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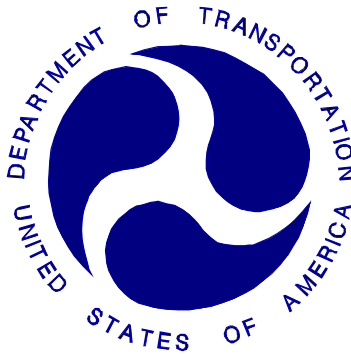
**NEW CAR ASSESSMENT PROGRAM (NCAP)
FRONTAL BARRIER IMPACT TEST**

NISSAN MOTOR CORP.
2006 NISSAN FRONTIER
EXTENDED CAB PICKUP

NHTSA NUMBER: M65205

CALSPAN TEST NUMBER: 8642-NCAP-77

CALSPAN CORPORATION
TRANSPORTATION SCIENCES CENTER
P.O. BOX 400
BUFFALO, NEW YORK 14225



March 3, 2006

FINAL REPORT

PREPARED FOR:

U. S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
Rulemaking
Office of Crashworthiness Standards
Mail Code: NVS-111
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Prepared by:

Patrick G. MacDiarmid, Jr., Project Engineer

Approved by:

David J. Travale, Program Manager
Transportation Science Center

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12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Office of Crashworthiness Standards Mail Code: NVS-111 400 Seventh, SW, Room 5311 Washington, D.C. 20590				13. Type of Report and Period Covered Final Report March, 2006	
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16. Abstract A frontal load cell barrier test of a 2006 Nissan Frontier Extended Cab Pickup was performed at Calspan Corporation's crash test facility in Buffalo, New York, on March 3, 2006. The impact velocity was 56.49 kph and the temperature at the barrier face was 20°C. The maximum post-test vehicle crush was 512 mm. The test vehicle was equipped with 3-point restraint systems with torso belt pretensioners and force limiters, knee bolsters, active head restraints and airbags at both the driver and right outboard passenger seating positions. With respect to FMVSS 208 "Occupant Crash Protection - Injury Criteria" both the driver and passenger appeared to comply with head, chest, and femur requirements. The occupant injury criteria summary is as follows:					
Measurement Description		Units	Threshold	Driver (150)	Passenger (142)
Head Injury Criteria (HIC - 36 ms)		-	1000	862.5	759.8
Maximum Thorax Acceleration (3 ms Clip)		g's	60 g's	56.5	53.3
Chest Displacement		mm	-76 mm	-38.3	-36.2
Left Femur Force		Newtons	-10000 N	-4911.9	-4351.8
Right Femur Force		Newtons	-10000 N	-3397.0	-3529.8
17. Key Words 56 kph Frontal Barrier Impact test New Car Assessment Program (NCAP)			18. Distribution Statement Copies of this report are available from: NHTSA Technical Reference Division National Highway Traffic Safety Admin. 400 Seventh St., SW, Room 5111 Washington, DC 20590		
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SECTION 1

PURPOSE AND SUMMARY OF TEST

1.1 PURPOSE

This 56.49 kph frontal barrier impact test is part of the Vehicle Barrier Impact Testing Program sponsored by the National Highway Traffic Safety Administration (NHTSA) under Contract No. DTNH22-01-D-32005. 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 48.3 kph requirements.

The 56.49 kph frontal barrier impact test was conducted in accordance with the Office of Crashworthiness Standards Laboratory Indicant Test procedure.

1.2 TEST PROCEDURE

This 56.49 kph 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.

One real-time camera and 16 high-speed cameras were used to document the frontal barrier impact event. Camera locations and other pertinent camera information can be found in 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 nine accelerometer array heads, chest and pelvis triaxial accelerometers, chest displacement potentiometers, upper neck transducers, right/left femur load cells, and lower leg instrumentation. Seat belt load cells were also on the driver's and passenger's lap and shoulder belts to measure dummy torso and pelvic section loading. The driver (position 1) ATD (Serial No. 150) and the right-front passenger (position 2) ATD (Serial No.142) were used in one test (M65105) previous to this test where they did not exceed FMVSS 208 head, chest or femur requirements. Certification details, along with instrumentation calibration data, are found in Appendix C.

The vehicle, occupant, camera and measurement data are presented in Section 2. Appendix A contains the still photograph prints. The 141 channels of data were recorded on an on-board data acquisition system. Appendix B contains the vehicle, load cell barrier and dummy response data traces. Appendix C contains the dummy calibration data and Appendix D contains the transducer calibration dates.

1.3 SUMMARY OF FRONTAL BARRIER IMPACT TEST

A load cell barrier consisting of 36 load cells was impacted by a 2006 Nissan Frontier Extended Cab Pickup at a velocity of 56.49 kph. The test was performed at Calspan on March 3, 2006. Pre- and post-test photographs of the vehicle and dummies can be found in Appendix A.

The occupant data is summarized below.

ATD	HIC	T ₁	T ₂	Clip (g)	T ₁	T ₂	Chest Disp. (mm)	Left Femur (N)	Right Femur (N)
Driver	862.5	53.3	82.4	56.5	63.7	66.7	-38.3	-4911.9	-3397.0
Passenger	759.8	57.2	86.6	53.3	64.2	67.3	-36.2	-4351.8	-3529.8

The test data can be found on the NHTSA website at www.nhtsa.dot.gov

TEST NOTES	
Data Channel	Anomalies
V1P1 Left Upper Tibia Mx	Questionable Data
V1P1 Left Upper Tibia My	Channel Opened
V1P1 Right Lower Tibia Mx	Channel Opened
V1P1 Left Foot Aft Ax	Data Saturated
Barrier Load Cell B8 Fx	Did Not Record

SECTION 2
OCCUPANT AND VEHICLE INFORMATION

DATA SHEET NO. 1
CRASH TEST SUMMARY

Vehicle NHTSA No.: M65205 Test Mode: 56.3 kph Frontal Barrier
 Test Date: March 3, 2006 Time: 11:21 Temperature: 20 °C
 Vehicle Make/Model/Body Style: 2006 Nissan Frontier Extended Cab Pickup
 Vehicle Test Weight: 2232.0 kg Impact Velocity: 56.49 kph (55.5 – 57.1 kph)
 Vehicle/Barrier Impact Angle: 0 ° Max Static Crush: 512 mm

ATD INFORMATION AND VISIBLE CONTACT POINTS

	DRIVER	PASSENGER
ATD Type:	Part 572E	Part 572E
Restraint System:	Three-point safety belt with torso belt pretensioners and force limiters, airbag, knee bolter and active head restraint.	Three-point safety belt with torso belt pretensioners and force limiters, airbag, knee bolter and active head restraint.
Head Contact:	The face to the center of the airbag and the back of the head to the left of center of the head restraint	The face to the center of the airbag and the back of the head to the right of center of the head restraint
Abdomen Contact:	None	None
Chest Contact:	Airbag	Airbag
Left Knee Contact:	Knee Bolster	Knee Bolster
Right Knee Contact:	Knee Bolster	Knee Bolster

DOOR OPENING, SEAT TRACK AND GLAZING INFORMATION

Description	Driver Side	Passenger Side
Door Lock Status	Unlocked	Unlocked
Front Door Opening	Closed, latched and operable without tools	Closed, latched and operable without tools
Rear Door Opening	Closed, latched and operable without tools	Closed, latched and operable without tools
Hatch/Other Door Opening	-	-
Front Seat Track Shift (mm)	0	0
Front Seat Back Failure	None	None
Glazing Damage	The windshield cracked on the passenger side as a result of airbag deployment	

VEHICLE REBOUND FROM BARRIER

Measured Parameter	Left Side (mm)	Center (mm)	Right Side (mm)	Average (mm)
Value	480	462	468	470

BELT LENGTH DATA

Measurement Description	Units	Driver	Passenger
Shoulder belt length as measured on ATD	mm	1210	1250
Lap belt length as measured on ATD	mm	930	930
Belt length from trim panel exit to bolt hole anchor point for continuous webbing systems	mm	2140	2180

DATA SHEET NO. 2
GENERAL TEST AND VEHICLE PARAMETER DATA

TEST VEHICLE INFORMATION:

Year/Make/Model/Body Style: 2006 Nissan Frontier Extended Cab Pickup

NHTSA No. : M65205 ; VIN: 1N6AD06W46C411331 ; Color: Black

Engine Data: 6 cylinders; - CID; 3.5 Liters; - cc

Placement: X Longitudinal or In-Line; - Transverse or Lateral

Transmission Data: 5 speeds; - Manual; X Automatic; X Overdrive

Final Drive: - Rear Wheel Drive; - Front Wheel Drive; X Four Wheel Drive

AUTOMATIC DOOR LOCKS:

Is test vehicle equipped with Automatic Door Locks (ADLs)? - Yes; X No;

Does vehicle owner's manual describe how to deactivate ADLs? - Yes; - No; X N/A

DEALER AND DELIVERY INFORMATION:

Date Received: 2/03/2006 ; Odometer Reading 824 km

Selling Dealer: Norwood Nissan

Dealer Address: 1338 Post Road Warwick, RI 02888

TEST VEHICLE OPTIONS:

X AC; X Power Steering; X Power Brakes; - Power Locks; - Power Seats

X ABS; X Tilt Wheel; - Stability Control - Traction Control - Anti-Theft

SAFETY BELT FEATURES:

Driver: X Pretensioner (Shoulder); X Load Limiter; X Adjustable Anchorage

Passenger: X Pretensioner (Shoulder); X Load Limiter; X Adjustable Anchorage

AIRBAG FEATURES:

Position	Frontal	Knee Bolster	Side Torso	Side Head/Torso Combination	Side Curtain
Driver:	Yes	No	No	No	No
Passenger:	Yes	No	No	No	No
Rear Passenger:	No	N/A	No	No	No

DATA FROM VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured by: Nissan Motor Corp.

Date of Manufacture 11/05

GVWR: 2581 kg; GAWR: 1495 kg FRONT; 1481 kg REAR

VEHICLE CAPACITY DATA:

Type of Front Seats: - Bench; X Bucket; - Split Bench

Number of Occupants: 2 Front; - Rear; 2 Total

Vehicle Capacity Weight (VCW) = 607.0 kg

No. of Occupants x 68.04 kg = 136.1 kg

Rated Cargo/Luggage Weight (RCLW) = 470.9 kg (136.1 kg maximum)

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

WEIGHT OF TEST VEHICLE AS RECEIVED FROM DEALER (with maximum fluids)= UDW:

	Left Side (kg)	Right Side (kg)	Ratio (%)	Total (kg)
Front =	570.0	561.0	58.0	1131.0
Rear =	409.0	410.0	42.0	819.0
Total Delivered Weight (UDW) =				1950.0

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Delivered Weight (UDW)	=	1950.0	kg	Maximum allowable
Rated Cargo/Luggage Weight (RCLW)	=	136.1	kg	
Weight of 2 p.572 Dummies @ 76 each	=	152	kg	
TARGET TEST WEIGHT	=	2238.1	kg	

WEIGHT OF TEST VEHICLE WITH TWO DUMMIES AND 130.0 KG OF CARGO WEIGHT:

	Left Side (kg)	Right Side (kg)	Ratio (%)	Total (kg)
Front =	608.0	597.0	54.0	1205.0
Rear =	509.0	518.0	46.0	1027.0
Total Vehicle Test Weight (ATW) =				2232.0

Weight of Ballast Secured in Vehicle Trunk Area¹ = 61 kg

Vehicle Components Removed for Weight Reduction: None

VEHICLE ATTITUDE (all dimension in millimeters):

	Left Front	Right Front	Left Rear	Right Rear	CG ²
AS DELIVERED:	896	894	929	923	1345.3
FULLY LOADED:	887	884	898	891	-
AS TESTED:	892	887	900	892	1473.8

Vehicle's Wheel Base: 3203 mm

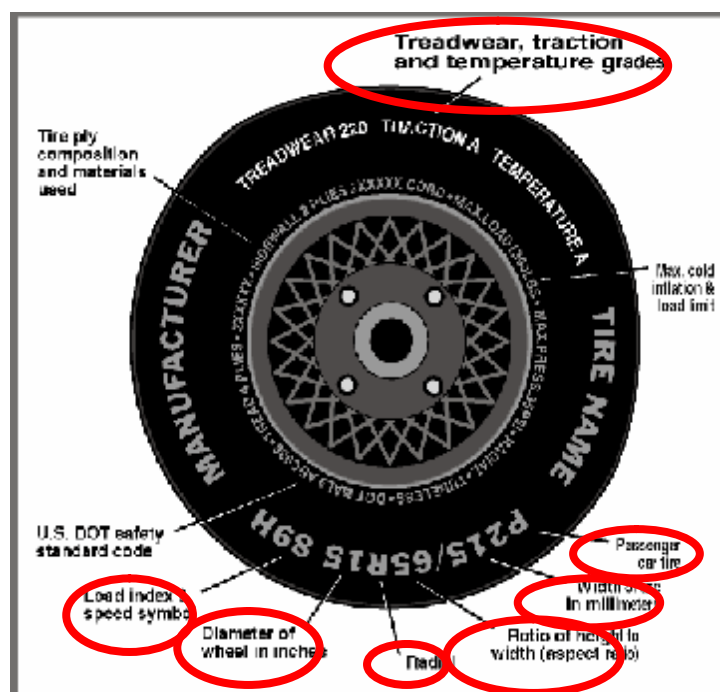
¹Ballast weight does not include the weight of instrumentation, on-board cameras and data acquisition system

²Rearward of the front axle centerline.

DATA SHEET NO. 3
TEST VEHICLE TIRE INFORMATION

Vehicle Year/Make/Model/Body Style: 2006 Nissan Frontier Extended Cab Pickup

NHTSA Test No.: M65205 Test Date: March 3, 2006



Measured Parameter	Front	Rear
Maximum Tire Pressure (from sidewall - kPa)	240	240
Cold Pressure (from tire placard - kPa)*	240	240
Recommended Tire Size (from tire placard)	P265/70R16	P265/70R16
Tire size on Vehicle	P265/70R16	P265/70R16
Tire Manufacturer	BF Goodrich	BF Goodrich
Tire Name	Radial Long Trail T/!	Radial Long Trail T/!
Tire Type	P	P
Tire Width (mm)	265	265
Ratio of Height to Width (aspect ratio)	70	70
Radial	Yes	Yes
Wheel Diameter	16	16
Load Index & Speed Symbol	111T	111T
Treadwear	440	440
Traction Grade	B	B
Temperature Grade	B	B

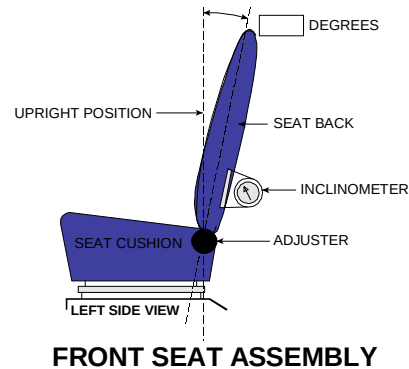
*Tire pressure used for test

DATA SHEET NO. 4
TEST VEHICLE INFORMATION

VEHICLE IDENTIFICATION:

Model Year : 2006 Vehicle Model: Nissan Frontier Body Style : Ext. Cab Pickup

1. NOMINAL DESIGN RIDING POSITION:
for adjustable driver and passenger seat backs.
Please describe how to position the inclinometer to
measure the seat back angle. Include description of
the location of the adjustment latch detent, if
applicable.



Seat back angle for driver's seat: 21°

Measurement instructions: The seat back was reclined to the 6th detent from the full upright position 0.

The head restraint post angle was 10°

Seat back angle for passenger's seat: 21°

Measurement instructions: The seat back was reclined to the 9th detent from the full upright position 0.

The head restraint post angle was 13° for the fold flat seat.

2. SEAT FORE AND AFT POSITIONING:

Positioning of the driver's seat: The driver set was placed in mid travel of 0 – 240 mm or 120 mm rearward of full forward. There are 21 detents labeled 0 – 20, the test detent is detent 10.

Positioning of the passenger's seat: The passenger set was placed in mid travel of 0 – 240 mm or 120 mm rearward of full forward. There are 21 detents labeled 0 – 20, the test detent is detent 10.

3. FUEL TANK CAPACITY DATA:

3.1 A. "Usable Capacity" of the standard equipment fuel tank is 79.87 liters

B. "Usable Capacity" of the optional equipment fuel tank is - liters

C. "Usable Capacity" of the vehicle(s) used for certification
testing to requirements of FMVSS 301 = 73.5 to 75.1 liters

3.2 Actual Amount of Stoddard solvent added to vehicle for test = 74.19 liters

3.3 One-Third of Useable Capacity = 26.6 liters

3.4 Is vehicle equipped with electric fuel pump? Yes- X ; No- -

If YES, explain the vehicle operating conditions under which the fuel pump will pump fuel.

The fuel pump will pump fuel for five seconds after the ignition is switched to the 'ON' position, while the engine is running and for 1.5 seconds after the ignition switch is turned off.

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

4. STEERING COLUMN ADJUSTMENTS:

Steering wheel and column adjustments are made so that the steering wheel hub is at the geometric center of the locus it describes when it is moved through its full range of driving positions. If the tested vehicle has any of these adjustments, does your company use any specific procedures to determine the geometric center.

Operational Instructions: There are seven total detents with the uppermost detent labeled 0.

The test position is detent 3. This gives a resultant angle of 24.5°

5. SEAT BELT UPPER ANCHORAGE:

Nominal design riding position: There are four total detents with the top detent numbered 0. The test position is in detent 0.

6. AUTOMATIC DOOR LOCKS: Is test vehicle equipped with ADLs? - Yes; X No;

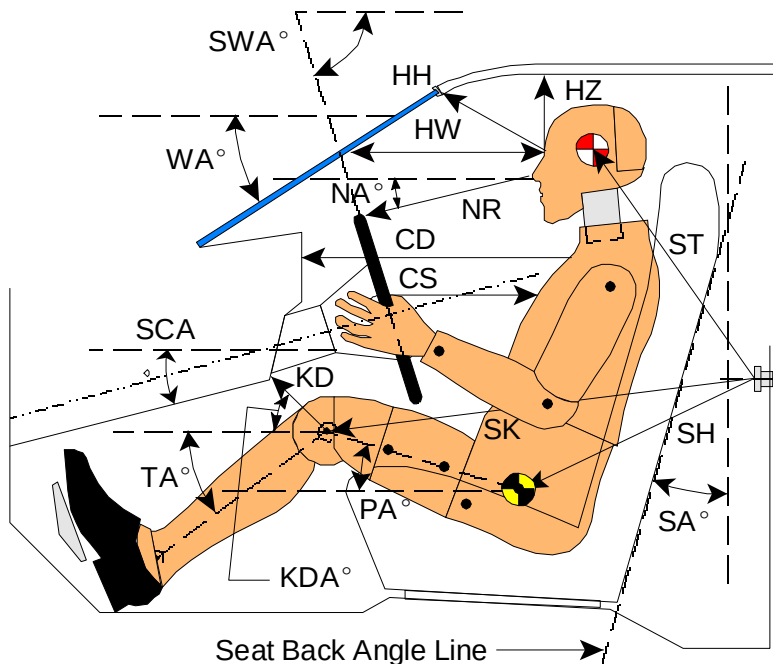
Does vehicle owner's manual describe how to deactivate ADLs? - Yes; - No; X N/A

Comments: This vehicle was not equipped with automatic door locks or power locks

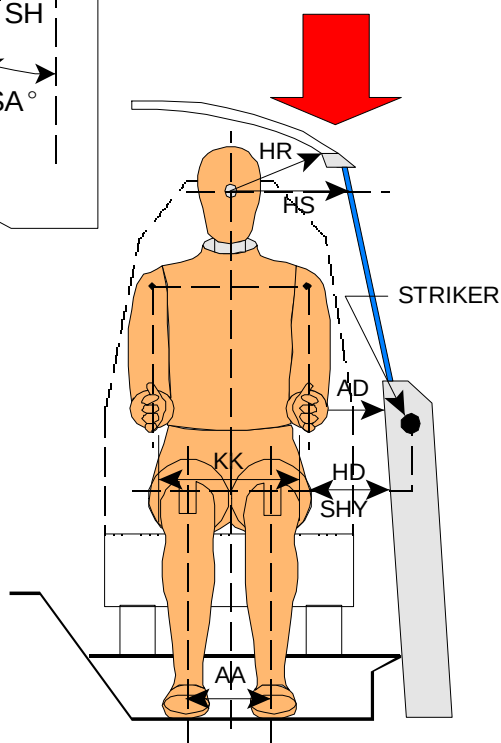
DATA SHEET NO. 5

FRONT SEAT DUMMY POSITIONING MEASUREMENTS IN VEHICLE

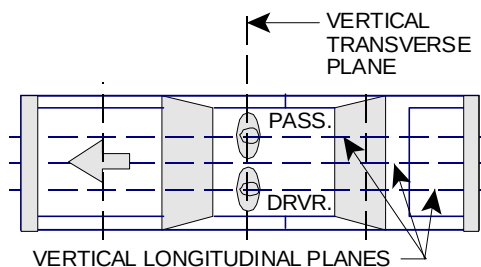
DUMMY MEASUREMENT FOR FRONT SEAT PASSENGERS



AD - Arm to Door
 HD - H-Point to Door
 HR - Head to Side Header
 HS - Head to Side Window
 KK - Knee to Knee
 AA - Ankle to Ankle
 SHY- Striker to H-Point (Y Direction)



CD - Chest to Dash
 CS - Steering Wheel to Chest
 HH - Head to Header
 HW - Head to Windshield
 HZ - Head to Roof
 KDA - Knee to Dash Angle
 KDL- Left Knee to Dash
 KDR - Right Knee to Dash
 NA - Nose to Rim Angle
 NR - Nose to Rim
 PA - Pelvic Angle
 RA - Rim to Abdomen
 SA - Seat Back Angle
 SCA - Steering Column Angle
 SH - Striker to H-Point
 SK - Striker to Knee
 ST - Striker to Head
 SWA- Steering Wheel Angle
 TA - Tibial Angle
 WA - Windshield Angle



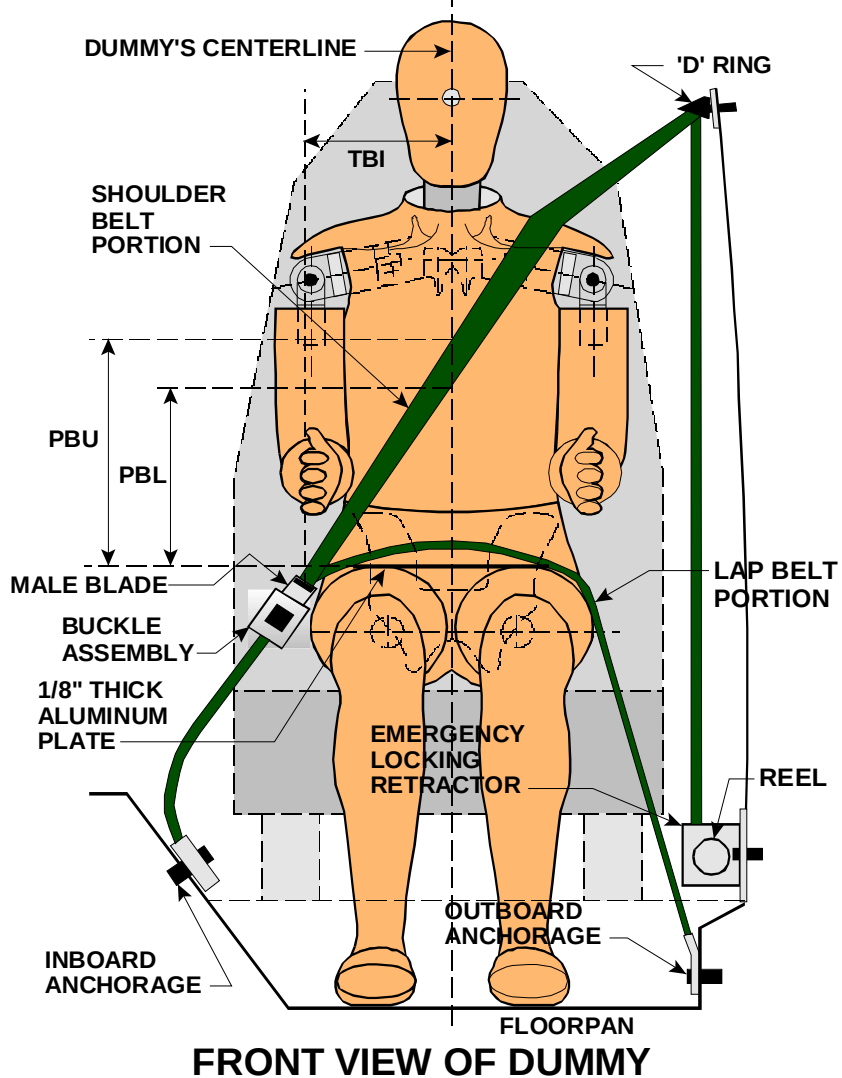
DATA SHEET NO. 5
FRONT SEAT DUMMY POSITIONING MEASUREMENTS IN VEHICLE (cont.)

	DRIVER (Serial #150)			PASS. (Serial #142)		
WA ^o	33 deg.			N/A		
SWA ^o	65.5 deg.			N/A		
SCA ^o	24.5 deg.			N/A		
SA ^o	21 deg.			21 deg.		
HZ	170			166		
HH	367			358		
HW	579			570		
HR	194			185		
NR	385	Angle	-15 deg.	N/A		
CD	525			499		
CS	280			N/A		
RA	170			N/A		
KDL	135	Angle (KDA)	13 deg.	116		
KDR	106			123	Angle (KDA)	26 deg.
PA ^o	22.6 deg.			24.0 deg.		
TA ^o	51.5 deg.			45.2 deg.		
KK	330			273		
AA	330			250		
ST	580	Angle	9 deg.	588	Angle	11 deg.
SK	625	Angle	85 deg.	625	Angle	90 deg.
SH	275	Angle	112 deg.	270	Angle	105 deg.
SHY	220			215		
HS	310			321		
HD	168			163		
AD	90			100		

Dimensions in millimeters

DATA SHEET NO. 6
SEAT BELT POSITIONING DATA

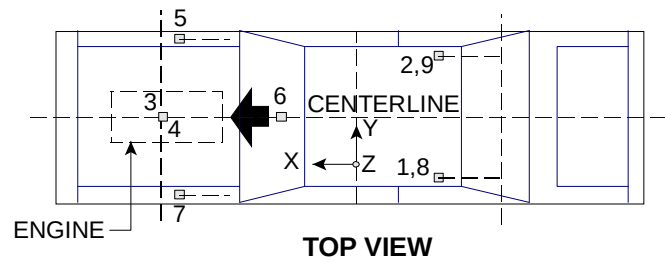
SEAT BELT POSITIONING DATA



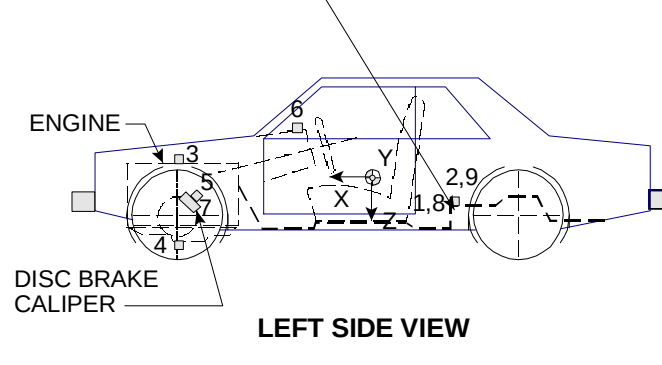
	DRIVER DUMMY (mm)	PASSENGER DUMMY (mm)
PBU -- Top surface of alum. plate to upper edge	330	320
PBL-- Top surface of alum. plate to belt lower edge	250	240
LAP BELT TENSION	10 N	10 N
SHOULDER BELT TENSION	Retractor	Retractor

DATA SHEET NO. 7
VEHICLE ACCELEROMETER LOCATIONS

VEHICLE ACCELEROMETER LOCATIONS



REAR SEAT CUSHION
ASSY. FRONT ATTACHMENT
BRACKET SUPPORT



No.	LOCATION	PRE-TEST LENGTH (mm)		
		X	Y	Z
1	Left Rear Seat Cross Member X	2624	-621	-560
2	Right Rear Seat Cross Member X	2665	610	-558
3	Top of Engine Block	4492	-200	-964
4	Bottom of Engine	4112	138	-345
5	Disc Brake Caliper @ Right Side	4332	454	-375
6	Instrument Panel**	-	-	-
7	Disc Brake Caliper @Left Side	4331	-457	-374
8	Left Rear Seat Cross Member Z	2624	-621	-560
9	Right Rear Seat Cross Member Z	2665	610	-558

X – From rear surface of vehicle (+ forward)

Y – From vehicle centerline (+ right)

Z – From ground plane (+ up)

** Accelerometer was not requested by the COTR

DATA SHEET NO.8
SUMMARY OF FMVSS 212 and FMVSS 219 (Partial) DATA

DETAILS OF WINDSHIELD MOUNTING SUCH AS RETENTION METHOD, TRIM TYPE, ETC.:

Windshield is bonded in place and covered with a 15 mm molding.

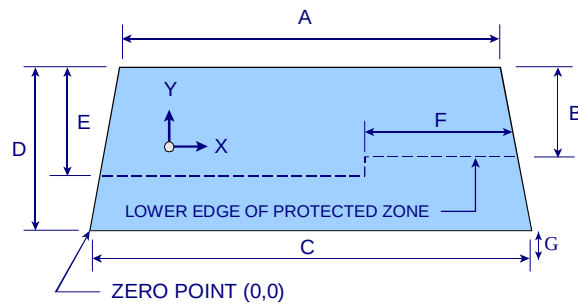
FMVSS 212 REQUIREMENTS:

The Post-Test periphery retention amount must be at least 75% of the Pre-Test periphery measurement for vehicles NOT equipped with automatic restraints, and 50% for each side of the windshield for vehicles equipped with automatic restraint systems for front occupants,

Temperature of windshield molding during test: 20°C.

FMVSS 212 TEST DATA

	WINDSHIELD PERIPHERY		% OF RETENTION
	PRE-TEST (mm)	POST-TEST (mm)	
RIGHT SIDE	2165.0	2165.0	100.0%
LEFT SIDE	2165.0	2165.0	100.0%
TOTAL	4330	4330	100.0%



DIMENSIONS (mm)	
A	1245
B	510
C	1555
D	765
E	495
F	913
G	15

FRONT VIEW OF WINDSHIELD

FAILURE DETAILS: None

DETAILS OF WINDSHIELD GLASS PENETRATION GREATER THAN 6 mm: None

	COORDINATES	
	X	Y
1.	-	-
2.	-	-
3.	-	-
4.	-	-

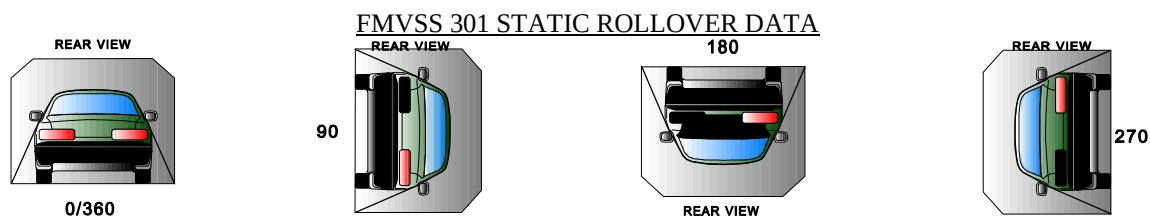
DATA SHEET NO. 9
SUMMARY OF FMVSS NO. 301 DATA

NHTSA TEST No.: _____ M65205 _____ TEST DATE: _____ March 3, 2006
VEHICLE MAKE/MODEL: _____ 2006 Nissan Frontier Extended Cab Pickup _____
FMVSS 301 FUEL SYSTEM INTEGRITY POST IMPACT DATA

FUEL SPILLAGE MEASUREMENT:

Time Interval	Amount	Maximum Allowable Spillage
Impact Until Motion Ceases	0	28 g
First Five Minutes Following Impact	0	142 g
Next 25 Minutes	0	28 g / 1 minute

SOLVENT SPILLAGE DETAILS: None



I. DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Stage	Rotation Time (spec. 1 -3 min)				FMVSS 301 Hold Time		Total Time				Next Whole Minute Interval	
0° - 90°	1	minutes	13	seconds	5	minutes	6	minutes	13	seconds	7	minutes
90° - 180°	1	minutes	06	seconds	5	minutes	6	minutes	6	seconds	7	minutes
180°-270°	1	minutes	05	seconds	5	minutes	6	minutes	5	seconds	7	minutes
270°-360°	1	minutes	11	seconds	5	minutes	6	minutes	11	seconds	7	minutes

II. FMVSS 301 REQUIREMENTS: (Maximum allowable solvent spillage):

First 5 minutes from onset of rotation	6th min.	7th min.	8th min. (if required)
142 g	28 g	28 g	28 g

III. ACTUAL TEST VEHICLE SOLVENT SPILLAGE:

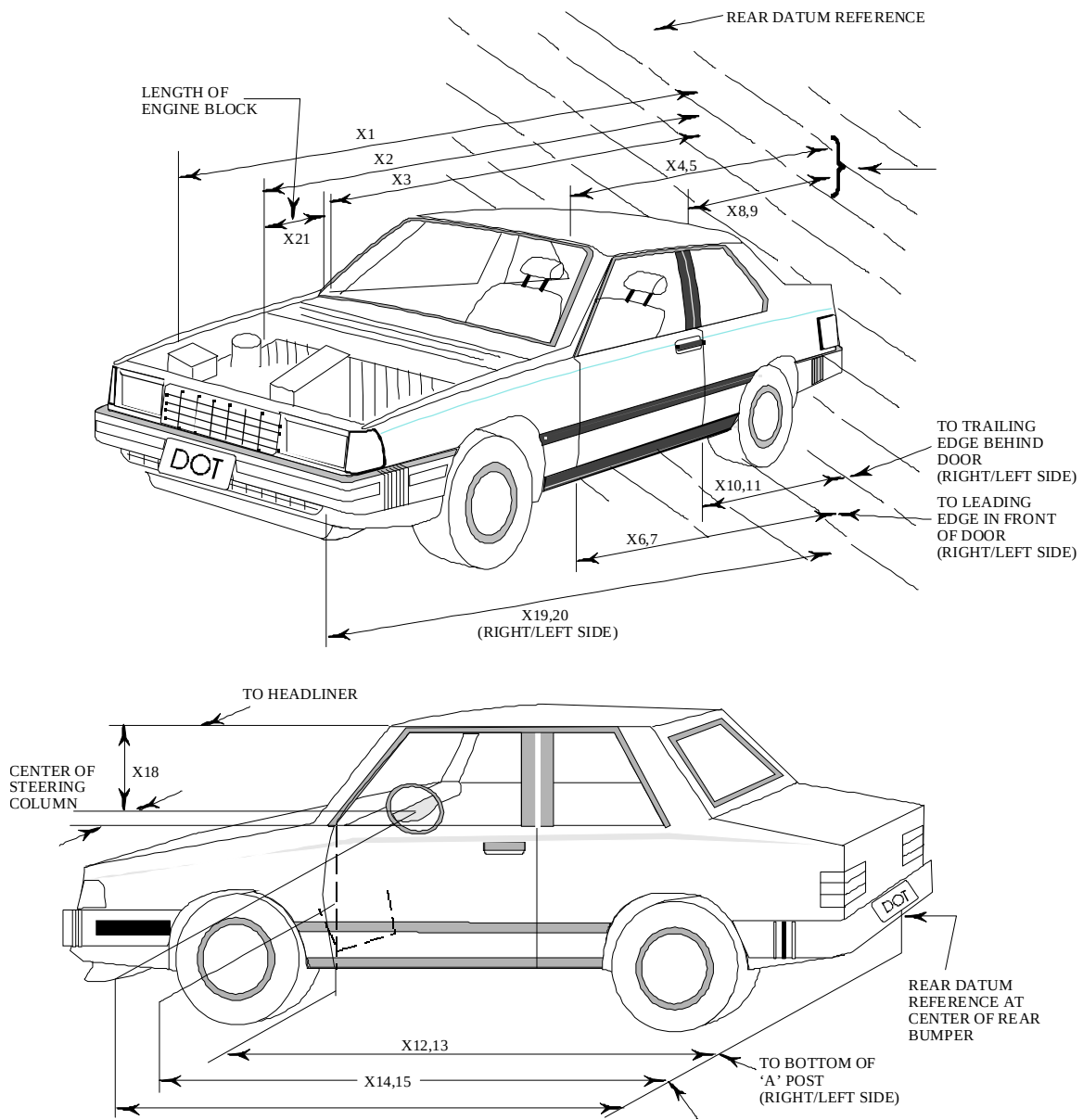
Rollover Stage	First 5 minutes from onset of rotation (g)	6th min. (g)	7th min. (g)	8th min. (if required) (g)
0° - 90°	0	0	0	N/A
90° - 180°	0	0	0	N/A
180°-270°	0	0	0	N/A
270°-360°	0	0	0	N/A

Note: Record spillage for whole minute intervals only as determined above.

IV. SOLVENT SPILLAGE LOCATION(S):

Rollover Stage	Spillage Location
0° - 90°	None
90° - 180°	None
180°-270°	None
270°-360°	None

DATA SHEET NO. 10
TEST VEHICLE MEASUREMENTS



DATA SHEET NO.10
VEHICLE MEASUREMENTS (cont.)

NHTSA TEST No.: M65205 TEST DATE: March 3, 2006
VEHICLE MAKE/MODEL: 2006 Nissan Frontier Extended Cab Pickup

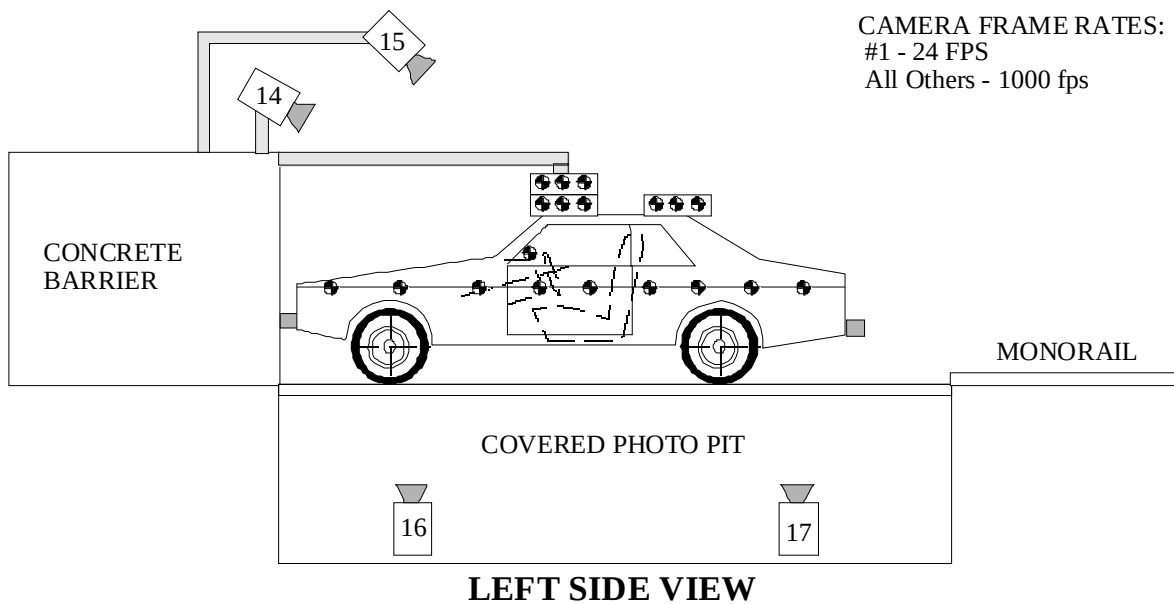
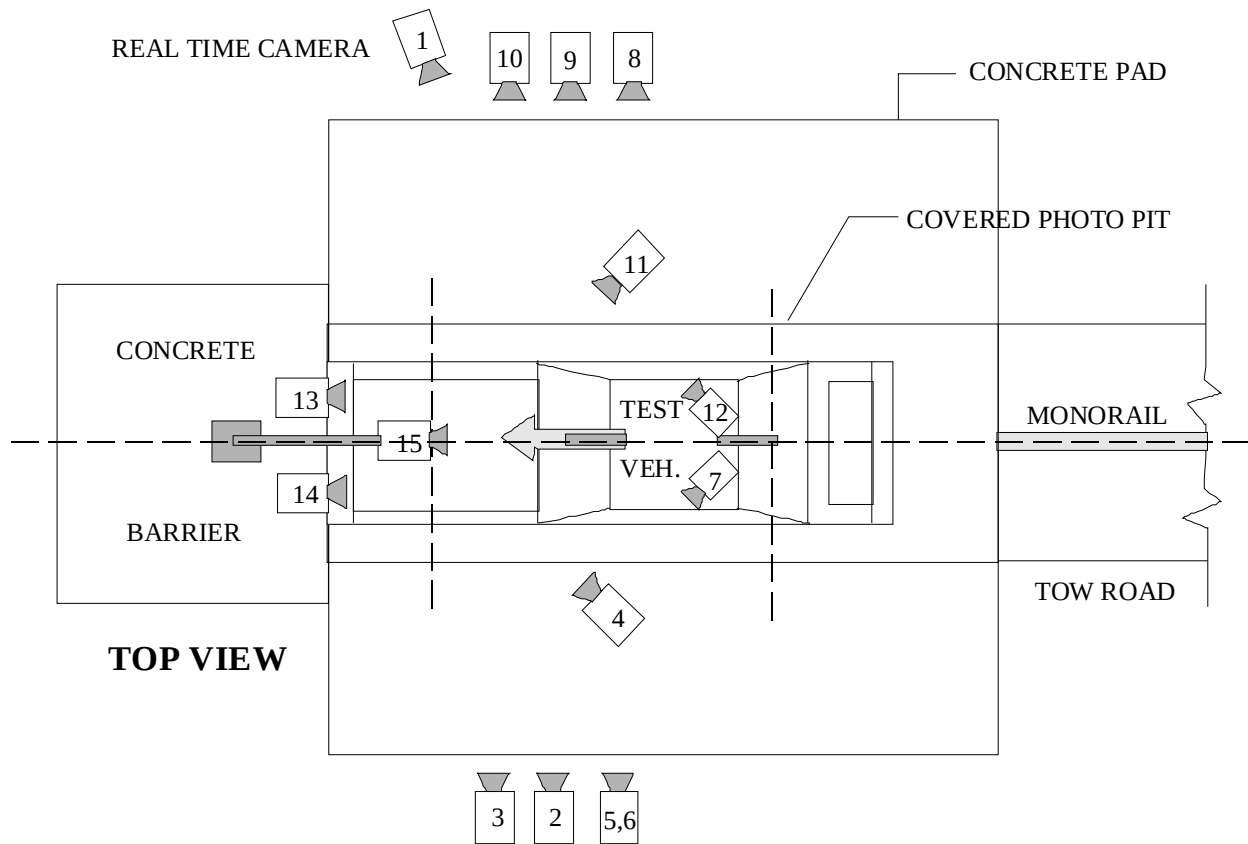
No.		Pre-Test	Post-Test	Difference
X1	Total Length of Vehicle at Centerline	5229	4717	512
X2	Rear Surface of Vehicle to Front of Engine	4735	4551	184
X3	Rear Surface of Vehicle to Firewall	4149	4080	69
X4	Rear Surface of Vehicle to Upper Leading Edge of Right Door	3831	3815	16
X5	Rear Surface of Vehicle to Upper Leading Edge of Left Door	3820	3811	9
X6	Rear Surface of Vehicle to Lower Leading Edge of Right Door	3721	3701	20
X7	Rear Surface of Vehicle to Lower Leading Edge of Left Door	3721	3705	16
X8	Rear Surface of Vehicle to Upper Trailing Edge of Right Door	2717	2702	15
X9	Rear Surface of Vehicle to Upper Trailing Edge of Left Door	2718	2710	8
X10	Rear Surface of Vehicle to Lower Trailing Edge of Right Door	2675	2654	21
X11	Rear Surface of Vehicle to Lower Trailing Edge of Left Door	2676	2662	14
X12	Rear Surface of Vehicle to Bottom of "A" Post of Right Side	3944	3934	10
X13	Rear Surface of Vehicle to Bottom of "A" Post of Left Side	3943	3935	8
X14	Rear Surface of Vehicle to Firewall, Right Side	4146	4110	36
X15	Rear Surface of Vehicle to Firewall, Left Side	4174	4167	7
X16	Rear Surface of Vehicle to Steering Column	3332	3341	-9
X17	Center of Steering Column to "A" Post	262	252	10
X18	Center of Steering Column to Headliner	431	404	27
X19	Rear Surface of Vehicle to Right Side of Front Bumper	5177	4719	458
X20	Rear Surface of Vehicle to Left Side of Front Bumper	5180	4721	459
X21	Length of Engine Block	509	509	0
RD	Rear Surface of Vehicle to Right Side of Dash Panel	3550	3538	12
CD	Rear Surface of Vehicle to Center of Dash Panel	3494	3480	14
LD	Rear Surface of Vehicle to Left Side of Dash Panel	3549	3541	8

All Dimensions in mm

NHTSA TEST No.: M65205 TEST DATE: March 3, 2006
VEHICLE MAKE/MODEL: 2006 Nissan Frontier Extended Cab Pickup

	Elements	Pre-Test (mm)
1	Total length	5229
2	Total Width	1760
3	Bumper Top Height	711
4	Bumper Bottom Height	414
5	Longitudinal Member Top Height	563
6	Distance Between Longitudinal Members	828
7	Longitudinal Member Width	70
8	Engine top height	1153
9	Engine bottom height	255
10	Engine and gearbox width	420
11	Front bumper-engine distance	494
12	Front shock absorber fixing height	786
13	Bonnet leading edge height	1032
14	Front shock absorber fixing width	1192
15	Front bumper – front axle distance	796
16	Front axle – a pillar distance	660
17	A-pillar – B pillar distance	1015
18	B-pillar – rear axle distance	1536
19	B-pillar – C Pillar distance	532
20	Roof sill bottom height	1644
21	Roof sill top height	1729
22	Floor sill bottom height	379
23	Floor sill top height	513

DATA SHEET NO.11
HIGH-SPEED CAMERA LOCATIONS



CAMERA FRAME RATES:
#1 - 24 FPS
All Others - 1000 fps

DATA SHEET NO.11
HIGH-SPEED CAMERA LOCATIONS (cont.)

NHTSA Test No.: M65205 Vehicle: 2006 Nissan Frontier Extended Cab Pickup

CAMERA NO.	VIEW	CAMERA POSITIONS (mm)*			ANGLE (deg)**	FILM PLANE TO HEAD TARGET	LENS (mm)	SPEED (fps)
		X	Y	Z				
1	Real-Time Camera	-	-	-	-	-	-	30
2	Overall Left Side	8630	1947	1095	-3	8158	28	1000
3	Left Side View	9764	947	1082	-2	9292	52	1000
4	Driver and Interior View	7620	2967	2050	-9	-	35	500
5	Steering Column (Bottom)	8050	1547	1160	-2	7578	25	1000
6	Steering Column (Top)	8050	1547	1095	-9	7578	28-70	1000
7	Left CRS Lateral View	-	-	-	-	-	-	-
8	Overall Right Side	9517	2117	1170	-3	9785	28	500
9	Right Side View	9887	1483	1157	-2	10155	52	1000
10	Right Passenger View	8790	1917	1412	-4	9058	35	1000
11	Passenger and Interior View	7517	2867	2033	-10	-	35	500
12	Right CRS Lateral View	-	-	-	-	-	-	-
13	Passenger Front View	620	-92	1987	-29	-	13	500
14	Driver Front View	620	-92	1987	-28	-	13	500
15	Windshield View	0	-530	3374	-47	-	20	500
16	Pit View of Engine	0	615	-3048	90	-	13	500
17	Pit View of Fuel Tank	0	2500	-3048	90	-	13	500

*X = film plane to monorail centerline ** = referenced to horizontal plane

Y = film plane to impact location N.T. indicates No Timing

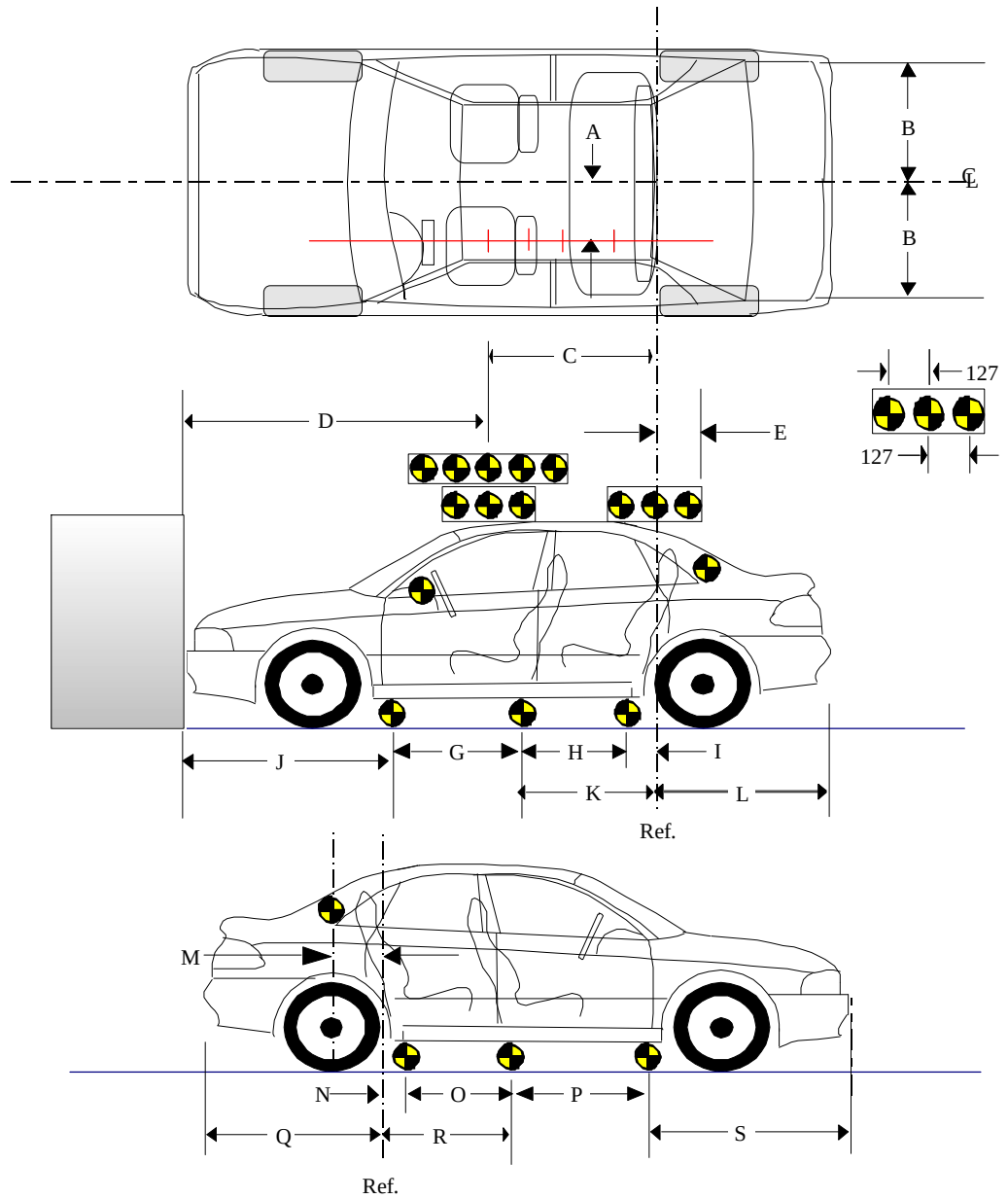
Z = film plane to ground

DATA SHEET NO. 12
VEHICLE REFERENCE PHOTO TARGET LOCATIONS

NHTSA Test No.: M65205 Vehicle: 2006 Nissan Frontier Extended Cab Pickup

(Dimensions in millimeters)

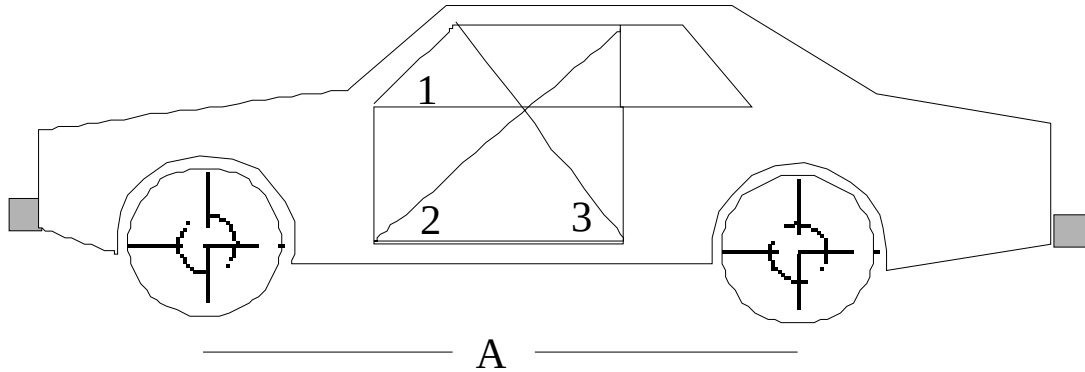
A	344
B	740
C	1217
D	1963
E	169
F	1460
G	812
H	820
I	626
J	1352
K	1446
L	1619
M	170
N	617
O	822
P	816
Q	1621
R	1439
S	1352



DATA SHEET NO. 13
VEHICLE INTRUSION MEASUREMENTS

NHTSA Test No.: M65205 Vehicle: 2006 Nissan Frontier Extended Cab Pickup

DOOR OPENING WIDTH AND WHEELBASE MEASUREMENTS



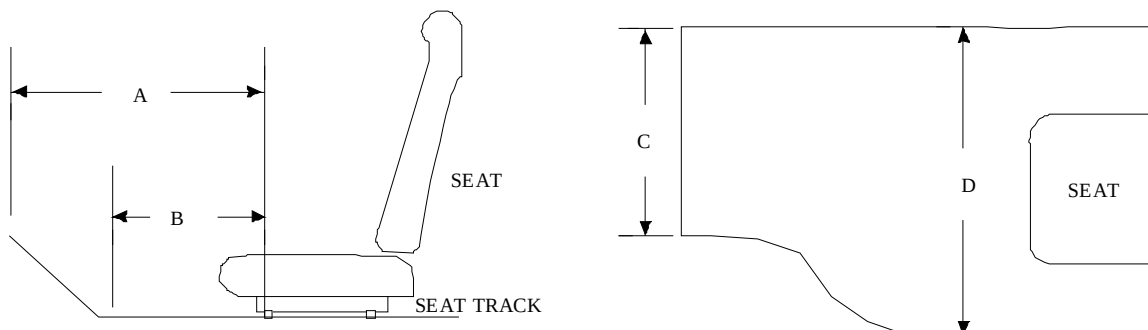
UNITS (mm)	LEFT			RIGHT		
MEASUREMENT	1	2	3	1	2	3
BEFORE TEST	1015	1507	1206	1014	1521	1219
AFTER TEST	1012	1498	1220	1011	1511	1236
DIFFERENCE	3	9	-14	3	10	-17

UNITS (mm)	A = WHEELBASE LEFT	A = WHEELBASE RIGHT
BEFORE TEST	3203	3203
AFTER TEST	3168	2941
DIFFERENCE	35	262

DATA SHEET NO.13
VEHICLE INTRUSION MEASUREMENTS (cont)

NHTSA Test No.: M65205 Vehicle: 2006 Nissan Frontier Extended Cab Pickup

STATIC FOOTWELL DEFORMATION



DRIVER

Measurement	Pre-Test	Post-Test	Difference
A	686	644	42
B	493	485	8
C	468	462	6
D	424	423	1

PASSENGER

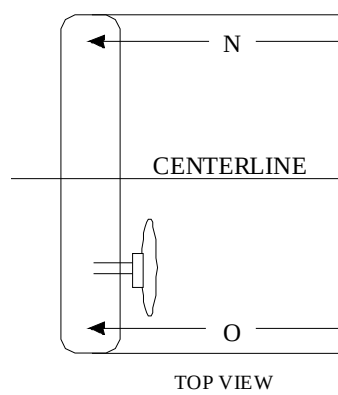
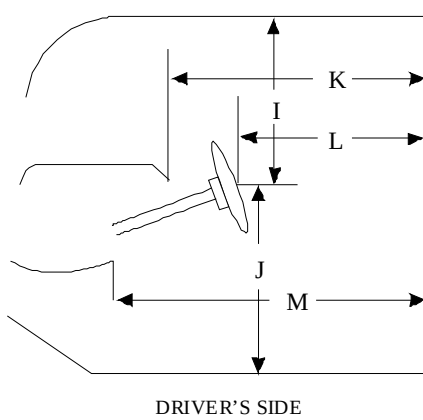
Measurement	Pre-Test	Post-Test	Difference
A	593	598	-5
B	486	502	-16
C	411	405	6
D	425	416	9

Units = mm

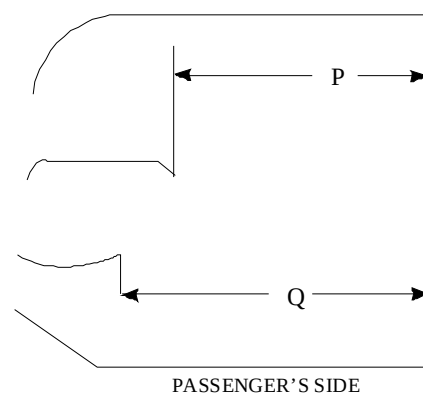
DATA SHEET NO.13
VEHICLE INTRUSION MEASUREMENTS (cont.)

NHTSA Test No.: M65205 Vehicle: 2006 Nissan Frontier Extended Cab Pickup

STATIC PASSENGER COMPARTMENT INTRUSION



MEASUREMENTS
FROM C-PILLAR
BELT ANCHORAGE



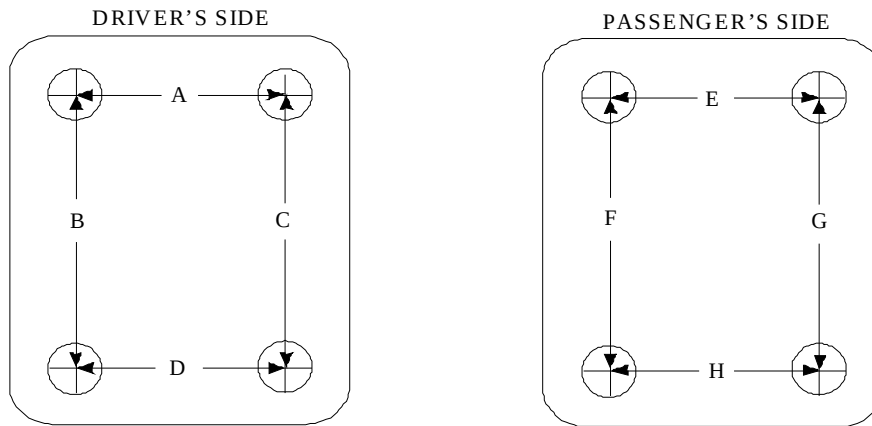
Measurement	Pre-Test	Post-Test	Difference
I	431	404	27
J	683	714	-31
K	814	821	-7
L	563	583	-20
M	798	818	-20
N	780	783	-3
O	780	782	-2
P = K (PASS.)	854	843	11
Q = M (PASS.)	794	806	-12

Units = mm

DATA SHEET NO.13
VEHICLE INTRUSION MEASUREMENTS (cont.)

NHTSA Test No.: M65205 Vehicle: 2006 Nissan Frontier Extended Cab Pickup

FLOORBOARD DEFORMATION



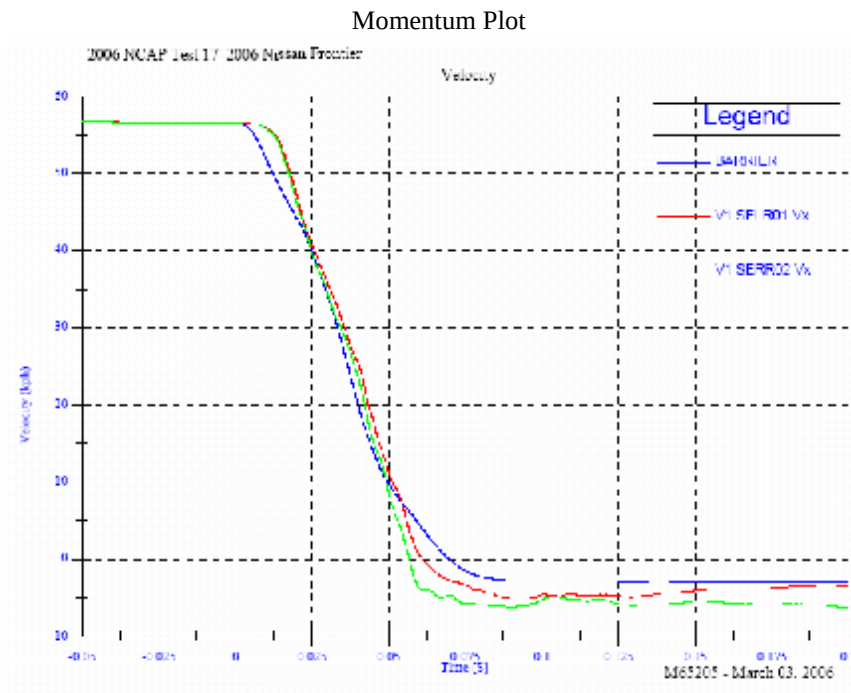
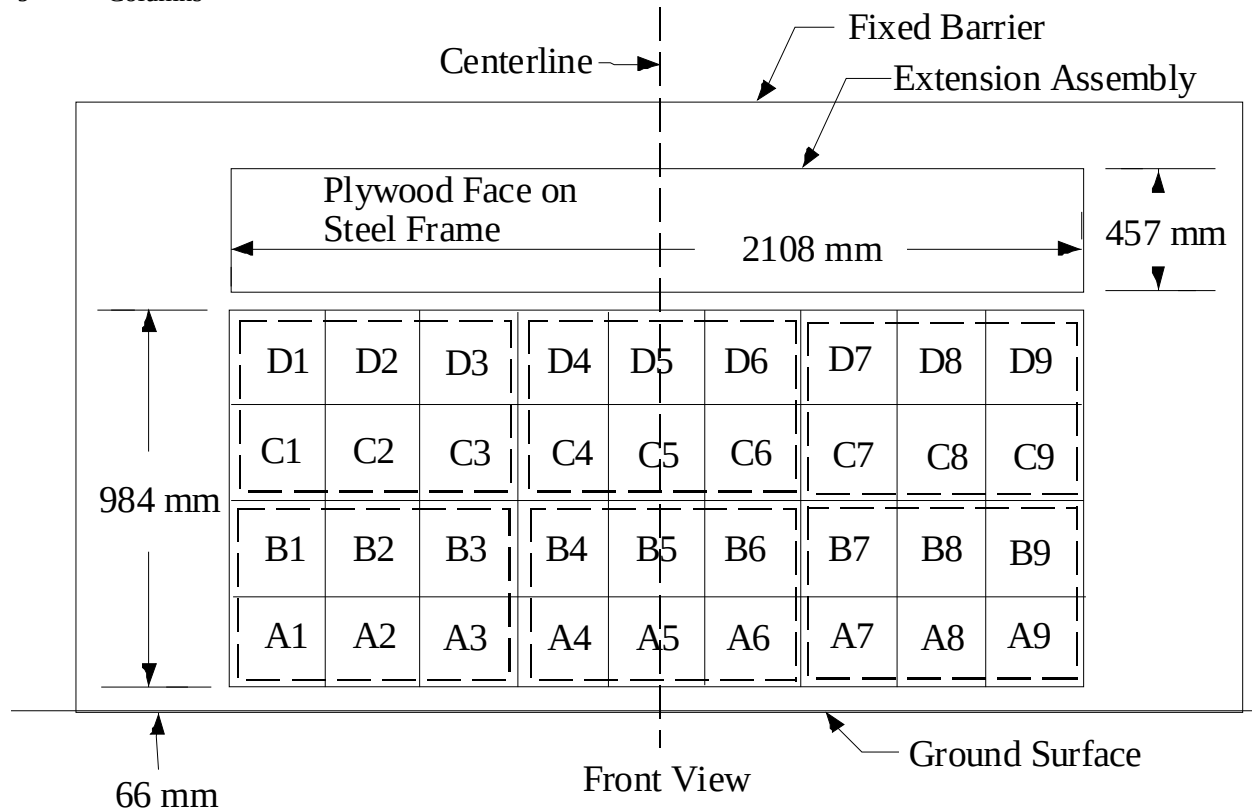
TOP VIEW THROUGH FLOOR PAN

Measurement	Pre-Test	Post-Test	Difference
A	468	462	6
B	403	398	5
C	332	330	3
D	424	423	1
E	411	405	6
F	415	413	2
G	397	396	2
H	425	416	9

Units = mm

DATA SHEET NO.14
LOAD CELL LOCATIONS ON FIXED BARRIER

36 Load Cells
4 Rows
9 Columns



DATA SHEET NO. 15
ACCIDENT INVESTIGATION DIVISION DATA
FOR FRONTAL BARRIER IMPACT

Vehicle Make/Model/Body Style: Nissan Frontier Extended Cab Pickup

NHTSA Test No.: M65205 VIN: 1N6AD06W46C411331

Model Year: 2006 Build Date: 11/05 Test Date: March 3, 2006

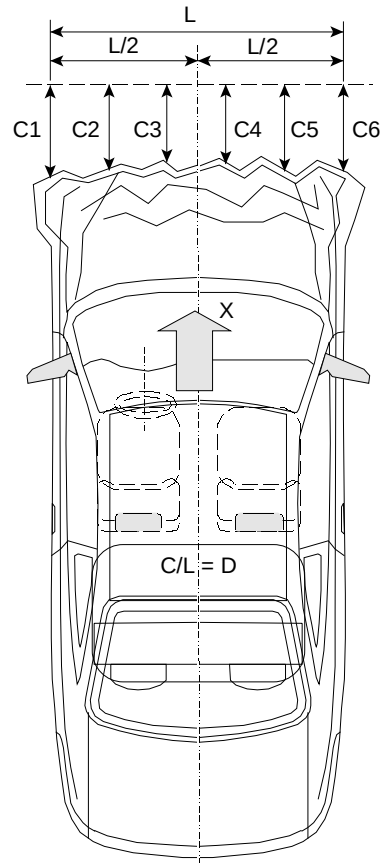
Vehicle Size Category: Standard Pickup Test Weight: 2232.0 kg

Vehicle Wheelbase: 3203 mm; Front Overhang: 796 mm; Overall Width: 1760 mm

Collision Deformation Classification (CDC) Code: 12FDEW3

Crush Depth Dimensions

	PRE (mm)	POST (mm)	DIFF (mm)
C1 =	5040	4681	359
C2 =	5175	4722	453
C3 =	5223	4719	504
C4 =	5223	4719	504
C5 =	5173	4721	452
C6 =	5035	4684	351



Midpoint of Damage: D = Vehicle Centerline (Longitudinal)

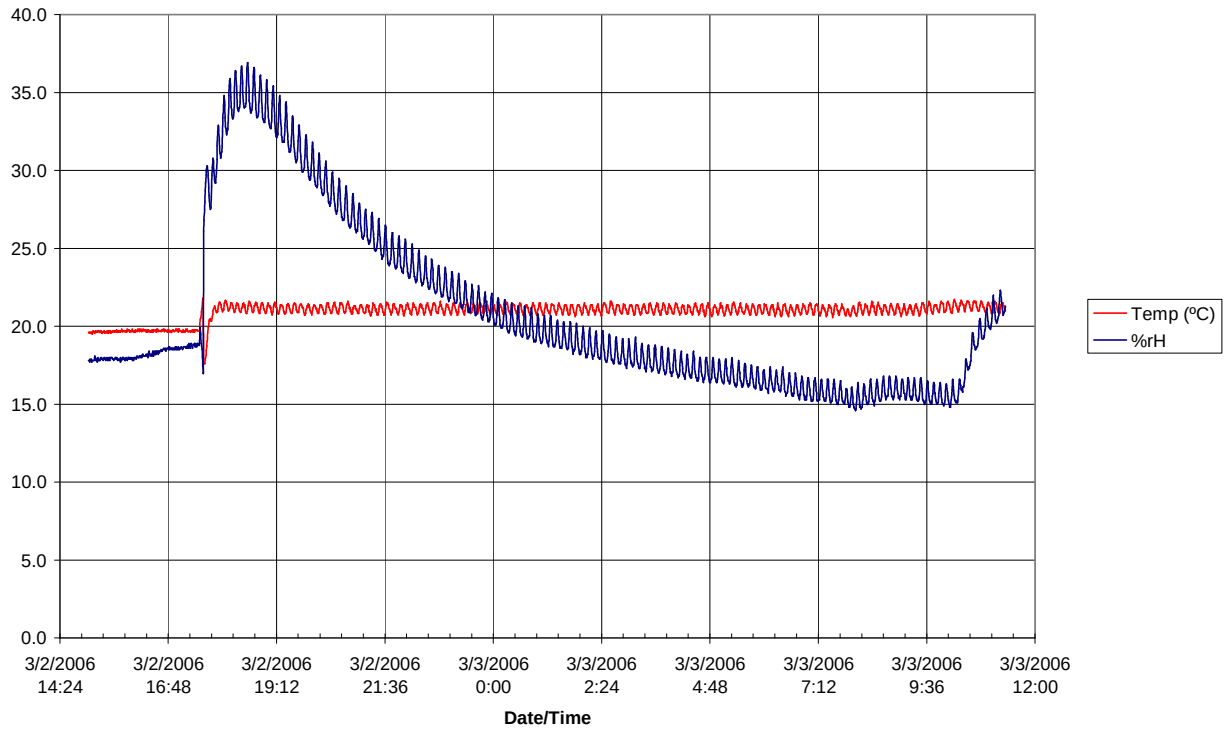
Length of Damaged Region:

L1=	<u>1697</u>	mm
L2=	<u>848.5</u>	mm
L5=	<u>339.4</u>	mm

DATA SHEET NO.16
VEHICLE AND DUMMY TEMPERATURE STABILIZATION CHART

NHTSA Test No.: M65205 Vehicle: 2006 Nissan Frontier Extended Cab Pickup

Nissan Frontier M65205 Environmental Conditions



APPENDIX A
PHOTOGRAPHS

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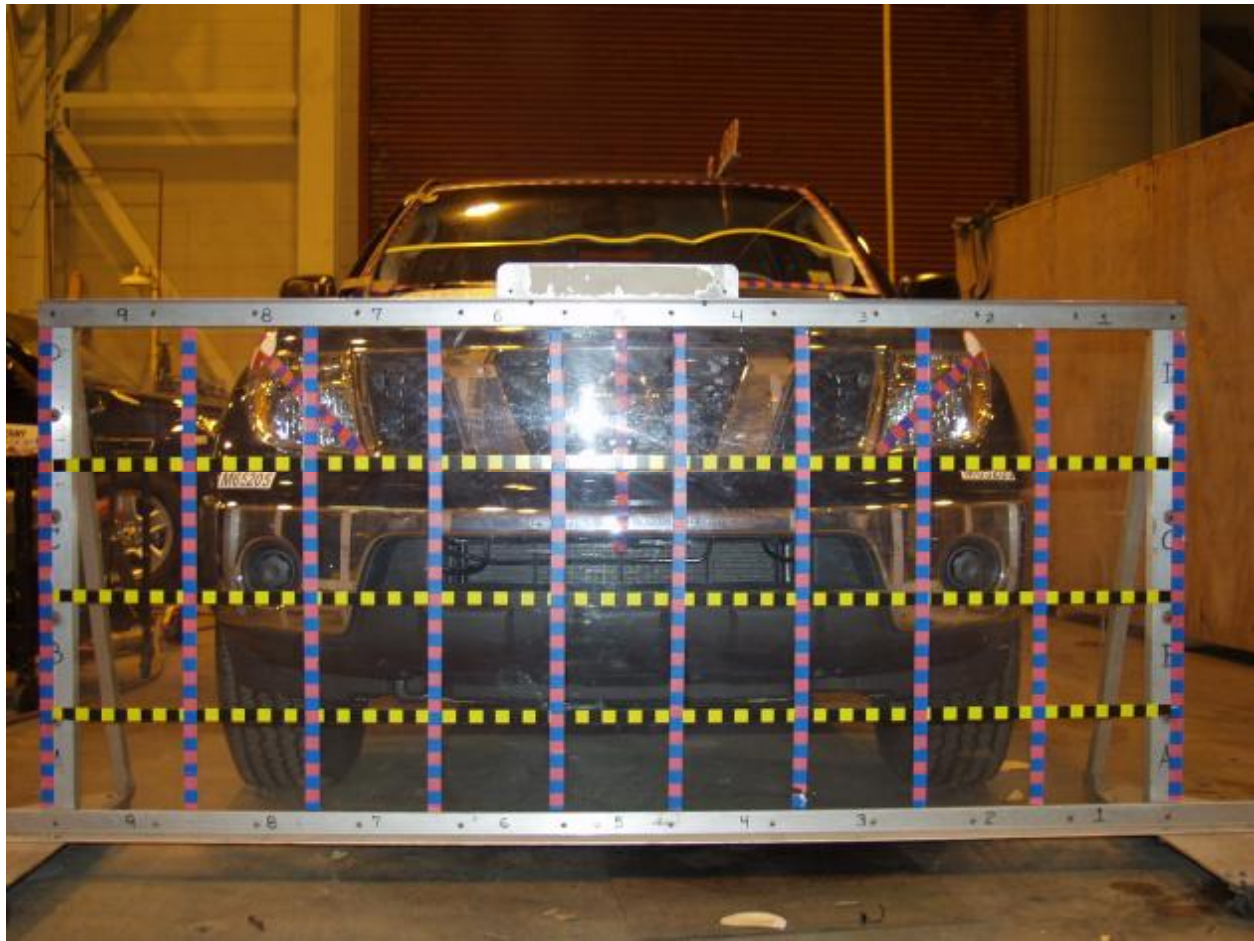


Figure A-1: Load Cell Locations



Figure A-2: Vehicle Certification Placard



Figure A-3: Vehicle Tire Placard



Figure A-4: Right Front, As Received



Figure A-5: Left Rear, As Received

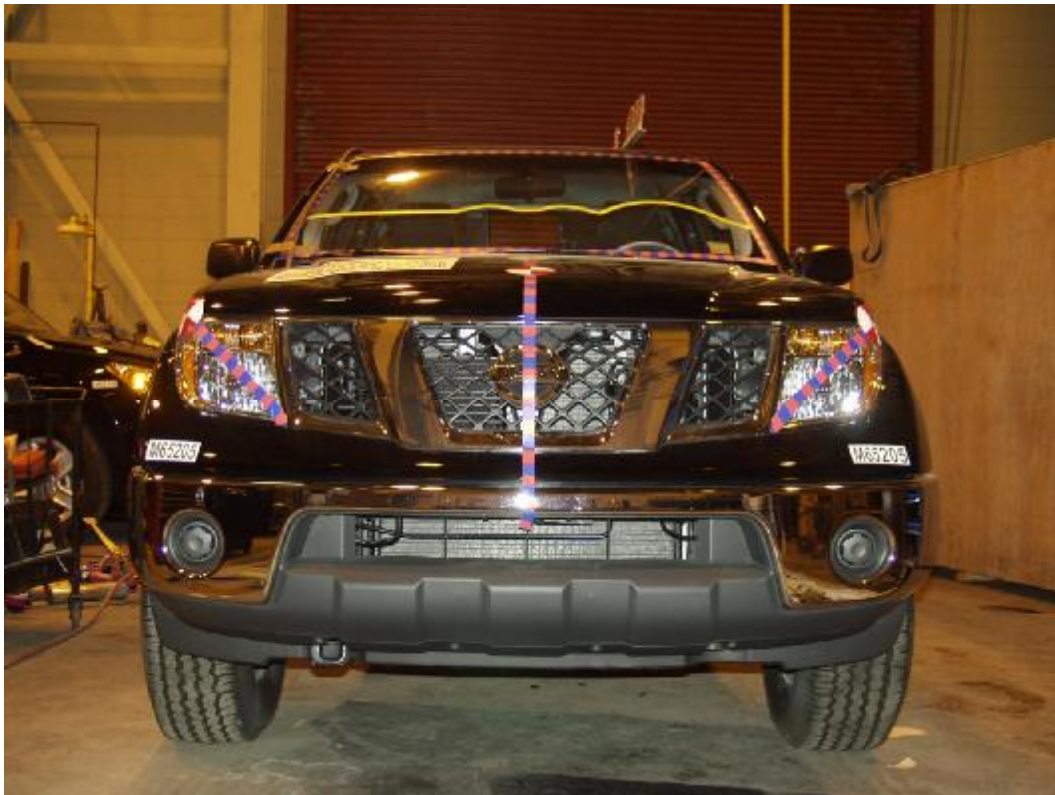


Figure A-6: Pre-Test Front View



Figure A-7: Post-Test Front View



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



Figure A-12: Pre-Test Right Front Three-Quarter View



Figure A-13: Post-Test Right Front Three-Quarter View



Figure A-14: Pre-Test Left Rear Three-Quarter View



Figure A-15: Post-Test Left Rear Three-Quarter View



Figure A-16: Left Rear Three-Quarter View of Doors After Impact



Figure A-17: Right Rear Three-Quarter View of Doors After Impact



Figure A-18: Pre-Test Windshield View



Figure A-19: Post-Test Windshield View



Figure A-20: Pre-Test Engine Compartment View



Figure A-21: Post-Test Engine Compartment View



Figure A-22: Pre-Test Fuel Cap View



Figure A-23: Post-Test Fuel Cap View



Figure A-24: Pre-Test Front Underbody View



Figure A-25: Post-Test Front Underbody View

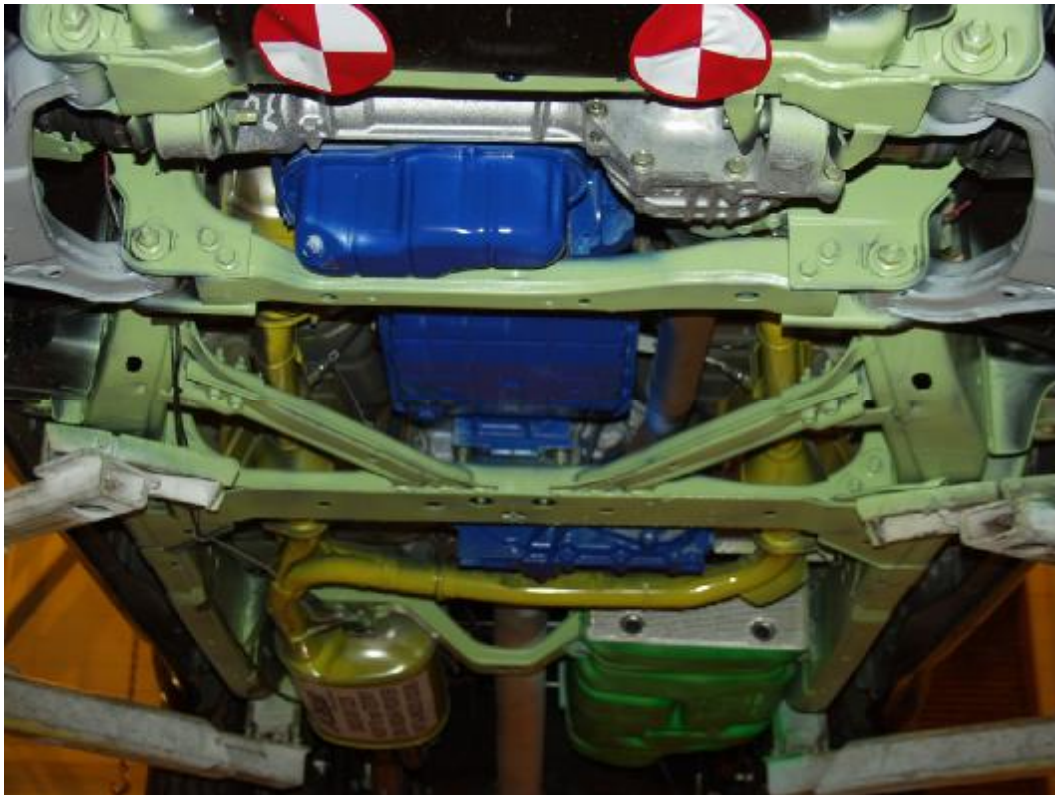


Figure A-26: Pre-Test Mid Underbody View



Figure A-27: Post-Test Mid Underbody View



Figure A-28: Pre-Test Rear Underbody View



Figure A-29: Post-Test Rear Underbody View



Figure A-30: Pre-Test Driver Head Location



Figure A-31: Post-Test Driver Head Location



Figure A-32: Pre-Test Driver Position View



Figure A-33: Post-Test Driver Position View



Figure A-34: Pre-Test Driver and Interior View



Figure A-35: Post-Test Driver and Interior View

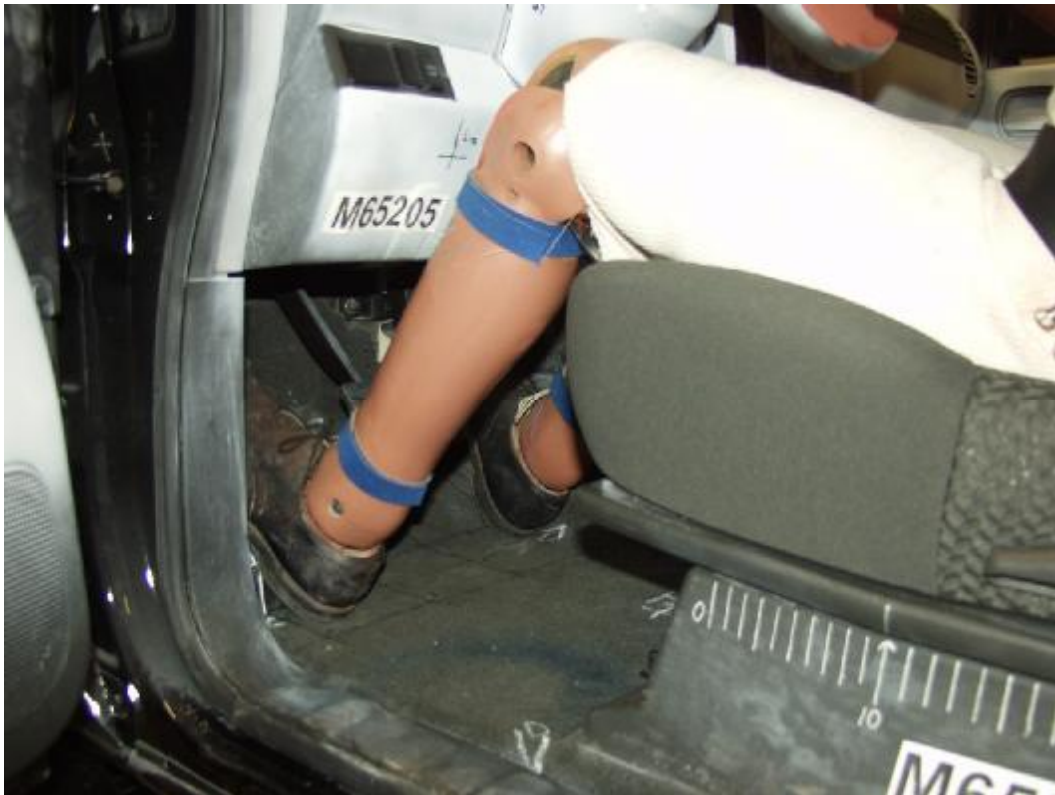


Figure A-36: Pre-Test Driver Feet View



Figure A-37: Post-Test Driver Feet View



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



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



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



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



Figure A-42: Post-Test Driver Head View



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



Figure A-44: Pre-Test Passenger Head Location



Figure A-45: Post-Test Passenger Head Location



Figure A-46: Pre-Test Passenger Position View



Figure A-47: Post-Test Passenger Position View



Figure A-48: Pre-Test Passenger and Interior View



Figure A-49: Post-Test Passenger and Interior View



Figure A-50: Pre-Test Passenger Feet View



Figure A-51: Post-Test Passenger Feet View



Figure A-52: Pre-Test Passenger Knee Bolster View



Figure A-53: Post-Test Passenger Knee Bolster View



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



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



Figure A-56: Post-Test Passenger Head View



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



Figure A-58: Rollover View - 90°



Figure A-59: Rollover View - 180°



Figure A-60: Rollover View - 270°



Figure A-61: Rollover View - 360°



Figure A-62: Impact View

APPENDIX B

DUMMY, VEHICLE AND LOAD CELL BARRIER RESPONSE DATA

**Hybrid III Dummy Sign Conventions
Load Cells and Special Transducers**

Transducer	SAE Sign Convention (positive unless noted)	
Upper Neck Load Cell	Fx	Head rearward
	Fy	Head left
	Fz	Neck in tension
	Mx	Left ear to left shoulder
	My	Chin to chest (flexion)
	Mz	Chin to left shoulder (look left)
Chest Displacement Potentiometer	Compression is negative	
Pelvic Load Cell (Lower Lumbar)	Fx	Chest rearward
	Fy	Chest left
	Fz	Spine in tension
Femur Load Cell	Compression is negative	
Upper Tibia Load Cell (right and left leg)	Mx	Support tibia at ends, load left side center
	My	Support tibia at ends, load front (shin) center
Lower Tibia Load Cell (right and left leg)	Fz	Tibia in tension
	Mx	Support tibia at ends, load left side center
	My	Support tibia at ends, load front (shin) center

DATA CHANNEL FILTER CLASS SUMMARY

NHTSA TEST NO.: M65205

DATA TYPE	SAE FILTER CLASS (Hz)
Dummy Head Accelerations	1000
Dummy Chest Accelerations	180
Dummy Chest Displacements	600
Dummy Femur Forces	600
Dummy Belt Loads	60
Dummy Belt Displacements	180
Dummy Neck Forces	1000
Dummy Neck Moments	600
Vehicle Accelerations	60
Vehicle Velocity Integrations	180
Vehicle Displacement Integrations	180
Load Cell Barrier Forces	60

Table of Data Plots

PLOT	PLOT NAME[UNITS, CHANNEL FILTER CLASS]	PAGE
1	V1P1 Head CG x [g, CFC_1000]	B-8
2	V1P1 Head CG y [g, CFC_1000]	B-8
3	V1P1 Head CG z [g, CFC_1000]	B-8
4	V1P1 Head CG Resultant [g, CFC_1000]	B-8
5	V1P1 Chest x [g, CFC_180]	B-9
6	V1P1 Chest y [g, CFC_180]	B-9
7	V1P1 Chest z [g, CFC_180]	B-9
8	V1P1 Chest Resultant [g, CFC_180]	B-9
9	V1P1 Chest Compression x [mm, CFC_600]	B-10
10	V1P1 Left Femur z [N, CFC_600]	B-11
11	V1P1 Right Femur z [N, CFC_600]	B-11
12	V1P2 Head CG x [g, CFC_1000]	B-12
13	V1P2 Head CG y [g, CFC_1000]	B-12
14	V1P2 Head CG z [g, CFC_1000]	B-12
15	V1P2 Head CG Resultant [g, CFC_1000]	B-12
16	V1P2 Chest x [g, CFC_180]	B-13
17	V1P2 Chest y [g, CFC_180]	B-13
18	V1P2 Chest z [g, CFC_180]	B-13
19	V1P2 Chest Resultant [g, CFC_180]	B-13
20	V1P2 Chest Compression x [mm, CFC_600]	B-14
21	V1P2 Left Femur z [N, CFC_600]	B-15
22	V1P2 Right Femur z [N, CFC_600]	B-15

The following dummy, vehicle and load cell response data can be found in the research and development section of the NHTSA website at: www.nhtsa.dot.gov

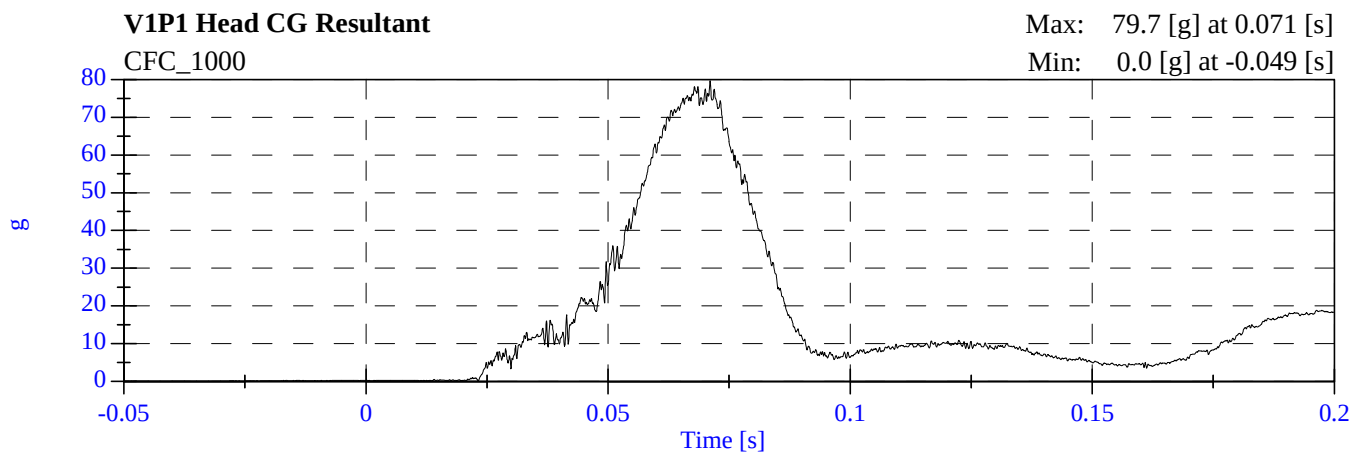
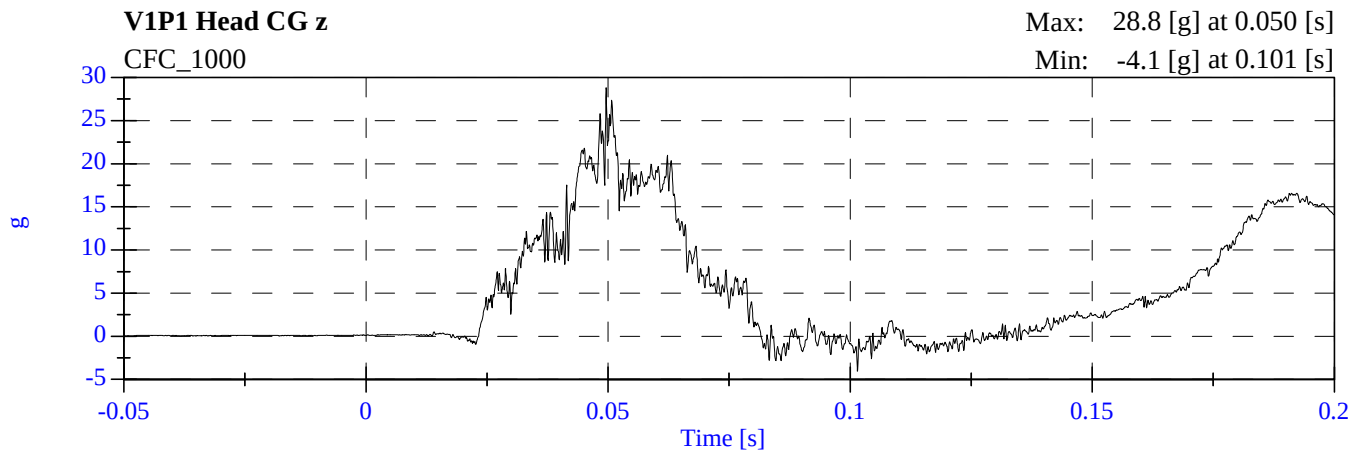
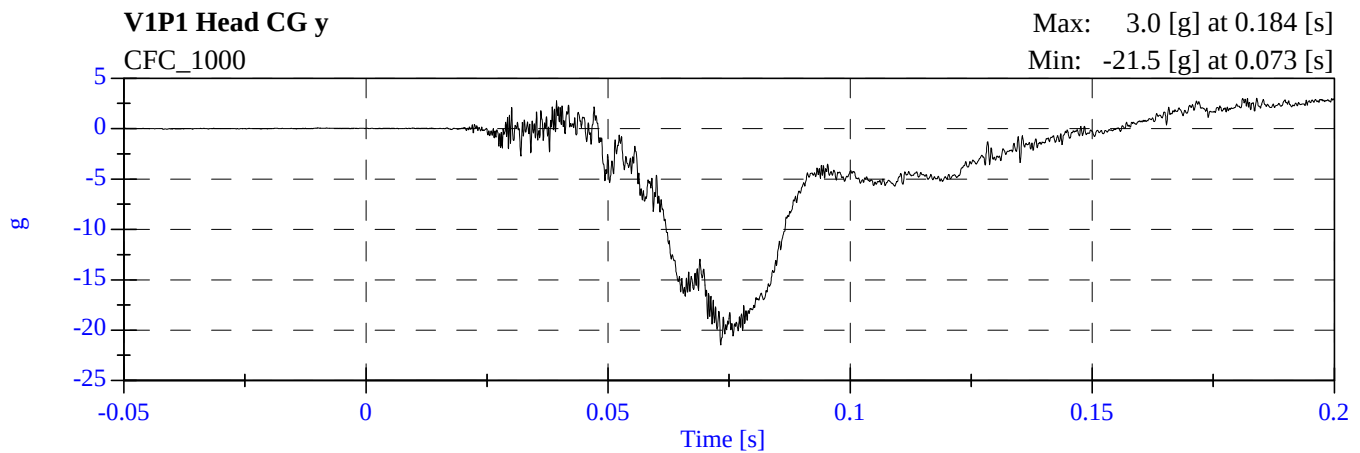
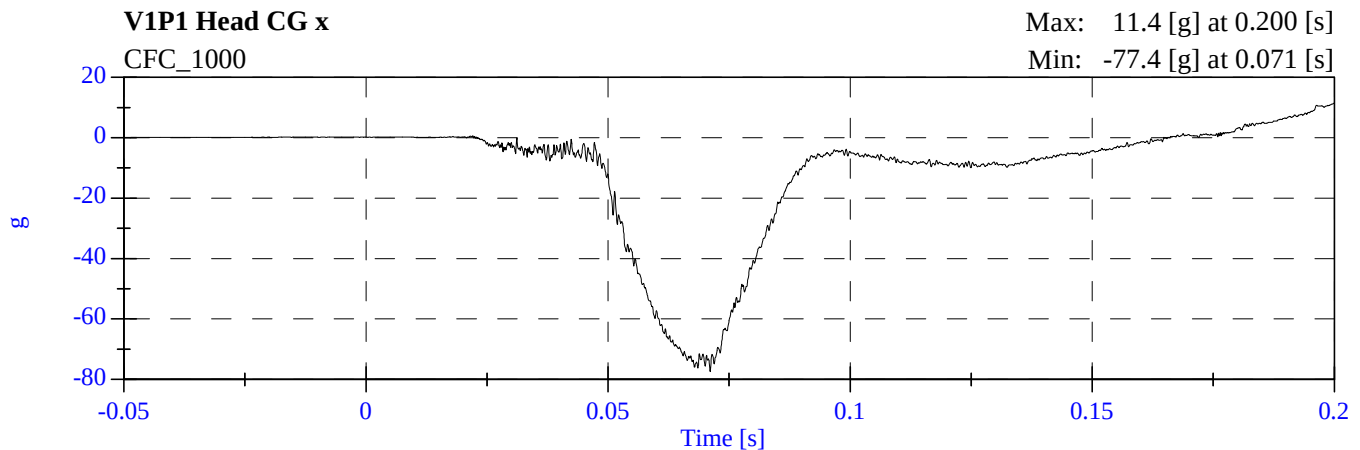
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V1P1 Head 9 Array X Arm Az	V1P1 Shoulder Belt Load
V1P1 Head 9 Array Y Arm Ax	V1P2 Lap Belt Load
V1P1 Head 9 Array Y Arm Az	V1P2 Shoulder Belt Load
V1P1 Head 9 Array Z Arm Ax	V1 Left Rear #1x
V1P1 Head 9 Array Z Arm Ay	V1 Right Rear #2x
V1P1 Head CG Ax	V1 Engine Top #3x
V1P1 Head CG Ay	V1 Engine Bottom #4x
V1P1 Head CG Az	V1 Right Caliper #5x
V1P1 Head CG Red Ax	V1 Left Caliper #7x
V1P1 Head CG Red Ay	V1 Left Rear #8z
V1P1 Head CG Red Az	V1 Right Rear #9z
V1P1 Upper Neck Fx	
V1P1 Upper Neck Fy	
V1P1 Upper Neck Fz	
V1P1 Upper Neck Mx	
V1P1 Upper Neck My	
V1P1 Upper Neck Mz	
V1P1 Chest Ax	
V1P1 Chest Ay	
V1P1 Chest Az	
V1P1 Chest Red Ax	
V1P1 Chest Red Ay	
V1P1 Chest Red Az	
V1P1 Chest Compression	
V1P1 Pelvic Ax	
V1P1 Pelvic Ay	
V1P1 Pelvic Az	
V1P1 Left Femur Fz	
V1P1 Right Femur Fz	
V1P1 Left Upper Tibia Mx	
V1P1 Left Upper Tibia My	
V1P1 Left Lower Tibia Fz	
V1P1 Left Lower Tibia Mx	
V1P1 Left Lower Tibia My	
V1P1 Right Upper Tibia Fz	
V1P1 Right Upper Tibia Mx	
V1P1 Right Upper Tibia My	
V1P1 Right Lower Tibia Mx	
V1P1 Right Lower Tibia My	
V1P1 Left Foot Aft Ax	
V1P1 Left Foot Aft Az	
V1P1 Left Foot Fore Az	
V1P1 Right Foot Aft Ax	
V1P1 Right Foot Aft Az	
V1P1 Right Foot Fore z	
V1P2 Head 9 Array X Arm Ay	

V1P2 Head 9 Array X Arm Az	
V1P2 Head 9 Array Y Arm Ax	
V1P2 Head 9 Array Y Arm Az	
V1P2 Head 9 Array Z Arm Ax	
V1P2 Head 9 Array Z Arm Ay	
V1P2 Head CG Ax	
V1P2 Head CG Ay	
V1P2 Head CG Az	
V1P2 Head CG Red Ax	
V1P2 Head CG Red Ay	
V1P2 Head CG Red Az	
V1P2 Upper Neck Fx	
V1P2 Upper Neck Fy	
V1P2 Upper Neck Fz	
V1P2 Upper Neck Mx	
V1P2 Upper Neck My	
V1P2 Upper Neck Mz	
V1P2 Chest Ax	
V1P2 Chest Ay	
V1P2 Chest Az	
V1P2 Chest Red Ax	
V1P2 Chest Red Ay	
V1P2 Chest Red Az	
V1P2 Chest Compression	
V1P2 Pelvic Ax	
V1P2 Pelvic Ay	
V1P2 Pelvic Az	
V1P2 Left Femur Fz	
V1P2 Right Femur Fz	
V1P2 Left Upper Tibia Fz	
V1P2 Left Upper Tibia Mx	
V1P2 Left Upper Tibia My	
V1P2 Left Lower Tibia Mx	
V1P2 Left Lower Tibia My	
V1P2 Right Upper Tibia Mx	
V1P2 Right Upper Tibia My	
V1P2 Right Lower Tibia Fz	
V1P2 Right Lower Tibia Mx	
V1P2 Right Lower Tibia My	
V1P2 Left Foot Aft Ax	
V1P2 Left Foot Aft Az	
V1P2 Left Foot Fore Az	
V1P2 Right Foot Aft Ax	
V1P2 Right Foot Aft Az	
V1P2 Right Foot Fore Az	
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Barrier Load Cell A2 Fx	
Barrier Load Cell A3 Fx	
Barrier Load Cell A4 Fx	

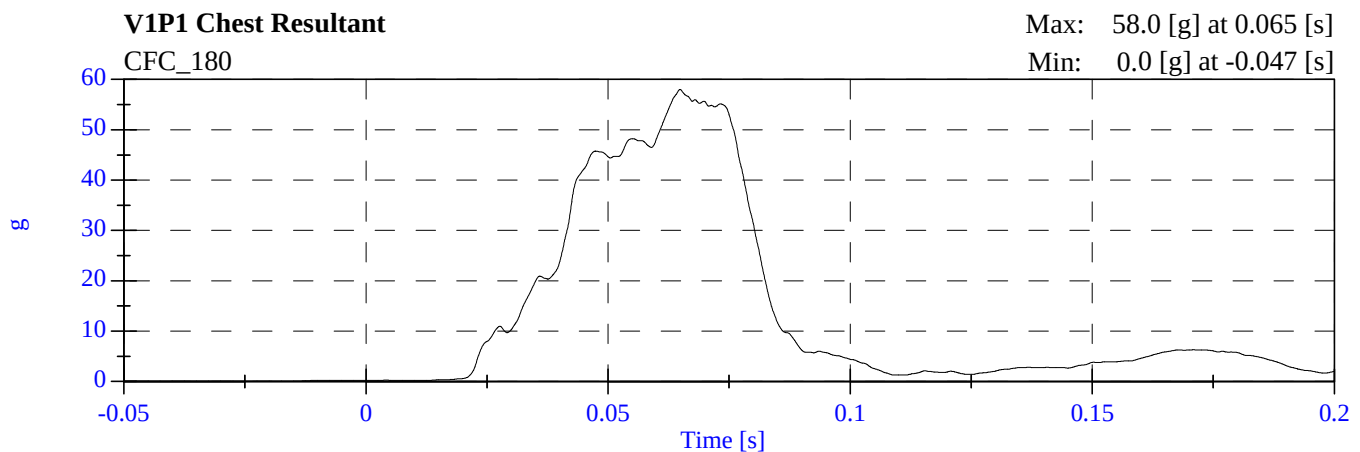
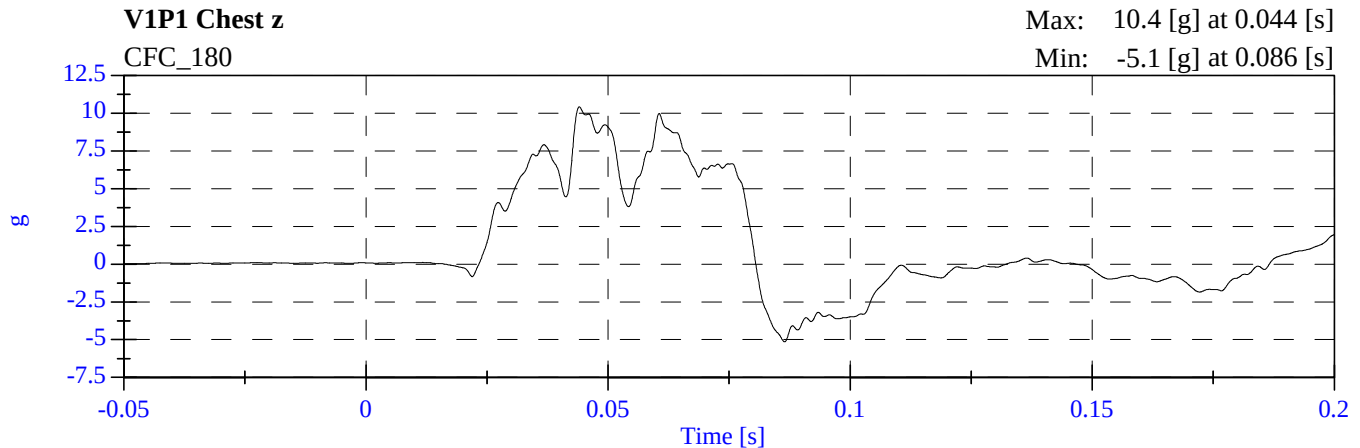
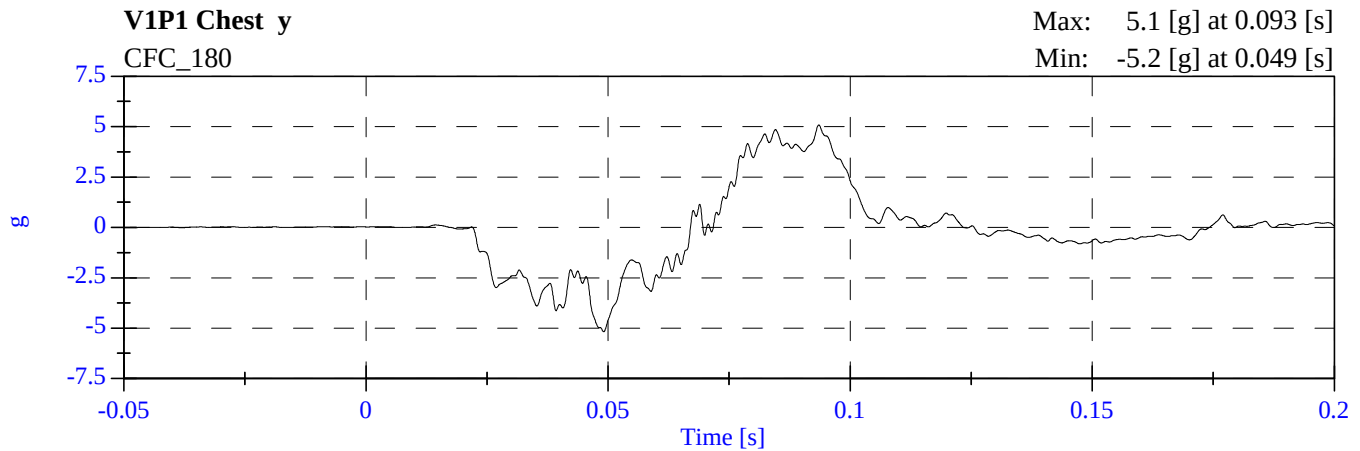
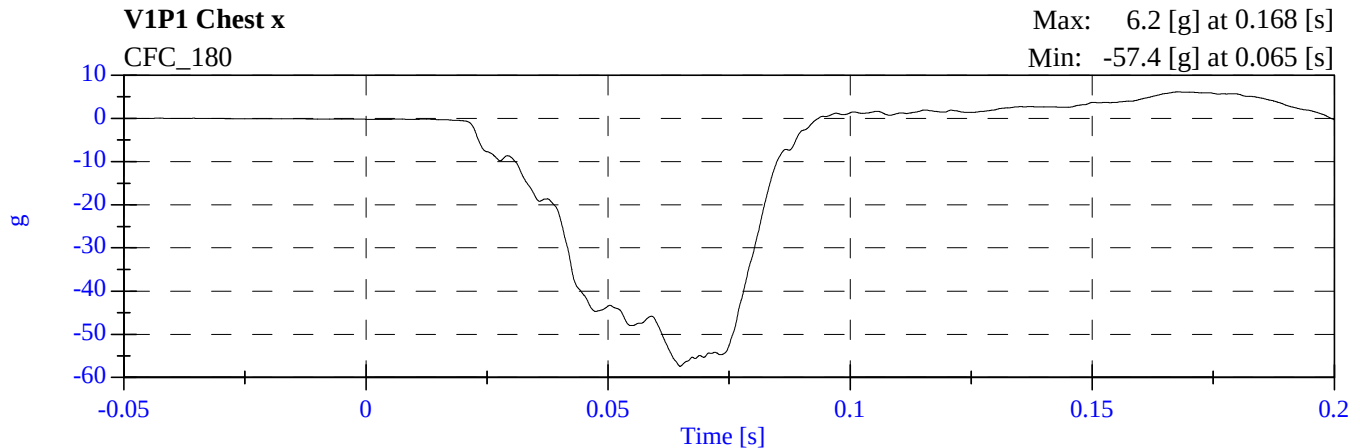
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Barrier Load Cell A6 Fx	
Barrier Load Cell A7 Fx	
Barrier Load Cell A8 Fx	
Barrier Load Cell A9 Fx	
Barrier Load Cell B1 Fx	
Barrier Load Cell B2 Fx	
Barrier Load Cell B3 Fx	
Barrier Load Cell B4 Fx	
Barrier Load Cell B5 Fx	
Barrier Load Cell B6 Fx	
Barrier Load Cell B7 Fx	
Barrier Load Cell B8 Fx	
Barrier Load Cell B9 Fx	
Barrier Load Cell C1 Fx	
Barrier Load Cell C2 Fx	
Barrier Load Cell C3 Fx	
Barrier Load Cell C4 Fx	
Barrier Load Cell C5 Fx	
Barrier Load Cell C6 Fx	
Barrier Load Cell C7 Fx	
Barrier Load Cell C8 Fx	
Barrier Load Cell C9 Fx	
Barrier Load Cell D1 Fx	
Barrier Load Cell D2 Fx	
Barrier Load Cell D3 Fx	
Barrier Load Cell D4 Fx	
Barrier Load Cell D5 Fx	
Barrier Load Cell D6 Fx	
Barrier Load Cell D7 Fx	
Barrier Load Cell D8 Fx	
Barrier Load Cell D9 Fx	

TEST NOTES	
Data Channel	Anomalies
V1P1 Left Upper Tibia Mx	Questionable Data
V1P1 Left Upper Tibia My	Channel Opened
V1P1 Right Lower Tibia Mx	Channel Opened
V1P1 Left Foot Aft Ax	Data Saturated
Barrier Load Cell B8 Fx	Did Not Record

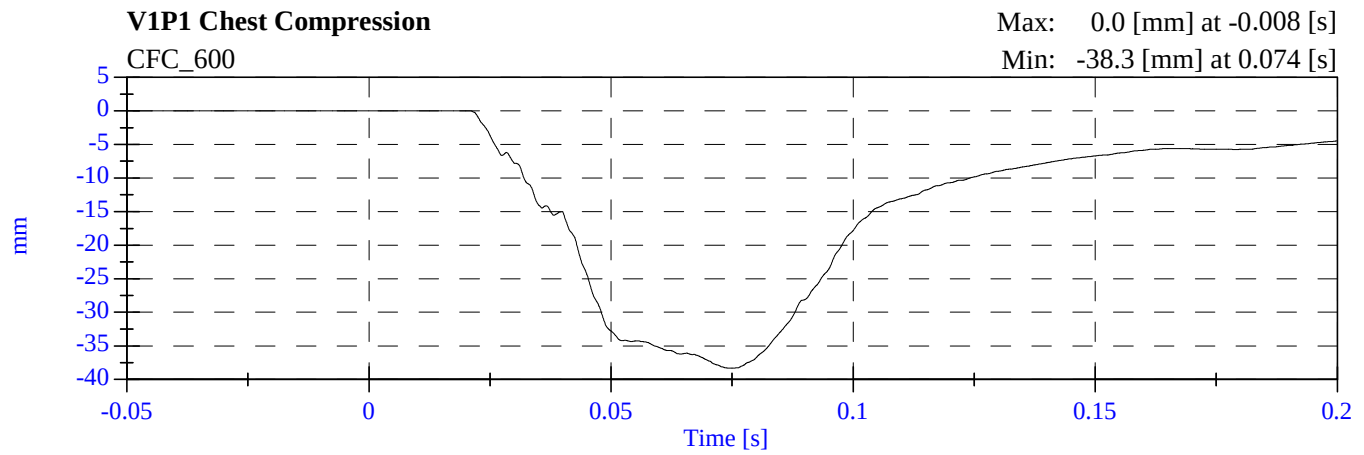
2006 NCAP Test 17 2006 Nissan Frontier M65205 - March 03, 2006



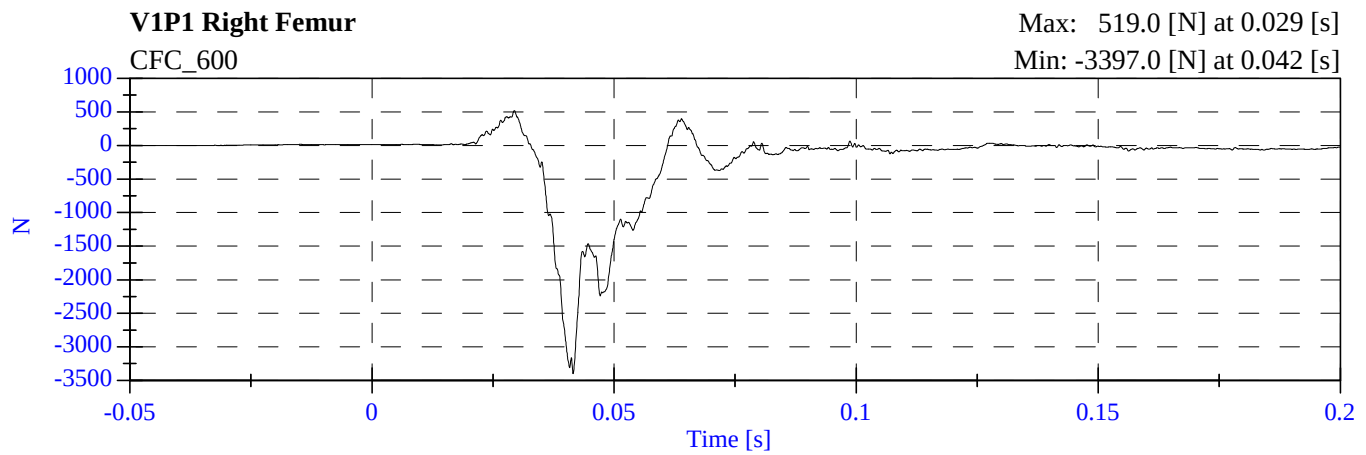
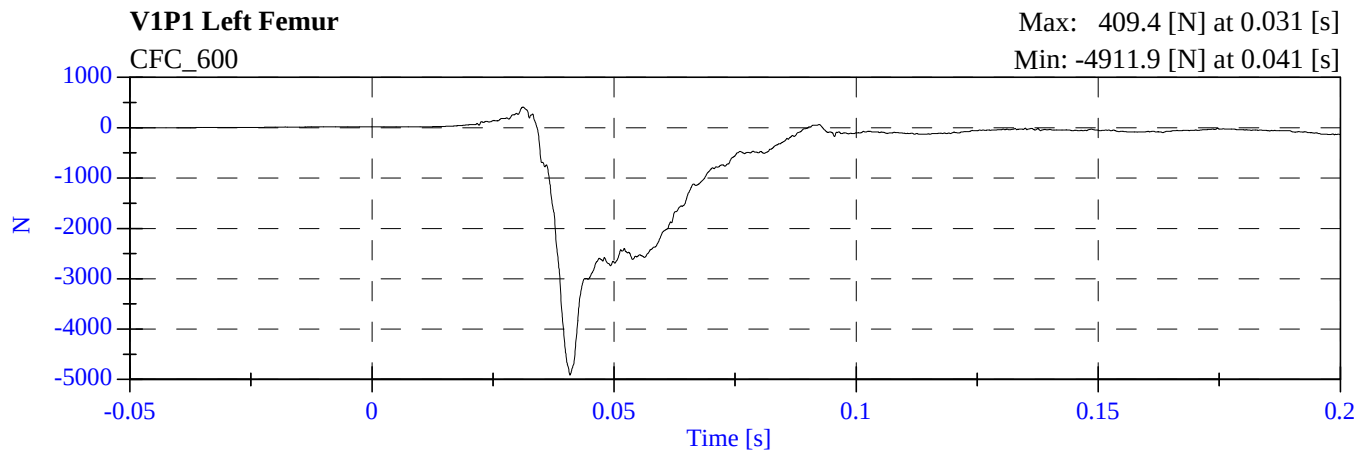
2006 NCAP Test 17 2006 Nissan Frontier M65205 - March 03, 2006



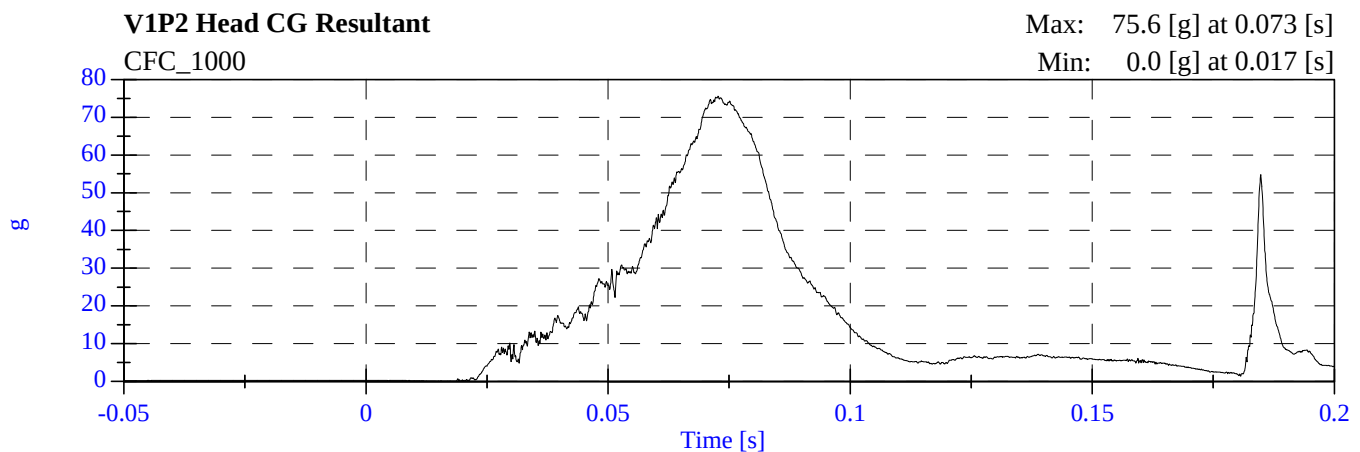
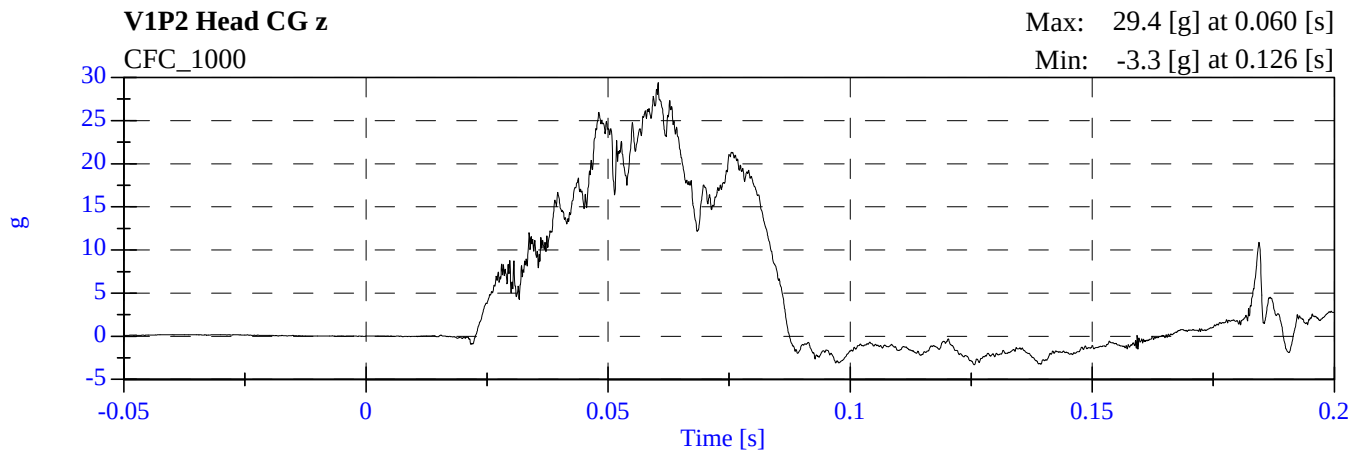
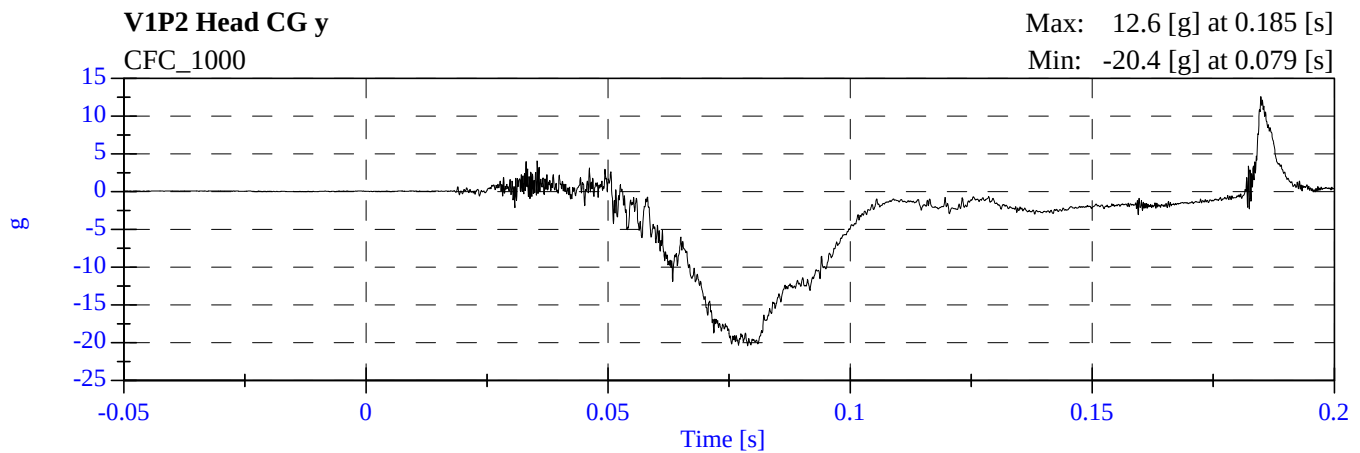
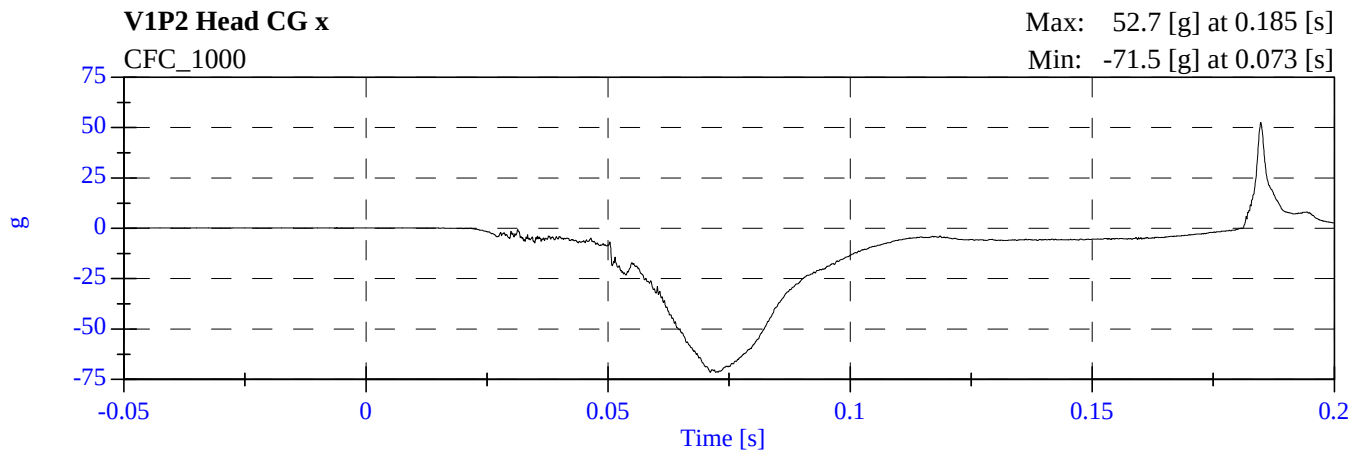
2006 NCAP Test 17 2006 Nissan Frontier
M65205 - March 03, 2006



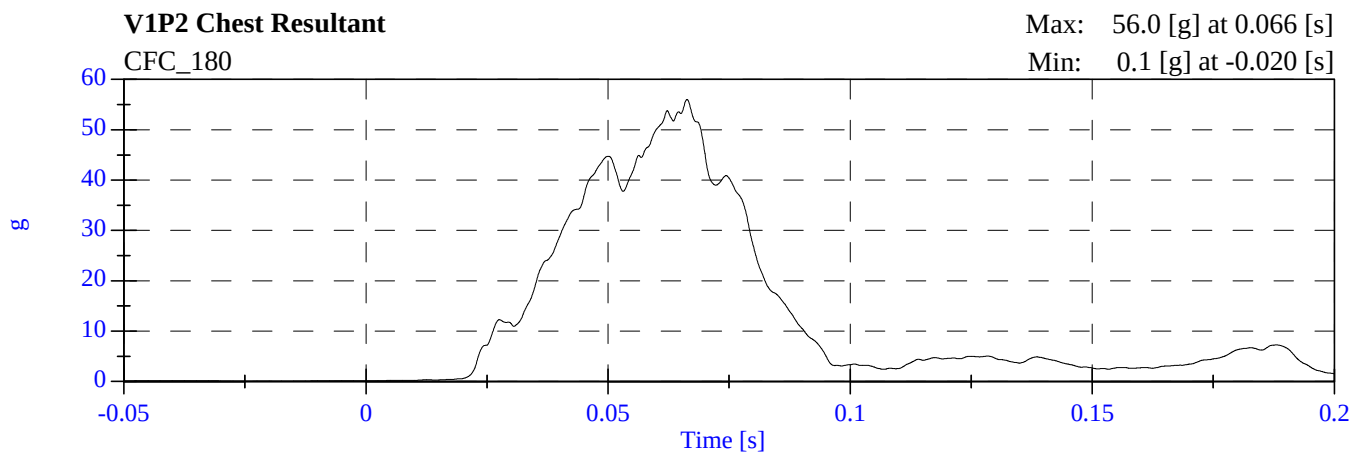
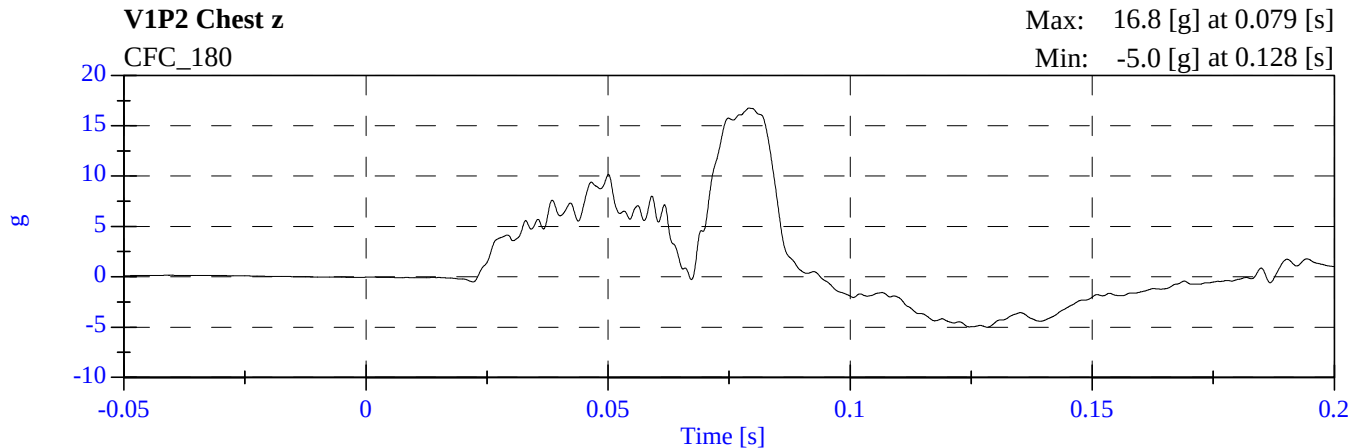
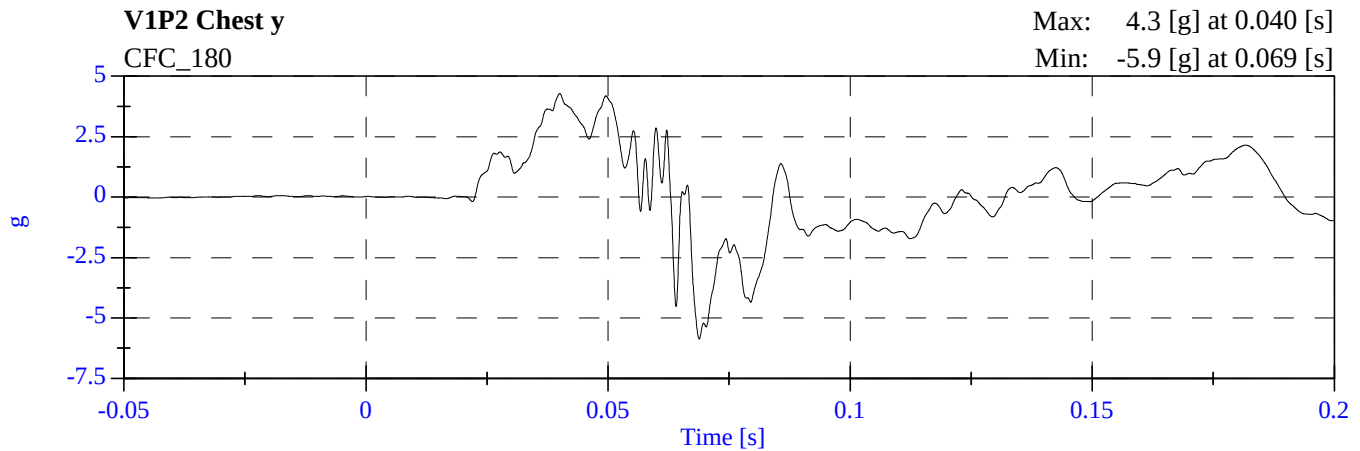
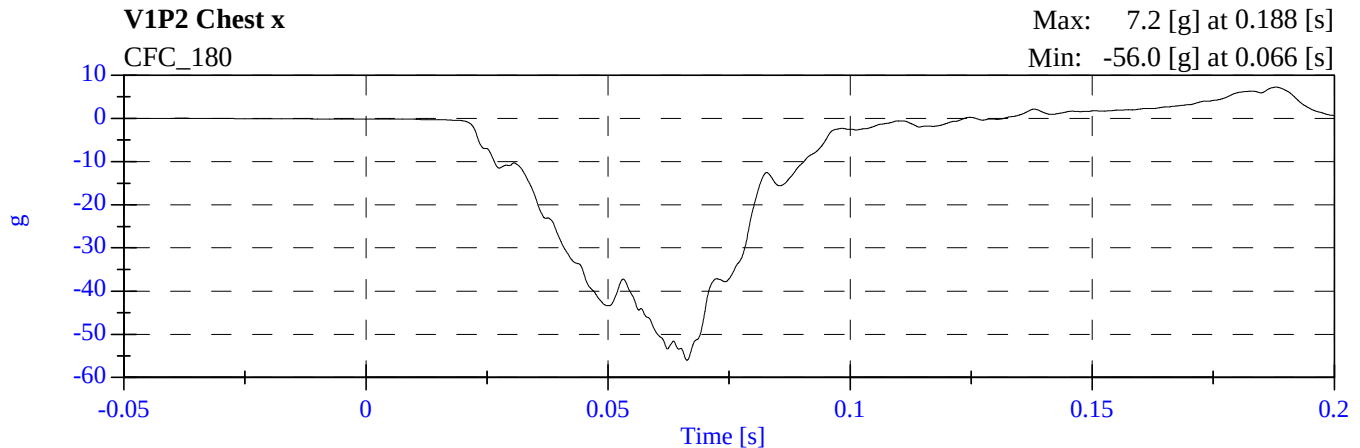
**2006 NCAP Test 17 2006 Nissan Frontier
M65205 - March 03, 2006**



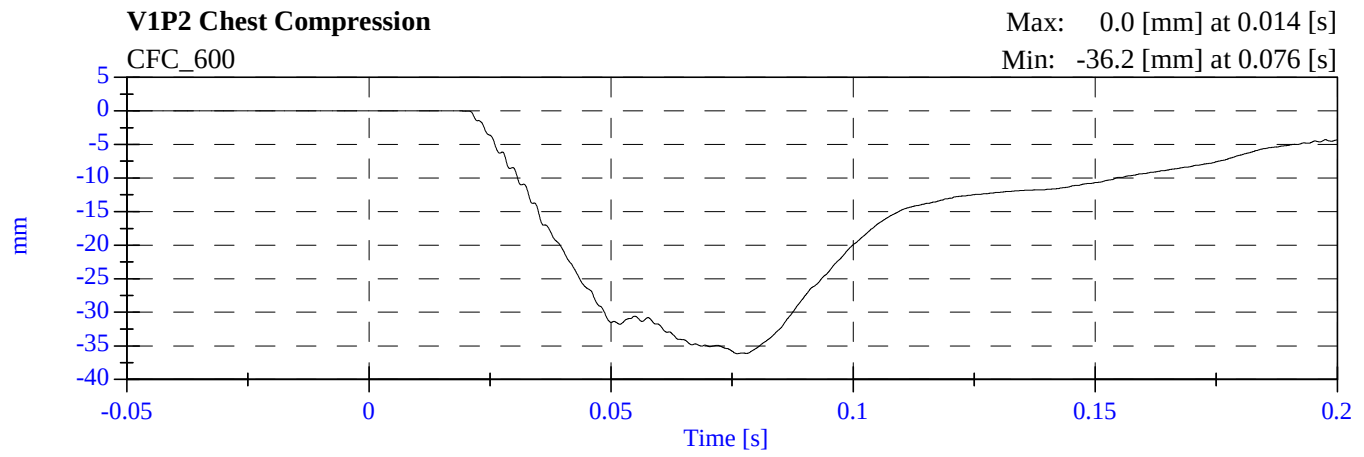
2006 NCAP Test 17 2006 Nissan Frontier M65205 - March 03, 2006



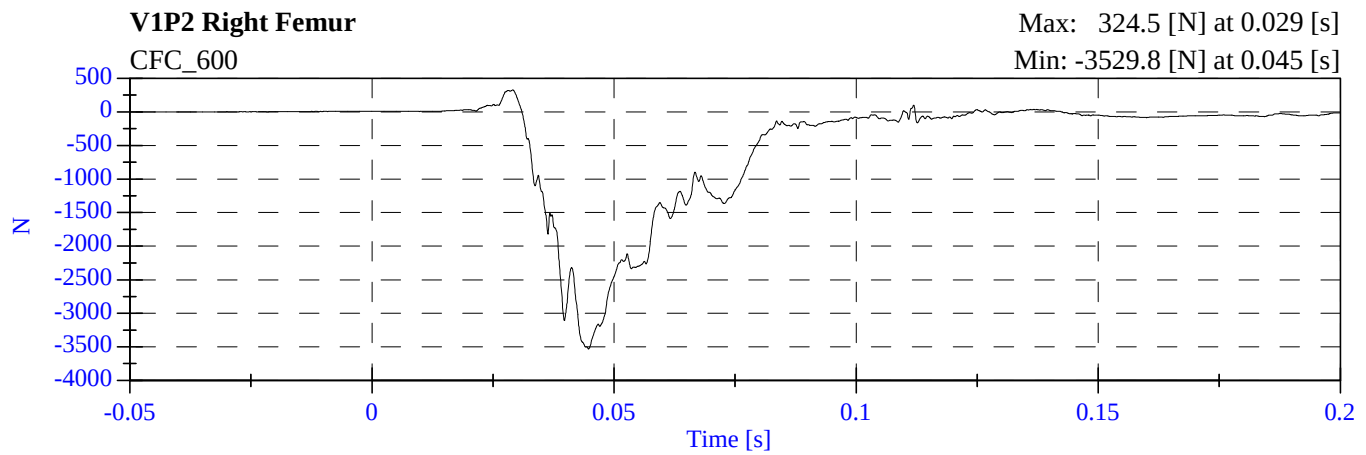
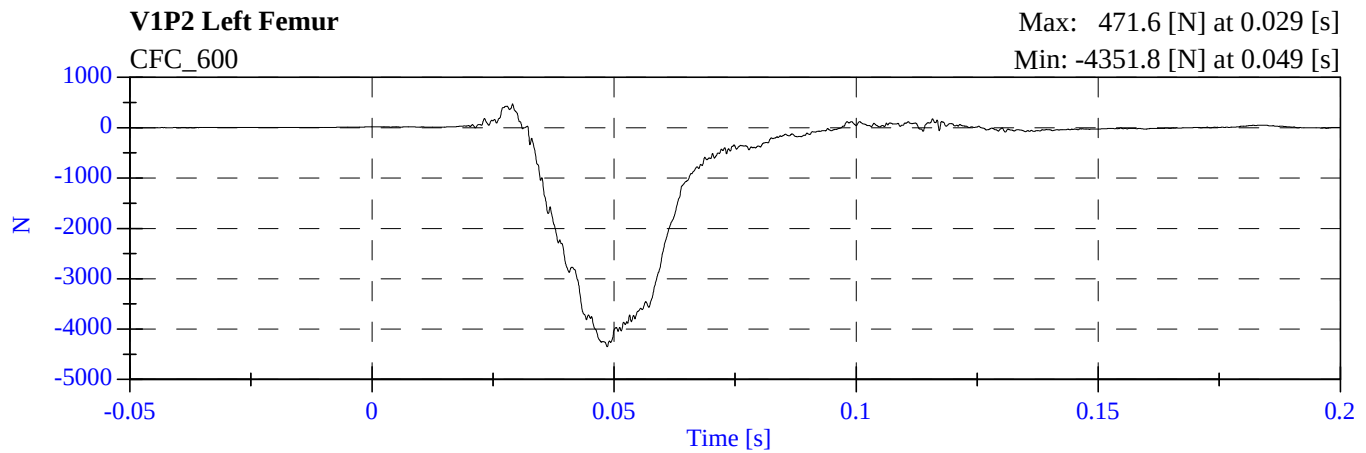
2006 NCAP Test 17 2006 Nissan Frontier M65205 - March 03, 2006



2006 NCAP Test 17 2006 Nissan Frontier
M65205 - March 03, 2006



**2006 NCAP Test 17 2006 Nissan Frontier
M65205 - March 03, 2006**



APPENDIX C

PART 572B/E DUMMY CONFIGURATION AND PERFORMANCE VERIFICATION DATA SHEETS

Appendix C contains the results from certification tests performed on the 50th percentile male anthropomorphic test devices utilized for this crash test. The results indicate that the dummies meet all of the performance requirements of the six standard tests as specified in 49 CFR Part 572, Federal Register, Volume 42, No. 25, dated February 7, 1977.

The tests were conducted at the Dummy Certification Test Facility of Calspan. A summary of the test results, and Part 572 specifications are included in this Appendix.

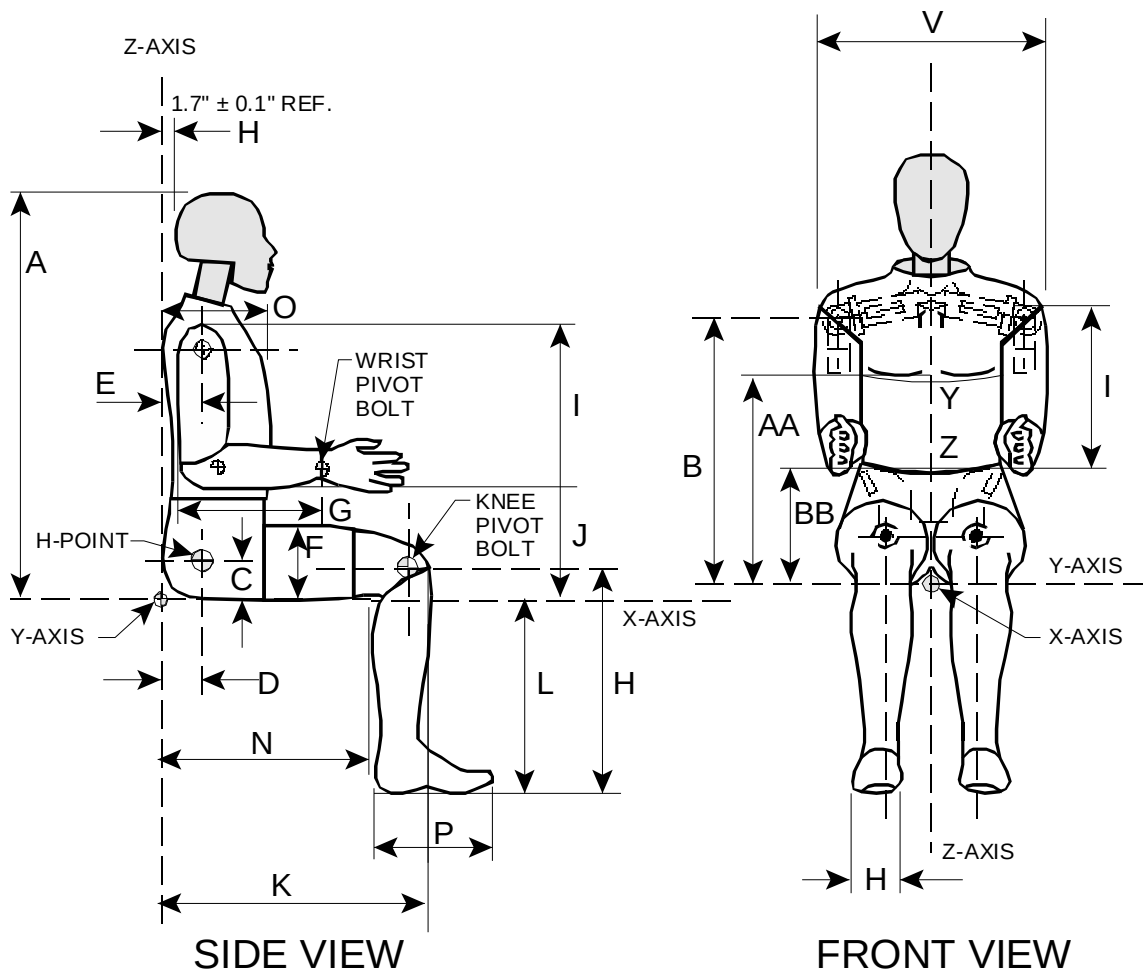
Dummy serial numbers and certification dates are:

<u>Position No./Location</u>	<u>Serial No.</u>	<u>Completion Date</u>
#1/Driver	150	February 17, 2006
#2/Right Front Passenger	142	February 17, 2006

Electronic Test Equipment

The complement of signal conditioning, recording and display equipment, in conjunction with dummy certification testing, can be found in New Car Assessment and Standards Inducant Testing Final Report No. 6525-V-1.

EXTERNAL DIMENSIONS SPECIFICATIONS



NOTE: Figure is referenced to the erect seated position. The curved lumbar does not allow the Hybrid III to be positioned in a perfect erect attitude.
(REF: S572.31(A)(6))

PART 572E
HEAD DROP TEST

Dummy Serial Number 150
Sequential Test Number 1
Date 02/14/2006
Workfile 150H 02-14-06

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	18.9 – 25.6 Deg C	21.1
Relative Humidity	10% - 70%	36.0
Peak Resultant Acceleration	225-275 G's	273.84
Peak Lateral Acceleration	15 G's Max	6.19
Is Acceleration Curve Unimodal?	YES	Yes

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
NECK FLEXION TEST

Dummy Serial Number	150	
Sequential Test Number	1	
Date	02/16/2006	6 Axis Neck Transducer
Workfile	150NF1 02-16-06	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		20.6 – 22.2 Deg C	21.1
Relative Humidity		10% - 70%	34.0
Impact Velocity		6.89 – 7.13 m/s	6.93
Pendulum Deceleration	10 ms	22.50 - 27.50 G's	22.83
	20 ms	17.60 - 22.60 G's	22.41
	30 ms	12.50 - 18.50 G's	18.10
Max Pendulum G's Above 30 ms		29 G's Max	18.10
Deceleration - Time Curve Decay Time to 5 G's		34 - 42 ms	39.90
D Plane Rotation	Max	64 - 78 Deg	69.16
	Time	57 - 64 ms	60.20
Moment About Occipital Condyle	Max	88.13 – 108.47 N-m	93.79
	Time	47 - 58 ms	52.50
Rotation Angle - Time Curve Decay Time to Zero		113 - 128 ms	118.80
Positive Moment - Time Curve Decay Time to Zero		97 - 107 ms	99.70

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
NECK EXTENSION TEST

Dummy Serial Number	150	
Sequential Test Number	1	
Date	02/16/2006	6 Axis Neck Transducer
Workfile	150NE2 02-15-06	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		20.6 – 22.2 Deg C	21.1
Relative Humidity		10% - 70%	28.0
Impact Velocity		5.94 – 6.19 m/s	6.02
Pendulum Deceleration	10 ms	17.20 - 21.20 G's	18.58
	20 ms	14.00 - 19.00 G's	18.22
	30 ms	11.00 - 16.00 G's	15.81
Max Pendulum G's Above 30 ms		22 G's Max	15.81
Deceleration - Time Curve Decay Time to 5 G's		38 - 46 ms	38.80
D Plane Rotation	Max	81 - 106 Deg	93.59
	Time	72 - 82 ms	73.80
Moment About Occipital Condyle	Max	-79.99 - -52.88 N-m	-73.94
	Time	65 - 79 ms	71.20
Rotation Angle - Time Curve Decay Time to Zero		147 - 174 ms	156.30
Positive Moment - Time Curve Decay Time to Zero		120 - 148 ms	133.00

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
THORAX IMPACT TEST

Dummy Serial Number 150
Sequential Test Number 1
Date 02/17/2006
Workfile 150T 02-17-06

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	20.6 – 22.2 Deg C	21.1
Relative Humidity	10% - 70%	33.0
Pendulum Velocity	6.58 – 6.83 m/s	6.67
Maximum Deflection	63.50 – 72.64 mm	65.5
Maximum Resistive Force	5159.9 – 5893.9 N	5544.3
Internal Hysteresis	69 - 85 %	74.55

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
KNEE IMPACT TEST

Dummy Serial Number 150
Sequential Test Number 1
Date 02/17/2006
Workfile 150LF 02-17-06; 150RF 02-17-06

TEST PARAMETER	SPECIFICATION	TEST RESULTS
LEFT KNEE		
Temperature	18.9 – 25.6 Deg C	21.1
Relative Humidity	10% - 70%	33.0
Probe Velocity	2.07 – 2.13 m/s	2.13
Peak Knee Impact Force	4715.1 – 5782.7 N	5249
RIGHT KNEE		
Temperature	18.9 – 25.6 Deg C	21.1
Relative Humidity	10% - 70%	33.0
Probe Velocity	2.07 – 2.13 m/s	2.13
Peak Knee Impact Force	4715.1 – 5782.7 N	4971

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
EXTERNAL DIMENSIONS

Dummy Serial Number 150
Sequential Test Number 1
Date 02/17/2006

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature			21.1
Relative Humidity			33.0
Location for Chest Circumference	AA	16.9 - 17.1 in	17.0
Location for Waist Circumference	BB	8.9 - 9.1 in	9.0
Total Sitting Height	A	34.6 - 35.0 in	34.8
Shoulder Pivot Height	B	19.9 - 20.5 in	20.0
H-Point Height	C	3.3 - 3.5 in	3.4
H-Point from Backline	D	5.3 - 5.5 in	5.5
Shoulder Pivot from Backline	E	3.3 - 3.7 in	3.6
Thigh Clearance	F	5.5 - 6.1 in	6.0
Back of Elbow to Wrist Pivot	G	11.4 - 12.0 in	11.5
Skull Cap to Backline	H	1.6 - 1.8 in	1.7
Shoulder - Elbow Length	I	13.0 - 13.6 in	13.2
Elbow Rest Height	J	7.5 - 8.3 in	8.2
Buttock Knee Length	K	22.8 - 23.8 in	23.5
Popliteal Height	L	16.9 - 17.9 in	17.8
Knee Pivot Height	M	19.1 - 19.7 in	19.5
Buttock Popliteal Length	N	17.8 - 18.8 in	18.5
Chest Depth	O	8.4 - 9.0 in	9.0
Foot Length	P	9.9 - 10.5 in	10.2
Shoulder Breadth	V	16.6 - 17.2 in	16.9
Foot Breadth	W	3.6 - 4.2 in	4.0
Chest Circumference (With Jacket)	Y	38.2 - 39.4 in	39.1
Waist Circumference	Z	32.9 - 34.1 in	34.0

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
HEAD DROP TEST

Dummy Serial Number 142
Sequential Test Number 1
Date 02/14/2006
Workfile 142H 02-14-06

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	18.9 – 25.6 Deg C	21.1
Relative Humidity	10% - 70%	36.0
Peak Resultant Acceleration	225-275 G's	249.53
Peak Lateral Acceleration	15 G's Max	5.24
Is Acceleration Curve Unimodal?	YES	Yes

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
NECK FLEXION TEST

Dummy Serial Number	142	
Sequential Test Number	1	
Date	02/15/2006	6 Axis Neck Transducer
Workfile	142NF 02-15-06	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		20.6 – 22.2 Deg C	21.1
Relative Humidity		10% - 70%	28.0
Impact Velocity		6.89 – 7.13 m/s	6.94
Pendulum Deceleration	10 ms	22.50 - 27.50 G's	23.13
	20 ms	17.60 - 22.60 G's	22.04
	30 ms	12.50 - 18.50 G's	17.85
Max Pendulum G's Above 30 ms		29 G's Max	17.85
Deceleration - Time Curve Decay Time to 5 G's		34 - 42 ms	38.60
D Plane Rotation	Max	64 - 78 Deg	68.03
	Time	57 - 64 ms	58.00
Moment About Occipital Condyle	Max	88.13 – 108.47 N-m	100.52
	Time	47 - 58 ms	49.90
Rotation Angle - Time Curve Decay Time to Zero		113 - 128 ms	117.40
Positive Moment - Time Curve Decay Time to Zero		97 - 107 ms	98.30

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
NECK EXTENSION TEST

Dummy Serial Number	142	
Sequential Test Number	1	
Date	02/15/2006	6 Axis Neck Transducer
Workfile	142NE 02-15-06	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		20.6 – 22.2 Deg C	21.1
Relative Humidity		10% - 70%	28.0
Impact Velocity		5.94 – 6.19 m/s	6.07
Pendulum Deceleration	10 ms	17.20 - 21.20 G's	19.95
	20 ms	14.00 - 19.00 G's	18.83
	30 ms	11.00 - 16.00 G's	14.98
Max Pendulum G's Above 30 ms		22 G's Max	15.02
Deceleration - Time Curve Decay Time to 5 G's		38 - 46 ms	38.28
D Plane Rotation	Max	81 - 106 Deg	93.08
	Time	72 - 82 ms	72.38
Moment About Occipital Condyle	Max	-79.99 - -52.88 N-m	-71.71
	Time	65 - 79 ms	67.98
Rotation Angle - Time Curve Decay Time to Zero		147 - 174 ms	153.38
Positive Moment - Time Curve Decay Time to Zero		120 - 148 ms	131.88

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
THORAX IMPACT TEST

Dummy Serial Number 142
Sequential Test Number 1
Date 02/17/2006
Workfile 142T 02-17-06

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	20.6 – 22.2 Deg C	21.1
Relative Humidity	10% - 70%	33.0
Pendulum Velocity	6.58 – 6.83 m/s	6.61
Maximum Deflection	63.50 – 72.64 mm	64.8
Maximum Resistive Force	5159.9 – 5893.9 N	5570.9
Internal Hysteresis	69 - 85 %	75.31

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
KNEE IMPACT TEST

Dummy Serial Number 142
Sequential Test Number 1
Date 02/17/2006
Workfile 142LF 02-17-06; 142RF 02-17-06

TEST PARAMETER	SPECIFICATION	TEST RESULTS
LEFT KNEE		
Temperature	18.9 – 25.6 Deg C	21.1
Relative Humidity	10% - 70%	33.0
Probe Velocity	2.07 – 2.13 m/s	2.13
Peak Knee Impact Force	4715.1 – 5782.7 N	5041.5
RIGHT KNEE		
Temperature	18.9 – 25.6 Deg C	21.1
Relative Humidity	10% - 70%	33.0
Probe Velocity	2.07 – 2.13 m/s	2.13
Peak Knee Impact Force	4715.1 – 5782.7 N	5080.5

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
EXTERNAL DIMENSIONS

Dummy Serial Number 142
Sequential Test Number 1
Date 02/17/2006

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature			21.1
Relative Humidity			33.0
Location for Chest Circumference	AA	16.9 - 17.1 in	17.1
Location for Waist Circumference	BB	8.9 - 9.1 in	9.0
Total Sitting Height	A	34.6 - 35.0 in	35.0
Shoulder Pivot Height	B	19.9 - 20.5 in	20.4
H-Point Height	C	3.3 - 3.5 in	3.5
H-Point from Backline	D	5.3 - 5.5 in	5.3
Shoulder Pivot from Backline	E	3.3 - 3.7 in	3.7
Thigh Clearance	F	5.5 - 6.1 in	6.0
Back of Elbow to Wrist Pivot	G	11.4 - 12.0 in	11.5
Skull Cap to Backline	H	1.6 - 1.8 in	1.7
Shoulder - Elbow Length	I	13.0 - 13.6 in	13.5
Elbow Rest Height	J	7.5 - 8.3 in	8.2
Buttock Knee Length	K	22.8 - 23.8 in	23.5
Popliteal Height	L	16.9 - 17.9 in	17.8
Knee Pivot Height	M	19.1 - 19.7 in	19.2
Buttock Popliteal Length	N	17.8 - 18.8 in	18.6
Chest Depth	O	8.4 - 9.0 in	9.0
Foot Length	P	9.9 - 10.5 in	10.3
Shoulder Breadth	V	16.6 - 17.2 in	16.9
Foot Breadth	W	3.6 - 4.2 in	4.0
Chest Circumference (With Jacket)	Y	38.2 - 39.4 in	38.9
Waist Circumference	Z	32.9 - 34.1 in	33.1

Remarks:

Laboratory Technician:

B. Swiecicki

APPENDIX D

DUMMY, VEHICLE AND LABORATORY INSTRUMENT CALIBRATION

INSTRUMENT CALIBRATION FOR DRIVER DUMMY
(Six Month Calibration Minimum)

DRIVER DUMMY (S/N 150)		Manufacturer	Serial #	Calibration	
				Last	Next
Head 9 Array	X Arm Y	ENDEVCO	AC-J27470	30-Jan-06	30-Jul-06
	X Arm Z	ENDEVCO	AC-J36741	30-Jan-06	30-Jul-06
	Y Arm X	ENDEVCO	AC-J20027	27-Jan-06	27-Jul-06
	Y Arm Z	ENDEVCO	AC-J21988	30-Jan-06	30-Jul-06
	Z Arm X	ENDEVCO	AC-AAKC6	27-Jan-06	27-Jul-06
	Z Arm Y	ENDEVCO	AC-AAKD0	30-Jan-06	30-Jul-06
	Z Arm Z	ENDEVCO	AC-AAKE6	27-Jan-06	27-Jul-06
Head	X	ENDEVCO	AC-J20061	30-Jan-06	30-Jul-06
	Y	ENDEVCO	AC-AJ4F8	30-Jan-06	30-Jul-06
	Z	ENDEVCO	AC-AHRW5	30-Jan-06	30-Jul-06
Head	X (R)	ENDEVCO	AC-AJ7Y4	30-Jan-06	30-Jul-06
	Y (R)	ENDEVCO	AC-AJ454	30-Jan-06	30-Jul-06
	Z (R)	ENDEVCO	AC-J19563	30-Jan-06	30-Jul-06
Neck Load Cell	X	DENTON	LC-157Fx	14-Jul-05	11-Jan-06
	Y	DENTON	LC-157Fy	14-Jul-05	11-Jan-06
	Z	DENTON	LC-157Fz	14-Jul-05	11-Jan-06
Neck Moment	X	DENTON	LC-157Mx	14-Jul-05	11-Jan-06
	Y	DENTON	LC-157My	14-Jul-05	11-Jan-06
	Z	DENTON	LC-157Mz	14-Jul-05	11-Jan-06
Chest	X	ENDEVCO	AC-J20580	30-Jan-06	30-Jul-06
	Y	ENDEVCO	AC-J20018	30-Jan-06	30-Jul-06
	Z	ENDEVCO	AC-J20569	30-Jan-06	30-Jul-06
Chest	X (R)	ENDEVCO	AC-J21963	30-Jan-06	30-Jul-06
	Y (R)	ENDEVCO	AC-P16755	30-Jan-06	30-Jul-06
	Z (R)	ENDEVCO	AC-J14667	30-Jan-06	30-Jul-06
Chest Deflection	X	SERVO	DS-150	23-Jun-05	21-Dec-05
Pelvic	X	ENDEVCO	AC-J34378	27-Jan-06	27-Jul-06
	Y	ENDEVCO	AC-J23757	27-Jan-06	27-Jul-06
	Z	ENDEVCO	AC-J27513	27-Jan-06	27-Jul-06

INSTRUMENT CALIBRATION FOR DRIVER DUMMY
(Six Month Calibration Minimum)

DRIVER DUMMY (S/N 150)		Manufacturer	Serial #	Calibration	
				Last	Next
Left Femur Load Cell	Fz	DENTON	LC-261	02-Jul-05	30-Dec-05
Right Femur Load Cell	Fz	DENTON	LC-264	02-Jul-05	30-Dec-05
Left Upper Tibia	Mx	DENTON	LC-263Mx	29-Jun-05	27-Dec-05
	My	DENTON	LC-263My	29-Jun-05	27-Dec-05
Left Lower Tibia	Fz	DENTON	LC-174Fz	28-Jun-05	26-Dec-05
	Mx	DENTON	LC-174Mx	28-Jun-05	26-Dec-05
	My	DENTON	LC-174My	28-Jun-05	26-Dec-05
Right Upper Tibia	Mx	DENTON	LC-268Mx	27-Jun-05	25-Dec-05
	My	DENTON	LC-268My	27-Jun-05	25-Dec-05
Right Lower Tibia	Fz	DENTON	LC-196Fz	27-Jun-05	25-Dec-05
	Mx	DENTON	LC-196Mx	27-Jun-05	25-Dec-05
	My	DENTON	LC-196My	27-Jun-05	25-Dec-05
Left Foot Rear	X	ENDEVCO	AC-J19223	30-Jan-06	30-Jul-06
	Z	ENDEVCO	AC-J20083	30-Jan-06	30-Jul-06
Left Foot Front	Z	ENTRAN	AC-04J04J07-M02	30-Jan-06	30-Jul-06
Right Foot Rear	X	ENDEVCO	AC-J35747	30-Jan-06	30-Jul-06
	Z	ENDEVCO	AC-J27496	30-Jan-06	30-Jul-06
Right Foot Front	Z	ENDEVCO	AC-J36723	30-Jan-06	30-Jul-06
Lap Belt Load Cell		First Technology	LC-168	01-Oct-05	31-Mar-06
Shoulder Belt Load Cell		First Technology	LC-159	01-Oct-05	31-Mar-06

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY
(Six Month Calibration Minimum)

PASSENGER DUMMY (S/N 142)		Manufacturer	Serial #	Calibration	
				Last	Next
Head 9 Array	X Arm Y	ENDEVCO	AC-J35933	31-Jan-06	31-Jul-06
	X Arm Z	ENDEVCO	AC-J36038	31-Jan-06	31-Jul-06
	Y Arm X	ENDEVCO	AC-J36605	31-Jan-06	31-Jul-06
	Y Arm Z	ENDEVCO	AC-J21907	31-Jan-06	31-Jul-06
	Z Arm X	ENDEVCO	AC-J19843	31-Jan-06	31-Jul-06
	Z Arm Y	ENDEVCO	AC-AJ507	31-Jan-06	31-Jul-06
Head	X	ENDEVCO	AC-J14189	31-Jan-06	31-Jul-06
	Y	ENDEVCO	AC-J20125	31-Jan-06	31-Jul-06
	Z	ENDEVCO	AC-J36744	31-Jan-06	31-Jul-06
Head	X (R)	ENDEVCO	AC-J21989	31-Jan-06	31-Jul-06
	Y (R)	ENDEVCO	AC-J35921	31-Jan-06	31-Jul-06
	Z (R)	ENDEVCO	AC-ACCY2	31-Jan-06	31-Jul-06
Neck Load Cell	X	DENTON	LC-297Fx	13-Jul-05	10-Jan-06
	Y	DENTON	LC-297Fy	13-Jul-05	10-Jan-06
	Z	DENTON	LC-297Fz	13-Jul-05	10-Jan-06
Neck Moment	X	DENTON	LC-297Mx	13-Jul-05	10-Jan-06
	Y	DENTON	LC-297My	13-Jul-05	10-Jan-06
	Z	DENTON	LC-297Mz	13-Jul-05	10-Jan-06
Chest	X	ENDEVCO	AC-AC9F9	31-Jan-06	31-Jul-06
	Y	ENDEVCO	AC-P16194	31-Jan-06	31-Jul-06
	Z	ENDEVCO	AC-J14688	31-Jan-06	31-Jul-06
Chest	X (R)	ENDEVCO	AC-AAK48	31-Jan-06	31-Jul-06
	Y (R)	ENDEVCO	AC-AAKB1	31-Jan-06	31-Jul-06
	Z (R)	ENDEVCO	AC-J27517	31-Jan-06	31-Jul-06
Chest Deflection	X	SERVO	DS-142	28-Jun-05	26-Dec-05
Pelvic	X	ENDEVCO	AC-AJ5R0	31-Jan-06	31-Jul-06
	Y	ENDEVCO	AC-J22036	31-Jan-06	31-Jul-06
	Z	ENDEVCO	AC-J17649	31-Jan-06	31-Jul-06

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY
(Six Month Calibration Minimum)

PASSENGER DUMMY (S/N 142)		Manufacturer	Serial #	Calibration	
				Last	Next
Left Femur Load Cell	Fz	DENTON	LC-729	20-Mar-05	17-Sep-05
Right Femur Load Cell	Fz	GSE	LC-631	16-Mar-05	13-Sep-05
Left Upper Tibia	Mx	DENTON	LC-266Mx	24-Jun-05	22-Dec-05
	My	DENTON	LC-266My	24-Jun-05	22-Dec-05
Left Lower Tibia	Fz	DENTON	LC-179Fz	22-Jun-05	20-Dec-05
	Mx	DENTON	LC-179Mx	22-Jun-05	20-Dec-05
	My	DENTON	LC-179My	22-Jun-05	20-Dec-05
Right Upper Tibia	Mx	DENTON	LC-265Mx	28-Jun-05	26-Dec-05
	My	DENTON	LC-265My	28-Jun-05	26-Dec-05
Right Lower Tibia	Fz	DENTON	LC-178Fz	28-Jun-05	26-Dec-05
	Mx	DENTON	LC-178Mx	28-Jun-05	26-Dec-05
	My	DENTON	LC-178My	28-Jun-05	26-Dec-05
Left Foot Rear	X	ENTRAN	AC-02I02I05-F06	01-Feb-06	01-Aug-06
	Z	ENTRAN	AC-01G18-F14	01-Feb-06	01-Aug-06
Left Foot Front	Z	ENTRAN	AC-99H30-Z13	01-Feb-06	01-Aug-06
Right Foot Rear	X	ENTRAN	AC-02I20I16-A13	01-Feb-06	01-Aug-06
	Z	ENTRAN	AC-03D03D16-F01	01-Feb-06	01-Aug-06
Right Foot Front	Z	ENTRAN	AC-00L20-A15	31-Jan-06	31-Jul-06
Lap Belt Load Cell		First Technology	LC-173	01-Oct-05	31-Mar-06
Shoulder Belt Load Cell		First Technology	LC-178	01-Oct-05	31-Mar-06

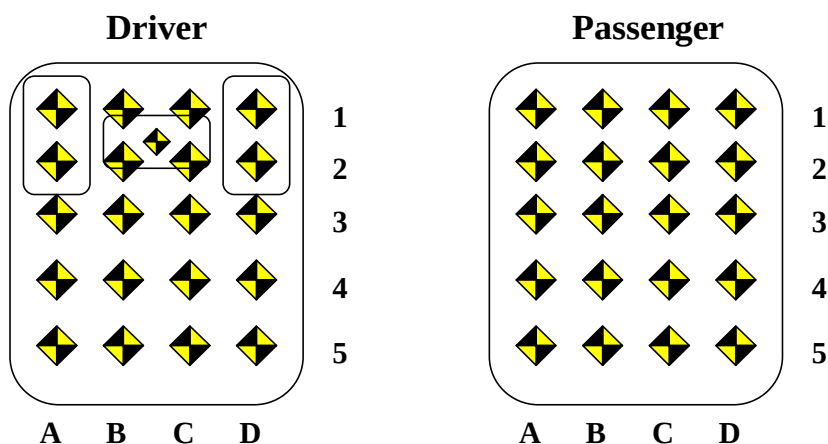
INSTRUMENT CALIBRATION FOR VEHICLE ACCELEROMETERS
(Six Month Calibration Minimum)

	Manufacturer	Serial #	Calibration	
			Last	Next
Left Seat Rear Crossmember X	ICS	AC-FGP19	17-Oct-05	16-Apr-06
Right Rear Seat Crossmember X	GS SENSORS	AC-9440-046	17-Oct-05	16-Apr-06
Top of Engine	GS SENSORS	AC-9440-039	17-Oct-05	16-Apr-06
Bottom of Engine	GS SENSORS	AC-9440-006	12-Oct-05	11-Apr-06
Right Disc Brake Caliper	GS SENSORS	AC-9440-032	13-Oct-05	12-Apr-06
Left Disc Brake Caliper	GS SENSORS	AC-9440-024	03-Feb-06	03-Aug-06
Left Seat Rear Crossmember Z	ICS	AC-FGP29	17-Oct-05	16-Apr-06
Right Seat Rear Crossmember Z	GS SENSORS	AC-9440-023	17-Oct-05	16-Apr-06

APPENDIX E

VEHICLE INTERIOR INTRUSION MEASUREMENTS

DRIVER SIDE INTRUSION MEASUREMENTS



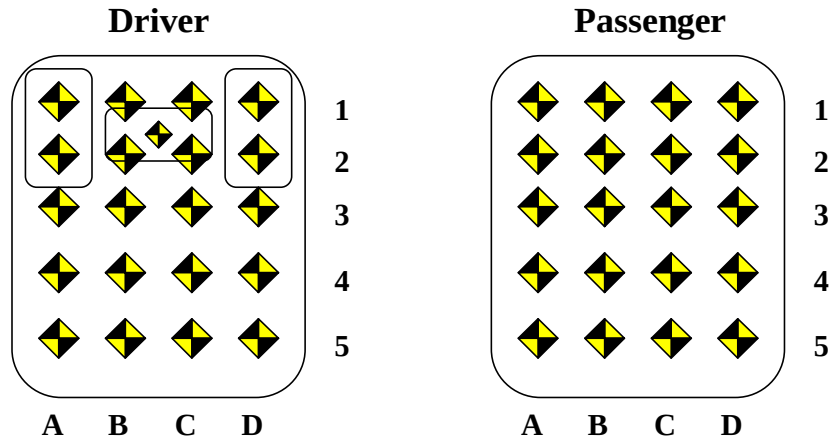
Driver Side Intrusion Measurements

Intrusion Location	PRE-TEST (mm)			POST-TEST (mm)			CHANGE (mm)		
	X	Y	Z	X	Y	Z	X	Y	Z
A1	3813	-631	-602	3795	-627	-589	18	-4	-13
B1	3991	-495	-600	3954	-487	-612	37	-8	12
C1	3991	-362	-602	3926	-371	-644	65	9	42
D1	3988	-241	-602	3945	-258	-623	43	17	21
A2	3765	-632	-557	3749	-626	-541	16	-6	-16
B2	3912	-498	-553	3871	-496	-570	41	-2	17
C2	3898	-366	-551	3840	-370	-590	58	4	39
D2	3888	-238	-552	3853	-244	-578	35	6	26
A3	3753	-629	-503	3741	-628	-487	12	-1	-16
B3	3804	-498	-505	3786	-497	-497	18	-1	-8
C3	3798	-369	-509	3768	-370	-505	30	1	-4
D3	3793	-236	-511	3769	-238	-508	24	2	-3
A4	3725	-630	-505	3710	-630	-491	15	0	-14
B4	3723	-497	-507	3704	-501	-499	19	4	-8
C4	3719	-371	-506	3699	-370	-509	20	-1	3
D4	3711	-235	-510	3690	-238	-510	21	3	0
A5	3651	-632	-507	3635	-634	-496	16	2	-11
B5	3647	-497	-507	3628	-500	-496	19	3	-11
C5	3644	-370	-506	3626	-373	-506	18	3	0
D5	3641	-237	-513	3620	-240	-512	21	3	-1
BP	3818	-394	-677	3791	-380	-675	27	-14	-2
G	3569	-552	-940	3567	-552	-942	2	0	2
H	3566	-247	-938	3572	-250	-943	-6	3	5
L	3332	-397	-1202	3341	-407	-1229	-9	10	27
AB	3305	-615	-537	3283	-621	-521	22	6	-16

BP=Brake Pedal, G=Left side of bolster, H=Right side of bolster, L=Steering wheel center;

AB = Front outboard seat anchor bolt

PASSENGER SIDE INTRUSION MEASUREMENTS



Passenger Side Intrusion Measurements

Intrusion Location	PRE-TEST (mm)			POST-TEST (mm)			CHANGE (mm)		
	X	Y	Z	X	Y	Z	X	Y	Z
A1	3891	242	-604	3862	236	-606	29	6	2
B1	3894	377	-604	3865	372	-605	29	5	1
C1	3897	512	-605	3874	506	-608	23	6	3
D1	3900	648	-605	3881	643	-607	19	5	2
A2	3843	245	-556	3821	240	-552	22	5	-4
B2	3845	375	-556	3821	369	-554	24	6	-2
C2	3849	509	-557	3830	505	-556	19	4	-1
D2	3850	645	-556	3835	641	-554	15	4	-2
A3	3779	246	-525	3763	249	-524	16	-3	-1
B3	3785	376	-506	3771	372	-500	14	4	-6
C3	3790	510	-506	3778	504	-501	12	6	-5
D3	3795	643	-505	3785	638	-501	10	5	-4
A4	3708	247	-516	3693	245	-513	15	2	-3
B4	3715	376	-510	3702	375	-509	13	1	-1
C4	3721	511	-509	3708	508	-507	13	3	-2
D4	3722	645	-506	3711	640	-501	11	5	-5
A5	3646	248	-538	3631	247	-532	15	1	-6
B5	3647	382	-511	3633	378	-508	14	4	-3
C5	3652	512	-510	3637	512	-509	15	0	-1
D5	3652	645	-507	3640	642	-504	12	3	-3
R	3562	245	-919	3557	247	-921	5	-2	2
S	3568	519	-919	3564	521	-919	4	-2	0
AB	3304	611	-536	3276	610	-519	28	1	-17

R=Left side of bolster, S=Right side of bolster, L=Steering wheel center;

AB = Front outboard seat anchor bolt