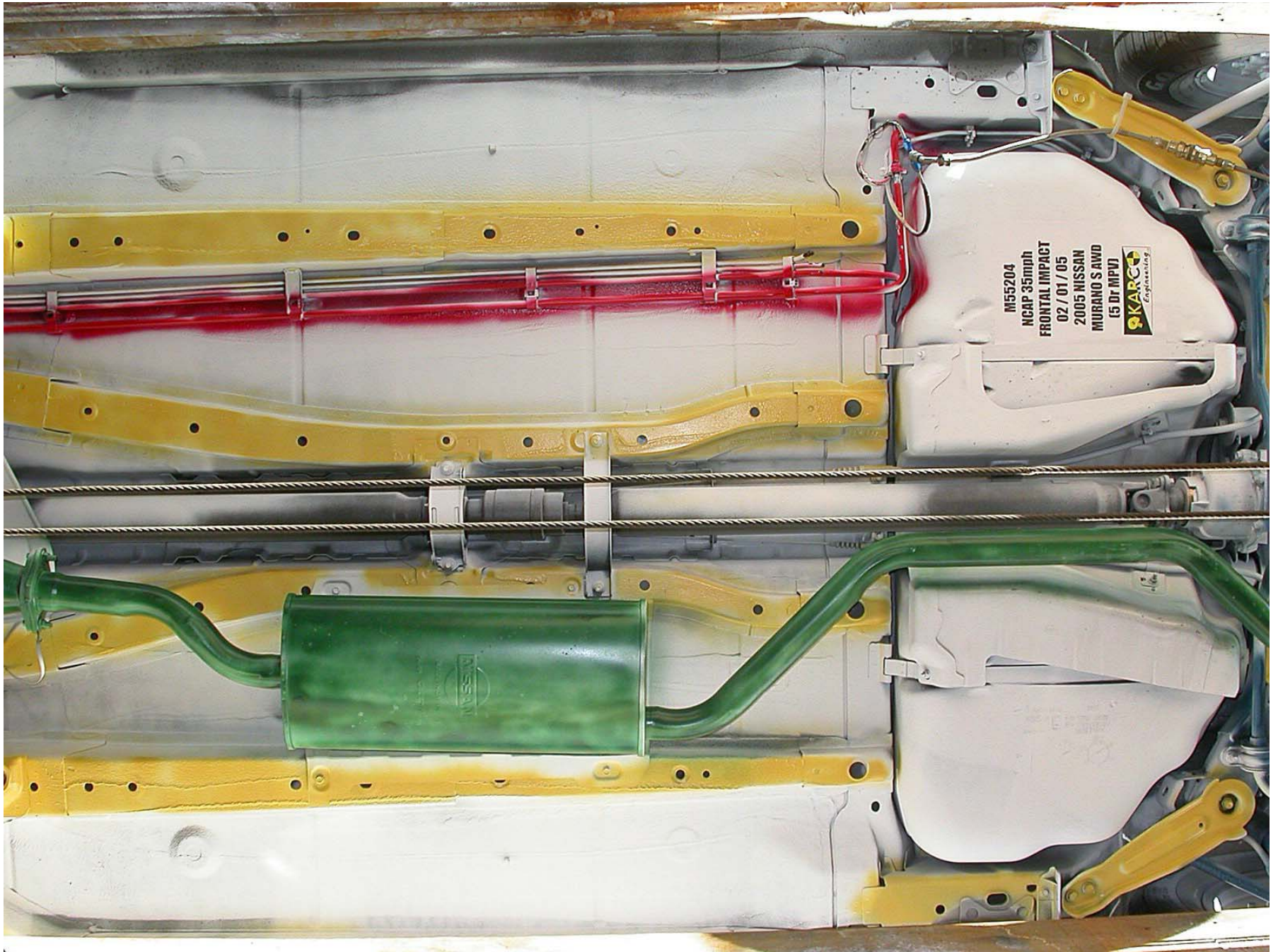


Figure A-26: Pre-Test Mid Underbody

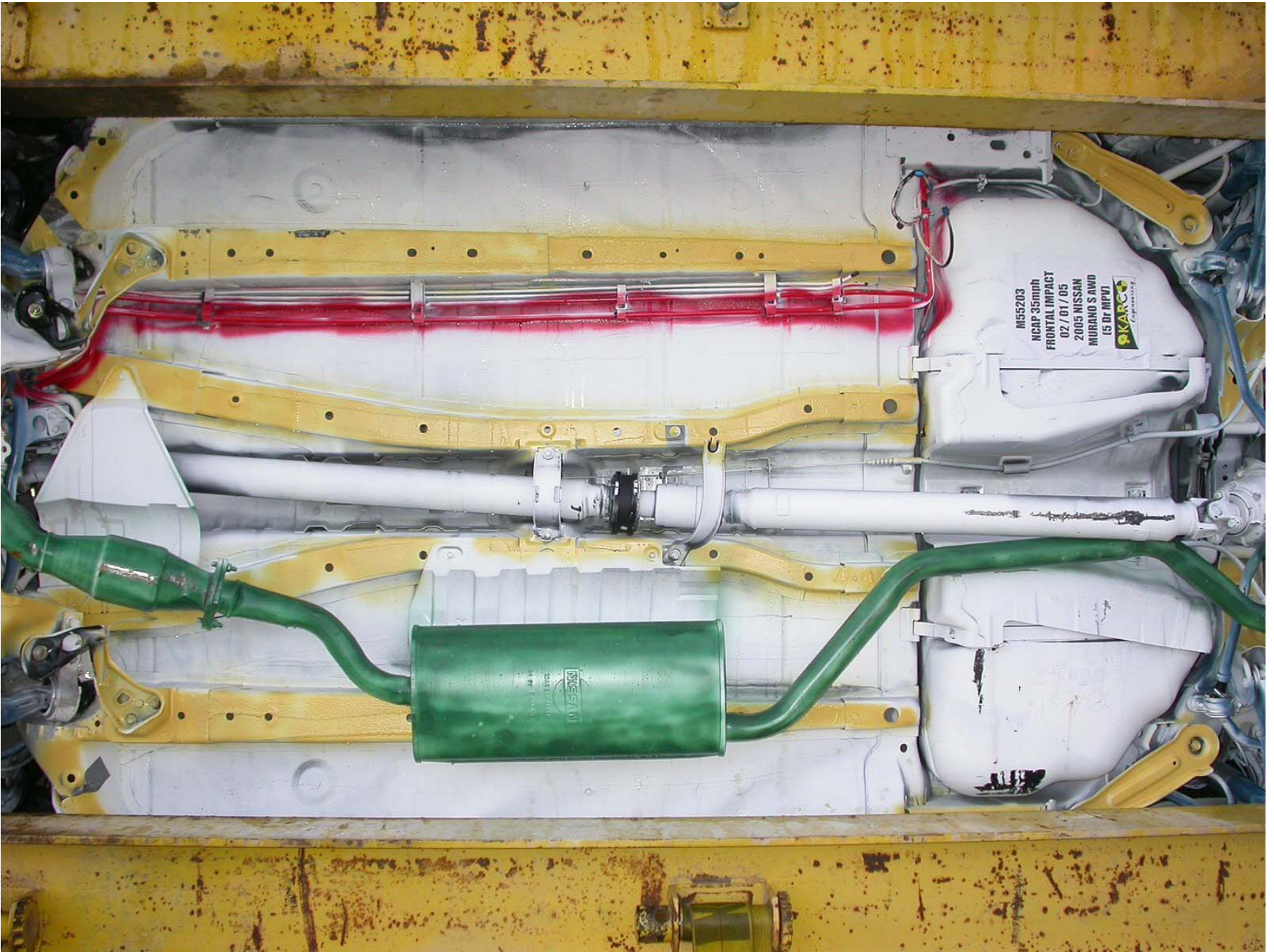


Figure A-27: Post-Test Mid Underbody

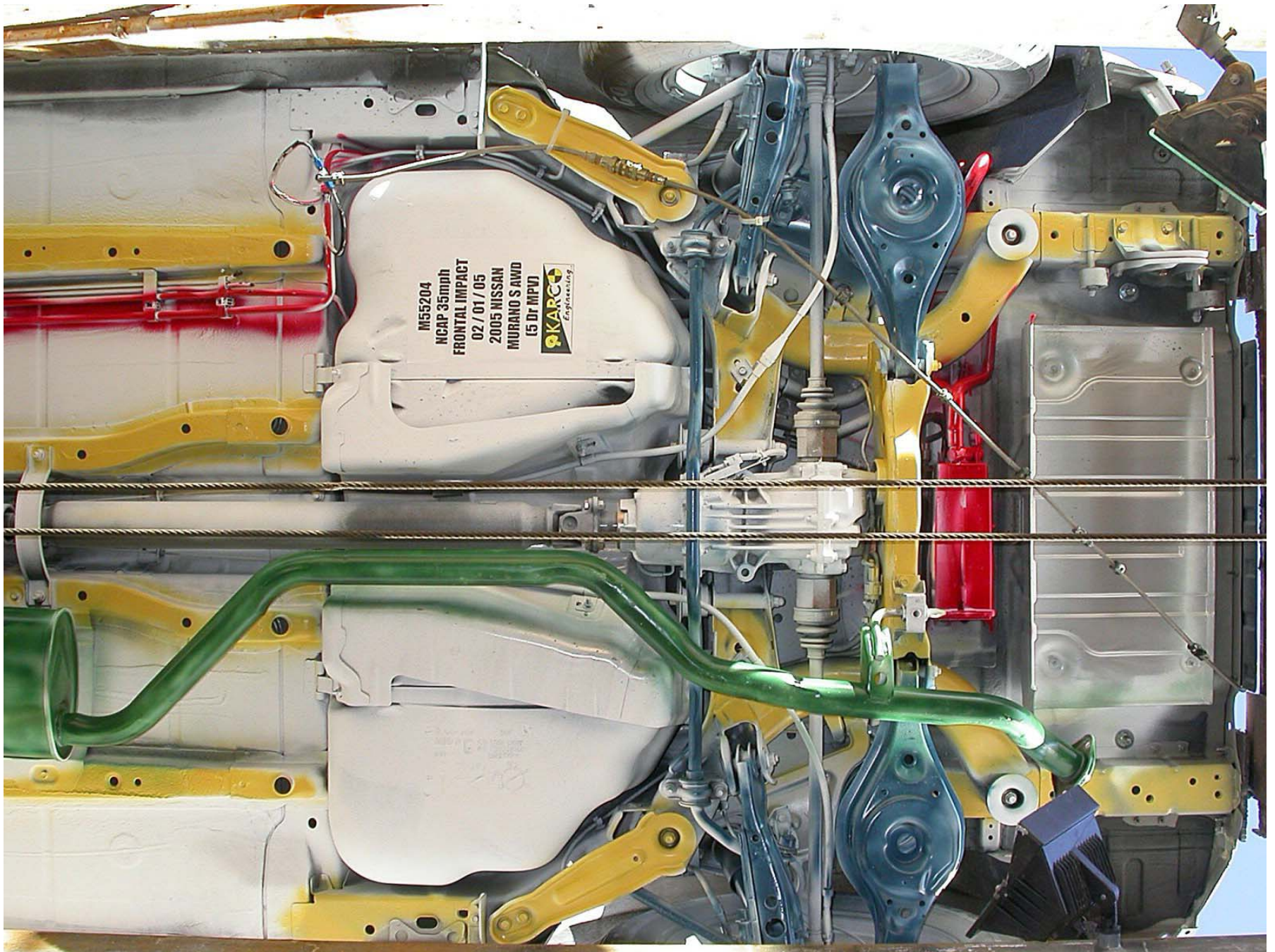


Figure A-28: Pre-Test Rear Underbody

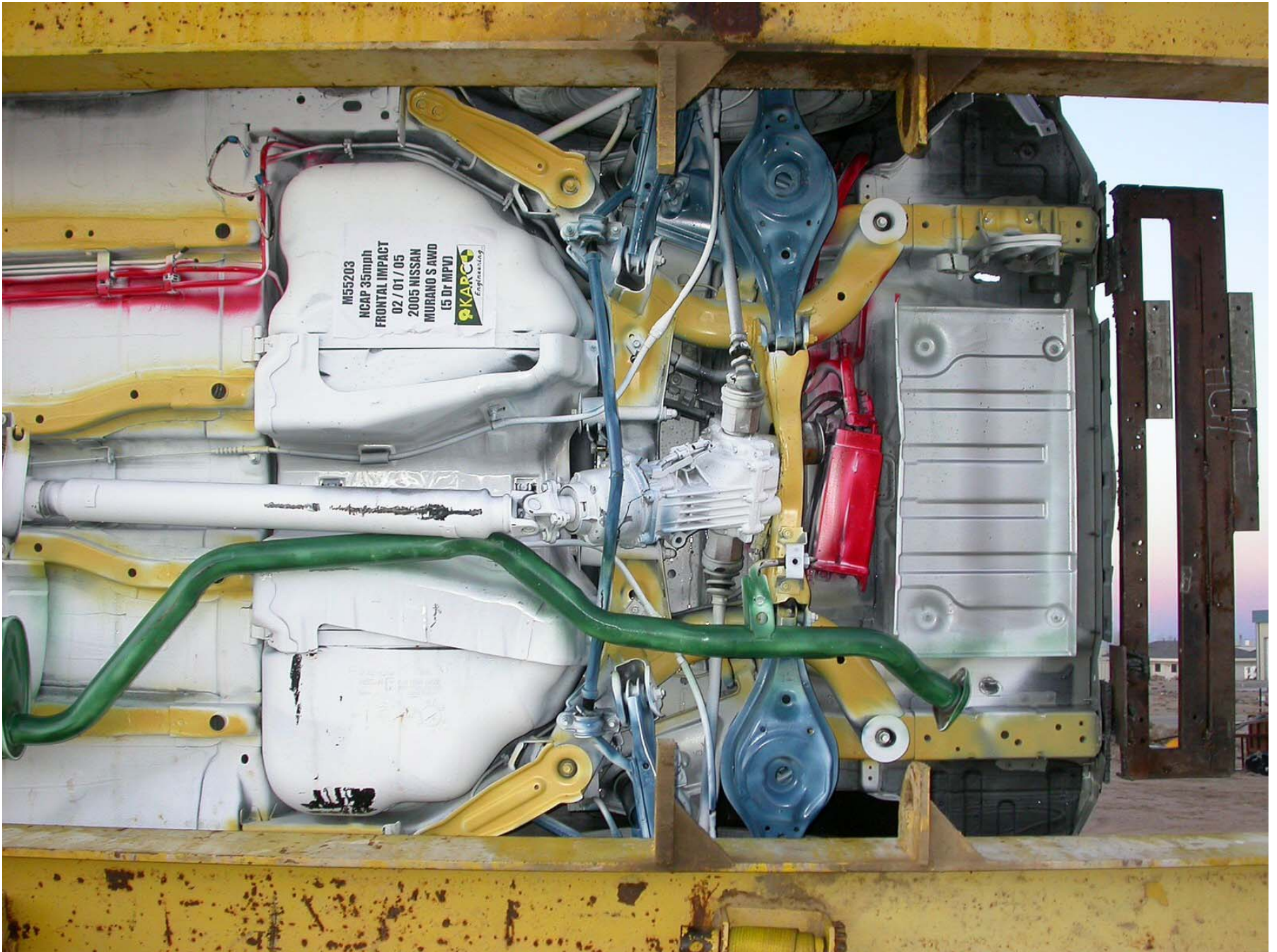


Figure A-29: Post-Test Rear Underbody



Figure A-30: Pre-Test Driver Dummy Front View (Head Position)



Figure A-31: Post-Test Driver Dummy Front View (Head Position)



Figure A-32: Pre-Test Driver Dummy (Through Window)



Figure A-33: Post-Test Driver Dummy (Through Window)



Figure A-34: Pre-Test Driver Dummy (Door Open)



Figure A-35: Post-Test Driver Dummy (Door Open)



Figure A-36: Pre-Test Driver Dummy Feet



Figure A-37: Post-Test Driver Dummy Feet



Figure A-38: Pre-Test Driver Side Knee Bolster



Figure A-39: Post-Test Driver Side Knee Bolster

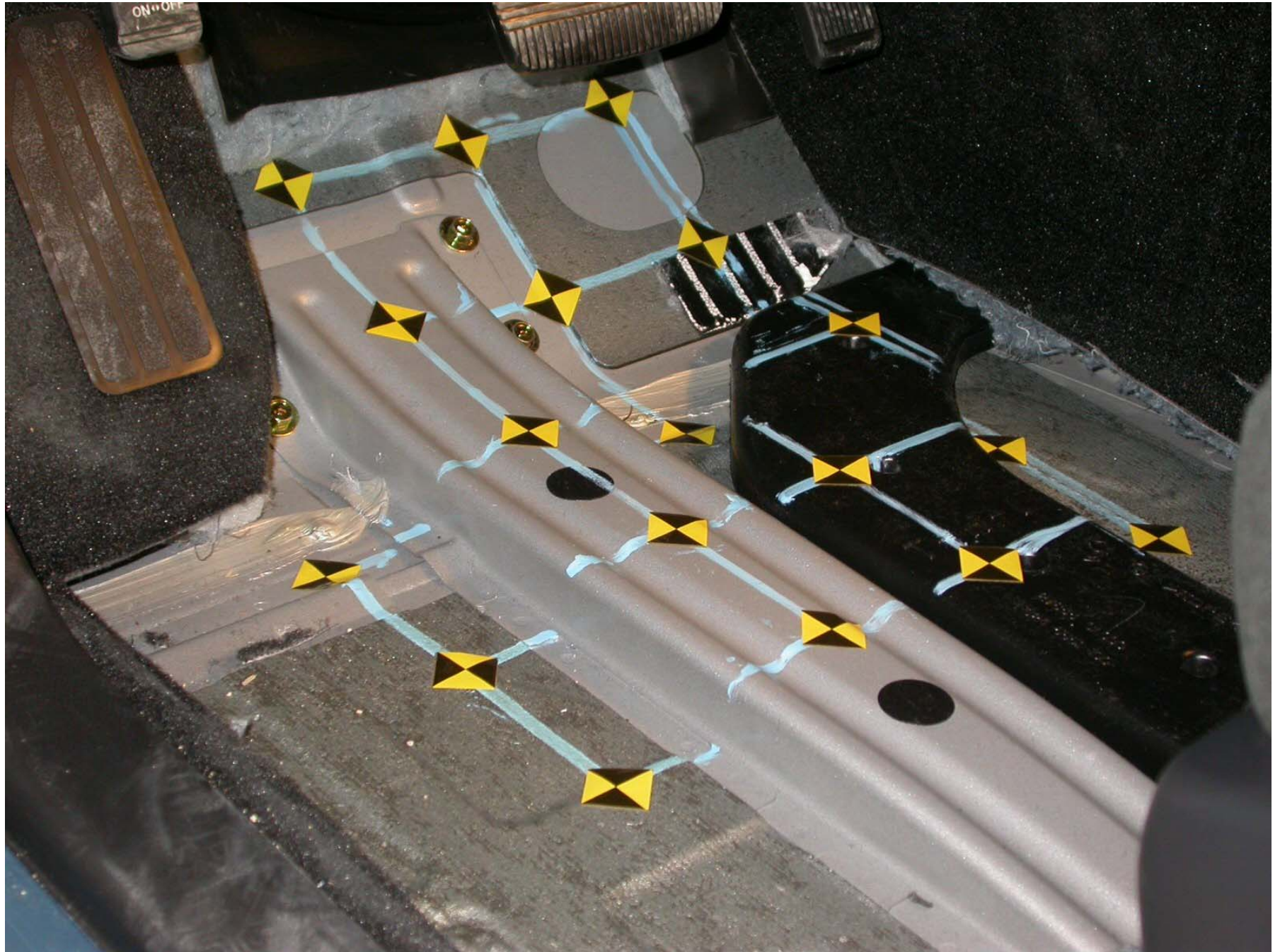


Figure A-40: Pre-Test Driver Side Floor Pan



Figure A-41: Post-Test Driver Side Floor Pan



Figure A-42: Post-Test Driver Dummy Head



Figure A-43: Post-Test Driver Dummy Airbag Contact



Figure A-44: Pre-Test Passenger Dummy Front View (Head Position)



Figure A-45: Post-Test Passenger Dummy Front View (Head Position)



Figure A-46: Pre-Test Passenger Dummy (Through Window)



Figure A-47: Post-Test Passenger Dummy (Through Window)



Figure A-48: Pre-Test Passenger Dummy (Door Open)



Figure A-49: Post-Test Passenger Dummy (Door Open)



Figure A-50: Pre-Test Passenger Dummy Feet



Figure A-51: Post-Test Passenger Dummy Feet



Figure A-52: Pre-Test Passenger Side Glove Box



Figure A-53: Post-Test Passenger Side Glove Box



Figure A-54: Pre-Test Passenger Side Floor Pan



Figure A-55: Post-Test Passenger Side Floor Pan



Figure A-56: Post-Test Passenger Dummy Head



Figure A-57: Post-Test Passenger Dummy Airbag Contact



Figure A-58: Vehicle on Rollover Device (0°)



Figure A-59: Vehicle on Rollover Device (90°)



Figure A-60: Vehicle on Rollover Device (180°)

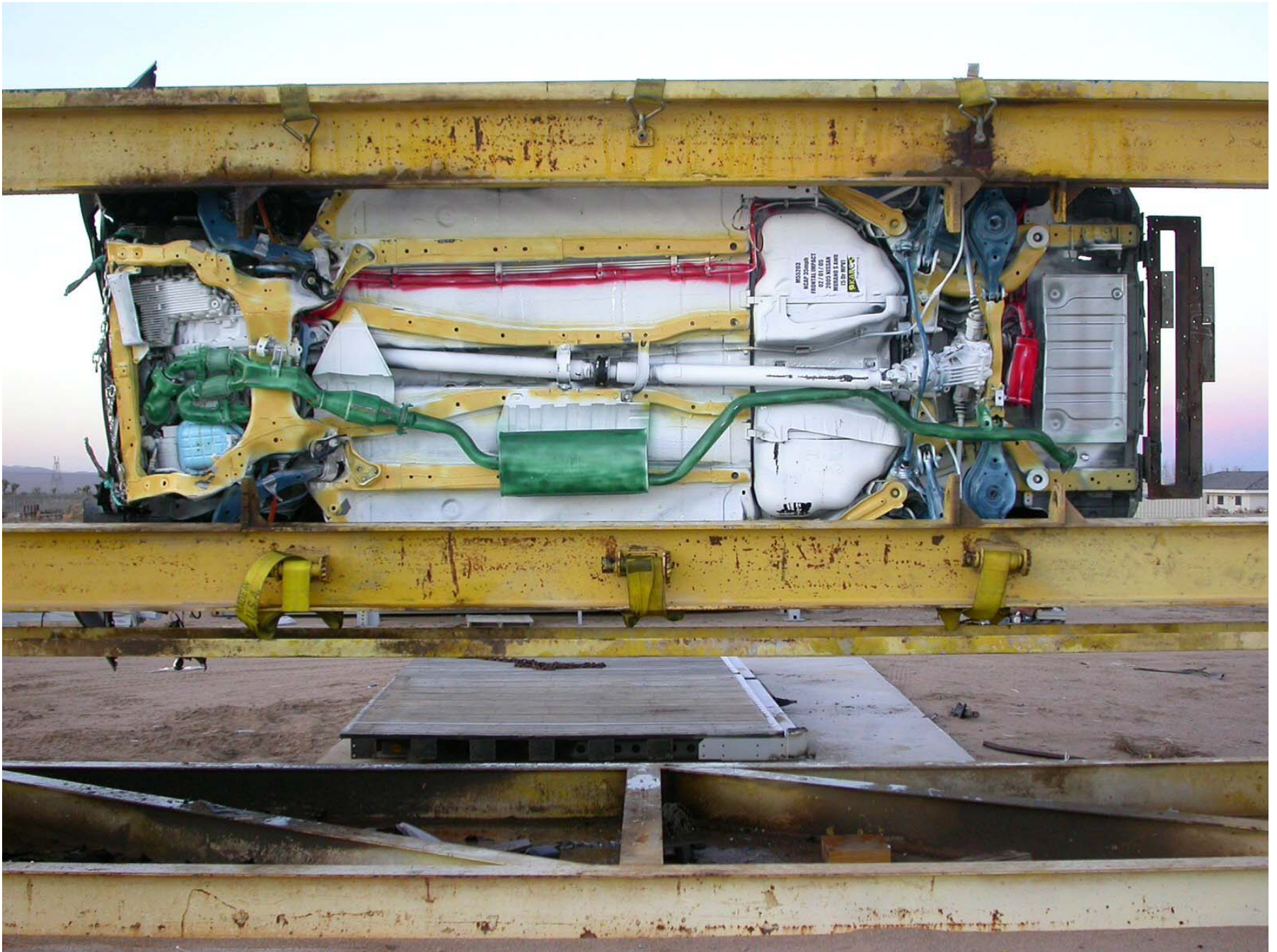


Figure A-61: Vehicle on Rollover Device (270°)



Figure A-62: Vehicle Impact

APPENDIX B

DATA PLOTS

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B-15	Driver Left Upper Tibia Moment X
	Driver Left Upper Tibia Moment Y
	Driver Right Upper Tibia Moment X
	Driver Right Upper Tibia Moment Y
B-16	Driver Left Lower Tibia Moment X
	Driver Left Lower Tibia Moment Y
	Driver Left Lower Tibia Force Z
B-17	Driver Right Lower Tibia Moment X
	Driver Right Lower Tibia Moment Y
	Driver Right Lower Tibia Force Z
B-18	Driver Left Foot Aft X
	Driver Left Foot Aft Z
	Driver Left Foot Fore Z
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	Driver Shoulder Belt Pullout
	Driver Shoulder Belt Elongation
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	Passenger Head Resultant Primary
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	Passenger Head Primary X Displacement

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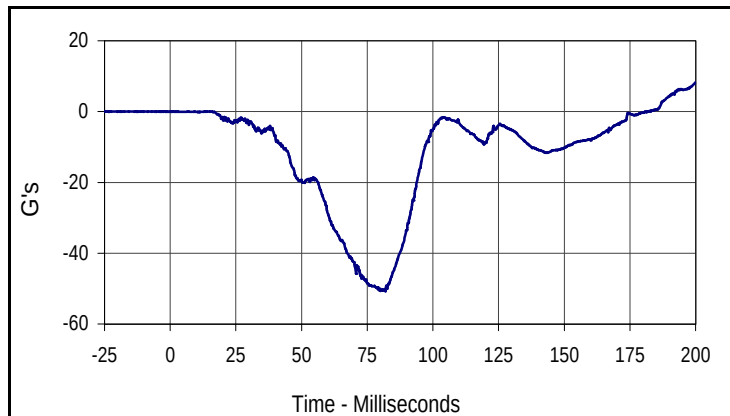
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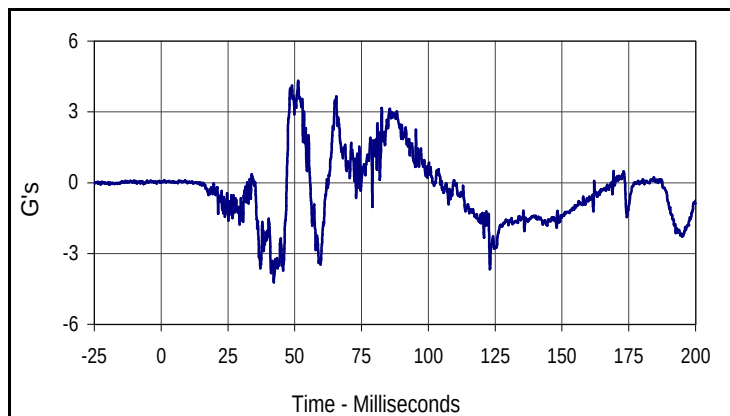
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	Vehicle Right Rear Z Velocity
	Vehicle Right Rear Z Displacement

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 Test Program: 2005 NHTSA 35mph NCAP

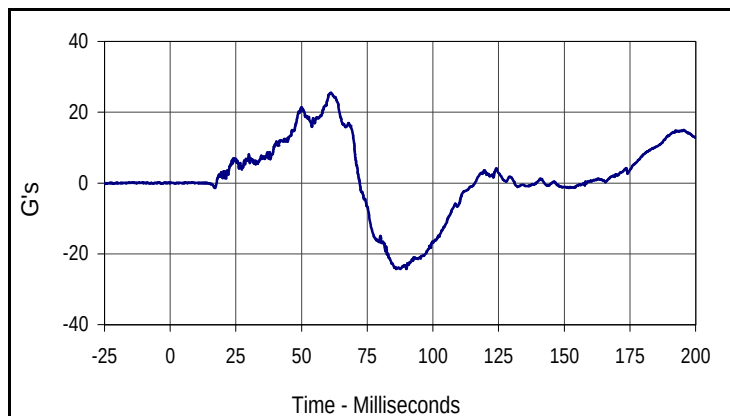
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 NHTSA No.: M55203



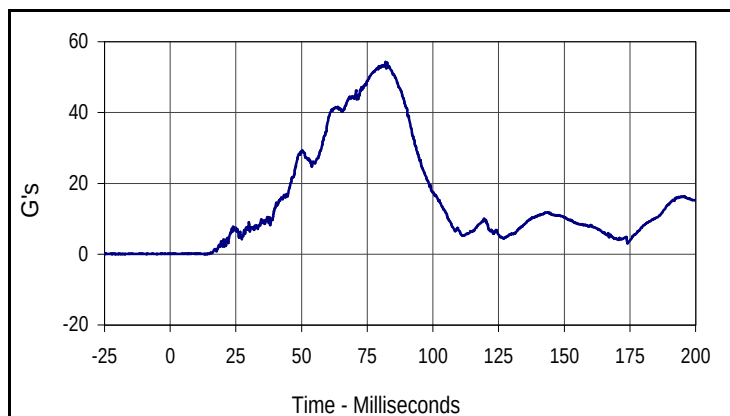
Curve Description			
Driver Head Primary X			
CURNO	Type	SAE Class	Units
001	FIL	1000	G's
Max	Time	Min	Time
8.2	200.0	-50.7	81.9



Curve Description			
Driver Head Primary Y			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
4.3	51.3	-4.2	42.2



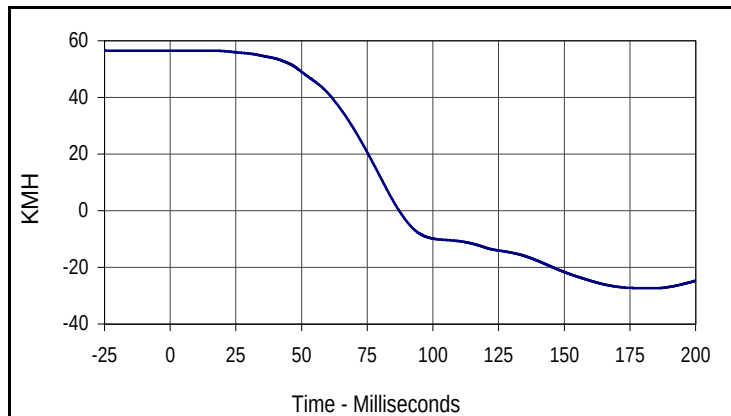
Curve Description			
Driver Head Primary Z			
CURNO	Type	SAE Class	Units
003	FIL	1000	G's
Max	Time	Min	Time
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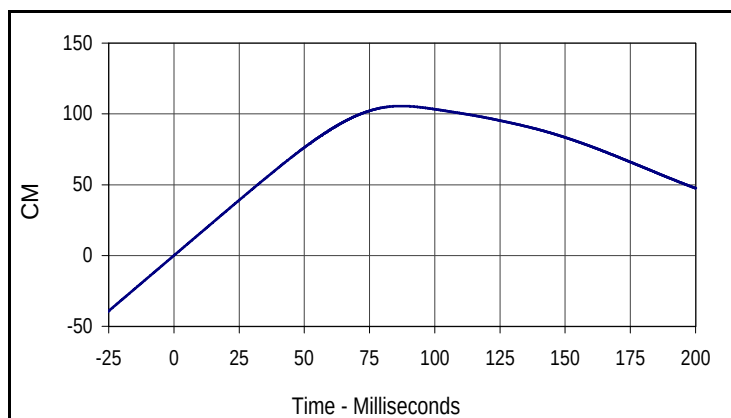
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Driver Head Resultant Primary			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
54.3	81.9	0.0	13.0

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 NHTSA No.: M55203



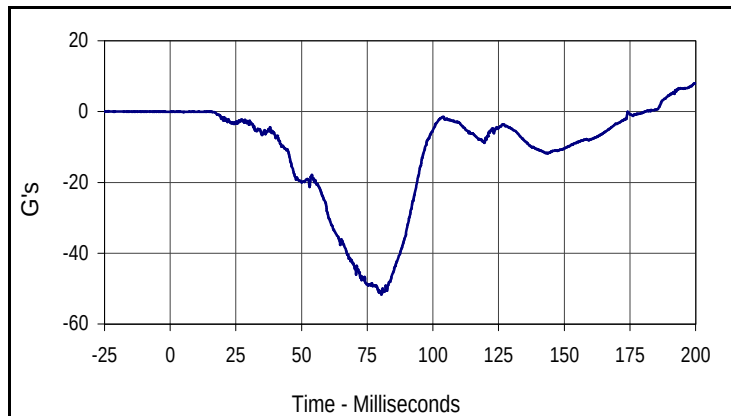
Curve Description			
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CURNO	Type	SAE Class	Units
001	IN1	180	KMH
Max	Time	Min	Time
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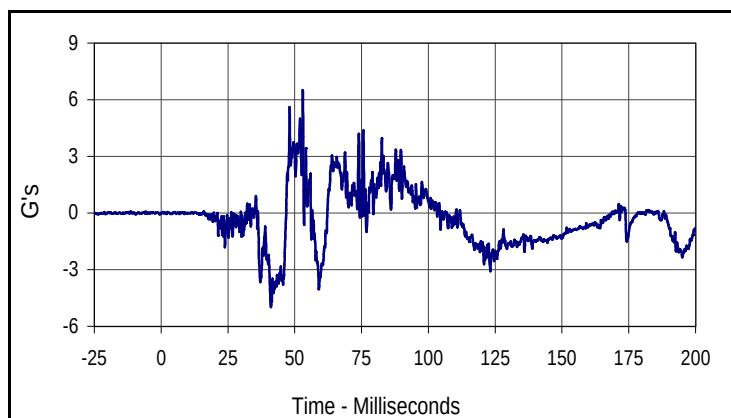
Curve Description			
Driver Head Primary X Displacement			
CURNO	Type	SAE Class	Units
001	IN2	180	CM
Max	Time	Min	Time
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Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

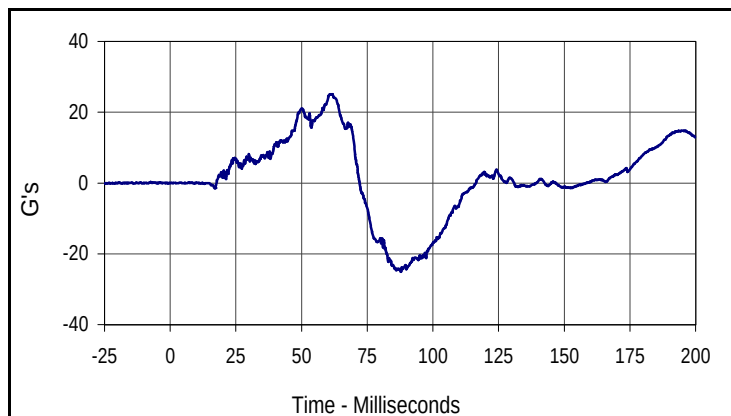
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 NHTSA No.: M55203



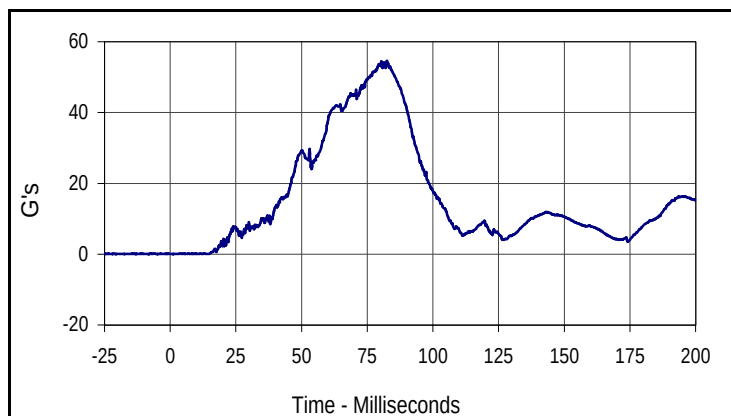
Curve Description			
Driver Head Redundant X			
CURNO	Type	SAE Class	Units
004	FIL	1000	G's
Max	Time	Min	Time
8.0	200.0	-51.7	80.4



Curve Description			
Driver Head Redundant Y			
CURNO	Type	SAE Class	Units
005	FIL	1000	G's
Max	Time	Min	Time
6.5	53.0	-5.0	41.1



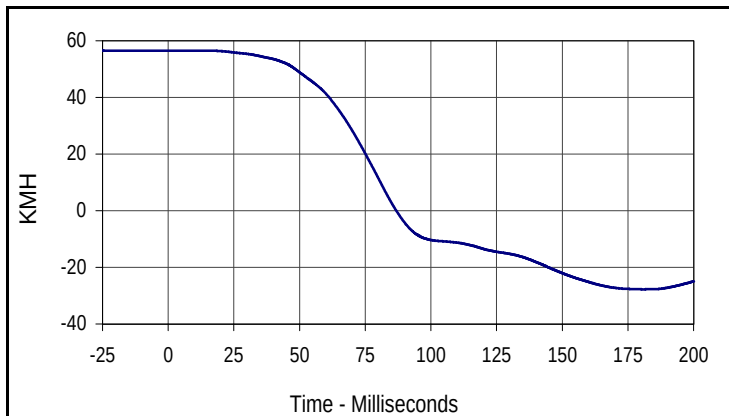
Curve Description			
Driver Head Redundant Z			
CURNO	Type	SAE Class	Units
006	FIL	1000	G's
Max	Time	Min	Time
25.1	61.7	-25.1	87.8



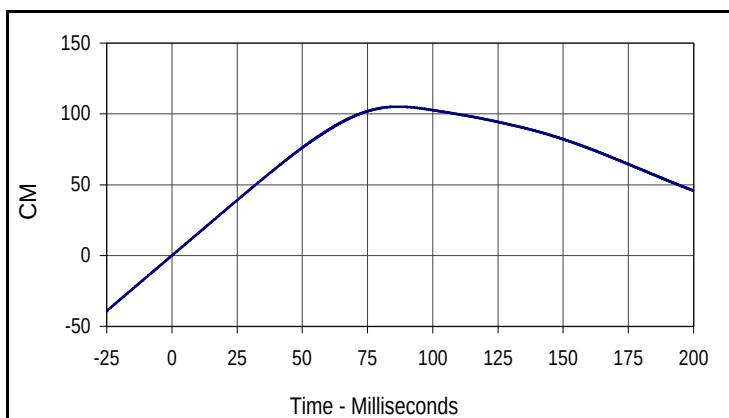
Curve Description			
Driver Head Resultant Redundant			
CURNO	Type	SAE Class	Units
004	RES	1000	G's
Max	Time	Min	Time
54.6	82.5	0.0	1.1

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 NHTSA No.: M55203



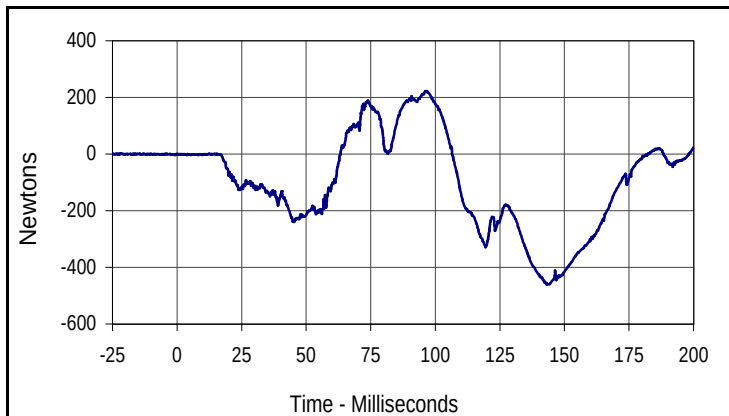
Curve Description			
Driver Head Redundant X Velocity			
CURNO	Type	SAE Class	Units
004	IN1	180	KMH
Max	Time	Min	Time
56.5	0.0	-27.7	180.8



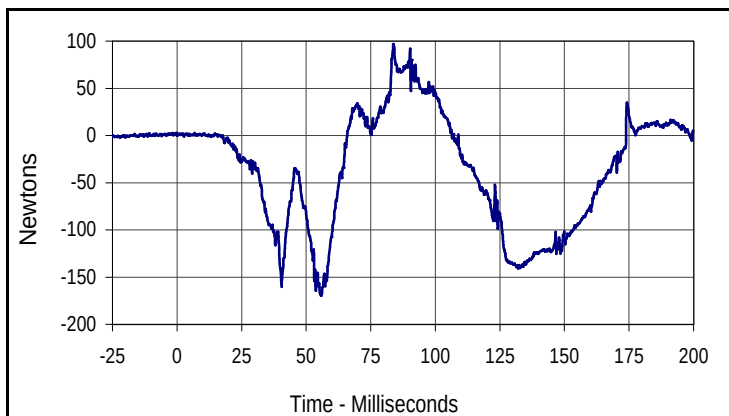
Curve Description			
Driver Head Redundant X Displacement			
CURNO	Type	SAE Class	Units
004	IN2	180	CM
Max	Time	Min	Time
105.1	86.8	0.0	0.0

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

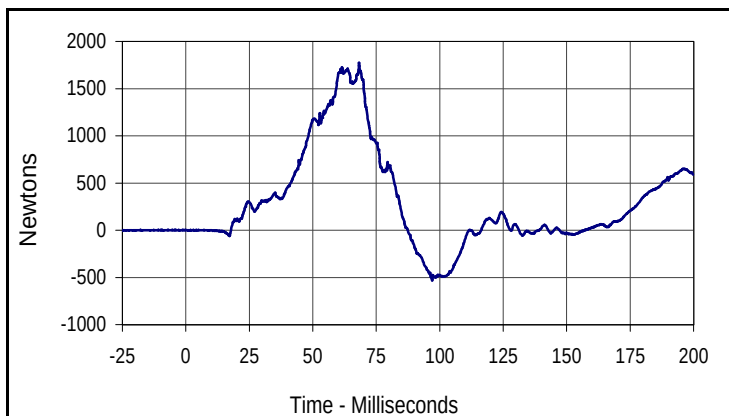
Test Date: 2/1/05
 NHTSA No.: M55203



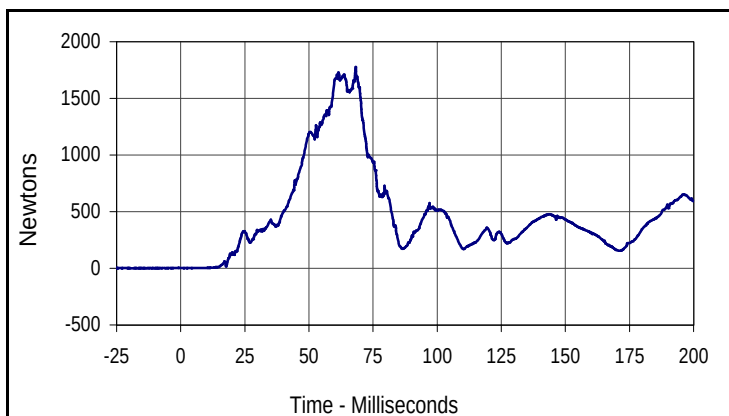
Curve Description			
Driver Upper Neck Force X			
CURNO	Type	SAE Class	Units
007	FIL	1000	Newtons
Max	Time	Min	Time
222.8	96.8	-460.4	143.7



Curve Description			
Driver Upper Neck Force Y			
CURNO	Type	SAE Class	Units
008	FIL	1000	Newtons
Max	Time	Min	Time
97.1	83.8	-170.0	55.8



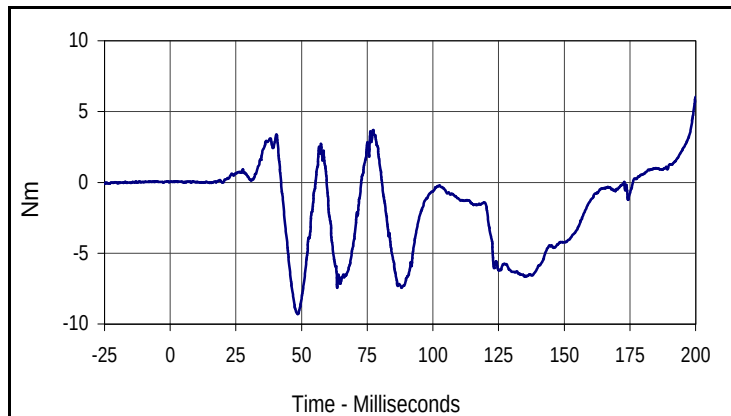
Curve Description			
Driver Upper Neck Force Z			
CURNO	Type	SAE Class	Units
009	FIL	1000	Newtons
Max	Time	Min	Time
1773.4	68.3	-530.8	97.0



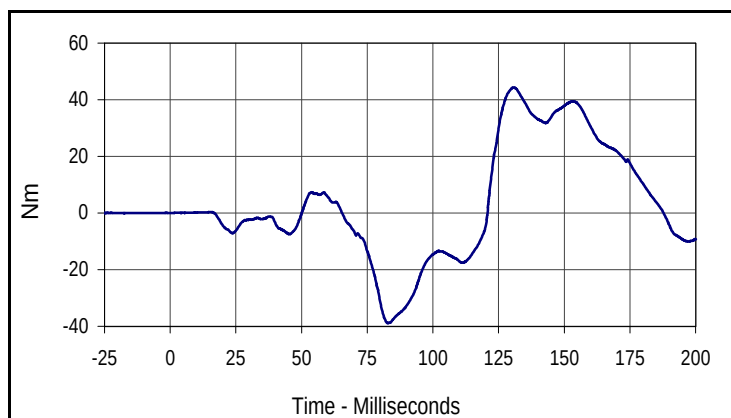
Curve Description			
Driver Upper Neck Force Res.			
CURNO	Type	SAE Class	Units
007	RES	1000	Newtons
Max	Time	Min	Time
1776.6	68.3	0.2	2.5

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

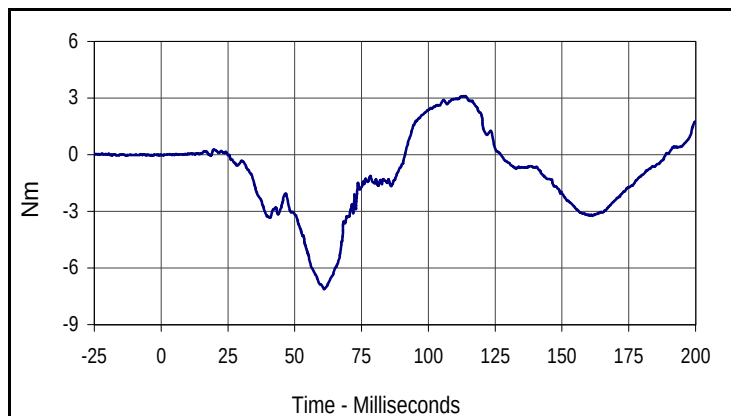
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 NHTSA No.: M55203



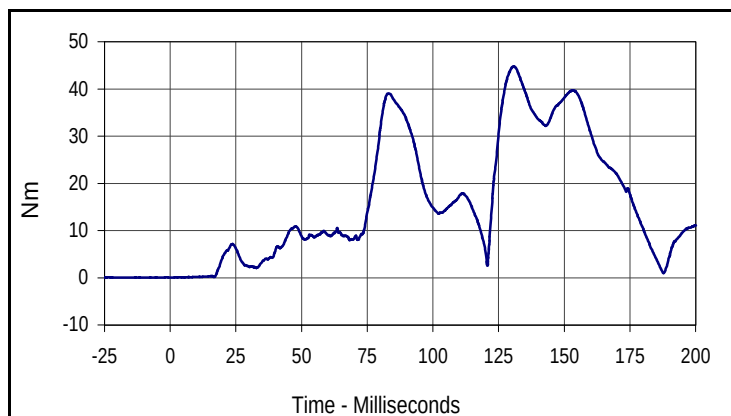
Curve Description			
Driver Upper Neck Moment X			
CURNO	Type	SAE Class	Units
010	FIL	600	Nm
Max	Time	Min	Time
6.1	200.0	-9.3	48.6



Curve Description			
Driver Upper Neck Moment Y			
CURNO	Type	SAE Class	Units
011	FIL	600	Nm
Max	Time	Min	Time
44.3	130.7	-38.9	82.9



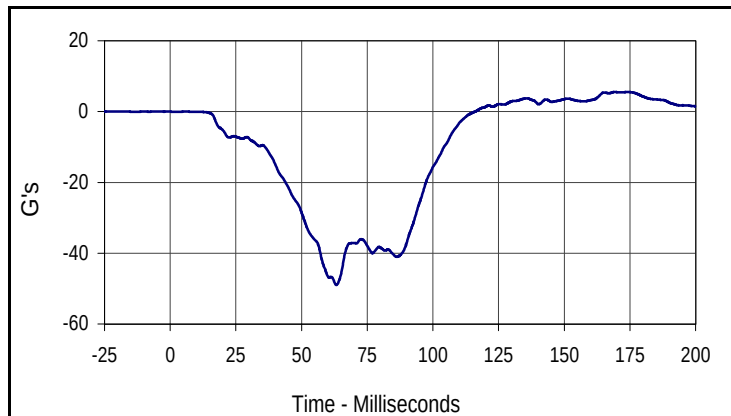
Curve Description			
Driver Upper Neck Moment Z			
CURNO	Type	SAE Class	Units
012	FIL	600	Nm
Max	Time	Min	Time
3.1	113.2	-7.1	61.0



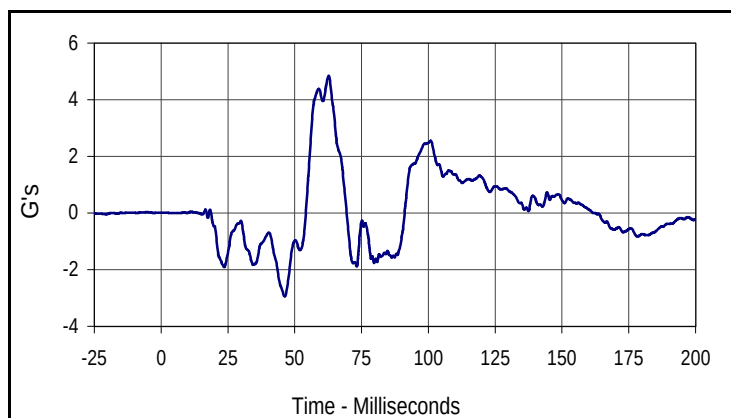
Curve Description			
Driver Upper Neck Moment Res.			
CURNO	Type	SAE Class	Units
010	RES	600	Nm
Max	Time	Min	Time
44.8	130.7	0.0	1.0

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

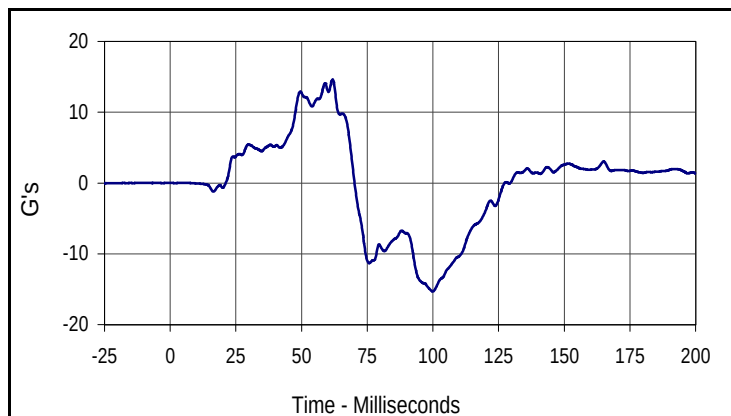
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 NHTSA No.: M55203



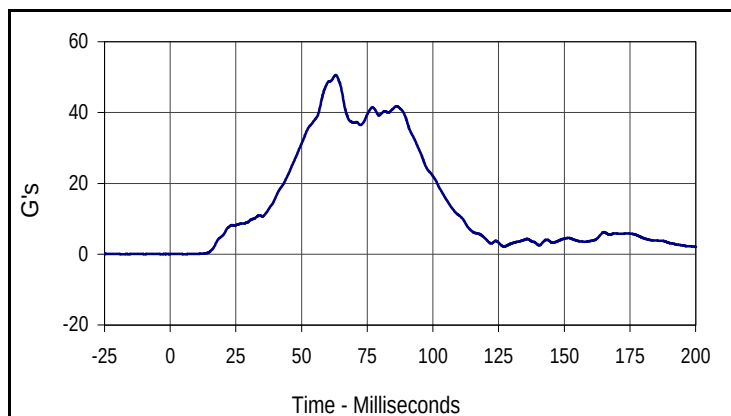
Curve Description			
Driver Chest Primary X			
CURNO	Type	SAE Class	Units
013	FIL	180	G's
Max	Time	Min	Time
5.5	174.2	-49.0	63.3



Curve Description			
Driver Chest Primary Y			
CURNO	Type	SAE Class	Units
014	FIL	180	G's
Max	Time	Min	Time
4.8	62.7	-2.9	46.2



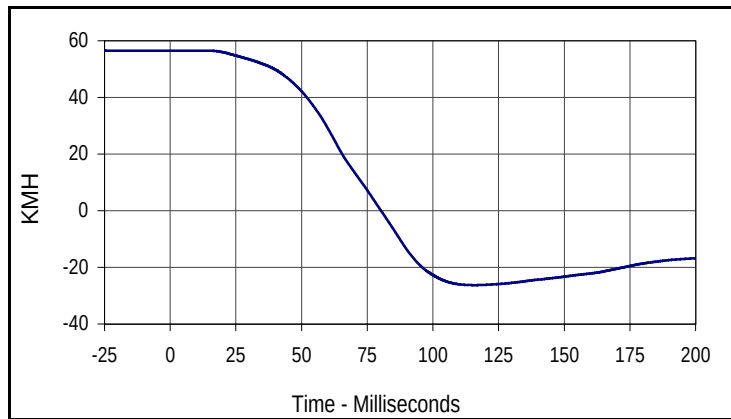
Curve Description			
Driver Chest Primary Z			
CURNO	Type	SAE Class	Units
015	FIL	180	G's
Max	Time	Min	Time
14.6	61.8	-15.3	99.9



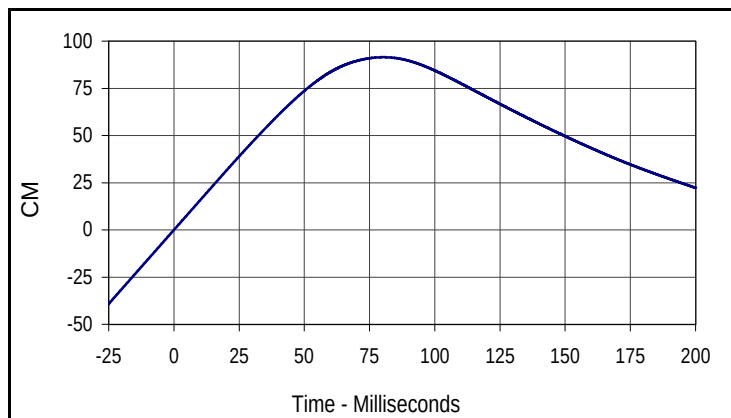
Curve Description			
Driver Chest Resultant Primary			
CURNO	Type	SAE Class	Units
013	RES	180	G's
Max	Time	Min	Time
50.6	63.0	0.0	5.3

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05
 NHTSA No.: M55203



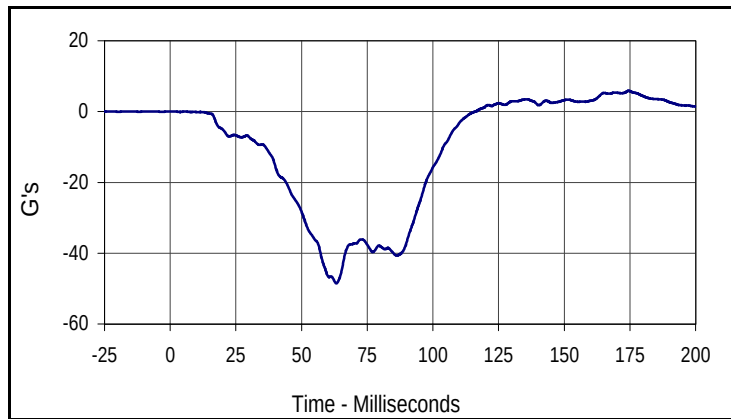
Curve Description			
Driver Chest Primary X Velocity			
CURNO	Type	SAE Class	Units
013	IN1	180	KMH
Max	Time	Min	Time
56.5	0.0	-26.3	116.1



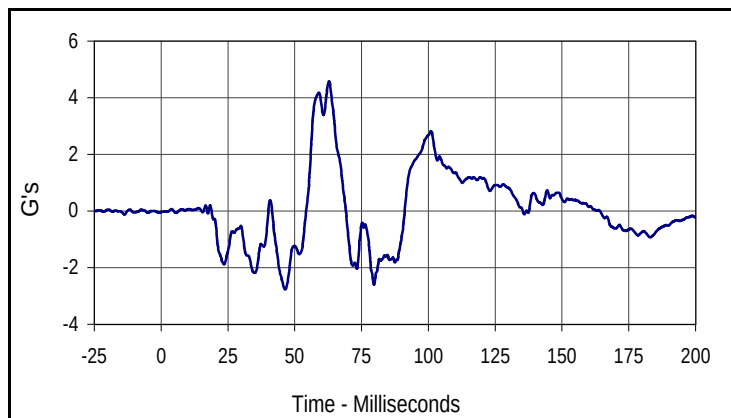
Curve Description			
Driver Chest Primary X Displacement			
CURNO	Type	SAE Class	Units
013	IN2	180	CM
Max	Time	Min	Time
91.5	80.3	0.0	0.0

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

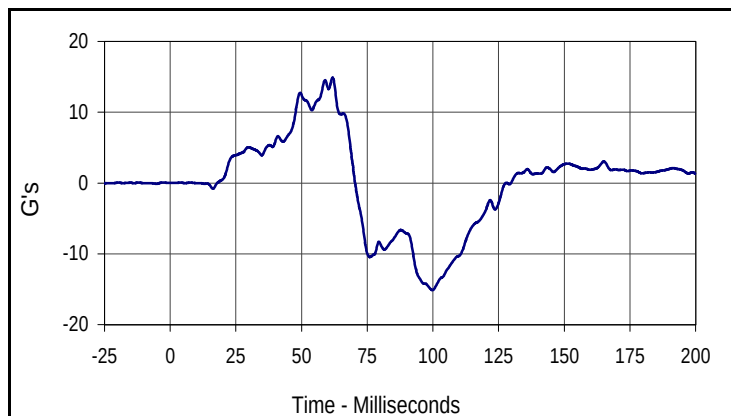
Test Date: 2/1/05
 NHTSA No.: M55203



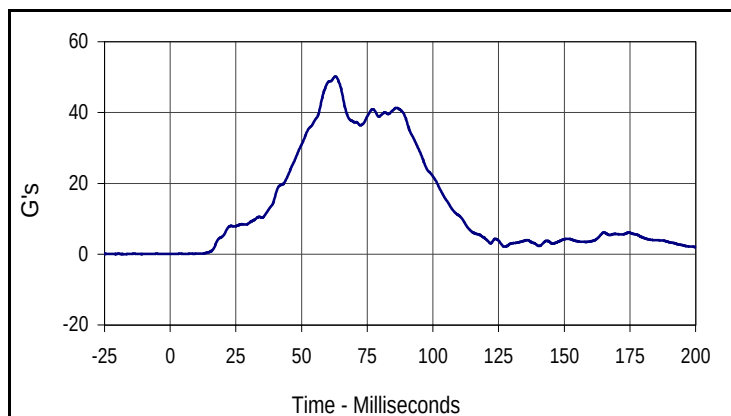
Curve Description			
Driver Chest Redundant X			
CURNO	Type	SAE Class	Units
016	FIL	180	G's
Max	Time	Min	Time
5.9	174.5	-48.5	63.2



Curve Description			
Driver Chest Redundant Y			
CURNO	Type	SAE Class	Units
017	FIL	180	G's
Max	Time	Min	Time
4.6	62.8	-2.8	46.4



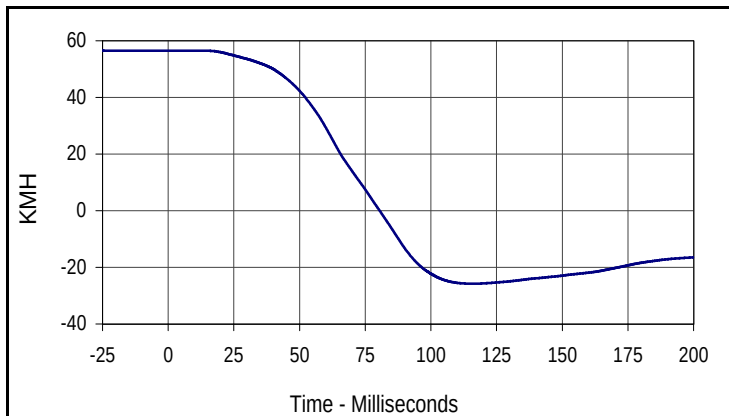
Curve Description			
Driver Chest Redundant Z			
CURNO	Type	SAE Class	Units
018	FIL	180	G's
Max	Time	Min	Time
14.9	61.8	-15.1	99.9



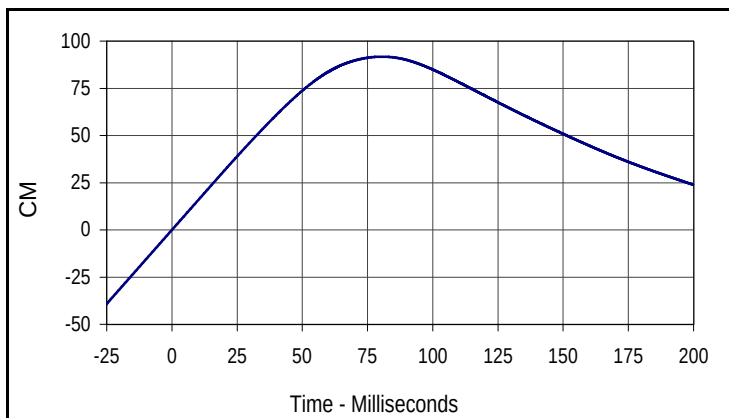
Curve Description			
Driver Chest Resultant Redundant			
CURNO	Type	SAE Class	Units
016	RES	180	G's
Max	Time	Min	Time
50.2	62.9	0.0	1.4

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

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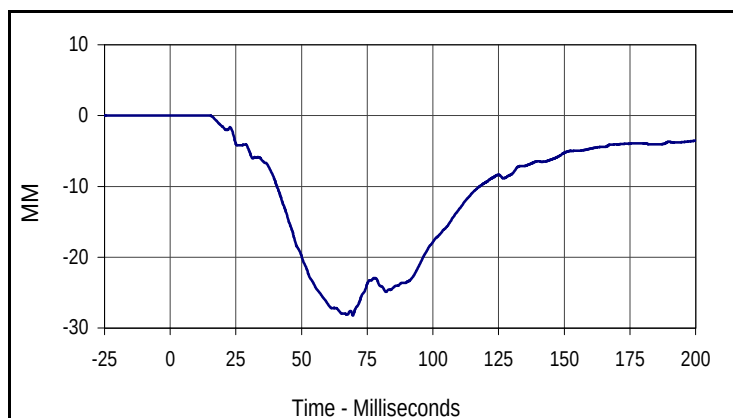
Curve Description			
Driver Chest Redundant X Velocity			
CURNO	Type	SAE Class	Units
016	IN1	180	KMH
Max	Time	Min	Time
56.5	1.4	-25.8	116.2



Curve Description			
Driver Chest Redundant X Displacement			
CURNO	Type	SAE Class	Units
016	IN2	180	CM
Max	Time	Min	Time
91.8	80.5	0.0	0.0

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

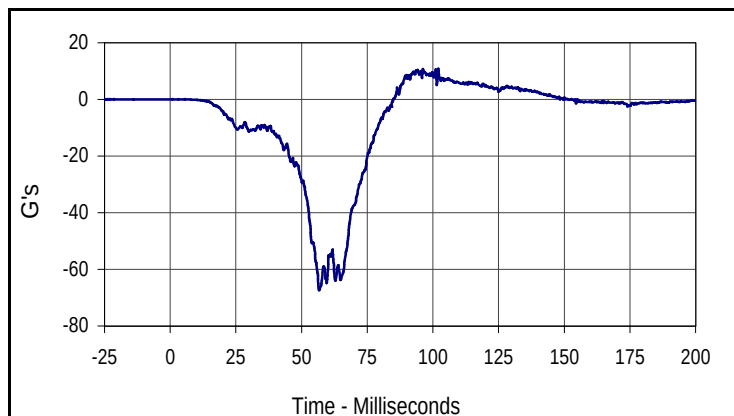
Test Date: 2/1/05
 NHTSA No.: M55203



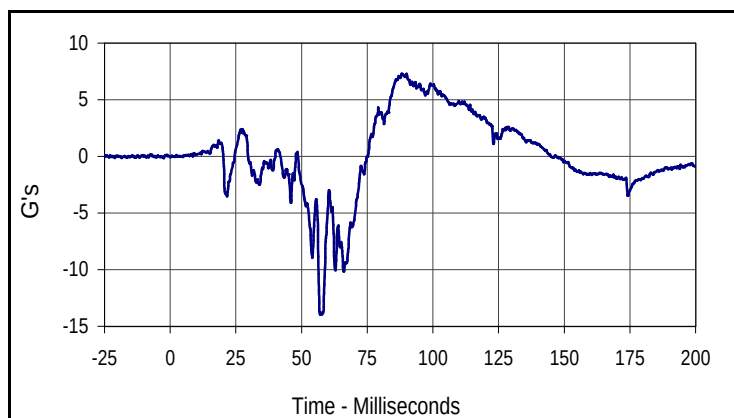
Curve Description			
Driver Chest Deflection			
CURNO	Type	SAE Class	Units
019	FIL	600	MM
Max	Time	Min	Time
0.0	1.4	-28.2	69.6

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

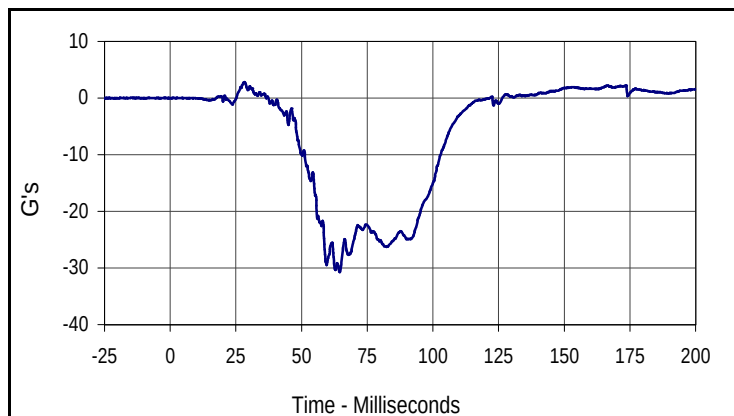
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 NHTSA No.: M55203



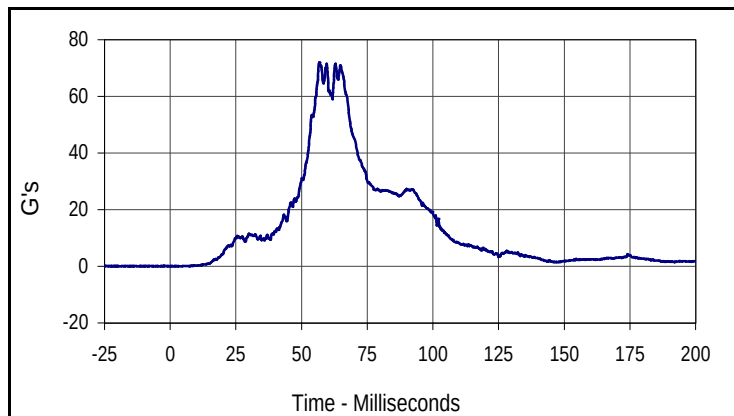
Curve Description			
Driver Pelvis X			
CURNO	Type	SAE Class	Units
020	FIL	1000	G's
Max	Time	Min	Time
10.8	102.1	-67.4	56.7



Curve Description			
Driver Pelvis Y			
CURNO	Type	SAE Class	Units
021	FIL	1000	G's
Max	Time	Min	Time
7.3	88.2	-14.0	57.1



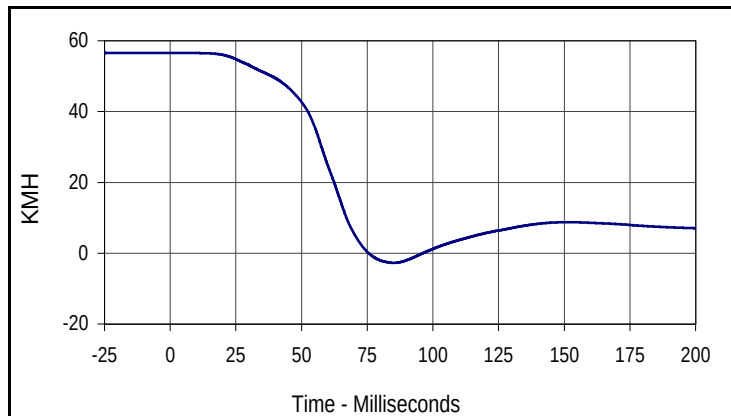
Curve Description			
Driver Pelvis Z			
CURNO	Type	SAE Class	Units
022	FIL	1000	G's
Max	Time	Min	Time
2.8	28.4	-30.7	64.5



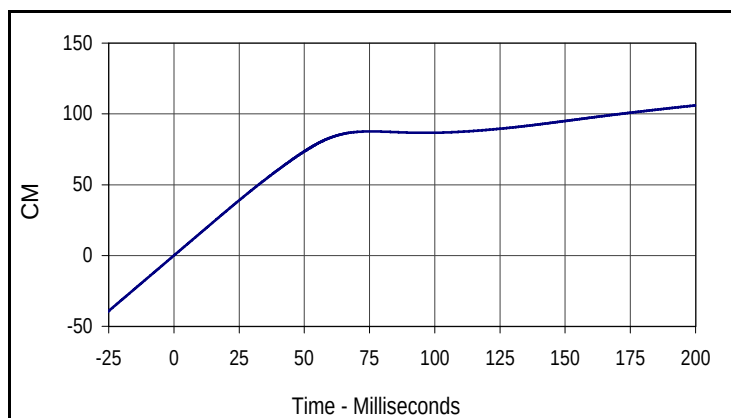
Curve Description			
Driver Pelvis Resultant			
CURNO	Type	SAE Class	Units
020	RES	1000	G's
Max	Time	Min	Time
72.0	56.7	0.0	3.6

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05
 NHTSA No.: M55203



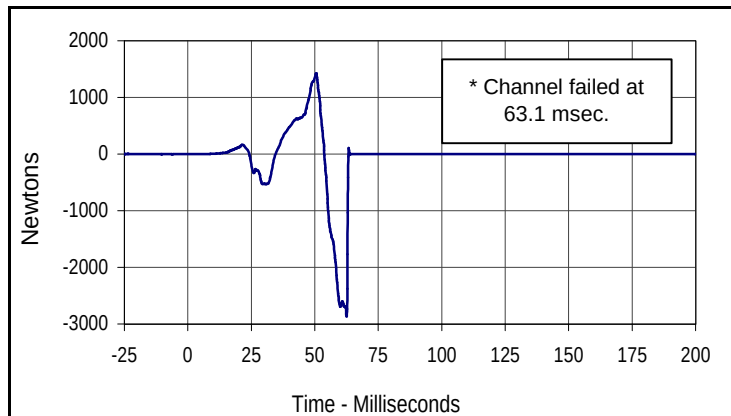
Curve Description			
Driver Pelvis X Velocity			
CURNO	Type	SAE Class	Units
020	IN1	180	KMH
Max	Time	Min	Time
56.5	7.0	-2.7	85.1



Curve Description			
Driver Pelvis X Displacement			
CURNO	Type	SAE Class	Units
020	IN2	180	CM
Max	Time	Min	Time
106.0	200.0	0.0	0.0

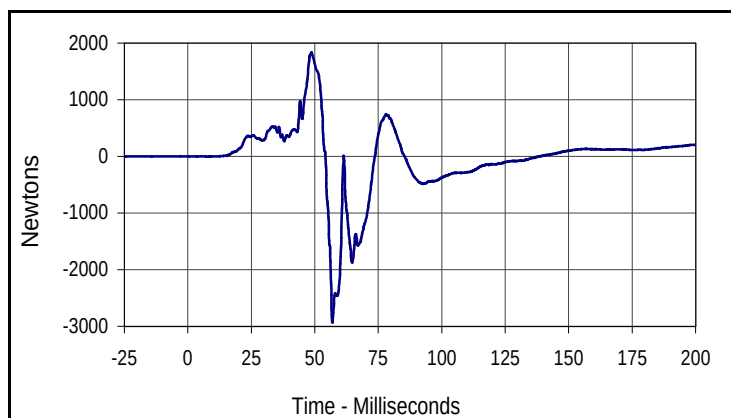
Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

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Curve Description			
Driver Left Femur Force			
CURNO	Type	SAE Class	Units
023	FIL	600	Newtons
Max	Time	Min	Time
1425.9	50.6	-2864.6	62.6

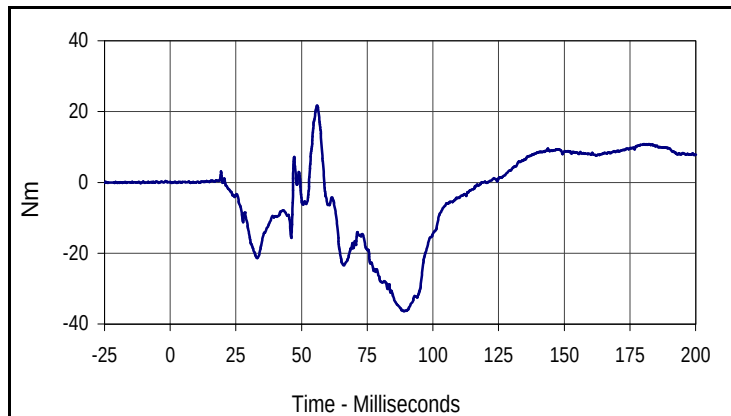
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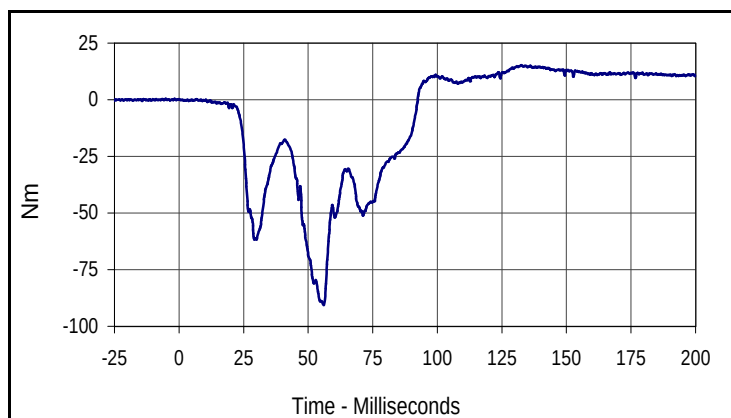
Curve Description			
Driver Right Femur Force			
CURNO	Type	SAE Class	Units
024	FIL	600	Newtons
Max	Time	Min	Time
1834.5	48.7	-2931.3	56.9

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

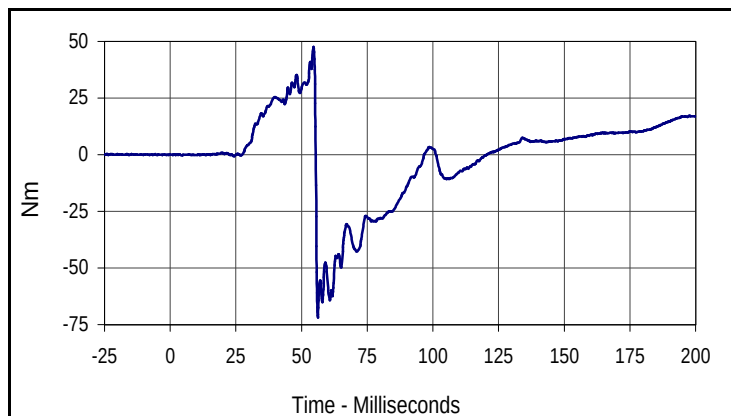
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 NHTSA No.: M55203



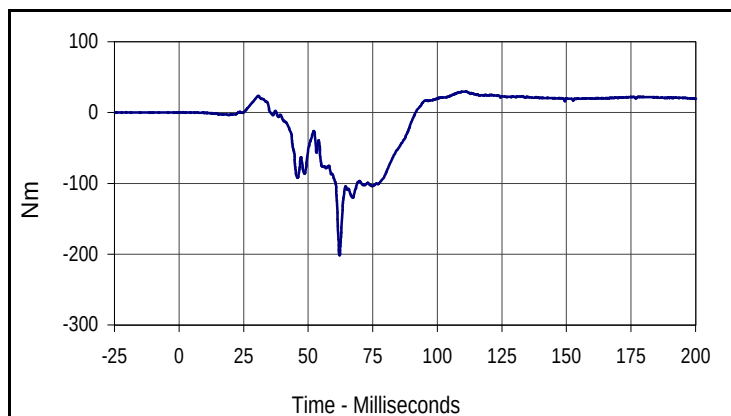
Curve Description			
Driver Left Upper Tibia Moment X			
CURNO	Type	SAE Class	Units
025	FIL	600	Nm
Max	Time	Min	Time
21.7	55.9	-36.4	88.9



Curve Description			
Driver Left Upper Tibia Moment Y			
CURNO	Type	SAE Class	Units
026	FIL	600	Nm
Max	Time	Min	Time
15.3	132.6	-90.7	56.0



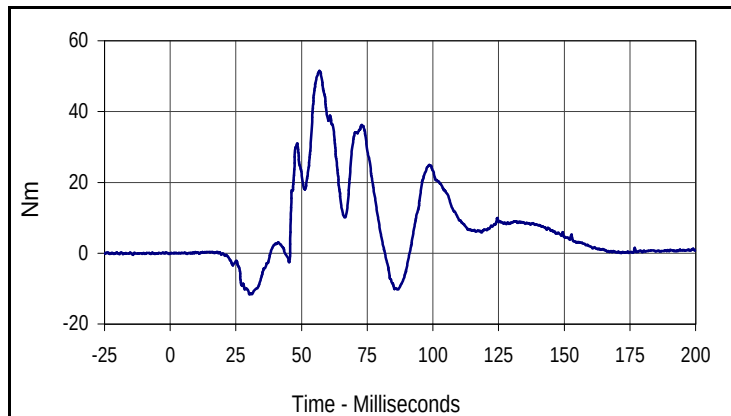
Curve Description			
Driver Right Upper Tibia Moment X			
CURNO	Type	SAE Class	Units
027	FIL	600	Nm
Max	Time	Min	Time
47.6	54.6	-71.9	56.2



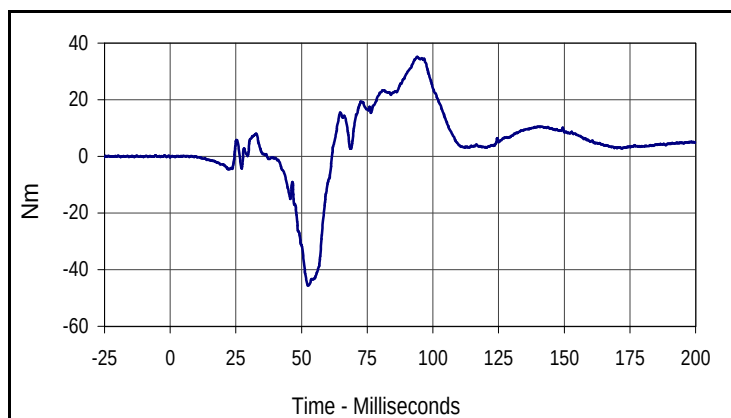
Curve Description			
Driver Right Upper Tibia Moment Y			
CURNO	Type	SAE Class	Units
028	FIL	600	Nm
Max	Time	Min	Time
29.8	111.2	-201.5	62.1

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
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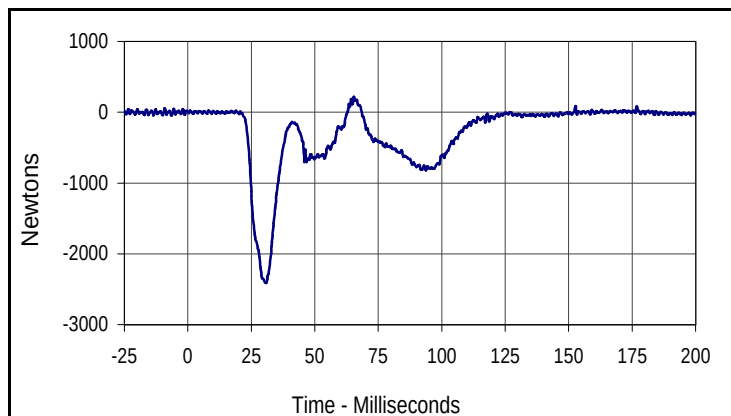
Test Date: 2/1/05
 NHTSA No.: M55203



Curve Description			
Driver Left Lower Tibia Moment X			
CURNO	Type	SAE Class	Units
029	FIL	600	Nm
Max	Time	Min	Time
51.5	56.8	-11.7	30.2



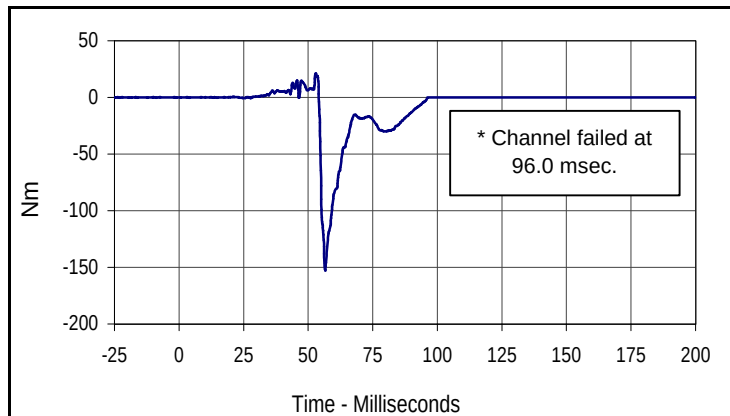
Curve Description			
Driver Left Lower Tibia Moment Y			
CURNO	Type	SAE Class	Units
030	FIL	600	Nm
Max	Time	Min	Time
35.1	93.9	-45.7	52.5



Curve Description			
Driver Left Lower Tibia Force Z			
CURNO	Type	SAE Class	Units
031	FIL	600	Newtons
Max	Time	Min	Time
216.7	65.4	-2411.9	30.9

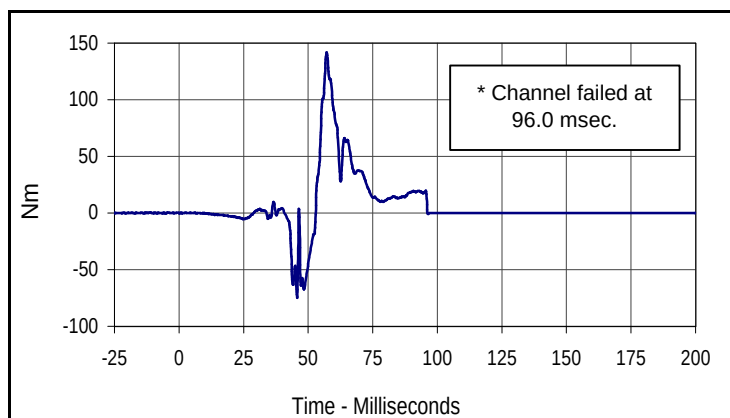
Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05
 NHTSA No.: M55203



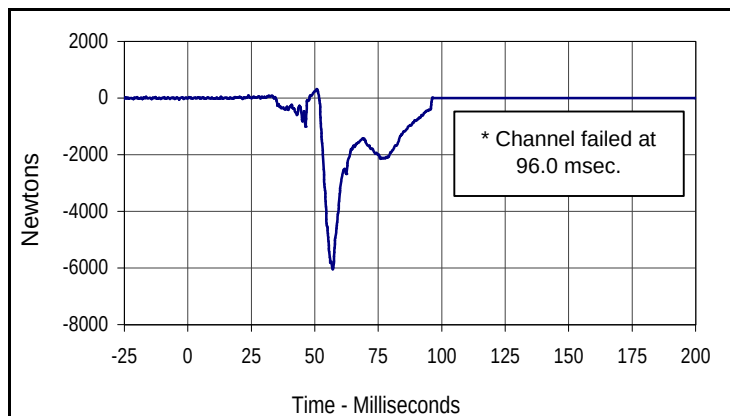
Curve Description			
Driver Right Lower Tibia Moment X			
CURNO	Type	SAE Class	Units
032	FIL	600	Nm
Max	Time	Min	Time
21.3	52.9	-152.8	56.6

* Channel failed at 96.0 msec.



Curve Description			
Driver Right Lower Tibia Moment Y			
CURNO	Type	SAE Class	Units
033	FIL	600	Nm
Max	Time	Min	Time
141.8	57.2	-74.9	45.7

* Channel failed at 96.0 msec.

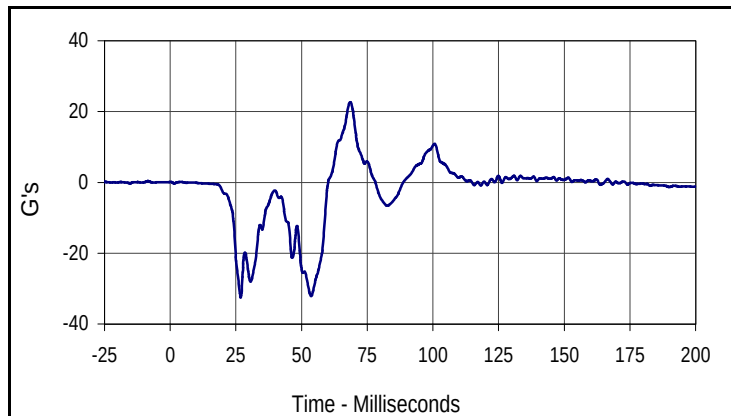


Curve Description			
Driver Right Lower Tibia Force Z			
CURNO	Type	SAE Class	Units
034	FIL	600	Newtons
Max	Time	Min	Time
314.7	50.9	-6046.5	57.1

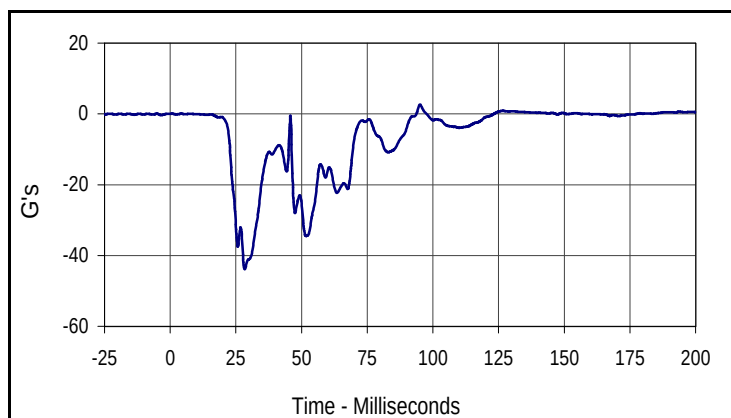
* Channel failed at 96.0 msec.

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

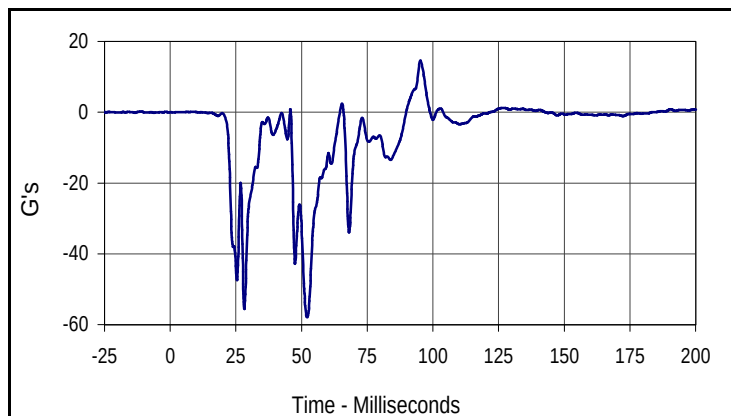
Test Date: 2/1/05
 NHTSA No.: M55203



Curve Description			
Driver Left Foot Aft X			
CURNO	Type	SAE Class	Units
035	FIL	180	G's
Max	Time	Min	Time
22.7	68.5	-32.5	26.8



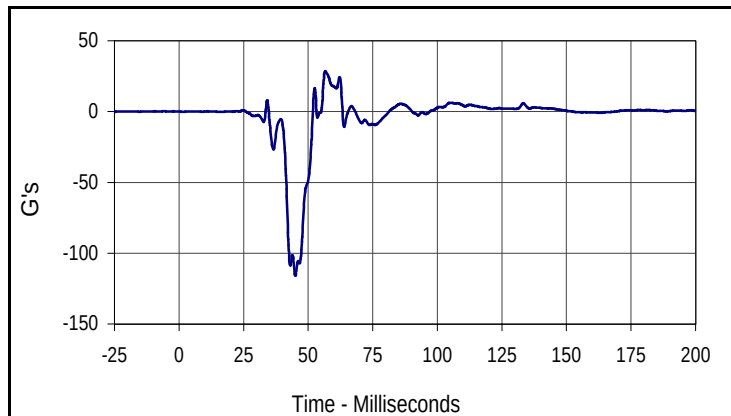
Curve Description			
Driver Left Foot Aft Z			
CURNO	Type	SAE Class	Units
036	FIL	180	G's
Max	Time	Min	Time
2.6	95.1	-43.9	28.4



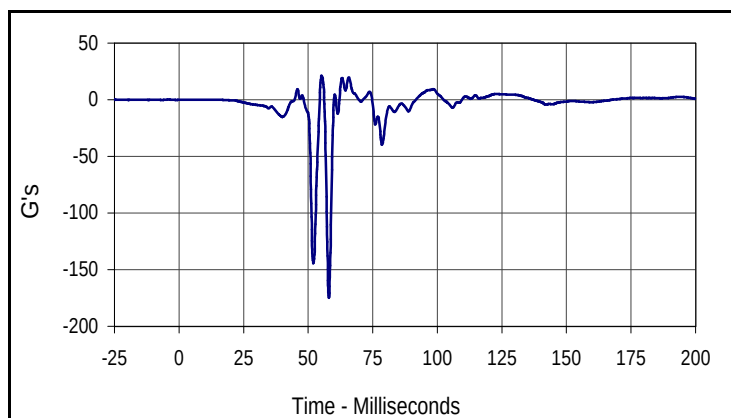
Curve Description			
Driver Left Foot Fore Z			
CURNO	Type	SAE Class	Units
037	FIL	180	G's
Max	Time	Min	Time
14.5	95.2	-57.9	52.2

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

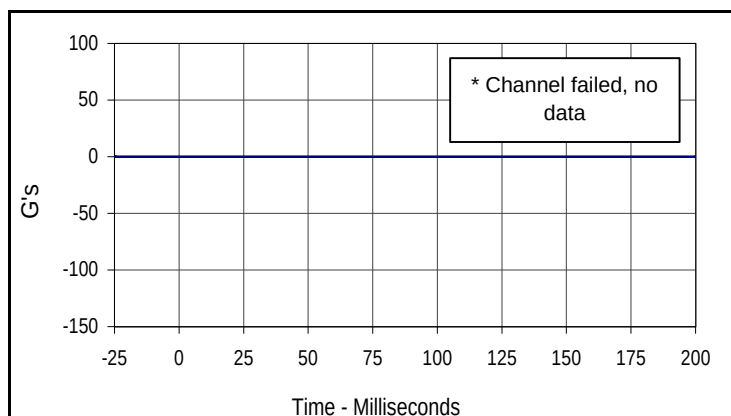
Test Date: 2/1/05
 NHTSA No.: M55203



Curve Description			
Driver Right Foot Aft X			
CURNO	Type	SAE Class	Units
038	FIL	180	G's
Max	Time	Min	Time
28.6	56.6	-115.9	45.0



Curve Description			
Driver Right Foot Aft Z			
CURNO	Type	SAE Class	Units
039	FIL	180	G's
Max	Time	Min	Time
21.1	55.2	-174.9	58.0

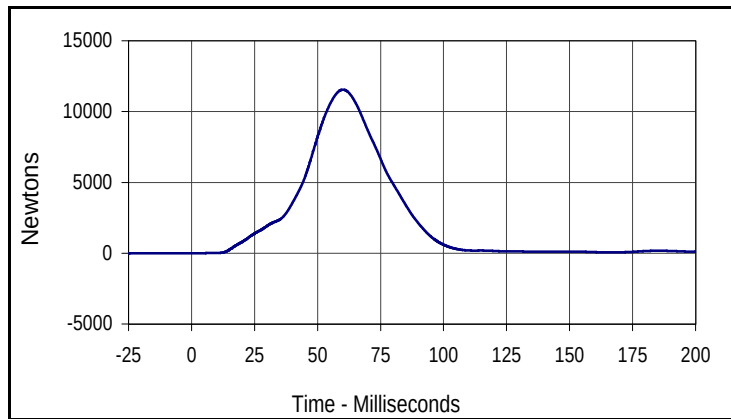


Curve Description			
Driver Right Foot Fore Z			
CURNO	Type	SAE Class	Units
040	FIL	180	G's
Max	Time	Min	Time
0.0	0.0	0.0	0.0

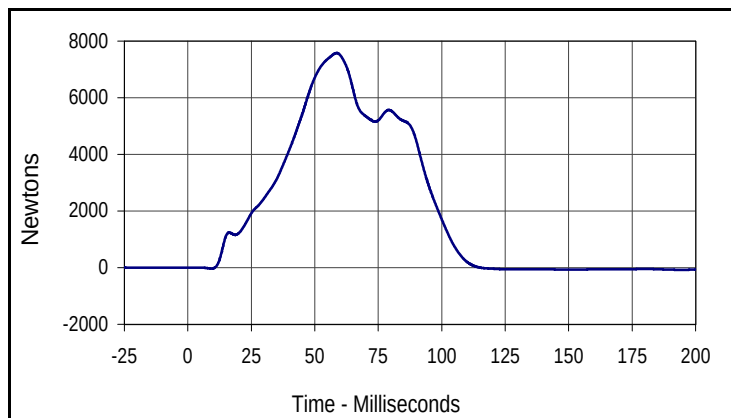
* Channel failed, no data

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

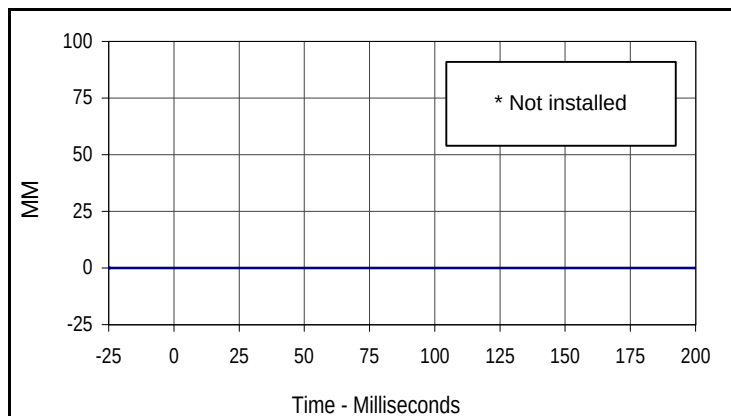
Test Date: 2/1/05
 NHTSA No.: M55203



Curve Description			
Driver Lap Belt Force			
CURNO	Type	SAE Class	Units
041	FIL	60	Newtons
Max	Time	Min	Time
11550.5	60.1	-0.9	0.6

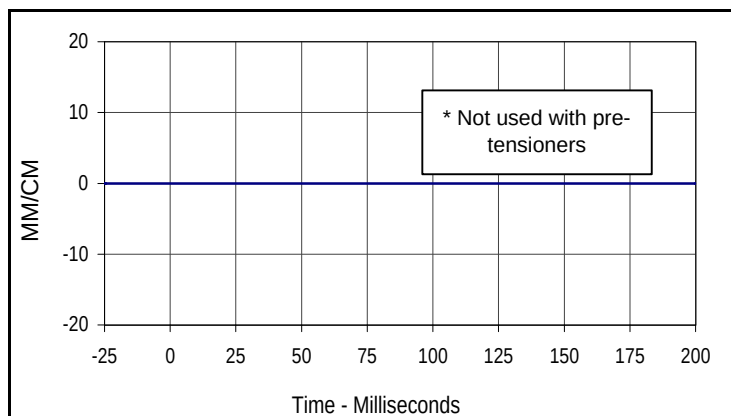


Curve Description			
Driver Shoulder Belt Force			
CURNO	Type	SAE Class	Units
042	FIL	60	Newtons
Max	Time	Min	Time
7578.2	58.6	-76.2	194.8



Curve Description			
Driver Shoulder Belt Pullout			
CURNO	Type	SAE Class	Units
043	FIL	60	MM
Max	Time	Min	Time
0.0	0.0	0.0	0.0

* Not installed

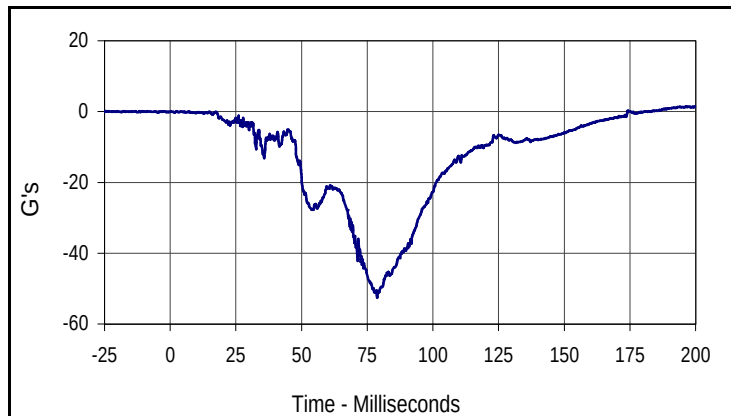


Curve Description			
Driver Shoulder Belt Elongation			
CURNO	Type	SAE Class	Units
044	FIL	60	MM/CM
Max	Time	Min	Time
0.0	0.0	0.0	0.0

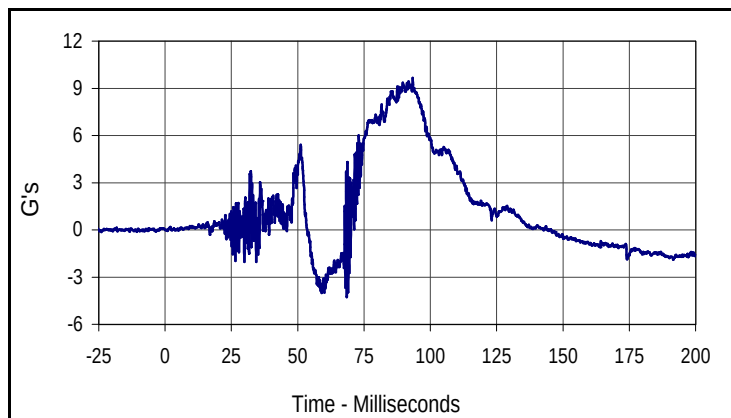
* Not used with pre-tensioners

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

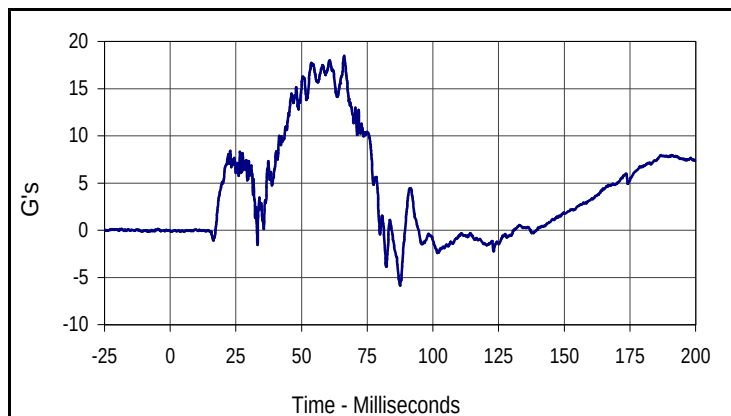
Test Date: 2/1/05
 NHTSA No.: M55203



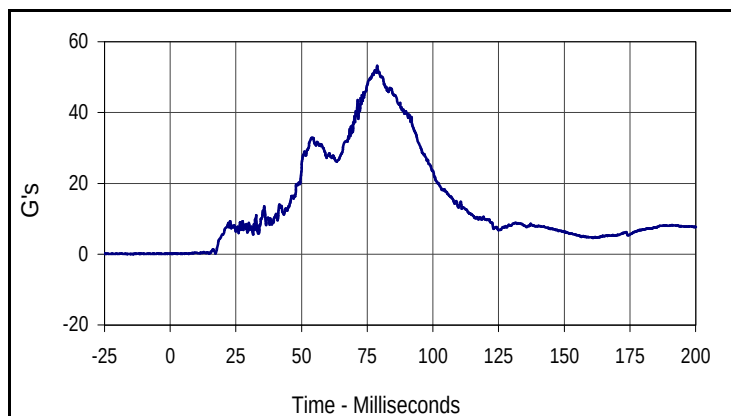
Curve Description			
Passenger Head Primary X			
CURNO	Type	SAE Class	Units
045	FIL	1000	G's
Max	Time	Min	Time
1.5	196.5	-52.6	78.8



Curve Description			
Passenger Head Primary Y			
CURNO	Type	SAE Class	Units
046	FIL	1000	G's
Max	Time	Min	Time
9.7	93.4	-4.2	68.5



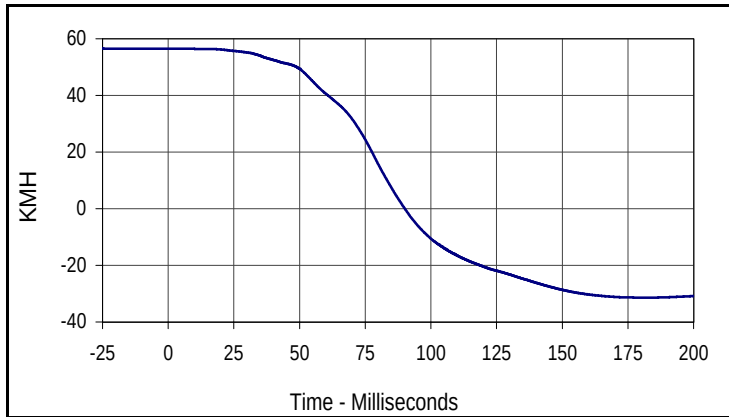
Curve Description			
Passenger Head Primary Z			
CURNO	Type	SAE Class	Units
047	FIL	1000	G's
Max	Time	Min	Time
18.5	66.2	-5.9	87.5



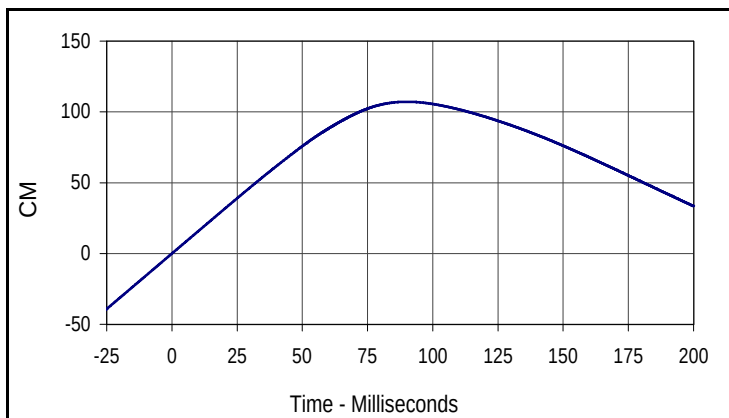
Curve Description			
Passenger Head Resultant Primary			
CURNO	Type	SAE Class	Units
045	RES	1000	G's
Max	Time	Min	Time
53.2	78.8	0.1	7.1

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05
 NHTSA No.: M55203



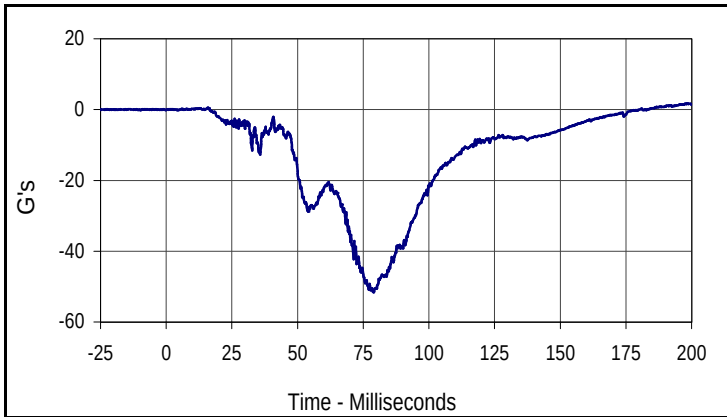
Curve Description			
Passenger Head Primary X Velocity			
CURNO	Type	SAE Class	Units
045	IN1	180	KMH
Max	Time	Min	Time
56.5	0.0	-31.4	180.8



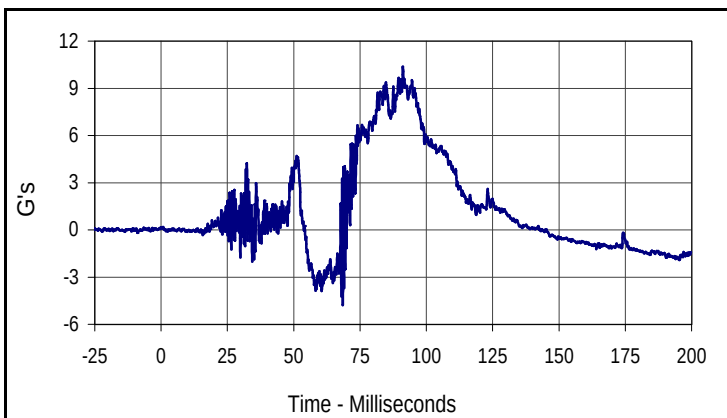
Curve Description			
Passenger Head Primary X Displacement			
CURNO	Type	SAE Class	Units
045	IN2	180	CM
Max	Time	Min	Time
107.2	90.1	0.0	0.0

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

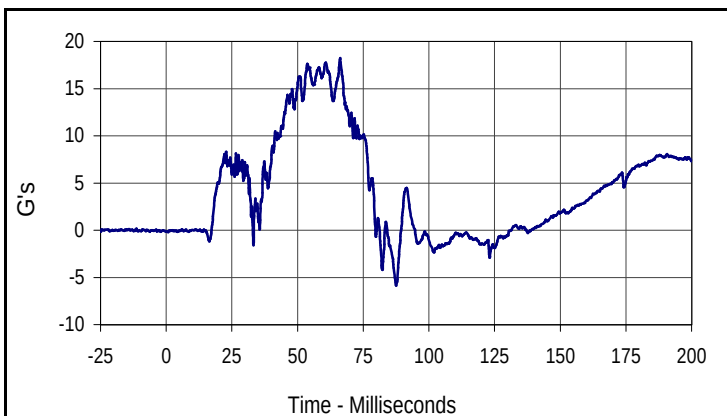
Test Date: 2/1/05
 NHTSA No.: M55203



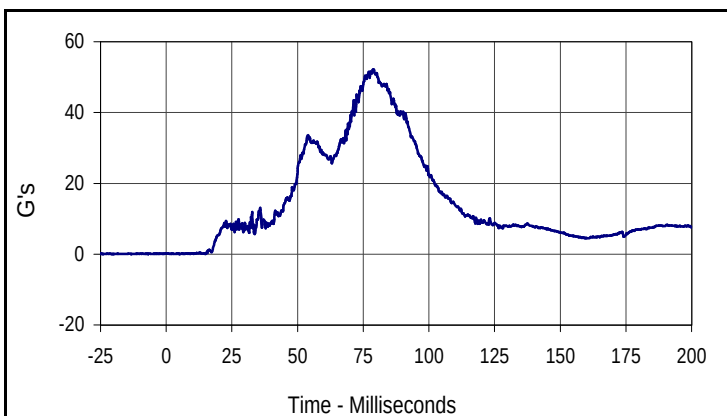
Curve Description			
Passenger Head Redundant X			
CURNO	Type	SAE Class	Units
048	FIL	1000	G's
Max	Time	Min	Time
1.7	198.5	-51.6	78.9



Curve Description			
Passenger Head Redundant Y			
CURNO	Type	SAE Class	Units
049	FIL	1000	G's
Max	Time	Min	Time
10.4	91.2	-4.8	68.5



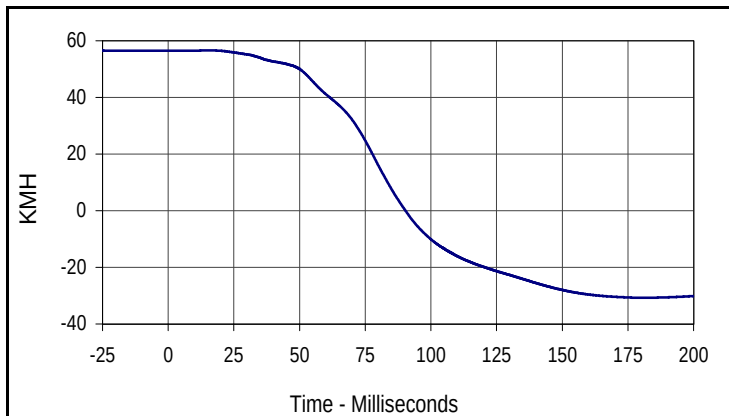
Curve Description			
Passenger Head Redundant Z			
CURNO	Type	SAE Class	Units
050	FIL	1000	G's
Max	Time	Min	Time
18.2	66.2	-5.9	87.5



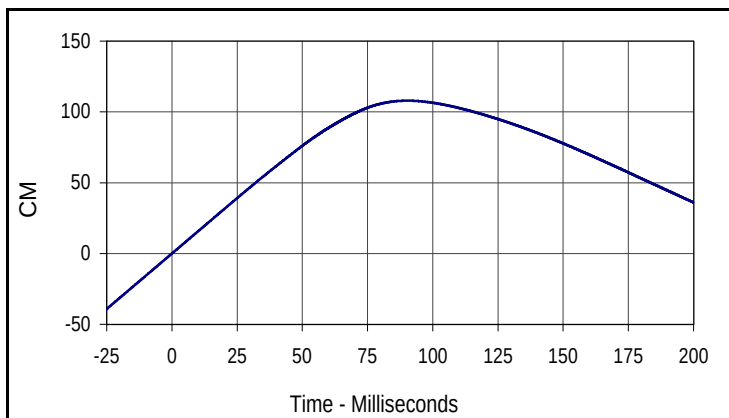
Curve Description			
Passenger Head Resultant Redundant			
CURNO	Type	SAE Class	Units
048	RES	1000	G's
Max	Time	Min	Time
52.3	78.9	0.0	5.1

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05
 NHTSA No.: M55203



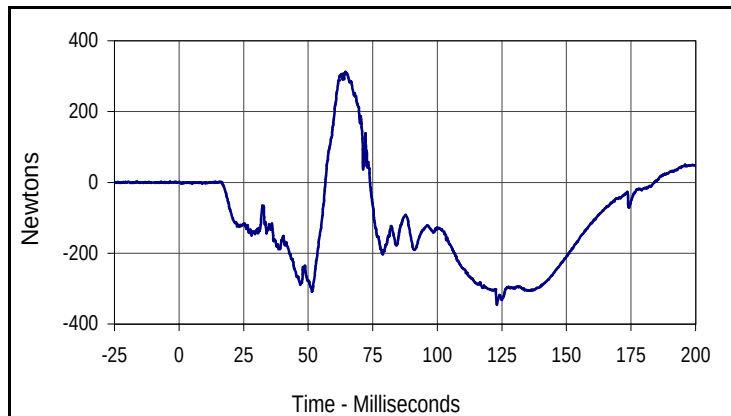
Curve Description			
Passenger Head Redundant X Velocity			
CURNO	Type	SAE Class	Units
048	IN1	180	KMH
Max	Time	Min	Time
56.6	16.6	-30.7	183.2



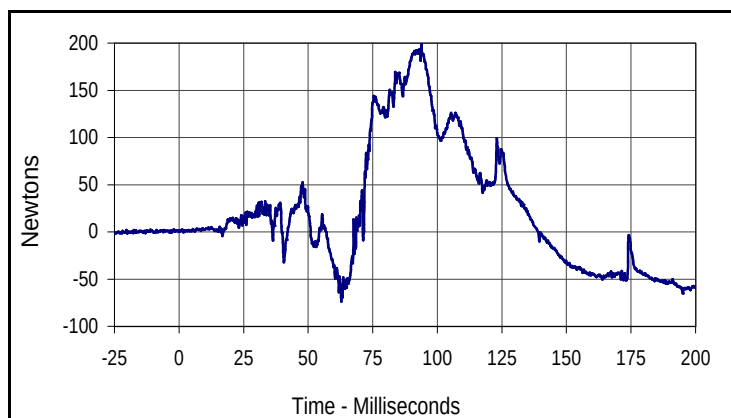
Curve Description			
Passenger Head Redundant X Displacement			
CURNO	Type	SAE Class	Units
048	IN2	180	CM
Max	Time	Min	Time
107.9	90.3	0.0	0.0

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

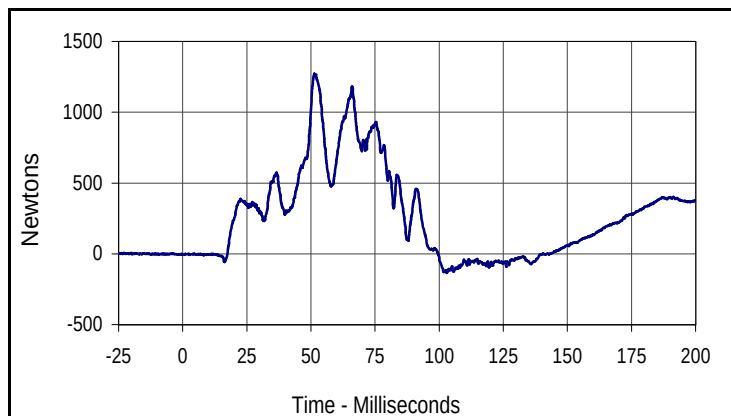
Test Date: 2/1/05
 NHTSA No.: M55203



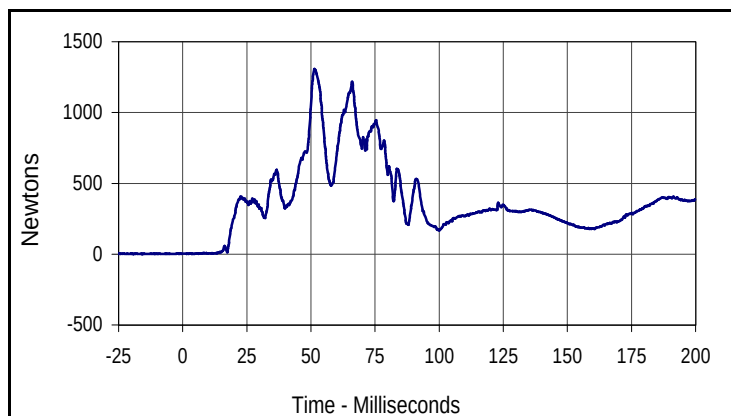
Curve Description			
Passenger Upper Neck Force X			
CURNO	Type	SAE Class	Units
051	FIL	1000	Newtons
Max	Time	Min	Time
312.5	64.4	-345.5	123.0



Curve Description			
Passenger Upper Neck Force Y			
CURNO	Type	SAE Class	Units
052	FIL	1000	Newtons
Max	Time	Min	Time
199.5	93.9	-74.0	62.8



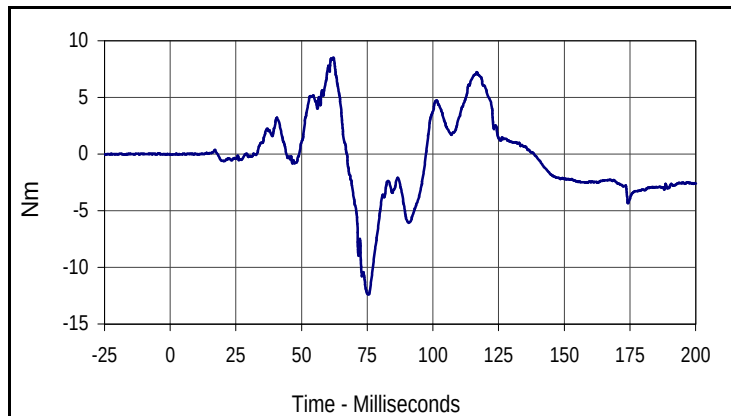
Curve Description			
Passenger Upper Neck Force Z			
CURNO	Type	SAE Class	Units
053	FIL	1000	Newtons
Max	Time	Min	Time
1271.2	51.3	-133.8	102.9



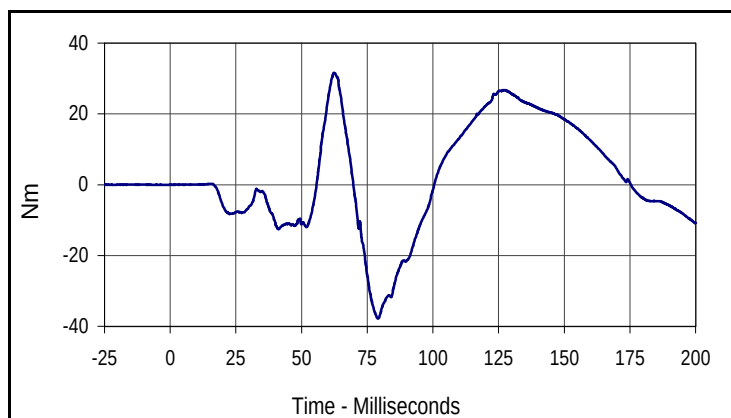
Curve Description			
Passenger Upper Neck Force Res.			
CURNO	Type	SAE Class	Units
051	RES	1000	Newtons
Max	Time	Min	Time
1307.4	51.4	1.5	2.1

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

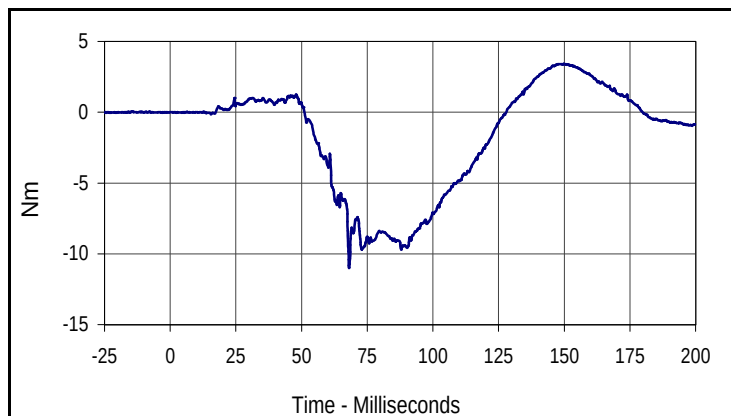
Test Date: 2/1/05
 NHTSA No.: M55203



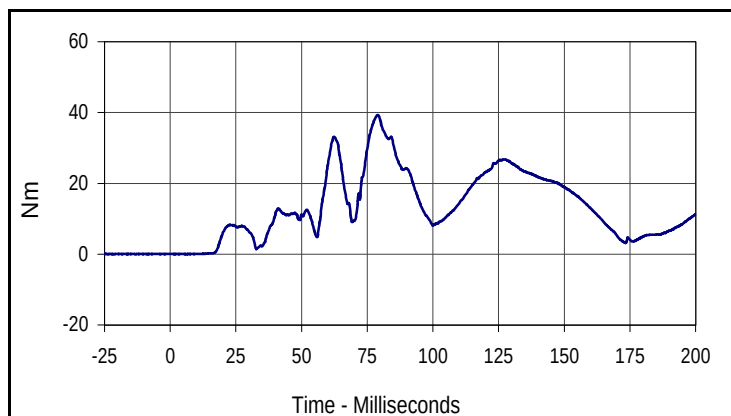
Curve Description			
Passenger Upper Neck Moment X			
CURNO	Type	SAE Class	Units
054	FIL	600	Nm
Max	Time	Min	Time
8.5	62.1	-12.4	75.2



Curve Description			
Passenger Upper Neck Moment Y			
CURNO	Type	SAE Class	Units
055	FIL	600	Nm
Max	Time	Min	Time
31.6	62.4	-37.8	79.1



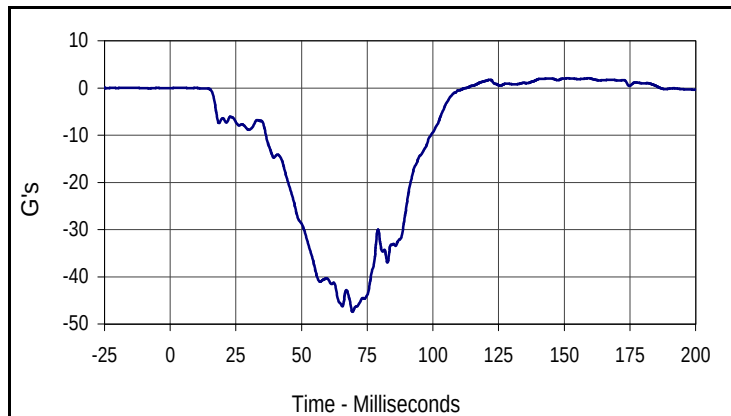
Curve Description			
Passenger Upper Neck Moment Z			
CURNO	Type	SAE Class	Units
056	FIL	600	Nm
Max	Time	Min	Time
3.4	149.9	-11.0	68.1



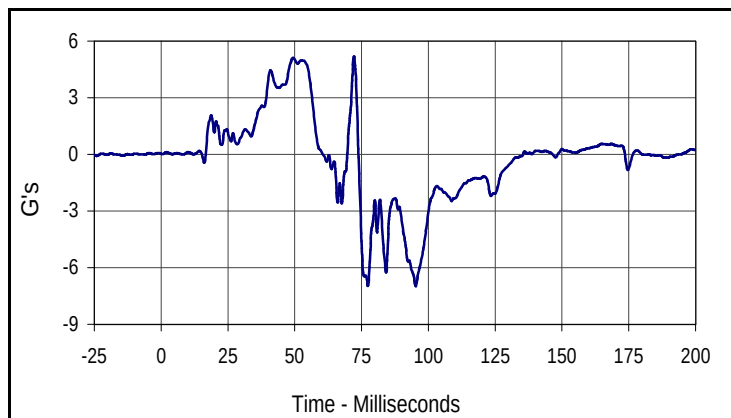
Curve Description			
Passenger Upper Neck Moment Res.			
CURNO	Type	SAE Class	Units
054	RES	600	Nm
Max	Time	Min	Time
39.3	79.0	0.0	2.0

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

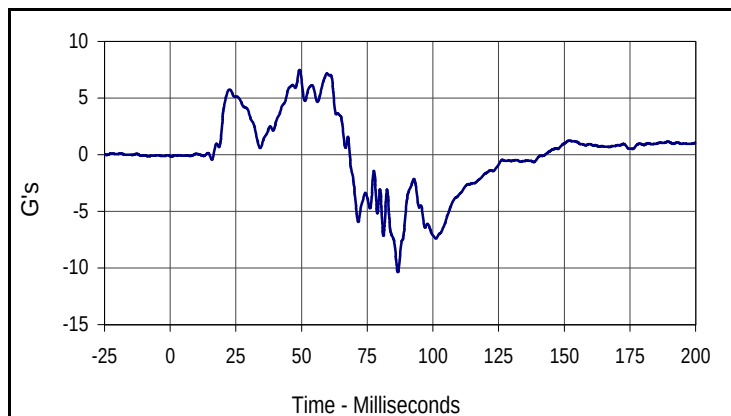
Test Date: 2/1/05
 NHTSA No.: M55203



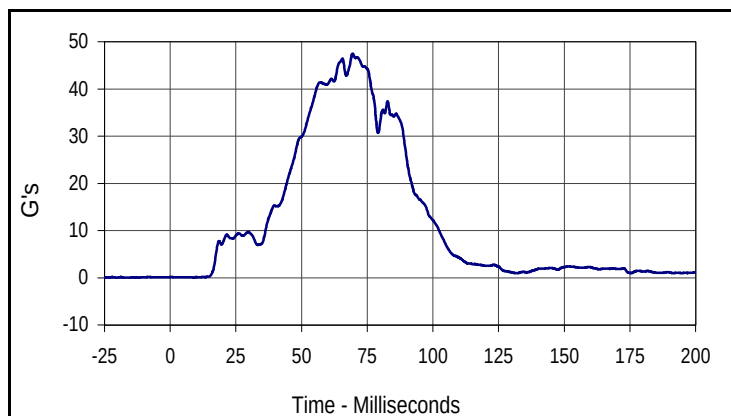
Curve Description			
Passenger Chest Primary X			
CURNO	Type	SAE Class	Units
057	FIL	180	G's
Max	Time	Min	Time
2.1	159.3	-47.4	69.4



Curve Description			
Passenger Chest Primary Y			
CURNO	Type	SAE Class	Units
058	FIL	180	G's
Max	Time	Min	Time
5.2	72.2	-7.0	95.3



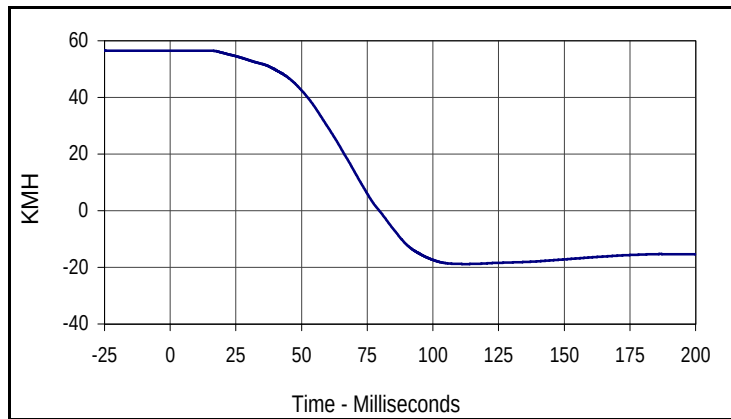
Curve Description			
Passenger Chest Primary Z			
CURNO	Type	SAE Class	Units
059	FIL	180	G's
Max	Time	Min	Time
7.5	49.3	-10.4	86.7



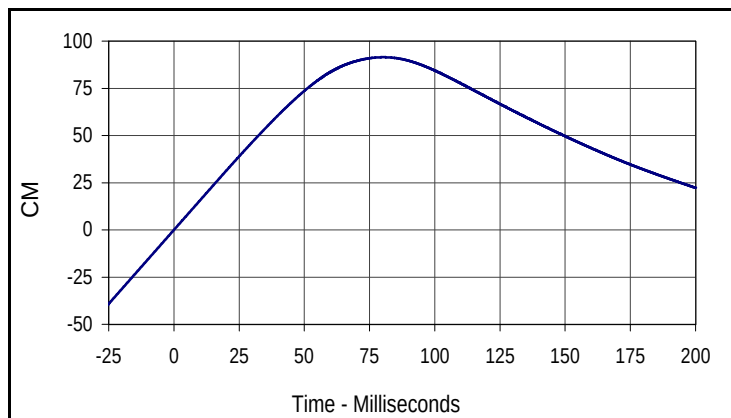
Curve Description			
Passenger Chest Resultant Primary			
CURNO	Type	SAE Class	Units
057	RES	180	G's
Max	Time	Min	Time
47.5	69.4	0.0	8.9

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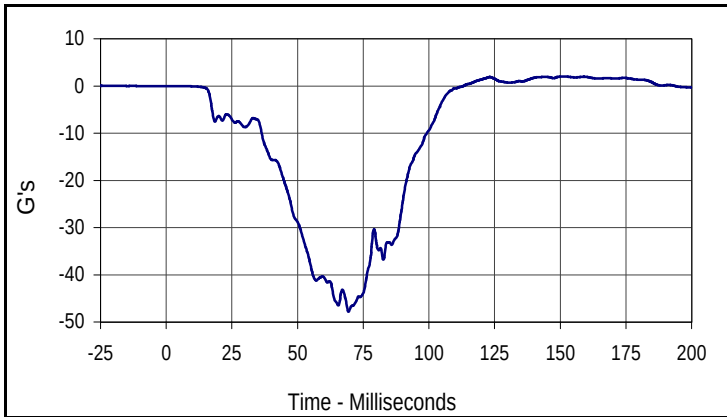
Curve Description			
Passenger Chest Primary X Velocity			
CURNO	Type	SAE Class	Units
057	IN1	180	KMH
Max	Time	Min	Time
56.5	6.2	-18.8	112.7



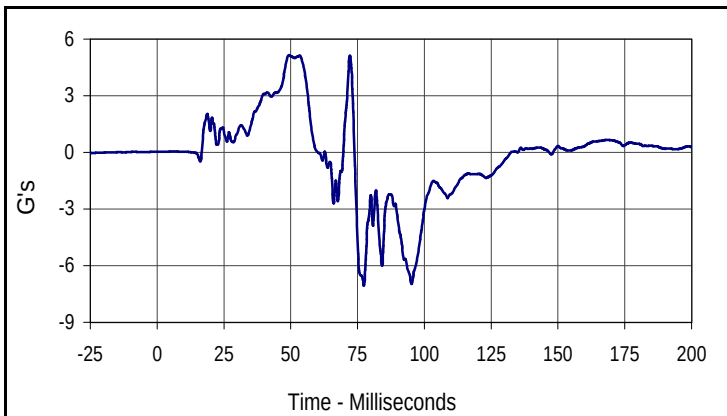
Curve Description			
Passenger Chest Primary X Displacement			
CURNO	Type	SAE Class	Units
057	IN2	180	CM
Max	Time	Min	Time
91.5	80.3	0.0	0.0

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

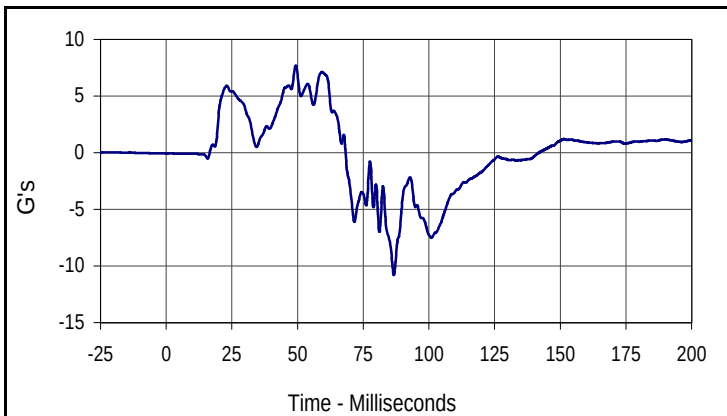
Test Date: 2/1/05
 NHTSA No.: M55203



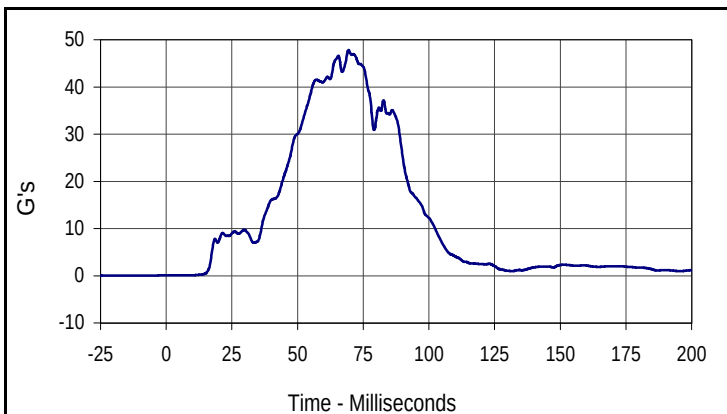
Curve Description			
Passenger Chest Redundant X			
CURNO	Type	SAE Class	Units
060	FIL	180	G's
Max	Time	Min	Time
2.0	151.8	-47.8	69.4



Curve Description			
Passenger Chest Redundant Y			
CURNO	Type	SAE Class	Units
061	FIL	180	G's
Max	Time	Min	Time
5.2	49.3	-7.1	77.4



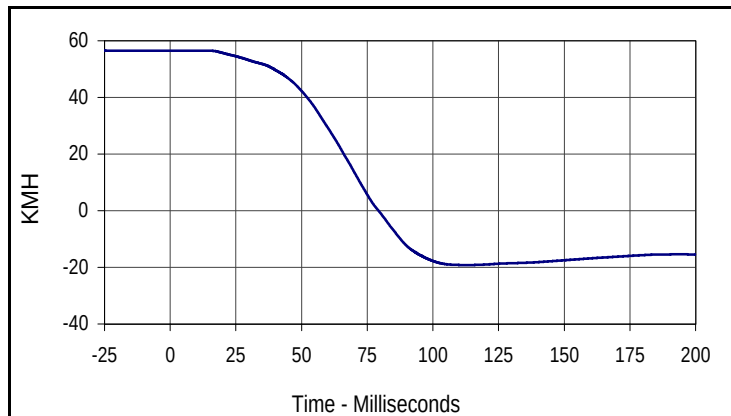
Curve Description			
Passenger Chest Redundant Z			
CURNO	Type	SAE Class	Units
062	FIL	180	G's
Max	Time	Min	Time
7.7	49.3	-10.8	86.7



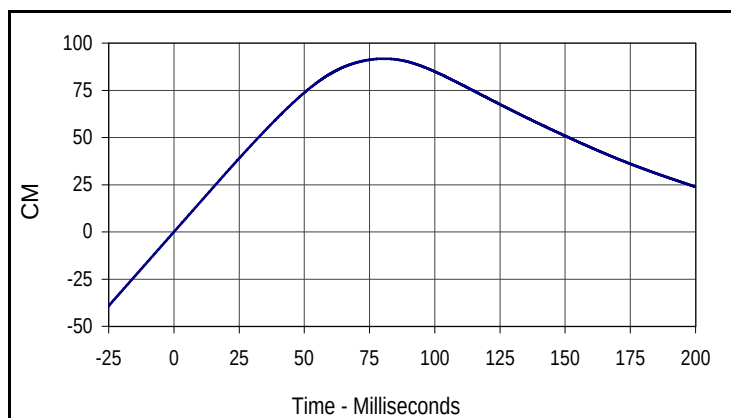
Curve Description			
Passenger Chest Resultant Redundant			
CURNO	Type	SAE Class	Units
060	RES	180	G's
Max	Time	Min	Time
47.8	69.4	0.1	1.5

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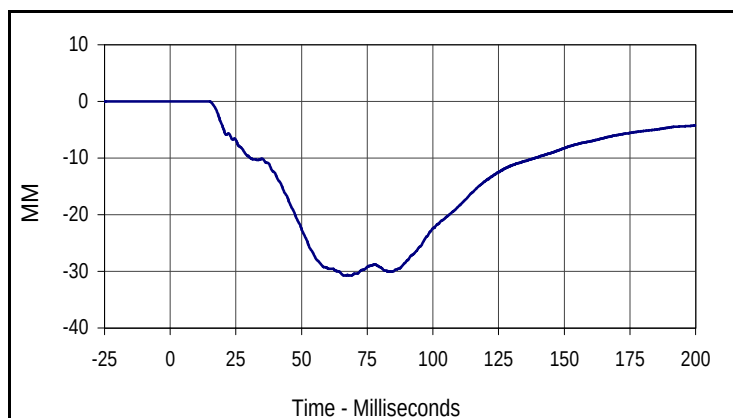
Curve Description			
Passenger Chest Redundant X Velocity			
CURNO	Type	SAE Class	Units
060	IN1	180	KMH
Max	Time	Min	Time
56.5	0.0	-19.2	113.2



Curve Description			
Passenger Chest Redundant X Displacement			
CURNO	Type	SAE Class	Units
060	IN2	180	CM
Max	Time	Min	Time
91.8	80.5	0.0	0.0

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

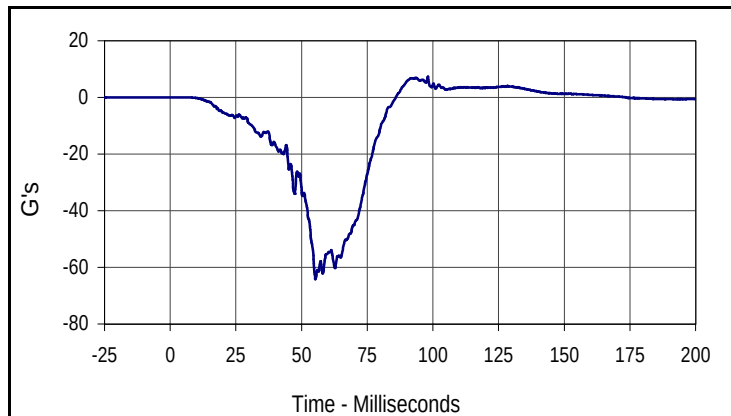
Test Date: 2/1/05
 NHTSA No.: M55203



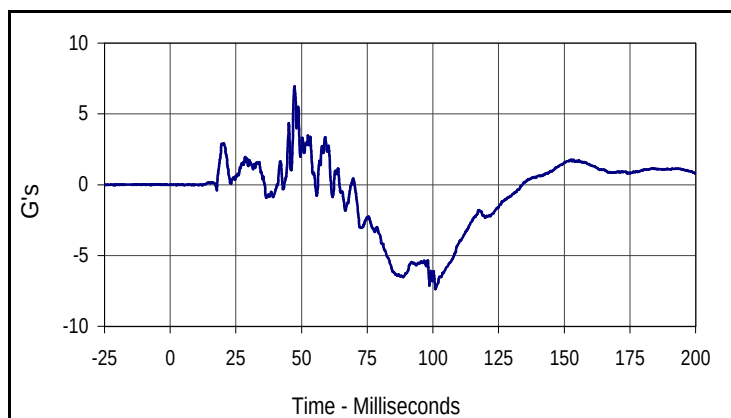
Curve Description			
Passenger Chest Deflection			
CURNO	Type	SAE Class	Units
063	FIL	600	MM
Max	Time	Min	Time
0.0	7.9	-30.8	68.5

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

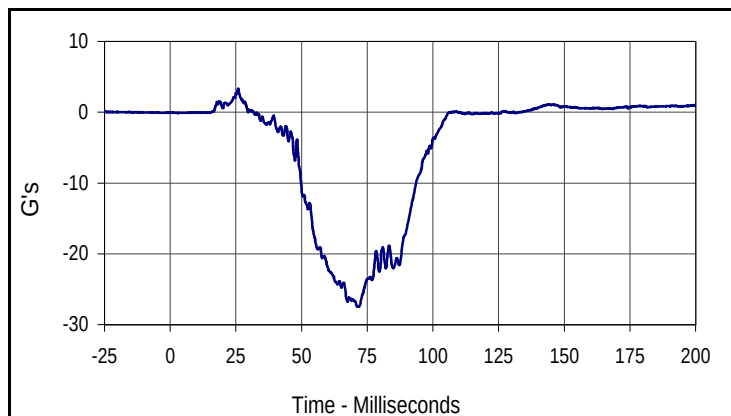
Test Date: 2/1/05
 NHTSA No.: M55203



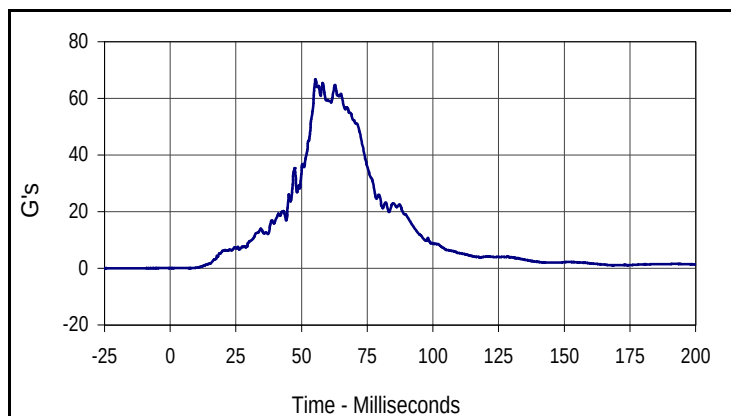
Curve Description			
Passenger Pelvis X			
CURNO	Type	SAE Class	Units
064	FIL	1000	G's
Max	Time	Min	Time
7.3	98.1	-64.2	55.3



Curve Description			
Passenger Pelvis Y			
CURNO	Type	SAE Class	Units
065	FIL	1000	G's
Max	Time	Min	Time
7.0	47.3	-7.4	101.0



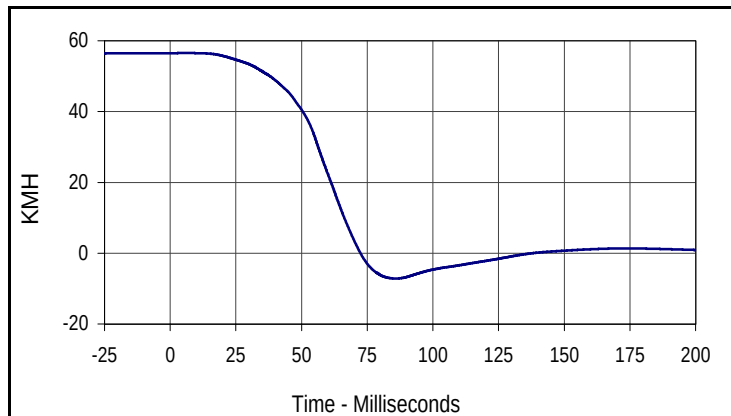
Curve Description			
Passenger Pelvis Z			
CURNO	Type	SAE Class	Units
066	FIL	1000	G's
Max	Time	Min	Time
3.3	25.9	-27.5	71.9



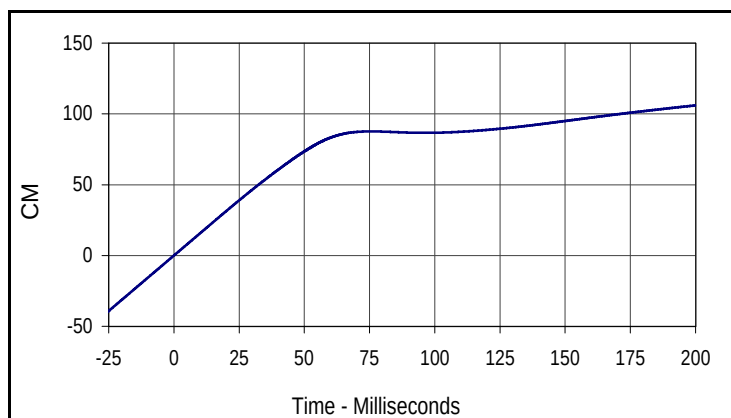
Curve Description			
Passenger Pelvis Resultant			
CURNO	Type	SAE Class	Units
064	RES	1000	G's
Max	Time	Min	Time
66.7	55.3	0.0	1.2

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05
 NHTSA No.: M55203



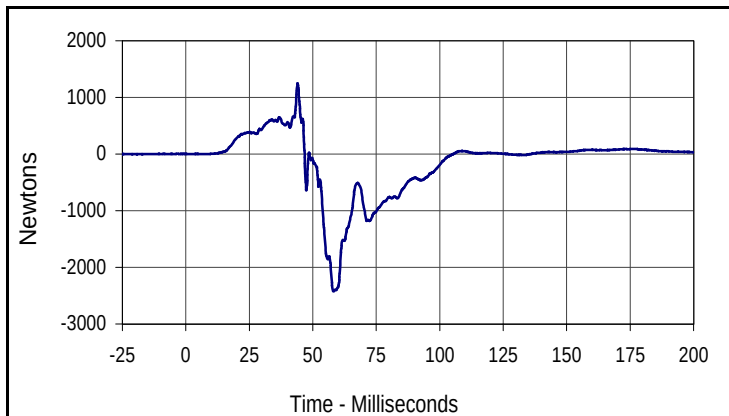
Curve Description			
Passenger Pelvis X Velocity			
CURNO	Type	SAE Class	Units
064	IN1	180	KMH
Max	Time	Min	Time
56.5	7.2	-7.2	85.8



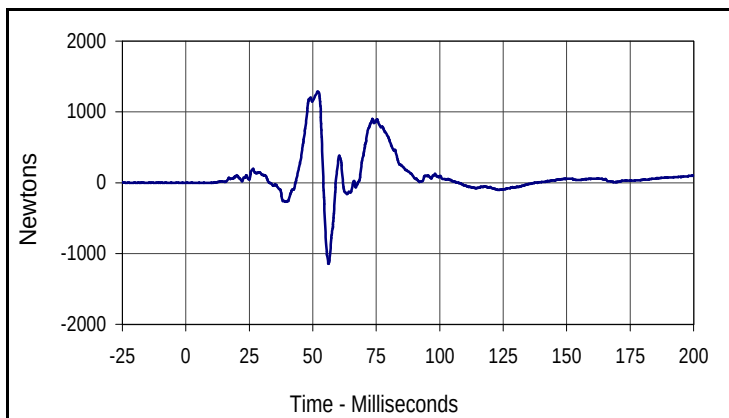
Curve Description			
Passenger Pelvis X Displacement			
CURNO	Type	SAE Class	Units
064	IN2	180	CM
Max	Time	Min	Time
106.0	200.0	0.0	0.0

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05
 NHTSA No.: M55203



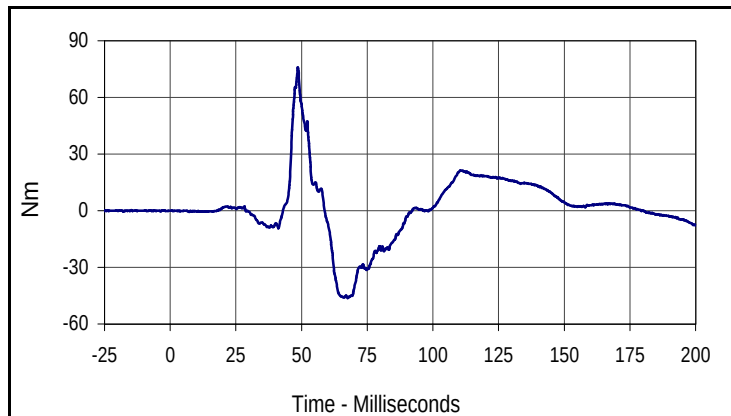
Curve Description			
Passenger Left Femur Force			
CURNO	Type	SAE Class	Units
067	FIL	600	Newtons
Max	Time	Min	Time
1246.3	44.0	-2424.5	58.2



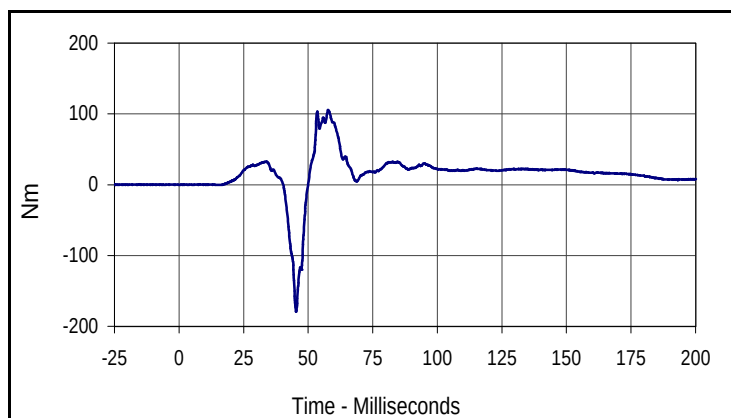
Curve Description			
Passenger Right Femur Force			
CURNO	Type	SAE Class	Units
068	FIL	600	Newtons
Max	Time	Min	Time
1291.8	51.9	-1146.2	56.2

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

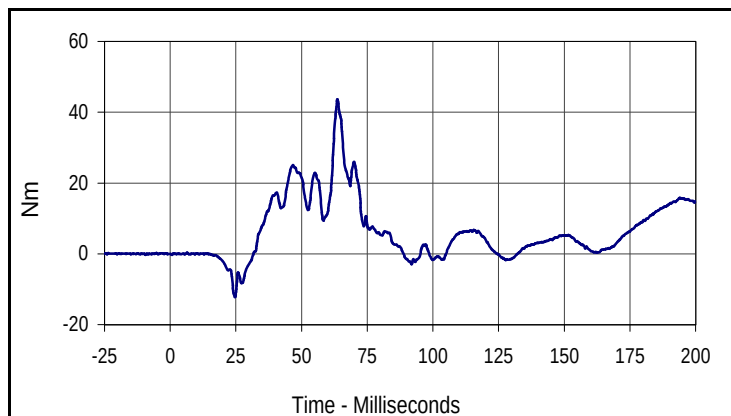
Test Date: 2/1/05
 NHTSA No.: M55203



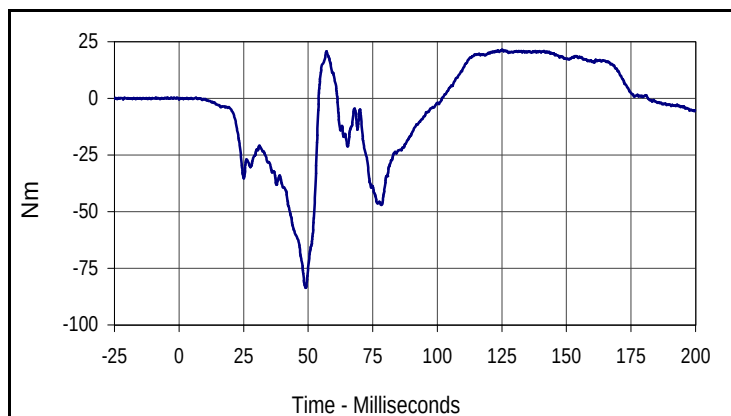
Curve Description			
Passenger Left Upper Tibia Moment X			
CURNO	Type	SAE Class	Units
069	FIL	600	Nm
Max	Time	Min	Time
75.9	48.6	-46.3	67.5



Curve Description			
Passenger Left Upper Tibia Moment Y			
CURNO	Type	SAE Class	Units
070	FIL	600	Nm
Max	Time	Min	Time
105.6	57.8	-179.2	45.4



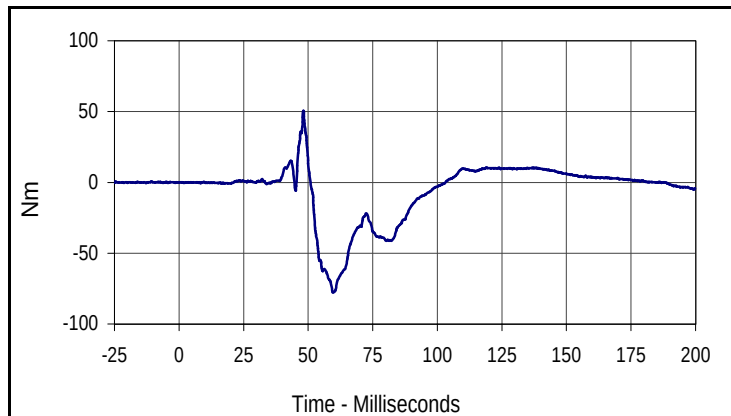
Curve Description			
Passenger Right Upper Tibia Moment X			
CURNO	Type	SAE Class	Units
071	FIL	600	Nm
Max	Time	Min	Time
43.6	63.7	-12.3	24.6



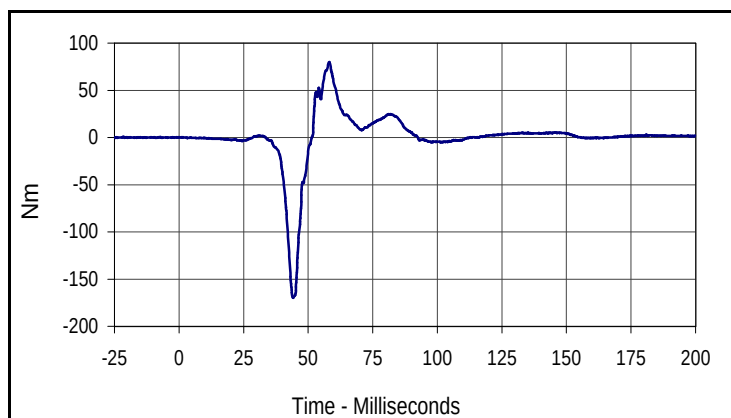
Curve Description			
Passenger Right Upper Tibia Moment Y			
CURNO	Type	SAE Class	Units
072	FIL	600	Nm
Max	Time	Min	Time
21.5	125.2	-83.6	49.1

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

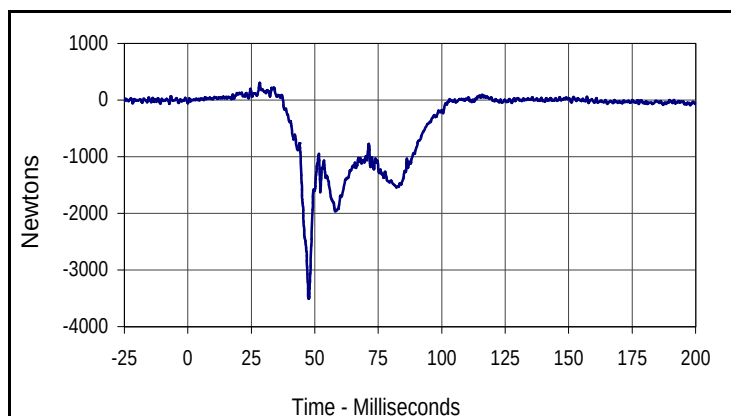
Test Date: 2/1/05
 NHTSA No.: M55203



Curve Description			
Passenger Left Lower Tibia Moment X			
CURNO	Type	SAE Class	Units
073	FIL	600	Nm
Max	Time	Min	Time
50.6	48.2	-77.9	59.7



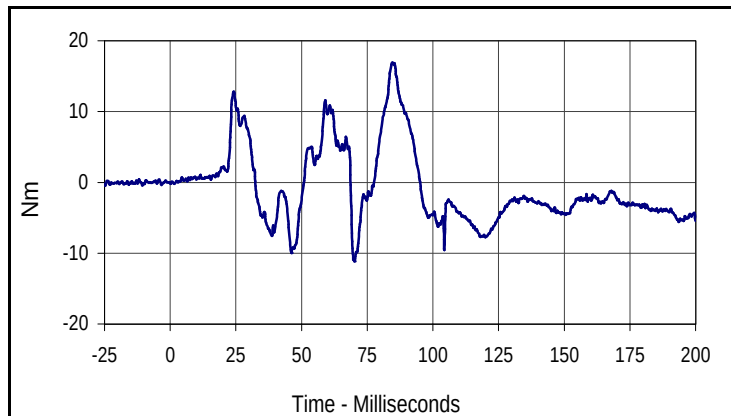
Curve Description			
Passenger Left Lower Tibia Moment Y			
CURNO	Type	SAE Class	Units
074	FIL	600	Nm
Max	Time	Min	Time
80.1	58.1	-169.9	44.2



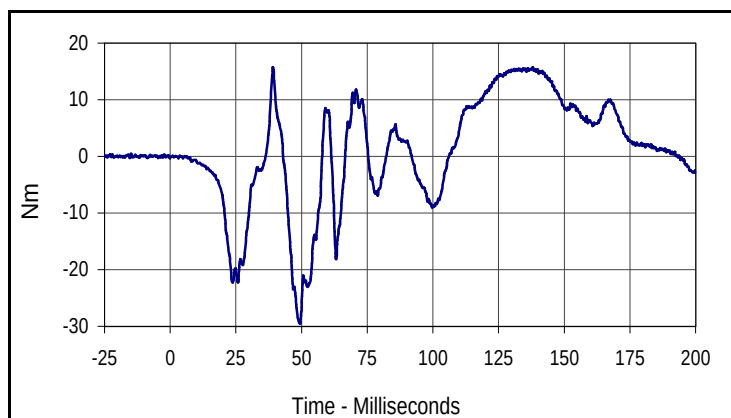
Curve Description			
Passenger Left Lower Tibia Force Z			
CURNO	Type	SAE Class	Units
075	FIL	600	Newtons
Max	Time	Min	Time
306.7	28.3	-3509.4	47.6

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

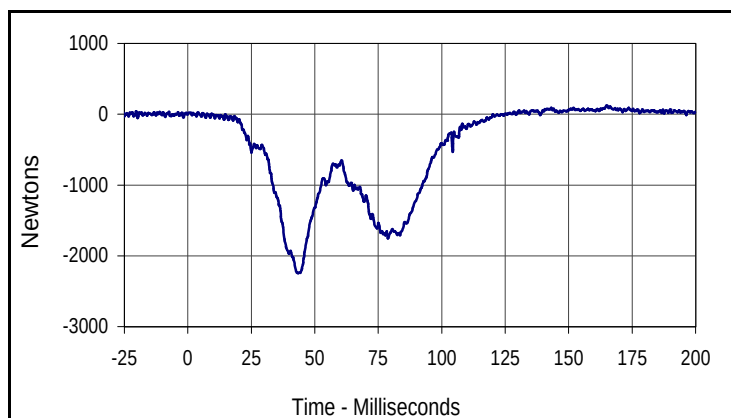
Test Date: 2/1/05
 NHTSA No.: M55203



Curve Description			
Passenger Right Lower Tibia Moment X			
CURNO	Type	SAE Class	Units
076	FIL	600	Nm
Max	Time	Min	Time
16.9	84.5	-11.1	70.2



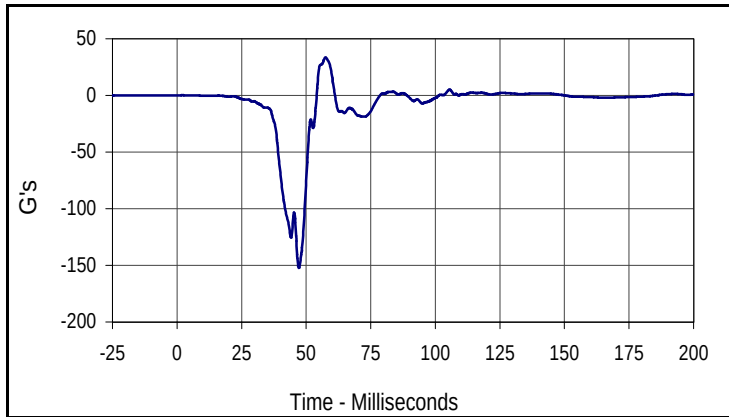
Curve Description			
Passenger Right Lower Tibia Moment Y			
CURNO	Type	SAE Class	Units
077	FIL	600	Nm
Max	Time	Min	Time
15.8	138.0	-29.5	49.4



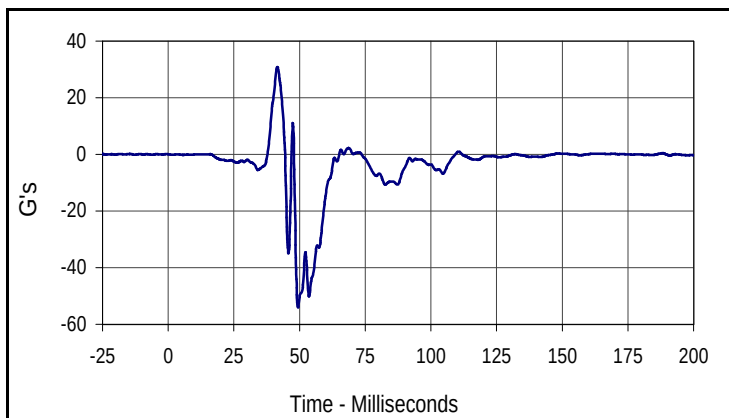
Curve Description			
Passenger Right lower Tibia Force Z			
CURNO	Type	SAE Class	Units
078	FIL	600	Newtons
Max	Time	Min	Time
123.2	165.2	-2246.6	43.5

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

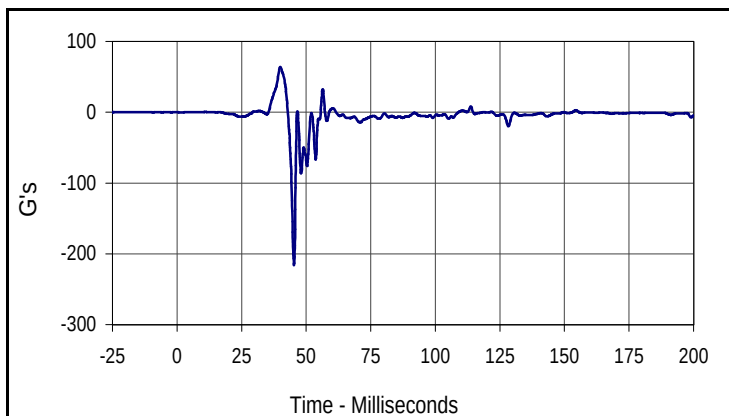
Test Date: 2/1/05
 NHTSA No.: M55203



Curve Description			
Passenger Left Foot Aft X			
CURNO	Type	SAE Class	Units
079	FIL	180	G's
Max	Time	Min	Time
33.6	57.5	-152.3	47.2



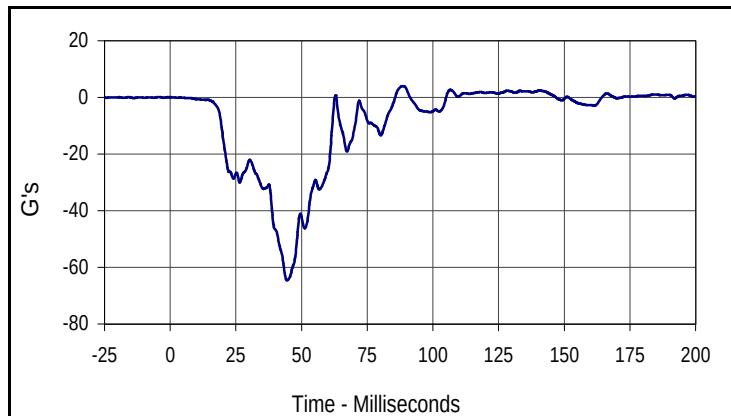
Curve Description			
Passenger Left Foot Aft Z			
CURNO	Type	SAE Class	Units
080	FIL	180	G's
Max	Time	Min	Time
30.9	41.5	-54.0	49.4



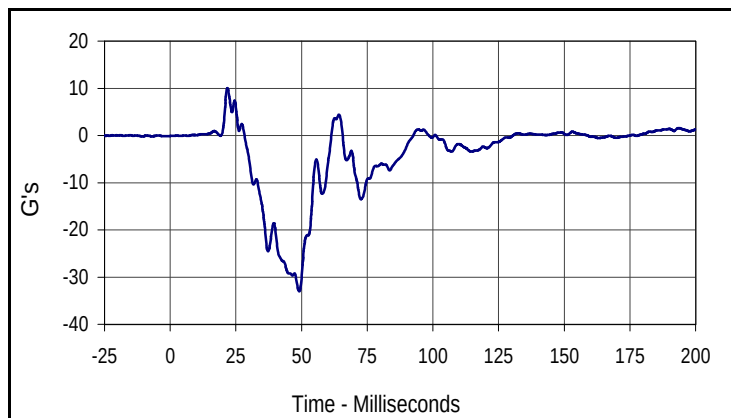
Curve Description			
Passenger Left Foot Fore Z			
CURNO	Type	SAE Class	Units
081	FIL	180	G's
Max	Time	Min	Time
63.8	40.0	-216.1	45.3

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

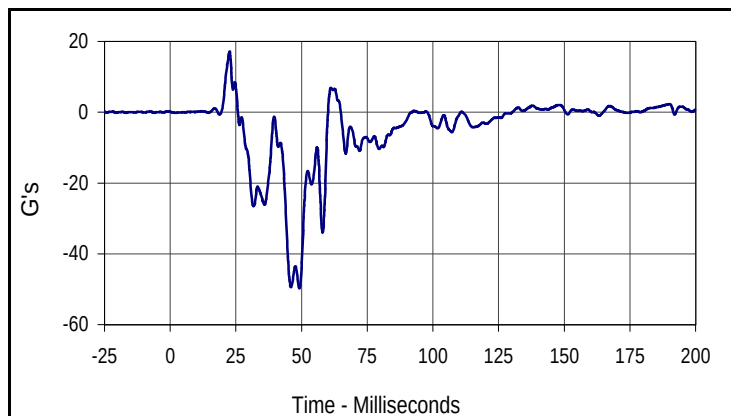
Test Date: 2/1/05
 NHTSA No.: M55203



Curve Description			
Passenger Right Foot Aft X			
CURNO	Type	SAE Class	Units
082	FIL	180	G's
Max	Time	Min	Time
4.0	88.6	-64.6	44.4



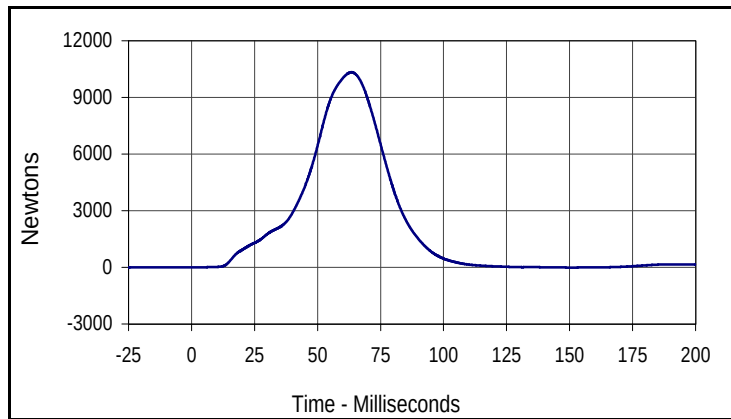
Curve Description			
Passenger Right Foot Aft Z			
CURNO	Type	SAE Class	Units
083	FIL	180	G's
Max	Time	Min	Time
10.1	21.7	-33.0	49.1



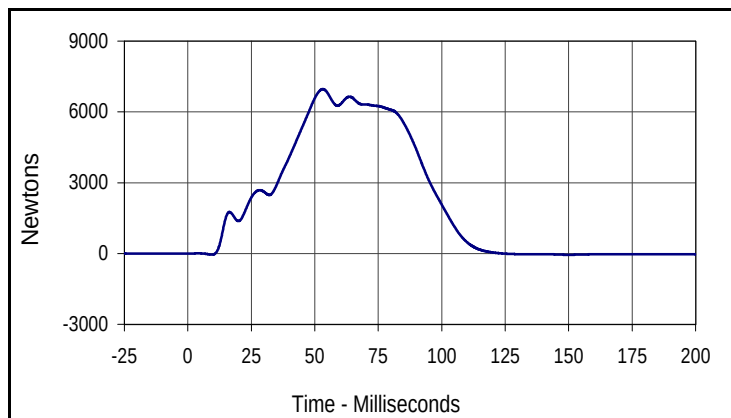
Curve Description			
Passenger Right Foot Fore Z			
CURNO	Type	SAE Class	Units
084	FIL	180	G's
Max	Time	Min	Time
17.1	22.6	-49.8	49.2

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

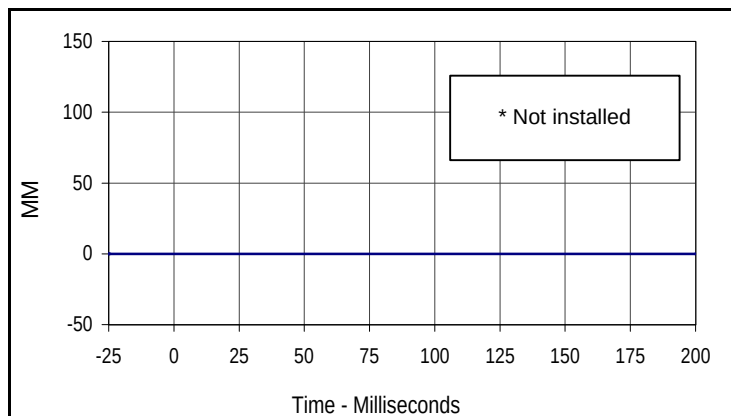
Test Date: 2/1/05
 NHTSA No.: M55203



Curve Description			
Passenger Lap Belt Force			
CURNO	Type	SAE Class	Units
085	FIL	60	Newtons
Max	Time	Min	Time
10332.0	63.4	-10.2	150.8

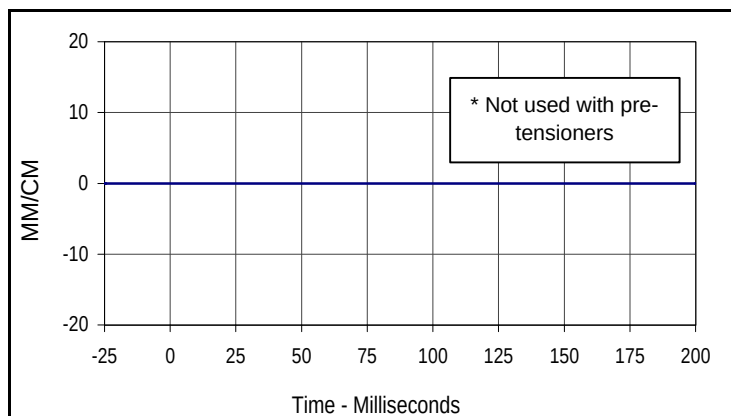


Curve Description			
Passenger Shoulder Belt Force			
CURNO	Type	SAE Class	Units
086	FIL	60	Newtons
Max	Time	Min	Time
6962.9	53.2	-55.6	149.9



Curve Description			
Passenger Shoulder Belt Pullout			
CURNO	Type	SAE Class	Units
087	FIL	60	MM
Max	Time	Min	Time
0.0	0.0	0.0	0.0

* Not installed

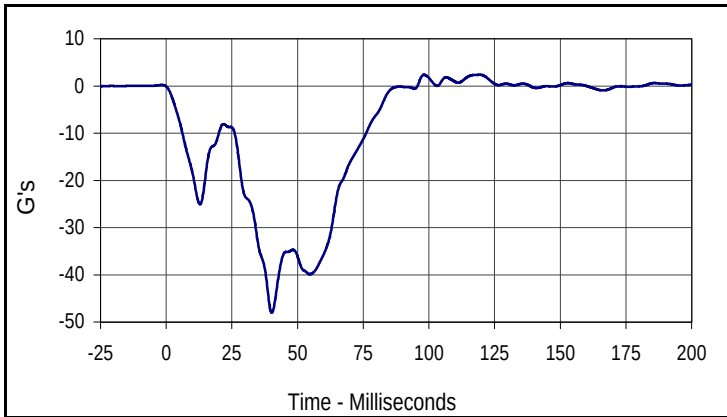


Curve Description			
Passenger Shoulder Belt Elongation			
CURNO	Type	SAE Class	Units
088	FIL	60	MM/CM
Max	Time	Min	Time
0.0	0.0	0.0	0.0

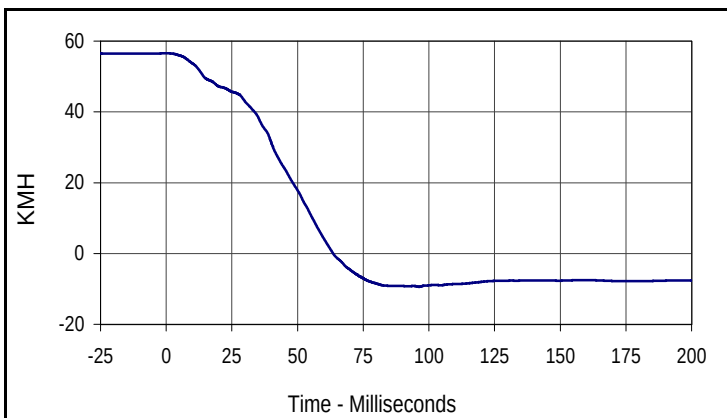
* Not used with pre-tensioners

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

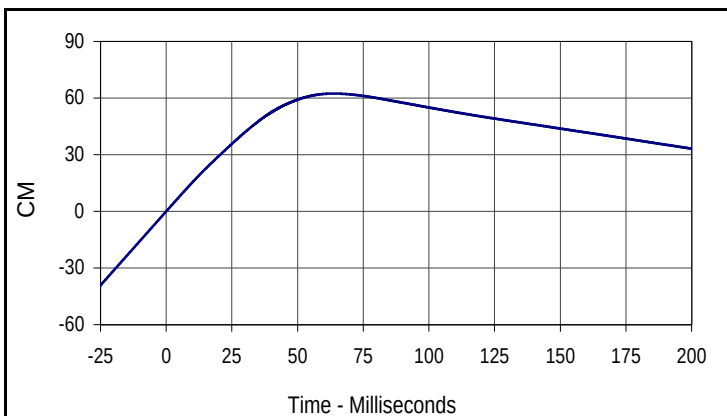
Test Date: 2/1/05
 NHTSA No.: M55203



Curve Description			
Vehicle Left Rear X			
CURNO	Type	SAE Class	Units
089	FIL	60	G's
Max	Time	Min	Time
2.4	98.1	-48.1	40.2



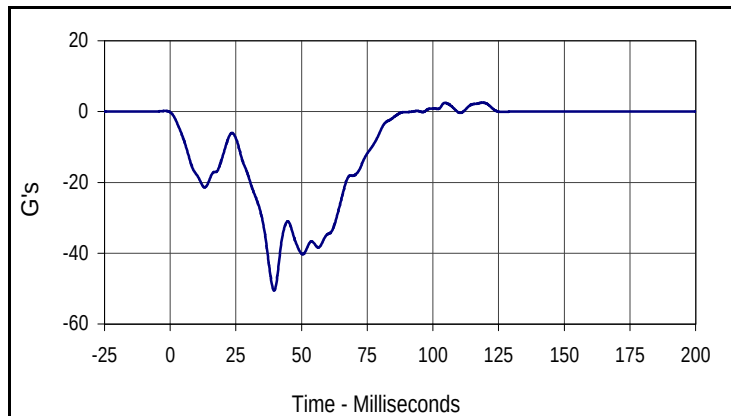
Curve Description			
Vehicle Left Rear X Velocity			
CURNO	Type	SAE Class	Units
089	IN1	180	KMH
Max	Time	Min	Time
56.5	0.9	-9.4	96.3



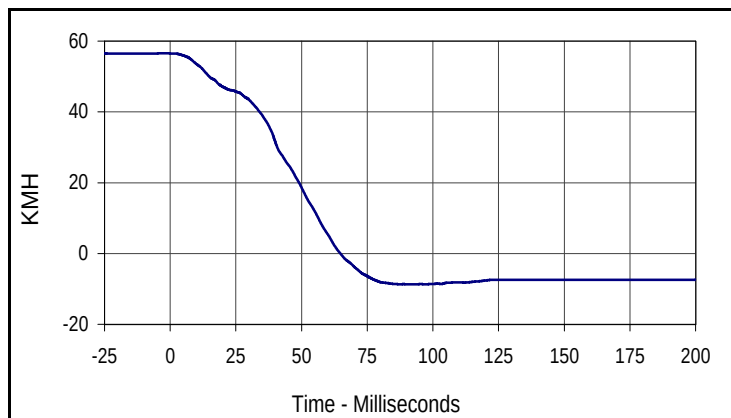
Curve Description			
Vehicle Left Rear X Displacement			
CURNO	Type	SAE Class	Units
089	IN2	180	CM
Max	Time	Min	Time
62.4	63.5	0.0	0.0

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

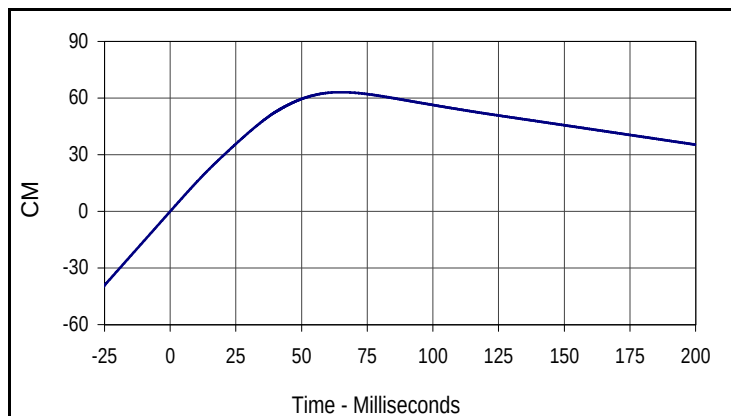
Test Date: 2/1/05
 NHTSA No.: M55203



Curve Description			
Vehicle Right Rear X			
CURNO	Type	SAE Class	Units
090	FIL	60	G's
Max	Time	Min	Time
2.5	119.0	-50.6	39.5



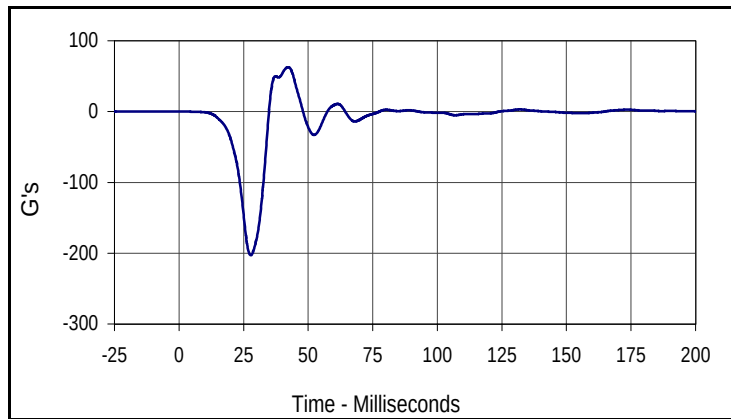
Curve Description			
Vehicle Right Rear X Velocity			
CURNO	Type	SAE Class	Units
090	IN1	180	KMH
Max	Time	Min	Time
56.5	0.0	-8.7	97.3



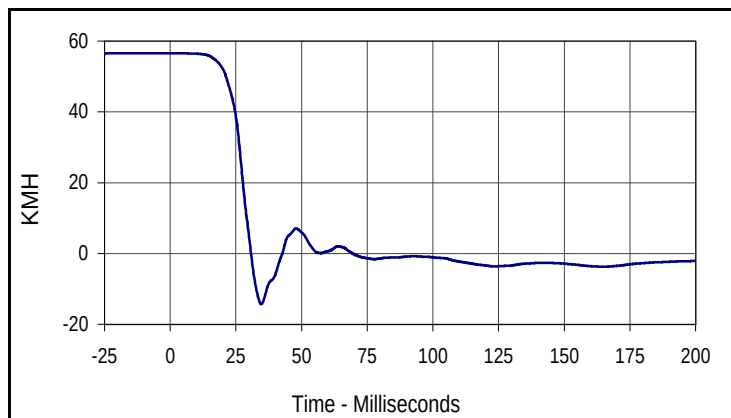
Curve Description			
Vehicle Right Rear X Displacement			
CURNO	Type	SAE Class	Units
090	IN2	180	CM
Max	Time	Min	Time
63.1	64.8	0.0	0.0

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

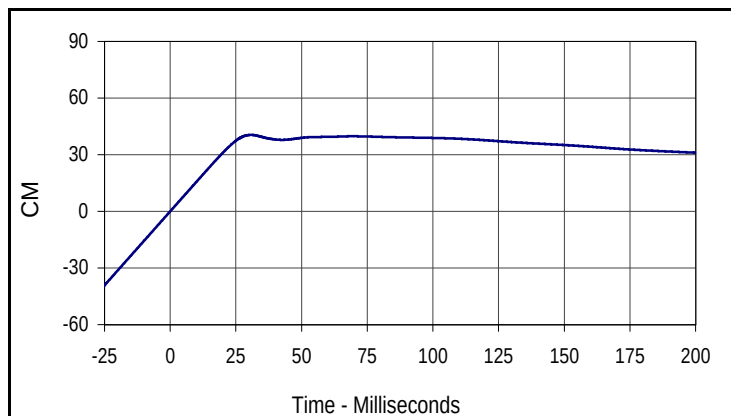
Test Date: 2/1/05
 NHTSA No.: M55203



Curve Description			
Vehicle Engine Top X			
CURNO	Type	SAE Class	Units
091	FIL	60	G's
Max	Time	Min	Time
62.6	42.2	-203.0	27.8



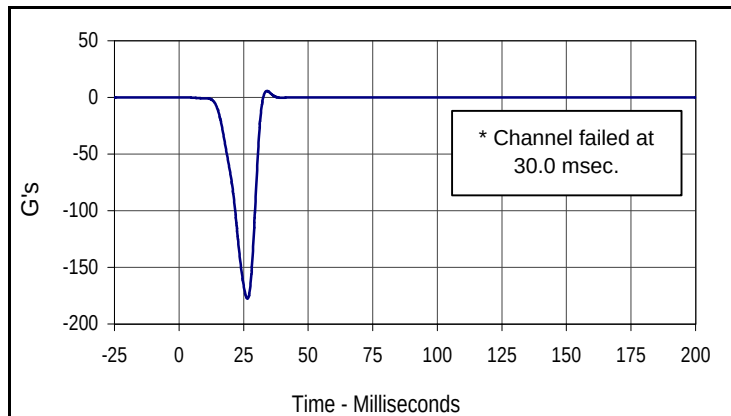
Curve Description			
Vehicle Engine Top X Velocity			
CURNO	Type	SAE Class	Units
091	IN1	180	KMH
Max	Time	Min	Time
56.5	2.0	-14.3	34.6



Curve Description			
Vehicle Engine Top X Displacement			
CURNO	Type	SAE Class	Units
091	IN2	180	CM
Max	Time	Min	Time
40.5	30.8	0.0	0.0

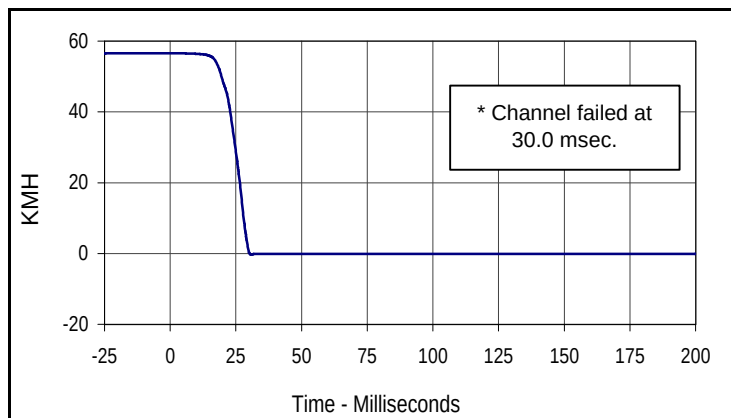
Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05
 NHTSA No.: M55203



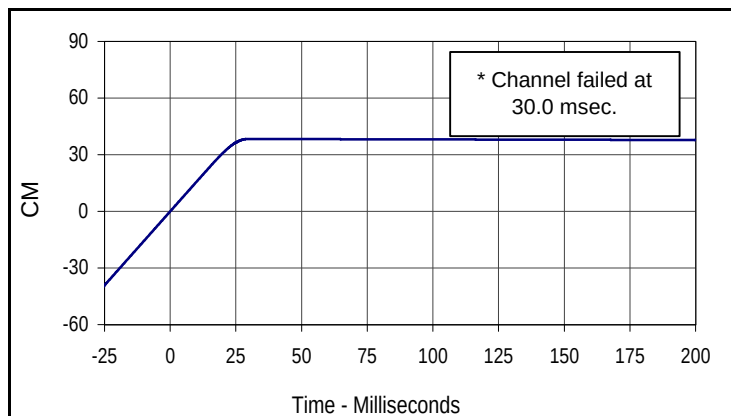
Curve Description			
Vehicle Engine Bottom X			
CURNO	Type	SAE Class	Units
092	FIL	60	G's
Max	Time	Min	Time
5.7	34.0	-177.7	26.5

* Channel failed at 30.0 msec.



Curve Description			
Vehicle Engine Bottom X Velocity			
CURNO	Type	SAE Class	Units
092	IN1	180	KMH
Max	Time	Min	Time
56.5	3.2	-0.3	30.8

* Channel failed at 30.0 msec.

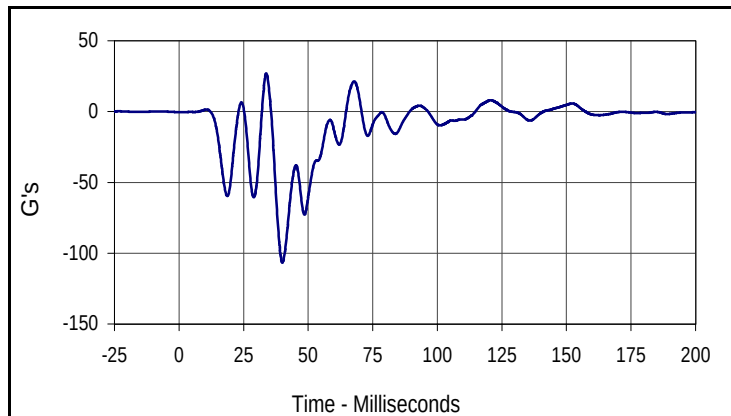


Curve Description			
Vehicle Engine Bottom X Displacement			
CURNO	Type	SAE Class	Units
092	IN2	180	CM
Max	Time	Min	Time
38.3	30.2	0.0	0.0

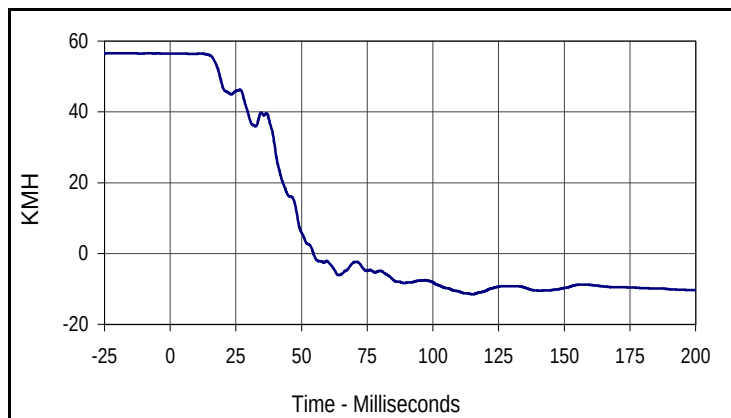
* Channel failed at 30.0 msec.

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

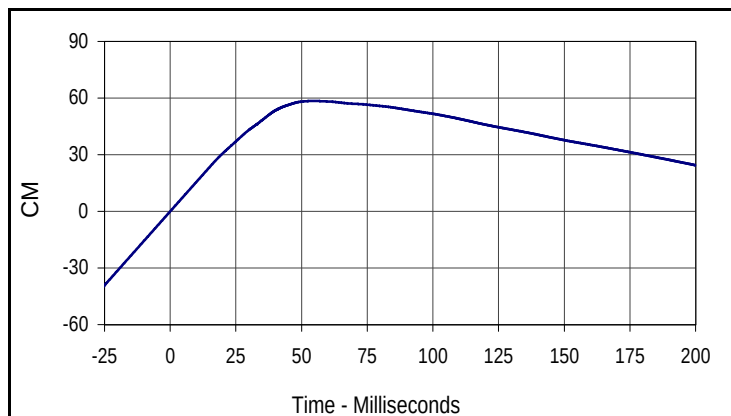
Test Date: 2/1/05
 NHTSA No.: M55203



Curve Description			
Vehicle Left Brake Caliper X			
CURNO	Type	SAE Class	Units
093	FIL	60	G's
Max	Time	Min	Time
27.0	33.8	-106.6	40.0



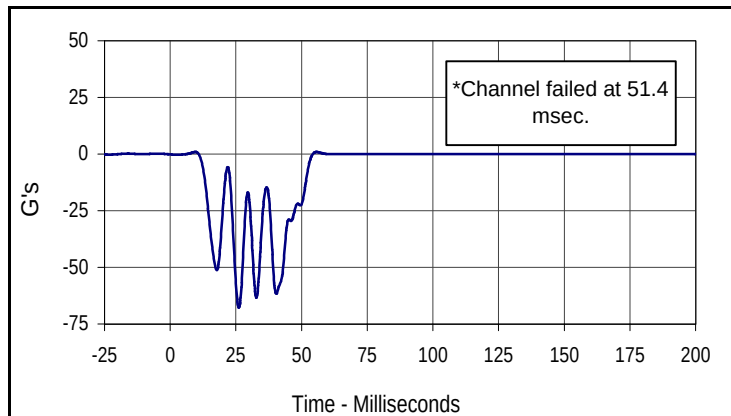
Curve Description			
Vehicle Left Brake Caliper X Velocity			
CURNO	Type	SAE Class	Units
093	IN1	180	KMH
Max	Time	Min	Time
56.5	11.6	-11.5	115.2



Curve Description			
Vehicle Left Brake Caliper X Displacement			
CURNO	Type	SAE Class	Units
093	IN2	180	CM
Max	Time	Min	Time
58.5	54.5	0.0	0.0

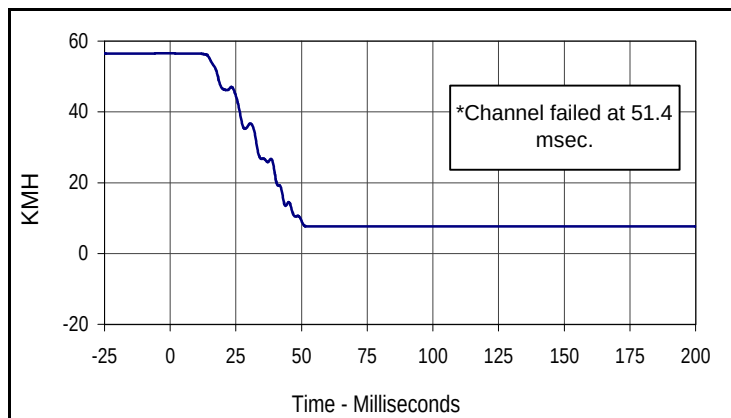
Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05
 NHTSA No.: M55203



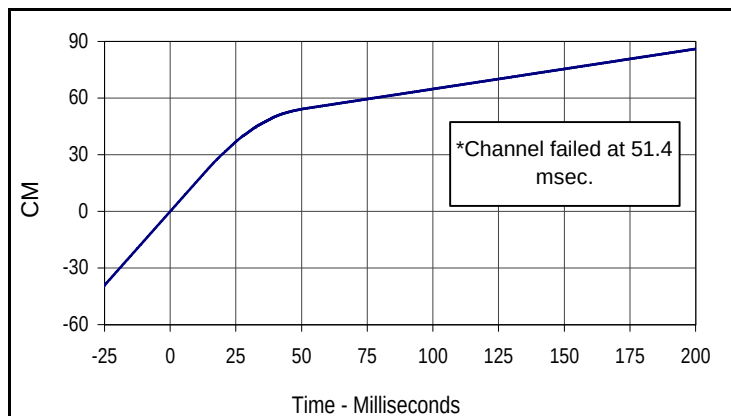
Curve Description			
Vehicle Right Brake Caliper X			
CURNO	Type	SAE Class	Units
094	FIL	60	G's
Max	Time	Min	Time
1.0	9.6	-67.7	26.1

* Channel failed at 51.4 msec.



Curve Description			
Vehicle Right Brake Caliper X Velocity			
CURNO	Type	SAE Class	Units
094	IN1	180	KMH
Max	Time	Min	Time
56.5	0.0	7.6	51.9

* Channel failed at 51.4 msec.

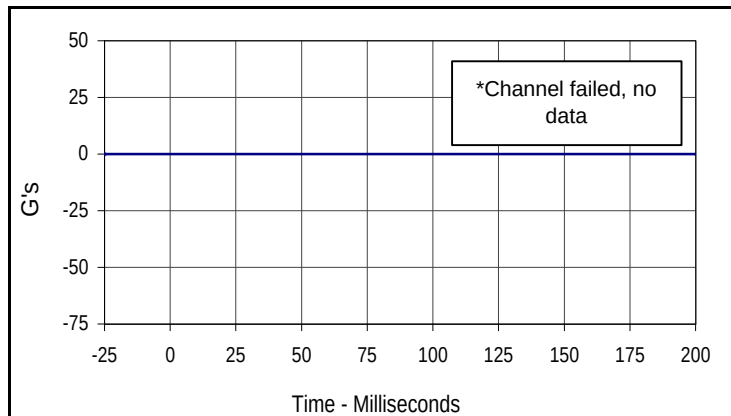


Curve Description			
Vehicle Right Brake Caliper X Displacement			
CURNO	Type	SAE Class	Units
094	IN2	180	CM
Max	Time	Min	Time
86.0	200.0	0.0	0.0

* Channel failed at 51.4 msec.

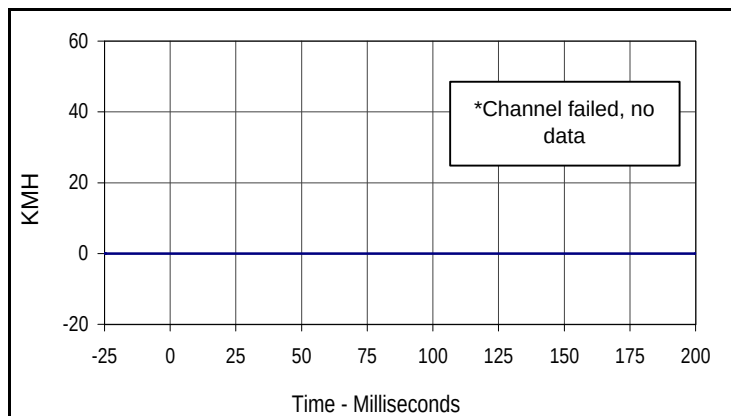
Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05
 NHTSA No.: M55203



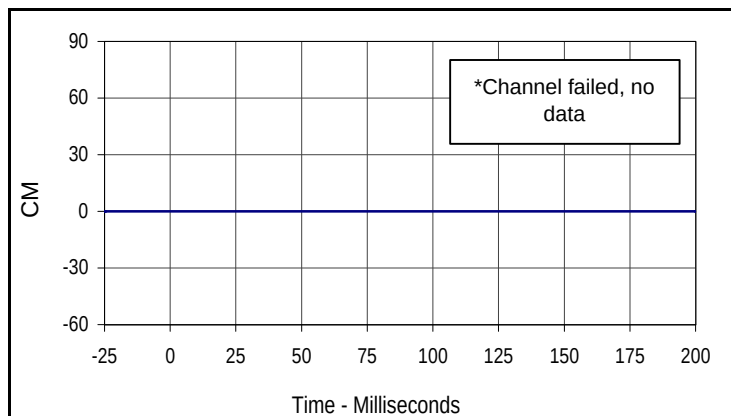
Curve Description			
Vehicle Instrument Panel X			
CURNO	Type	SAE Class	Units
095	FIL	60	G's
Max	Time	Min	Time
0.0	0.0	0.0	0.0

* Channel failed, no data



Curve Description			
Vehicle Instrument Panel X Velocity			
CURNO	Type	SAE Class	Units
095	IN1	180	KMH
Max	Time	Min	Time
0.0	0.0	0.0	0.0

* Channel failed, no data

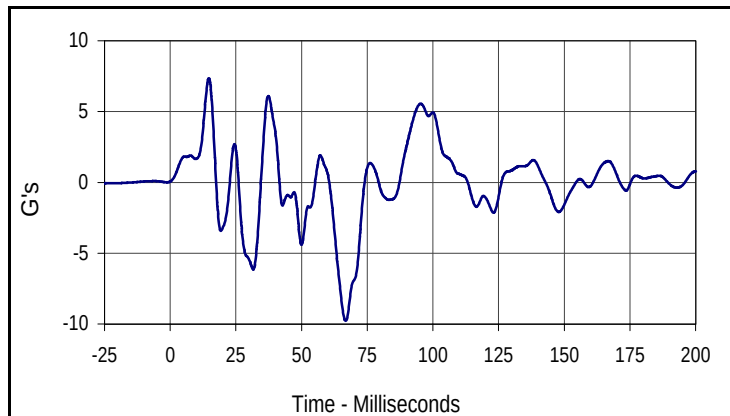


Curve Description			
Vehicle Instrument Panel X Displacement			
CURNO	Type	SAE Class	Units
095	IN2	180	CM
Max	Time	Min	Time
0.0	0.0	0.0	0.0

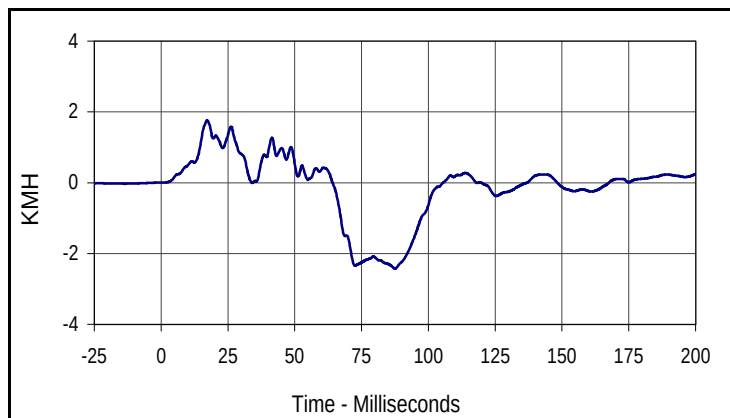
* Channel failed, no data

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

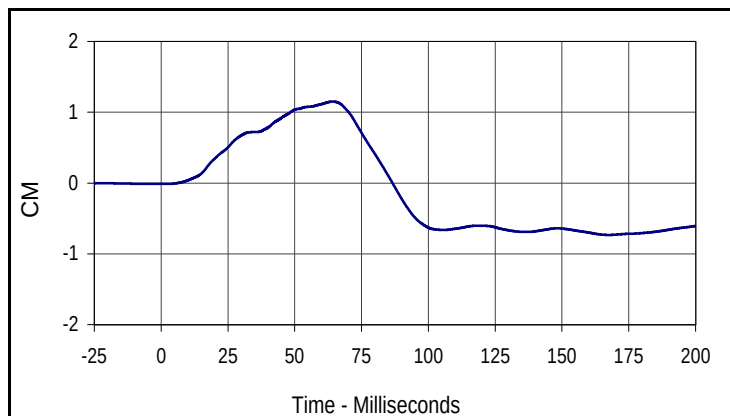
Test Date: 2/1/05
 NHTSA No.: M55203



Curve Description			
Vehicle Left Rear Z			
CURNO	Type	SAE Class	Units
096	FIL	60	G's
Max	Time	Min	Time
7.3	14.7	-9.8	66.8



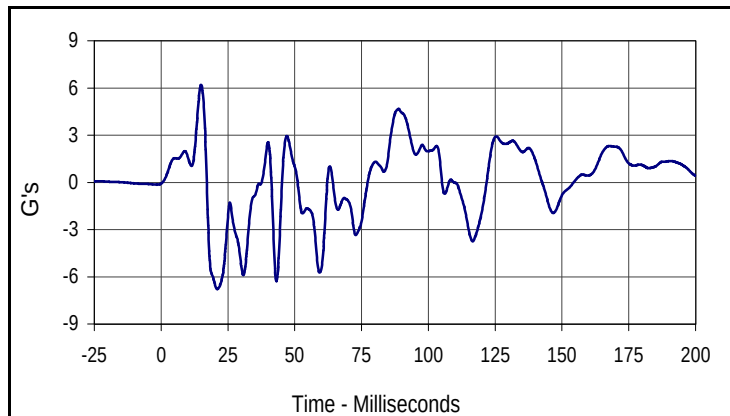
Curve Description			
Vehicle Left Rear Z Velocity			
CURNO	Type	SAE Class	Units
096	IN1	180	KMH
Max	Time	Min	Time
1.8	17.2	-2.4	87.5



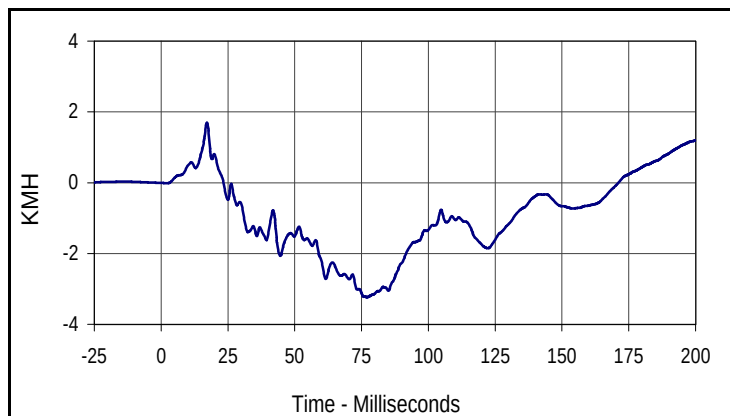
Curve Description			
Vehicle Left Rear Z Displacement			
CURNO	Type	SAE Class	Units
096	IN2	180	CM
Max	Time	Min	Time
1.1	64.2	-0.7	167.5

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

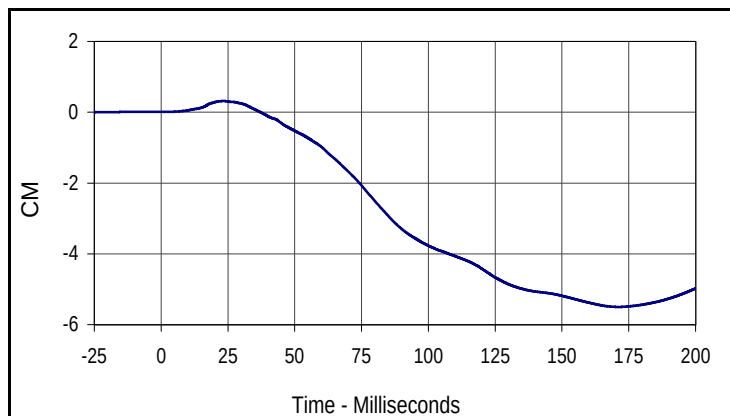
Test Date: 2/1/05
 NHTSA No.: M55203



Curve Description			
Vehicle Right Rear Z			
CURNO	Type	SAE Class	Units
097	FIL	60	G's
Max	Time	Min	Time
6.2	15.0	-6.8	21.0



Curve Description			
Vehicle Right Rear Z Velocity			
CURNO	Type	SAE Class	Units
097	IN1	180	KMH
Max	Time	Min	Time
1.7	17.1	-3.2	77.0



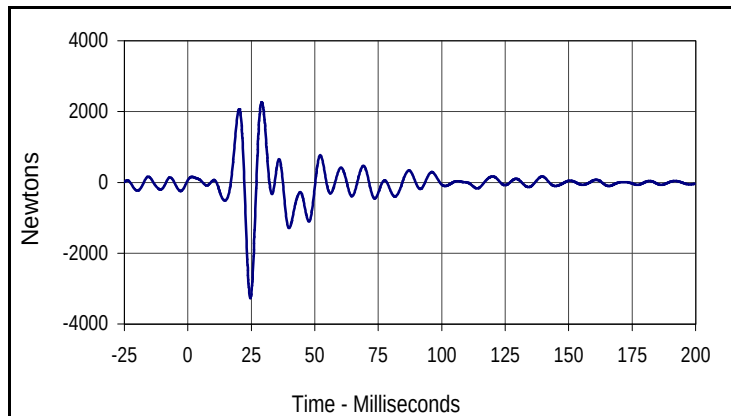
Curve Description			
Vehicle Right Rear Z Displacement			
CURNO	Type	SAE Class	Units
097	IN2	180	CM
Max	Time	Min	Time
0.3	23.4	-5.5	171.1

APPENDIX C

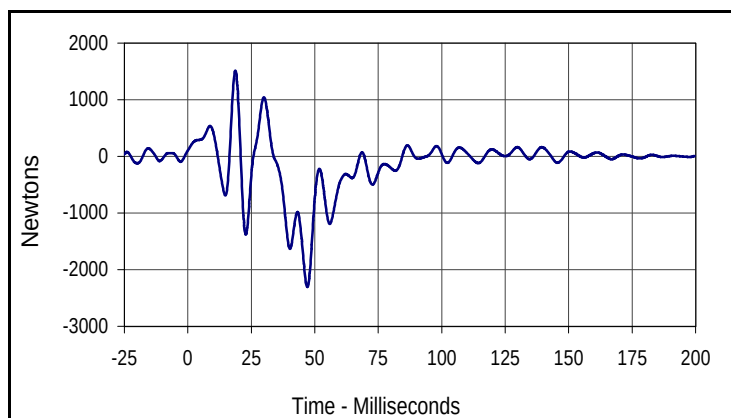
LOAD CELL BARRIER DATA PLOTS

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

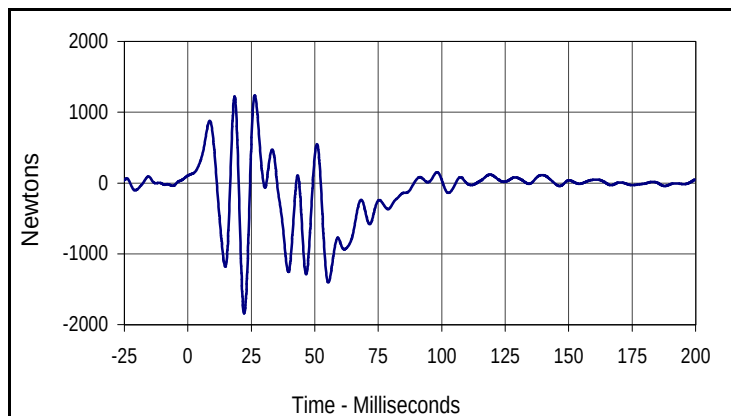
Test Date: 2/1/05
 NHTSA No.: M55203



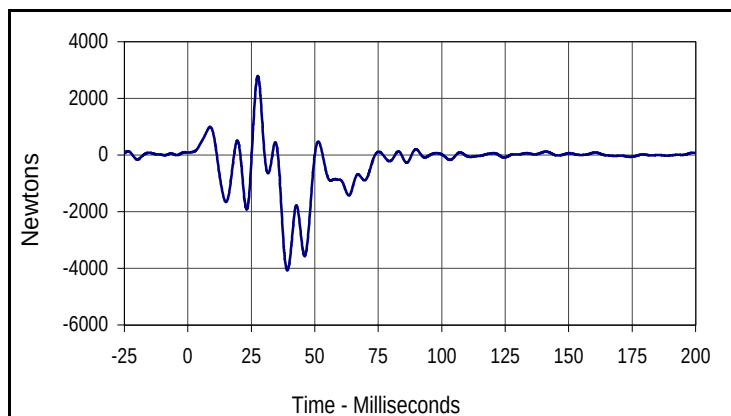
Curve Description			
Barrier Force A1			
CURNO	Type	SAE Class	Units
098	FIL	60	Newtons
Max	Time	Min	Time
2266.8	29.1	-3268.7	24.6



Curve Description			
Barrier Force B1			
CURNO	Type	SAE Class	Units
107	FIL	60	Newtons
Max	Time	Min	Time
1515.4	18.7	-2303.0	47.1



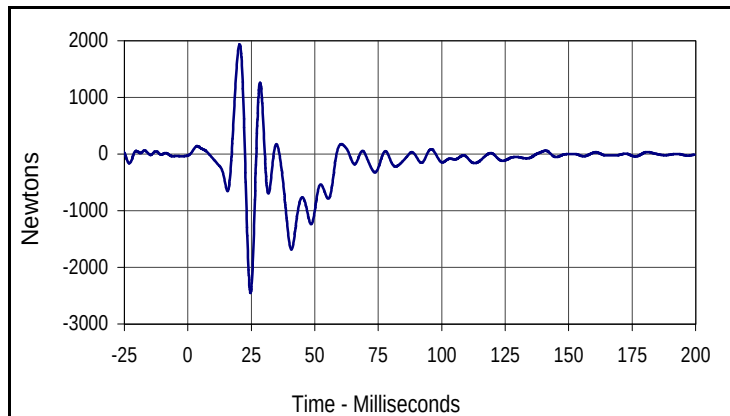
Curve Description			
Barrier Force C1			
CURNO	Type	SAE Class	Units
116	FIL	60	Newtons
Max	Time	Min	Time
1235.0	26.3	-1840.9	22.2



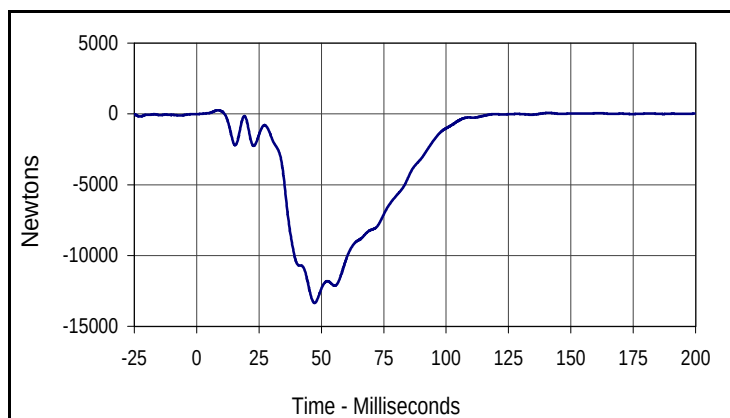
Curve Description			
Barrier Force D1			
CURNO	Type	SAE Class	Units
125	FIL	60	Newtons
Max	Time	Min	Time
2788.2	27.6	-4078.2	39.2

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

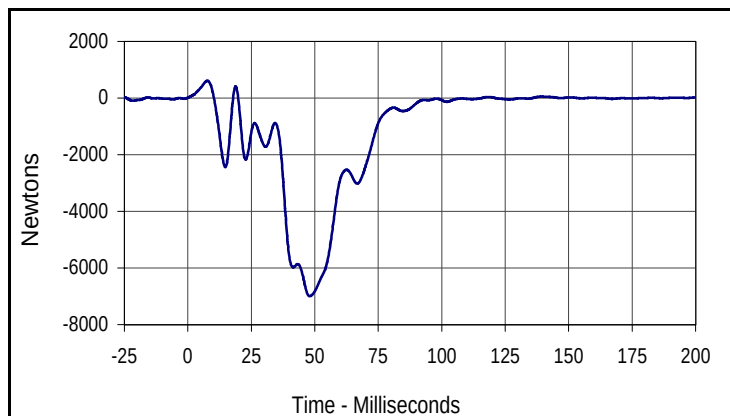
Test Date: 2/1/05
 NHTSA No.: M55203



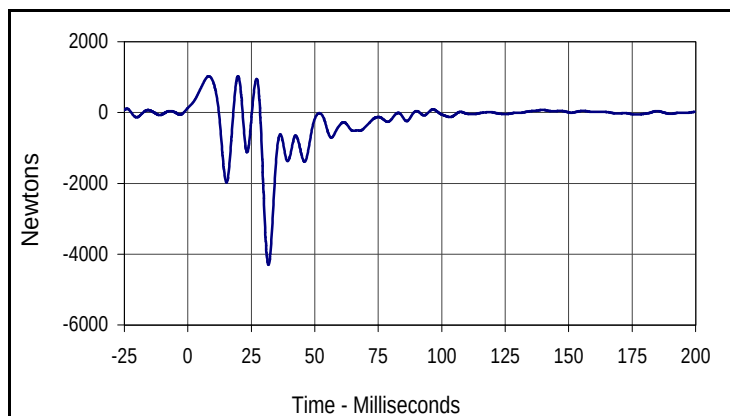
Curve Description			
Barrier Force A2			
CURNO	Type	SAE Class	Units
099	FIL	60	Newtons
Max	Time	Min	Time
1939.5	20.4	-2451.0	24.7



Curve Description			
Barrier Force B2			
CURNO	Type	SAE Class	Units
108	FIL	60	Newtons
Max	Time	Min	Time
255.6	8.4	-13351.9	47.3



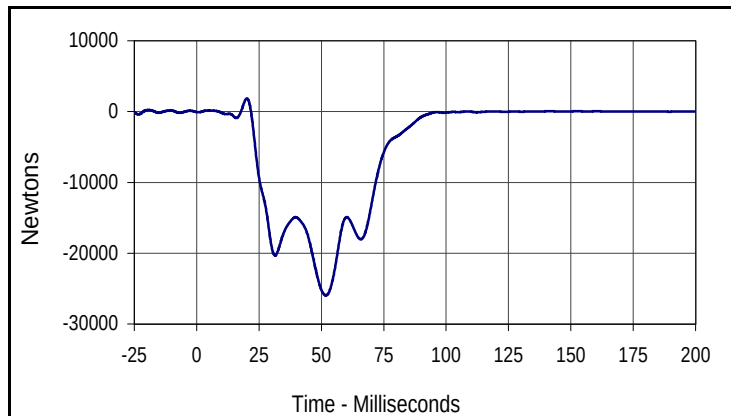
Curve Description			
Barrier Force C2			
CURNO	Type	SAE Class	Units
117	FIL	60	Newtons
Max	Time	Min	Time
609.2	7.7	-6998.1	48.0



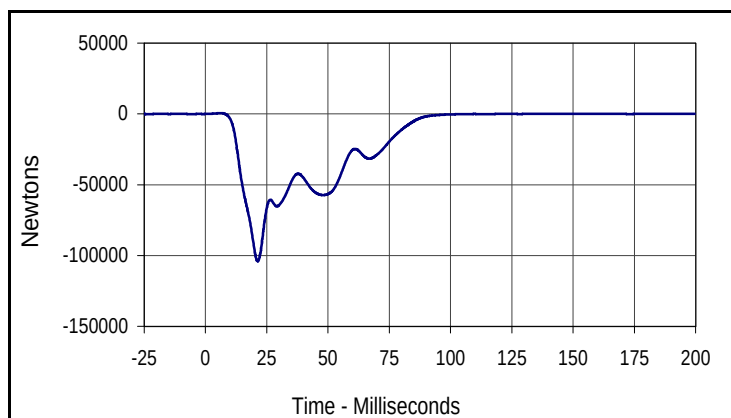
Curve Description			
Barrier Force D2			
CURNO	Type	SAE Class	Units
126	FIL	60	Newtons
Max	Time	Min	Time
1027.8	8.2	-4301.7	31.8

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

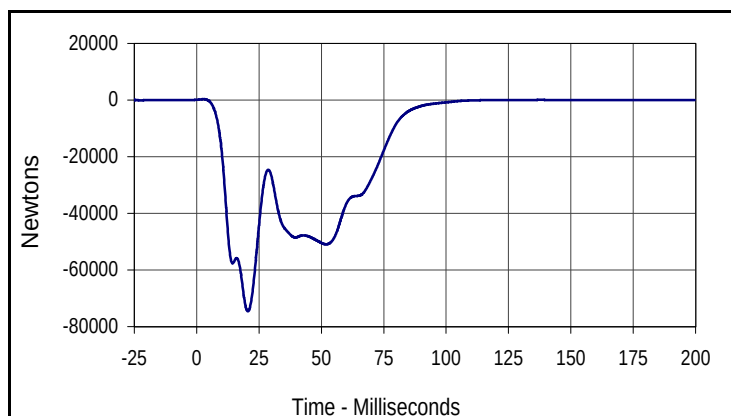
Test Date: 2/1/05
 NHTSA No.: M55203



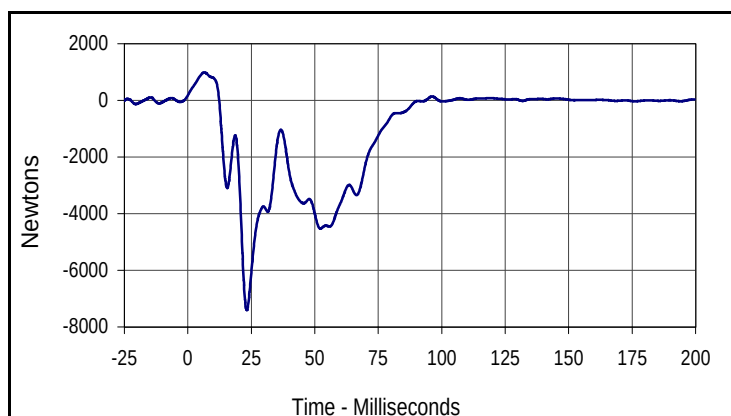
Curve Description			
Barrier Force A3			
CURNO	Type	SAE Class	Units
100	FIL	60	Newtons
Max	Time	Min	Time
1855.6	20.1	-25959.2	51.8



Curve Description			
Barrier Force B3			
CURNO	Type	SAE Class	Units
109	FIL	60	Newtons
Max	Time	Min	Time
529.5	6.2	-104016.5	21.3



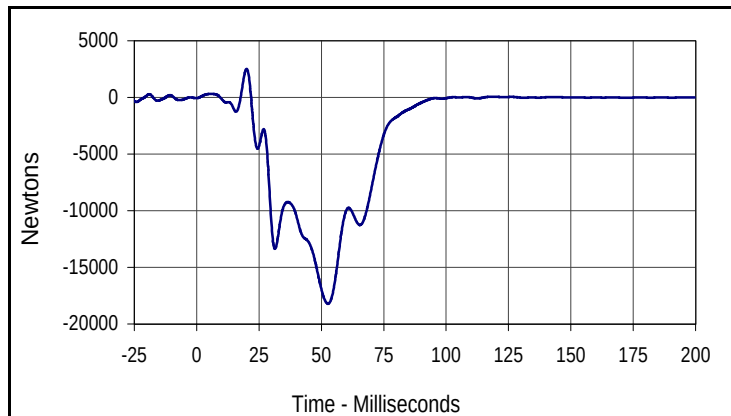
Curve Description			
Barrier Force C3			
CURNO	Type	SAE Class	Units
118	FIL	60	Newtons
Max	Time	Min	Time
307.5	2.7	-74610.6	20.5



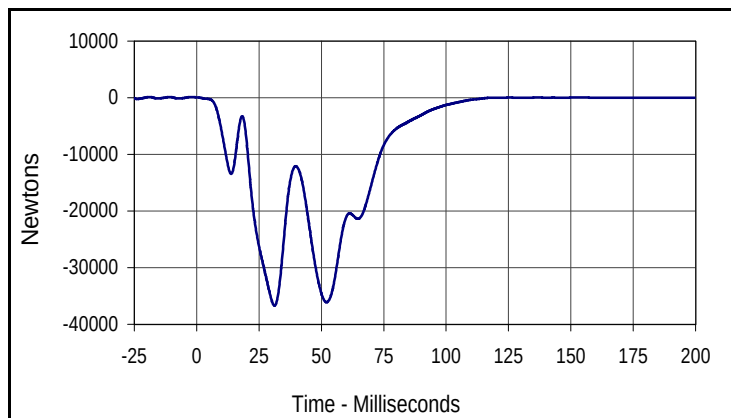
Curve Description			
Barrier Force D3			
CURNO	Type	SAE Class	Units
127	FIL	60	Newtons
Max	Time	Min	Time
982.4	6.5	-7405.0	23.2

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

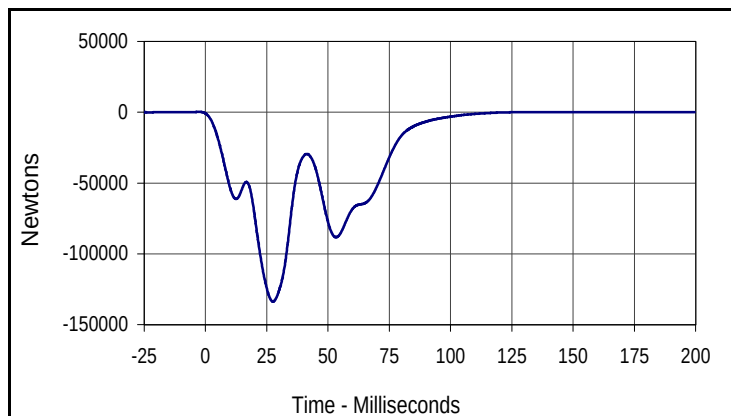
Test Date: 2/1/05
 NHTSA No.: M55203



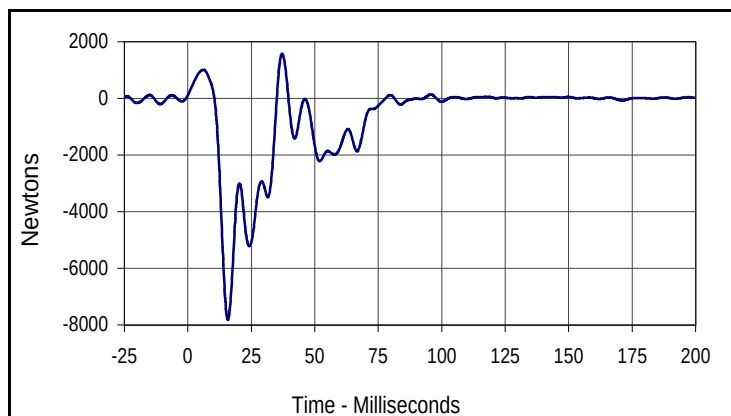
Curve Description			
Barrier Force A4			
CURNO	Type	SAE Class	Units
101	FIL	60	Newtons
Max	Time	Min	Time
2515.4	20.0	-18210.9	52.6



Curve Description			
Barrier Force B4			
CURNO	Type	SAE Class	Units
110	FIL	60	Newtons
Max	Time	Min	Time
65.3	0.0	-36703.1	31.2



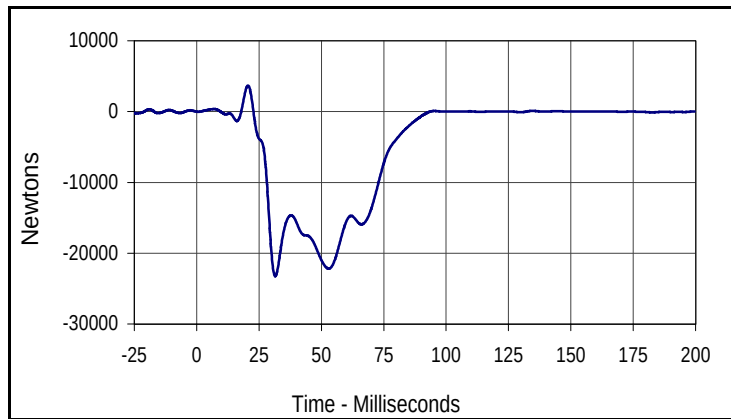
Curve Description			
Barrier Force C4			
CURNO	Type	SAE Class	Units
119	FIL	60	Newtons
Max	Time	Min	Time
67.4	142.7	-133733.9	27.5



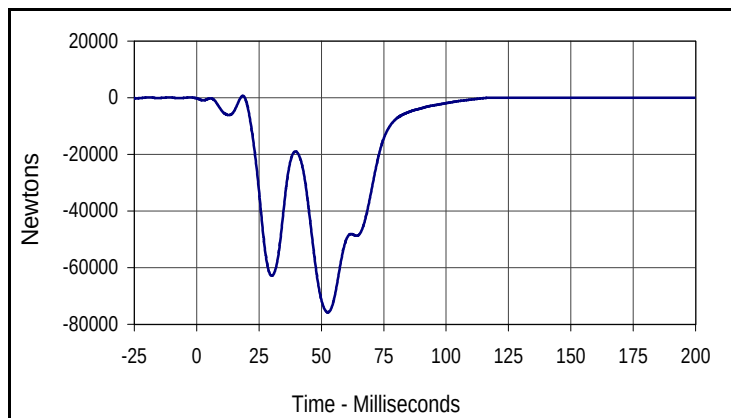
Curve Description			
Barrier Force D4			
CURNO	Type	SAE Class	Units
128	FIL	60	Newtons
Max	Time	Min	Time
1579.1	37.1	-7813.7	15.8

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

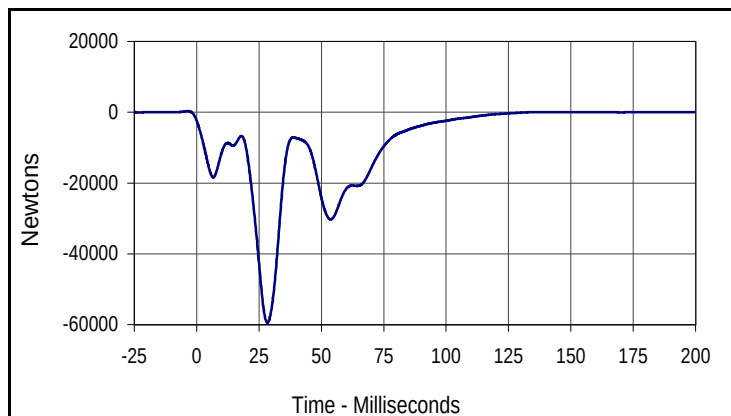
Test Date: 2/1/05
 NHTSA No.: M55203



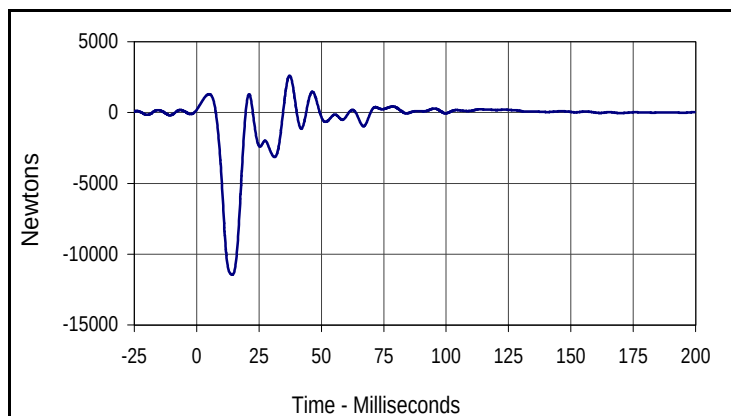
Curve Description			
Barrier Force A5			
CURNO	Type	SAE Class	Units
102	FIL	60	Newtons
Max	Time	Min	Time
3692.0	20.6	-23246.0	31.5



Curve Description			
Barrier Force B5			
CURNO	Type	SAE Class	Units
111	FIL	60	Newtons
Max	Time	Min	Time
665.5	18.5	-75788.2	52.6



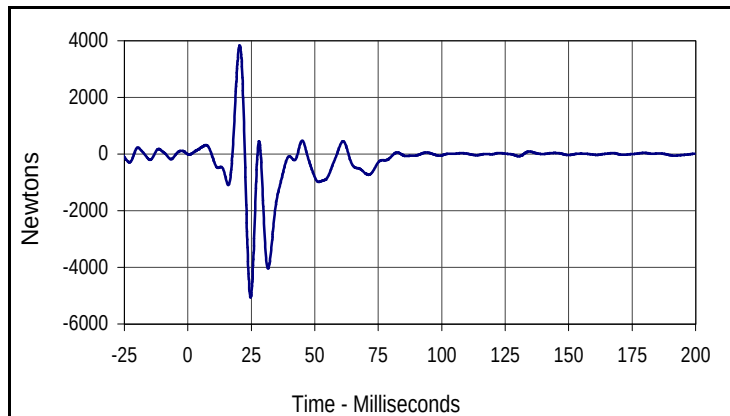
Curve Description			
Barrier Force C5			
CURNO	Type	SAE Class	Units
120	FIL	60	Newtons
Max	Time	Min	Time
64.9	144.0	-59448.8	28.3



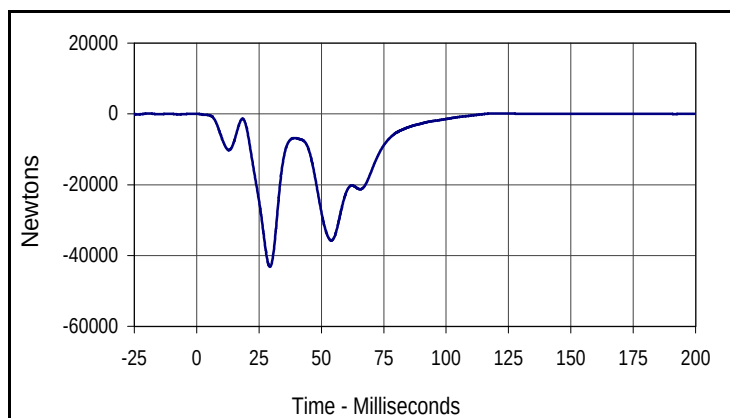
Curve Description			
Barrier Force D5			
CURNO	Type	SAE Class	Units
129	FIL	60	Newtons
Max	Time	Min	Time
2607.7	37.3	-11450.8	14.3

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

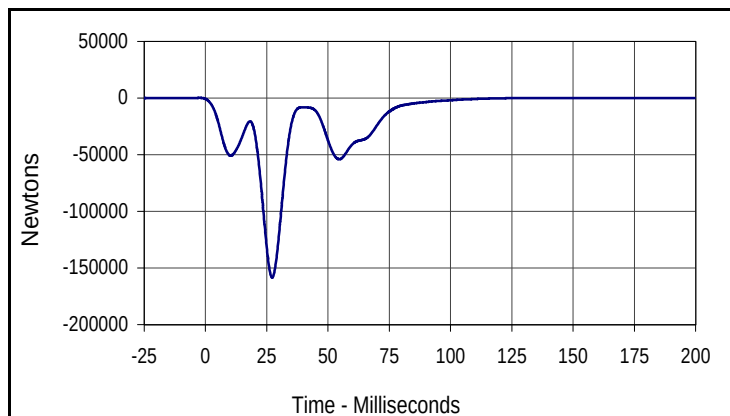
Test Date: 2/1/05
 NHTSA No.: M55203



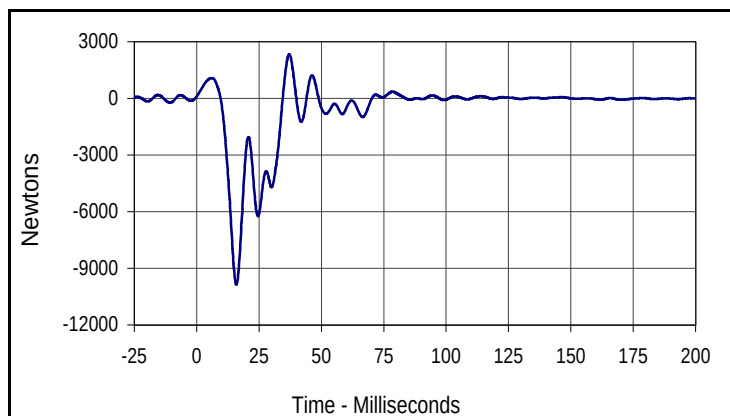
Curve Description			
Barrier Force A6			
CURNO	Type	SAE Class	Units
103	FIL	60	Newtons
Max	Time	Min	Time
3839.3	20.4	-5061.0	24.7



Curve Description			
Barrier Force B6			
CURNO	Type	SAE Class	Units
112	FIL	60	Newtons
Max	Time	Min	Time
115.9	118.4	-43202.3	29.4



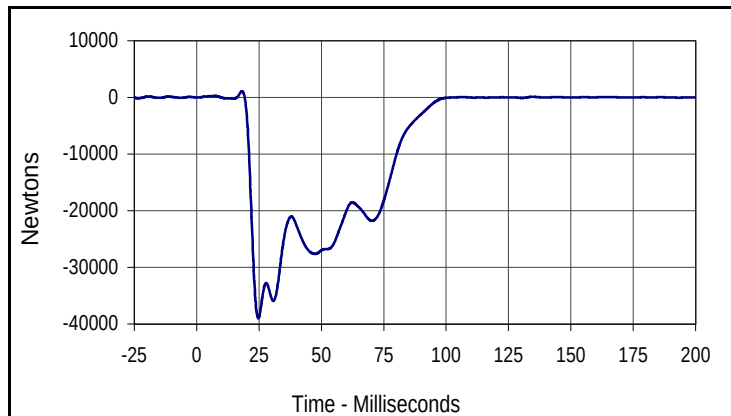
Curve Description			
Barrier Force C6			
CURNO	Type	SAE Class	Units
121	FIL	60	Newtons
Max	Time	Min	Time
100.3	134.7	-158376.4	27.2



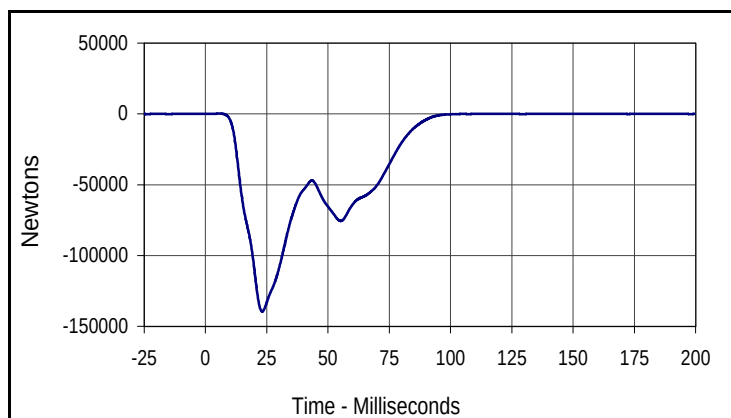
Curve Description			
Barrier Force D6			
CURNO	Type	SAE Class	Units
130	FIL	60	Newtons
Max	Time	Min	Time
2331.2	37.1	-9848.7	15.9

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

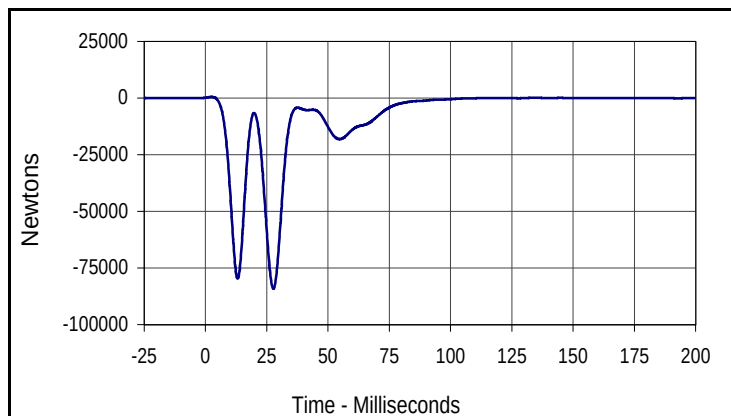
Test Date: 2/1/05
 NHTSA No.: M55203



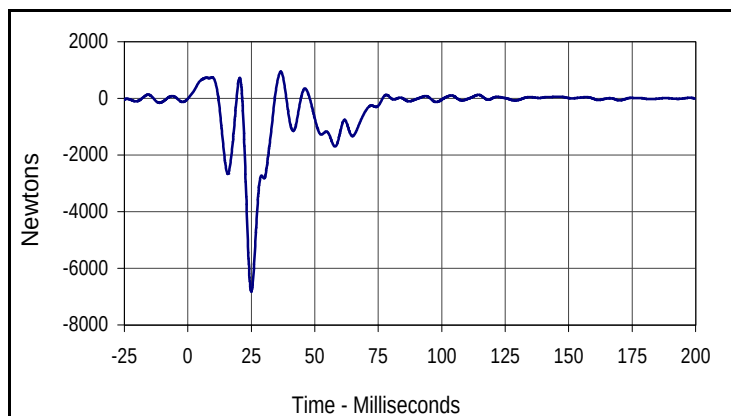
Curve Description			
Barrier Force A7			
CURNO	Type	SAE Class	Units
104	FIL	60	Newtons
Max	Time	Min	Time
1075.0	18.2	-38961.1	24.7



Curve Description			
Barrier Force B7			
CURNO	Type	SAE Class	Units
113	FIL	60	Newtons
Max	Time	Min	Time
240.2	5.7	-139536.0	23.1



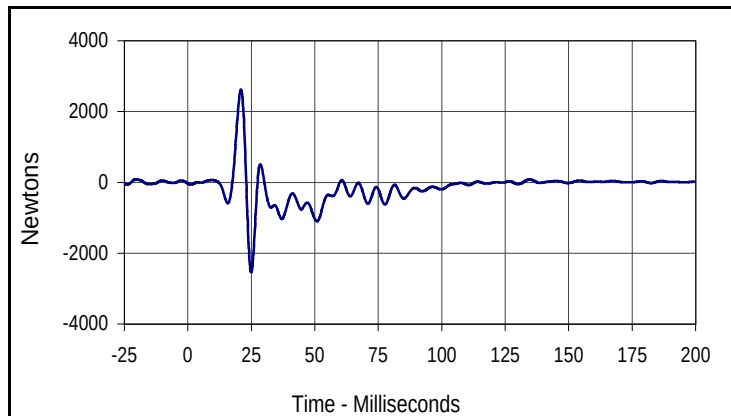
Curve Description			
Barrier Force C7			
CURNO	Type	SAE Class	Units
122	FIL	60	Newtons
Max	Time	Min	Time
507.0	2.5	-84145.9	27.7



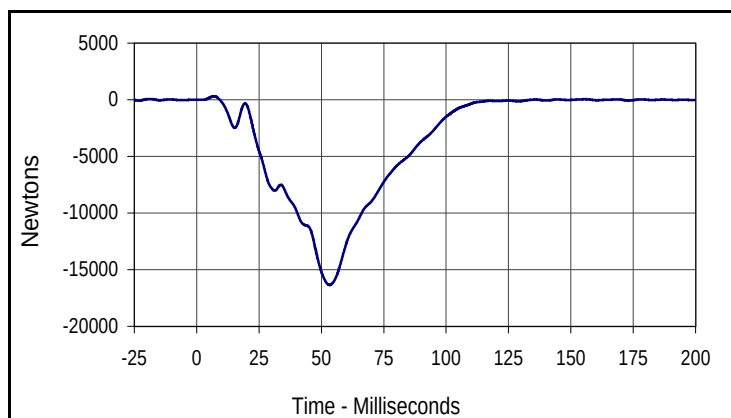
Curve Description			
Barrier Force D7			
CURNO	Type	SAE Class	Units
131	FIL	60	Newtons
Max	Time	Min	Time
945.4	36.6	-6821.1	25.0

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

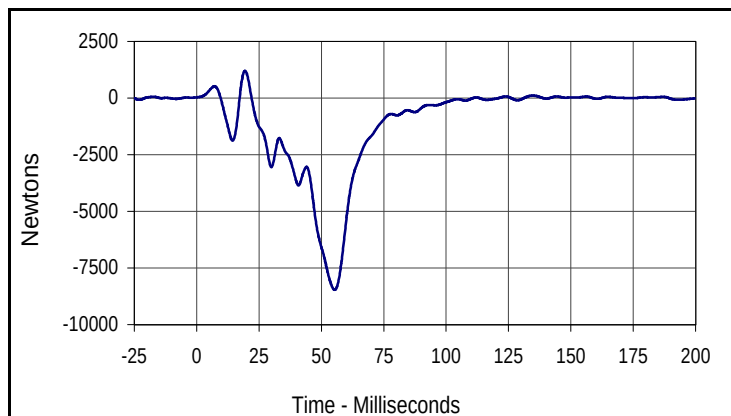
Test Date: 2/1/05
 NHTSA No.: M55203



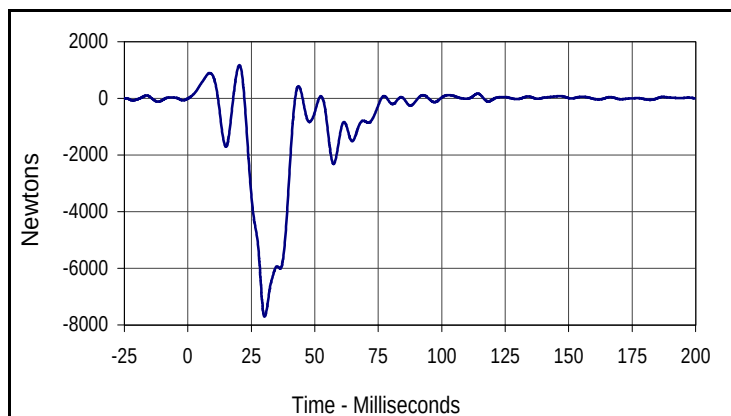
Curve Description			
Barrier Force A8			
CURNO	Type	SAE Class	Units
105	FIL	60	Newtons
Max	Time	Min	Time
2621.9	20.9	-2538.5	24.9



Curve Description			
Barrier Force B8			
CURNO	Type	SAE Class	Units
114	FIL	60	Newtons
Max	Time	Min	Time
303.0	7.0	-16343.1	53.3



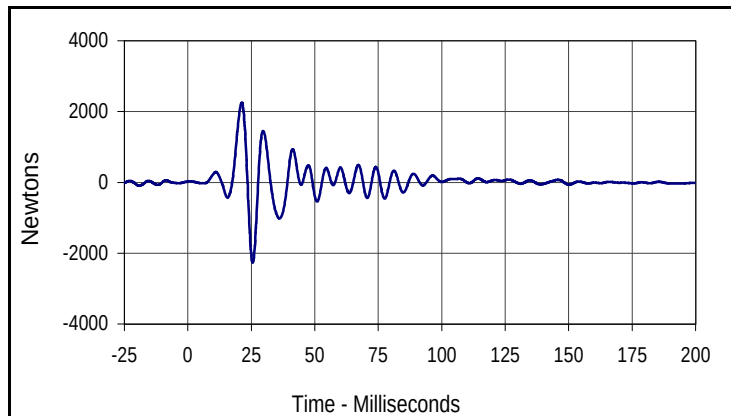
Curve Description			
Barrier Force C8			
CURNO	Type	SAE Class	Units
123	FIL	60	Newtons
Max	Time	Min	Time
1199.2	19.4	-8466.2	55.3



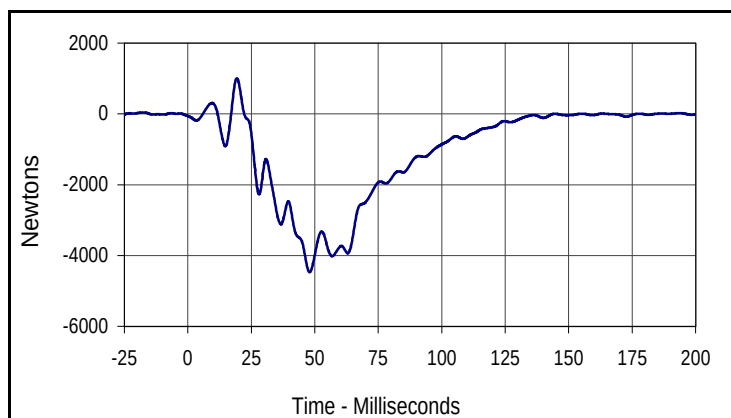
Curve Description			
Barrier Force D8			
CURNO	Type	SAE Class	Units
132	FIL	60	Newtons
Max	Time	Min	Time
1178.2	20.3	-7699.2	30.2

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

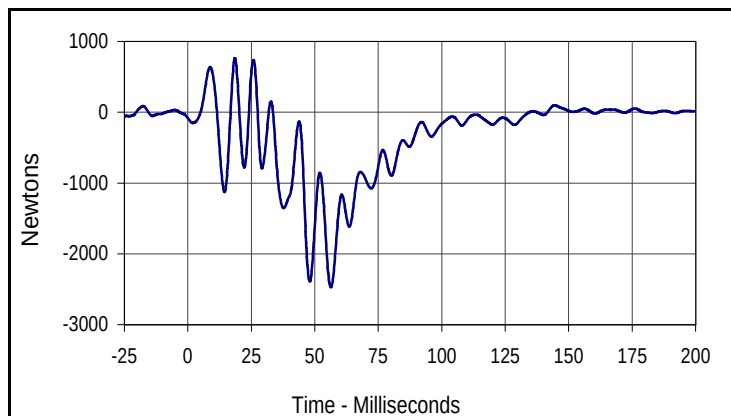
Test Date: 2/1/05
 NHTSA No.: M55203



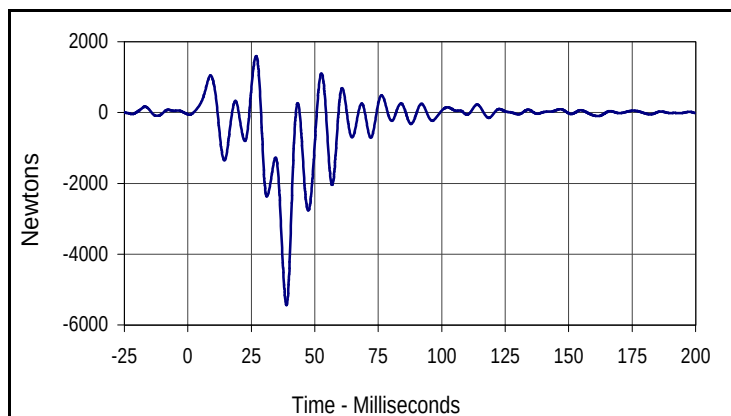
Curve Description			
Barrier Force A9			
CURNO	Type	SAE Class	Units
106	FIL	60	Newtons
Max	Time	Min	Time
2246.3	21.2	-2264.1	25.5



Curve Description			
Barrier Force B9			
CURNO	Type	SAE Class	Units
115	FIL	60	Newtons
Max	Time	Min	Time
1007.1	19.3	-4473.2	48.0



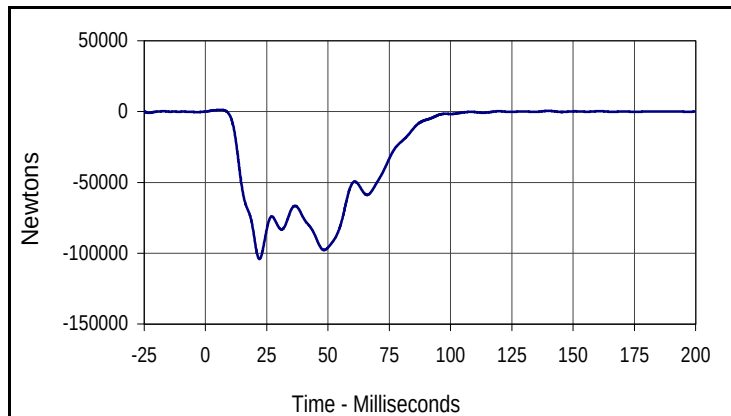
Curve Description			
Barrier Force C9			
CURNO	Type	SAE Class	Units
124	FIL	60	Newtons
Max	Time	Min	Time
764.1	18.5	-2469.2	56.3



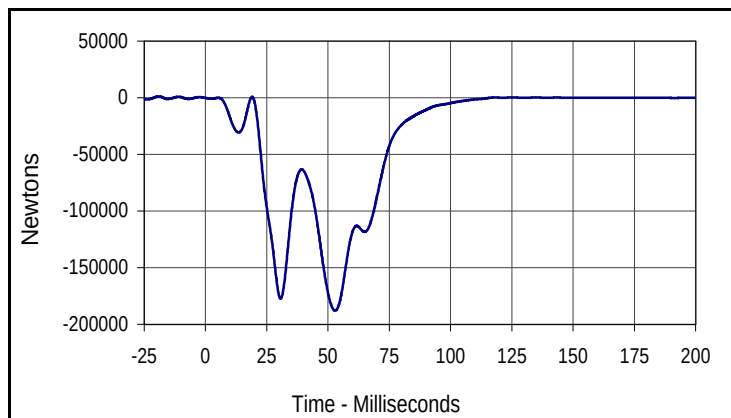
Curve Description			
Barrier Force D9			
CURNO	Type	SAE Class	Units
133	FIL	60	Newtons
Max	Time	Min	Time
1596.6	26.9	-5435.0	38.9

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

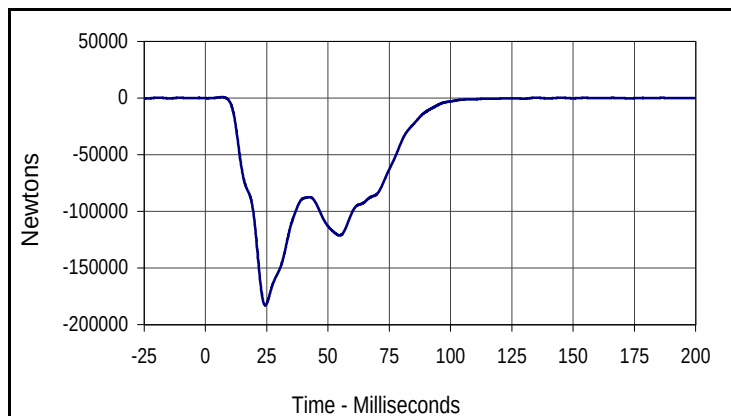
Test Date: 2/1/05
 NHTSA No.: M55203



Curve Description			
Barrier Force Sum Group 1			
CURNO	Type	SAE Class	Units
001	SUM	60	Newtons
Max	Time	Min	Time
1181.8	6.3	-104156.7	22.0



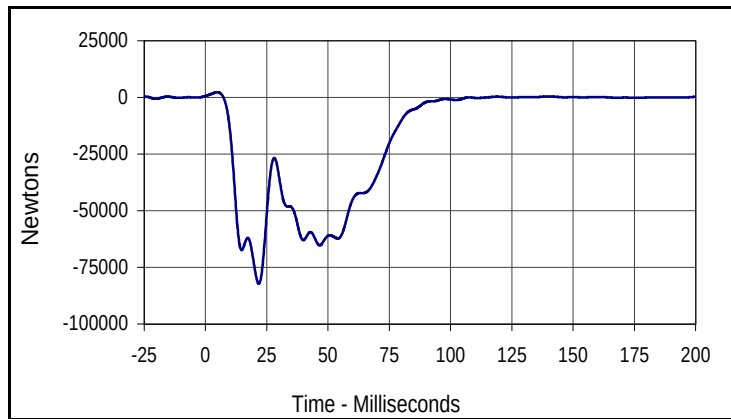
Curve Description			
Barrier Force Sum Group 2			
CURNO	Type	SAE Class	Units
002	SUM	60	Newtons
Max	Time	Min	Time
792.9	19.0	-187927.3	52.9



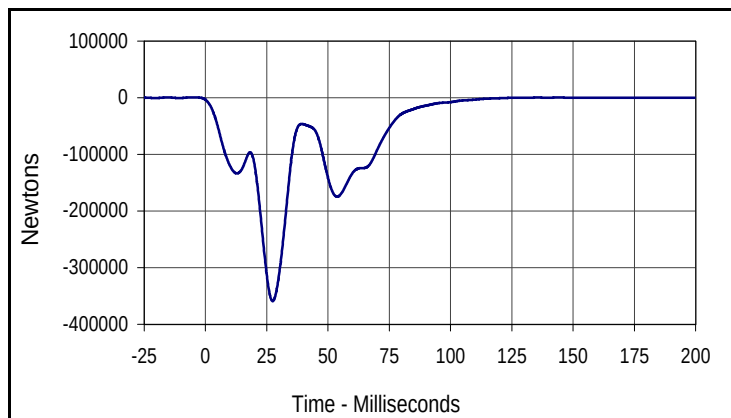
Curve Description			
Barrier Force Sum Group 3			
CURNO	Type	SAE Class	Units
003	SUM	60	Newtons
Max	Time	Min	Time
794.1	6.8	-182914.5	24.4

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

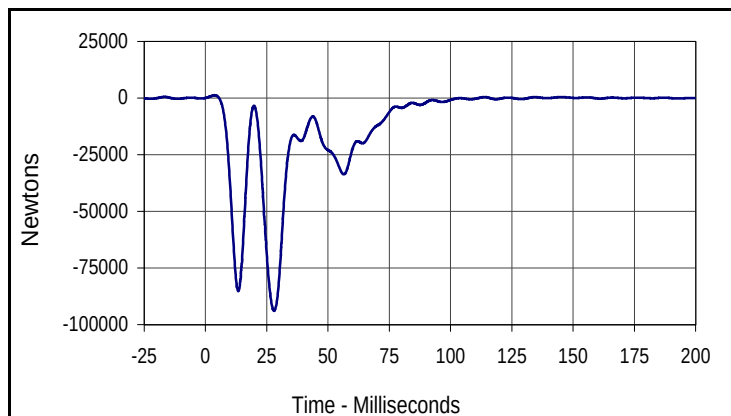
Test Date: 2/1/05
 NHTSA No.: M55203



Curve Description			
Barrier Force Sum Group 4			
CURNO	Type	SAE Class	Units
004	SUM	60	Newtons
Max	Time	Min	Time
2263.8	4.8	-82199.2	21.8



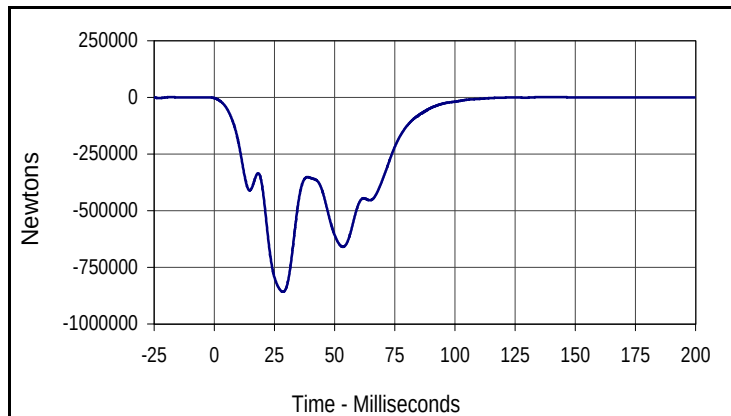
Curve Description			
Barrier Force Sum Group 5			
CURNO	Type	SAE Class	Units
005	SUM	60	Newtons
Max	Time	Min	Time
367.7	143.9	-359165.1	27.4



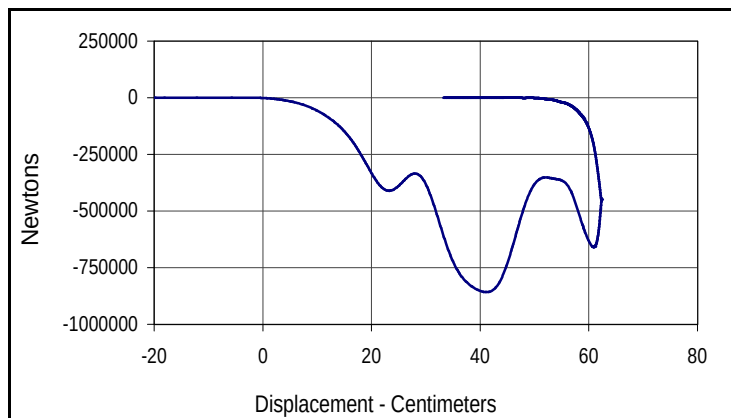
Curve Description			
Barrier Force Sum Group 6			
CURNO	Type	SAE Class	Units
006	SUM	60	Newtons
Max	Time	Min	Time
1204.8	3.7	-93892.6	28.0

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05
 NHTSA No.: M55203



Curve Description			
Barrier Force Total Sum			
CURNO	Type	SAE Class	Units
007	SUM	60	Newtons
Max	Time	Min	Time
1235.2	135.2	-858008.0	28.5



Curve Description			
Barrier Force Total Sum vs. Displ.			
CURNO	Type	SAE Class	Units
001	XVY	60	Newtons
Max	CM	Min	CM
1235.2	47.0	-858008.0	40.1

BARRIER LOAD CELL SUMMARY DATA

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

Location	Units	Max	Time	Min	Time
Barrier Force A1	Newtons	2266.8	29.1	-3268.7	24.6
Barrier Force A2	Newtons	1939.5	20.4	-2451.0	24.7
Barrier Force A3	Newtons	1855.6	20.1	-25959.2	51.8
Barrier Force A4	Newtons	2515.4	20.0	-18210.9	52.6
Barrier Force A5	Newtons	3692.0	20.6	-23246.0	31.5
Barrier Force A6	Newtons	3839.3	20.4	-5061.0	24.7
Barrier Force A7	Newtons	1075.0	18.2	-38961.1	24.7
Barrier Force A8	Newtons	2621.9	20.9	-2538.5	24.9
Barrier Force A9	Newtons	2246.3	21.2	-2264.1	25.5
Barrier Force B1	Newtons	1515.4	18.7	-2303.0	47.1
Barrier Force B2	Newtons	255.6	8.4	-13351.9	47.3
Barrier Force B3	Newtons	529.5	6.2	-104016.5	21.3
Barrier Force B4	Newtons	65.3	0.0	-36703.1	31.2
Barrier Force B5	Newtons	665.5	18.5	-75788.2	52.6
Barrier Force B6	Newtons	115.9	118.4	-43202.3	29.4
Barrier Force B7	Newtons	240.2	5.7	-139536.0	23.1
Barrier Force B8	Newtons	303.0	7.0	-16343.1	53.3
Barrier Force B9	Newtons	1007.1	19.3	-4473.2	48.0
Barrier Force C1	Newtons	1235.0	26.3	-1840.9	22.2
Barrier Force C2	Newtons	609.2	7.7	-6998.1	48.0
Barrier Force C3	Newtons	307.5	2.7	-74610.6	20.5
Barrier Force C4	Newtons	67.4	142.7	-133733.9	27.5
Barrier Force C5	Newtons	64.9	144.0	-59448.8	28.3
Barrier Force C6	Newtons	100.3	134.7	-158376.4	27.2
Barrier Force C7	Newtons	507.0	2.5	-84145.9	27.7
Barrier Force C8	Newtons	1199.2	19.4	-8466.2	55.3
Barrier Force C9	Newtons	764.1	18.5	-2469.2	56.3
Barrier Force D1	Newtons	2788.2	27.6	-4078.2	39.2
Barrier Force D2	Newtons	1027.8	8.2	-4301.7	31.8
Barrier Force D3	Newtons	982.4	6.5	-7405.0	23.2
Barrier Force D4	Newtons	1579.1	37.1	-7813.7	15.8
Barrier Force D5	Newtons	2607.7	37.3	-11450.8	14.3
Barrier Force D6	Newtons	2331.2	37.1	-9848.7	15.9
Barrier Force D7	Newtons	945.4	36.6	-6821.1	25.0
Barrier Force D8	Newtons	1178.2	20.3	-7699.2	30.2
Barrier Force D9	Newtons	1596.6	26.9	-5435.0	38.9
Barrier Force Sum Group 1	Newtons	1181.8	6.3	-104156.7	22.0
Barrier Force Sum Group 2	Newtons	792.9	19.0	-187927.3	52.9
Barrier Force Sum Group 3	Newtons	794.1	6.8	-182914.5	24.4
Barrier Force Sum Group 4	Newtons	2263.8	4.8	-82199.2	21.8
Barrier Force Sum Group 5	Newtons	367.7	143.9	-359165.1	27.4
Barrier Force Sum Group 6	Newtons	1204.8	3.7	-93892.6	28.0
Barrier Force Total Sum	Newtons	1235.2	135.2	-858008.0	28.5

APPENDIX D

INSTRUMENTATION DATA CHANNEL ASSIGNMENTS

2005 NHTSA 35mph NCAP
Instrumentation Data Channel Assignments
Driver A.T.D. Serial Number 35
2/1/05
2005 Nissan Murano S AWD 5-Door MPV

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
1	HEAD, PRIMARY	X	GPAC027	Accel., 1/2 bridge	Endevco	7264-2000	G
2	HEAD, PRIMARY	Y	GPAC002	Accel., 1/2 bridge	Endevco	7264-2000	G
3	HEAD, PRIMARY	Z	GPAC003	Accel., 1/2 bridge	Endevco	7264-2000	G
4	HEAD, REDUNDANT	X	GPAC032	Accel., 1/2 bridge	Endevco	7264-2000	G
5	HEAD, REDUNDANT	Y	GPAC021	Accel., 1/2 bridge	Endevco	7264-2000	G
6	HEAD, REDUNDANT	Z	GPAC026	Accel., 1/2 bridge	Endevco	7264-2000	G
7	NECK FORCE	X	GPUN01FX	Load cell, six axis neck	R. A. Denton	1716A	N
8	NECK FORCE	Y	GPUN01FY	Load cell, six axis neck	R. A. Denton	1716A	N
9	NECK FORCE	Z	GPUN01FZ	Load cell, six axis neck	R. A. Denton	1716A	N
10	NECK MOMENT	X	GPUN01MX	Load cell, six axis neck	R. A. Denton	1716A	Nm
11	NECK MOMENT	Y	GPUN01MY	Load cell, six axis neck	R. A. Denton	1716A	Nm
12	NECK MOMENT	Z	GPUN01MZ	Load cell, six axis neck	R. A. Denton	1716A	Nm
13	CHEST, PRIMARY	X	GPAC005	Accel., 1/2 bridge	Endevco	7264-2000	G
14	CHEST, PRIMARY	Y	GPAC011	Accel., 1/2 bridge	Endevco	7264-2000	G
15	CHEST, PRIMARY	Z	GPAC010	Accel., 1/2 bridge	Endevco	7264-2000	G
16	CHEST, REDUNDANT	X	GPAC034	Accel., 1/2 bridge	Endevco	7264-2000	G
17	CHEST, REDUNDANT	Y	GPAC023	Accel., 1/2 bridge	Endevco	7264-2000	G
18	CHEST, REDUNDANT	Z	GPAC020	Accel., 1/2 bridge	Endevco	7264-2000	G
19	CHEST DISPLACEMENT	X	GPCP002	Rotary Pot Chest	Servo	14CBI	MM
20	PELVIS, PRIMARY	X	GPAC025	Accel., 1/2 bridge	Endevco	7264-2000	G
21	PELVIS, PRIMARY	Y	GPAC022	Accel., 1/2 bridge	Endevco	7264-2000	G
22	PELVIS, PRIMARY	Z	GPAC019	Accel., 1/2 bridge	Endevco	7264-2000	G
23	LEFT FEMUR FORCE	Z	KEFF003	Load cell, Femur	R.A. Denton	2121	N
24	RIGHT FEMUR FORCE	Z	KEFF004	Load cell, Femur	R.A. Denton	2121	N

2005 NHTSA 35mph NCAP
Instrumentation Data Channel Assignments
Driver A.T.D. Serial Number 35
2/1/05
2005 Nissan Murano S AWD 5-Door MPV

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
25	UP. TIBIA LEFT MOM.	X	GPUT09MX	2 ch., Upper tibia gage	R. A. Denton	1583	Nm
26	UP. TIBIA LEFT MOM.	Y	GPUT09MY	2 ch., Upper tibia gage	R. A. Denton	1583	Nm
27	UP. TIBIA RIGHT MOM.	X	GPUT09MX	2 ch., Upper tibia gage	R. A. Denton	1583	Nm
28	UP. TIBIA RIGHT MOM.	Y	GPUT09MY	2 ch., Upper tibia gage	R. A. Denton	1583	Nm
29	LWR. TIBIA LEFT MOM.	X	GPLT09MX	3 ch., lower tibia gage	R. A. Denton	3093	Nm
30	LWR. TIBIA LEFT MOM.	Y	GPLT09MY	3 ch., lower tibia gage	R. A. Denton	3093	Nm
31	LWR. TIBIA LEFT FORCE	Z	GPLT09FZ	3 ch., lower tibia gage	R. A. Denton	3093	N
32	LWR. TIBIA RIGHT MOM.	X	GPLT09MX	3 ch., lower tibia gage	R. A. Denton	3093	Nm
33	LWR. TIBIA RIGHT MOM.	Y	GPLT09MY	3 ch., lower tibia gage	R. A. Denton	3093	Nm
34	LWR. TIBIA RIGHT FORCE	Z	GPLT09FZ	3 ch., lower tibia gage	R. A. Denton	3093	N
35	FOOT LEFT, AFT	X	KEIC002X	Accel., Foot Triax	I.C. Sensor	3031-500	G
36	FOOT LEFT, AFT	Z	KEIC002Y	Accel., Foot Triax	I.C. Sensor	3031-500	G
37	FOOT LEFT, FORE	Z	KEIC002Z	Accel., Foot Triax	I.C. Sensor	3031-500	G
38	FOOT RIGHT, AFT	X	KEIC001X	Accel., Foot Triax	I.C. Sensor	3031-500	G
39	FOOT RIGHT, AFT	Z	KEIC001Y	Accel., Foot Triax	I.C. Sensor	3031-500	G
40	FOOT RIGHT, FORE	Z	KEIC001Z	Accel., Foot Triax	I.C. Sensor	3031-500	G
41	LAP BELT FORCE	X	BL134	Load cell, Seat belt	FGP	FN4060	N
42	SHOULDER BELT FORCE	X	BL135	Load cell, Seat belt	FGP	FN4060	N
43	SHOULDER BELT SPOOL	X	KEPP001	Pullout pot	Celesco	PTX101-0030	MM
44	SHOULDER BELT ELONG.	X	KEEP001	Linear pot., belt stretch	E.T.I.	LCP8-10 10K	MM/CM

2005 NHTSA 35mph NCAP
Instrumentation Data Channel Assignments
Passenger A.T.D. Serial Number 34
2/1/05
2005 Nissan Murano S AWD 5-Door MPV

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
45	HEAD, PRIMARY	X	KEAC039	Accel.,1/2 bridge	Endevco	7264-2000	G
46	HEAD, PRIMARY	Y	KEAC038	Accel.,1/2 bridge	Endevco	7264-2000	G
47	HEAD, PRIMARY	Z	KEAC027	Accel.,1/2 bridge	Endevco	7264-2000	G
48	HEAD, REDUNDANT	X	KEAC031	Accel.,1/2 bridge	Endevco	7264-2000	G
49	HEAD, REDUNDANT	Y	KEAC032	Accel.,1/2 bridge	Endevco	7264-2000	G
50	HEAD, REDUNDANT	Z	KEAC026	Accel.,1/2 bridge	Endevco	7264-2000	G
51	NECK FORCE	X	GPUN02FX	Load cell, six axis neck	R. A. Denton	1716A	N
52	NECK FORCE	Y	GPUN02FY	Load cell, six axis neck	R. A. Denton	1716A	N
53	NECK FORCE	Z	GPUN02FZ	Load cell, six axis neck	R. A. Denton	1716A	N
54	NECK MOMENT	X	GPUN02MX	Load cell, six axis neck	R. A. Denton	1716A	Nm
55	NECK MOMENT	Y	GPUN02MY	Load cell, six axis neck	R. A. Denton	1716A	Nm
56	NECK MOMENT	Z	GPUN02MZ	Load cell, six axis neck	R. A. Denton	1716A	Nm
57	CHEST, PRIMARY	X	GPAC031	Accel., 1/2 bridge	Endevco	7264-2000	G
58	CHEST, PRIMARY	Y	GPAC024	Accel., 1/2 bridge	Endevco	7264-2000	G
59	CHEST, PRIMARY	Z	GPAC029	Accel., 1/2 bridge	Endevco	7264-2000	G
60	CHEST, REDUNDANT	X	KEAC023	Accel.,1/2 bridge	Endevco	7264-200	G
61	CHEST, REDUNDANT	Y	KEAC022	Accel.,1/2 bridge	Endevco	7264-200	G
62	CHEST, REDUNDANT	Z	KEAC024	Accel.,1/2 bridge	Endevco	7264-200	G
63	CHEST DISPLACEMENT	X	GPCP001	Rotary Pot Chest	Servo	14CBI	MM
64	PELVIS, PRIMARY	X	KEAC019	Accel.,1/2 bridge	Endevco	7264-200	G
65	PELVIS, PRIMARY	Y	KEAC020	Accel.,1/2 bridge	Endevco	7264-200	G
66	PELVIS, PRIMARY	Z	KEAC021	Accel.,1/2 bridge	Endevco	7264-200	G
67	LEFT FEMUR FORCE	Z	KEFF001	Load cell, Femur	R.A. Denton	2121	N
68	RIGHT FEMUR FORCE	Z	KEFF002	Load cell, Femur	R.A. Denton	2121	N

2005 NHTSA 35mph NCAP
Instrumentation Data Channel Assignments
Passenger A.T.D. Serial Number 34
2/1/05
2005 Nissan Murano S AWD 5-Door MPV

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
69	UP. TIBIA LEFT MOM.	X	GPUT09MX	2 ch., Upper tibia gage	R. A. Denton	1583	Nm
70	UP. TIBIA LEFT MOM.	Y	GPUT09MY	2 ch., Upper tibia gage	R. A. Denton	1583	Nm
71	UP. TIBIA RIGHT MOM.	X	GPUT09MX	2 ch., Upper tibia gage	R. A. Denton	1583	Nm
72	UP. TIBIA RIGHT MOM.	Y	GPUT09MY	2 ch., Upper tibia gage	R. A. Denton	1583	Nm
73	LWR. TIBIA LEFT MOM.	X	GPLT09MX	3 ch., lower tibia gage	R. A. Denton	3093	Nm
74	LWR. TIBIA LEFT MOM.	Y	GPLT09MY	3 ch., lower tibia gage	R. A. Denton	3093	Nm
75	LWR. TIBIA LEFT FORCE	Z	GPLT09FZ	3 ch., lower tibia gage	R. A. Denton	3093	N
76	LWR. TIBIA RIGHT MOM.	X	GPLT09MX	3 ch., lower tibia gage	R. A. Denton	3093	Nm
77	LWR. TIBIA RIGHT MOM.	Y	GPLT09MY	3 ch., lower tibia gage	R. A. Denton	3093	Nm
78	LWR. TIBIA RIGHT FORCE	Z	GPLT09FZ	3 ch., lower tibia gage	R. A. Denton	3093	N
79	FOOT LEFT, AFT	X	KEIC003X	Accel., Foot Triax	I.C. Sensor	3031-500	G
80	FOOT LEFT, AFT	Z	KEIC003Y	Accel., Foot Triax	I.C. Sensor	3031-500	G
81	FOOT LEFT, FORE	Z	KEIC003Z	Accel., Foot Triax	I.C. Sensor	3031-500	G
82	FOOT RIGHT, AFT	X	KEIC004X	Accel., Foot Triax	I.C. Sensor	3031-500	G
83	FOOT RIGHT, AFT	Z	KEIC004Y	Accel., Foot Triax	I.C. Sensor	3031-500	G
84	FOOT RIGHT, FORE	Z	KEIC004Z	Accel., Foot Triax	I.C. Sensor	3031-500	G
85	LAP BELT FORCE	X	BL168	Load cell, Seat belt	First Tech	IF-964	N
86	SHOULDER BELT FORCE	X	BL169	Load cell, Seat belt	First Tech	IF-964	N
87	SHOULDER BELT SPOOL	X	KEPP001	Pullout pot	Celesco	PTX101-0030	MM
88	SHOULDER BELT ELONG.	X	KEEP001	Linear pot., belt stretch	E.T.I.	LCP8-10 10K	MM/CM

**2005 NHTSA 35mph NCAP
Instrumentation Data Channel Assignments
Vehicle Accelerometers
2/1/05
2005 Nissan Murano S AWD 5-Door MPV**

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
89	LEFT REAR	X	KEVA002	Accel., Pre-Amp	I.C.S/Karco	3031-500	G
90	RIGHT REAR	X	KEVA006	Accel., Vehicle block	I.C. Sensor	3031-200	G
91	ENGINE TOP	X	KEVA009	Accel., Vehicle block	I.C. Sensor	3031-500	G
92	ENGINE BOTTOM	X	KEVA007	Accel., Vehicle block	I.C. Sensor	3031-500	G
93	LEFT BRAKE CALIPER	X	KEVA008	Accel., Vehicle block	I.C. Sensor	3031-500	G
94	RIGHT BRAKE CALIPER	X	KEVA012	Accel., Vehicle block	I.C. Sensor	3031-500	G
95	INSTRUMENT PANEL	X	KEVA011	Accel., Vehicle block	I.C. Sensor	3031-200	G
96	LEFT REAR	Z	KEVA001	Accel., Vehicle block	I.C. Sensor	3031-500	G
97	RIGHT REAR	Z	KEVA010	Accel., Vehicle block	I.C. Sensor	3031-200	G

**2005 NHTSA 35mph NCAP
Instrumentation Data Channel Assignments
Rigid Load Cell Barrier
2/1/05
2005 Nissan Murano S AWD 5-Door MPV**

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
98	BARRIER FORCE A1	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
99	BARRIER FORCE A2	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
100	BARRIER FORCE A3	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
101	BARRIER FORCE A4	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
102	BARRIER FORCE A5	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
103	BARRIER FORCE A6	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
104	BARRIER FORCE A7	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
105	BARRIER FORCE A8	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
106	BARRIER FORCE A9	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
107	BARRIER FORCE B1	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
108	BARRIER FORCE B2	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
109	BARRIER FORCE B3	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
110	BARRIER FORCE B4	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
111	BARRIER FORCE B5	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
112	BARRIER FORCE B6	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
113	BARRIER FORCE B7	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
114	BARRIER FORCE B8	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
115	BARRIER FORCE B9	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N

**2005 NHTSA 35mph NCAP
Instrumentation Data Channel Assignments
Rigid Load Cell Barrier
2/1/05
2005 Nissan Murano S AWD 5-Door MPV**

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
116	BARRIER FORCE C1	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
117	BARRIER FORCE C2	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
118	BARRIER FORCE C3	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
119	BARRIER FORCE C4	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
120	BARRIER FORCE C5	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
121	BARRIER FORCE C6	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
122	BARRIER FORCE C7	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
123	BARRIER FORCE C8	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
124	BARRIER FORCE C9	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
125	BARRIER FORCE D1	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
126	BARRIER FORCE D2	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
127	BARRIER FORCE D3	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
128	BARRIER FORCE D4	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
129	BARRIER FORCE D5	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
130	BARRIER FORCE D6	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
131	BARRIER FORCE D7	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
132	BARRIER FORCE D8	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N
133	BARRIER FORCE D9	X	BARRIER	Load Cell, LCB	Interface	1220-FS	N

APPENDIX E

DUMMY CALIBRATION DATA

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

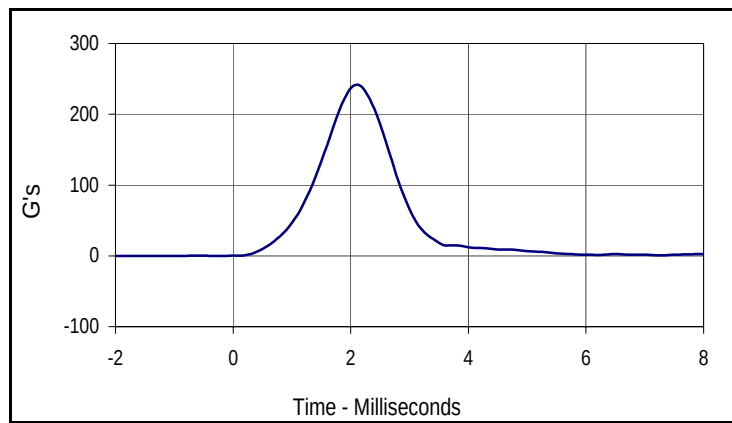
Test Date: 1/18/05

ATD Serial No.: 034

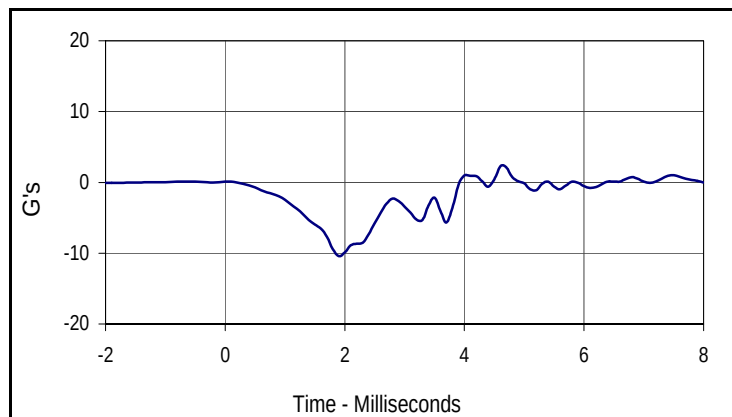
Test I.D.: HD01A



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Peak Resultant Acceleration	G's	225.0 to 275.0	241.8	Pass
Peak Lateral Acceleration	G's	≤15.0	10.4	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Overall Test Results			Pass	



Curve Description			
Head Resultant			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
241.8	2.1	0.0	-1.4



Curve Description			
Head Y			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
2.3	4.6	-10.4	1.9

Test Program: Hybrid III 50th Percentile Male Thorax Impact Test

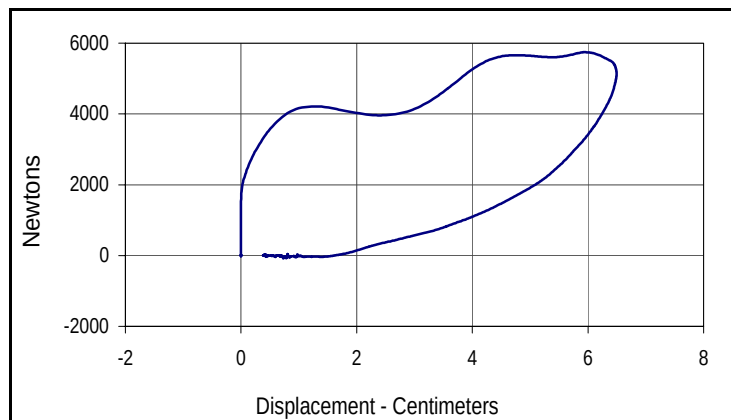
Test Date: 1/19/05

ATD Serial No.: 034

Test I.D.: CH01A



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	6.58 to 6.82	6.64	Pass
Peak Probe Force	Newtons	5159 to 5893	5743	Pass
Peak Sternum Deflection	CM	6.35 to 7.26	6.49	Pass
Internal Hysteresis	%	69 to 85	75.9	Pass
Overall Test Results				Pass



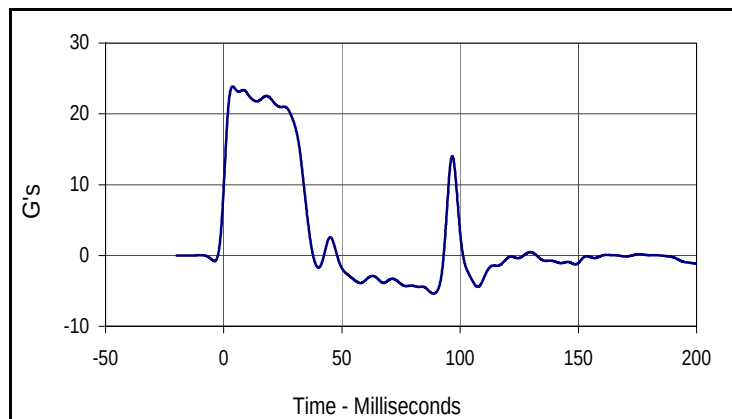
Curve Description			
Probe Force vs. Chest Deflection			
CURNO	Type	SAE Class	Hysteresis
001	FIL	180	75.9
Peak Probe Force		Peak Chest Deflection	
5743		6.49	

Test Program: Hybrid III 50th Percentile Male Neck Flexion Test
 ATD Serial No.: 034

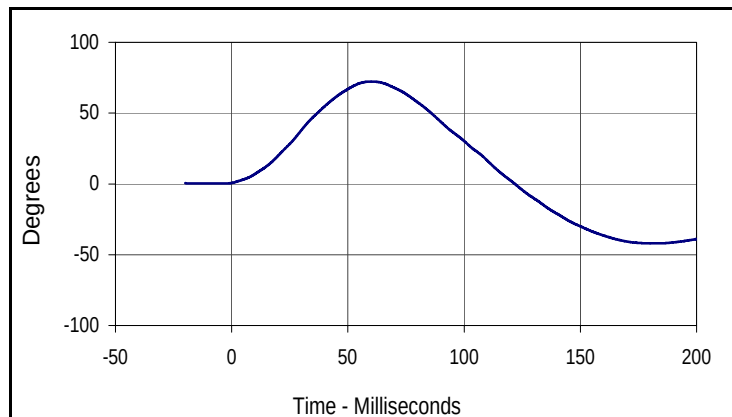
Test Date: 1/18/05
 Test I.D.: NF01A



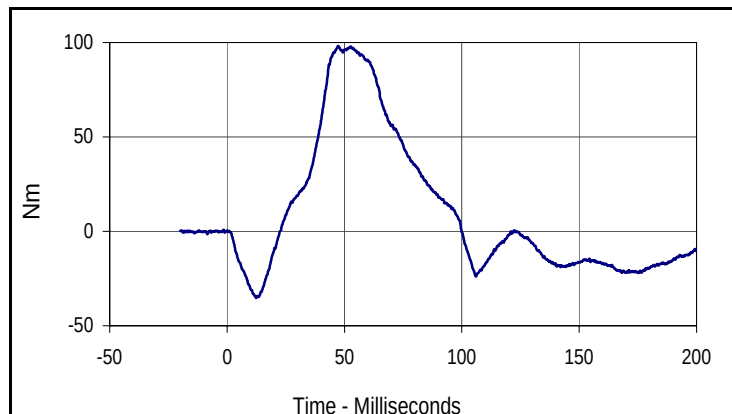
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	6.89 to 7.13	7.04	Pass
Pendulum Deceleration	10 Msec.	G's	22.5 to 27.5	22.9	Pass
	20 Msec.	G's	17.6 to 22.6	22.1	Pass
	30 Msec.	G's	12.5 to 18.5	18.4	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 29.0	18.4	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	34.0 to 42.0	35.6	Pass
Maximum "D" Plane Rotation	Max	Degrees	64.0 to 78.0	72.3	Pass
	Time	Msec.	57.0 to 64.0	59.7	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	113.0 to 128.0	121.9	Pass
Moment About Occ. Condyle	Max	Nm	84.1 to 108.5	98.2	Pass
	Time	Msec.	47.0 to 58.0	47.3	Pass
Positive Moment Decay, Time To Zero Crossing		Msec.	97.0 to 107.0	100.0	Pass
Overall Test Results				Pass	



Curve Description			
Pendulum Deceleration			
CURNO	Type	SAE Class	Units
001	FIL	60	G's
Max	Time	Min	Time
23.9	3.7	-5.4	88.7



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
72.3	59.7	-42.0	181.3



Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
98.2	47.3	-35.2	12.4

Test Program: Hybrid III 50th Percentile Male Neck Extension Test

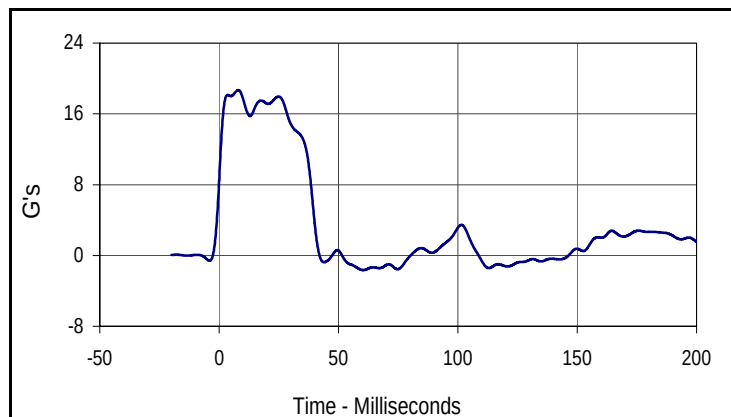
Test Date: 1/18/05

ATD Serial No.: 034

Test I.D.: NE01A



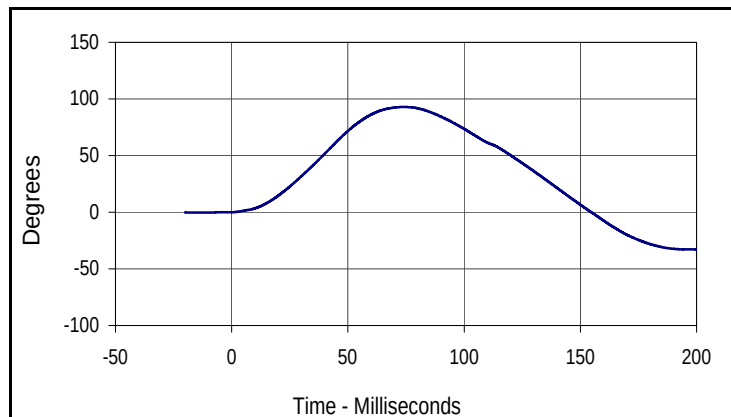
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	5.94 to 6.19	6.08	Pass
Pendulum Deceleration	10 Msec.	G's	17.2 to 21.2	17.7	Pass
	20 Msec.	G's	14.0 to 19.0	17.2	Pass
	30 Msec.	G's	11.0 to 16.0	14.8	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 22.0	14.8	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	38.0 to 46.0	39.6	Pass
Maximum "D" Plane Rotation	Max	Degrees	81.0 to 106.0	92.9	Pass
	Time	Msec.	72.0 to 82.0	73.9	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	147.0 to 174.0	154.7	Pass
Moment About Occ. Condyle	Max	Nm	-52.9 to- 79.9	-63.1	Pass
	Time	Msec.	65.0 to 79.0	66.2	Pass
Positive Moment Decay, Time To Zero Crossing		Msec.	120.0 to 148.0	135.1	Pass
Overall Test Results				Pass	



Curve Description

Pendulum Deceleration

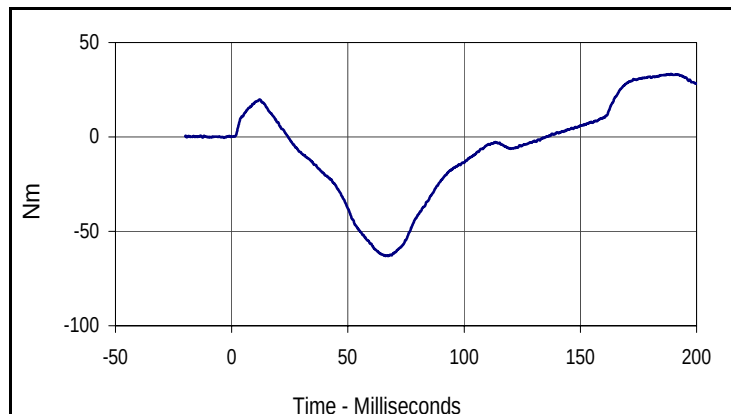
CURNO	Type	SAE Class	Units
001	FIL	60	G's
Max	Time	Min	Time
18.7	8.0	-1.7	60.3



Curve Description

"D" Plane Rotation

CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
92.9	73.9	-32.8	196.7



Curve Description

Moment About Occipital Condyle

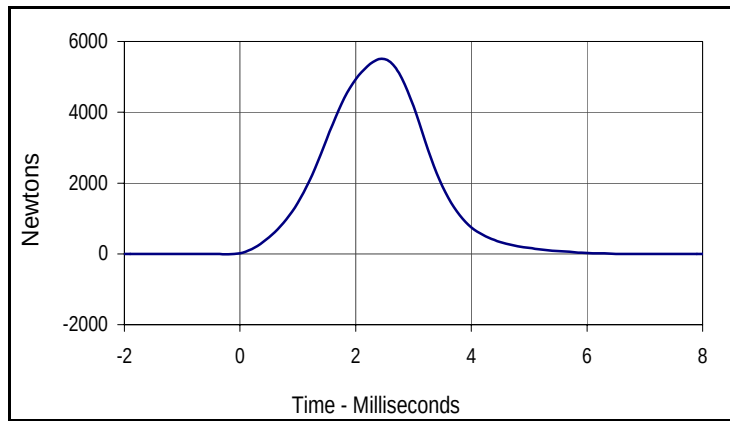
CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
33.5	189.0	-63.1	66.2

Test Program: Hybrid III 50th Percentile Male Knee Impact TestTest Date: 1/18/05ATD Serial No.: 034Test I.D.: LK01A , RK01A**Left Knee**

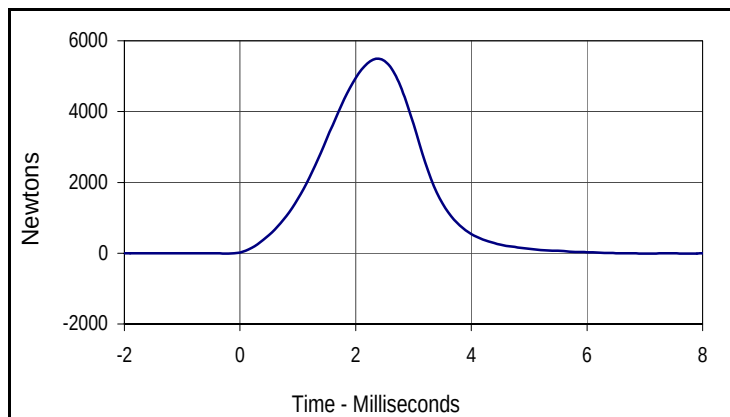
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.09	Pass
Peak Probe Force	Newtons	4715 to 5782	5505	Pass
Overall Test Results				Pass

Right Knee

Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.13	Pass
Peak Probe Force	Newtons	4715 to 5782	5493	Pass
Overall Test Results				Pass



Curve Description			
Left Knee Probe Force			
CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
5505.0	2.5	-10.1	-0.2



Curve Description			
Right Knee Probe Force			
CURNO	Type	SAE Class	Units
002	FIL	600	Newtons
Max	Time	Min	Time
5492.6	2.4	-18.3	9.7

Test Program: Hybrid III 50th Percentile Male External Measurements

Test Date: 1/19/05

ATD Serial No.: 034

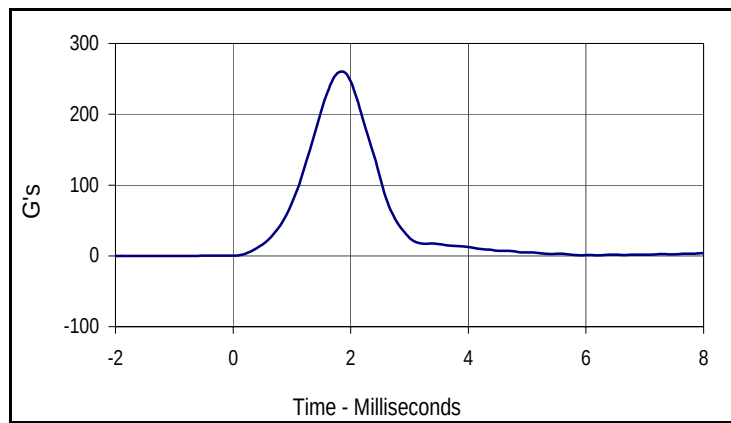
Test I.D.: N/A



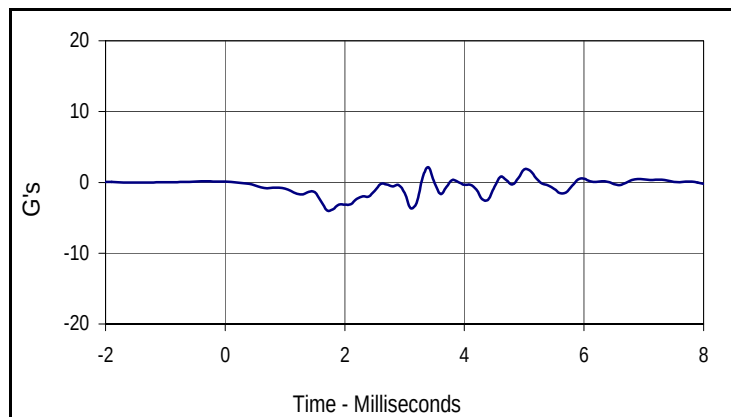
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
A - Total sitting height	mm	879 to 889	887	Pass
B - Shoulder pivot height	mm	505 to 521	512	Pass
C - "H" point height	mm	84 to 89	86	Pass
D - "H" point from seat back	mm	135 to 140	138	Pass
E - Shoulder pivot from back	mm	84 to 94	89	Pass
F - Thigh clearance	mm	140 to 155	150	Pass
G - Elbow back to wrist pivot	mm	290 to 305	298	Pass
H - Skull cap to back line	mm	41 to 46	44	Pass
I - Shoulder to elbow length	mm	330 to 345	341	Pass
J - Elbow rest height	mm	190 to 211	198	Pass
K - Buttock to knee length	mm	579 to 604	600	Pass
L - Popliteal length	mm	429 to 455	445	Pass
M - Knee pivot height	mm	485 to 500	498	Pass
N - Buttock popliteal length	mm	452 to 477	470	Pass
O - Chest depth	mm	213 to 229	225	Pass
P - Foot length	mm	251 to 267	265	Pass
V - Shoulder breadth	mm	422 to 437	425	Pass
W - Foot breadth	mm	91 to 107	105	Pass
Y - Chest circumference	mm	970 to 1001	987	Pass
Z - Waist circumference	mm	836 to 866	860	Pass
AA - Location for chest circumference	mm	429 to 434	430	Pass
BB - Location for waist circumference	mm	226 to 231	229	Pass
Overall Test Results				Pass

Test Program: Hybrid III 50th Percentile Male Head Drop TestTest Date: 1/18/05ATD Serial No.: 035Test I.D.: HD01B

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Peak Resultant Acceleration	G's	225.0 to 275.0	259.3	Pass
Peak Lateral Acceleration	G's	≤15.0	4.0	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Overall Test Results			Pass	



Curve Description			
Head Resultant			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
259.3	1.8	0.0	-1.4



Curve Description			
Head Y			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
2.1	3.4	-4.0	1.7

Test Program: Hybrid III 50th Percentile Male Thorax Impact Test

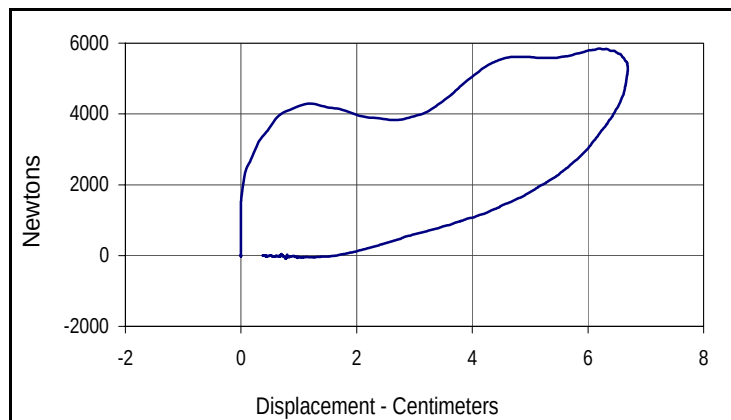
Test Date: 1/19/05

ATD Serial No.: 035

Test I.D.: CH01B



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	6.58 to 6.82	6.72	Pass
Peak Probe Force	Newtons	5159 to 5893	5846	Pass
Peak Sternum Deflection	CM	6.35 to 7.26	6.69	Pass
Internal Hysteresis	%	69 to 85	75.5	Pass
Overall Test Results				Pass



Curve Description			
Probe Force vs. Chest Deflection			
CURNO	Type	SAE Class	Hysteresis
001	FIL	180	75.5
Peak Probe Force		Peak Chest Deflection	
5846		6.69	

Test Program: Hybrid III 50th Percentile Male Neck Flexion Test

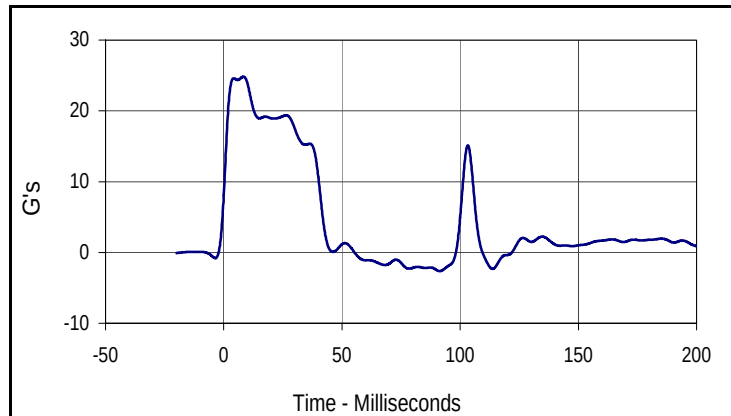
Test Date: 1/18/05

ATD Serial No.: 035

Test I.D.: NF01B



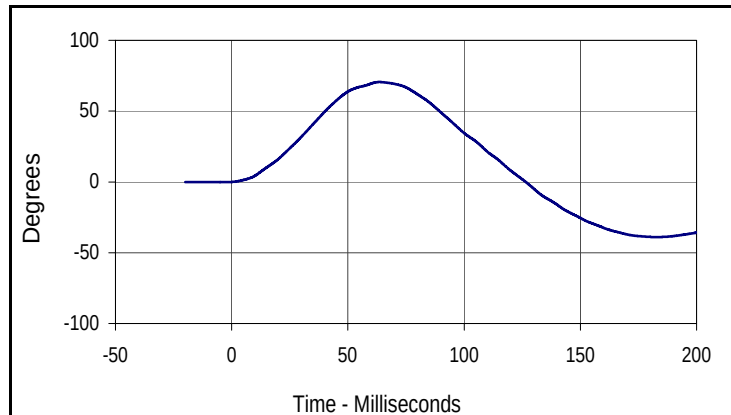
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	6.89 to 7.13	6.98	Pass
Pendulum Deceleration	10 Msec.	G's	22.5 to 27.5	23.9	Pass
	20 Msec.	G's	17.6 to 22.6	19.0	Pass
	30 Msec.	G's	12.5 to 18.5	17.5	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 29.0	17.5	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	34.0 to 42.0	41.9	Pass
Maximum "D" Plane Rotation	Max	Degrees	64.0 to 78.0	70.5	Pass
	Time	Msec.	57.0 to 64.0	63.6	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	113.0 to 128.0	126.5	Pass
Moment About Occ. Condyle	Max	Nm	84.1 to 108.5	94.3	Pass
	Time	Msec.	47.0 to 58.0	56.7	Pass
Positive Moment Decay, Time To Zero Crossing		Msec.	97.0 to 107.0	106.4	Pass
			Overall Test Results		Pass



Curve Description

Pendulum Deceleration

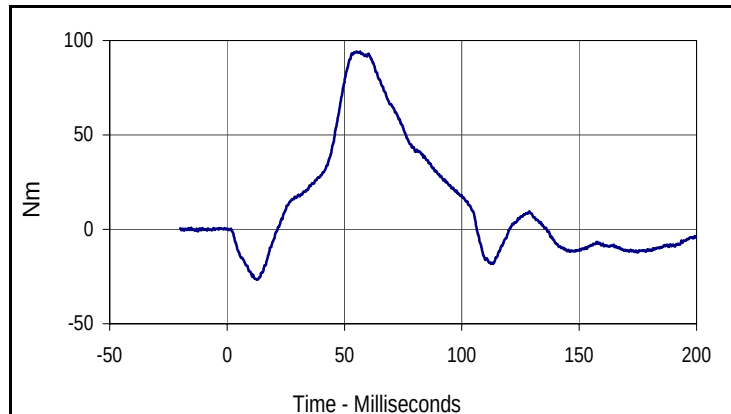
CURNO	Type	SAE Class	Units
001	FIL	60	G's
Max	Time	Min	Time
24.8	8.3	-2.6	91.3



Curve Description

"D" Plane Rotation

CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
70.5	63.6	-38.9	182.4



Curve Description

Moment About Occipital Condyle

CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
94.3	56.7	-26.7	13.0

Test Program: Hybrid III 50th Percentile Male Neck Extension Test

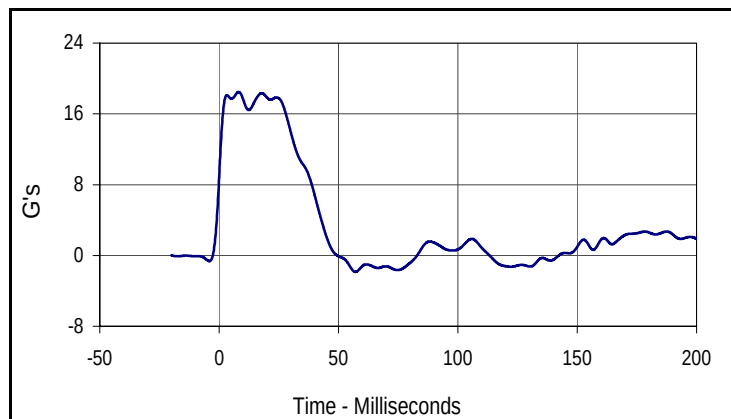
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ATD Serial No.: 035

Test I.D.: NE01B



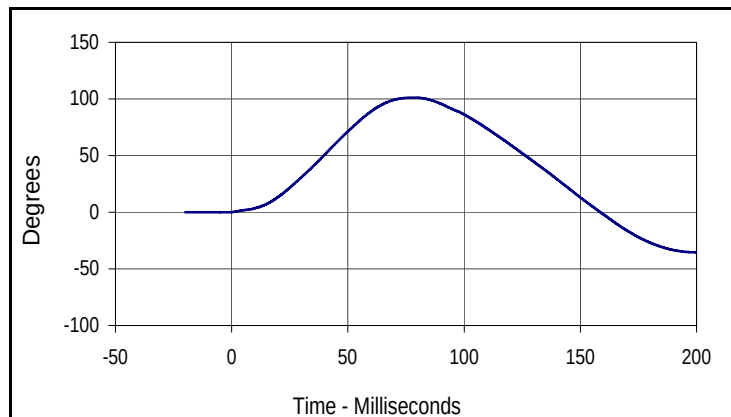
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	5.94 to 6.19	6.11	Pass
Pendulum Deceleration	10 Msec.	G's	17.2 to 21.2	17.7	Pass
	20 Msec.	G's	14.0 to 19.0	17.9	Pass
	30 Msec.	G's	11.0 to 16.0	13.9	Pass
Peak Pendulum Decel. after 30 Msec.		G's	≤ 22.0	13.9	Pass
Deceleration Decay, Time to Cross 5 G's		Msec.	38.0 to 46.0	41.8	Pass
Maximum "D" Plane Rotation	Max	Degrees	81.0 to 106.0	101.1	Pass
	Time	Msec.	72.0 to 82.0	78.1	Pass
"D" Plane Rotation Decay, Time To Zero Crossing		Msec.	147.0 to 174.0	158.6	Pass
Moment About Occ. Condyle	Max	Nm	-52.9 to- 79.9	-64.4	Pass
	Time	Msec.	65.0 to 79.0	68.3	Pass
Positive Moment Decay, Time To Zero Crossing		Msec.	120.0 to 148.0	137.6	Pass
Overall Test Results				Pass	



Curve Description

Pendulum Deceleration

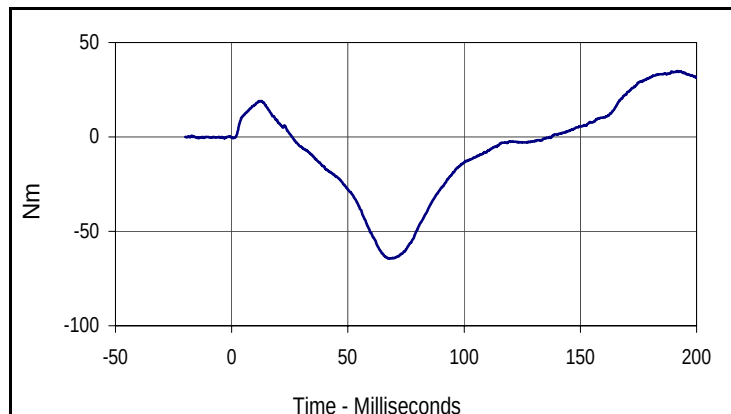
CURNO	Type	SAE Class	Units
001	FIL	60	G's
Max	Time	Min	Time
18.5	8.1	-1.9	57.1



Curve Description

"D" Plane Rotation

CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
101.1	78.1	-35.4	200.0



Curve Description

Moment About Occipital Condyle

CURNO	Type	SAE Class	Units
004	FIL	600	Nm
Max	Time	Min	Time
34.8	191.6	-64.4	68.3

Test Program: Hybrid III 50th Percentile Male Knee Impact Test

Test Date: 1/18/05

ATD Serial No.: 035

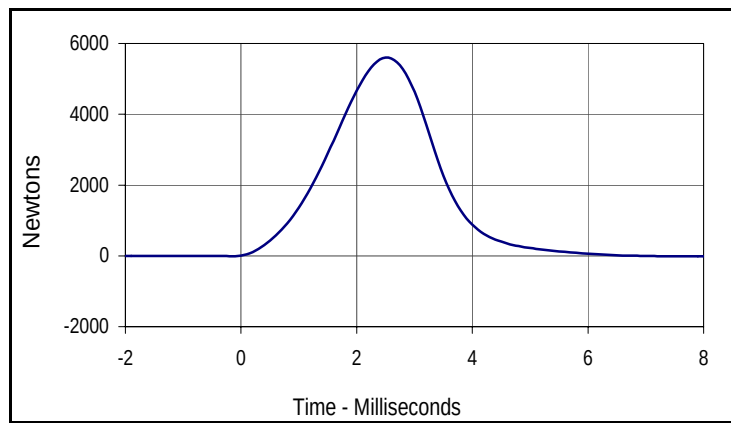
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**Left Knee**

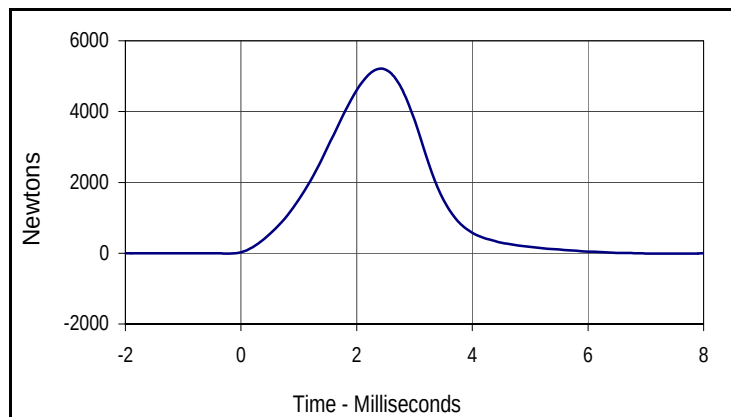
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.13	Pass
Peak Probe Force	Newtons	4715 to 5782	5601	Pass
Overall Test Results				Pass

Right Knee

Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.10	Pass
Peak Probe Force	Newtons	4715 to 5782	5212	Pass
Overall Test Results				Pass

**Curve Description****Left Knee Probe Force**

CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
5600.9	2.5	-10.3	-0.2

**Curve Description****Right Knee Probe Force**

CURNO	Type	SAE Class	Units
002	FIL	600	Newtons
Max	Time	Min	Time
5212.4	2.4	-12.1	-0.2

Test Program: Hybrid III 50th Percentile Male External Measurements

Test Date: 1/19/05

ATD Serial No.: 035

Test I.D.: N/A



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
A - Total sitting height	mm	879 to 889	882	Pass
B - Shoulder pivot height	mm	505 to 521	516	Pass
C - "H" point height	mm	84 to 89	88	Pass
D - "H" point from seat back	mm	135 to 140	138	Pass
E - Shoulder pivot from back	mm	84 to 94	91	Pass
F - Thigh clearance	mm	140 to 155	149	Pass
G - Elbow back to wrist pivot	mm	290 to 305	301	Pass
H - Skull cap to back line	mm	41 to 46	45	Pass
I - Shoulder to elbow length	mm	330 to 345	344	Pass
J - Elbow rest height	mm	190 to 211	205	Pass
K - Buttock to knee length	mm	579 to 604	584	Pass
L - Popliteal length	mm	429 to 455	450	Pass
M - Knee pivot height	mm	485 to 500	495	Pass
N - Buttock popliteal length	mm	452 to 477	470	Pass
O - Chest depth	mm	213 to 229	228	Pass
P - Foot length	mm	251 to 267	255	Pass
V - Shoulder breadth	mm	422 to 437	431	Pass
W - Foot breadth	mm	91 to 107	106	Pass
Y - Chest circumference	mm	970 to 1001	994	Pass
Z - Waist circumference	mm	836 to 866	860	Pass
AA - Location for chest circumference	mm	429 to 434	431	Pass
BB - Location for waist circumference	mm	226 to 231	228	Pass
Overall Test Results				Pass

APPENDIX F

CHILD RESTRAINT SYSTEM

REPORT NUMBER TR-P25001-12-NC

**NEW CAR ASSESSMENT PROGRAM
FRONTAL BARRIER IMPACT TEST**

**NISSAN MOTOR COMPANY, LTD
2005 NISSAN MURANO S AWD
5-DOOR MPV**

NHTSA NUMBER: M55203

**PREPARED BY:
KARCO ENGINEERING, LLC
9270 HOLLY ROAD
ADELANTO, CALIFORNIA 92301**



FEBRUARY 1, 2005

FINAL REPORT

**PREPARED FOR:
U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
RULEMAKING
OFFICE OF CRASHWORTHINESS STANDARDS
MAIL CODE: NVS-111
400 SEVENTH STREET, SW, ROOM 5311
WASHINGTON, D.C. 20590**

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Date: 2/8/05

FINAL REPORT ACCEPTED BY:

Manager, New Car Assessment Program

Date of Acceptance

COTR, NCAP Frontal Impact Program

Date of Acceptance

Technical Report Documentation Page

1. Report No. TR-P25001-12-NC		2. Government Accession No.		3. Recipients Catalog No.	
4. Title and Subtitle Final Report of a Graco Hi-Back TurboBooster CRS NHTSA NO. M55203				5. Report Date February 1, 2005	
				6. Performing Organization Code KAR	
7. Authors Mr. Biren J. Patel, Project Engineer, Karco Mr. Frank Richardson, Program Manager, Karco				8. Performing Organization Report No. TR-P25001-12-NC	
9. Performing Organization Name and Address Karco Engineering, LLC 9270 Holly Rd. Adelanto, CA, 92301				10. Work Unit No.	
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12. Sponsoring Agency Name and Address U. S. Department of Transportation National Highway Traffic Safety Administration Rulemaking Office of Crashworthiness Standards Mail Code NPS-111 400 Seventh Street, SW, Room 5311 Washington, D.C 20590				13. Type of Report and Period Covered Final Test Report Option Year 4	
				14. Sponsoring Agency Code DOT/NHTSA/NRM/OCS	
15. Supplementary Notes					
16. Abstract A frontal test was conducted on the subject CRS Graco Hi-Back TurboBooster in conjunction with frontal NCAP testing on a 2005 Nissan Murano S AWD 5-Door MPV and in accordance with the specifications of the Office of Crashworthiness Standards Test Procedure for the determination of CRS crashworthiness. This test was conducted at Karco Engineering, LLC on February 1, 2005					
Measurement Description		Units		Left Rear	Right Rear
Head Injury Criteria (HIC) 36		N/A			2137.4
Head Injury Criteria (HIC) 15		N/A			1340.3
3 msec. Chest Clip		G's			71.7
Peak Chest Deflection		mm			-19.7
17. Key Words 56.3 km/h NCAP Frontal Barrier Impact Test New Car Assessment Program (NCAP) Final Report of a Graco Hi-Back TurboBooster CRS				18. Distribution of Statement Copies of this report available from: NHTSA Technical Reference Division National Highway Traffic Safety Admin. 400 Seventh St., SW, Room 5108 Washington, D.C. 20590	
19. Security Classification (this report) Unclassified		20. Security Classification (this page) Unclassified		21. No. of Pages 45	22. Price

Form DOT F1700.7 (8-72)

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SECTION F-1

PURPOSE AND SUMMARY OF TEST M55203

The purpose of this test is to obtain CRS performance data during an NCAP (35mph) frontal impact test.

The 56.52 km/h NCAP frontal impact test was conducted in accordance with the Office of Crashworthiness Standards (OCS) NCAP Laboratory Test Procedure.

SUMMARY

One ten year old child Hybrid III dummy (Position 3) was instrumented with head, chest, and pelvic tri-axial accelerometers, a chest displacement potentiometer, six-axis upper neck, lumbar, clavicle, ASIS and femur load cells. In addition a tri-axial accelerometer was installed on the CRS and the CRS seat back. Seat belt load cells were placed on the shoulder and lap belts, also shoulder belt spool-out and elongation was measured.

The right rear child dummy (Serial No. 011) was calibrated one test prior to this test. Child dummy calibration information is found in Section F-5.

CHILD DUMMY VALUES

Location	HIC 36 Values	HIC 15 Values	3 Msec. Chest Clip	Peak Chest Deflection
Right Rear Child (10 Yr.)	2137.4	1340.3	71.7	-19.7
Left Rear Child				

DATA SHEET NO.1
CRASH TEST SUMMARY

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

CHILD RESTRAINT SYSTEM INFORMATION

Description	Position #3 CRS	Position #4 CRS
Manufacturer	Graco Children's Products, Inc.	
Model Name	TurboBooster	
Serial No.	JJ 1202042319234	
Type	Hi-Back Booster	
Forward/Rearward	Forward	

VISIBLE DUMMY CONTACT POINTS

Description	Position #3 CRS	Position #4 CRS
Head Contact	Chin to Chest, Right Side Rear Door	
Chest Contact	None	
Abdomen Contact	None	
Left Knee Contact	None	
Right Knee Contact	None	
Left Toe Contact	Front Seat Back	
Right Toe Contact	Front Seat Back	

POST-TEST DOOR OPENINGS

Description	Position #3 CRS	Position #4 CRS
Front Door	Remained closed/latched, opened w/o tools	
Rear Door	Remained closed/latched, opened w/o tools	
Hatch/Other Door	Remained closed/latched, opened w/o tools	

POST-TEST SEAT DATA

Location	Seat Movement (mm)	Seat Back Failure
Left Rear		
Right Rear	0	Yes

CAMERA COVERAGE

Description	Standard	Additional
High Speed	2	2
Real Time	0	0
Total	2	2

DATA CHANNELS

Child Sensors	32
Belt Sensors	4
CRS Sensors	6
Total	42

DATA SHEET NO.2
CRS PARAMETER DATA

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

RETAINING CLIP INFORMATION

Description	Position #3 CRS	Position #4 CRS
Ret. Clip Movement		

CHILD HARNESS STRETCH

Description	Position #3 CRS	Position #4 CRS
Harness Stretch		

TEST VEHICLE WEIGHTS

	Units	As Delivered Weights (UVW)			As Tested Weights (ATW)		
		Front Axle	Rear Axle	Total	Front Axle	Rear Axle	Total
Left	kg	534	367	901	571	429	1000
Right	kg	533	365	898	566	427	993
Ratio	%	59.3	40.7	100	57.0	43.0	100
Totals	kg	1067	732	1799	1137	856	1993

TARGET TEST WEIGHT CALCULATION

Measured Parameter	Units	Value
Total Delivered Weight (UVW)	kg	1799
Weight of 2 P572 ATD's	kg	152
Rated Cargo/Luggage Wt. (RCLW)	kg	50
Calculated Vehicle Target Wt. (TVTW)	kg	2001

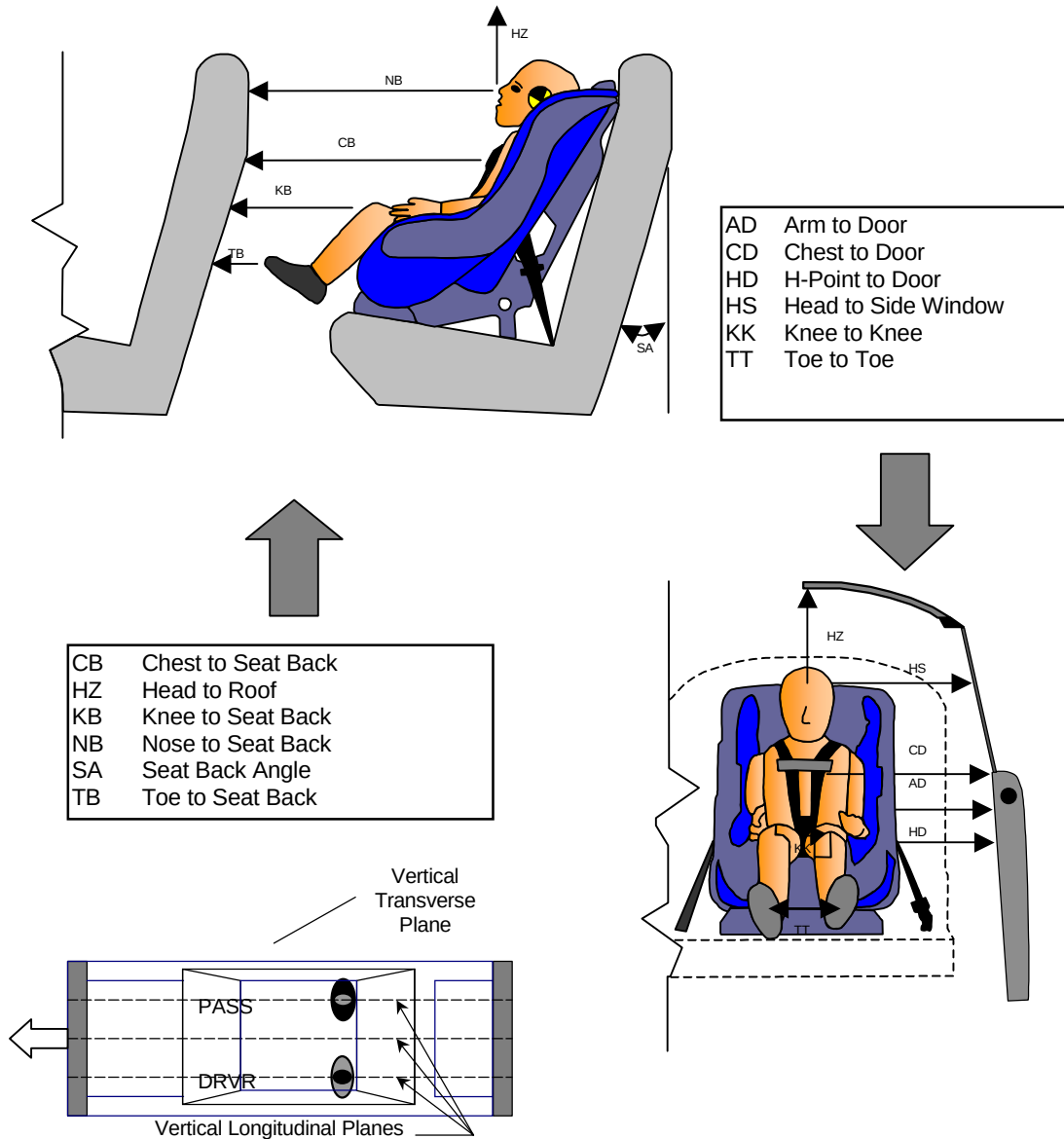
DATA SHEET NO.3 **CHILD DUMMY POSITIONING IN VEHICLE**

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program 2005 NHTSA 35mph NCAP

Test Date: 2/1/05



DUMMY MEASUREMENTS FOR REAR SEAT OCCUPANTS

DATA SHEET NO.3
CHILD DUMMY POSITIONING IN VEHICLE...(CONTINUED)

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

CHILD DUMMY POSITION MEASUREMENTS

Code	Measurement	Units	P3 CRS Serial No. 011			P4 CRS		
			Pre-Test	Post-Test	Diff.	Pre-Test	Post-Test	Diff.
SA	Seat Back Angle	deg.	23.8	0.2	-23.6			
HZ	Head to Roof (Z)	mm	260	345	85			
CD	Chest to Dash	mm	455	360	-95			
KK	Knee to Knee (Y)	mm	180	220	40			
HS	Head to Side Window	mm	365	310	-55			
HD	H-Point to Door (Y)	mm	335	335	0			
AD	Arm to Door	mm	275	55	-220			
NB	Nose to Seat Back	mm	595	280	-315			
CB	Chest to Seat Back	mm	590	400	-190			
FF	Foot to Foot	mm	105	220	115			
KB-Left	Knee to Seat Back	mm	355	355	0			
KB-Right	Knee to Seat Back	mm	373	310	-63			
TB-Left	Toe to Seat Back	mm	170	120	-50			
TB-Right	Toe to Seat Back	mm	180	165	-15			

DATA SHEET NO. 4 - 10 YEAR OLD HYBRID III ATD INJURY CRITERIA AND SENSOR DATA

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

HEAD PEAK ACCELERATIONS

Location	Axis	Units	Right Rear (10 Yr.)			
			Max	Time	Min	Time
Head CG	X	G's	12.9	168.0	-52.9	106.8
Head CG	Y	G's	13.5	94.1	-18.0	158.3
Head CG	Z	G's	95.7	83.3	-6.8	40.1
Head CG Resultant	N/A	G's	104.7	83.4		

HEAD INJURY CRITERIA (HIC)

Location	Right Rear (10 Yr.)			
	HIC	T ¹	T ²	Avg G
Head CG Primary (HIC36)	2137.4	65.2	101.2	81.1
Head CG Primary (HIC15)	1340.3	73.3	88.3	95.5

CHEST PEAK ACCELERATIONS

Location	Axis	Units	Right Rear (10 Yr.)			
			Max	Time	Min	Time
Chest CG	X	G's	2.1	200.0	-65.3	64.7
Chest CG	Y	G's	37.1	63.9	-9.0	159.9
Chest CG	Z	G's	22.2	68.3	-10.7	82.7
Chest CG Resultant	N/A	G's	75.6	64.3		

CHEST CLIP (3MSEC)

Location	Right Rear (10 Yr.)		
	CLIP	T ¹	T ²
Chest CG Primary	71.7	62.5	65.5

CHEST PEAK DISPLACEMENTS

Location	Axis	Units	Right Rear (10 Yr.)			
			Max	Time	Min	Time
Chest	X	MM	1.7	47.5	-19.7	89.6

PELVIC PEAK ACCELERATIONS

Location	Axis	Units	Right Rear (10 Yr.)			
			Max	Time	Min	Time
Pelvis	X	G's	14.5	123.9	-70.0	60.6
Pelvis	Y	G's	21.9	58.0	-21.4	122.0
Pelvis	Z	G's	6.7	173.9	-36.2	65.3
Pelvis Resultant	N/A	G's	77.9	65.2		

DATA SHEET NO. 4...(CONTINUED)

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

UPPER NECK PEAK FORCES AND MOMENTS

Location	Axis	Units	Right Rear (10 Yr.)			
			Max	Time	Min	Time
Neck Force	X	Newtons	159.6	40.2	-1531.9	83.5
Neck Force	Y	Newtons	468.8	103.5	-171.3	175.8
Neck Force	Z	Newtons	3418.1	83.3	-157.2	160.8
Neck Force Resultant	N/A	Newtons	3745.6	83.4		
Neck Moment	X	Nm	14.4	80.2	-28.5	105.4
Neck Moment	Y	Nm	20.1	184.3	-68.9	69.5
Neck Moment	Z	Nm	13.5	80.0	-0.4	37.4
Neck Moment Resultant	N/A	Nm	69.5	69.5		

CRS BELT SENSOR PEAK VALUES

Location	Axis	Units	Right Rear (10 Yr.)			
			Max	Time	Min	Time
Lap Belt Force	N/A	Newtons	5753.3	65.5	-173.8	189.7
Shoulder Belt Force	N/A	Newtons	10625.4	75.2	-24.5	167.3
Shoulder Belt Pullout	N/A	MM	139.3	98.7	-0.3	30.5
Shoulder Belt Elongation	N/A	MM/CM	0.0	0.0	0.0	0.0 ¹

1.) Not installed

CRS ACCELEROMETER PEAK VALUES

Location	Axis	Units	Right Rear (10 Yr.)			
			Max	Time	Min	Time
CRS	X	G's	36.1	104.2	-76.1	55.7
CRS	Y	G's	19.2	60.3	-21.2	74.3
CRS	Z	G's	18.4	145.0	-34.3	50.0
CRS Resultant	N/A	G's	78.2	55.7		
CRS Seat Back	X	G's	22.0	124.3	-96.3	64.9
CRS Seat Back	Y	G's	34.4	72.2	-100.3	63.2
CRS Seat Back	Z	G's	23.6	78.1	-14.6	120.0
CRS Seat Back Res.	N/A	G's	131.2	63.9		

FEMUR PEAK FORCES

Location	Axis	Units	Right Rear (10 Yr.)			
			Max	Time	Min	Time
Left Femur	Z	Newtons	2600.7	56.8	-168.5	167.0
Right Femur	Z	Newtons	1495.6	63.5	-141.8	134.5

DATA SHEET NO.5
CRS PERFORMANCE DATA

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

CRS PERFORMANCE DATA

Location	P3 CRS Serial No. 011		P4 CRS	
	Damage	Post-Test	Damage	Post-Test
Upper Tether Strap	No	None		
Upper Tether Buckle	No	None		
Upper Tether Hook	No	None		
Veh. Upper Tether Anchor	No	None		
Lower Anchor Strap	No	None		
Lower Anchor Buckle	No	None		
Lower Anchor Hooks	No	None		
Veh. Lower CRS Anchors	No	None		
5-Point Harness Connections	No	None		
Cracks on CRS	No	None		
Fabric Tears on CRS	No	None		
Vehicle Seat Structure	No	None		
Vehicle Seat Fabric Tears	No	None		

DATA SHEET NO.6
CRS CAMERA DATA

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV

NHTSA No.: M55203

Test Program 2005 NHTSA 35mph NCAP

Test Date: 2/1/05

CAMERA LOCATIONS

No.	Camera View	Location(mm)			Angle (Deg.)	Film Plane to Head	Lens (mm)	Speed (fps)
		X	Y	Z				
1	Right Rear Dummy Onboard	-2743	-776	-1524	-10	1414	13	1000
2	Left Rear Dummy Onboard	-2743	776	-1524	-10	763	12	1000

ADDITIONAL CAMERAS

1	Right Rear Dummy Onboard	-3200	-776	-1524	0	1285	8.5	1000
2	Right Rear Dummy Onboard	-3200	776	-1524	-10	483	8.5	1000

X = Barrier Face Y = Monorail Centerline Z = Ground DNR = Did Not Run NTM = No Time Marks

SECTION F-2

PHOTOGRAPHS

LIST OF PHOTOGRAPHS

Figure		Page
1	Close-up, Position 3 CRS Label	F-1
2	Pre-Test Frontal View of Position 3 CRS	F-2
3	Post-Test Frontal View of Position 3 CRS	F-3
4	Pre-Test Rear View of Position 3 CRS	F-4
5	Post-Test Rear View of Position 3 CRS	F-5
6	Pre-Test Left Side View of Position 3 CRS	F-6
7	Post-Test Left Side View of Position 3 CRS	F-7
8	Pre-Test Right Side View of Position 3 CRS	F-8
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10	Pre-Test Position 3 Front View (Head Position)	F-10
11	Post-Test Position 3 Front View (Head Position)	F-11
12	Pre-Test Position 3 Front View (Seat Belt Position)	F-12
13	Post-Test Position 3 Front View (Seat Belt Position)	F-13
14	Pre-Test Position 3 Right Side View	F-14
15	Post-Test Position 3 Right Side View	F-15
16	Pre-Test Position 3 Left Side View	F-16
17	Post-Test Position 3 Left Side View	F-17
18	Post-Test Position 3 Dummy Legs	F-18
19	Post-Test Position 3 Dummy Contact Point	F-19

MODEL 8495SRT NAME: TurboBooster
SERIAL JJ 1202042319234
Manufactured in 120204
GRACO CHILDREN'S PRODUCTS, INC.
EXTON, PA 19341 1-888-224-6549
Made in China

LAPZ00004B

Figure F2-1: Close-up, Position 3 CRS Label

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Figure F2-2: Pre-Test Frontal View of Position 3 CRS



Figure F2-3: Post-Test Frontal View of Position 3 CRS



Figure F2-4: Pre-Test Rear View of Position 3 CRS



Figure F2-5: Post-Test Rear View of Position 3 CRS



Figure F2-6: Pre-Test Left Side View of Position 3 CRS



Figure F2-7: Post-Test Left Side View of Position 3 CRS



Figure F2-8: Pre-Test Right Side View of Position 3 CRS



Figure F2-9: Post-Test Right Side View of Position 3 CRS



Figure F2-10: Pre-Test Position 3 Front View (Head Position)



Figure F2-11: Post-Test Position 3 Front View (Head Position)



Figure F2-12: Pre-Test Position 3 Front View (Seat Belt Position)



Figure F2-13: Post-Test Position 3 Front View (Seat Belt Position)



Figure F2-14: Pre-Test Position 3 Right Side View



Figure F2-15: Post-Test Position 3 Right Side View



Figure F2-16: Pre-Test Position 3 Left Side View



Figure F2-17: Post-Test Position 3 Left Side View



Figure F2-18: Post-Test Position 3 Dummy Legs



Figure F2-19: Post-Test Position 3 Dummy Contact Point

SECTION F-3

CHILD DUMMY RESPONSE AND CRS DATA TRACES

LIST OF DATA PLOTS

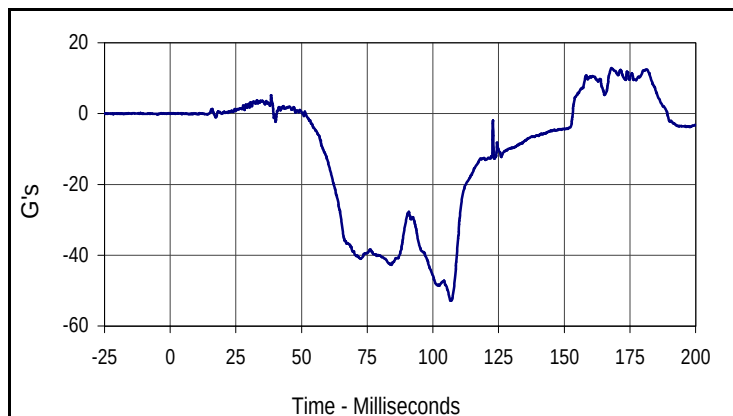
Data Plot		Page
F3-1	Right Rear (10 Yr.) Head X	F3-1
	Right Rear (10 Yr.) Head Y	F3-1
	Right Rear (10 Yr.) Head Z	F3-1
	Right Rear (10 Yr.) Head Resultant	F3-1
F3-2	Right Rear (10 Yr.) Upper Neck Force X	F3-2
	Right Rear (10 Yr.) Upper Neck Force Y	F3-2
	Right Rear (10 Yr.) Upper Neck Force Z	F3-2
	Right Rear (10 Yr.) Upper Neck Force Resultant	F3-2
F3-3	Right Rear (10 Yr.) Upper Neck Moment X	F3-3
	Right Rear (10 Yr.) Upper Neck Moment Y	F3-3
	Right Rear (10 Yr.) Upper Neck Moment Z	F3-3
	Right Rear (10 Yr.) Upper Neck Moment Resultant	F3-3
F3-4	Right Rear (10 Yr.) Chest X	F3-4
	Right Rear (10 Yr.) Chest Y	F3-4
	Right Rear (10 Yr.) Chest Z	F3-4
	Right Rear (10 Yr.) Chest Resultant	F3-4
F3-5	Right Rear (10 Yr.) Chest Deflection	F3-5
F3-6	Right Rear (10 Yr.) Pelvis X	F3-6
	Right Rear (10 Yr.) Pelvis Y	F3-6
	Right Rear (10 Yr.) Pelvis Z	F3-6
	Right Rear (10 Yr.) Pelvis Resultant	F3-6
F3-7	Right Rear (10 Yr.) Left Femur Force	F3-7
	Right Rear (10 Yr.) Right Femur Force	F3-7
F3-8	Right Rear (10 Yr.) Lumbar Force X	F3-8
	Right Rear (10 Yr.) Lumbar Force Y	F3-8
	Right Rear (10 Yr.) Lumbar Force Z	F3-8
	Right Rear (10 Yr.) Lumbar Force Resultant	F3-8
F3-9	Right Rear (10 Yr.) Lumbar Moment X	F3-9
	Right Rear (10 Yr.) Lumbar Moment Y	F3-9
	Right Rear (10 Yr.) Lumbar Moment Z	F3-9
	Right Rear (10 Yr.) Lumbar Moment Resultant	F3-9
F3-10	Right Rear (10 Yr.) Left Clavicle Force X	F3-10
	Right Rear (10 Yr.) Left Clavicle Force Z	F3-10
	Right Rear (10 Yr.) Right Clavicle Force X	F3-10
	Right Rear (10 Yr.) Right Clavicle Force Z	F3-10

LIST OF DATA PLOTS...(CONTINUED)

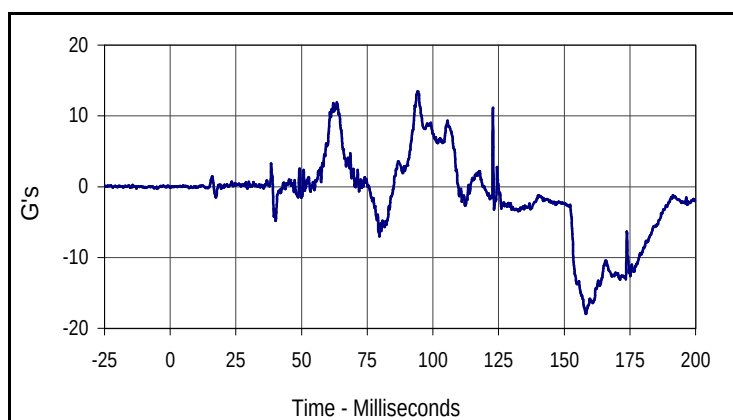
Data Plot		Page
F3-11	Right Rear (10 Yr.) Left Upper ASIS Force	F3-11
	Right Rear (10 Yr.) Left Lower ASIS Force	F3-11
	Right Rear (10 Yr.) Right Upper ASIS Force	F3-11
	Right Rear (10 Yr.) Right Lower ASIS Force	F3-11
F3-12	Right Rear (10 Yr.) Lap Belt Force	F3-12
	Right Rear (10 Yr.) Shoulder Belt Force	F3-12
	Right Rear (10 Yr.) Shoulder Belt Pullout	F3-12
	Right Rear (10 Yr.) Lap Belt Elongation	F3-12
F3-13	Right Rear (10 Yr.) CRS X	F3-13
	Right Rear (10 Yr.) CRS Y	F3-13
	Right Rear (10 Yr.) CRS Z	F3-13
	Right Rear (10 Yr.) CRS Resultant	F3-13
F3-14	Right Rear (10 Yr.) CRS Seat Back X	F3-14
	Right Rear (10 Yr.) CRS Seat Back Y	F3-14
	Right Rear (10 Yr.) CRS Seat Back Z	F3-14
	Right Rear (10 Yr.) CRS Seat Back Resultant	F3-14

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

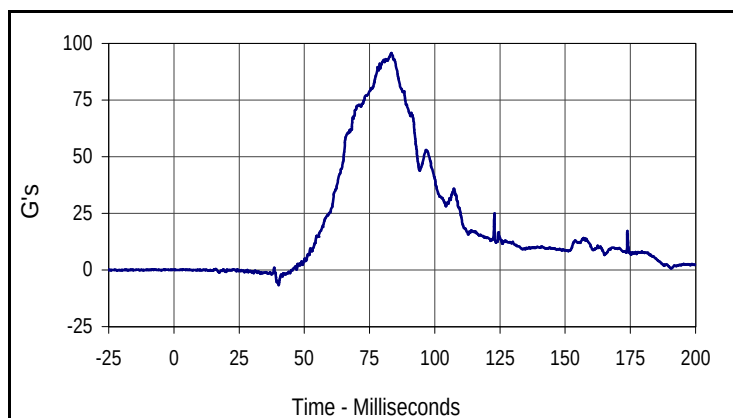
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 NHTSA No.: M55203



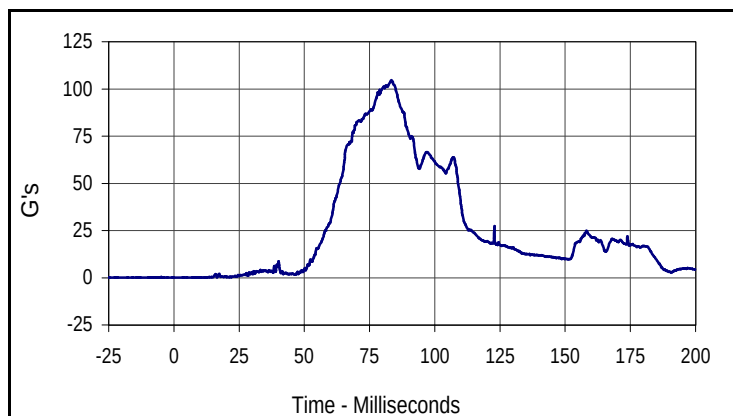
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Right Rear (10 Yr.) Head X			
CURNO	Type	SAE Class	Units
134	FIL	1000	G's
Max	Time	Min	Time
12.9	168.0	-52.9	106.8



Curve Description			
Right Rear (10 Yr.) Head Y			
CURNO	Type	SAE Class	Units
135	FIL	1000	G's
Max	Time	Min	Time
13.5	94.1	-18.0	158.3



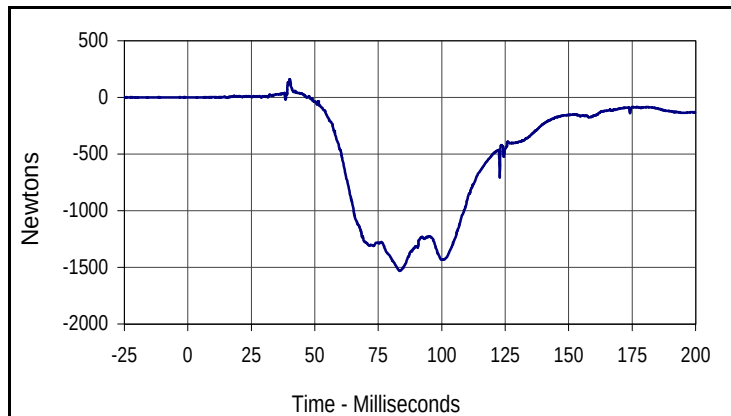
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Right Rear (10 Yr.) Head Z			
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Max	Time	Min	Time
95.7	83.3	-6.8	40.1



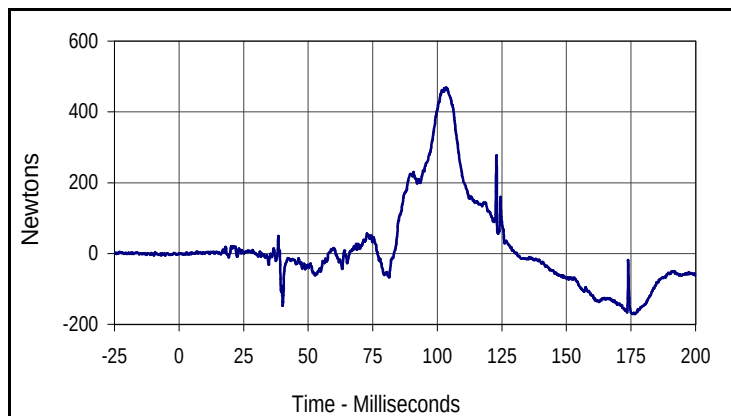
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Right Rear (10 Yr.) Head Resultant			
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134	RES	1000	G's
Max	Time	Min	Time
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Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

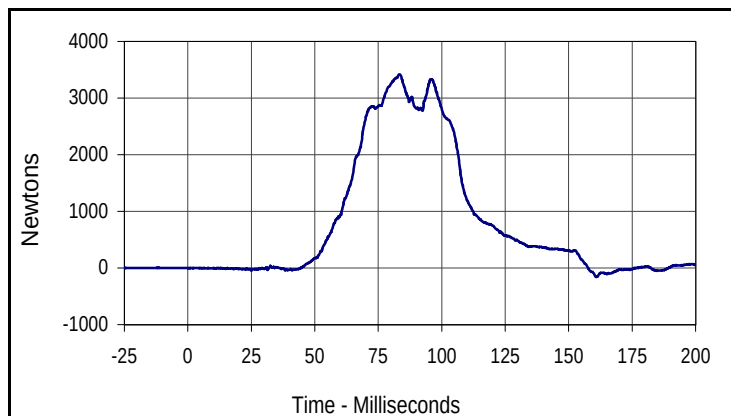
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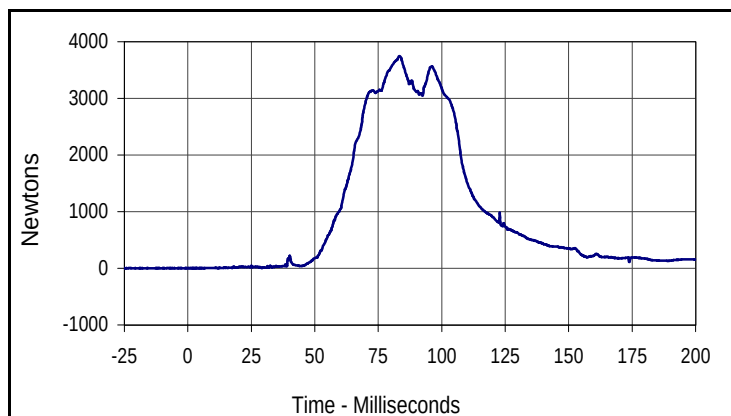
Curve Description			
Right Rear (10 Yr.) Upper Neck Force X			
CURNO	Type	SAE Class	Units
137	FIL	1000	Newtons
Max	Time	Min	Time
159.6	40.2	-1531.9	83.5



Curve Description			
Right Rear (10 Yr.) Upper Neck Force Y			
CURNO	Type	SAE Class	Units
138	FIL	1000	Newtons
Max	Time	Min	Time
468.8	103.5	-171.3	175.8



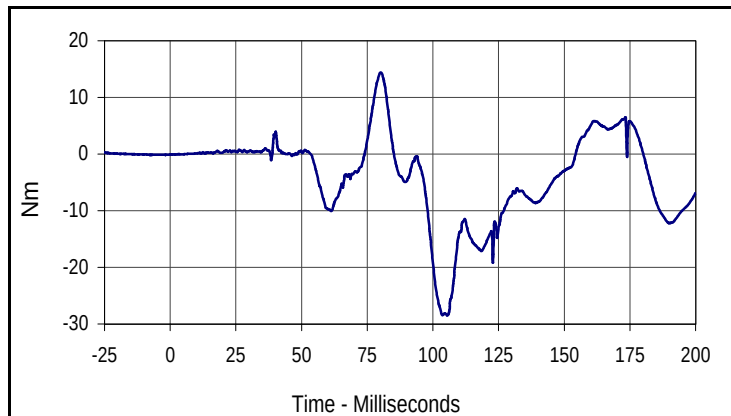
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Right Rear (10 Yr.) Upper Neck Force Z			
CURNO	Type	SAE Class	Units
139	FIL	1000	Newtons
Max	Time	Min	Time
3418.1	83.3	-157.2	160.8



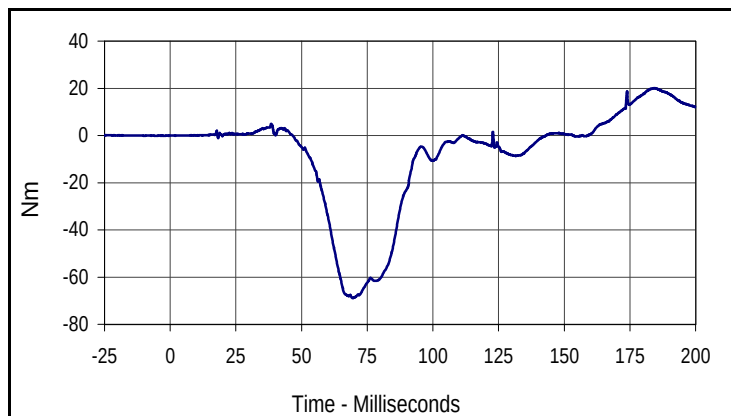
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Right Rear (10 Yr.) Upper Neck Force Res.			
CURNO	Type	SAE Class	Units
137	RES	1000	Newtons
Max	Time	Min	Time
3745.6	83.4	1.5	4.2

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

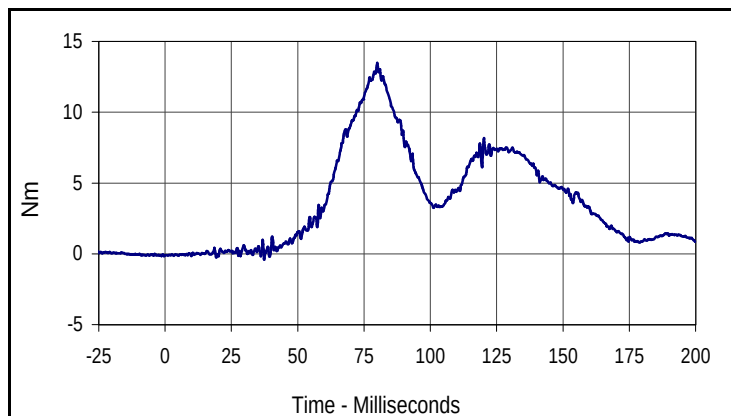
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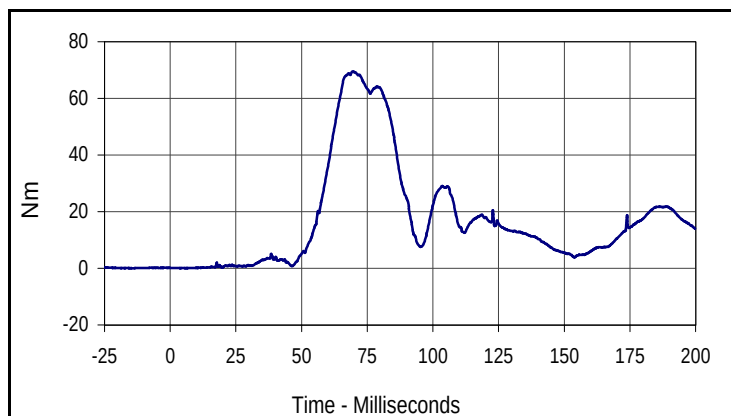
Curve Description			
Right Rear (10 Yr.) Upper Neck Moment X			
CURNO	Type	SAE Class	Units
140	FIL	600	Nm
Max	Time	Min	Time
14.4	80.2	-28.5	105.4



Curve Description			
Right Rear (10 Yr.) Upper Neck Moment Y			
CURNO	Type	SAE Class	Units
141	FIL	600	Nm
Max	Time	Min	Time
20.1	184.3	-68.9	69.5



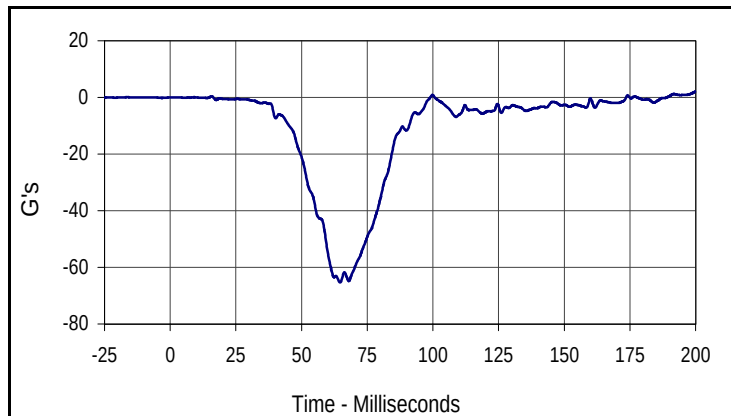
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Right Rear (10 Yr.) Upper Neck Moment Z			
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142	FIL	600	Nm
Max	Time	Min	Time
13.5	80.0	-0.4	37.4



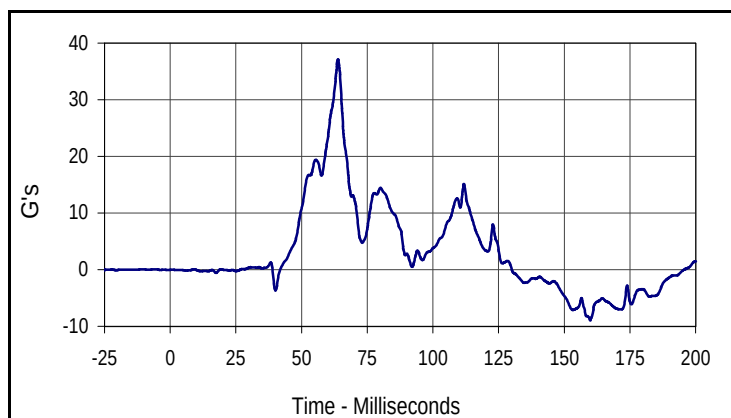
Curve Description			
Right Rear (10 Yr.) Upper Neck Moment Res.			
CURNO	Type	SAE Class	Units
140	RES	600	Nm
Max	Time	Min	Time
69.5	69.5	0.0	3.8

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

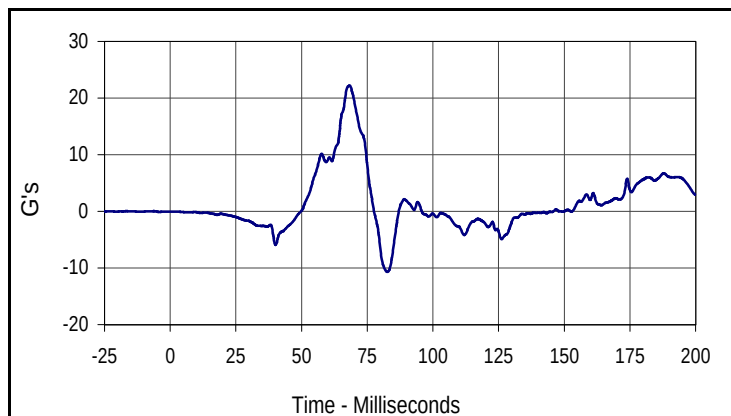
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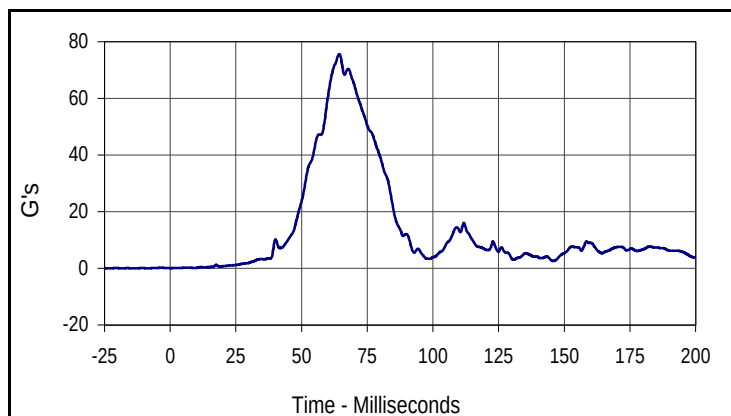
Curve Description			
Right Rear (10 Yr.) Chest X			
CURNO	Type	SAE Class	Units
143	FIL	180	G's
Max	Time	Min	Time
2.1	200.0	-65.3	64.7



Curve Description			
Right Rear (10 Yr.) Chest Y			
CURNO	Type	SAE Class	Units
144	FIL	180	G's
Max	Time	Min	Time
37.1	63.9	-9.0	159.9



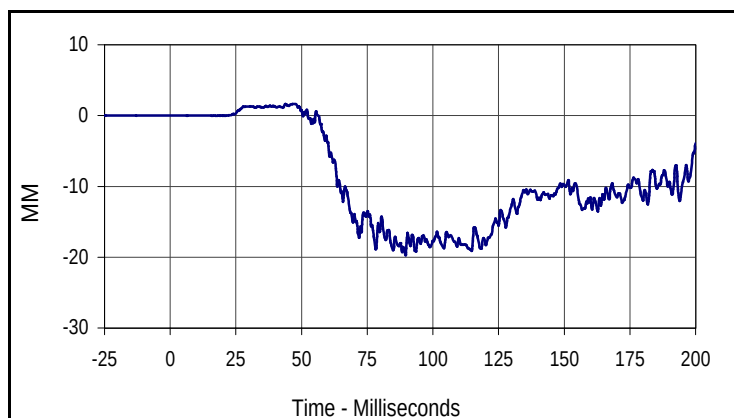
Curve Description			
Right Rear (10 Yr.) Chest Z			
CURNO	Type	SAE Class	Units
145	FIL	180	G's
Max	Time	Min	Time
22.2	68.3	-10.7	82.7



Curve Description			
Right Rear (10 Yr.) Chest Resultant			
CURNO	Type	SAE Class	Units
143	RES	180	G's
Max	Time	Min	Time
75.6	64.3	0.1	0.3

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

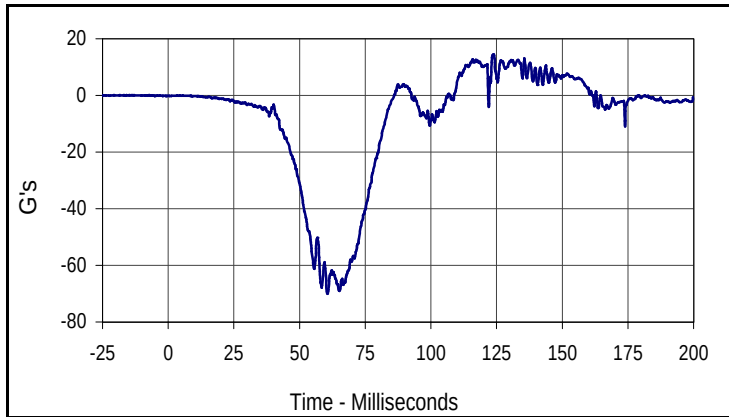
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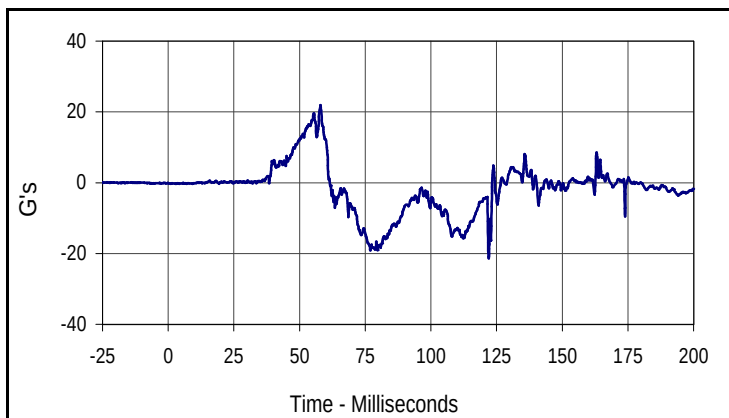
Curve Description			
Right Rear (10 Yr.) Chest Deflection			
CURNO	Type	SAE Class	Units
146	FIL	600	MM
Max	Time	Min	Time
1.7	47.5	-19.7	89.6

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

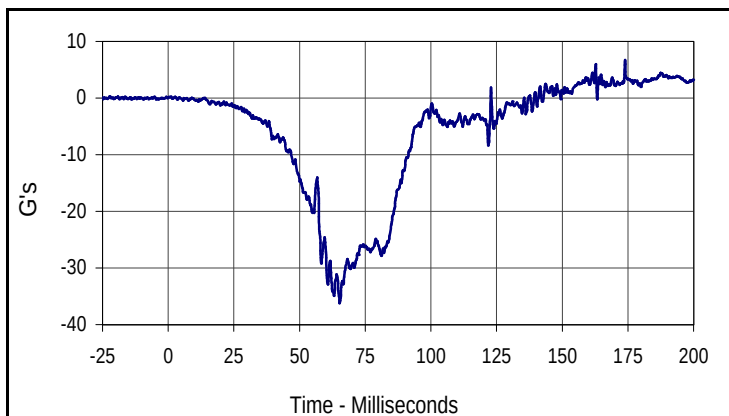
Test Date: 2/1/05
 NHTSA No.: M55203



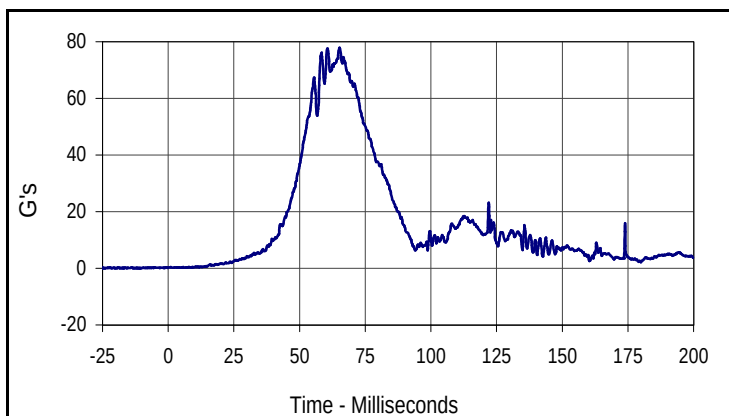
Curve Description			
Right Rear (10 Yr.) Pelvis X			
CURNO	Type	SAE Class	Units
147	FIL	1000	G's
Max	Time	Min	Time
14.5	123.9	-70.0	60.6



Curve Description			
Right Rear (10 Yr.) Pelvis Y			
CURNO	Type	SAE Class	Units
148	FIL	1000	G's
Max	Time	Min	Time
21.9	58.0	-21.4	122.0



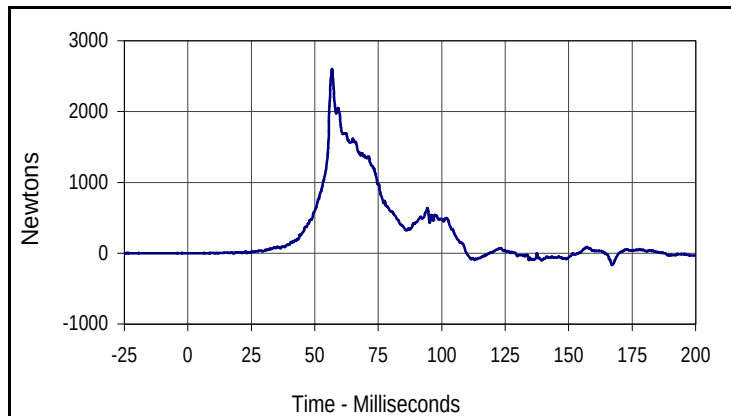
Curve Description			
Right Rear (10 Yr.) Pelvis Z			
CURNO	Type	SAE Class	Units
149	FIL	1000	G's
Max	Time	Min	Time
6.7	173.9	-36.2	65.3



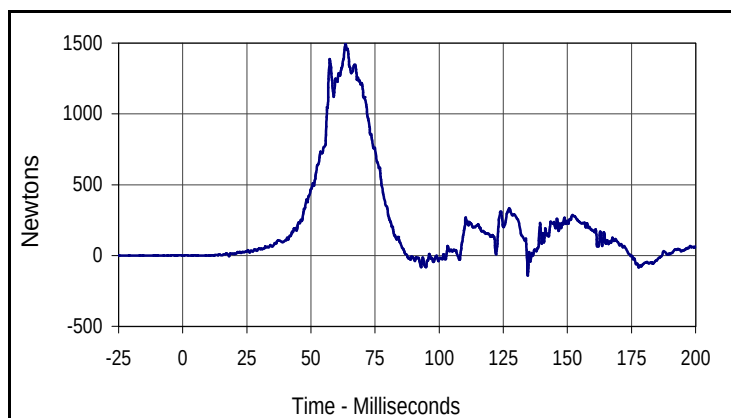
Curve Description			
Right Rear (10 Yr.) Pelvis Resultant			
CURNO	Type	SAE Class	Units
147	RES	1000	G's
Max	Time	Min	Time
77.9	65.2	0.2	1.4

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

Test Date: 2/1/05
 NHTSA No.: M55203



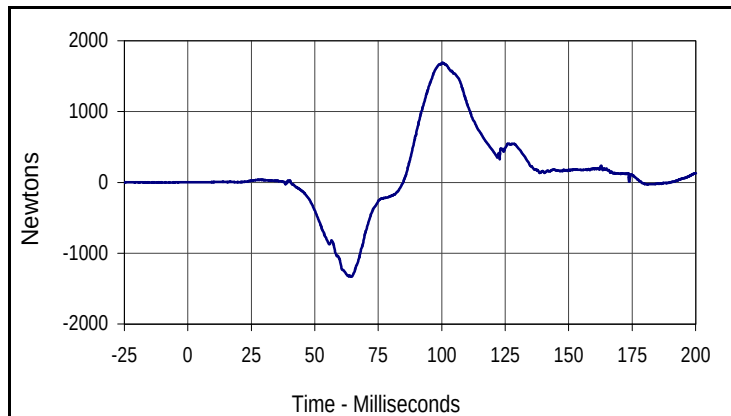
Curve Description			
Right Rear (10 Yr.) Left Femur Force			
CURNO	Type	SAE Class	Units
150	FIL	600	Newtons
Max	Time	Min	Time
2600.7	56.8	-168.5	167.0



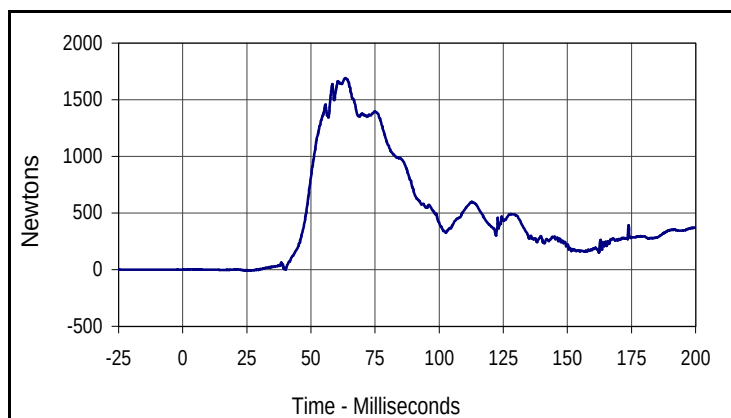
Curve Description			
Right Rear (10 Yr.) Right Femur Force			
CURNO	Type	SAE Class	Units
151	FIL	600	Newtons
Max	Time	Min	Time
1495.6	63.5	-141.8	134.5

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

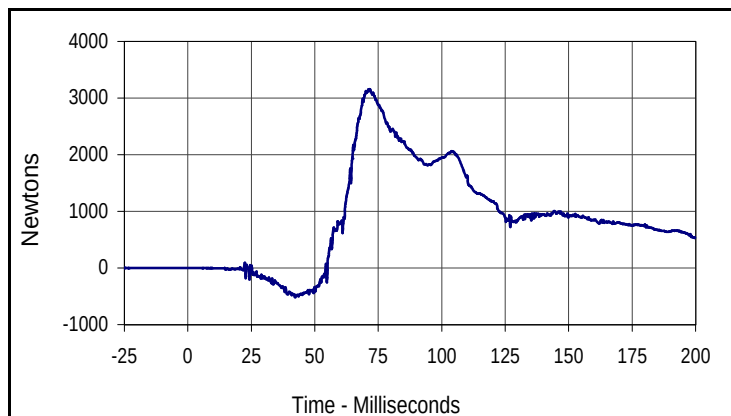
Test Date: 2/1/05
 NHTSA No.: M55203



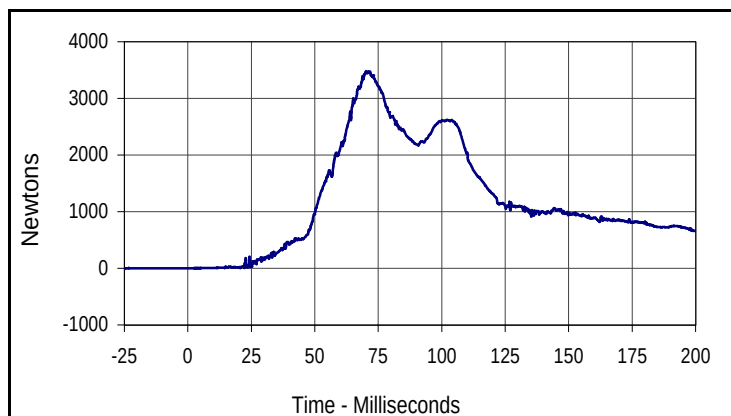
Curve Description			
Right Rear (10 Yr.) Lumbar Force X			
CURNO	Type	SAE Class	Units
152	FIL	1000	Newtons
Max	Time	Min	Time
1688.5	100.3	-1332.0	64.3



Curve Description			
Right Rear (10 Yr.) Lumbar Force Y			
CURNO	Type	SAE Class	Units
153	FIL	1000	Newtons
Max	Time	Min	Time
1693.0	63.4	-9.6	25.8



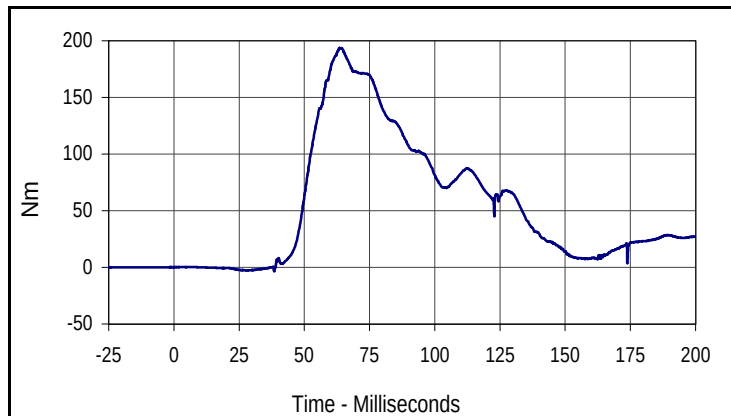
Curve Description			
Right Rear (10 Yr.) Lumbar Force Z			
CURNO	Type	SAE Class	Units
154	FIL	1000	Newtons
Max	Time	Min	Time
3155.4	71.7	-517.2	42.3



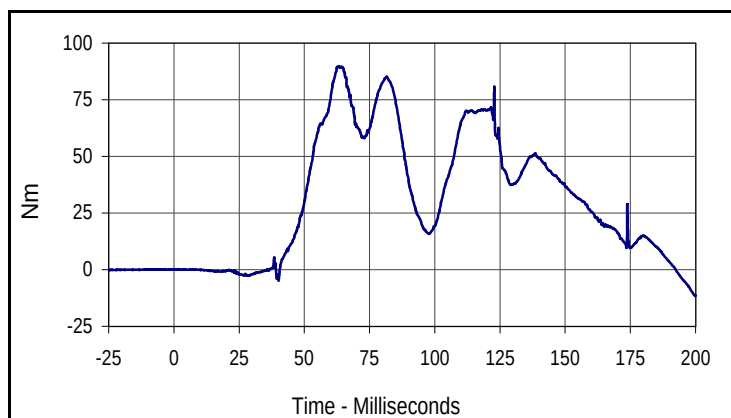
Curve Description			
Right Rear (10 Yr.) Lumbar Force Resultant			
CURNO	Type	SAE Class	Units
152	RES	1000	Newtons
Max	Time	Min	Time
3479.6	70.2	1.4	0.8

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

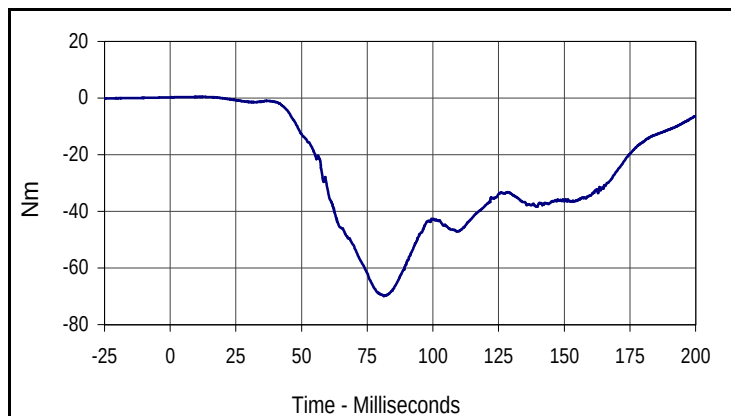
Test Date: 2/1/05
 NHTSA No.: M55203



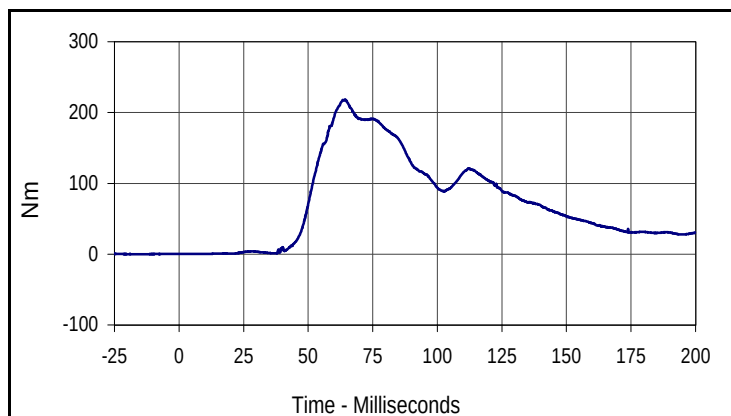
Curve Description			
Right Rear (10 Yr.) Lumbar Moment X			
CURNO	Type	SAE Class	Units
155	FIL	1000	Nm
Max	Time	Min	Time
193.7	63.5	-3.3	38.4



Curve Description			
Right Rear (10 Yr.) Lumbar Moment Y			
CURNO	Type	SAE Class	Units
156	FIL	1000	Nm
Max	Time	Min	Time
89.8	63.2	-11.7	200.0



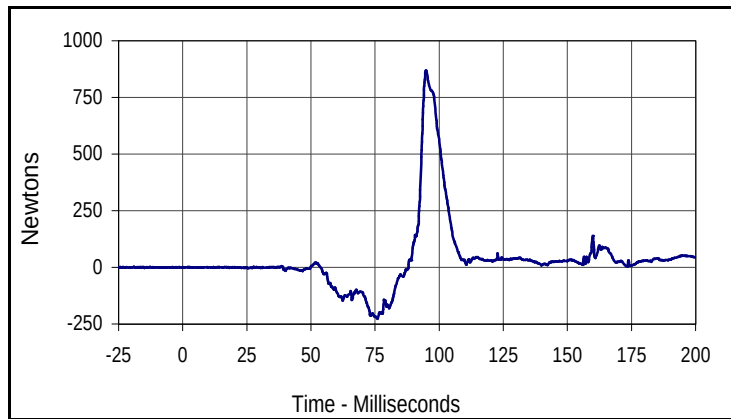
Curve Description			
Right Rear (10 Yr.) Lumbar Moment Z			
CURNO	Type	SAE Class	Units
157	FIL	1000	Nm
Max	Time	Min	Time
0.4	12.6	-69.9	81.3



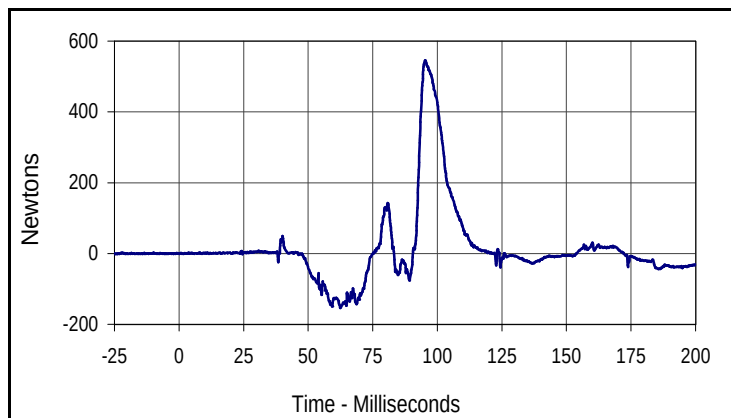
Curve Description			
Right Rear (10 Yr.) Lumbar Moment Resultant			
CURNO	Type	SAE Class	Units
155	RES	1000	Nm
Max	Time	Min	Time
218.0	64.3	0.3	0.9

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

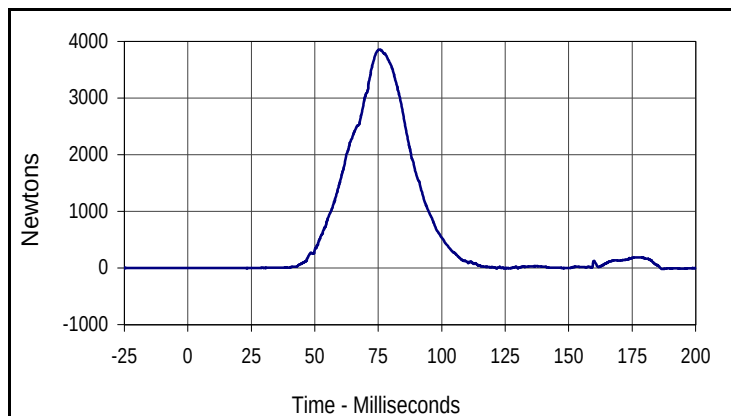
Test Date: 2/1/05
 NHTSA No.: M55203



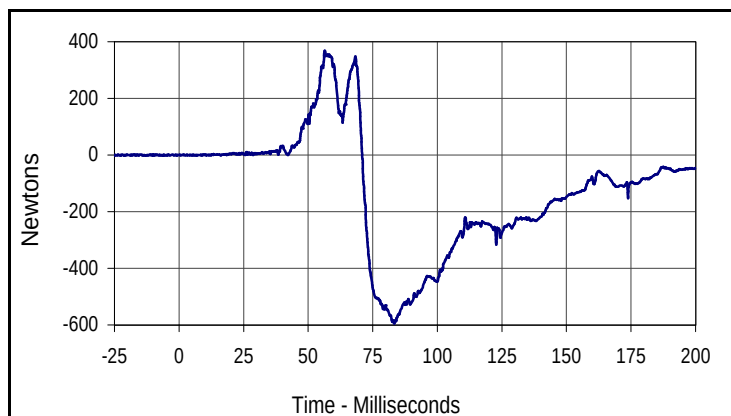
Curve Description			
Right Rear (10 Yr.) Left Clavicle Force X			
CURNO	Type	SAE Class	Units
158	FIL	1000	Newtons
Max	Time	Min	Time
869.2	94.9	-227.6	75.9



Curve Description			
Right Rear (10 Yr.) Left Clavicle Force Z			
CURNO	Type	SAE Class	Units
159	FIL	1000	Newtons
Max	Time	Min	Time
545.6	95.3	-153.9	62.5



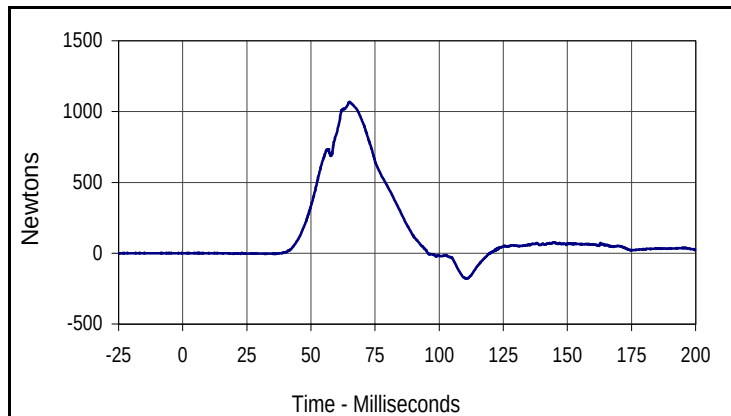
Curve Description			
Right Rear (10 Yr.) Right Clavicle Force X			
CURNO	Type	SAE Class	Units
160	FIL	1000	Newtons
Max	Time	Min	Time
3855.0	75.5	-17.6	186.8



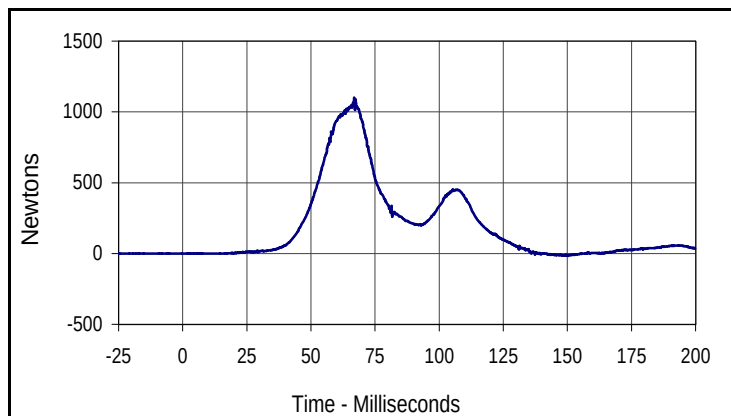
Curve Description			
Right Rear (10 Yr.) Right Clavicle Force Z			
CURNO	Type	SAE Class	Units
161	FIL	1000	Newtons
Max	Time	Min	Time
368.5	56.4	-594.7	83.3

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

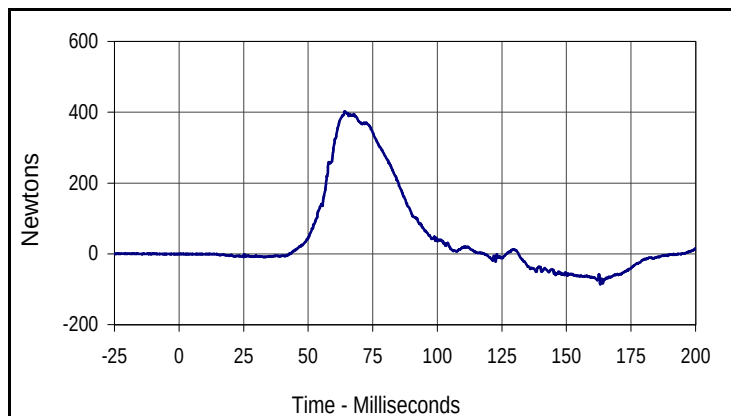
Test Date: 2/1/05
 NHTSA No.: M55203



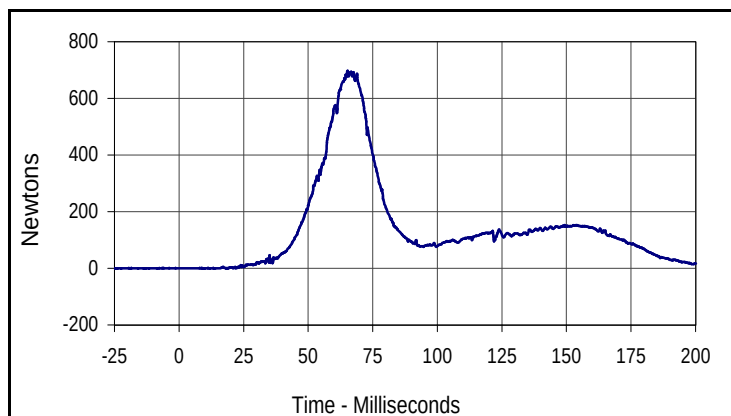
Curve Description			
Right Rear (10 Yr.) Left Upper ASIS Force			
CURNO	Type	SAE Class	Units
162	FIL	1000	Newtons
Max	Time	Min	Time
1068.1	64.9	-178.7	110.5



Curve Description			
Right Rear (10 Yr.) Left Lower ASIS Force			
CURNO	Type	SAE Class	Units
163	FIL	1000	Newtons
Max	Time	Min	Time
1099.9	66.9	-16.7	149.7



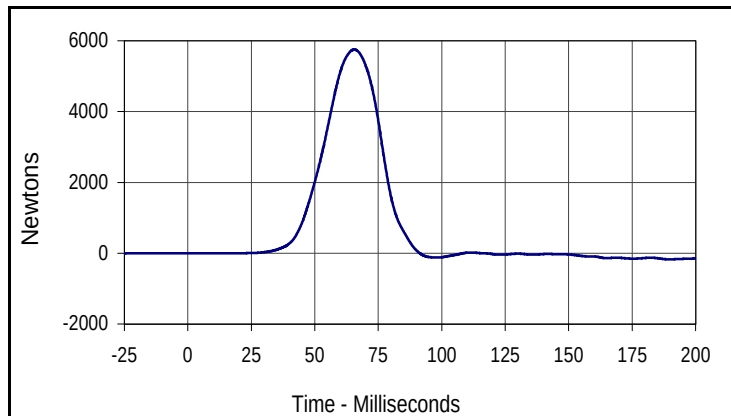
Curve Description			
Right Rear (10 Yr.) Right Upper ASIS Force			
CURNO	Type	SAE Class	Units
164	FIL	1000	Newtons
Max	Time	Min	Time
401.8	64.1	-85.9	163.1



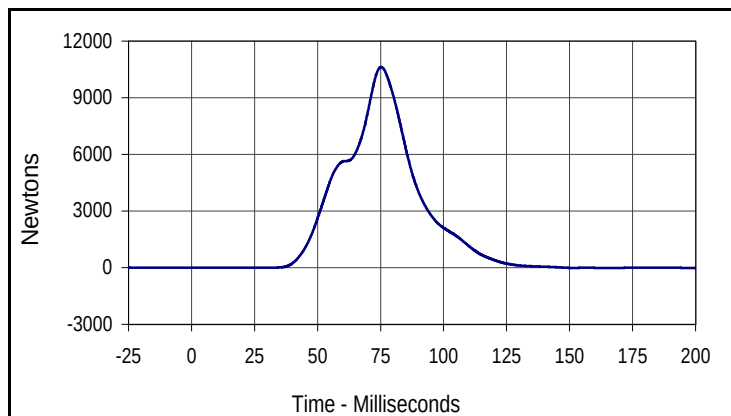
Curve Description			
Right Rear (10 Yr.) Right Lower ASIS Force			
CURNO	Type	SAE Class	Units
165	FIL	1000	Newtons
Max	Time	Min	Time
697.2	65.3	-1.1	18.9

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

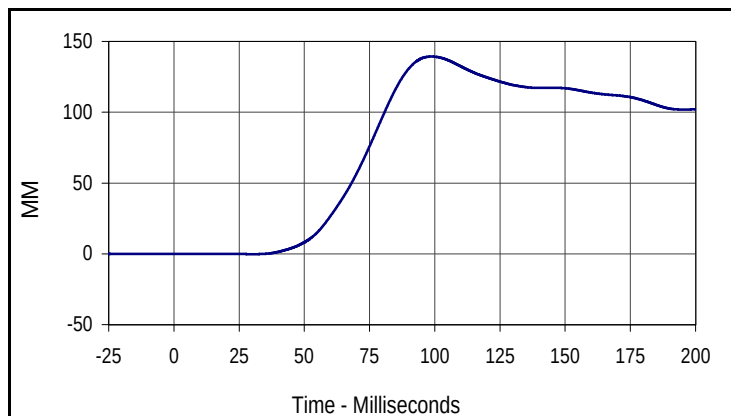
Test Date: 2/1/05
 NHTSA No.: M55203



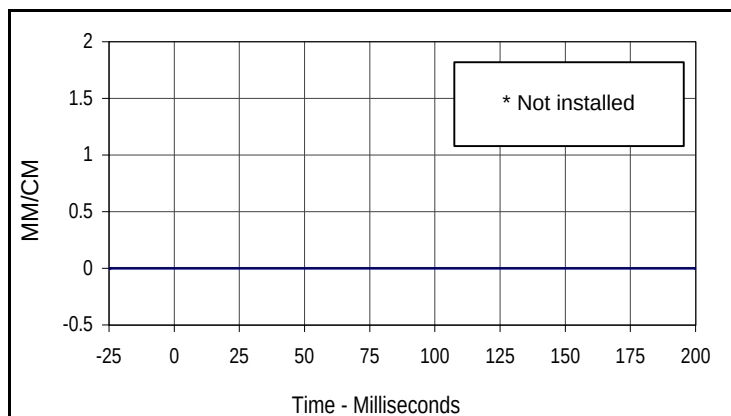
Curve Description			
Right Rear (10 Yr.) Lap Belt Force			
CURNO	Type	SAE Class	Units
166	FIL	60	Newtons
Max	Time	Min	Time
5753.3	65.5	-173.8	189.7



Curve Description			
Right Rear (10 Yr.) Shoulder Belt Force			
CURNO	Type	SAE Class	Units
167	FIL	60	Newtons
Max	Time	Min	Time
10625.4	75.2	-24.5	167.3



Curve Description			
Right Rear (10 Yr.) Shoulder Belt Pullout			
CURNO	Type	SAE Class	Units
168	FIL	60	MM
Max	Time	Min	Time
139.3	98.7	-0.3	30.5

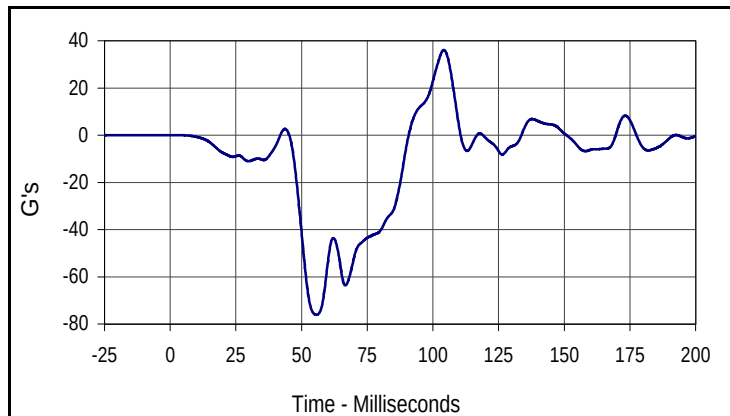


Curve Description			
Right Rear (10 Yr.) Shoulder Belt Elongation			
CURNO	Type	SAE Class	Units
169	FIL	60	MM/CM
Max	Time	Min	Time
0.00	0.0	0.00	0.0

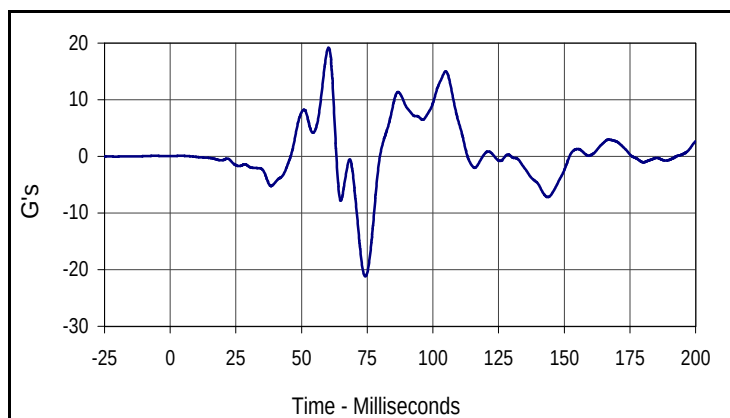
* Not installed

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

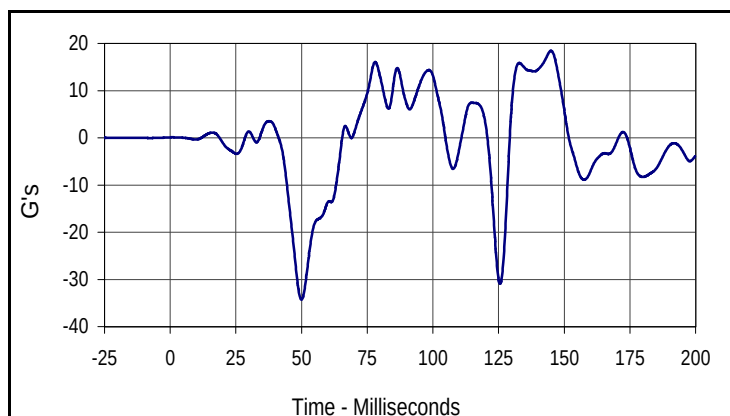
Test Date: 2/1/05
 NHTSA No.: M55203



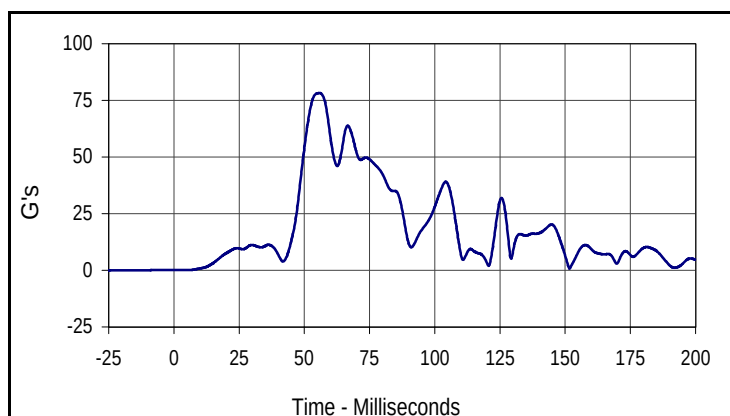
Curve Description			
Right Rear (10 Yr.) CRS X			
CURNO	Type	SAE Class	Units
170	FIL	60	G's
Max	Time	Min	Time
36.1	104.2	-76.1	55.7



Curve Description			
Right Rear (10 Yr.) CRS Y			
CURNO	Type	SAE Class	Units
171	FIL	60	G's
Max	Time	Min	Time
19.2	60.3	-21.2	74.3



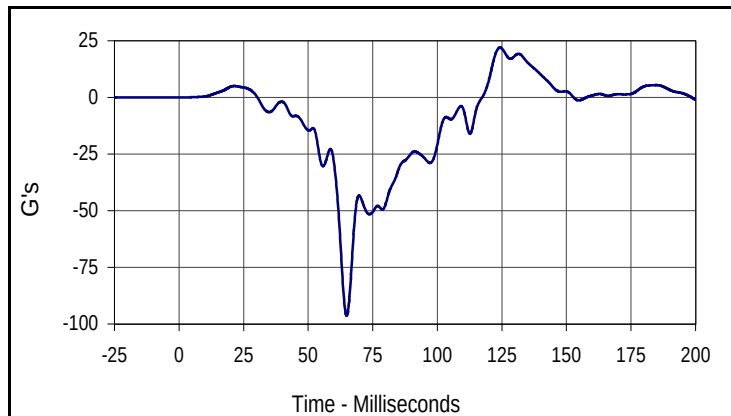
Curve Description			
Right Rear (10 Yr.) CRS Z			
CURNO	Type	SAE Class	Units
172	FIL	60	G's
Max	Time	Min	Time
18.4	145.0	-34.3	50.0



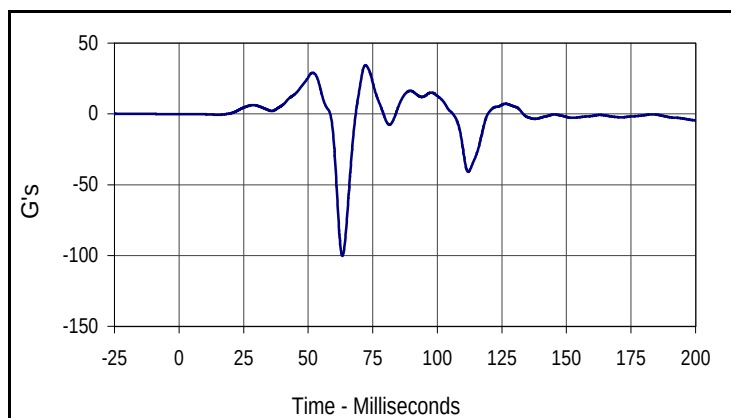
Curve Description			
Right Rear (10 Yr.) CRS Resultant			
CURNO	Type	SAE Class	Units
170	RES	60	G's
Max	Time	Min	Time
78.2	55.7	0.1	5.2

Test Vehicle: 2005 Nissan Murano S AWD 5-Door MPV
 Test Program: 2005 NHTSA 35mph NCAP

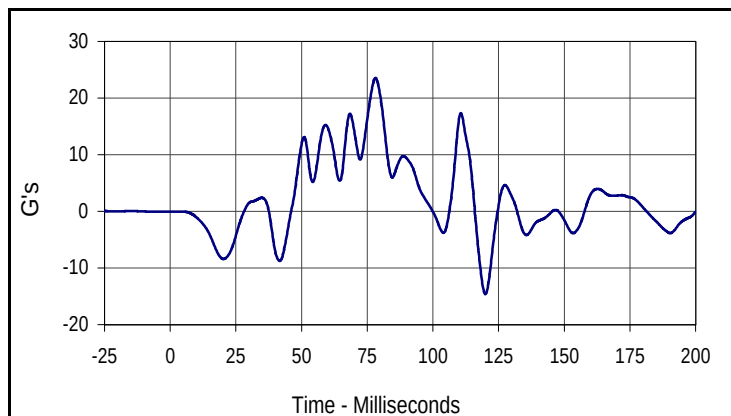
Test Date: 2/1/05
 NHTSA No.: M55203



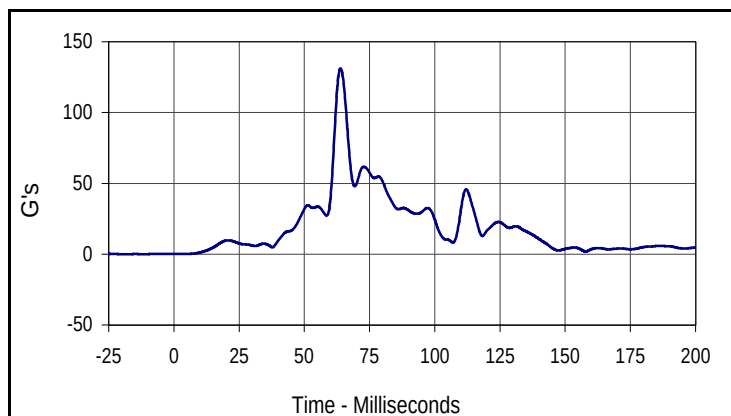
Curve Description			
Right Rear (10 Yr.) CRS Seat Back X			
CURNO	Type	SAE Class	Units
173	FIL	60	G's
Max	Time	Min	Time
22.0	124.3	-96.3	64.9



Curve Description			
Right Rear (10 Yr.) CRS Seat Back Y			
CURNO	Type	SAE Class	Units
174	FIL	60	G's
Max	Time	Min	Time
34.4	72.2	-100.3	63.2



Curve Description			
Right Rear (10 Yr.) CRS Seat Back Z			
CURNO	Type	SAE Class	Units
175	FIL	60	G's
Max	Time	Min	Time
23.6	78.1	-14.6	120.0



Curve Description			
Right Rear (10 Yr.) CRS Seat Back Resultant			
CURNO	Type	SAE Class	Units
173	RES	60	G's
Max	Time	Min	Time
131.2	63.9	0.2	4.6

SECTION F-4

CHILD DUMMY INSTRUMENTATION INFORMATION

2005 NHTSA 35mph NCAP
Instrumentation Data Channel Assignments
Right Rear Child A.T.D. Serial Number 011 (10 Yr.)
2/1/05
2005 Nissan Murano S AWD 5-Door MPV

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
134	HEAD CG	X	GPAC047	Accel.,1/2 bridge	Endevco	7264-2000	G
135	HEAD CG	Y	GPAC048	Accel.,1/2 bridge	Endevco	7264-2000	G
136	HEAD CG	Z	GPAC049	Accel.,1/2 bridge	Endevco	7264-2000	G
137	UPPER NECK FORCE	X	10UNFX	Load cell, six axis neck	R. A. Denton	IF-234	N
138	UPPER NECK FORCE	Y	10UNFY	Load cell, six axis neck	R. A. Denton	IF-234	N
139	UPPER NECK FORCE	Z	10UNFZ	Load cell, six axis neck	R. A. Denton	IF-234	N
140	UPPER NECK MOMENT	X	10UNMX	Load cell, six axis neck	R. A. Denton	IF-234	Nm
141	UPPER NECK MOMENT	Y	10UNMY	Load cell, six axis neck	R. A. Denton	IF-234	Nm
142	UPPER NECK MOMENT	Z	10UNMZ	Load cell, six axis neck	R. A. Denton	IF-234	Nm
143	CHEST CG	X	2116-A01	Accel., Full Bridge	Entran	2000JF	G
144	CHEST CG	Y	2116-A06	Accel., Full Bridge	Entran	2000JF	G
145	CHEST CG	Z	2116-A07	Accel., Full Bridge	Entran	2000JF	G
146	CHEST DISPLACEMENT	X	10CP	Rotary Pot Chest	Servo	14CBI	MM
147	PELVIS	X	2116-N07	Accel., Full Bridge	Entran	2000JF	G
148	PELVIS	Y	2116-A03	Accel., Full Bridge	Entran	2000JF	G
149	PELVIS	Z	2116-A17	Accel., Full Bridge	Entran	2000JF	G
150	LEFT FEMUR FORCE	Z	KEFF001	Load cell, Femur	R.A. Denton	2090	N
151	RIGHT FEMUR FORCE	Z	KEFF002	Load cell, Femur	R.A. Denton	2090	N
152	LUMBAR FORCE	X	LUMFX	Load cell, Lumbar	R.A. Denton	2431	N
153	LUMBAR FORCE	Y	LUMFY	Load cell, Lumbar	R.A. Denton	2431	N
154	LUMBAR FORCE	Z	LUMFZ	Load cell, Lumbar	R.A. Denton	2431	N
155	LUMBAR MOMENT	X	LUMMX	Load cell, Lumbar	R.A. Denton	2431	N
156	LUMBAR MOMENT	Y	LUMMY	Load cell, Lumbar	R.A. Denton	2431	N
157	LUMBAR MOMENT	Z	LUMMZ	Load cell, Lumbar	R.A. Denton	2431	N

**2005 NHTSA 35mph NCAP
Instrumentation Data Channel Assignments
Right Rear Child A.T.D. Serial Number 011 (10 Yr.)
2/1/05
2005 Nissan Murano S AWD 5-Door MPV**

CH.	LOCATION	AXIS	IDENT. NO.	DESCRIPTION	MFR	MODEL	UNITS
158	CLAVICLE FORCE	X	CLFX	Load cell, Clavicle	R.A. Denton	5400J	N
159	CLAVICLE FORCE	Z	CLFY	Load cell, Clavicle	R.A. Denton	5400J	N
160	CLAVICLE FORCE	X	CLRFX	Load cell, Clavicle	R.A. Denton	5410J	N
161	CLAVICLE FORCE	Z	CLRFZ	Load cell, Clavicle	R.A. Denton	5410J	N
162	LEFT ASIS UPPER	X	10LUASIS	Load cell, ASIS	R.A. Denton	3475	N
163	LEFT ASIS LOWER	X	10LLASIS	Load cell, ASIS	R.A. Denton	3475	N
164	RIGHT ASIS UPPER	X	10RUASIS	Load cell, ASIS	R.A. Denton	3476	N
165	RIGHT ASIS LOWER	X	10RLASIS	Load cell, ASIS	R.A. Denton	3476	N
166	LAP BELT FORCE	X	BL168	Load cell, Seat belt	First Tech	IF-964	N
167	SHOULDER BELT FORCE	X	BL169	Load cell, Seat belt	First Tech	IF-964	N
168	SHOULDER BELT SPOOL	X	KEPP001	Pullout pot	Celesco	PTX101-0030	MM
169	SHOULDER BELT ELONG.	X	KEEP001	Linear pot., belt stretch	E.T.I.	LCP8-10 10K	MM/CM
170	CRS	X	KETX4A	Accel.,1/2 bridge	Endevco	7264-200	G
171	CRS	Y	KETX4B	Accel.,1/2 bridge	Endevco	7264-200	G
172	CRS	Z	KETX4C	Accel.,1/2 bridge	Endevco	7264-200	G
173	CRS SEAT BACK	X	KETX4A	Accel.,1/2 bridge	Endevco	7264-200	G
174	CRS SEAT BACK	Y	KETX4B	Accel.,1/2 bridge	Endevco	7264-200	G
175	CRS SEAT BACK	Z	KETX4C	Accel.,1/2 bridge	Endevco	7264-200	G

SECTION F-5

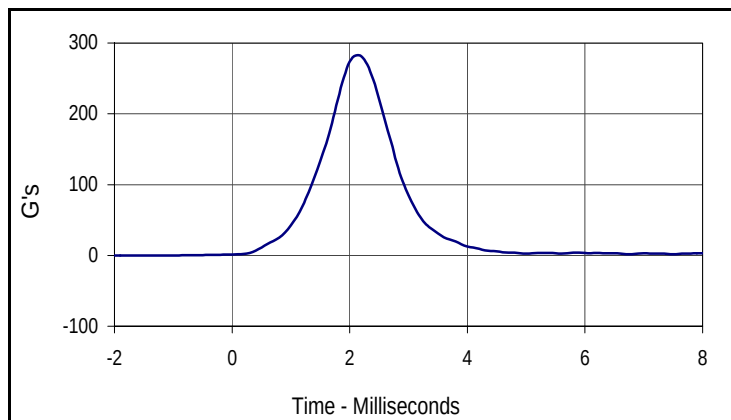
CHILD DUMMY CALIBRATION INFORMATION

Test Program: Hybrid III 10 Yr Old Head Drop Test
 ATD Serial No.: 009

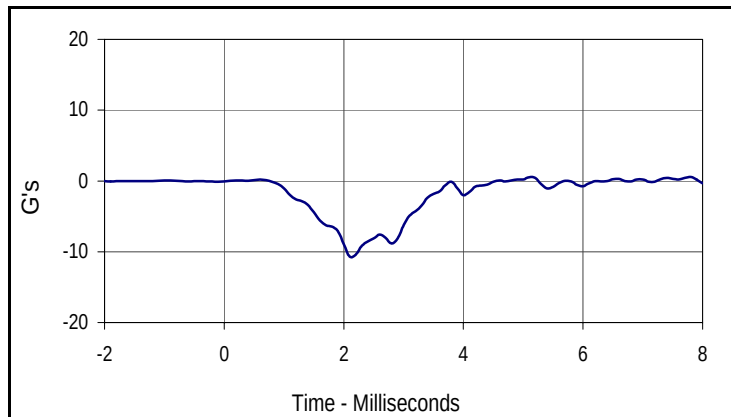
Test Date: 1/18/05
 Test I.D.: HD01A



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Peak Resultant Acceleration	G's	250.0 to 300.0	282.5	Pass
Peak Lateral Acceleration	G's	≤15.0	10.7	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Oscillations After Main Pulse	%	<10	1.4	Pass
Overall Test Results			Pass	



Curve Description			
Head Resultant			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
282.5	2.1	0.0	-2.0



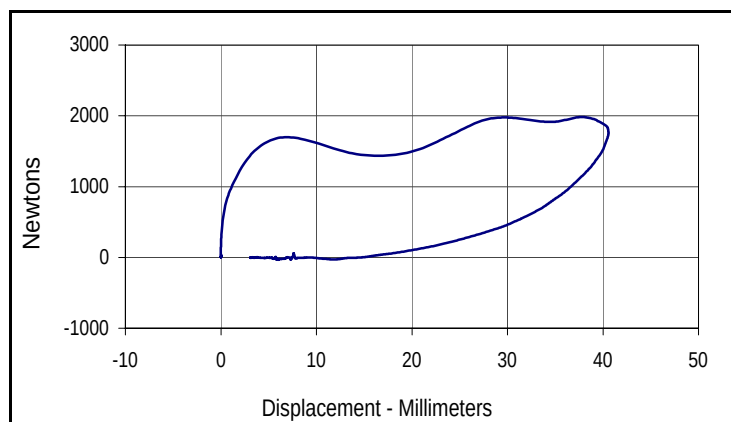
Curve Description			
Head Y			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
0.5	5.1	-10.7	2.1

Test Program: Hybrid III 10 Yr Old Thorax Impact Test
 ATD Serial No.: 009

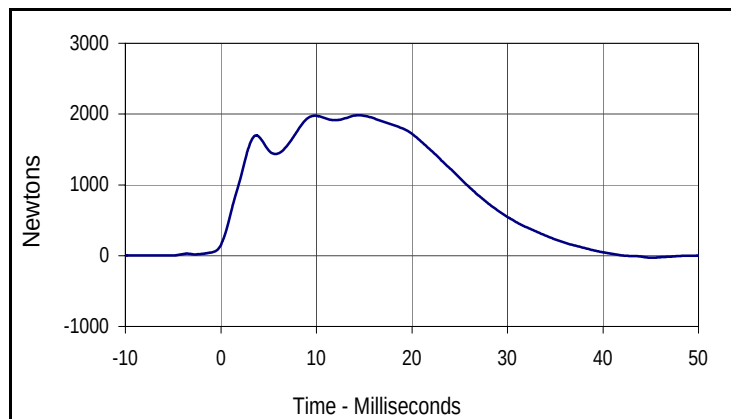
Test Date: 1/19/05
 Test I.D.: CH01A



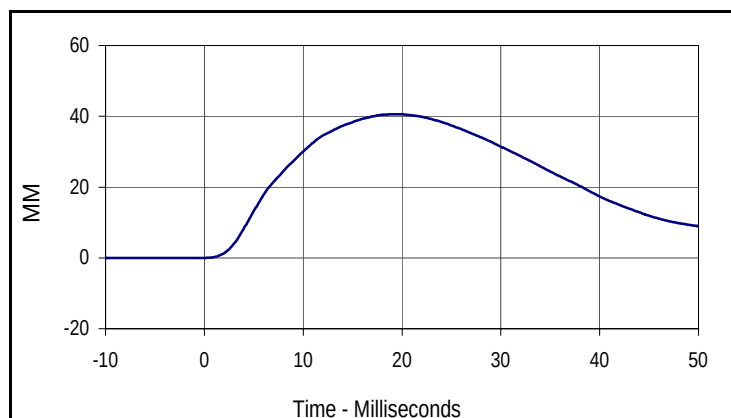
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	5.88 to 6.12	6.10	Pass
Peak Chest Deflection	MM	40.5 to 48.5	40.6	Pass
Peak Force Between 40.5 and 48.5 MM	Newtons	1830 to 2330	1983	Pass
Peak Force Between 20 and 40.5 MM	Newtons	≤2330	1757	Pass
Internal Hysteresis	%	69 to 85	81.5	Pass
Overall Test Results			Pass	



Curve Description			
Probe Force vs. Chest Deflection			
CURNO	Type	SAE Class	Hysteresis
003	FIL	180	81.5
Peak Probe Force		Peak Chest Deflection	
1982.8		40.6	



Curve Description			
Probe Force			
CURNO	Type	SAE Class	Units
002	FIL	180	Newtons
Max	Time	Min	Time
1982.8	14.4	-34.3	77.8



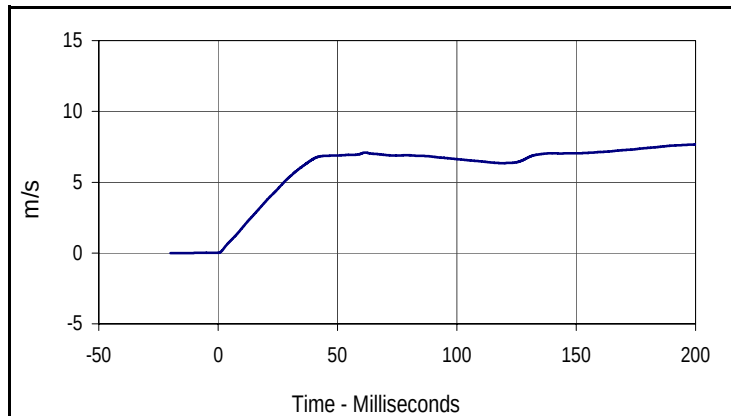
Curve Description			
Chest Deflection			
CURNO	Type	SAE Class	Units
001	FIL	180	MM
Max	Time	Min	Time
40.6	19.5	0.0	-0.4

Test Program: Hybrid III 10 Yr Old Neck Flexion Test
 ATD Serial No.: 009

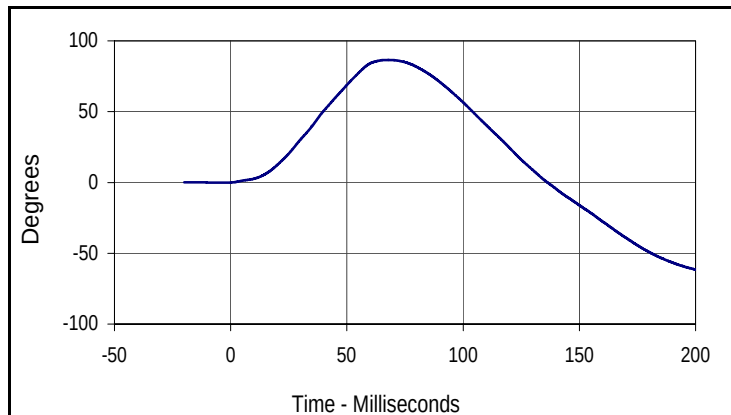
Test Date: 1/18/05
 Test I.D.: NF01A



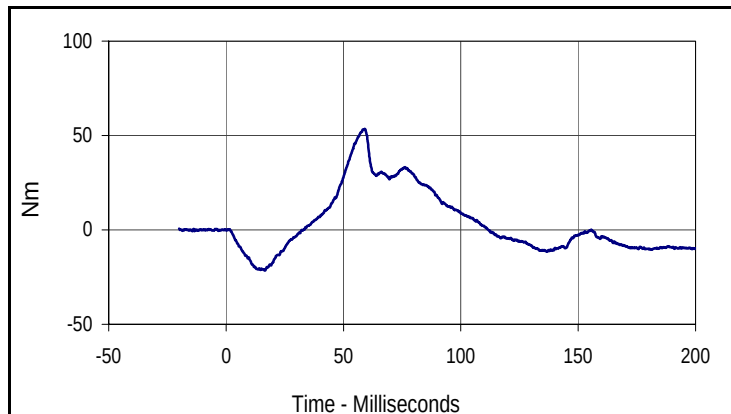
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	5.98 to 6.22	6.13	Pass
Pendulum Deceleration	10 Msec.	m/s	1.64 to 2.04	1.76	Pass
	20 Msec.	m/s	3.04 to 4.04	3.66	Pass
	30 Msec.	m/s	4.45 to 5.65	5.39	Pass
"D" Plane Rotation	Max	Degrees	74.0 to 88.0	86.6	Pass
Peak Moment in Rotation	Max	Nm	50.0 to 62.0	53.5	Pass
Positive Moment Decay, Time To 10 Nm		Msec.	85.0 to 105.0	99.0	Pass
			Overall Test Results		Pass



Curve Description			
Pendulum Velocity			
CURNO	Type	SAE Class	Units
001	FIL	180	m/s
Max	Time	Min	Time
7.7	200.0	0.0	-20.0



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
86.6	67.8	-61.5	200.0



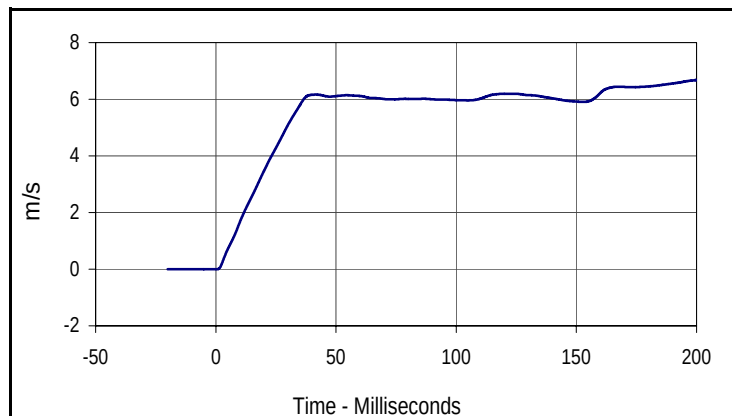
Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Time	Min	Time
53.5	59.1	-21.6	16.6

Test Program: Hybrid III 10 Yr Old Neck Extension Test
 ATD Serial No.: 009

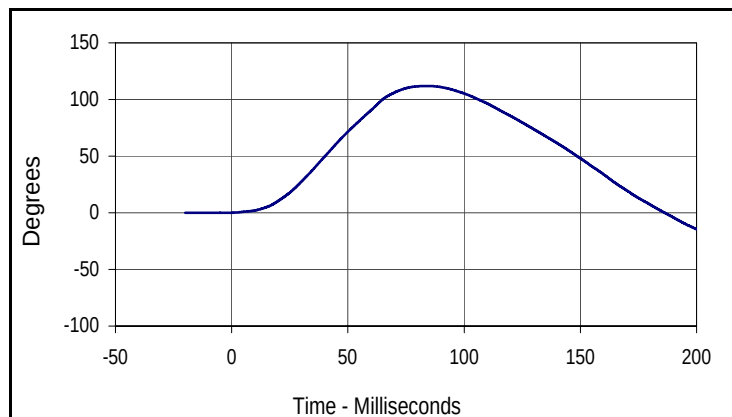
Test Date: 1/18/05
 Test I.D.: NE01A



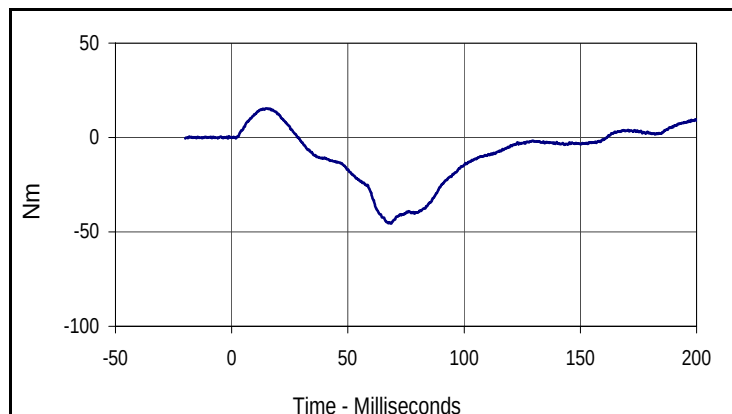
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	4.91 to 5.15	5.09	Pass
Pendulum Deceleration	10 Msec.	m/s	1.59 to 1.89	1.66	Pass
	20 Msec.	m/s	2.88 to 3.68	3.47	Pass
	30 Msec.	m/s	4.20 to 5.20	5.09	Pass
"D" Plane Rotation	Max	Degrees	99.0 to 114.0	112.0	Pass
Peak Moment in Rotation	Max	Nm	-35.0 to -47.0	-45.6	Pass
Positive Moment Decay, Time To 10 Nm		Msec.	100.0 to 120.0	107.9	Pass
			Overall Test Results		Pass



Curve Description			
Pendulum Velocity			
CURNO	Type	SAE Class	Units
001	FIL	180	m/s
Max	Time	Min	Time
6.7	200.0	0.0	0.4



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
112.0	83.9	-14.5	200.0



Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Time	Min	Time
15.4	14.6	-45.6	68.5

Test Program: Hybrid III 10 Yr Old Knee Impact Test
 ATD Serial No.: 009

Test Date: 1/19/05
 Test I.D.: LK01A , RK01A

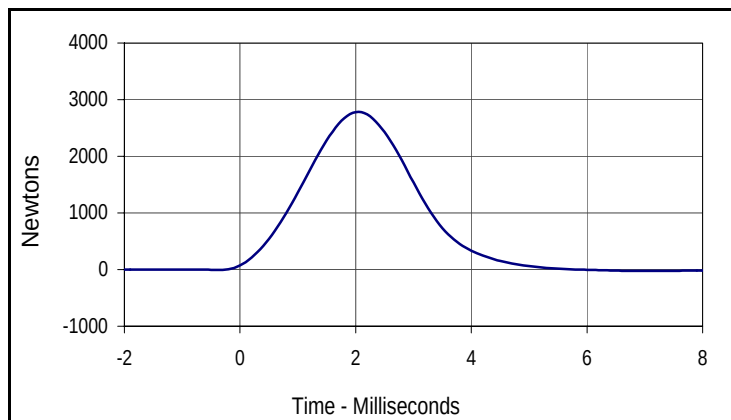


Left Knee

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.09	Pass
Peak Probe Force	Newtons	2560 to 3140	2780	Pass
Overall Test Results				Pass

Right Knee

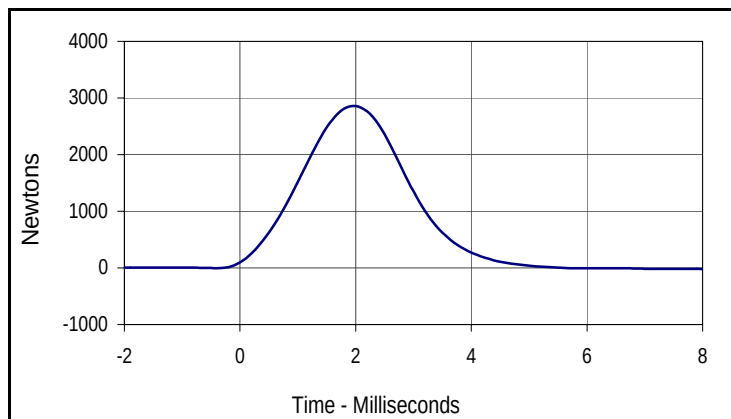
Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.08	Pass
Peak Probe Force	Newtons	2560 to 3140	2859	Pass
Overall Test Results				Pass



Curve Description

Left Knee Probe Force

CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
2780.3	2.0	-24.7	6.9



Curve Description

Right Knee Probe Force

CURNO	Type	SAE Class	Units
002	FIL	600	Newtons
Max	Time	Min	Time
2859.1	2.0	-25.4	8.6

Test Program: Hybrid III 10 Yr Old External Measurements

Test Date: 1/19/05

ATD Serial No.: 009

Test I.D.: N/A



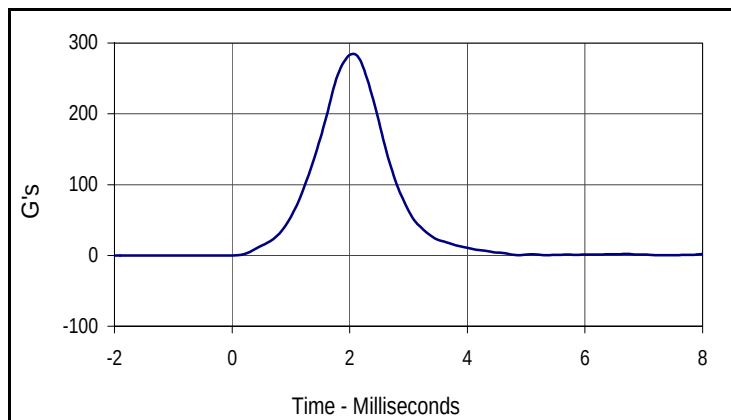
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
A - Total sitting height	mm	710 to 737	715	Pass
B - Shoulder pivot height	mm	385 to 405	398	Pass
C - "H" point height	mm	78 to 88	82	Pass
D - "H" point from backline	mm	133 to 143	140	Pass
E - Shoulder pivot from back	mm	80 to 90	86	Pass
F - Thigh clearance	mm	105 to 121	109	Pass
G - Elbow back to wrist pivot	mm	227 to 243	240	Pass
H - Skull cap to back line	mm	46 to 51	50	Pass
I - Shoulder to elbow length	mm	269 to 285	272	Pass
J - Elbow rest height	mm	137 to 158	150	Pass
K - Buttock to knee length	mm	464 to 484	475	Pass
L - Popliteal length	mm	321 to 342	335	Pass
M - Knee pivot height	mm	370 to 389	380	Pass
N - Buttock popliteal length	mm	367 to 387	380	Pass
O - Chest depth without jacket	mm	158 to 173	165	Pass
P - Foot length	mm	188 to 203	200	Pass
R - Buttock to knee pivot length	mm	414 to 434	425	Pass
S - Head breadth	mm	137 to 147	145	Pass
T - Head depth	mm	178 to 188	182	Pass
U - Hip breadth	mm	257 to 272	265	Pass
V - Shoulder breadth	mm	307 to 323	310	Pass
W - Foot breadth	mm	69 to 84	75	Pass
X - Head circumference	mm	528 to 549	540	Pass
Y - Chest circumference with jacket	mm	691 to 716	700	Pass
Z - Waist circumference	mm	696 to 721	715	Pass
AA - Location for chest circumference	mm	338 to 348	340	Pass
Overall Test Results				Pass

Test Program: Hybrid III 10 Yr Old Head Drop Test
 ATD Serial No.: 011

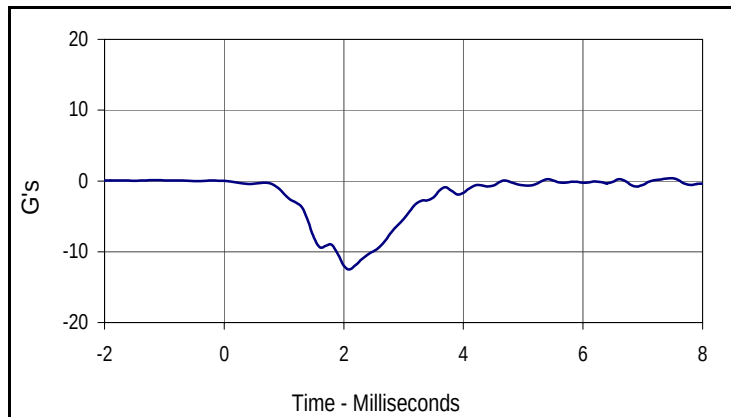
Test Date: 1/18/05
 Test I.D.: HD01B



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Peak Resultant Acceleration	G's	250.0 to 300.0	283.7	Pass
Peak Lateral Acceleration	G's	≤15.0	12.5	Pass
Is Acceleration Unimodal?	Yes/No	Yes	Yes	Pass
Oscillations After Main Pulse	%	<10	0.7	Pass
Overall Test Results			Pass	



Curve Description			
Head Resultant			
CURNO	Type	SAE Class	Units
001	RES	1000	G's
Max	Time	Min	Time
283.7	2.1	0.0	-0.4



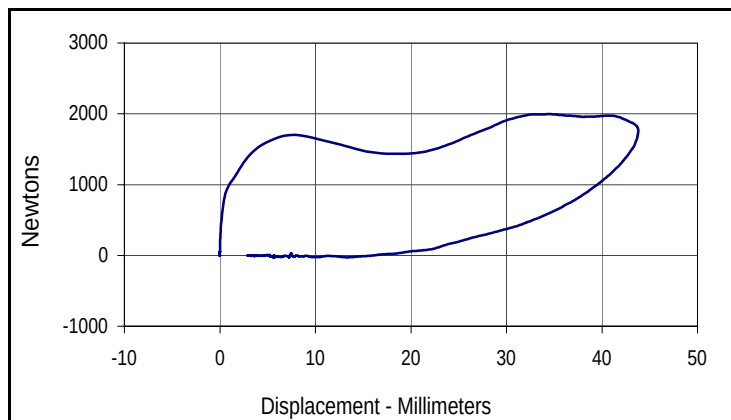
Curve Description			
Head Y			
CURNO	Type	SAE Class	Units
002	FIL	1000	G's
Max	Time	Min	Time
0.2	5.4	-12.5	2.1

Test Program: Hybrid III 10 Yr Old Thorax Impact Test
 ATD Serial No.: 011

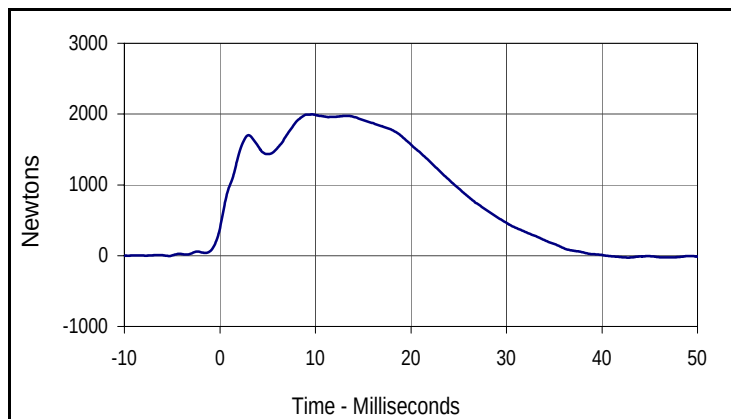
Test Date: 1/19/05
 Test I.D.: CH01B



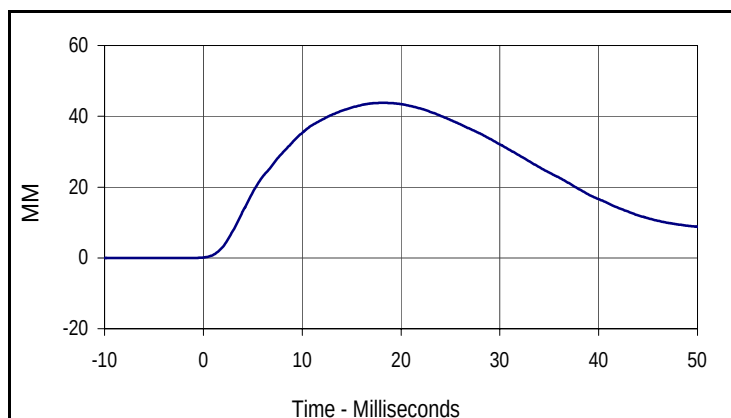
Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Probe Velocity	m/s	5.88 to 6.12	5.96	Pass
Peak Chest Deflection	MM	40.5 to 48.5	43.8	Pass
Peak Force Between 40.5 and 48.5 MM	Newtons	1830 to 2330	1995	Pass
Peak Force Between 20 and 40.5 MM	Newtons	≤2330	1975	Pass
Internal Hysteresis	%	69 to 85	81.4	Pass
Overall Test Results			Pass	



Curve Description			
Probe Force vs. Chest Deflection			
CURNO	Type	SAE Class	Hysteresis
003	FIL	180	81.4
Peak Probe Force		Peak Chest Deflection	
1994.7		43.8	



Curve Description			
Probe Force			
CURNO	Type	SAE Class	Units
002	FIL	180	Newtons
Max	Time	Min	Time
1994.7	9.7	-32.1	85.1



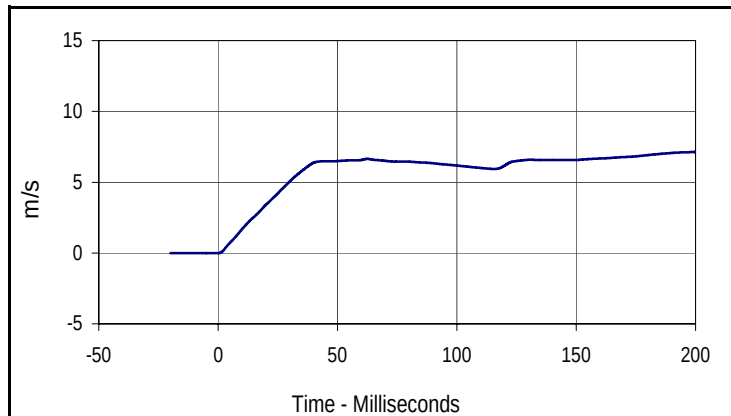
Curve Description			
Chest Deflection			
CURNO	Type	SAE Class	Units
001	FIL	180	MM
Max	Time	Min	Time
43.8	18.2	0.0	-7.1

Test Program: Hybrid III 10 Yr Old Neck Flexion Test
 ATD Serial No.: 011

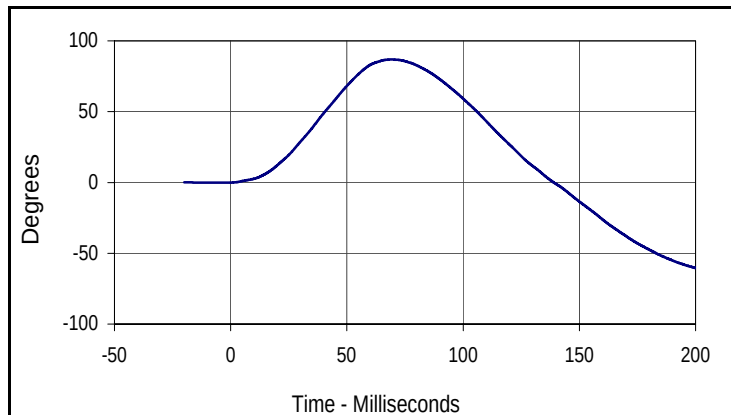
Test Date: 1/18/05
 Test I.D.: NF01B



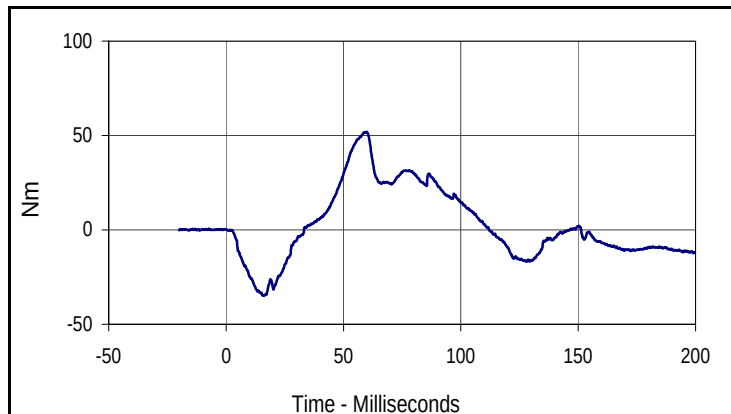
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	5.98 to 6.22	6.08	Pass
Pendulum Deceleration	10 Msec.	m/s	1.64 to 2.04	1.69	Pass
	20 Msec.	m/s	3.04 to 4.04	3.40	Pass
	30 Msec.	m/s	4.45 to 5.65	5.06	Pass
"D" Plane Rotation	Max	Degrees	74.0 to 88.0	86.8	Pass
Peak Moment in Rotation	Max	Nm	50.0 to 62.0	51.9	Pass
Positive Moment Decay, Time To 10 Nm		Msec.	85.0 to 105.0	104.6	Pass
			Overall Test Results		Pass



Curve Description			
Pendulum Velocity			
CURNO	Type	SAE Class	Units
001	FIL	180	m/s
Max	Time	Min	Time
7.1	200.0	0.0	0.1



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
86.8	69.1	-60.4	200.0



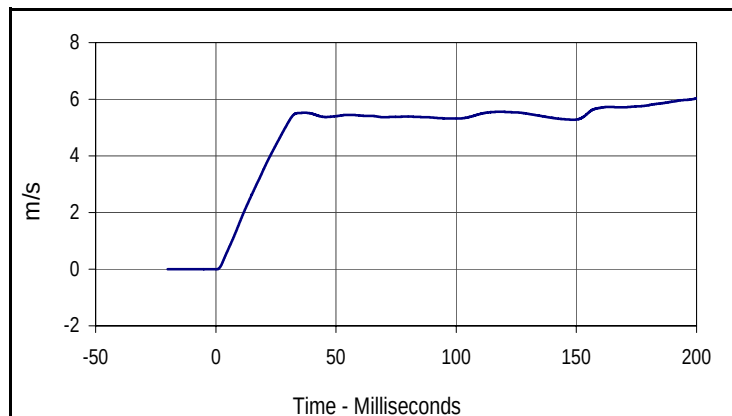
Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Time	Min	Time
51.9	59.6	-34.9	16.2

Test Program: Hybrid III 10 Yr Old Neck Extension Test
 ATD Serial No.: 011

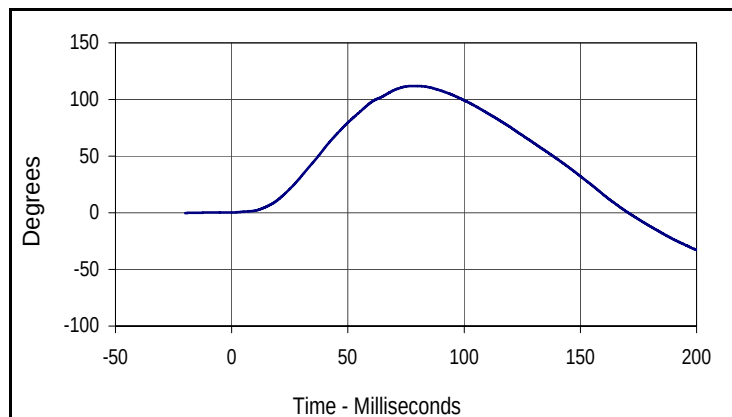
Test Date: 1/18/05
 Test I.D.: NE01B



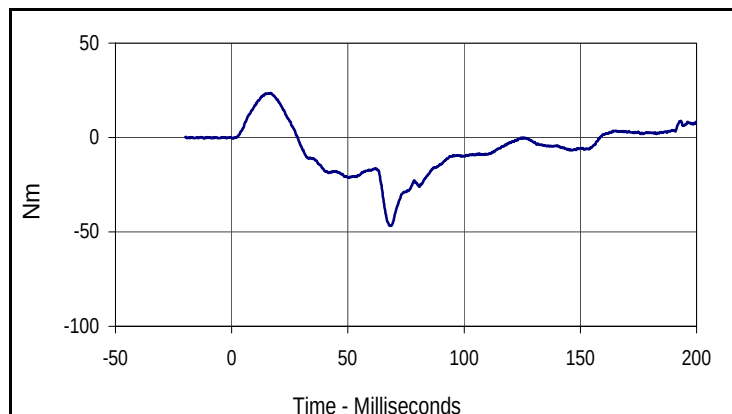
Tested Parameter		Units	Specification	Result	Pass/Fail
Laboratory Temperature		°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity		%	10 to 70	30	Pass
Pendulum Velocity		m/s	4.91 to 5.15	4.94	Pass
Pendulum Deceleration	10 Msec.	m/s	1.59 to 1.89	1.67	Pass
	20 Msec.	m/s	2.88 to 3.68	3.55	Pass
	30 Msec.	m/s	4.20 to 5.20	5.16	Pass
"D" Plane Rotation	Max	Degrees	99.0 to 114.0	111.9	Pass
Peak Moment in Rotation	Max	Nm	-35.0 to -47.0	-46.8	Pass
Positive Moment Decay, Time To 10 Nm		Msec.	100.0 to 120.0	100.6	Pass
			Overall Test Results		Pass



Curve Description			
Pendulum Velocity			
CURNO	Type	SAE Class	Units
001	FIL	180	m/s
Max	Time	Min	Time
6.0	200.0	0.0	0.2



Curve Description			
"D" Plane Rotation			
CURNO	Type	SAE Class	Units
003	FIL	60	Degrees
Max	Time	Min	Time
111.9	78.5	-32.8	200.0



Curve Description			
Moment About Occipital Condyle			
CURNO	Type	SAE Class	Units
002	FIL	600	Nm
Max	Time	Min	Time
23.6	16.9	-46.8	68.1

Test Program: Hybrid III 10 Yr Old Knee Impact Test
 ATD Serial No.: 011

Test Date: 1/19/05
 Test I.D.: LK01B , RK01B

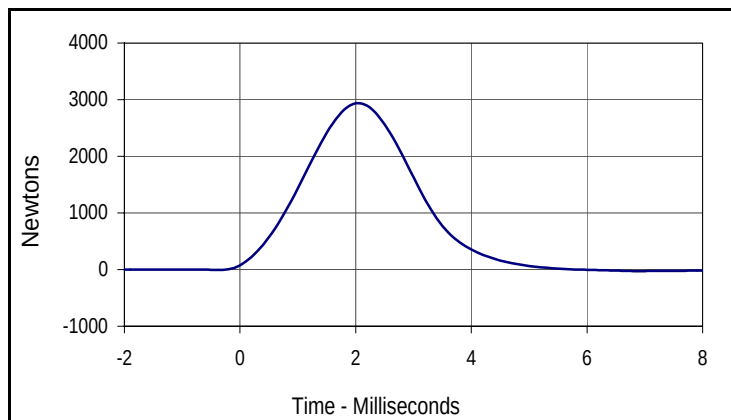


Left Knee

Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	18.9 to 25.6	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.10	Pass
Peak Probe Force	Newtons	2560 to 3140	2936	Pass
Overall Test Results				Pass

Right Knee

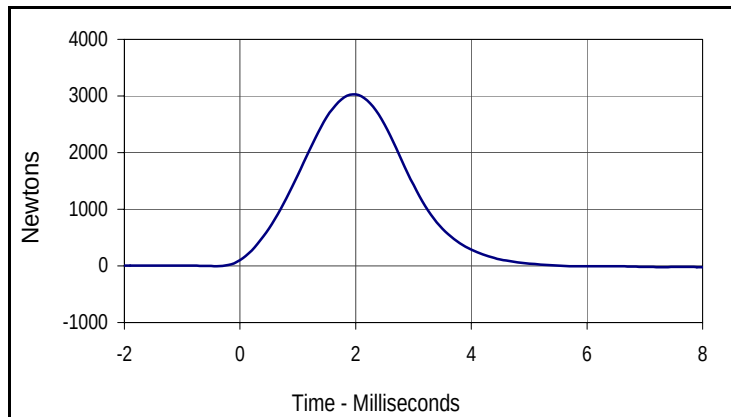
Pendulum Velocity at T=0	m/sec	2.07 to 2.13	2.10	Pass
Peak Probe Force	Newtons	2560 to 3140	3027	Pass
Overall Test Results				Pass



Curve Description

Left Knee Probe Force

CURNO	Type	SAE Class	Units
001	FIL	600	Newtons
Max	Time	Min	Time
2936.0	2.0	-26.1	6.9



Curve Description

Right Knee Probe Force

CURNO	Type	SAE Class	Units
002	FIL	600	Newtons
Max	Time	Min	Time
3026.9	2.0	-26.9	8.6

Test Program: Hybrid III 10 Yr Old External Measurements

Test Date: 1/19/05

ATD Serial No.: 011

Test I.D.: N/A



Tested Parameter	Units	Specification	Result	Pass/Fail
Laboratory Temperature	°C	20.6 to 22.2	21.1	Pass
Laboratory Relative Humidity	%	10 to 70	30	Pass
A - Total sitting height	mm	710 to 737	730	Pass
B - Shoulder pivot height	mm	385 to 405	400	Pass
C - "H" point height	mm	78 to 88	85	Pass
D - "H" point from backline	mm	133 to 143	135	Pass
E - Shoulder pivot from back	mm	80 to 90	85	Pass
F - Thigh clearance	mm	105 to 121	110	Pass
G - Elbow back to wrist pivot	mm	227 to 243	238	Pass
H - Skull cap to back line	mm	46 to 51	50	Pass
I - Shoulder to elbow length	mm	269 to 285	280	Pass
J - Elbow rest height	mm	137 to 158	155	Pass
K - Buttock to knee length	mm	464 to 484	480	Pass
L - Popliteal length	mm	321 to 342	325	Pass
M - Knee pivot height	mm	370 to 389	375	Pass
N - Buttock popliteal length	mm	367 to 387	380	Pass
O - Chest depth without jacket	mm	158 to 173	170	Pass
P - Foot length	mm	188 to 203	200	Pass
R - Buttock to knee pivot length	mm	414 to 434	420	Pass
S - Head breadth	mm	137 to 147	139	Pass
T - Head depth	mm	178 to 188	182	Pass
U - Hip breadth	mm	257 to 272	270	Pass
V - Shoulder breadth	mm	307 to 323	310	Pass
W - Foot breadth	mm	69 to 84	80	Pass
X - Head circumference	mm	528 to 549	540	Pass
Y - Chest circumference with jacket	mm	691 to 716	710	Pass
Z - Waist circumference	mm	696 to 721	700	Pass
AA - Location for chest circumference	mm	338 to 348	340	Pass
Overall Test Results				Pass