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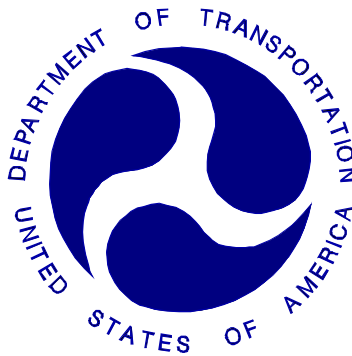
**NEW CAR ASSESSMENT PROGRAM (NCAP)
FRONTAL BARRIER IMPACT TEST**

TOYOTA MOTOR MANUFACTURING CALIFORNIA INC.
2006 TOYOTA TACOMA
DOUBLE CAB 4X4 PICKUP

NHTSA NUMBER: M65107

CALSPAN TEST NUMBER: 8642-NCAP-73

CALSPAN CORPORATION
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February 15, 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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Washington, DC 20590

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16. Abstract A frontal load cell barrier test of a 2006 Toyota Tacoma Double Cab 4X4 Pickup was performed at Calspan Corporation's crash test facility in Buffalo, New York, on February 15, 2006. The impact velocity was 56.17 kph and the temperature at the barrier face was 21.0°C. The maximum post-test vehicle crush was 537 mm. The test vehicle was equipped with 3-point restraint systems, knee bolsters, 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 (064)	Passenger (061)
Head Injury Criteria (HIC - 36 ms)		-	1000	315.6	412.7
Maximum Thorax Acceleration (3 ms Clip)		g's	60 g's	36.8	43.7
Chest Displacement		mm	-76 mm	-30.3	-31.9
Left Femur Force		Newtons	-10000 N	-1857.0	-1331.5
Right Femur Force		Newtons	-10000 N	-2073.9	-3708.9
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SECTION 1

PURPOSE AND SUMMARY OF TEST

1.1 PURPOSE

This 56.17 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 56.17 kph frontal barrier impact test was conducted in accordance with the Office of Crashworthiness Standards Laboratory Indicant Test procedure.

1.2 TEST PROCEDURE

This 56.17 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 14 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 installed 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. 064) and the right-front passenger (position 2) ATD (Serial No.061) were calibrated previous to this test. 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 140 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 Toyota Tacoma Double Cab 4X4 Pickup at a velocity of 56.17 kph. The test was performed at Calspan on February 15, 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	315.6	69.0	105.0	36.8	79.1	82.1	-30.3	-1857.0	-2073.9
Passenger	412.7	67.8	103.8	43.7	70.8	73.8	-31.9	-1331.5	-3708.9

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

TEST NOTES	
Data Channel	Anomalies
V1P2 Left Upper Tibia My	Data Clipped: 28-66 ms
V1 Engine Top #3x	Transducer Failed

SECTION 2
OCCUPANT AND VEHICLE INFORMATION

DATA SHEET NO. 1
CRASH TEST SUMMARY

Vehicle NHTSA No.: M65107 Test Mode: 56.3 kph Frontal Barrier
 Test Date: February 15, 2006 Time: 13:49 Temperature: 21.0 °C
 Vehicle Make/Model/Body Style: 2006 Toyota Tacoma Double Cab 4X4 Pickup
 Vehicle Test Weight: 2138.0 kg Impact Velocity: 56.17 kph (55.5 – 57.1 kph)
 Vehicle/Barrier Impact Angle: 0 ° Max Static Crush: 537 mm

ATD INFORMATION AND VISIBLE CONTACT POINTS

	DRIVER	PASSENGER
ATD Type:	Part 572E	Part 572E
Restraint System:	3-point belt with shoulder pretensioner and force limiter, airbag, knee bolster and head restraint	3-point belt with shoulder pretensioner and force limiter, airbag, knee bolster and head restraint
Head Contact:	Face to center of airbag; Back of head to outboard half of head restraint	Face to center of airbag; Back of head to outboard half of head restraint
Abdomen Contact:	None	None
Chest Contact:	Airbag	Airbag
Left Knee Contact:	Knee bolster left of steering column	Left edge of glove compartment door
Right Knee Contact:	Knee bolster right of steering column	Center of glove compartment door

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	None	

VEHICLE REBOUND FROM BARRIER

Measured Parameter	Left Side (mm)	Center (mm)	Right Side (mm)	Average (mm)
Value	709	741	741	730

BELT LENGTH DATA

Measurement Description	Units	Driver	Passenger
Shoulder belt length as measured on ATD	mm	882	932
Lap belt length as measured on ATD	mm	860	875
Belt length from trim panel exit to bolt hole anchor point for continuous webbing systems	mm	1742	1807

DATA SHEET NO. 2
GENERAL TEST AND VEHICLE PARAMETER DATA

TEST VEHICLE INFORMATION:

Year/Make/Model/Body Style: 2006 Toyota Tacoma Double Cab 4X4 Pickup

NHTSA No. : M65107 ; VIN: 5TELU42N96Z205570 ; Color: Desert Sand Mica

Engine Data: 6 cylinders; - CID; 4.0 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: 01/30/2006 ; Odometer Reading 138 km

Selling Dealer: Stateside Toyota

Dealer Address: 1700 Washington Street, Jamestown, NY 14701

TEST VEHICLE OPTIONS:

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

X ABS; X Tilt Wheel; - Stability Control - Traction Control X 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	No	No	No	No

DATA FROM VEHICLE'S CERTIFICATION LABEL:

Vehicle Manufactured by: Toyota Motor Manufacturing California Inc.

Date of Manufacture 01/06

GVWR: 2472 kg; GAWR: 1249 kg FRONT; 1410 kg REAR

VEHICLE CAPACITY DATA:

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

Number of Occupants: 2 Front; 3 Rear; 5 Total

Vehicle Capacity Weight (VCW) = 544 kg

No. of Occupants x 68.04 kg = 340.2 kg

Rated Cargo/Luggage Weight (RCLW) = 203.8 kg *

* Maximum of 136.1 kg used for target weight calculation .

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 =	557.0	507.0	57.3	1064.0
Rear =	400.0	392.0	42.7	792.0
Total Delivered Weight (UDW) =				1856.0

CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Delivered Weight (UDW)	=	1856.0	kg
Rated Cargo/Luggage Weight (RCLW)	=	136.1	kg
Weight of 2 p.572 Dummies @ 76 each	=	152	kg
TARGET TEST WEIGHT	=	2144.1	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 =	592.5	539.0	52.9	1131.5
Rear =	507.5	499.0	47.1	1006.5
Total Vehicle Test Weight (ATW) =				2138.0

Weight of Ballast Secured in Vehicle Trunk Area¹ = 68 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:	898	912	956	959	0.0
FULLY LOADED:	857	902	915	920	-
AS TESTED:	858	905	915	920	0.0

Vehicle's Wheel Base: 3253 mm

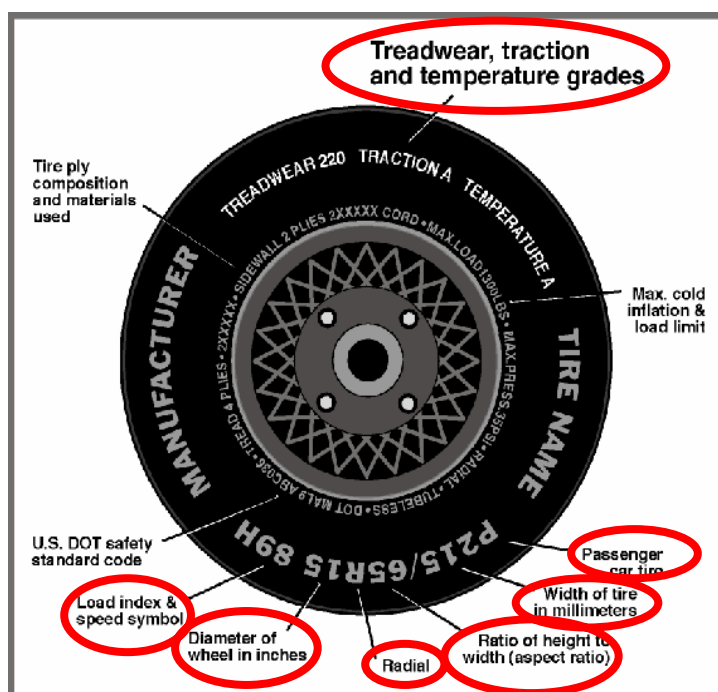
¹Ballast weight does not include the weight of instrumentation, on-board cameras and data acquisition system

²Rearward of the front axle centerline.

DATA SHEET NO. 3
TEST VEHICLE TIRE INFORMATION

Vehicle Year/Make/Model/Body Style: 2006 Toyota Tacoma Double Cab 4X4 Pickup

NHTSA Test No.: M65107 Test Date: February 15, 2006



Measured Parameter	Front	Rear
Maximum Tire Pressure (from sidewall - kPa)	350	350
Cold Pressure (from tire placard - kPa)*	200	200
Recommended Tire Size (from tire placard)	P245/75 R16	P245/75 R16
Tire size on Vehicle	P245/75 R16	P245/75 R16
Tire Manufacturer	Dunlop	Dunlop
Tire Name	AT20 Grandtrek	AT20 Grandtrek
Tire Type	P	P
Tire Width (mm)	245	245
Ratio of Height to Width (aspect ratio)	75	75
Radial	R	R
Wheel Diameter	16	16
Load Index & Speed Symbol	109S	109S
Treadwear	300	300
Traction Grade	B	B
Temperature Grade	B	B

*Tire pressure used for test

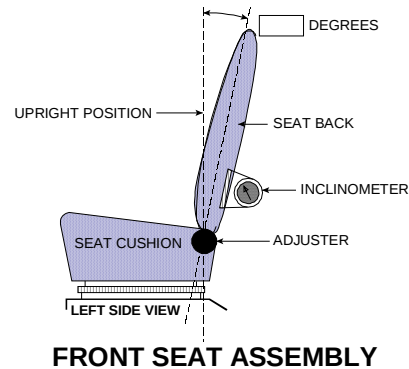
DATA SHEET NO. 4
TEST VEHICLE INFORMATION

VEHICLE IDENTIFICATION:

Model Year : 2006 Vehicle Model: Toyota Tacoma Body Style : Double Cab 4X4 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: 20° (measured with H-point machine)

Measurement instructions: Seat back was placed detent 4 where the forward most position is defined as detent 0 (8 degrees back from the forward most locking position).

Seat back angle for passenger's seat: 20° (measured with H-point machine)

Measurement instructions: Seat back was placed detent 5 where the forward most position is defined as detent 0 (10 degrees back from the forward most locking position).

2. SEAT FORE AND AFT POSITIONING:

Positioning of the driver's seat: Seat cushion was placed in detent 8 where the forward most position is defined as detent 0 (120 mm back from forward most position, 240 mm total travel).

Positioning of the passenger's seat: Seat cushion was placed in detent 8 where the forward most position is defined as detent 0 (120 mm back from forward most position, 240 mm total travel).

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 = 73.82 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 operates briefly when the ignition is turned to the "ON" position and the engine is not started

The fuel pump operates continuously when the engine is started.

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: The steering column was positioned at the middle of its tilt and middle of its telescope range (1.6 degrees down from full up, 22 mm out from full in).

5. SEAT BELT UPPER ANCHORAGE:

Nominal design riding position: The upper anchorage was placed in detent 1 where the upper most detent is defined as detent 0 (22.5 mm down from full up).

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

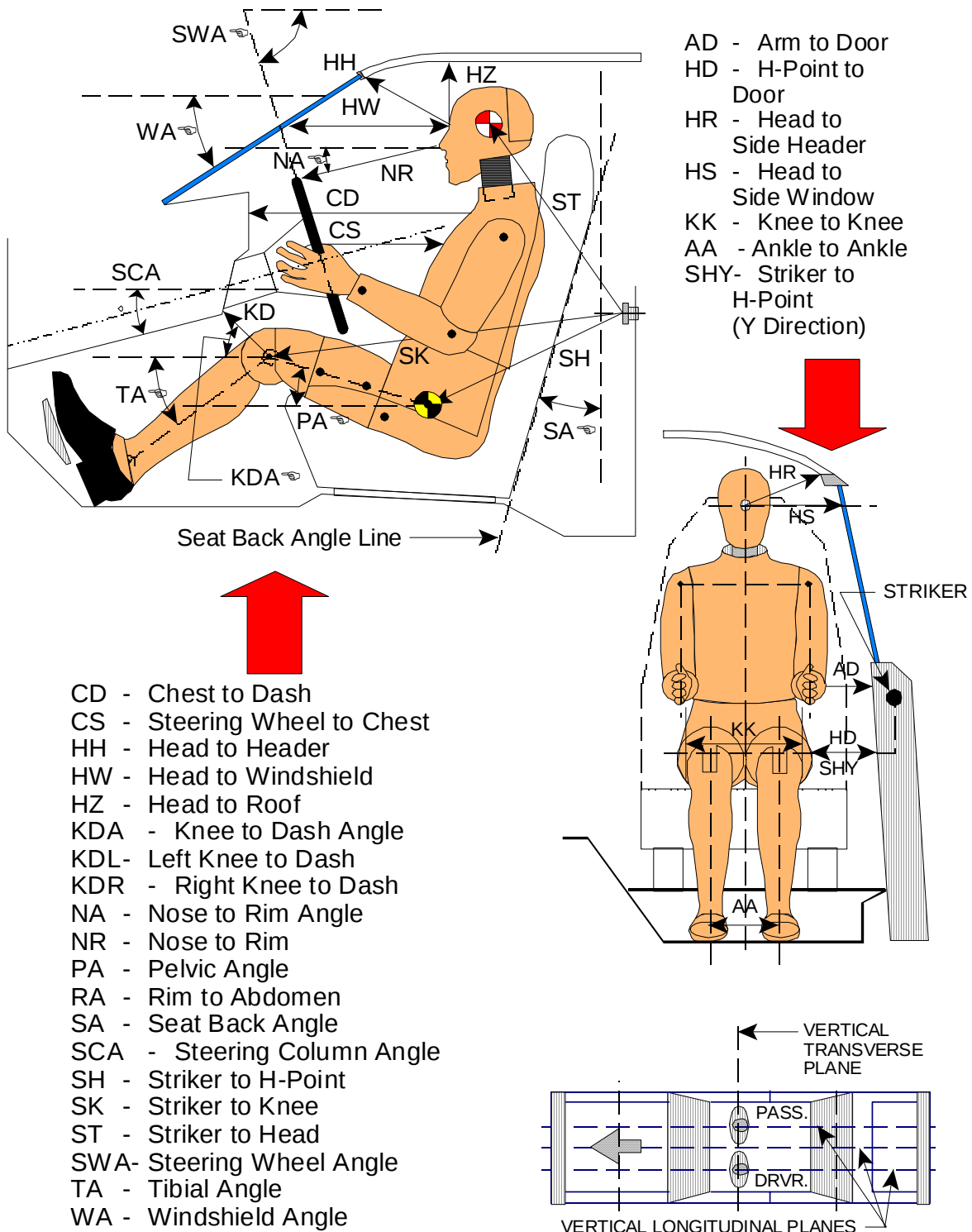
Does vehicle owner's manual describe how to deactivate ADLs? - Yes; - No; X N/A

Comments: None

DATA SHEET NO. 5

FRONT SEAT DUMMY POSITIONING MEASUREMENTS IN VEHICLE

DUMMY MEASUREMENT FOR FRONT SEAT PASSENGERS



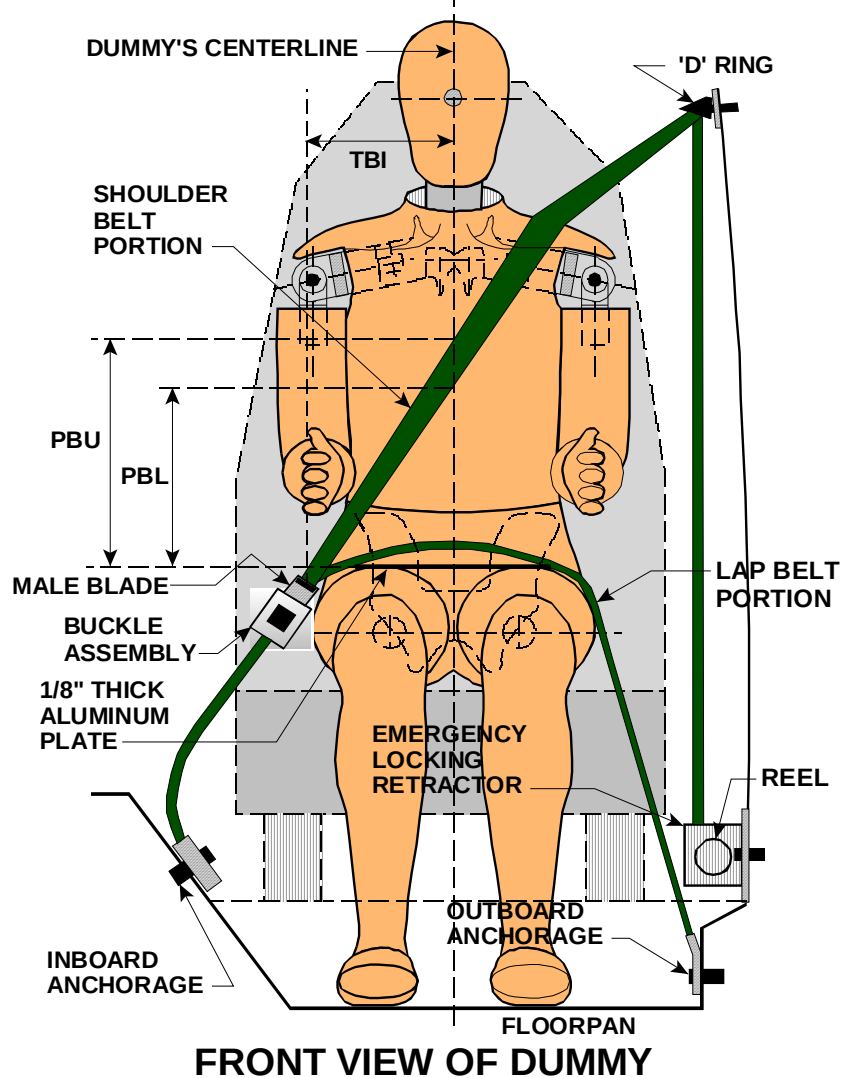
DATA SHEET NO. 5
FRONT SEAT DUMMY POSITIONING MEASUREMENTS IN VEHICLE (cont.)

	DRIVER (Serial #064)			PASS. (Serial #061)		
WA ^o	37.1 deg.			N/A		
SWA ^o	64.5 deg.			N/A		
SCA ^o	25.5 deg.			N/A		
SA ^o	0.5 deg. (head restraint post)			4.3 deg. (head restraint post)		
HZ	227			240		
HH	428			448		
HW	647			651		
HR	234			244		
NR	437	Angle	12 deg.	N/A		
CD	555			556		
CS	336			N/A		
RA	221			N/A		
KDL	170	Angle (KDA)	34 deg.	159		
KDR	153			168	Angle (KDA)	31 deg.
PA ^o	24.6 deg.			24.9 deg.		
TA ^o	38.5 deg.			38.0 deg.		
KK	415			315		
AA	354			210		
ST	509	Angle	5 deg.	498	Angle	5 deg.
SK	580	Angle	95 deg.	580	Angle	98 deg.
SH	258	Angle	131 deg.	245	Angle	132 deg.
SHY	250			250		
HS	351			355		
HD	148			154		
AD	109			112		

Dimensions in millimeters

DATA SHEET NO. 6
SEAT BELT POSITIONING DATA

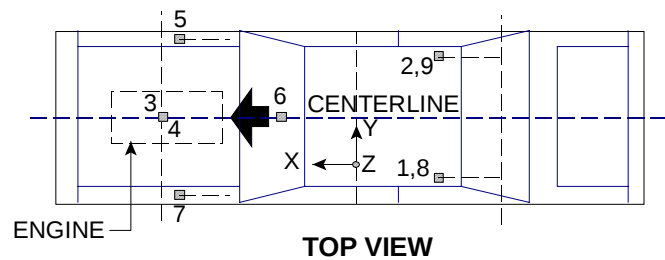
SEAT BELT POSITIONING DATA



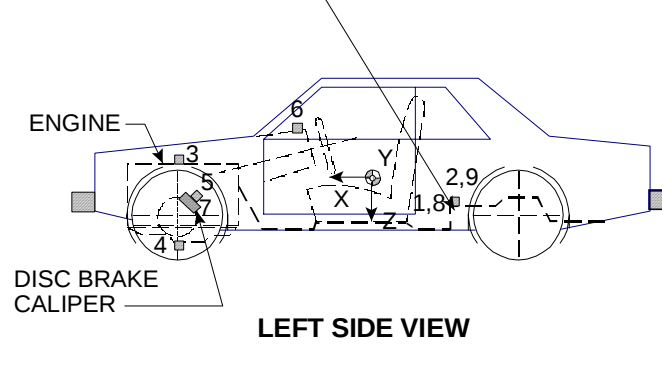
	DRIVER DUMMY (mm)	PASSENGER DUMMY (mm)
PBU -- Top surface of alum. plate to upper edge	360	360
PBL-- Top surface of alum. plate to belt lower edge	285	285
LAP BELT TENSION	10 N	10 N
SHOULDER BELT TENSION	Retractor	Retractor

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	2439	-641	-572
2	Right Rear Seat Cross Member X	2439	640	-572
3	Top of Engine Block	4513	279	-956
4	Bottom of Engine	4586	257	-327
5	Disc Brake Caliper @ Right Side	4324	821	-464
6	Instrument Panel**	-	-	-
7	Disc Brake Caliper @Left Side	4324	-821	-464
8	Left Rear Seat Cross Member Z	2439	-641	-572
9	Right Rear Seat Cross Member Z	2439	640	-572

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 10 mm molding.

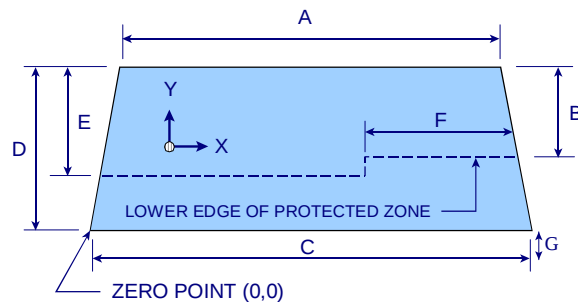
FMVSS 212 REQUIREMENTS:

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: 21.0°C.

FMVSS 212 TEST DATA

	WINDSHIELD PERIPHERY		% OF RETENTION
	PRE-TEST (mm)	POST-TEST (mm)	
RIGHT SIDE	2052.0	2052.0	100.0%
LEFT SIDE	2052.0	2052.0	100.0%
TOTAL	4104	4104	100.0%



DIMENSIONS (mm)	
A	1244
B	395
C	1500
D	680
E	432
F	560
G	10

FRONT VIEW OF WINDSHIELD

FAILURE DETAILS: None

DETAILS OF WINDSHIELD GLASS PENETRATION GREATER THAN 6 mm: None

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

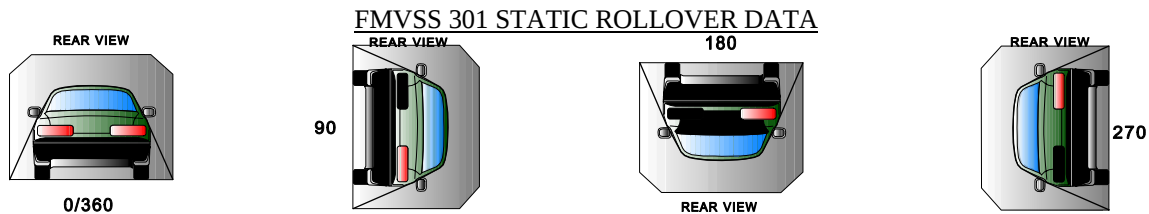
DATA SHEET NO. 9
SUMMARY OF FMVSS NO. 301 DATA

NHTSA TEST No.: _____ M65107 _____ TEST DATE: _____ February 15, 2006
VEHICLE MAKE/MODEL: _____ 2006 Toyota Tacoma Double Cab 4X4 Pickup _____
FMVSS 301 FUEL SYSTEM INTEGRITY POST IMPACT DATA

FUEL SPILLAGE MEASUREMENT:

Time Interval	Amount	Maximum Allowable Spillage
Impact Until Motion Ceases		28 g
First Five Minutes Following Impact		142 g
Next 25 Minutes		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	10	seconds	5	minutes	6	minutes	10	seconds	7	minutes
90° - 180°	1	minutes	7	seconds	5	minutes	6	minutes	7	seconds	7	minutes
180°-270°	1	minutes	5	seconds	5	minutes	6	minutes	5	seconds	7	minutes
270°-360°	1	minutes	8	seconds	5	minutes	6	minutes	8	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:

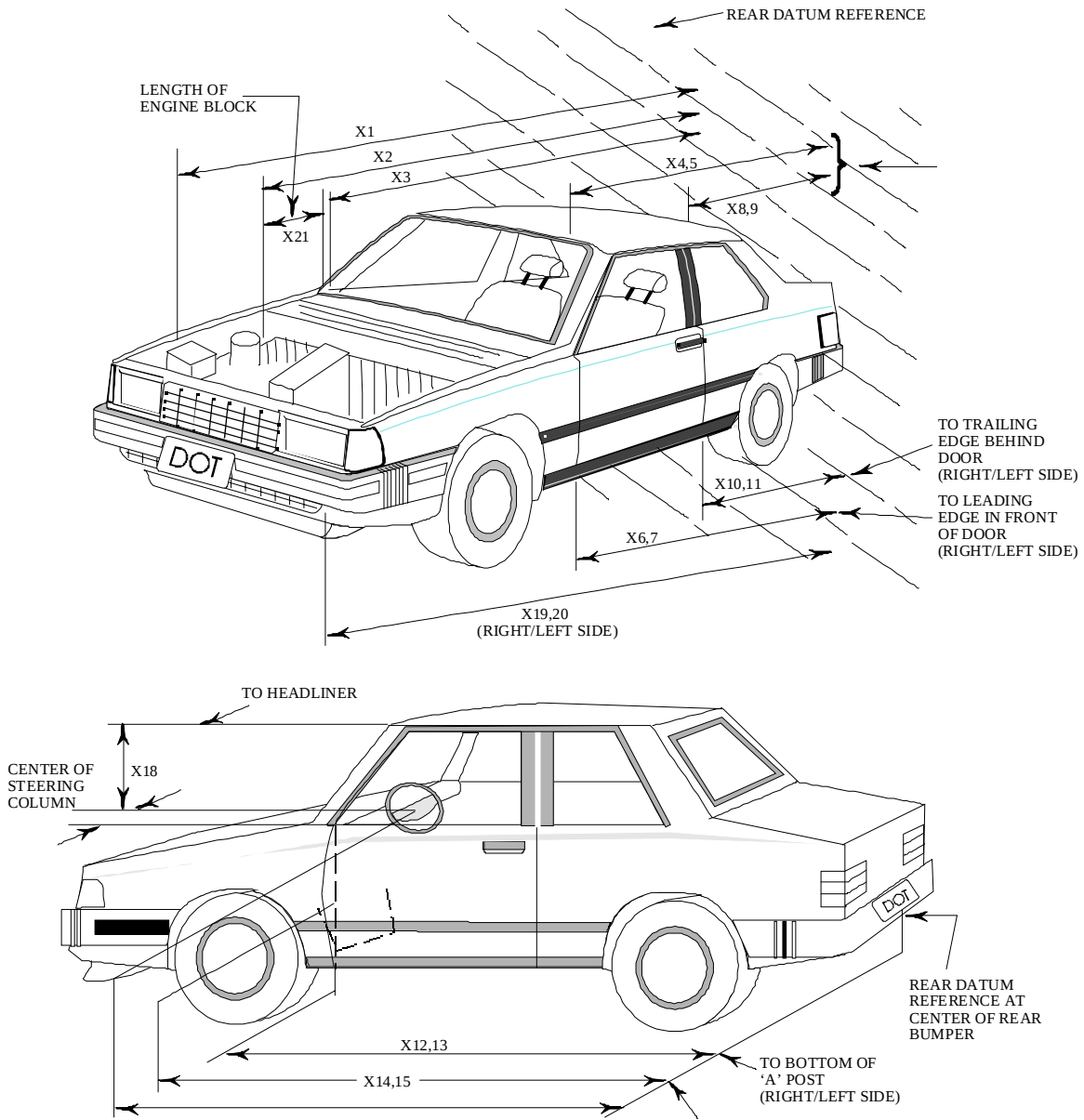
Rollover Stage	First 5 minutes from onset of rotation (g)	6th min. (g)	7th min. (g)	8th min. (if required) (g)
0° - 90°	0	0	0	N/A
90° - 180°	0	0	0	N/A
180°-270°	0	0	0	N/A
270°-360°	0	0	0	N/A

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.: M65107 TEST DATE: February 15, 2006
VEHICLE MAKE/MODEL: 2006 Toyota Tacoma Double Cab 4X4 Pickup

No.		Pre-Test	Post-Test	Difference
X1	Total Length of Vehicle at Centerline	5280	4748	532
X2	Rear Surface of Vehicle to Front of Engine	4674	4626	48
X3	Rear Surface of Vehicle to Firewall	4117	4024	93
X4	Rear Surface of Vehicle to Upper Leading Edge of Right Door	3846	3843	3
X5	Rear Surface of Vehicle to Upper Leading Edge of Left Door	3846	3843	3
X6	Rear Surface of Vehicle to Lower Leading Edge of Right Door	3826	3823	3
X7	Rear Surface of Vehicle to Lower Leading Edge of Left Door	3829	3827	2
X8	Rear Surface of Vehicle to Upper Trailing Edge of Right Door	2793	2790	3
X9	Rear Surface of Vehicle to Upper Trailing Edge of Left Door	2792	2788	4
X10	Rear Surface of Vehicle to Lower Trailing Edge of Right Door	2776	2772	4
X11	Rear Surface of Vehicle to Lower Trailing Edge of Left Door	2777	2771	6
X12	Rear Surface of Vehicle to Bottom of "A" Post of Right Side	3899	3897	2
X13	Rear Surface of Vehicle to Bottom of "A" Post of Left Side	3898	3897	1
X14	Rear Surface of Vehicle to Firewall, Right Side	4142	4092	50
X15	Rear Surface of Vehicle to Firewall, Left Side	4143	4083	60
X16	Rear Surface of Vehicle to Steering Column	3412	3423	-11
X17	Center of Steering Column to "A" Post	324	326	-2
X18	Center of Steering Column to Headliner	423	461	-38
X19	Rear Surface of Vehicle to Right Side of Front Bumper	5274	4751	523
X20	Rear Surface of Vehicle to Left Side of Front Bumper	5273	4716	557
X21	Length of Engine Block	559	559	0
RD	Rear Surface of Vehicle to Right Side of Dash Panel	3590	3587	3
CD	Rear Surface of Vehicle to Center of Dash Panel	3665	3667	-2
LD	Rear Surface of Vehicle to Left Side of Dash Panel	3592	3589	3

All Dimensions in mm

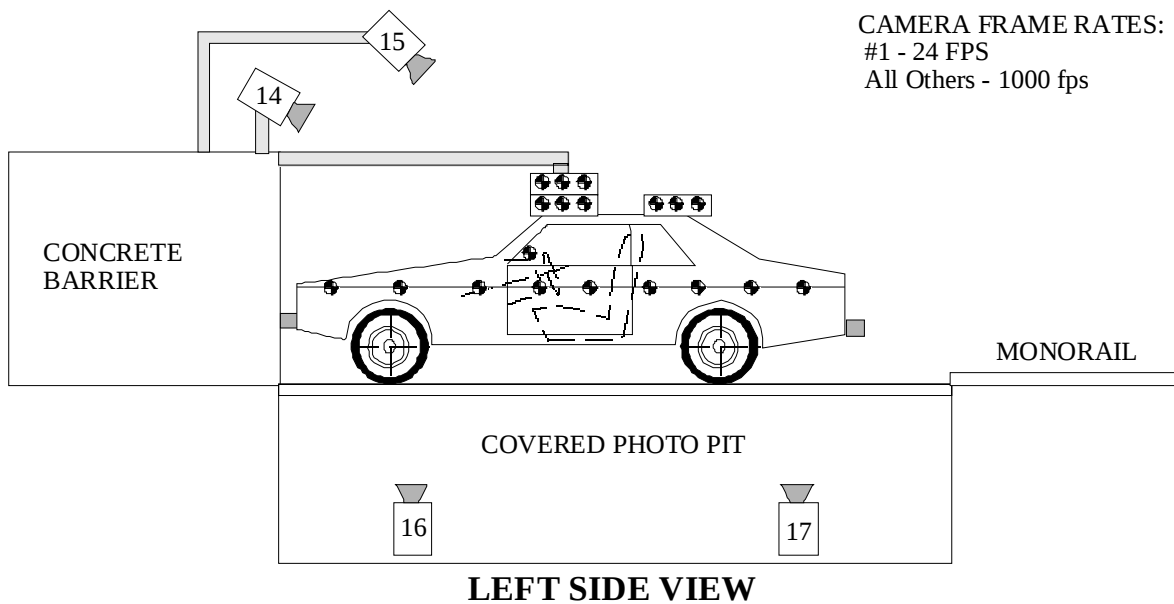
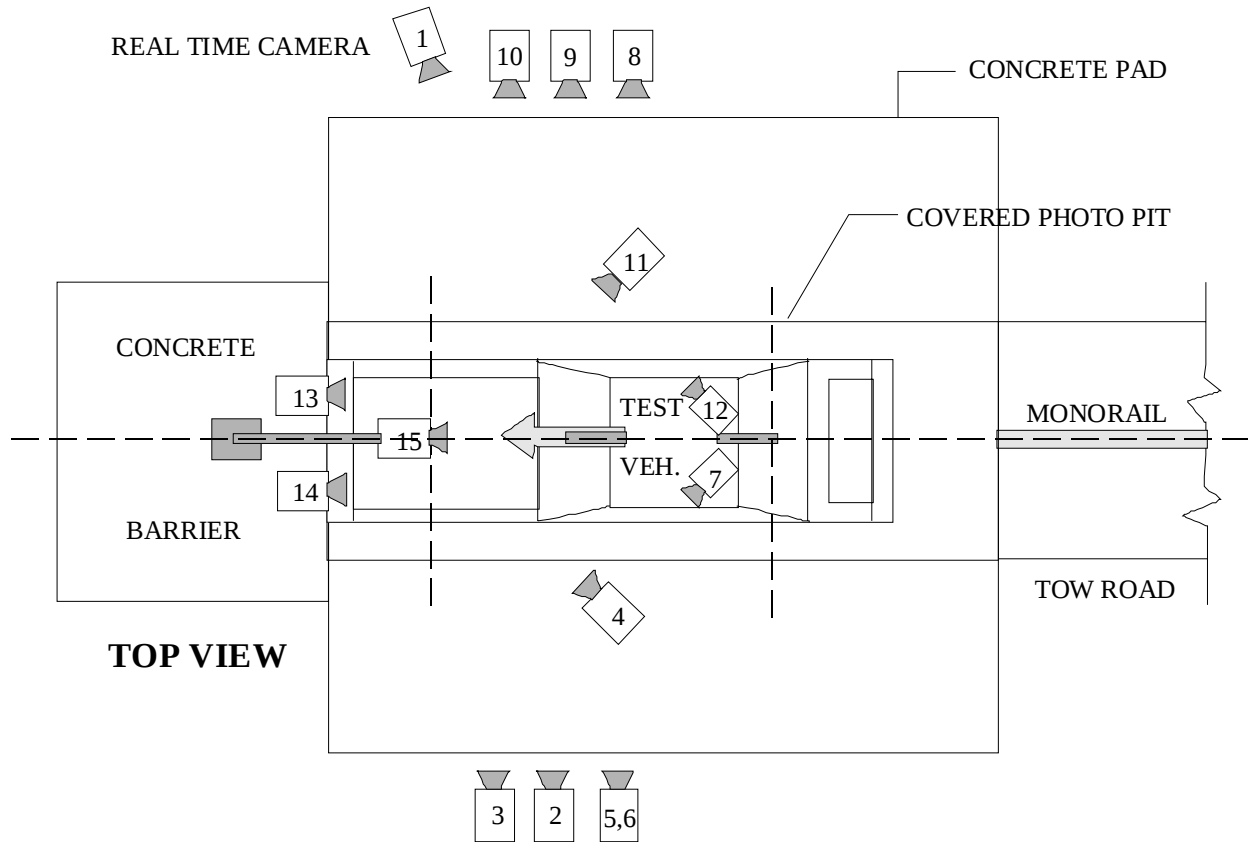
DATA SHEET NO.10
VEHICLE MEASUREMENTS (cont.)

NHTSA TEST No.: M65107 TEST DATE: February 15, 2006
VEHICLE MAKE/MODEL: 2006 Toyota Tacoma Double Cab 4X4 Pickup

TARGET VEHICLE STRUCTURAL MEASUREMENTS

	Elements	Pre-Test (mm)
1	Total length	5280
2	Total Width	1806
3	Bumper Top Height	599
4	Bumper Bottom Height	506
5	Longitudinal Member Top Height	587
6	Distance Between Longitudinal Members	778
7	Longitudinal Member Width	72
8	Engine top height	1152
9	Engine bottom height	317
10	Engine and gearbox width	640
11	Front bumper-engine distance	607
12	Front shock absorber fixing height	869
13	Bonnet leading edge height	1152
14	Front shock absorber fixing width	1024
15	Front bumper – front axle distance	840
16	Front axle – a pillar distance	598
17	A-pillar – B pillar distance	1023
18	B-pillar – rear axle distance	1597
19	B-pillar – C Pillar distance	893
20	Roof sill bottom height	1641
21	Roof sill top height	1740
22	Floor sill bottom height	459
23	Floor sill top height	552

DATA SHEET NO.11
HIGH-SPEED CAMERA LOCATIONS



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

NHTSA Test No.: M65107 Vehicle: 2006 Toyota Tacoma Double Cab 4X4 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	8864	2073	1095	-3.2	8281	28	1000
3	Left Side View	9929	1092	1088	-1.8	9346	50	1000
4	Driver and Interior View	7520	2775	2055	-1.7	-	35	500
5	Steering Column (Bottom)	8005	1721	1155	-2.1	7422	25	1000
6	Steering Column (Top)	8005	1721	1790	-7.4	7422	28-70	1000
7	Left CRS Lateral View	-	-	-	-	-	-	-
8	Overall Right Side	8702	1735	1225	-2.6	9341	28	500
9	Right Side View	9839	1307	1248	-2.2	10478	50	1000
10	Right Passenger View	8750	1957	1420	-2.4	9389	35	1000
11	Passenger and Interior View	7620	2818	2020	-6.6	-	35	500
12	Right CRS Lateral View	-	-	-	-	-	-	-
13	Passenger Front View	620	-92	1987	-28.0	-	13	500
14	Driver Front View	620	-92	1987	-27.7	-	13	500
15	Windshield View	0	-530	3374	-48.2	-	20	500
16	Pit View of Engine	0	850	-3048	90	-	13	500
17	Pit View of Fuel Tank	0	2610	-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

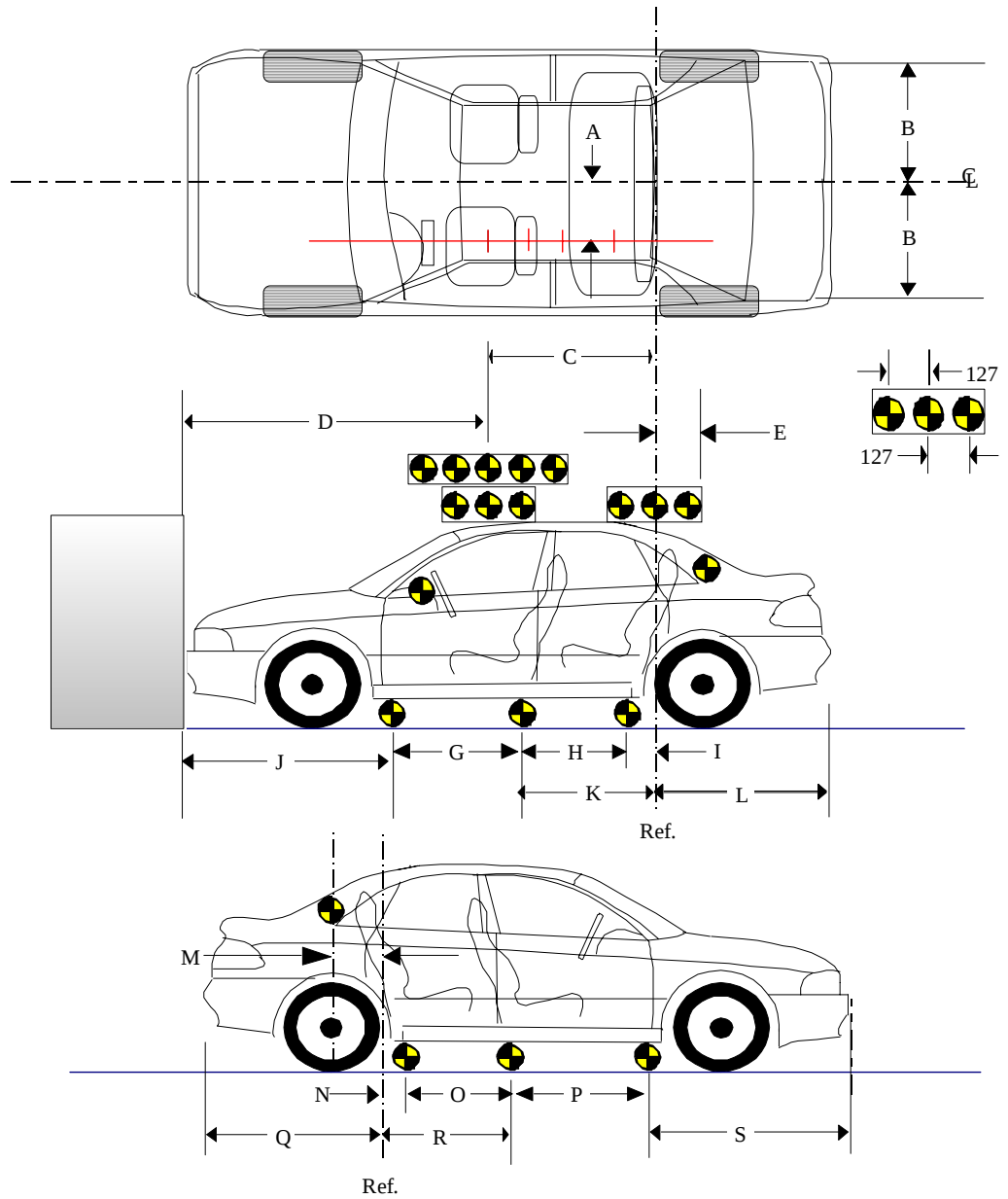
Z = film plane to ground

DATA SHEET NO. 12
VEHICLE REFERENCE PHOTO TARGET LOCATIONS

NHTSA Test No.: M65107 Vehicle: 2006 Toyota Tacoma Double Cab 4X4 Pickup

(Dimensions in millimeters)

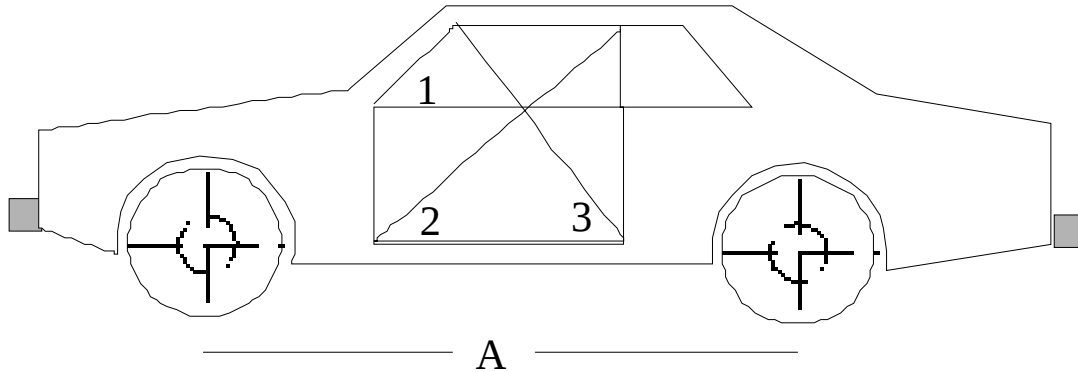
A	715
B	1222
C	2050
D	117
E	1552
F	1035
G	1020
H	295
I	1354
J	1315
K	1576
L	115
M	297
N	1023
O	1033
P	1577
Q	1320
R	1350
S	715



DATA SHEET NO. 13
VEHICLE INTRUSION MEASUREMENTS

NHTSA Test No.: M65107 Vehicle: 2006 Toyota Tacoma Double Cab 4X4 Pickup

DOOR OPENING WIDTH AND WHEELBASE MEASUREMENTS



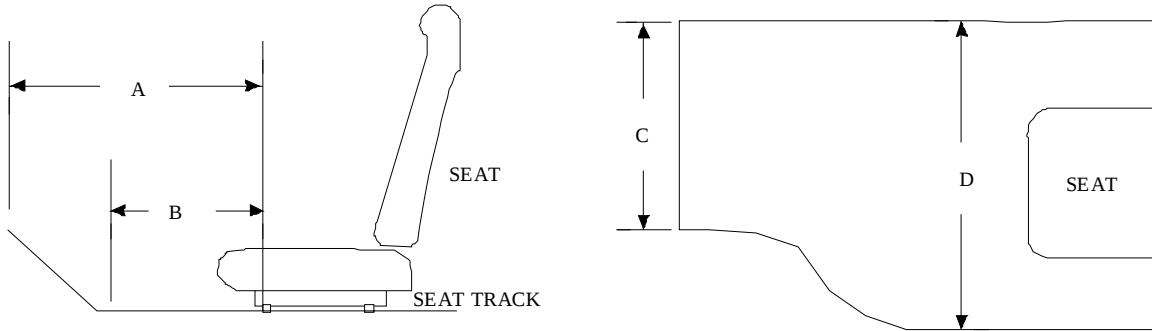
UNITS (mm)	LEFT			RIGHT		
MEASUREMENT	1	2	3	1	2	3
BEFORE TEST	971	1426	1092	971	1430	1094
AFTER TEST	970	1424	1097	970	1431	1096
DIFFERENCE	1	2	-5	1	-1	-2

UNITS (mm)	A = WHEELBASE LEFT	A = WHEELBASE RIGHT
BEFORE TEST	3253	3253
AFTER TEST	3206	3208
DIFFERENCE	47	45

DATA SHEET NO.13
VEHICLE INTRUSION MEASUREMENTS (cont)

NHTSA Test No.: M65107 Vehicle: 2006 Toyota Tacoma Double Cab 4X4 Pickup

STATIC FOOTWELL DEFORMATION



DRIVER

Measurement	Pre-Test	Post-Test	Difference
A	720	679	41
B	397	388	9
C	443	437	6
D	472	473	-1

PASSENGER

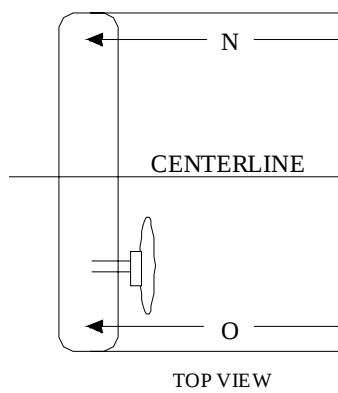
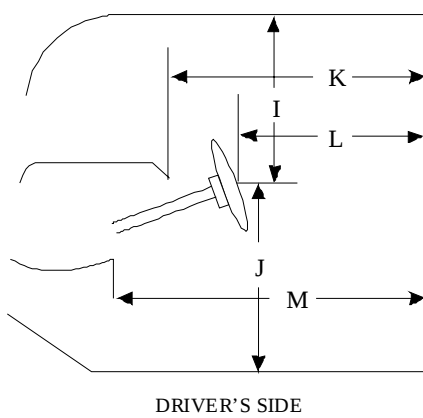
Measurement	Pre-Test	Post-Test	Difference
A	695	692	3
B	401	406	-5
C	436	439	-3
D	441	451	-10

Units = mm

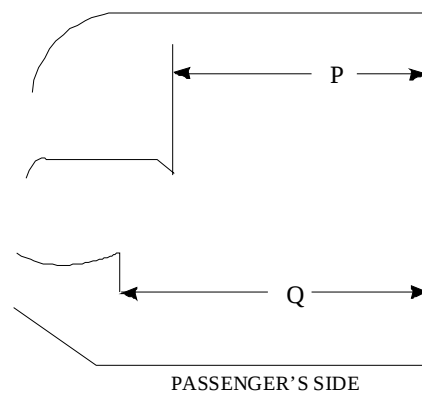
DATA SHEET NO.13
VEHICLE INTRUSION MEASUREMENTS (cont.)

NHTSA Test No.: M65107 Vehicle: 2006 Toyota Tacoma Double Cab 4X4 Pickup

STATIC PASSENGER COMPARTMENT INTRUSION



MEASUREMENTS
FROM C-PILLAR
BELT ANCHORAGE



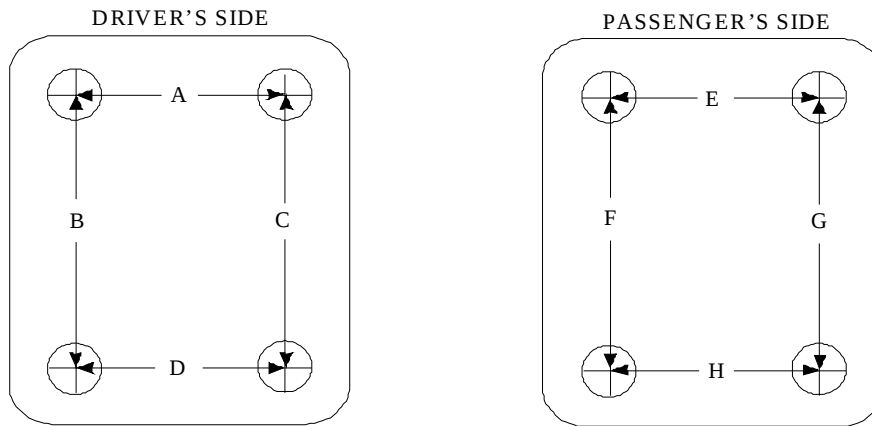
Measurement	Pre-Test	Post-Test	Difference
I	423	461	-38
J	630	596	34
K	762	765	-3
L	571	585	-14
M	807	807	0
N	749	748	1
O	752	751	1
P = K (PASS.)	764	765	-1
Q = M (PASS.)	744	743	1

Units = mm

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

NHTSA Test No.: M65107 Vehicle: 2006 Toyota Tacoma Double Cab 4X4 Pickup

FLOORBOARD DEFORMATION



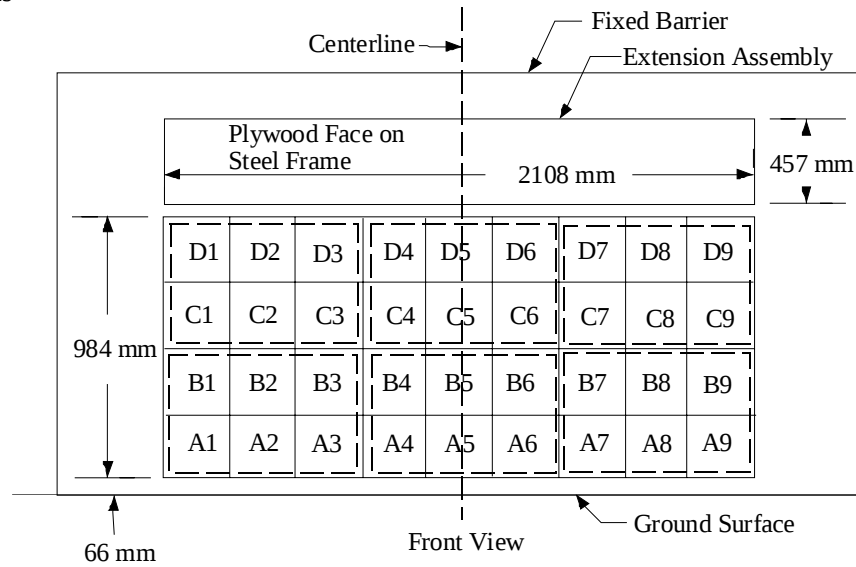
TOP VIEW THROUGH FLOOR PAN

Measurement	Pre-Test	Post-Test	Difference
A	443	437	6
B	371	371	0
C	346	335	11
D	472	473	-1
E	436	439	-3
F	376	376	0
G	350	349	1
H	441	451	-10

Units = mm

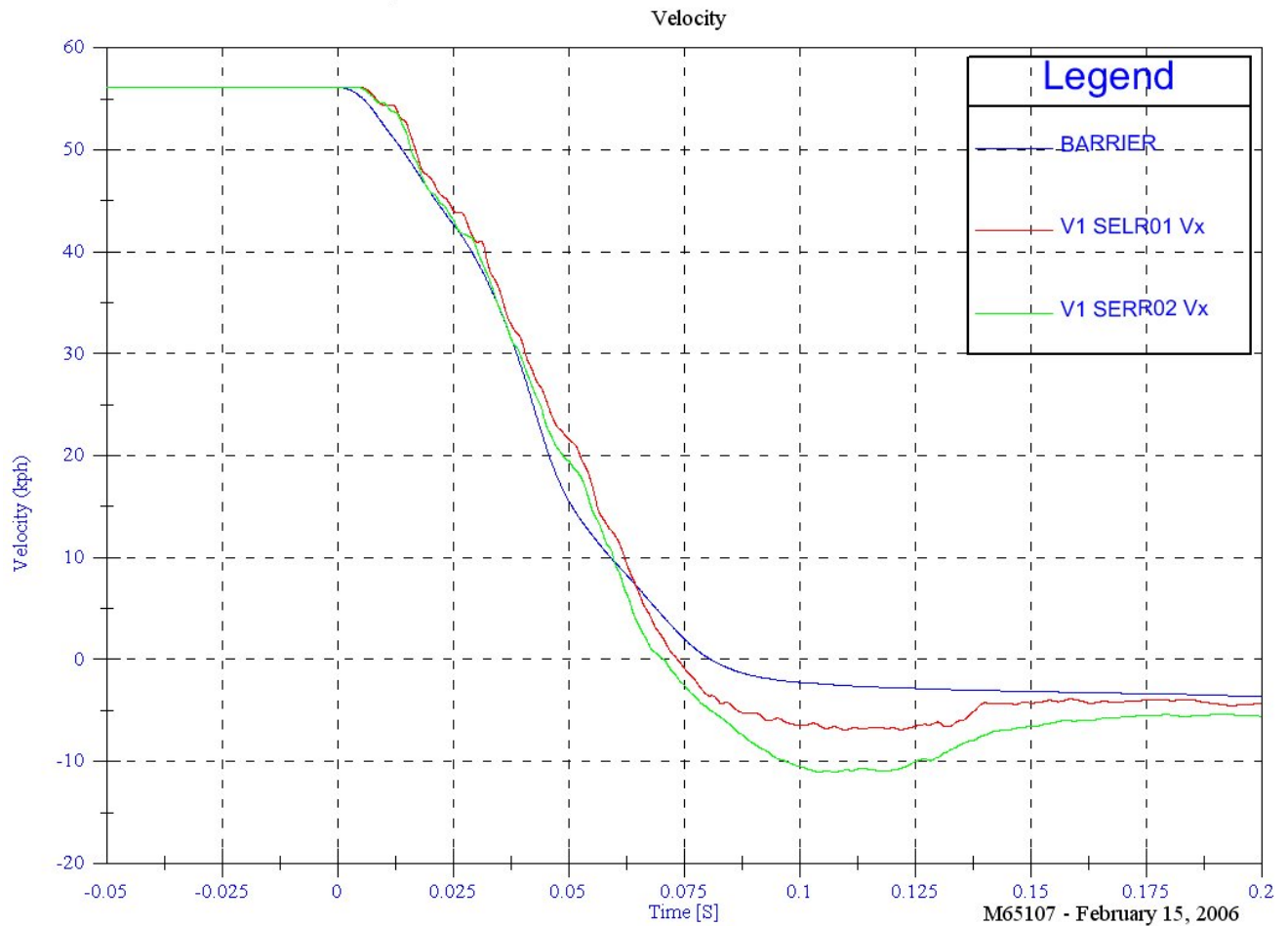
DATA SHEET NO.14
LOAD CELL LOCATIONS ON FIXED BARRIER

36 Load Cells
4 Rows
9 Columns



Momentum Plot

2006 NCAP Test 14 - 2006 Toyota Tacoma



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

Vehicle Make/Model/Body Style: Toyota Tacoma Double Cab 4X4 Pickup

NHTSA Test No.: M65107 VIN: 5TELU42N96Z205570

Model Year: 2006 Build Date: 01/06 Test Date: February 15, 2006

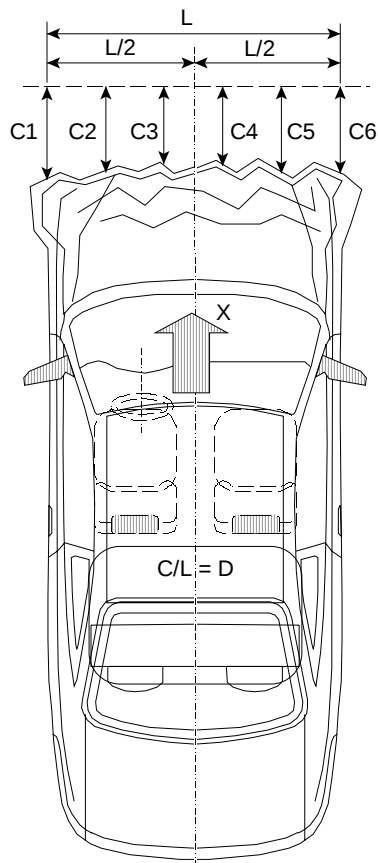
Vehicle Size Category: Truck Test Weight: 2138.0 kg

Vehicle Wheelbase: 3253 mm; Front Overhang: 840 mm; Overall Width: 1895 mm

Collision Deformation Classification (CDC) Code: 12FDEW3

Crush Depth Dimensions

	PRE (mm)	POST (mm)	DIFF (mm)
C1 =	5118	4733	385
C2 =	5260	4710	550
C3 =	5279	4742	537
C4 =	5279	4756	523
C5 =	5260	4745	515
C6 =	5116	4747	369



Midpoint of Damage: D = Vehicle Centerline (Longitudinal)

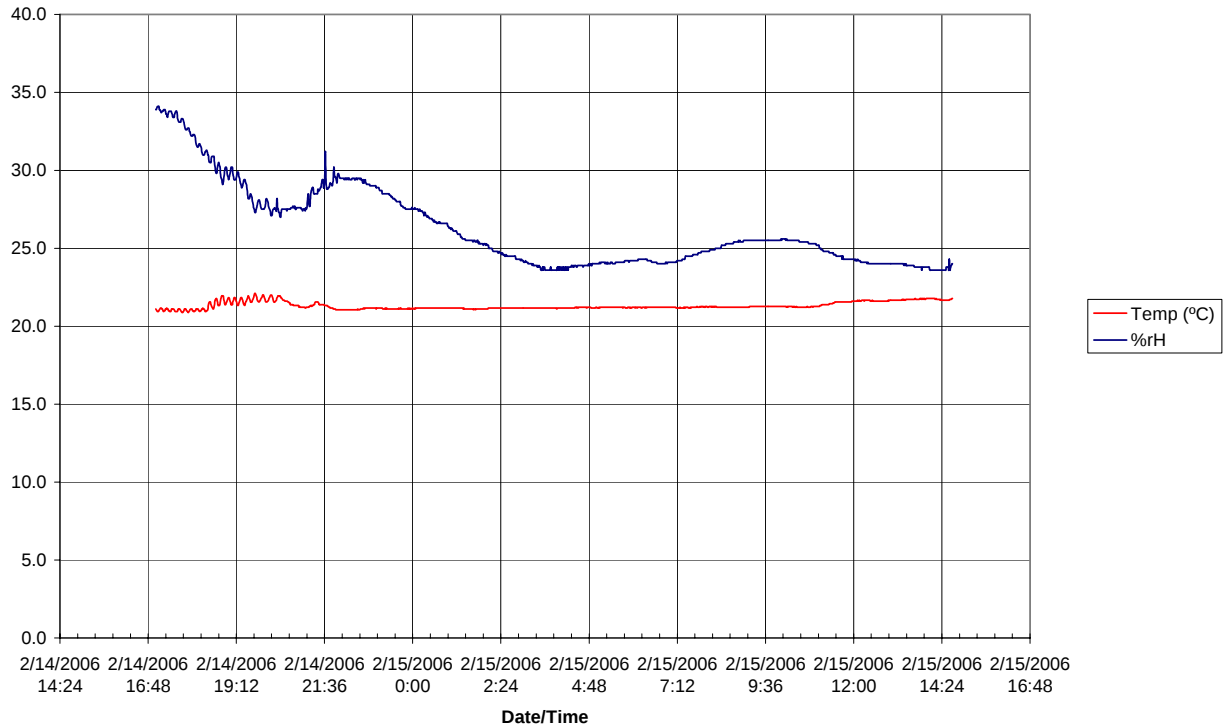
Length of Damaged Region:

L1=	<u>1596</u>	mm
L2=	<u>798.0</u>	mm
L5=	<u>319.2</u>	mm

DATA SHEET NO.16
VEHICLE AND DUMMY TEMPERATURE STABILIZATION CHART

NHTSA Test No.: M65107 Vehicle: 2006 Toyota Tacoma Double Cab 4X4 Pickup

Toyota Tacoma M65107 Environmental Conditions



APPENDIX A
PHOTOGRAPHS

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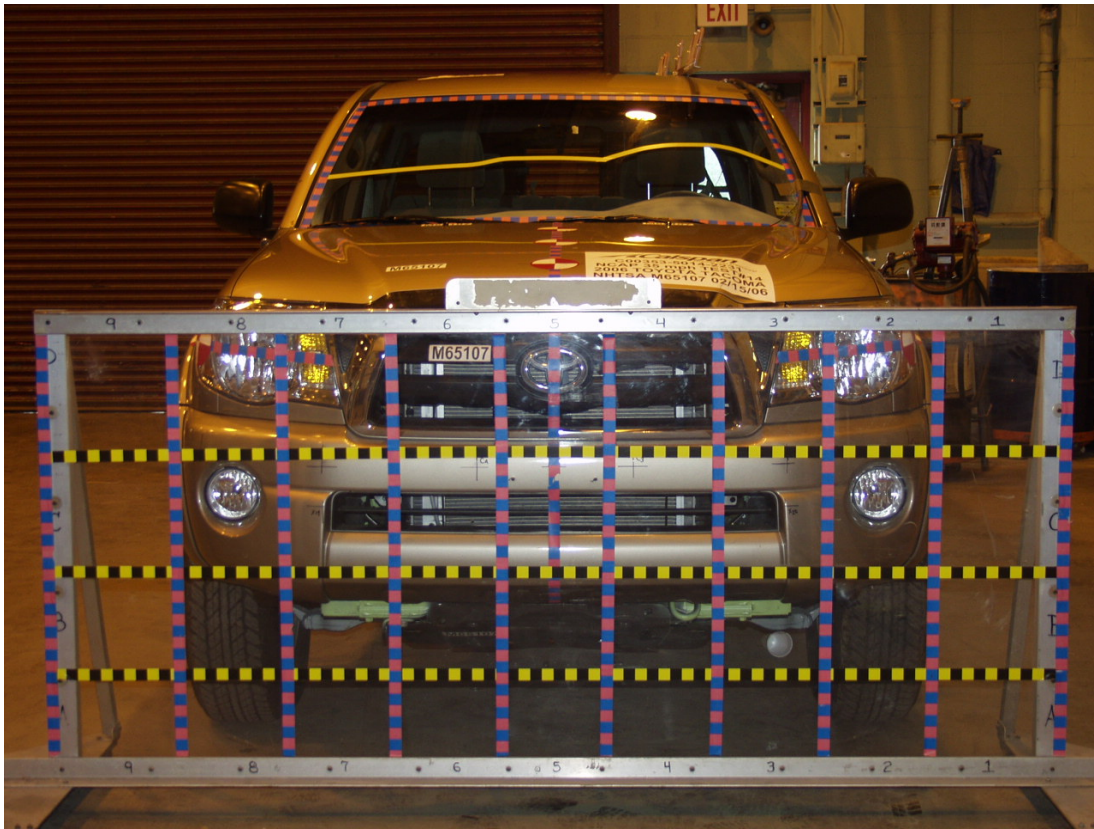


Figure A-1: Load Cell Locations

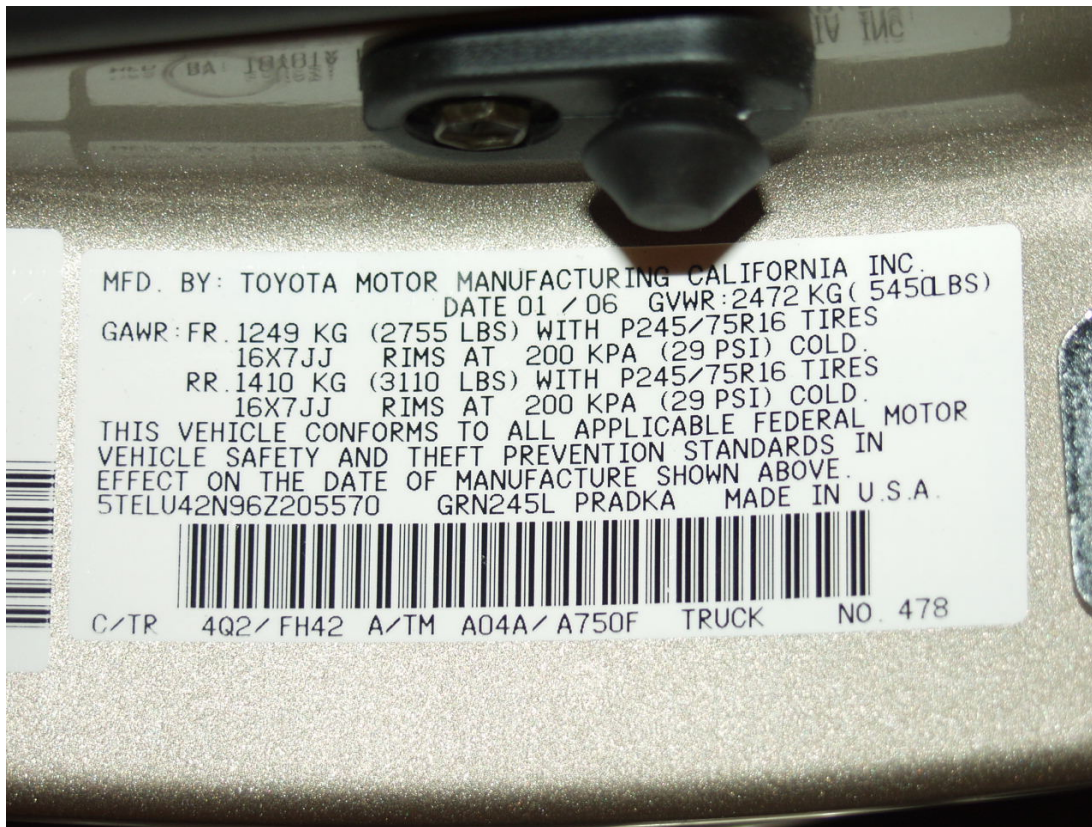


Figure A-2: Vehicle Certification Placard



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

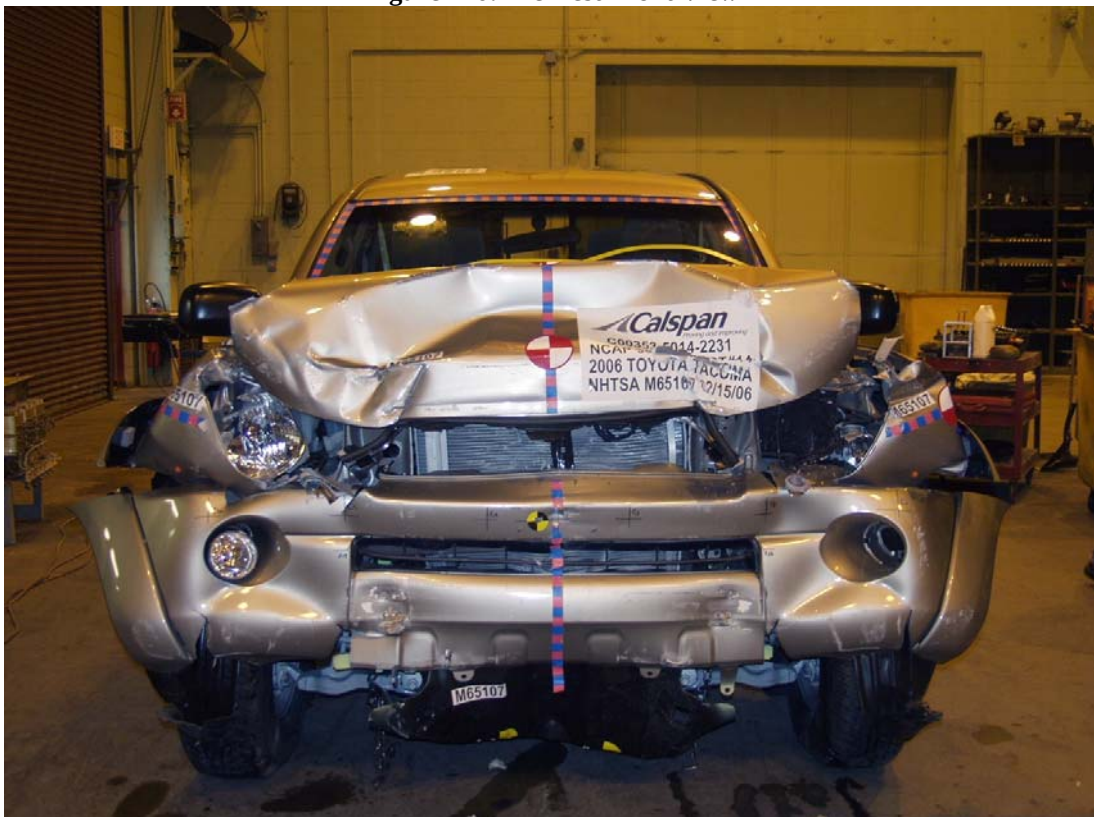


Figure A-7: Post-Test Front View



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.: M65107

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

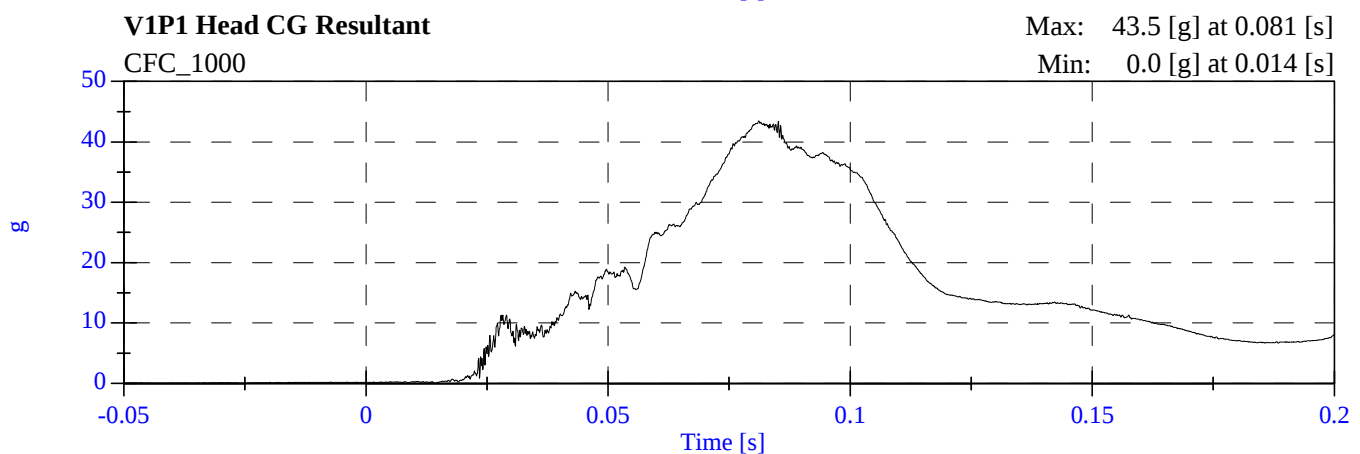
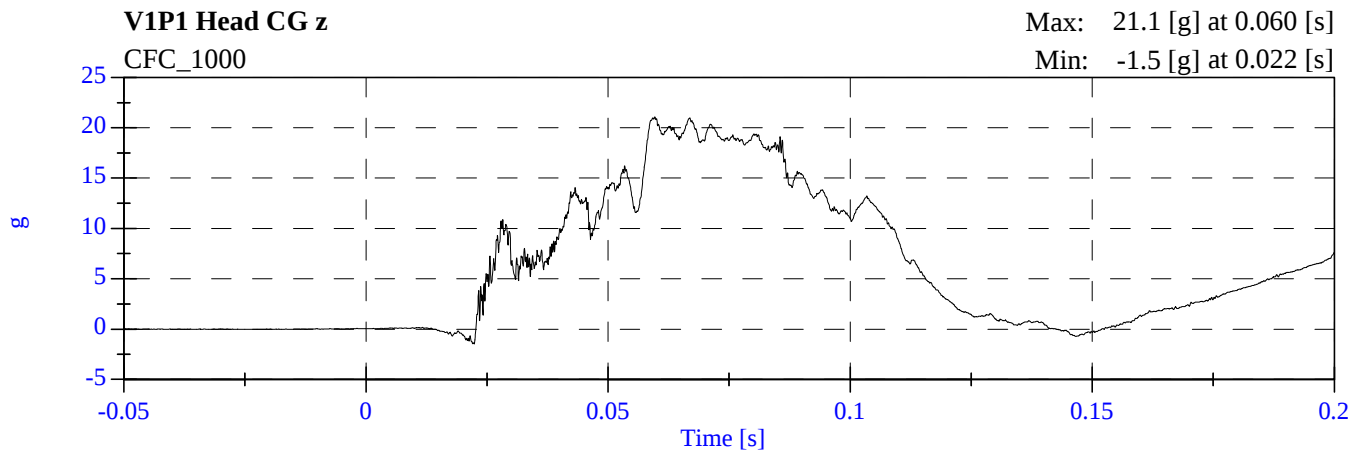
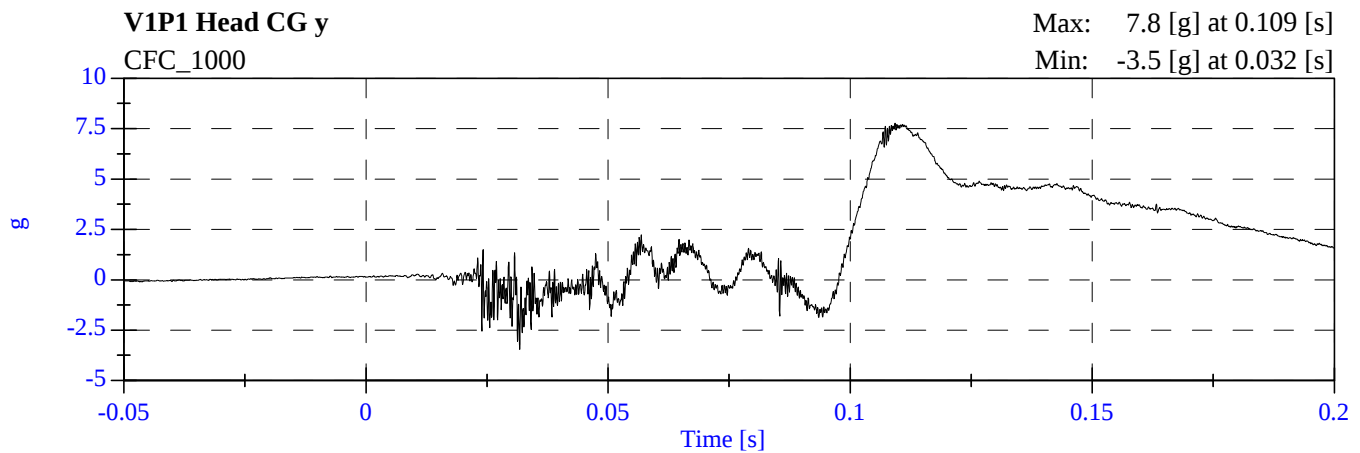
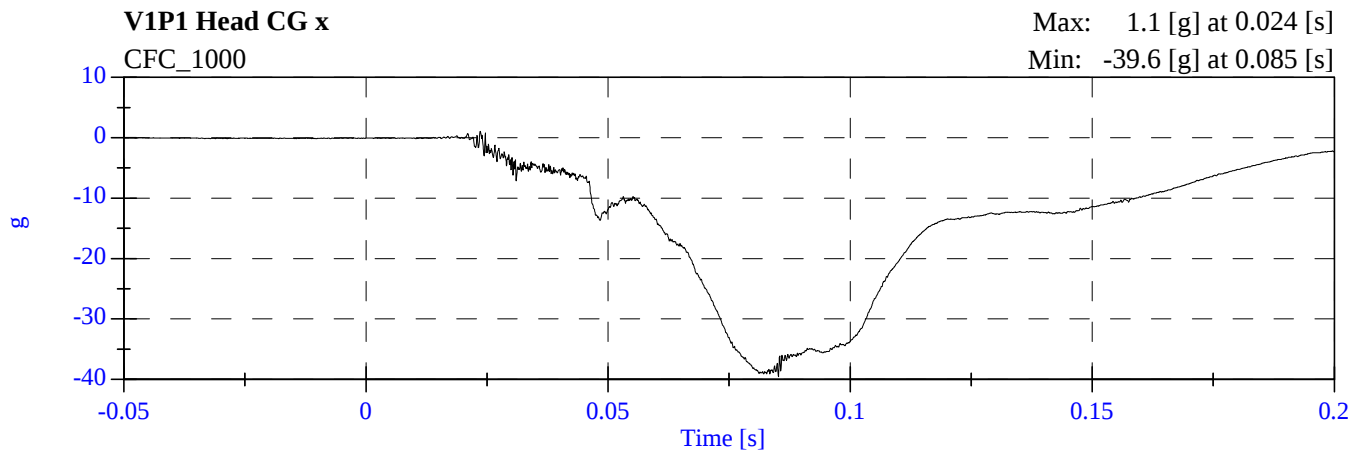
V1P1 Head 9 Array X Arm Ay	V1 Driver Lap Belt F
V1P1 Head 9 Array X Arm Az	V1 Driver Torso Belt F
V1P1 Head 9 Array Y Arm Ax	V1 RFP Lap Belt F
V1P1 Head 9 Array Y Arm Az	V1 RFP Torso Belt F
V1P1 Head 9 Array Z Arm Ax	V1 Left Rear #1 Ax
V1P1 Head 9 Array Z Arm Ay	V1 Right Rear #2 Ax
V1P1 Head CG Ax	V1 Engine Top #3 Ax
V1P1 Head CG Ay	V1 Engine Bottom #4 Ax
V1P1 Head CG Az	V1 Right Caliper #5 Ax
V1P1 Head CG Red Ax	V1 Left Caliper #7 Ax
V1P1 Head CG Red Ay	V1 Left Rear #8 Az
V1P1 Head CG Red Az	V1 Right Rear #9 Az
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	
Barrier Load Cell A1 Fx	
Barrier Load Cell A2 Fx	
Barrier Load Cell A3 Fx	
Barrier Load Cell A4 Fx	

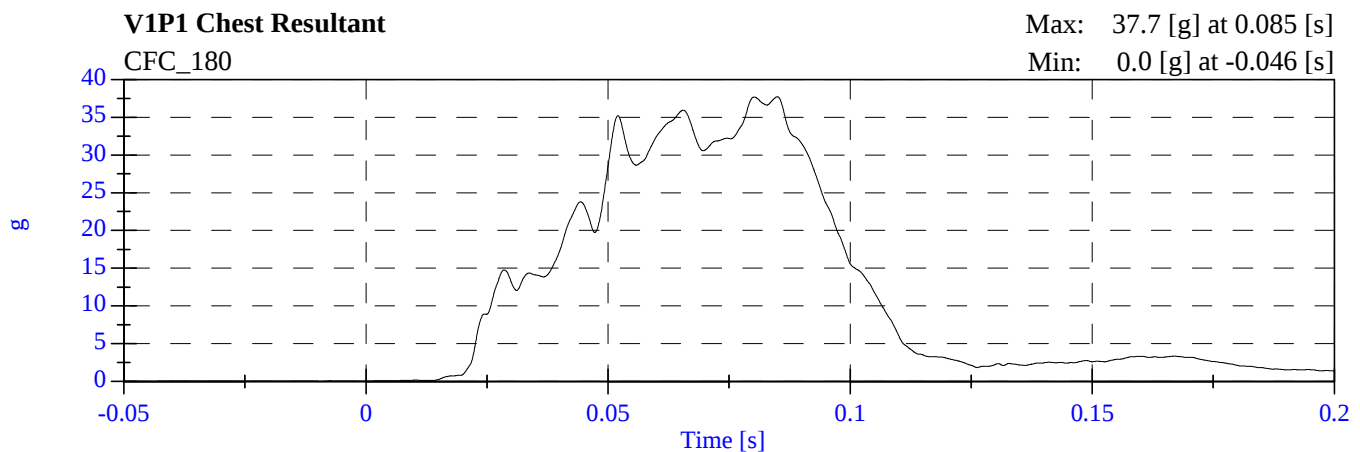
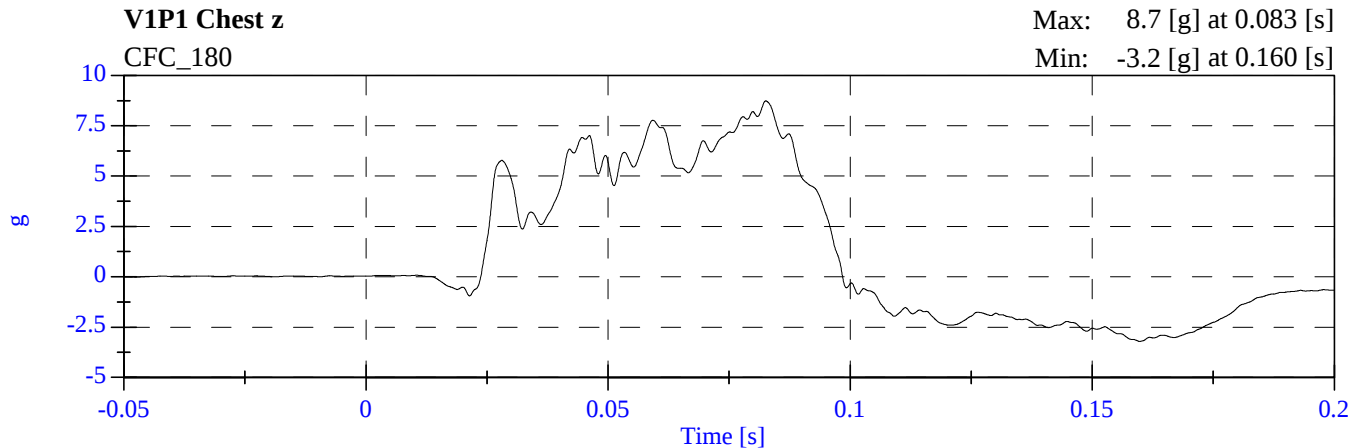
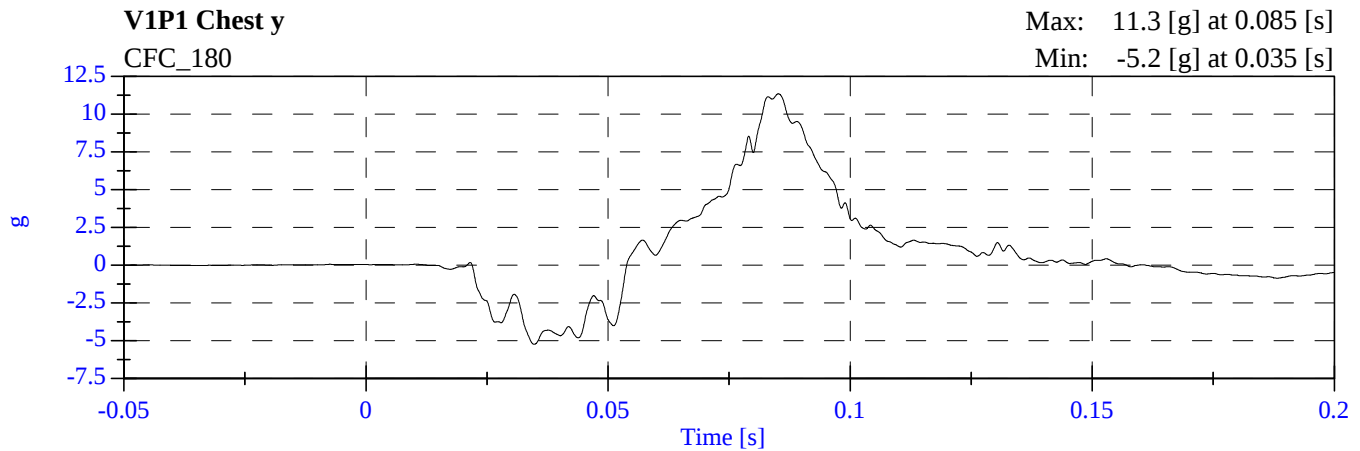
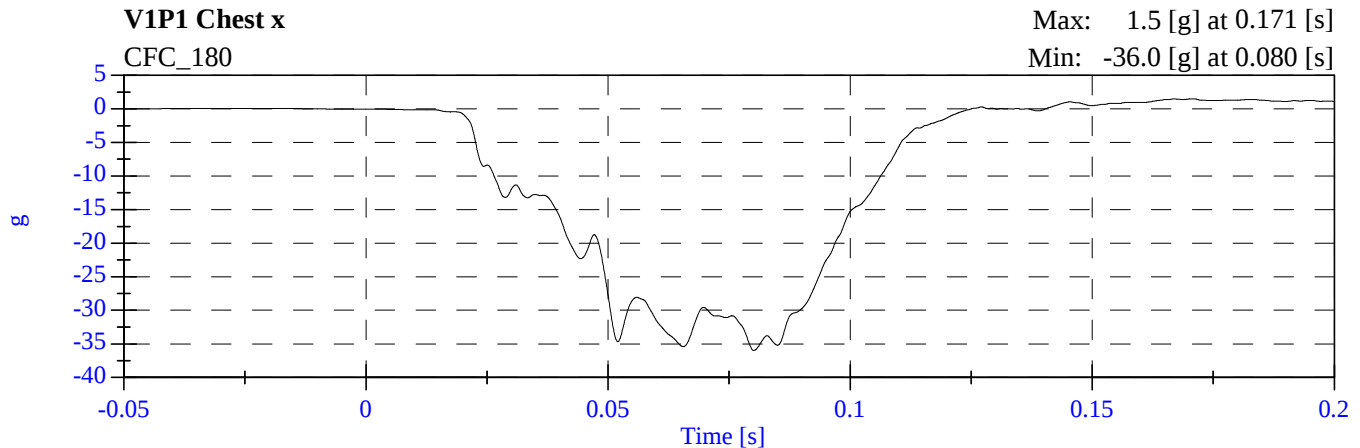
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Barrier Load Cell A6 Fx	
Barrier Load Cell A7 Fx	
Barrier Load Cell A8 Fx	
Barrier Load Cell A9 Fx	
Barrier Load Cell B1 Fx	
Barrier Load Cell B2 Fx	
Barrier Load Cell B3 Fx	
Barrier Load Cell B4 Fx	
Barrier Load Cell B5 Fx	
Barrier Load Cell B6 Fx	
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
V1P2 Left Upper Tibia My	Data Clipped: 28-66 ms
V1 Engine Top #3x	Transducer Failed

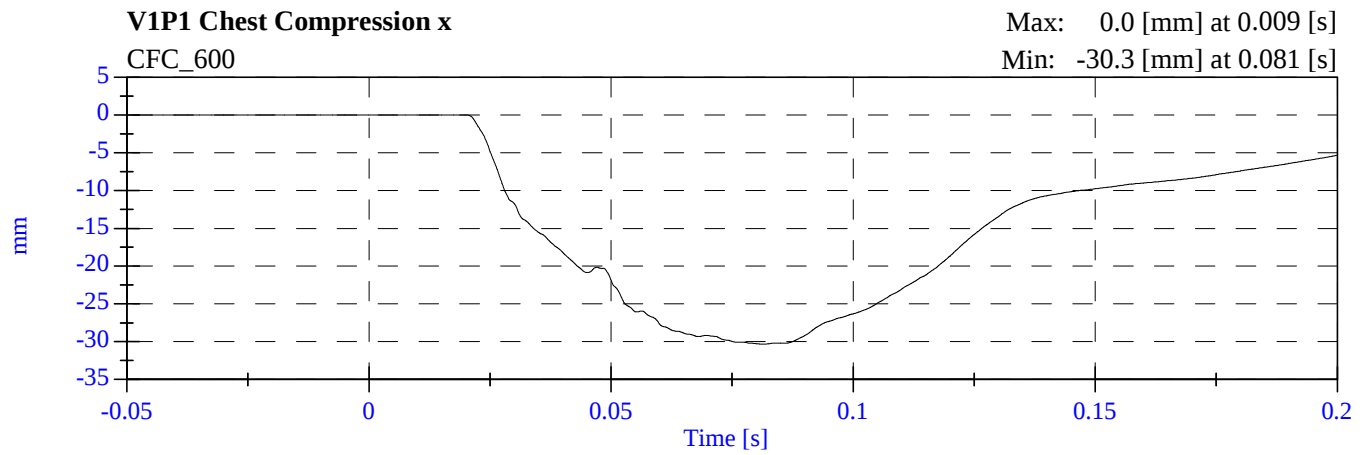
2006 NCAP Test 14 - 2006 Toyota Tacoma M65107 - February 15, 2006



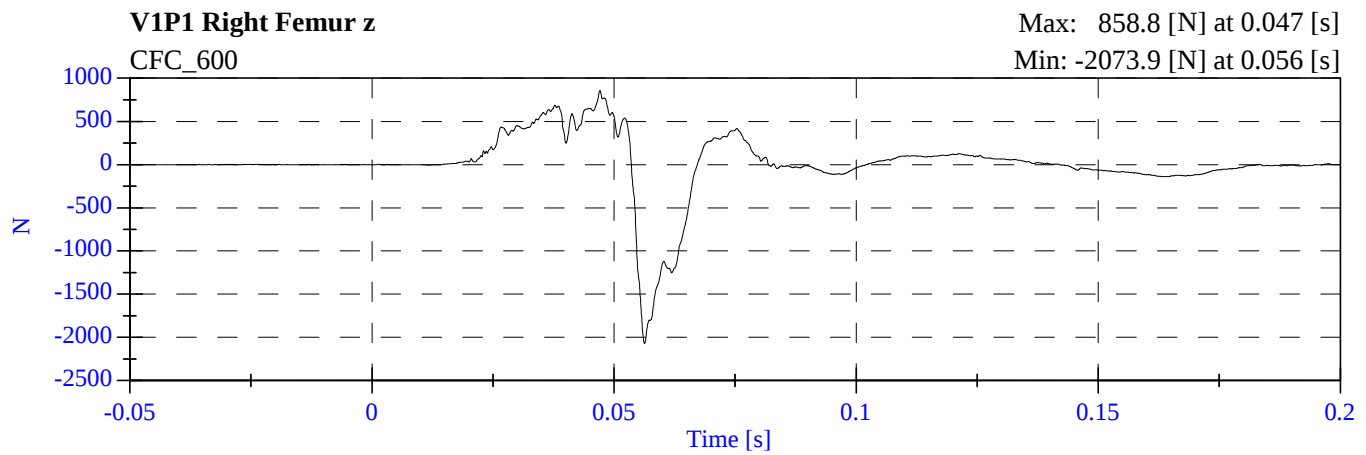
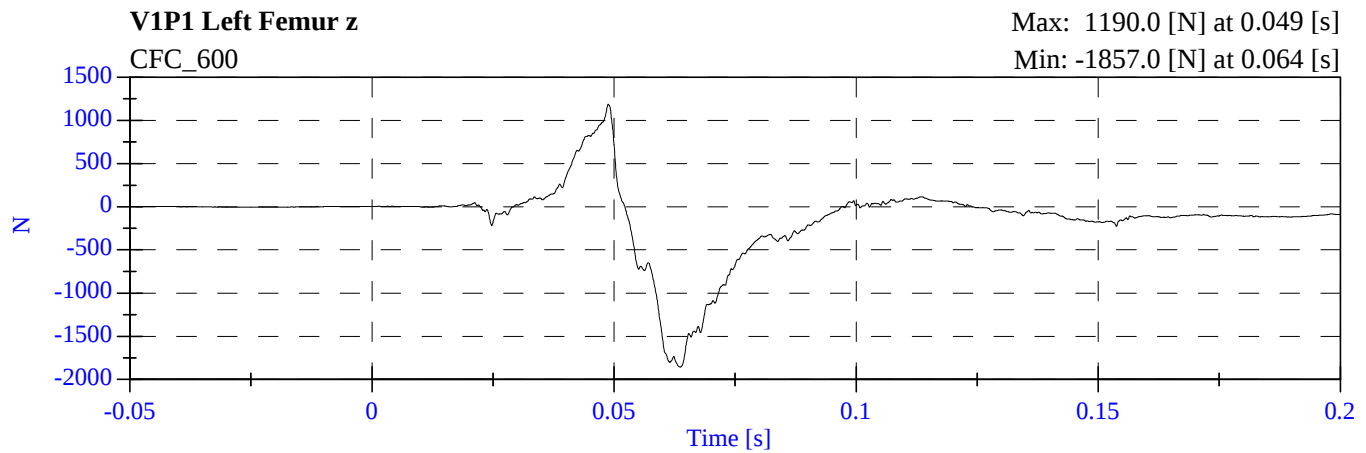
2006 NCAP Test 14 - 2006 Toyota Tacoma M65107 - February 15, 2006



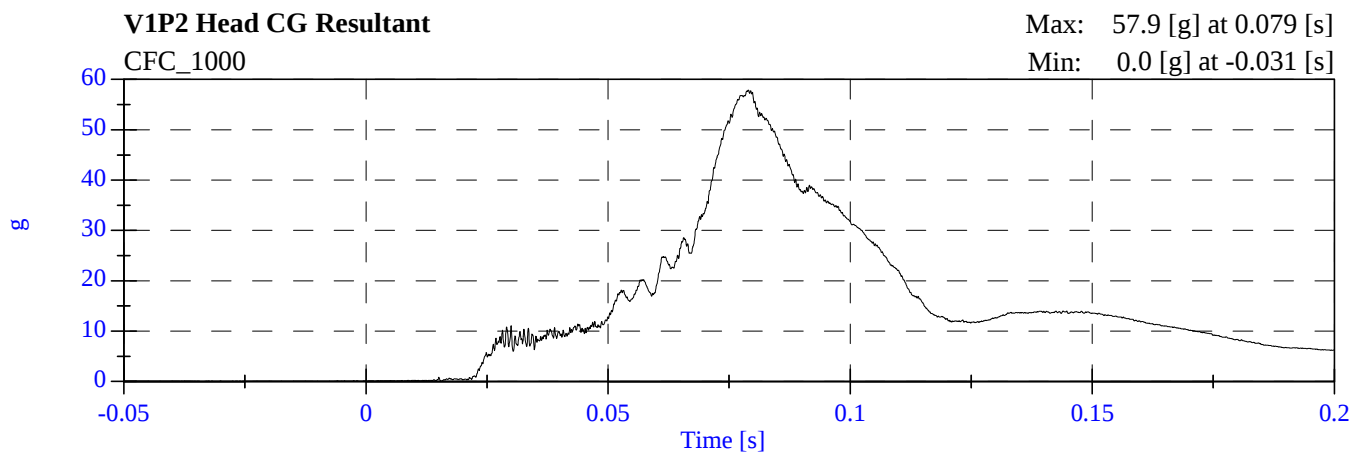
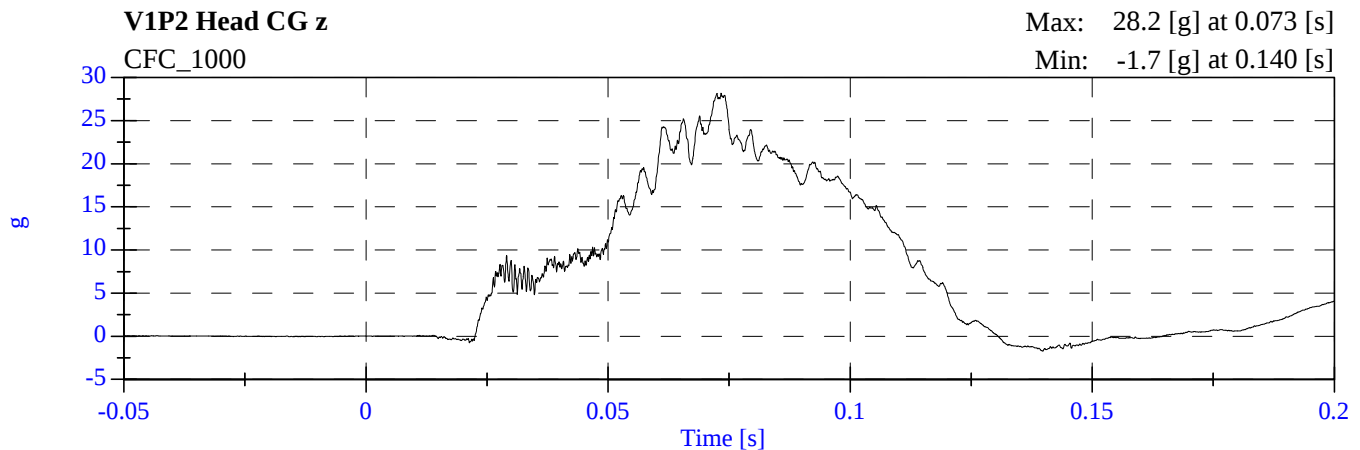
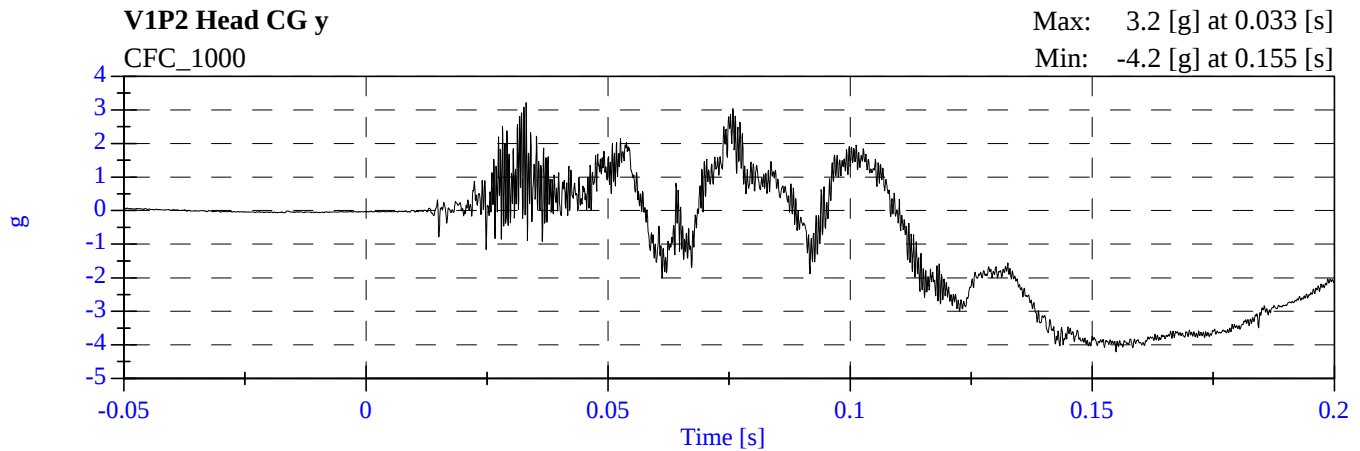
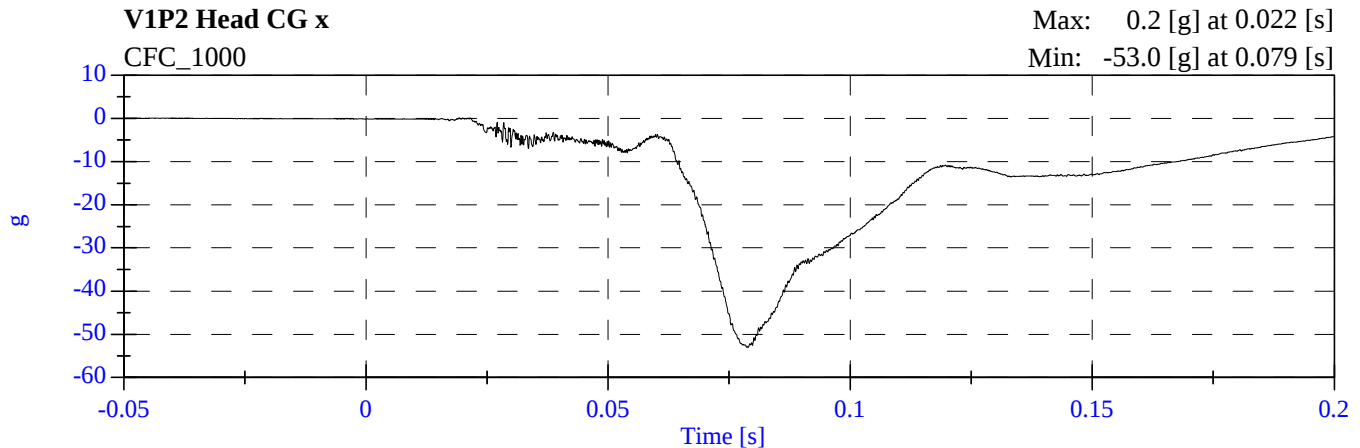
2006 NCAP Test 14 - 2006 Toyota Tacoma M65107 - February 15, 2006



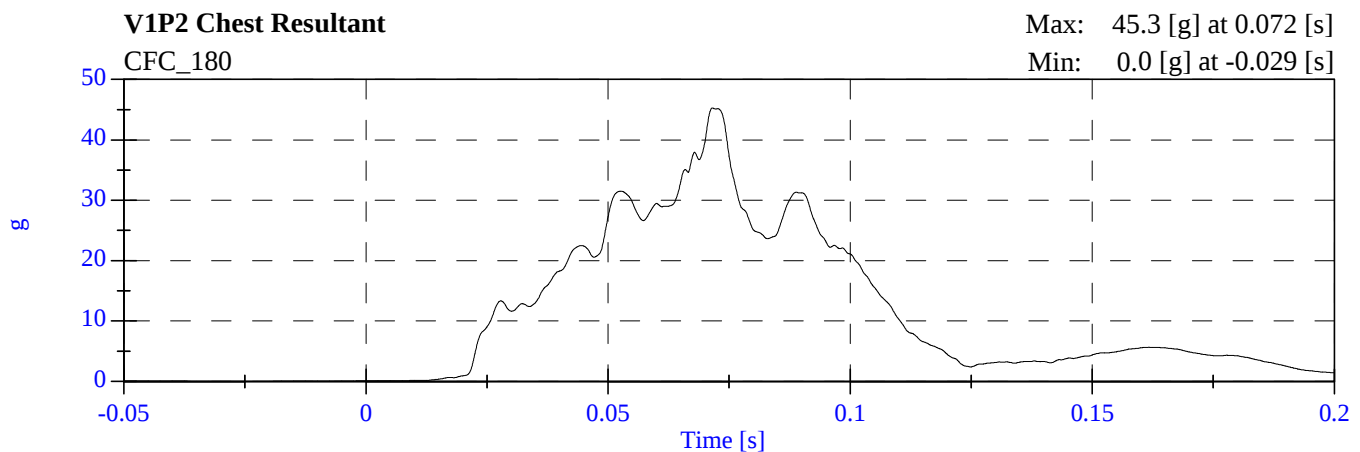
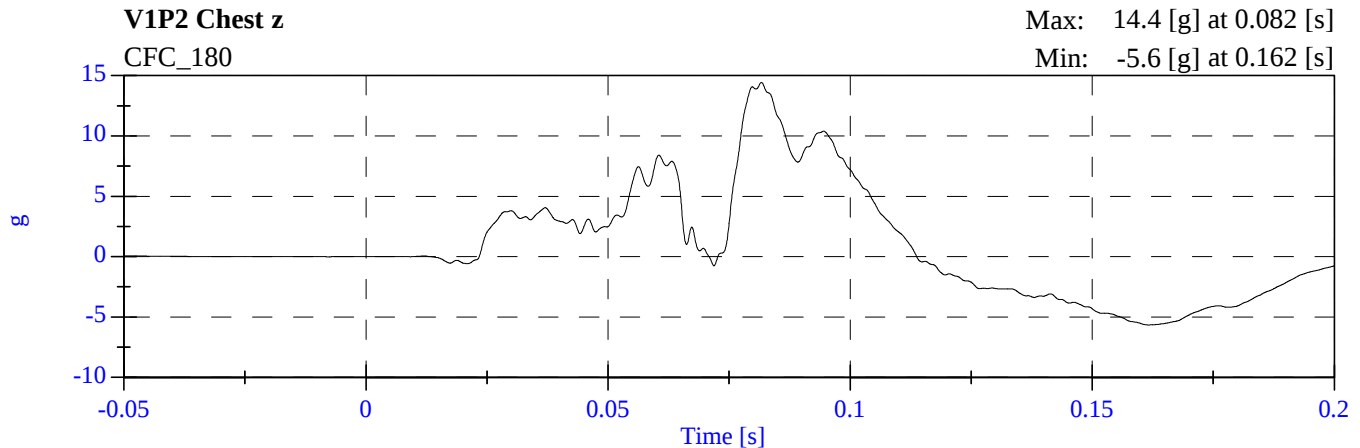
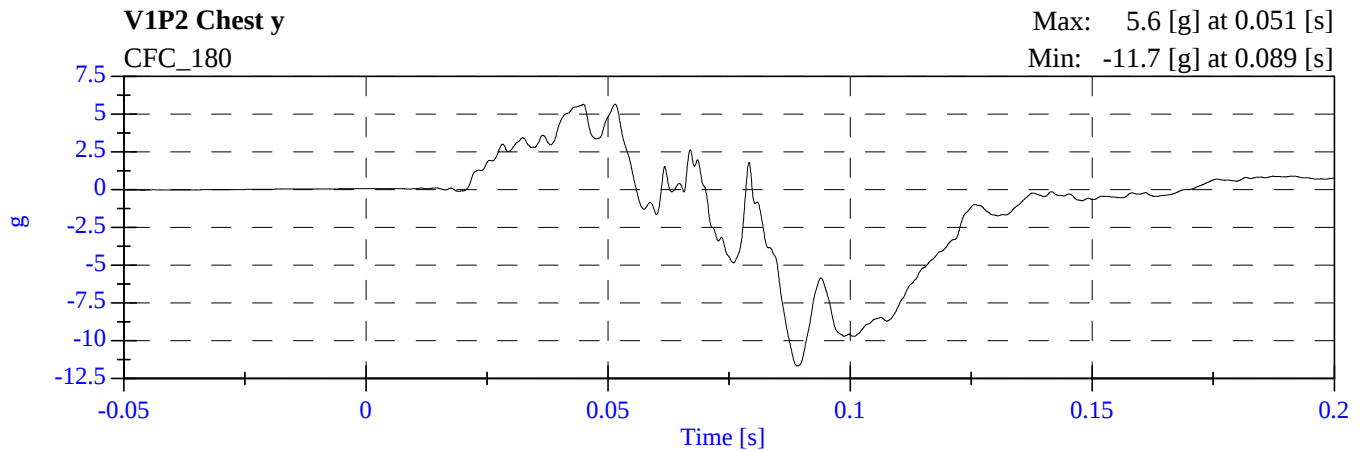
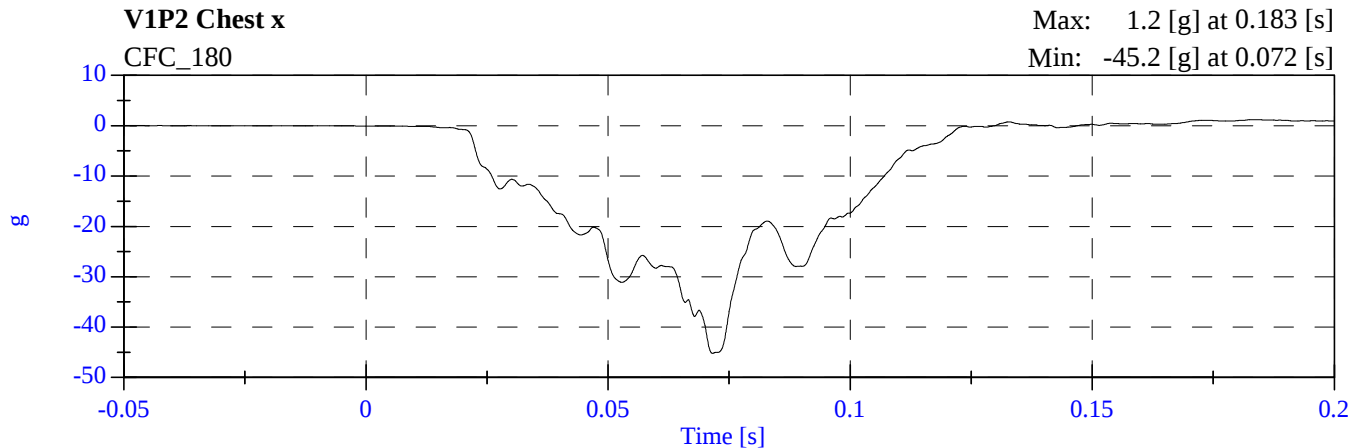
2006 NCAP Test 14 - 2006 Toyota Tacoma M65107 - February 15, 2006



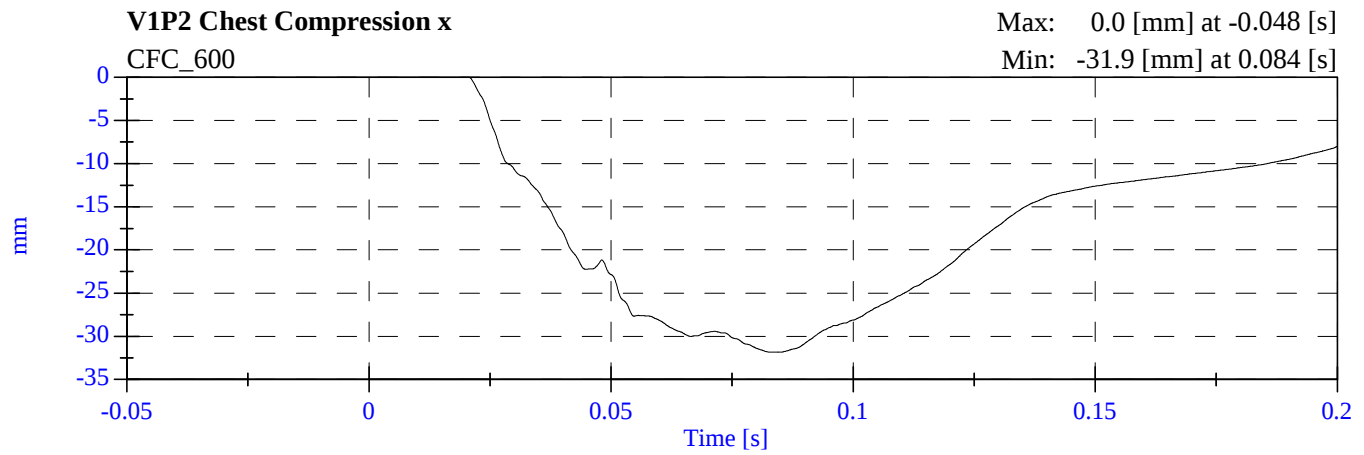
2006 NCAP Test 14 - 2006 Toyota Tacoma M65107 - February 15, 2006



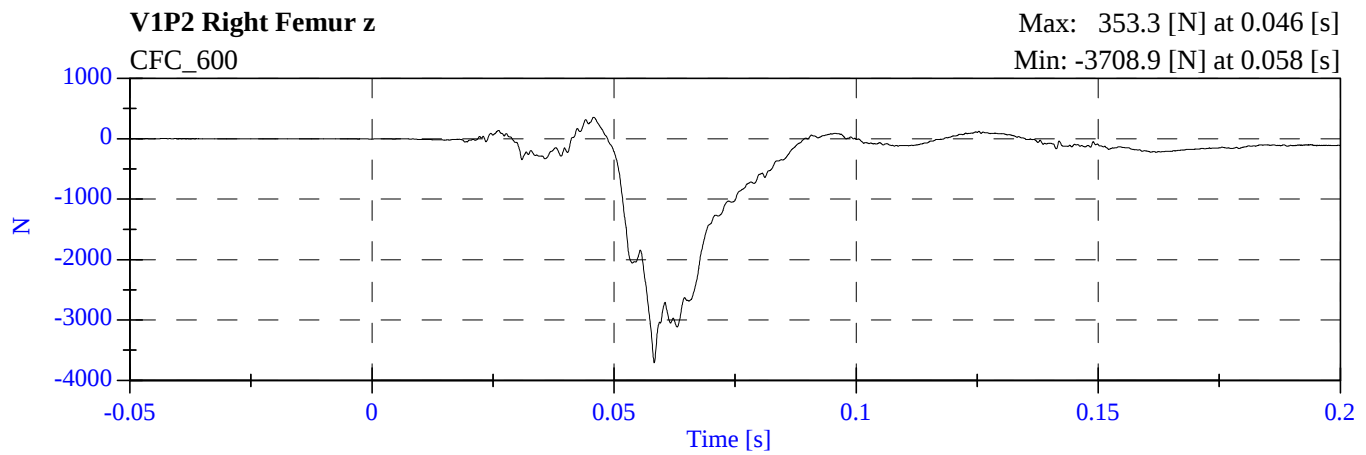
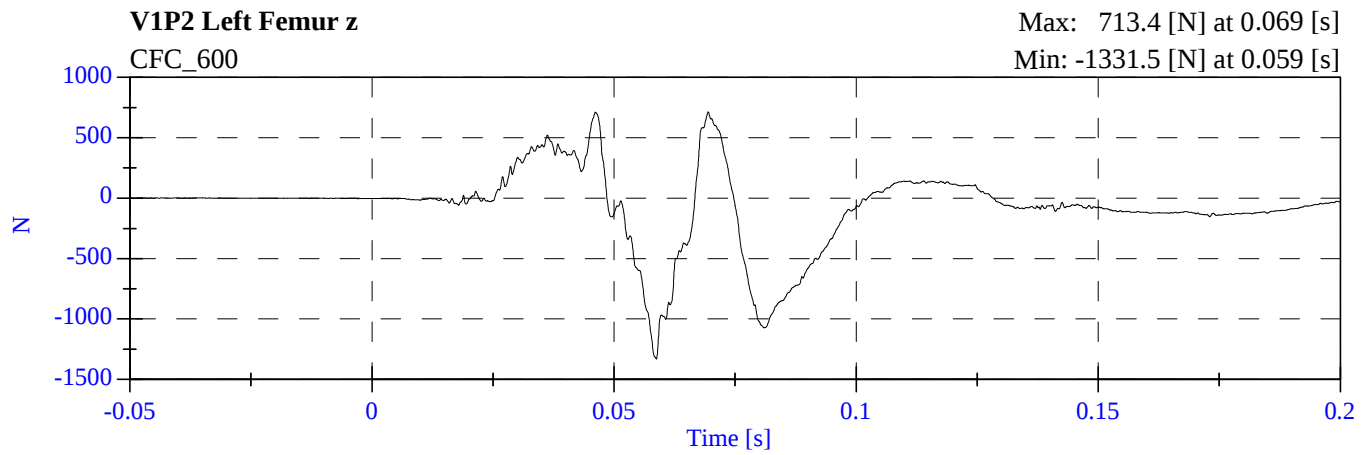
2006 NCAP Test 14 - 2006 Toyota Tacoma M65107 - February 15, 2006



2006 NCAP Test 14 - 2006 Toyota Tacoma M65107 - February 15, 2006



2006 NCAP Test 14 - 2006 Toyota Tacoma M65107 - February 15, 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:

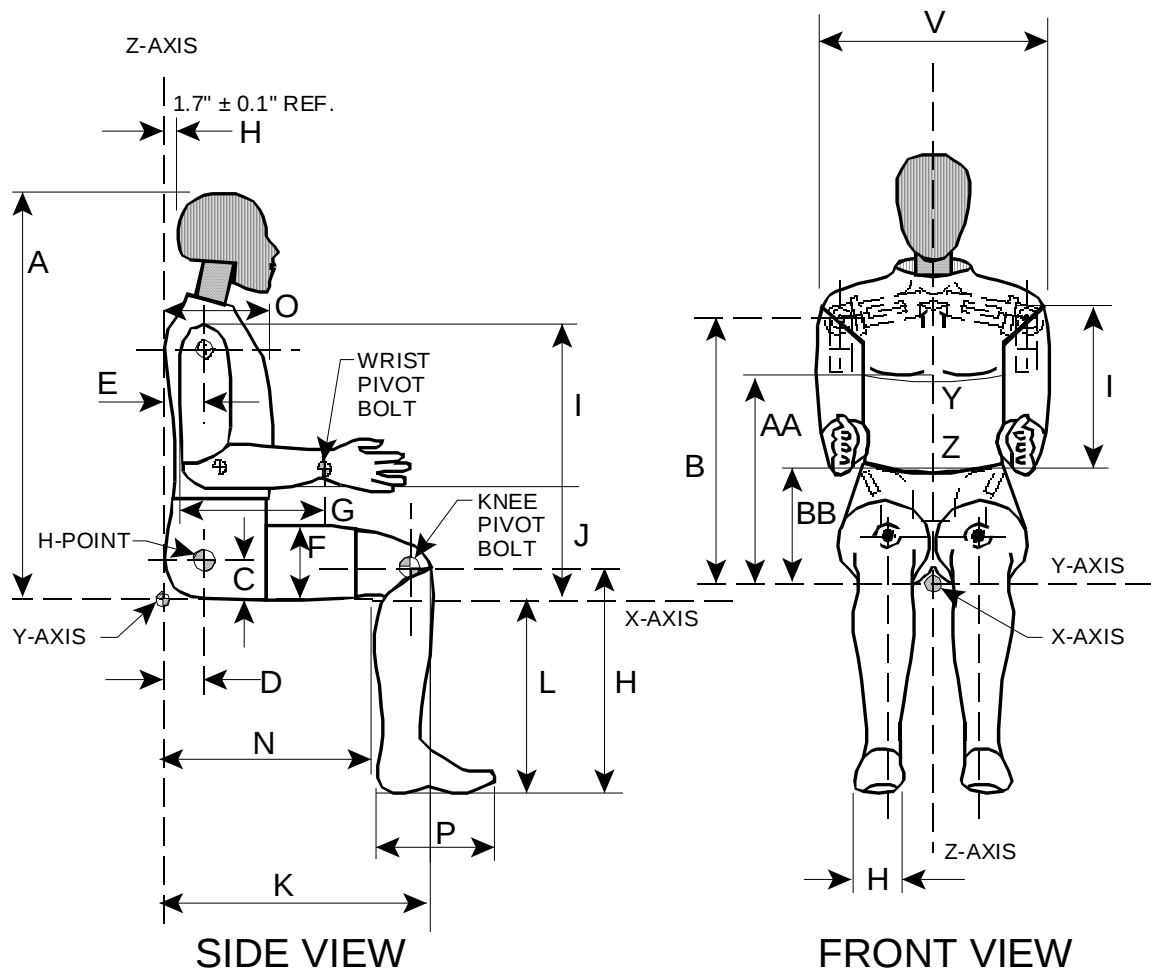
<u>Position No./Location</u>	<u>Serial No.</u>	<u>Completion Date</u>
#1/Driver	064	02/09/2006
#2/Right Front Passenger	061	02/09/2006

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.

DUMMY CONFIGURATION DIMENSIONS

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 064
Sequential Test Number 2
Date 02/03/06
Workfile 064H 02-03-06

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	18.9 – 25.6 Deg C	21.1
Relative Humidity	10% - 70%	33.0
Peak Resultant Acceleration	225-275 G's	256.30
Peak Lateral Acceleration	15 G's Max	9.79
Is Acceleration Curve Unimodal?	YES	YES

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
NECK FLEXION TEST

Dummy Serial Number	064	
Sequential Test Number	2	
Date	02/08/06	6 Axis Neck Transducer
Workfile	064NF 02-08-06	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		20.6 – 22.2 Deg C	21.1
Relative Humidity		10% - 70%	39.0
Impact Velocity		6.89 – 7.13 m/s	6.91
Pendulum Deceleration	10 ms	22.50 - 27.50 G's	23.48
	20 ms	17.60 - 22.60 G's	21.18
	30 ms	12.50 - 18.50 G's	16.16
Max Pendulum G's Above 30 ms		29 G's Max	16.16
Deceleration - Time Curve Decay Time to 5 G's		34 - 42 ms	40.70
D Plane Rotation	Max	64 - 78 Deg	68.01
	Time	57 - 64 ms	58.80
Moment About Occipital Condyle	Max	88.13 – 108.47 N-m	103.05
	Time	47 - 58 ms	54.0
Rotation Angle - Time Curve Decay Time to Zero		113 - 128 ms	115.80
Positive Moment - Time Curve Decay Time to Zero		97 - 107 ms	99.10

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK EXTENSION TEST

Dummy Serial Number	064	
Sequential Test Number	2	
Date	02/07/06	6 Axis Neck Transducer
Workfile	064NE 02-07-06	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		20.6 – 22.2 Deg C	21.1
Relative Humidity		10% - 70%	33.0
Impact Velocity		5.94 – 6.19 m/s	6.00
Pendulum Deceleration	10 ms	17.20 - 21.20 G's	17.27
	20 ms	14.00 - 19.00 G's	17.77
	30 ms	11.00 - 16.00 G's	15.53
Max Pendulum G's Above 30 ms		22 G's Max	15.53
Deceleration - Time Curve Decay Time to 5 G's		38 - 46 ms	45.10
D Plane Rotation	Max	81 - 106 Deg	94.92
	Time	72 - 82 ms	79.00
Moment About Occipital Condyle	Max	-79.99 - -52.88 N-m	-63.66
	Time	65 - 79 ms	74.00
Rotation Angle - Time Curve Decay Time to Zero		147 - 174 ms	160.90
Positive Moment - Time Curve Decay Time to Zero		120 - 148 ms	143.80

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
THORAX IMPACT TEST

Dummy Serial Number 064
Sequential Test Number 2
Date 02/08/06
Workfile 064T 02-08-06

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	20.6 – 22.2 Deg C	21.1
Relative Humidity	10% - 70%	37.0
Pendulum Velocity	6.58 – 6.83 m/s	6.73
Maximum Deflection	63.50 – 72.64 mm	64.77
Maximum Resistive Force	5159.9 – 5893.9 N	5796.9
Internal Hysteresis	69 - 85 %	75.67

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
KNEE IMPACT TEST

Dummy Serial Number 064
Sequential Test Number 2
Date 02/09/06
Workfile 064 LF RF 02-09-06

TEST PARAMETER	SPECIFICATION	TEST RESULTS
LEFT KNEE		
Temperature	18.9 – 25.6 Deg C	21.1
Relative Humidity	10% - 70%	35.0
Probe Velocity	2.07 – 2.13 m/s	2.13
Peak Knee Impact Force	4715.1 – 5782.7 N	5173.7
RIGHT KNEE		
Temperature	18.9 – 25.6 Deg C	21.1
Relative Humidity	10% - 70%	35.0
Probe Velocity	2.07 – 2.13 m/s	2.13
Peak Knee Impact Force	4715.1 – 5782.7 N	4869.7

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
EXTERNAL DIMENSIONS

Dummy Serial Number 064
Sequential Test Number 2
Date 02/09/06

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature			70.00
Relative Humidity			37.00
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	20.4
H-Point Height	C	3.3 - 3.5 in	3.4
H-Point from Backline	D	5.3 - 5.5 in	5.4
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	11.6
Skull Cap to Backline	H	1.6 - 1.8 in	1.7
Shoulder - Elbow Length	I	13.0 - 13.6 in	13.4
Elbow Rest Height	J	7.5 - 8.3 in	8.0
Buttock Knee Length	K	22.8 - 23.8 in	23.6
Popliteal Height	L	16.9 - 17.9 in	17.3
Knee Pivot Height	M	19.1 - 19.7 in	19.4
Buttock Popliteal Length	N	17.8 - 18.8 in	18.4
Chest Depth	O	8.4 - 9.0 in	8.6
Foot Length	P	9.9 - 10.5 in	10.2
Shoulder Breadth	V	16.6 - 17.2 in	16.8
Foot Breadth	W	3.6 - 4.2 in	3.8
Chest Circumference (With Jacket)	Y	38.2 - 39.4 in	39.2
Waist Circumference	Z	32.9 - 34.1 in	34.0

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
HEAD DROP TEST

Dummy Serial Number 061
Sequential Test Number 2
Date 02/03/06
Workfile 061H 02-03-06

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	18.9 – 25.6 Deg C	21.1
Relative Humidity	10% - 70%	33.0
Peak Resultant Acceleration	225-275 G's	230.74
Peak Lateral Acceleration	15 G's Max	3.46
Is Acceleration Curve Unimodal?	YES	YES

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
NECK FLEXION TEST

Dummy Serial Number	061	
Sequential Test Number	2	
Date	02/07/06	6 Axis Neck Transducer
Workfile	061NF1 02-07-06	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		20.6 – 22.2 Deg C	21.11
Relative Humidity		10% - 70%	33.0
Impact Velocity		6.89 – 7.13 m/s	6.99
Pendulum Deceleration	10 ms	22.50 - 27.50 G's	22.85
	20 ms	17.60 - 22.60 G's	22.30
	30 ms	12.50 - 18.50 G's	15.37
Max Pendulum G's Above 30 ms		29 G's Max	15.37
Deceleration - Time Curve Decay Time to 5 G's		34 - 42 ms	39.00
D Plane Rotation	Max	64 - 78 Deg	67.29
	Time	57 - 64 ms	57.20
Moment About Occipital Condyle	Max	88.13 – 108.47 N-m	96.51
	Time	47 - 58 ms	52.40
Rotation Angle - Time Curve Decay Time to Zero		113 - 128 ms	114.70
Positive Moment - Time Curve Decay Time to Zero		97 - 107 ms	97.00

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
NECK EXTENSION TEST

Dummy Serial Number	061	
Sequential Test Number	2	
Date	02/07/06	6 Axis Neck Transducer
Workfile	061NE1 02-07-06	

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature		20.6 – 22.2 Deg C	21.1
Relative Humidity		10% - 70%	33.0
Impact Velocity		5.94 – 6.19 m/s	6.07
Pendulum Deceleration	10 ms	17.20 - 21.20 G's	17.43
	20 ms	14.00 - 19.00 G's	17.33
	30 ms	11.00 - 16.00 G's	14.07
Max Pendulum G's Above 30 ms		22 G's Max	14.07
Deceleration - Time Curve Decay Time to 5 G's		38 - 46 ms	46.0
D Plane Rotation	Max	81 - 106 Deg	91.82
	Time	72 - 82 ms	76.60
Moment About Occipital Condyle	Max	-79.99 - -52.88 N-m	-67.49
	Time	65 - 79 ms	71.90
Rotation Angle - Time Curve Decay Time to Zero		147 - 174 ms	155.10
Positive Moment - Time Curve Decay Time to Zero		120 - 148 ms	136.20

Remarks:

Laboratory Technician: B. Swiecicki

PART 572E
THORAX IMPACT TEST

Dummy Serial Number 061
Sequential Test Number 2
Date 02/08/06
Workfile 061T 02-08-06

TEST PARAMETER	SPECIFICATION	TEST RESULTS
Temperature	20.6 – 22.2 Deg C	21.1
Relative Humidity	10% - 70%	39.0
Pendulum Velocity	6.58 – 6.83 m/s	6.74
Maximum Deflection	63.50 – 72.64 mm	65.02
Maximum Resistive Force	5159.9 – 5893.9 N	5763.0
Internal Hysteresis	69 - 85 %	76.20

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
KNEE IMPACT TEST

Dummy Serial Number 061
Sequential Test Number 2
Date 02/09/06
Workfile 061LF 02-09-06 / 061RF 02-09-06

TEST PARAMETER	SPECIFICATION	TEST RESULTS
LEFT KNEE		
Temperature	18.9 – 25.6 Deg C	21.1
Relative Humidity	10% - 70%	35.0
Probe Velocity	2.07 – 2.13 m/s	2.13
Peak Knee Impact Force	4715.1 – 5782.7 N	4744.1
RIGHT KNEE		
Temperature	18.9 – 25.6 Deg C	21.1
Relative Humidity	10% - 70%	35.0
Probe Velocity	2.07 – 2.13 m/s	2.13
Peak Knee Impact Force	4715.1 – 5782.7 N	5114.0

Remarks:

Laboratory Technician:

B. Swiecicki

PART 572E
EXTERNAL DIMENSIONS

Dummy Serial Number 061
Sequential Test Number 2
Date 02/09/06

TEST PARAMETER		SPECIFICATION	TEST RESULTS
Temperature			70.00
Relative Humidity			37.00
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	20.1
H-Point Height	C	3.3 - 3.5 in	3.4
H-Point from Backline	D	5.3 - 5.5 in	5.4
Shoulder Pivot from Backline	E	3.3 - 3.7 in	3.5
Thigh Clearance	F	5.5 - 6.1 in	6.0
Back of Elbow to Wrist Pivot	G	11.4 - 12.0 in	11.6
Skull Cap to Backline	H	1.6 - 1.8 in	1.7
Shoulder - Elbow Length	I	13.0 - 13.6 in	13.4
Elbow Rest Height	J	7.5 - 8.3 in	7.8
Buttock Knee Length	K	22.8 - 23.8 in	23.6
Popliteal Height	L	16.9 - 17.9 in	17.7
Knee Pivot Height	M	19.1 - 19.7 in	19.4
Buttock Popliteal Length	N	17.8 - 18.8 in	18.4
Chest Depth	O	8.4 - 9.0 in	8.4
Foot Length	P	9.9 - 10.5 in	10.1
Shoulder Breadth	V	16.6 - 17.2 in	16.8
Foot Breadth	W	3.6 - 4.2 in	3.8
Chest Circumference (With Jacket)	Y	38.2 - 39.4 in	39.2
Waist Circumference	Z	32.9 - 34.1 in	33.6

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 064)		Manufacturer	Serial #	Calibration	
				Last	Next
Head 9 Array	X Arm Y	ENDEVCO	AC-P18785	22-Dec-05	22-Jun-06
	X Arm Z	ENDEVCO	AC-P32218	22-Dec-05	22-Jun-06
	Y Arm X	ENDEVCO	AC-P23926	22-Dec-05	22-Jun-06
	Y Arm Z	ENDEVCO	AC-P17563	22-Dec-05	22-Jun-06
	Z Arm X	ENDEVCO	AC-P18948	22-Dec-05	22-Jun-06
	Z Arm Y	ENDEVCO	AC-P14965	22-Dec-05	22-Jun-06
	Z Arm Z	ENDEVCO	AC-P17563	22-Dec-05	22-Jun-06
Head	X	ENDEVCO	AC-P39736	22-Dec-05	22-Jun-06
	Y	ENDEVCO	AC-P35811	22-Dec-05	22-Jun-06
	Z	ENDEVCO	AC-P39729	22-Dec-05	22-Jun-06
Head	X (R)	ENDEVCO	AC-P35788	22-Dec-05	22-Jun-06
	Y (R)	ENDEVCO	AC-P35761	22-Dec-05	22-Jun-06
	Z (R)	ENDEVCO	AC-P35764	22-Dec-05	22-Jun-06
Neck Load Cell	X	DENTON	LC-441FX	27-Jun-05	26-Dec-05
	Y	DENTON	LC-441FY	27-Jun-05	26-Dec-05
	Z	DENTON	LC-441FZ	27-Jun-05	26-Dec-05
Neck Moment	X	DENTON	LC-441MX	27-Jun-05	26-Dec-05
	Y	DENTON	LC-441MY	27-Jun-05	26-Dec-05
	Z	DENTON	LC-441MZ	27-Jun-05	26-Dec-05
Chest	X	ENDEVCO	AC-P16863	23-Dec-05	23-Jun-06
	Y	ENDEVCO	AC-P17285	23-Dec-05	23-Jun-06
	Z	ENDEVCO	AC-P14393	3-Jan-06	4-Jul-06
Chest	X (R)	ENDEVCO	AC-P23640	23-Dec-05	23-Jun-06
	Y (R)	ENDEVCO	AC-P17283	23-Dec-05	23-Jun-06
	Z (R)	ENDEVCO	AC-P17235	3-Jan-06	4-Jul-06
Chest Deflection	X	SERVO	DS-064	29-Jun-05	28-Dec-05
Pelvic	X	ENDEVCO	AC-P35790	23-Dec-05	23-Jun-06
	Y	ENDEVCO	AC-P35817	23-Dec-05	23-Jun-06
	Z	ENDEVCO	AC-P39574	23-Dec-05	23-Jun-06

INSTRUMENT CALIBRATION FOR DRIVER DUMMY
(Six Month Calibration Minimum)

DRIVER DUMMY (S/N 064)		Manufacturer	Serial #	Calibration	
				Last	Next
Left Femur Load Cell	Fz	DENTON	LC-255	9-Aug-05	7-Feb-06
Right Femur Load Cell	Fz	GSE	LC-756	9-Aug-05	7-Feb-06
Left Upper Tibia	Mx	DENTON	LC-108MX	20-Jun-05	19-Dec-05
	My	DENTON	LC-108MY	20-Jun-05	19-Dec-05
Left Lower Tibia	Fz	DENTON	LC-113FZ	20-Jun-05	19-Dec-05
	Mx	DENTON	LC-113MX	20-Jun-05	19-Dec-05
	My	DENTON	LC-113MY	20-Jun-05	19-Dec-05
Right Upper Tibia	Mx	DENTON	LC-103MX	22-Jun-05	21-Dec-05
	My	DENTON	LC-103MY	22-Jun-05	21-Dec-05
Right Lower Tibia	Fz	DENTON	LC-133FZ	22-Jun-05	21-Dec-05
	Mx	DENTON	LC-133MX	22-Jun-05	21-Dec-05
	My	DENTON	LC-133MY	22-Jun-05	21-Dec-05
Left Foot Rear	X	ENDEVCO	AC-J31412	3-Jan-06	4-Jul-06
	Z	ENDEVCO	AC-P15951	3-Jan-06	4-Jul-06
Left Foot Front	Z	ENDEVCO	AC-P12566	3-Jan-06	4-Jul-06
Right Foot Rear	X	ENDEVCO	AC-FG97J	3-Jan-06	4-Jul-06
	Z	ENDEVCO	AC-J23941	3-Jan-06	4-Jul-06
Right Foot Front	Z	ENDEVCO	AC-J28727	3-Jan-06	4-Jul-06
Lap Belt Load Cell		FIRST TECHNOLOGY	LC-159	1-Oct-05	1-Apr-06
Shoulder Belt Load Cell		FIRST TECHNOLOGY	LC-168	1-Oct-05	1-Apr-06

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY
(Six Month Calibration Minimum)

PASSENGER DUMMY (S/N 061)		Manufacturer	Serial #	Calibration	
				Last	Next
Head 9 Array	X Arm Y	ENDEVCO	AC-P16832	4-Jan-06	5-Jul-06
	X Arm Z	ENDEVCO	AC-P16286	4-Jan-06	5-Jul-06
	Y Arm X	ENDEVCO	AC-P16591	4-Jan-06	5-Jul-06
	Y Arm Z	ENDEVCO	AC-P17141	4-Jan-06	5-Jul-06
	Z Arm X	ENDEVCO	AC-P17242	4-Jan-06	5-Jul-06
	Z Arm Y	ENDEVCO	AC-P35789	20-Dec-05	20-Jun-06
Head	X	ENDEVCO	AC-P39575	4-Jan-06	5-Jul-06
	Y	ENDEVCO	AC-P35758	4-Jan-06	5-Jul-06
	Z	ENDEVCO	AC-P39743	4-Jan-06	5-Jul-06
Head	X (R)	ENDEVCO	AC-P35803	4-Jan-06	5-Jul-06
	Y (R)	ENDEVCO	AC-P35804	4-Jan-06	5-Jul-06
	Z (R)	ENDEVCO	AC-P35818	4-Jan-06	5-Jul-06
Neck Load Cell	X	DENTON	LC-280FX	14-Jul-05	12-Jan-06
	Y	DENTON	LC-280FY	14-Jul-05	12-Jan-06
	Z	DENTON	LC-280FZ	14-Jul-05	12-Jan-06
Neck Moment	X	DENTON	LC-280MX	14-Jul-05	12-Jan-06
	Y	DENTON	LC-280MY	14-Jul-05	12-Jan-06
	Z	DENTON	LC-280MZ	14-Jul-05	12-Jan-06
Chest	X	ENDEVCO	AC-P23303	4-Jan-06	5-Jul-06
	Y	ENDEVCO	AC-P15526	4-Jan-06	5-Jul-06
	Z	ENDEVCO	AC-P19255	4-Jan-06	5-Jul-06
Chest	X (R)	ENDEVCO	AC-P16576	4-Jan-06	5-Jul-06
	Y (R)	ENDEVCO	AC-P15534	4-Jan-06	5-Jul-06
	Z (R)	ENDEVCO	AC-P19216	4-Jan-06	5-Jul-06
Chest Deflection	X	SERVO	DS-061	30-Jun-05	29-Dec-05
Pelvic	X	ENDEVCO	AC-P23993	4-Jan-06	5-Jul-06
	Y	ENDEVCO	AC-P23939	4-Jan-06	5-Jul-06
	Z	ENDEVCO	AC-P23999	4-Jan-06	5-Jul-06

INSTRUMENT CALIBRATION FOR PASSENGER DUMMY
(Six Month Calibration Minimum)

PASSENGER DUMMY (S/N 061)		Manufacturer	Serial #	Calibration	
				Last	Next
Left Femur Load Cell	Fz	GSE	LC-558	9-Aug-05	7-Feb-06
Right Femur Load Cell	Fz	DENTON	LC-560	9-Aug-05	7-Feb-06
Left Upper Tibia	Mx	DENTON	LC-274MX	28-Jun-05	27-Dec-05
	My	DENTON	LC-274MY	28-Jun-05	27-Dec-05
Left Lower Tibia	Fz	DENTON	LC-185FZ	28-Jun-05	27-Dec-05
	Mx	DENTON	LC-185MX	28-Jun-05	27-Dec-05
	My	DENTON	LC-185MY	28-Jun-05	27-Dec-05
Right Upper Tibia	Mx	DENTON	LC-200MX	28-Jun-05	27-Dec-05
	My	DENTON	LC-200MY	28-Jun-05	27-Dec-05
Right Lower Tibia	Fz	DENTON	LC-128FZ	29-Jun-05	28-Dec-05
	Mx	DENTON	LC-128MX	29-Jun-05	28-Dec-05
	My	DENTON	LC-128MY	29-Jun-05	28-Dec-05
Left Foot Rear	X	ENDEVCO	AC-P16225	4-Jan-06	5-Jul-06
	Z	ENDEVCO	AC-P15638	4-Jan-06	5-Jul-06
Left Foot Front	Z	ENDEVCO	AC-P16517	4-Jan-06	5-Jul-06
Right Foot Rear	X	ENTRAN	AC-03E03E21-M20	5-Jan-06	6-Jul-06
	Z	ENDEVCO	AC-AGAC4	4-Jan-06	5-Jul-06
Right Foot Front	Z	ENDEVCO	AC-J23946	4-Jan-06	5-Jul-06
Lap Belt Load Cell		FIRST TECHNOLOGY	LC-173	1-Oct-05	1-Apr-06
Shoulder Belt Load Cell		FIRST TECHNOLOGY	LC-178	1-Oct-05	1-Apr-06
Belt Stretch Transducer					

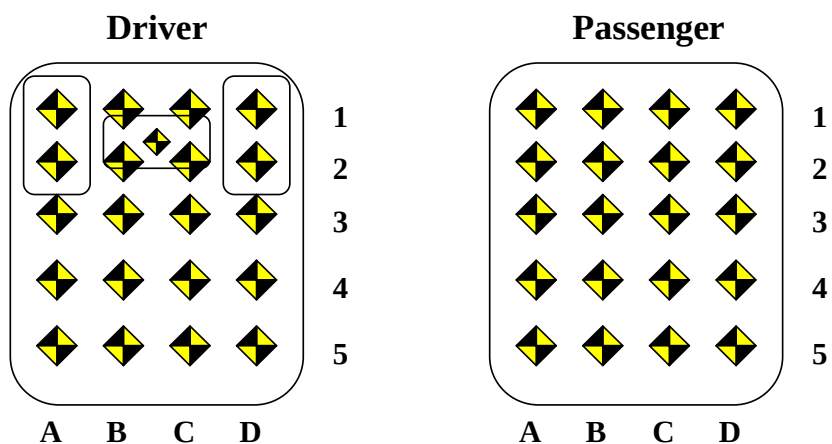
INSTRUMENT CALIBRATION FOR VEHICLE ACCELEROMETERS
(Six Month Calibration Minimum)

	Manufacturer	Serial #	Calibration	
			Last	Next
Left Seat Rear Crossmember X	ICS	AC-FGP19	17-Oct-05	17-Apr-06
Right Rear Seat Crossmember X	GS SENSORS	AC-9440-046	17-Oct-05	17-Apr-06
Top of Engine	GS SENSORS	AC-9440-029	8-Feb-06	9-Aug-06
Bottom of Engine	ICS	AC-9026-042	13-Oct-05	13-Apr-06
Right Disc Brake Caliper	GS SENSORS	AC-9440-045	17-Oct-05	17-Apr-06
Instrument Panel	-	-	-	-
Left Disc Brake Caliper	ICS	AC-FGP26	17-Oct-05	17-Apr-06
Left Seat Rear Crossmember Z	ICS	AC-FGP29	17-Oct-05	17-Apr-06
Right Seat Rear Crossmember Z	GS SENSORS	AC-9440-023	17-Oct-05	17-Apr-06

APPENDIX E

VEHICLE INTERIOR INTRUSION MEASUREMENTS

DRIVER SIDE INTRUSION MEASUREMENTS



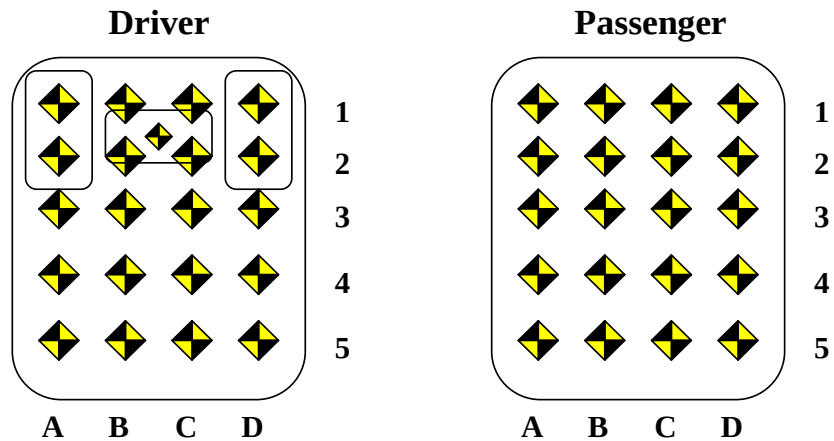
Driver Side Intrusion Measurements

Intrusion Location	PRE-TEST (mm)			POST-TEST (mm)			CHANGE (mm)		
	X	Y	Z	X	Y	Z	X	Y	Z
A1	3973	-617	-711	4000	-596	-716	-27	-21	5
B1	4078	-476	-710	4050	-455	-718	28	-21	8
C1	4078	-341	-713	4022	-326	-730	56	-15	17
D1	4035	-212	-713	3983	-211	-717	52	-1	4
A2	3901	-615	-599	3896	-609	-593	5	-6	-6
B2	3929	-477	-620	3919	-470	-602	10	-7	-18
C2	3929	-343	-624	3900	-341	-624	29	-2	0
D2	3908	-211	-629	3863	-214	-632	45	3	3
A3	3766	-616	-561	3759	-612	-555	7	-4	-6
B3	3763	-481	-563	3758	-480	-549	5	-1	-14
C3	3763	-347	-565	3745	-351	-555	18	4	-10
D3	3762	-214	-581	3742	-218	-570	20	4	-11
A4	3712	-616	-556	3705	-612	-549	7	-4	-7
B4	3710	-484	-558	3703	-481	-551	7	-3	-7
C4	3711	-348	-562	3694	-354	-552	17	6	-10
D4	3712	-215	-580	3694	-219	-572	18	4	-8
A5	3660	-617	-558	3654	-614	-552	6	-3	-6
B5	3659	-485	-558	3653	-481	-552	6	-4	-6
C5	3660	-349	-561	3646	-355	-553	14	6	-8
D5	3660	-214	-580	3645	-217	-574	15	3	-6
BP	3913	-358	-746	3929	-351	-714	-16	-7	-32
G	3627	-534	-989	3624	-533	-991	3	-1	2
H	3613	-233	-985	3608	-233	-992	5	0	7
L	3412	-378	-1204	3423	-377	-1166	-11	-1	-38
AB	3365	-601	-615	3361	-598	-610	4	-3	-5

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	4003	241	-717	3975	247	-737	28	-6	20
B1	4041	377	-719	4026	370	-730	15	7	11
C1	4056	511	-718	4052	498	-725	4	13	7
D1	4017	644	-720	4013	632	-723	4	12	3
A2	3899	246	-628	3892	241	-631	7	5	3
B2	3920	377	-623	3914	367	-632	6	10	9
C2	3925	508	-623	3925	500	-620	0	8	-3
D2	3923	644	-600	3927	637	-597	-4	7	-3
A3	3767	244	-575	3764	239	-566	3	5	-9
B3	3767	374	-568	3767	368	-560	0	6	-8
C3	3768	506	-568	3769	502	-559	-1	4	-9
D3	3769	642	-565	3772	637	-559	-3	5	-6
A4	3715	240	-584	3714	234	-575	1	6	-9
B4	3715	373	-563	3714	369	-554	1	4	-9
C4	3714	506	-561	3716	500	-553	-2	6	-8
D4	3715	641	-561	3718	637	-554	-3	4	-7
A5	3666	238	-587	3665	231	-580	1	7	-7
B5	3664	370	-562	3665	365	-552	-1	5	-10
C5	3662	506	-560	3664	499	-552	-2	7	-8
D5	3660	641	-562	3663	636	-557	-3	5	-5
R	3582	226	-1010	3577	226	-1024	5	0	14
S	3605	522	-1006	3603	521	-1026	2	1	20
AB	3366	605	-620	3363	602	-616	3	3	-4

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

AB = Front outboard seat anchor bolt