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Individual Vehicle dimensions were obtained through the use of the Expert AutoStats(R) program.

The Expert AutoStats(R) program contains a multitude of vehicle dimensions and specifications on over 42,000 different vehicles and 203 different manufacturers spanning more than 50 years.

While every attempt has been made to ensure accurate data, these dimensions are meant to be used as first approximations. Some measurements are dependant on such factors as tire and rim sizes, tire inflation pressure and wear, suspension system condition, bumper type and style, and other manufacturing variations from vehicle to vehicle.

Whenever feasible, the vehicle in question or an exemplar vehicle should be measured to verify data important to your case.

Individual Vehicle Data Search Service (R)

Provided by:

4N6XPRT SYSTEMS (R)

Forensic Expert Software

La Mesa, CA 91942-9342

(619) 464-3478 / (800) 266-9778 / FAX: (619) 464-2206

Through the use of

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Expert VIN DeCoder®

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Version Number 3.2.0

DeCoded VIN: **1G2ZG558964180955**

Model: **2006 Pontiac G6 SE1 4 Door Sedan**

Engine Size: **3.5 L/ 214 cu.in.**

Engine Description: **V6 Cylinder with Dual Overhead Cam**

Horse Power: **215 @ 5600 rpm**

Torque: **230 lb-ft at 4000 rpm**

Injection System: **Sequential Fuel Injection (SFI)**

PSI: **N/A** Ignition: **Electronic**

Manufacturer: **Chevrolet**

Assembly Plant: **Orion, MI**

Drive wheels: **This is a Front Wheel Drive vehicle w/ Manual Belts w/Driver & Passenger and Side Air Bags**

The First through Third characters (1G2) indicate a Pontiac Car made in the U.S.A.

The Fourth and Fifth characters (ZG) indicate a G6 SE1

The Sixth character (5) indicate a 4 Door Sedan

The Seventh character (5) indicate Manual Belts w/Driver & Passenger and Side Air Bags

The Eighth character (8) indicate the OEM engine: 3.5 L/ 214 cu.in., V6, DOHC

The Ninth character (the check digit) is entered as 9.

The VIN appears valid, the calculated value is 9.

The Tenth character (6) indicate the model year 2006

The Eleventh character (4) indicate the vehicle was made in the assembly plant in Orion, MI

The Twelfth through Seventeenth characters (180955) indicate the Serial Number and are unique to this vehicle.

JEREMY S DAILY PHD PE

TUCRRC

800 TUCKER DRIVE

TULSA OK 74104-9700

3/22/2013

**2006 PONTIAC G6 4 DOOR SEDAN**

Curb Weight:  lbs.  kg.  
 Curb Weight Distribution - Front:  % Rear:  %  
 Gross Vehicle Weight Rating:  lbs.  kg.  
 Number of Tires on Vehicle:   
 Drive wheels:

**Horizontal Dimensions**

	Inches	Feet	Meters
Total Length	<input type="text" value="189"/>	<input type="text" value="15.75"/>	<input type="text" value="4.80"/>
wheelbase:	<input type="text" value="112"/>	<input type="text" value="9.33"/>	<input type="text" value="2.84"/>
Front Bumper to Front Axle:	<input type="text" value="40"/>	<input type="text" value="3.33"/>	<input type="text" value="1.02"/>
Front Bumper to Front of Front Well:	<input type="text" value="25"/>	<input type="text" value="2.08"/>	<input type="text" value="0.64"/>
Front Bumper to Front of Hood:	<input type="text" value="8"/>	<input type="text" value="0.67"/>	<input type="text" value="0.20"/>
Front Bumper to Base of windshield:	<input type="text" value="47"/>	<input type="text" value="3.92"/>	<input type="text" value="1.19"/>
Front Bumper to Top of windshield:	<input type="text" value="81"/>	<input type="text" value="6.75"/>	<input type="text" value="2.06"/>
Rear Bumper to Rear Axle:	<input type="text" value="37"/>	<input type="text" value="3.08"/>	<input type="text" value="0.94"/>
Rear Bumper to Rear of Rear Well:	<input type="text" value="23"/>	<input type="text" value="1.92"/>	<input type="text" value="0.58"/>
Rear Bumper to Rear of Trunk:	<input type="text" value="7"/>	<input type="text" value="0.58"/>	<input type="text" value="0.18"/>
Rear Bumper to Base of Rear Window:	<input type="text" value="22"/>	<input type="text" value="1.83"/>	<input type="text" value="0.56"/>

**Width Dimensions**

Maximum width:	<input type="text" value="71"/>	<input type="text" value="5.92"/>	<input type="text" value="1.80"/>
Front Track:	<input type="text" value="60"/>	<input type="text" value="5.00"/>	<input type="text" value="1.52"/>
Rear Track:	<input type="text" value="60"/>	<input type="text" value="5.00"/>	<input type="text" value="1.52"/>

**Vertical Dimensions**

Height:	<input type="text" value="57"/>	<input type="text" value="4.75"/>	<input type="text" value="1.45"/>
Ground to -			
Front Bumper (Top)	<input type="text" value="21"/>	<input type="text" value="1.75"/>	<input type="text" value="0.53"/>
Headlight - center	<input type="text" value="27"/>	<input type="text" value="2.25"/>	<input type="text" value="0.69"/>
Hood - top front:	<input type="text" value="30"/>	<input type="text" value="2.50"/>	<input type="text" value="0.76"/>
Base of Windshield	<input type="text" value="37"/>	<input type="text" value="3.08"/>	<input type="text" value="0.94"/>
Rear Bumper - top:	<input type="text" value="28"/>	<input type="text" value="2.33"/>	<input type="text" value="0.71"/>
Trunk - top rear:	<input type="text" value="43"/>	<input type="text" value="3.58"/>	<input type="text" value="1.09"/>
Base of Rear Window:	<input type="text" value="44"/>	<input type="text" value="3.67"/>	<input type="text" value="1.12"/>

## 2006 PONTIAC G6 4 DOOR SEDAN

## Interior Dimensions

	Inches	Feet	Meters
Front Seat Shoulder width	55	4.58	1.40
Front Seat to Headliner	34	2.83	0.86
Front Leg Room - seatback to floor (max)	42	3.50	1.07
Rear Seat Shoulder width	52	4.33	1.32
Rear Seat to Headliner	34	2.83	0.86
Front Leg Room - seatback to floor (min)	31	2.58	0.79
Seatbelts:	3pt - front and rear		
Airbags:	FRONT SEAT AIRBAGS + OPTIONAL SIDE AIRBAGS		

## Steering Data

Turning Circle (Diameter)	468	39.00	11.89
Steering Ratio:	16.20:1		
Wheel Radius:	12	1.00	0.30
Tire Size (OEM):	P215/60R16		

## Acceleration &amp; Braking Information

Brake Type:	ALL DISC
ABS System:	ALL WHEEL ABS - OPTIONAL

Braking, 60 mph to 0 (Hard pedal, no skid, dry pavement):

$$d = 146.0 \text{ ft} \quad t = 3.3 \text{ sec} \quad a = -26.5 \text{ ft/sec}^2 \quad G\text{-force} = -0.82$$

Acceleration:

0 to 30mph	t = 2.8 sec	a = 15.7 ft/sec <sup>2</sup>	G-force = 0.49
0 to 60mph	t = 6.2 sec	a = 14.2 ft/sec <sup>2</sup>	G-force = 0.44
45 to 65mph	t = 5.3 sec	a = 5.5 ft/sec <sup>2</sup>	G-force = 0.17

Transmission Type: 4spd AUTOMATIC

Notes:

Federal Bumper Standard Requirements: 2.5 mph  
 This vehicles Rated Bumper Strength: 2.5 mph

N.S.D.C = 2005 - 2010

2006 PONTIAC G6 4 DOOR SEDAN

Other Information

Tip-Over Stability Ratio =	1.34	Stable
NHTSA Star Rating (calculated)		****

Center of Gravity (No Load):

Inches behind front axle	=	42.56
Inches in front of rear axle	=	69.44
Inches from side of vehicle	=	35.50
Inches from ground	=	22.37
Inches from front corner	=	89.87
Inches from rear corner	=	112.20
Inches from front bumper	=	82.56
Inches from rear bumper	=	106.44

Moments of Inertia Approximations (No Load):

Yaw Moment of Inertia	=	2318.66	lb*ft*sec <sup>2</sup>
Pitch Moment of Inertia	=	2238.78	lb*ft*sec <sup>2</sup>
Roll Moment of Inertia	=	465.96	lb*ft*sec <sup>2</sup>

Front Profile Information

Angle Front Bumper to Hood Front	=	48.4	deg
Angle Front of Hood to windshield Base	=	10.2	deg
Angle Front of Hood to windshield Top	=	18.9	deg
Angle of windshield	=	27.9	deg
Angle of Steering Tires at Max Turn	=	27.4	deg

First Approximation Crush Factors:

Speed Equivalent (mph) of Kinetic Energy (KE) used in causing crush of indentation may be evaluated using the following formula, the appropriated Crush Factor (CF), and Maximum Indentation Depth (MID), in feet:

$$V(\text{mph}) = \sqrt{(30 * CF * MID)}$$

KE Equivalent Speed (Front/Rear/Side)	=	21	CF
Bullet vehicle IMPACT SPEED estimation based on TARGET VEHICLE damage ONLY (Tested for Rear/Side Impact only)	=	27	CF

These CF values are based upon analysis of NHTSA Barrier Crash data, and from over 1000 vehicle accidents where independant evaluation of speed was possible. (These are NOT 'A', 'B', 'C', or 'G' values)

The rear Impact data with more then 2-3 inches of crush damage should be looked at carefully, since some vehicles have very weak trunk & fender strength. Therefore, on some cars, especially GM, you estimate from the rear crush data may be high by as much as 4-5 mph (on a crush of 18 inches).

# Stiffness Values and Test Data

Derived from

NHTSA Crash Test

#6268

2008 CHEVROLET MALIBU

Provided By

4N6XPRT StifCalcs®

Registered to:

TUCRRC

800 TUCKER DRIVE

TULSA OK 74104-9700

12R-110829SC03101

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## Similar Vehicle database reader

You entered: **2006 PONTIAC G6**

The Sister/Clone Vehicle Year/Model Interchange list indicates the following are Similar Models

Year Range	Make	Model	Body Styles	Wheelbase
2003 - 2011	SAAB	9-3	4D, 5D, CONV	105.3
Remarks: CONV IS OLD BODY in 2003, new convertible body begins in 2004.				
2004 - 2007	CHEVROLET	MALIBU	2D, 4D, SW	106.3, 116
Remarks:				
2004 - 2007	CHEVROLET	MALIBU MAXX	5D	112.3
Remarks: Quasi-station wagon version of Malibu with extended WB				
2005 - 2009	PONTIAC	G6	2D, 4D, CONV	112.3
Remarks:				
2007 - 2010	SATURN	AURA	4D	112.3
Remarks:				
2008 - 2012	CHEVROLET	MALIBU	2D, 4D, SW	106.3, 116
Remarks:				

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If you have suggestions, corrections, etc., you should contact Greg Anderson at Scalia Safety Engineering, 521 East Washington Avenue, Suite 200, Madison, WI 53703-2914, (608) 256-0820, FAX (608) 256-0212, E-mail: greganderson@cs.com.

**Test Information**

Test #	<b>6268</b>	NHTSA Test Reference Guide Version #	<b>V5</b>	
Test Date	<b>2007-12-06</b>	Contract #	<b>DTNH22-06-D-00027</b>	
Contract/Study Title	<b>35 MPH NCAP FRONTAL - 2008 MALIBU LS 4-DOOR SEDAN</b>			
Test Objective(s)	<b>OBTAIN ATD AND VEHICLE DATA</b>			
Test Type	<b>NEW CAR ASSESSMENT TEST</b>	Configuration	<b>VEHICLE INTO BARRIER</b>	
Impact Angle	<b>0</b>	Side Impact Point	<b>0</b> mm	<b>0.0</b> inches
		Offset Distance	<b>0</b> mm	<b>0.0</b> inches
		Closing Speed	<b>56.1</b> Km/Hr	<b>34.87</b> MPH
Test Performer	<b>KARCO ENGINEERING</b>			
Test Reference #	<b>M80102</b>			
Test Track Surface	<b>CONCRETE</b>	Condition	<b>DRY</b>	
Ambient Temperature	<b>18</b> C	<b>64.4</b> F	Total Number of Curves	<b>174</b>
Data Recorder Type	<b>DIGITAL DATA ACQUISITION</b>	Data Link	<b>OTHER</b>	
Test Commentary	<b>DATALINK IS NONE, ON-BOARD DAS</b>			

**Fixed Barrier Information**

Barrier Type	<b>RIGID</b>	Pole Barrier Diameter	<b>0</b> mm	<b>0</b> inches
Barrier Shape	<b>LOAD CELL BARRIER</b>			
Barrier Commentary	<b>NO COMMENTS</b>			



## 2008 CHEVROLET MALIBU LEFT FRONT SEAT OCCUPANT

Test #	<b>6268</b>	Sex	<b>MALE</b>
Vehicle #	<b>1</b>	Age	<b>0</b>
Location	<b>LEFT FRONT SEAT</b>	Height	<b>0</b> mm <b>0.0</b> inches
Position	<b>CENTER POSITION</b>	Weight	<b>0.0</b> kg <b>0</b> pounds
Type	<b>HYBRID III DUMMY</b>		
Size	<b>50 PERCENTILE</b>		
Calibration Method	<b>HYBRID III</b>		
Occupant Manufacturer	<b>FTSS, S/N:035</b>		
Occupant Modification	<b>UNMODIFIED</b>		
Occupant Description	<b>NO COMMENTS</b>		
Occupant Commentary	<b>NO COMMENTS</b>		

Head

Head to -

Windshield Header	<b>388</b> mm	<b>15.3</b> inches	Head Injury Criteria (HIC)	<b>330</b>
WindShield	<b>629</b> mm	<b>24.8</b> inches	HIC Lower Time Interval (ms)	<b>73.7</b>
Seatback	<b>0</b> mm	<b>0.0</b> inches	HIC Upper Time Interval (ms)	<b>109.7</b>
Side Header	<b>239</b> mm	<b>9.4</b> inches		
Side Window	<b>310</b> mm	<b>12.2</b> inches		
Neck to Seatback	<b>0</b> mm	<b>0.0</b> inches		
First Contact Region (Head)	<b>AIR BAG</b>			
Second Contact Region (Head)				

Chest

Chest to -

Dash	<b>545</b> mm	<b>21.5</b> inches	Arm to Door	<b>106</b> mm	<b>4.2</b> inches
Steering Wheel	<b>260</b> mm	<b>10.2</b> inches	Hip to Door	<b>120</b> mm	<b>4.7</b> inches
Seatback	<b>0</b> mm	<b>0.0</b> inches			
Chest Severity Index	<b>0</b>		Pelvic Peak Lateral Acceleration (g's)	<b>0</b>	
Thoracic Trauma Index	<b>0</b>		Thorax Peak Acceleration (g's)	<b>43.1</b>	
Lap Belt Peak Load	<b>7809</b> Newtons	<b>1755.5</b> pound Force			
Shoulder Belt Peak Load	<b>7460</b> Newtons	<b>1677.1</b> pound Force			
First Contact Region (Chest/Abdomen)	<b>AIR BAG</b>				
Second Contact Region (Chest/Abdomen)	<b>NONE</b>				

Legs

Knees to Dash	<b>155</b> mm	<b>6.1</b> inches	Knees to Seatback	<b>0</b> mm	<b>0.0</b> inches
Left Femur Peak Load	<b>-2021</b> Newtons	<b>-454.3</b> pounds Force			
Right Femur Peak Load	<b>-1248</b> Newtons	<b>-280.6</b> pounds Force			
First Contact Region (Legs)	<b>DASHBOARD</b>				
Second Contact Region (Legs)					

## 2008 CHEVROLET MALIBU LEFT FRONT SEAT OCCUPANT

Test #	<b>6268</b>	Sex	<b>MALE</b>	
Vehicle #	<b>1</b>	Age	<b>0</b>	
Location	<b>LEFT FRONT SEAT</b>	Height	<b>0</b> mm	<b>0.0</b> inches
Position	<b>CENTER POSITION</b>	Weight	<b>0.0</b> kg	<b>0</b> pounds
Type	<b>HYBRID III DUMMY</b>			
Size	<b>50 PERCENTILE</b>			
Calibration Method	<b>HYBRID III</b>			
Occupant Manufacturer	<b>FTSS, S/N:035</b>			
Occupant Modification	<b>UNMODIFIED</b>			
Occupant Description	<b>NO COMMENTS</b>			
Occupant Commentary	<b>NO COMMENTS</b>			

Restraints

Restraint # 1	<b>3 POINT BELT</b>
Mounted	<b>BELT - CONVENTIONAL MOUNT</b>
Deployment	<b>DEPLOYED PROPERLY</b>
Restraint Commentary	<b>NO COMMENTS</b>
Restraint # 2	<b>FRONTAL AIRBAG</b>
Mounted	<b>STEERING WHEEL</b>
Deployment	<b>DEPLOYED PROPERLY</b>
Restraint Commentary	<b>NO COMMENTS</b>

## 2008 CHEVROLET MALIBU RIGHT FRONT SEAT OCCUPANT

Test #	6268	Sex	MALE
Vehicle #	1	Age	0
Location	RIGHT FRONT SEAT	Height	0 mm 0.0 inches
Position	CENTER POSITION	Weight	0.0 kg 0 pounds
Type	HYBRID III DUMMY		
Size	50 PERCENTILE		
Calibration Method	HYBRID III		
Occupant Manufacturer	FTSS, S/N:034		
Occupant Modification	UNMODIFIED		
Occupant Description	NO COMMENTS		
Occupant Commentary	NO COMMENTS		

Head

Head to -

Windshield Header	389	mm	15.3	inches	Head Injury Criteria (HIC)	389
WindShield	635	mm	25.0	inches	HIC Lower Time Interval (ms)	65
Seatback	0	mm	0.0	inches	HIC Upper Time Interval (ms)	101
Side Header	265	mm	10.4	inches		
Side Window	315	mm	12.4	inches		
Neck to Seatback	0	mm	0.0	inches		
First Contact Region (Head)	AIR BAG					
Second Contact Region (Head)						

Chest

Chest to -

Dash	597	mm	23.5	inches	Arm to Door	106	mm	4.2	inches
Steering Wheel	0	mm	0.0	inches	Hip to Door	108	mm	4.3	inches
Seatback	0	mm	0.0	inches					
Chest Severity Index	0				Pelvic Peak Lateral Acceleration (g's)	0			
Thoracic Trauma Index	0				Thorax Peak Acceleration (g's)	42.2			
Lap Belt Peak Load	7635	Newtons	1716.4	pound Force					
Shoulder Belt Peak Load	7258	Newtons	1631.7	pound Force					
First Contact Region (Chest/Abdomen)	AIR BAG								
Second Contact Region (Chest/Abdomen)	NONE								

Legs

Knees to Dash	184	mm	7.2	inches	Knees to Seatback	0	mm	0.0	inches
Left Femur Peak Load	-460	Newtons	-103.4	pounds Force					
Right Femur Peak Load	-788	Newtons	-177.2	pounds Force					
First Contact Region (Legs)	DASHBOARD								
Second Contact Region (Legs)									

## 2008 CHEVROLET MALIBU RIGHT FRONT SEAT OCCUPANT

Test #	6268	Sex	MALE
Vehicle #	1	Age	0
Location	RIGHT FRONT SEAT	Height	0 mm 0.0 inches
Position	CENTER POSITION	Weight	0.0 kg 0 pounds
Type	HYBRID III DUMMY		
Size	50 PERCENTILE		
Calibration Method	HYBRID III		
Occupant Manufacturer	FTSS, S/N:034		
Occupant Modification	UNMODIFIED		
Occupant Description	NO COMMENTS		
Occupant Commentary	NO COMMENTS		

Restraints

Restraint # 1	3 POINT BELT
Mounted	BELT - CONVENTIONAL MOUNT
Deployment	DEPLOYED PROPERLY
Restraint Commentary	NO COMMENTS
Restraint # 2	FRONTAL AIRBAG
Mounted	DASH PANEL - TOP
Deployment	DEPLOYED PROPERLY
Restraint Commentary	NO COMMENTS

## 2008 CHEVROLET MALIBU RIGHT REAR SEAT OCCUPANT

Test #	6268	Sex	NOT APPLICABLE
Vehicle #	1	Age	0
Location	RIGHT REAR SEAT	Height	0 mm 0.0 inches
Position	NOT APPLICABLE	Weight	0.0 kg 0 pounds
Type	CRABI		
Size	12 MONTH OLD CHILD		
Calibration Method	HYBRID III		
Occupant Manufacturer	FIRST TECHNOLOGY SAFETY SYSTEMS, S/N:022		
Occupant Modification	UNMODIFIED		
Occupant Description	NO COMMENTS		
Occupant Commentary	NO COMMENTS		

Head

Head to -

Windshield Header	0	mm	0.0	inches	Head Injury Criteria (HIC)	338
WindShield	0	mm	0.0	inches	HIC Lower Time Interval (ms)	41.5
Seatback	564	mm	22.2	inches	HIC Upper Time Interval (ms)	77.5
Side Header	0	mm	0.0	inches		
Side Window	286	mm	11.3	inches		
Neck to Seatback	0	mm	0.0	inches		
First Contact Region (Head)	NONE					
Second Contact Region (Head)						

Chest

Chest to -

Dash	0	mm	0.0	inches	Arm to Door	270	mm	10.6	inches
Steering Wheel	0	mm	0.0	inches	Hip to Door	286	mm	11.3	inches
Seatback	490	mm	19.3	inches					
Chest Severity Index	0				Pelvic Peak Lateral Acceleration (g's)	0			
Thoracic Trauma Index	0				Thorax Peak Acceleration (g's)	46.9			
Lap Belt Peak Load	0	Newtons	0.0	pound Force					
Shoulder Belt Peak Load	0	Newtons	0.0	pound Force					
First Contact Region (Chest/Abdomen)	NONE								
Second Contact Region (Chest/Abdomen)	NONE								

Legs

Knees to Dash	0	mm	0.0	inches	Knees to Seatback	214	mm	8.4	inches
Left Femur Peak Load	0	Newtons	0.0	pounds Force					
Right Femur Peak Load	0	Newtons	0.0	pounds Force					
First Contact Region (Legs)	NONE								
Second Contact Region (Legs)									

## 2008 CHEVROLET MALIBU RIGHT REAR SEAT OCCUPANT

Test #	<b>6268</b>	Sex	<b>NOT APPLICABLE</b>	
Vehicle #	<b>1</b>	Age	<b>0</b>	
Location	<b>RIGHT REAR SEAT</b>	Height	<b>0</b> mm	<b>0.0</b> inches
Position	<b>NOT APPLICABLE</b>	Weight	<b>0.0</b> kg	<b>0</b> pounds
Type	<b>CRABI</b>			
Size	<b>12 MONTH OLD CHILD</b>			

Calibration Method	<b>HYBRID III</b>
Occupant Manufacturer	<b>FIRST TECHNOLOGY SAFETY SYSTEMS, S/N:022</b>
Occupant Modification	<b>UNMODIFIED</b>
Occupant Description	<b>NO COMMENTS</b>
Occupant Commentary	<b>NO COMMENTS</b>

Restraints

Restraint # 1	<b>INFANT SAFETY SEAT</b>
Mounted	<b>LATCH - LOWER ANCHORAGES NO TOP TETHER</b>
Deployment	<b>NOT APPLICABLE</b>
Restraint Commentary	<b>GRACO SNUGRIDE, MODEL NUMBER 8F09TAN3</b>
Restraint # 2	<b>5 POINT BELT</b>
Mounted	<b>CHILD SEAT</b>
Deployment	<b>NOT APPLICABLE</b>
Restraint Commentary	<b>NO COMMENTS</b>

2008 CHEVROLET MALIBU LEFT REAR SEAT OCCUPANT

Test #	<input type="text" value="6268"/>	Sex	<input type="text" value="NOT APPLICABLE"/>	
Vehicle #	<input type="text" value="1"/>	Age	<input type="text" value="0"/>	
Location	<input type="text" value="LEFT REAR SEAT"/>	Height	<input type="text" value="0"/> mm	<input type="text" value="0.0"/> inches
Position	<input type="text" value="NOT APPLICABLE"/>	Weight	<input type="text" value="0.0"/> kg	<input type="text" value="0"/> pounds
Type	<input type="text" value="CRABI"/>			
Size	<input type="text" value="12 MONTH OLD CHILD"/>			
Calibration Method	<input type="text" value="HYBRID III"/>			
Occupant Manufacturer	<input type="text" value="FIRST TECHNOLOGY SAFETY SYSTEMS, S/N:017"/>			
Occupant Modification	<input type="text" value="UNMODIFIED"/>			
Occupant Description	<input type="text" value="NO COMMENTS"/>			
Occupant Commentary	<input type="text" value="NO COMMENTS"/>			

Head

Head to -

Windshield Header	<input type="text" value="0"/> mm	<input type="text" value="0.0"/> inches	Head Injury Criteria (HIC)	<input type="text" value="467"/>
WindShield	<input type="text" value="0"/> mm	<input type="text" value="0.0"/> inches	HIC Lower Time Interval (ms)	<input type="text" value="48"/>
Seatback	<input type="text" value="462"/> mm	<input type="text" value="18.2"/> inches	HIC Upper Time Interval (ms)	<input type="text" value="84"/>
Side Header	<input type="text" value="0"/> mm	<input type="text" value="0.0"/> inches		
Side Window	<input type="text" value="370"/> mm	<input type="text" value="14.6"/> inches		
Neck to Seatback	<input type="text" value="0"/> mm	<input type="text" value="0.0"/> inches		
First Contact Region (Head)	<input type="text" value="OTHER"/>			
Second Contact Region (Head)	<input type="text"/>			

Chest

Chest to -

Dash	<input type="text" value="0"/> mm	<input type="text" value="0.0"/> inches	Arm to Door	<input type="text" value="260"/> mm	<input type="text" value="10.2"/> inches
Steering Wheel	<input type="text" value="0"/> mm	<input type="text" value="0.0"/> inches	Hip to Door	<input type="text" value="320"/> mm	<input type="text" value="12.6"/> inches
Seatback	<input type="text" value="365"/> mm	<input type="text" value="14.4"/> inches			
Chest Severity Index	<input type="text" value="0"/>		Pelvic Peak Lateral Acceleration (g's)	<input type="text" value="0"/>	
Thoracic Trauma Index	<input type="text" value="0"/>		Thorax Peak Acceleration (g's)	<input type="text" value="50"/>	
Lap Belt Peak Load	<input type="text" value="0"/> Newtons	<input type="text" value="0.0"/> pound Force			
Shoulder Belt Peak Load	<input type="text" value="0"/> Newtons	<input type="text" value="0.0"/> pound Force			
First Contact Region (Chest/Abdomen)	<input type="text" value="NONE"/>				
Second Contact Region (Chest/Abdomen)	<input type="text" value="NONE"/>				

Legs

Knees to Dash	<input type="text" value="0"/> mm	<input type="text" value="0.0"/> inches	Knees to Seatback	<input type="text" value="125"/> mm	<input type="text" value="4.9"/> inches
Left Femur Peak Load	<input type="text" value="0"/> Newtons		<input type="text" value="0.0"/> pounds Force		
Right Femur Peak Load	<input type="text" value="0"/> Newtons		<input type="text" value="0.0"/> pounds Force		
First Contact Region (Legs)	<input type="text" value="NONE"/>				
Second Contact Region (Legs)	<input type="text"/>				

## 2008 CHEVROLET MALIBU LEFT REAR SEAT OCCUPANT

Test #	<b>6268</b>	Sex	<b>NOT APPLICABLE</b>	
Vehicle #	<b>1</b>	Age	<b>0</b>	
Location	<b>LEFT REAR SEAT</b>	Height	<b>0</b> mm	<b>0.0</b> inches
Position	<b>NOT APPLICABLE</b>	Weight	<b>0.0</b> kg	<b>0</b> pounds
Type	<b>CRABI</b>			
Size	<b>12 MONTH OLD CHILD</b>			

Calibration Method	<b>HYBRID III</b>
Occupant Manufacturer	<b>FIRST TECHNOLOGY SAFETY SYSTEMS, S/N:017</b>
Occupant Modification	<b>UNMODIFIED</b>
Occupant Description	<b>NO COMMENTS</b>
Occupant Commentary	<b>NO COMMENTS</b>

Restraints

Restraint # 1	<b>INFANT SAFETY SEAT</b>
Mounted	<b>LAP/SHOULDER BELT, NO TOP TETHER</b>
Deployment	<b>NOT APPLICABLE</b>
Restraint Commentary	<b>MAXI-COSI, MODEL NUMBER 22-371 ORE</b>
Restraint # 2	<b>5 POINT BELT</b>
Mounted	<b>CHILD SEAT</b>
Deployment	<b>NOT APPLICABLE</b>
Restraint Commentary	<b>NO BASE USED FOR THIS CRS</b>



**Vehicle 1 2008 CHEVROLET MALIBU**

Test #	6268				
VIN	1G1ZG57B48F160469	NHTSA Test Vehicle Number	1		
Year	2008	Vehicle Modification Indicator	PRODUCTION VEHICLE		
Make	CHEVROLET	Post-test Steering Column Shear Capsule Separation	UNKNOWN		
Model	MALIBU	Steering Column Collapse Mechanism	UNKNOWN		
Body	FOUR DOOR SEDAN				
Engine	4 CYLINDER INLINE FRONT				
Displacement	2.4 Liter	Transmission	AUTOMATIC - FRONT WHEEL DRIVE		
Vehicle Modification(s) Description	UNMODIFIED				
Vehicle Commentary	NO COMMENTS				
Vehicle Length	4845 mm	190.7 inches	CG behind Front Axle	1265 mm	49.8 inches
Vehicle Width	1780 mm	70.1 inches	Center of Damage to CG Axis	0 mm	0.0 inches
Vehicle Wheelbase	2860 mm	112.6 inches	Total Length of Indentation	1478 mm	58.2 inches
Vehicle Test Weight	1779 KG	3921 pounds	Maximum Static Crush Depth	554 mm	21.8 inches
			Pre-Impact Speed	56 kph	34.9 mph
Vehicle Damage Index	12FDEW6		Principal Direction of Force	0	

Damage Profile Distance Measurements

(Measured Left-to-Right, Rear-to-Front)

DPD 1	265 mm	10.4 inches
DPD 2	474 mm	18.7 inches
DPD 3	504 mm	19.8 inches
DPD 4	505 mm	19.9 inches
DPD 5	475 mm	18.7 inches
DPD 6	310 mm	12.2 inches

Crush from Pre & Post Test Damage Measurements

	Pre-Test	Post-Test	Crush Depth
Left Bumper Corner	180.5 inches	159.8 inches	20.7 inches
	4585 mm	4060 mm	525 mm
Centerline	190.7 inches	168.9 inches	21.8 inches
	4845 mm	4291 mm	554 mm
Right Bumper Corner	180.5 inches	168.3 inches	12.2 inches
	4585 mm	4275 mm	310 mm

Bumper Engagement  
(Inline Impact Only)

0.0

Sill Engagement  
(Side Impact Only)

NOT APPLICABLE

A-pillar Engagement  
(Side Impact Only)

0.0

Moving Test Cart  
Angle

DIRECT ENGAGEMENT

Magnitude of the Tilt Angle  
Measured between surface of a  
Rollover Test Cart and the Ground

Moving Test Cart/Vehicle  
Crabbed Angle

0.0

Magnitude of the Crabbed Angle  
Measure Clockwise from  
Longitudinal Vector to Velocity Vector of Vehicle

Vehicle Orientation on Cart  
Moving Test Cart

NOT APPLICABLE

Magnitude of the Angle  
Measured between the Vehicle Orientation  
and Direction of Test Cart Motion

**Vehicle 1 2008 CHEVROLET MALIBU**

Test #	6268			
VIN	1G1ZG57B48F160469		NHTSA Test Vehicle Number	1
Year	2008		Vehicle Modification Indicator	PRODUCTION VEHICLE
Make	CHEVROLET	Post-test Steering Column Shear Capsule Separation	UNKNOWN	
Model	MALIBU		Steering Column Collapse Mechanism	UNKNOWN
Body	FOUR DOOR SEDAN			
Engine	4 CYLINDER INLINE FRONT			
Displacement	2.4	Liter	Transmission	AUTOMATIC - FRONT WHEEL DRIVE
Vehicle Modification(s) Description	UNMODIFIED			
Vehicle Commentary	NO COMMENTS			
Vehicle Length	4845	mm	190.7	inches
Vehicle Width	1780	mm	70.1	inches
Vehicle Wheelbase	2860	mm	112.6	inches
Vehicle Test Weight	1779	KG	3921	pounds
			CG behind Front Axle	1265 mm 49.8 inches
			Center of Damage to CG Axis	0 mm 0.0 inches
			Total Length of Indentation	1478 mm 58.2 inches
			Maximum Static Crush Depth	554 mm 21.8 inches
			Pre-Impact Speed	56 kph 34.9 mph
Vehicle Damage Index	12FDEW6		Principal Direction of Force	0

**Pre & Post Test Damage Measurements**

(Measurements are taken in a longitudinal direction. Except for Engine Block, all measurements are take from the Rear Vehicle Surface forward.)

Left Side				Centerline				Right Side			
Pre-Test		Post-Test		Pre-Test		Post-Test		Pre-Test		Post-Test	
mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches
Length of Vehicle at Centerline											
4845	190.7	4291	168.9								
Engine Block											
575	22.6	575	22.6								
Front Bumper Corner											
4585	180.5	4060	159.8					4585	180.5	4275	168.3
Front of Engine											
4305	169.5	3300	129.9								
Firewall											
3940	155.1	3715	146.3	3750	147.6	0	0.0	3945	155.3	3840	151.2
3405	134.1	3402	133.9					3415	134.4	3415	134.4
3364	132.4	3358	132.2					3381	133.1	3373	132.8
3386	133.3	3386	133.3					3396	133.7	3377	133.0
2282	89.8	2280	89.8					2290	90.2	2289	90.1
2292	90.2	2292	90.2					2314	91.1	2305	90.7
Steering Column											
2890	113.8	2984	117.5								
Center of Seering Column to 'A' Post (Horizontal)											
435	17.1	428	16.9								
Center of Steering Column to Headliner (Vertical)											
415	16.3	427	16.8								

# 2008 CHEVROLET MALIBU

NHTSA Crash Test - #6268 - Front Impact

Pre/Post Depths - Vehicle Width - Closing Speed - Trapezoidal Average

Test Vehicle Weight = 3921 pounds  
 Vehicle Closing Speed = 34.9 mph  
 Test Crush Length = 70.1 inches

### Pre/Post Collision Crush Depths (inches)

	Left Side Crush	Centerline Crush	Right Side Crush	(Pass. Side)
(Driver Side)	20.7	21.8	12.2	

### CRASH 3 Stiffness Coefficients

### SMAC Stiffness

Minimum Crush = 12.2 inches  
 Using a Rated No Damage Speed of 2.5mph  
 Using a Rated No Damage Speed of 5.0mph  
 Using a Rated No Damage Speed of 7.5mph  
 Using a Rated No Damage Speed of 10.0mph

Average Crush = 19.1 inches  
 Using a Rated No Damage Speed of 2.5mph  
 Using a Rated No Damage Speed of 5.0mph  
 Using a Rated No Damage Speed of 7.5mph  
 Using a Rated No Damage Speed of 10.0mph

Maximum Crush = 21.8 inches  
 Using a Rated No Damage Speed of 2.5mph  
 Using a Rated No Damage Speed of 5.0mph  
 Using a Rated No Damage Speed of 7.5mph  
 Using a Rated No Damage Speed of 10.0mph

	A	B	G	Kv
Minimum Crush = 12.2 inches				366.5
Using a Rated No Damage Speed of 2.5mph	297.6	315.8	140.2	
Using a Rated No Damage Speed of 5.0mph	549.1	268.9	560.7	
Using a Rated No Damage Speed of 7.5mph	754.8	225.8	1261.6	
Using a Rated No Damage Speed of 10.0mph	914.5	186.4	2242.8	
Average Crush = 19.1 inches				149.5
Using a Rated No Damage Speed of 2.5mph	190.1	128.8	140.2	
Using a Rated No Damage Speed of 5.0mph	350.8	109.7	560.7	
Using a Rated No Damage Speed of 7.5mph	482.1	92.1	1261.6	
Using a Rated No Damage Speed of 10.0mph	584.1	76.1	2242.8	
Maximum Crush = 21.8 inches				114.8
Using a Rated No Damage Speed of 2.5mph	166.5	98.9	140.2	
Using a Rated No Damage Speed of 5.0mph	307.3	84.2	560.7	
Using a Rated No Damage Speed of 7.5mph	422.4	70.7	1261.6	
Using a Rated No Damage Speed of 10.0mph	511.8	58.4	2242.8	

Rated No Damage Speed = Impact speed with a barrier resulting in no permanent vehicle deformation

Normal "Rated No Damage Speed" is 2.5 or 5 mph. Some Specific vehicles may, however, have a higher rating

A = Maximum force per inch of damage without permanent damage, lb/in  
 B = Crush resistance per inch of damage width (Crash), lb/in<sup>2</sup>  
 G = Energy dissipated without permanent damage, lb  
 Kv = Crush resistance per inch of damage width (SMAC), lb/in<sup>2</sup>

\*\*\*\*\*

### 4N6XPRT System's First Approximation Crush Factor (CF)

Speed from Crush calculation using a generic CF of 21 as suggested in Expert AutoStats

$$KE \text{ Speed (mph)} = \text{SQRT}(30 * CF * \text{max crush in feet})$$

Crush Factor	Maximum Crush (inches)	Calculated KE Speed (mph)	Calculated Error (mph)	Calculated Error (%)
21	21.8	33.8	-1.0	-3.1

**4N6XPRT Systems Specific Crush Factor (CF Specific to this test) = 22.3**

$$CF = (\text{mph} * \text{mph}) / (30 * \text{max crush in feet}), \text{ dimensionless}$$

**4N6XPRT Systems CF is calculated based upon the data reported and is specific to this vehicle and this test**

# 2008 CHEVROLET MALIBU

NHTSA Crash Test - #6268 - Front Impact

Pre/Post Depths - Indentation Length - Closing Speed - Trapezoidal Average

Test Vehicle Weight = 3921 pounds  
 Vehicle Closing Speed = 34.9 mph  
 Test Crush Length = 58.2 inches

### Pre/Post Collision Crush Depths (inches)

	Left Side Crush	Centerline Crush	Right Side Crush	
(Driver Side)	20.7	21.8	12.2	(Pass. Side)

### CRASH 3 Stiffness Coefficients

### SMAC Stiffness

Minimum Crush = 12.2 inches  
 Using a Rated No Damage Speed of 2.5mph  
 Using a Rated No Damage Speed of 5.0mph  
 Using a Rated No Damage Speed of 7.5mph  
 Using a Rated No Damage Speed of 10.0mph

Average Crush = 19.1 inches  
 Using a Rated No Damage Speed of 2.5mph  
 Using a Rated No Damage Speed of 5.0mph  
 Using a Rated No Damage Speed of 7.5mph  
 Using a Rated No Damage Speed of 10.0mph

Maximum Crush = 21.8 inches  
 Using a Rated No Damage Speed of 2.5mph  
 Using a Rated No Damage Speed of 5.0mph  
 Using a Rated No Damage Speed of 7.5mph  
 Using a Rated No Damage Speed of 10.0mph

	A	B	G	Kv
				441.4
	358.4	380.3	168.8	
	661.4	323.9	675.3	
	909.0	271.9	1519.4	
	1101.3	224.5	2701.1	
				180.1
	228.9	155.2	168.8	
	422.4	132.1	675.3	
	580.6	110.9	1519.4	
	703.5	91.6	2701.1	
				138.2
	200.5	119.1	168.8	
	370.1	101.4	675.3	
	508.7	85.2	1519.4	
	616.3	70.3	2701.1	

Rated No Damage Speed = Impact speed with a barrier resulting in no permanent vehicle deformation

Normal "Rated No Damage Speed" is 2.5 or 5 mph. Some Specific vehicles may, however, have a higher rating

A = Maximum force per inch of damage without permanent damage, lb/in  
 B = Crush resistance per inch of damage width (Crash), lb/in<sup>2</sup>  
 G = Energy dissipated without permanent damage, lb  
 Kv = Crush resistance per inch of damage width (SMAC), lb/in<sup>2</sup>

\*\*\*\*\*

### 4N6XPRT System's First Approximation Crush Factor (CF)

Speed from Crush calculation using a generic CF of 21 as suggested in Expert AutoStats

$$KE \text{ Speed (mph)} = \text{SQRT}(30 * CF * \text{max crush in feet})$$

Crush Factor	Maximum Crush (inches)	Calculated KE Speed (mph)	Calculated Error (mph)	Calculated Error (%)
21	21.8	33.8	-1.0	-3.1

**4N6XPRT Systems Specific Crush Factor (CF Specific to this test) = 22.3**

$$CF = (\text{mph} * \text{mph}) / (30 * \text{max crush in feet}), \text{ dimensionless}$$

**4N6XPRT Systems CF is calculated based upon the data reported and is specific to this vehicle and this test**

# 2008 CHEVROLET MALIBU

NHTSA Crash Test - #6268 - Front Impact

Damage Profile Distances - Vehicle Width - Closing Speed - Trapezoidal Average

Test Vehicle Weight = 3921 pounds  
 Vehicle Closing Speed = 34.9 MPH  
 Test Crush Length = 70.1 inches

### Damage Profile Distance Collision Crush Depths (inches)

	DPD1	DPD2	DPD3	DPD4	DPD5	DPD6	(Pass Side)
(Driver Side)	10.4	18.7	19.8	19.9	18.7	12.2	

### CRASH 3 Stiffness Coefficients

### SMAC Stiffness

Minimum Crush = 10.4 inches  
 Using a Rated No Damage Speed of 2.5mph  
 Using a Rated No Damage Speed of 5.0mph  
 Using a Rated No Damage Speed of 7.5mph  
 Using a Rated No Damage Speed of 10.0mph  
 Average Crush = 17.7 inches  
 Using a Rated No Damage Speed of 2.5mph  
 Using a Rated No Damage Speed of 5.0mph  
 Using a Rated No Damage Speed of 7.5mph  
 Using a Rated No Damage Speed of 10.0mph  
 Maximum Crush = 19.9 inches  
 Using a Rated No Damage Speed of 2.5mph  
 Using a Rated No Damage Speed of 5.0mph  
 Using a Rated No Damage Speed of 7.5mph  
 Using a Rated No Damage Speed of 10.0mph

A	B	G	Kv
			504.3
349.1	434.6	140.2	
644.2	370.1	560.7	
885.4	310.7	1261.6	
1072.7	256.5	2242.8	
			174.1
205.1	150.0	140.2	
378.5	127.8	560.7	
520.2	107.3	1261.6	
630.3	88.6	1554.8	
			137.7
182.4	118.7	140.2	
336.7	101.1	560.7	
462.7	84.9	1261.6	
560.6	70.1	2242.8	

Rated No Damage Speed = Impact speed with a barrier resulting in no permanent vehicle deformation

Normal "Rated No Damage Speed" is 2.5 or 5 mph. Some Specific vehicles may, however, have a higher rating

A = Maximum force per inch of damage without permanent damage, lb/in  
 B = Crush resistance per inch of damage width (Crash), lb/in<sup>2</sup>  
 G = Energy dissipated without permanent damage, lb  
 Kv = Crush resistance per inch of damage width (SMAC), lb/in<sup>2</sup>

\*\*\*\*\*

### 4N6XPRT System's First Approximation Crush Factor (CF)

Speed from Crush calculation using a generic CF of 21 as suggested in Expert AutoStats

$$KE \text{ Speed (mph)} = \text{SQRT}(30 * CF * \text{max crush in feet})$$

Crush Factor	Maximum Crush (inches)	Calculated KE Speed (mph)	Calculated Error (mph)	Calculated Error (%)
21	19.9	32.3	-2.5	-7.9

**4N6XPRT Systems Specific Crush Factor (CF Specific to this test) = 24.4**

$$CF = (\text{mph} * \text{mph}) / (30 * \text{max crush in feet}), \text{ dimensionless}$$

**4N6XPRT Systems CF is calculated based upon the data reported and is specific to this vehicle and this test**

# 2008 CHEVROLET MALIBU

NHTSA Crash Test - #6268 - Front Impact

Damage Profile Distances - Indentation Length - Closing Speed - Trapezoidal Average

Test Vehicle Weight = 3921 pounds  
 Vehicle Closing Speed = 34.9 MPH  
 Test Crush Length = 58.2 inches

### Damage Profile Distance Collision Crush Depths (inches)

	DPD1	DPD2	DPD3	DPD4	DPD5	DPD6	(Pass Side)
(Driver Side)	10.4	18.7	19.8	19.9	18.7	12.2	

### CRASH 3 Stiffness Coefficients

### SMAC Stiffness

Minimum Crush = 10.4 inches  
 Using a Rated No Damage Speed of 2.5mph  
 Using a Rated No Damage Speed of 5.0mph  
 Using a Rated No Damage Speed of 7.5mph  
 Using a Rated No Damage Speed of 10.0mph

Average Crush = 17.7 inches  
 Using a Rated No Damage Speed of 2.5mph  
 Using a Rated No Damage Speed of 5.0mph  
 Using a Rated No Damage Speed of 7.5mph  
 Using a Rated No Damage Speed of 10.0mph

Maximum Crush = 19.9 inches  
 Using a Rated No Damage Speed of 2.5mph  
 Using a Rated No Damage Speed of 5.0mph  
 Using a Rated No Damage Speed of 7.5mph  
 Using a Rated No Damage Speed of 10.0mph

A	B	G	Kv
			607.3
420.4	523.4	168.8	
775.8	445.7	675.3	
1066.3	374.2	1519.4	
1291.9	309.0	2701.1	
			209.7
247.0	180.7	168.8	
455.8	153.9	675.3	
626.5	129.2	1519.4	
759.1	106.7	1872.5	
			165.9
219.7	142.9	168.8	
405.5	121.7	675.3	
557.3	102.2	1519.4	
675.2	84.4	2701.1	

Rated No Damage Speed = Impact speed with a barrier resulting in no permanent vehicle deformation

Normal "Rated No Damage Speed" is 2.5 or 5 mph. Some Specific vehicles may, however, have a higher rating

A = Maximum force per inch of damage without permanent damage, lb/in  
 B = Crush resistance per inch of damage width (Crash), lb/in<sup>2</sup>  
 G = Energy dissipated without permanent damage, lb  
 Kv = Crush resistance per inch of damage width (SMAC), lb/in<sup>2</sup>

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### 4N6XPRT System's First Approximation Crush Factor (CF)

Speed from Crush calculation using a generic CF of 21 as suggested in Expert AutoStats

$$KE \text{ Speed (mph)} = \text{SQRT}(30 * CF * \text{max crush in feet})$$

Crush Factor	Maximum Crush (inches)	Calculated KE Speed (mph)	Calculated Error (mph)	Calculated Error (%)
21	19.9	32.3	-2.5	-7.9

**4N6XPRT Systems Specific Crush Factor (CF Specific to this test) = 24.4**

$$CF = (\text{mph} * \text{mph}) / (30 * \text{max crush in feet}), \text{ dimensionless}$$

**4N6XPRT Systems CF is calculated based upon the data reported and is specific to this vehicle and this test**

**Available Test Results**  
**Front Impact Test Summary**

Report Filter Settings

Year Range: 2005 - 2009  
 Make: PONTIAC  
 Model: G6

Test Number	Vehicle Info	No		Closing Speed (mph)	Vehicle Width Stiffness Values				Crush Factor
		Damage Speed (mph)	Average Crush (inch)		A	B	G	Kv	
5183	2004 SAAB 9-3 FOUR DOOR SEDAN	5.0	16.5	29.5	291.3	86.7	489.2	125.7	21.2
6056	2007 SAAB 9-3 FOUR DOOR SEDAN	5.0	19.4	34.7	334.5	102.4	546.6	139.8	24.8
5191	2004 CHEVROLET MALIBU FOUR DOOR SEDAN	5.0	16.4	29.7	341.3	102.7	567.0	148.5	21.5
6448	2008 CHEVROLET MALIBU FOUR DOOR SEDAN	5.0	11.9	24.7	360.3	119.2	544.3	187.3	20.5
6998	2011 CHEVROLET MALIBU FOUR DOOR SEDAN	5.0	18.6	35.1	360.9	117.1	556.0	159.3	26.6
5851	2006 SAAB 9-3 FOUR DOOR SEDAN	5.0	11.3	24.7	364.5	126.8	524.0	199.1	21.6
4863	2004 CHEVROLET MALIBU FOUR DOOR SEDAN	5.0	17.0	35.5	371.3	133.4	516.8	180.7	29.7
6268	2008 CHEVROLET MALIBU FOUR DOOR SEDAN	5.0	17.7	34.9	378.9	128.0	560.7	174.5	27.5
5271	2005 CHEVROLET MALIBU FOUR DOOR SEDAN	5.0	17.4	35.0	387.8	133.5	563.3	181.7	28.1
5250	2005 PONTIAC G6 FOUR DOOR SEDAN	5.0	17.0	35.3	393.2	139.8	552.9	189.7	29.2
5844	2007 SATURN AURA FOUR DOOR SEDAN	5.0	15.6	35.1	442.4	170.2	574.9	231.5	31.5
6997	2011 CHEVROLET MALIBU FOUR DOOR SEDAN	5.0	6.4	20.1	496.8	232.8	530.2	412.8	25.0
<b>Average (AVG)</b>					<b>376.9</b>	<b>132.7</b>	<b>543.8</b>	<b>194.2</b>	<b>25.6</b>
<b>Minimum (MIN)</b>					<b>291.3</b>	<b>86.7</b>	<b>489.2</b>	<b>125.7</b>	<b>20.5</b>
<b>Maximum (MAX)</b>					<b>496.8</b>	<b>232.8</b>	<b>574.9</b>	<b>412.8</b>	<b>31.5</b>
<b>Standard Deviation (STDev-sample)</b>					<b>52.4</b>	<b>38.0</b>	<b>24.7</b>	<b>74.5</b>	<b>3.8</b>
<b>Number of Tests (n)</b>					<b>12</b>				

**Available Test Results**  
**Front Impact Test Summary**

Report Filter Settings

Year Range: 2005 - 2009

Make: PONTIAC

Model: G6

Test Number	Vehicle Info	No Damage Speed (mph)	Max Crush (inch)	Closing Speed (mph)	-----V e h i c l e   W i d t h-----				Crush Factor
					-----S t i f f n e s s   V a l u e s-----				
					A	B	G	Kv	
6997	2011 CHEVROLET MALIBU FOUR DOOR SEDAN	5.0	15.7	20.1	202.9	38.8	530.2	68.9	10.2
5183	2004 SAAB 9-3 FOUR DOOR SEDAN	5.0	18.2	29.5	263.7	71.1	489.2	103.0	19.2
4863	2004 CHEVROLET MALIBU FOUR DOOR SEDAN	5.0	23.0	35.5	273.7	72.5	516.8	98.2	21.9
5250	2005 PONTIAC G6 FOUR DOOR SEDAN	5.0	22.6	35.3	296.0	79.2	552.9	107.5	22.0
5191	2004 CHEVROLET MALIBU FOUR DOOR SEDAN	5.0	18.9	29.7	296.5	77.5	567.0	112.1	18.7
5851	2006 SAAB 9-3 FOUR DOOR SEDAN	5.0	13.6	24.7	303.6	87.9	524.0	138.2	18.0
6448	2008 CHEVROLET MALIBU FOUR DOOR SEDAN	5.0	14.1	24.7	304.8	85.3	544.3	134.1	17.4
6268	2008 CHEVROLET MALIBU FOUR DOOR SEDAN	5.0	21.8	34.9	307.2	84.1	560.7	114.7	22.3
6056	2007 SAAB 9-3 FOUR DOOR SEDAN	5.0	20.9	34.7	310.9	88.4	546.6	120.7	23.0
6998	2011 CHEVROLET MALIBU FOUR DOOR SEDAN	5.0	21.3	35.1	313.8	88.5	556.0	120.4	23.1
5271	2005 CHEVROLET MALIBU FOUR DOOR SEDAN	5.0	19.9	35.0	339.7	102.4	563.3	139.4	24.6
5844	2007 SATURN AURA FOUR DOOR SEDAN	5.0	18.7	35.1	369.3	118.7	574.9	161.3	26.3
<b>Average (AVG)</b>					<b>298.5</b>	<b>82.9</b>	<b>543.8</b>	<b>118.2</b>	<b>20.6</b>
<b>Minimum (MIN)</b>					<b>202.9</b>	<b>38.8</b>	<b>489.2</b>	<b>68.9</b>	<b>10.2</b>
<b>Maximum (MAX)</b>					<b>369.3</b>	<b>118.7</b>	<b>574.9</b>	<b>161.3</b>	<b>26.3</b>
<b>Standard Deviation (STDev-sample)</b>					<b>40.7</b>	<b>19.0</b>	<b>24.7</b>	<b>23.7</b>	<b>4.2</b>
<b>Number of Tests (n)</b>					<b>12</b>				



Expert VIN DeCoder®

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Version Number 3.2.0

DeCoded VIN: **1G2NF52T31M537145**

Model: **2001 Pontiac Grand AM SE1 4 Door Sedan**

Engine Size: **2.4 L/ 146 cu.in.**

Engine Description: **In-Line 4 cylinder with Double Overhead Cam**

Horse Power: **150 @ 6000 rpm**

Torque: **155 lb-ft at 4400 rpm**

Injection System: **Multi-Port Fuel Injection (MPFI)**

PSI: **41-47 psi** Ignition: **Electronic**

Manufacturer: **Pontiac**

Assembly Plant: **Lansing (A), MI**

Drive wheels: **This is a Front Wheel Drive vehicle w/ Manual Seatbelts + Driver & Passenger Air Bags**

The First through Third characters (1G2) indicate a Pontiac Car made in the U.S.A.

The Fourth and Fifth characters (NF) indicate a Grand AM SE1

The Sixth character (5) indicate a 4 Door Sedan

The Seventh character (2) indicate Manual Seatbelts + Driver & Passenger Air Bags

The Eighth character (T) indicate the OEM engine: 2.4 L/ 146 cu.in., L4, DOHC

The Ninth character (the check digit) is entered as 3.

The VIN appears valid, the calculated value is 3.

The Tenth character (1) indicate the model year 2001

The Eleventh character (M) indicate the vehicle was made in the assembly plant in Lansing (A), MI

The Twelfth through Seventeenth characters (537145) indicate the Serial Number and are unique to this vehicle.

JEREMY S DAILY PHD PE

TUCRRC

800 TUCKER DRIVE

TULSA OK 74104-9700

3/22/2013

**2001 PONTIAC GRAND AM 4 DOOR SEDAN**

Curb Weight:  lbs.  kg.  
 Curb Weight Distribution - Front:  % Rear:  %  
 Gross Vehicle Weight Rating:  lbs.  kg.  
 Number of Tires on Vehicle:   
 Drive wheels:

**Horizontal Dimensions**

	Inches	Feet	Meters
Total Length	<input type="text" value="186"/>	<input type="text" value="15.50"/>	<input type="text" value="4.72"/>
wheelbase:	<input type="text" value="107"/>	<input type="text" value="8.92"/>	<input type="text" value="2.72"/>
Front Bumper to Front Axle:	<input type="text" value="40"/>	<input type="text" value="3.33"/>	<input type="text" value="1.02"/>
Front Bumper to Front of Front Well:	<input type="text" value="25"/>	<input type="text" value="2.08"/>	<input type="text" value="0.64"/>
Front Bumper to Front of Hood:	<input type="text" value="5"/>	<input type="text" value="0.42"/>	<input type="text" value="0.13"/>
Front Bumper to Base of windshield:	<input type="text" value="51"/>	<input type="text" value="4.25"/>	<input type="text" value="1.30"/>
Front Bumper to Top of windshield:	<input type="text" value="82"/>	<input type="text" value="6.83"/>	<input type="text" value="2.08"/>
Rear Bumper to Rear Axle:	<input type="text" value="39"/>	<input type="text" value="3.25"/>	<input type="text" value="0.99"/>
Rear Bumper to Rear of Rear Well:	<input type="text" value="25"/>	<input type="text" value="2.08"/>	<input type="text" value="0.64"/>
Rear Bumper to Rear of Trunk:	<input type="text" value="8"/>	<input type="text" value="0.67"/>	<input type="text" value="0.20"/>
Rear Bumper to Base of Rear Window:	<input type="text" value="27"/>	<input type="text" value="2.25"/>	<input type="text" value="0.69"/>

**Width Dimensions**

	Inches	Feet	Meters
Maximum width:	<input type="text" value="70"/>	<input type="text" value="5.83"/>	<input type="text" value="1.78"/>
Front Track:	<input type="text" value="59"/>	<input type="text" value="4.92"/>	<input type="text" value="1.50"/>
Rear Track:	<input type="text" value="59"/>	<input type="text" value="4.92"/>	<input type="text" value="1.50"/>

**Vertical Dimensions**

	Inches	Feet	Meters
Height:	<input type="text" value="55"/>	<input type="text" value="4.58"/>	<input type="text" value="1.40"/>
Ground to -			
Front Bumper (Top)	<input type="text" value="22"/>	<input type="text" value="1.83"/>	<input type="text" value="0.56"/>
Headlight - center	<input type="text" value="26"/>	<input type="text" value="2.17"/>	<input type="text" value="0.66"/>
Hood - top front:	<input type="text" value="28"/>	<input type="text" value="2.33"/>	<input type="text" value="0.71"/>
Base of Windshield	<input type="text" value="37"/>	<input type="text" value="3.08"/>	<input type="text" value="0.94"/>
Rear Bumper - top:	<input type="text" value="27"/>	<input type="text" value="2.25"/>	<input type="text" value="0.69"/>
Trunk - top rear:	<input type="text" value="41"/>	<input type="text" value="3.42"/>	<input type="text" value="1.04"/>
Base of Rear Window:	<input type="text" value="43"/>	<input type="text" value="3.58"/>	<input type="text" value="1.09"/>

## 2001 PONTIAC GRAND AM 4 DOOR SEDAN

## Interior Dimensions

	Inches	Feet	Meters
Front Seat Shoulder width	53	4.42	1.35
Front Seat to Headliner	38	3.17	0.97
Front Leg Room - seatback to floor (max)	42	3.50	1.07
Rear Seat Shoulder width	51	4.25	1.30
Rear Seat to Headliner	37	3.08	0.94
Front Leg Room - seatback to floor (min)	36	3.00	0.91
Seatbelts:	3pt - front and rear		
Airbags:	FRONT SEAT AIRBAGS		

## Steering Data

Turning Circle (Diameter)	456	38.00	11.58
Steering Ratio:	:1		
Wheel Radius:	12	1.00	0.30
Tire Size (OEM):	P215/60R15		

## Acceleration &amp; Braking Information

Brake Type:	FRONT DISC - REAR DRUM
ABS System:	ALL WHEEL ABS

Braking, 60 mph to 0 (Hard pedal, no skid, dry pavement):

$$d = 140.0 \text{ ft} \quad t = 3.2 \text{ sec} \quad a = -27.6 \text{ ft/sec}^2 \quad G\text{-force} = -0.86$$

Acceleration:

0 to 30mph	t = 3.6 sec	a = 12.2 ft/sec <sup>2</sup>	G-force = 0.38
0 to 60mph	t = 7.7 sec	a = 11.4 ft/sec <sup>2</sup>	G-force = 0.35
45 to 65mph	t = 6.2 sec	a = 4.7 ft/sec <sup>2</sup>	G-force = 0.15

Transmission Type: 4spd AUTOMATIC

Notes:

Federal Bumper Standard Requirements: 2.5 mph  
 This vehicles Rated Bumper Strength: 2.5 mph

N.S.D.C = 1999 - 2005

## 2001 PONTIAC GRAND AM 4 DOOR SEDAN

## Other Information

Tip-Over Stability Ratio =	<b>1.37</b>	<b>Stable</b>
NHTSA Star Rating (calculated)		<b>****</b>

## Center of Gravity (No Load):

Inches behind front axle	=	<b>38.52</b>
Inches in front of rear axle	=	<b>68.48</b>
Inches from side of vehicle	=	<b>35.00</b>
Inches from ground	=	<b>21.59</b>
Inches from front corner	=	<b>85.97</b>
Inches from rear corner	=	<b>113.04</b>
Inches from front bumper	=	<b>78.52</b>
Inches from rear bumper	=	<b>107.48</b>

## Moments of Inertia Approximations (No Load):

Yaw Moment of Inertia	=	<b>2003.48</b>	lb*ft*sec <sup>2</sup>
Pitch Moment of Inertia	=	<b>1935.84</b>	lb*ft*sec <sup>2</sup>
Roll Moment of Inertia	=	<b>410.88</b>	lb*ft*sec <sup>2</sup>

## Front Profile Information

Angle Front Bumper to Hood Front	=	<b>50.2</b>	deg
Angle Front of Hood to windshield Base	=	<b>11.1</b>	deg
Angle Front of Hood to windshield Top	=	<b>18.0</b>	deg
Angle of windshield	=	<b>27.3</b>	deg
Angle of Steering Tires at Max Turn	=	<b>26.9</b>	deg

## First Approximation Crush Factors:

Speed Equivalent (mph) of Kinetic Energy (KE) used in causing crush of indentation may be evaluated using the following formula, the appropriated Crush Factor (CF), and Maximum Indentation Depth (MID), in feet:

$$V(\text{mph}) = \sqrt{(30 * CF * MID)}$$

KE Equivalent Speed (Front/Rear/Side)	=	21	CF
Bullet vehicle IMPACT SPEED estimation based on TARGET VEHICLE damage ONLY (Tested for Rear/Side Impact only)	=	27	CF

These CF values are based upon analysis of NHTSA Barrier Crash data, and from over 1000 vehicle accidents where independant evaluation of speed was possible. (These are NOT 'A', 'B', 'C', or 'G' values)

The rear Impact data with more then 2-3 inches of crush damage should be looked at carefully, since some vehicles have very weak trunk & fender strength. Therefore, on some cars, especially GM, you estimate from the rear crush data may be high by as much as 4-5 mph (on a crush of 18 inches).

# Stiffness Values and Test Data

Derived from

NHTSA Crash Test

#3617

2001 PONTIAC GRAND AM

Provided By

4N6XPRT StifCalcs®

Registered to:

TUCRRC

800 TUCKER DRIVE

TULSA OK 74104-9700

12R-110829SC03101

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4N6XPRT Systems | 8387 University Avenue | La Mesa, CA 91942 | USA

(800) 266-9778 | (619) 464-3478 | FAX: (619) 464-2206 | Email: 4n6@4n6xpert.com

## Similar Vehicle database reader

You entered: **2001 PONTIAC GRANDAM**

The Sister/Clone Vehicle Year/Model Interchange list indicates the following are Similar Models

Year Range	Make	Model	Body Styles	Wheelbase
1999 - 2004	OLDSMOBILE	ALERO	2D, 4D	107
Remarks:				
1999 - 2005	PONTIAC	GRANDAM	2D, 4D	107, 116
Remarks:				

The data contained in the database has been provided free of charge as a courtesy to the traffic accident reconstruction community by Gregory C. Anderson of Scalia Safety Engineering. 4N6XPRT Systems® has made no changes to this data, and has only provided for distribution of this data free of charge. 4N6XPRT Systems® makes no warranties, either expressed or implied, with respect to this data, its quality, performance, merchantability, or fitness for any particular purpose. The entire risk as to its quality and performance is with the user. In no event will 4N6XPRT Systems® be liable for direct, indirect, incidental, or consequential damages resulting from any data presented here, even if 4N6XPRT Systems® has been advised of the possibility of such damages. The user must agree to assume full responsibility for any decisions which are based, in whole or in part, upon information obtained by using this data. As previously stated, the data has been provided free of charge as a courtesy to the traffic accident reconstruction community by Gregory C. Anderson of Scalia Safety Engineering. Mr. Anderson does not in any way guarantee the accuracy of the data. Some of the listed similarities are based on his own estimates or memory. Most of the data are pulled from specification tables which may contain inaccuracies of their own. Use common sense - if something seems wrong, check it (and if it is wrong, let him know!).

If you have suggestions, corrections, etc., you should contact Greg Anderson at Scalia Safety Engineering, 521 East Washington Avenue, Suite 200, Madison, WI 53703-2914, (608) 256-0820, FAX (608) 256-0212, E-mail: greganderson@cs.com.

**Test Information**

Test #	<b>3617</b>	NHTSA Test Reference Guide Version #	<b>V5</b>
Test Date	<b>2001-01-11</b>	Contract #	<b>DTNH22-97-D-02007</b>
Contract/Study Title	<b>35 MPH NCAP FRONTAL - 2001 PONTIAC GRAND AM 2 DOOR COUPE - M10115</b>		
Test Objective(s)	<b>OBTAIN ATD AND VEHICLE DATA</b>		
Test Type	<b>NEW CAR ASSESSMENT TEST</b>	Configuration	<b>VEHICLE INTO BARRIER</b>
Impact Angle	<b>0</b>	Side Impact Point	<b>0</b> mm <b>0.0</b> inches
		Offset Distance	<b>0</b> mm <b>0.0</b> inches
		Closing Speed	<b>55.9</b> Km/Hr <b>34.73</b> MPH
Test Performer	<b>KARCO ENGINEERING</b>		
Test Reference #	<b>M10115</b>		
Test Track Surface	<b>CONCRETE</b>	Condition	<b>DRY</b>
Ambient Temperature	<b>8</b> C <b>46.4</b> F	Total Number of Curves	<b>133</b>
Data Recorder Type	<b>DIGITAL DATA ACQUISITION</b>	Data Link	<b>OTHER</b>
Test Commentary	<b>NO DATA LINK, ON-BOARD RAM</b>		

**Fixed Barrier Information**

Barrier Type	<b>RIGID</b>	Pole Barrier Diameter	<b>0</b> mm <b>0</b> inches
Barrier Shape	<b>LOAD CELL BARRIER</b>		
Barrier Commentary	<b>NO DATA COLLECTED ON A1, B1, C1, D1, D2, D3, D4, D5, D6, D7, D8, D9</b>		

## 2001 PONTIAC GRAND AM LEFT FRONT SEAT OCCUPANT

Test #	3617	Sex	MALE
Vehicle #	1	Age	0
Location	LEFT FRONT SEAT	Height	0 mm 0.0 inches
Position	CENTER POSITION	Weight	0.0 kg 0 pounds
Type	HYBRID III DUMMY		
Size	50 PERCENTILE		
Calibration Method	HYBRID III		
Occupant Manufacturer	VECTOR, S/N:035		
Occupant Modification	UNMODIFIED		
Occupant Description	NO COMMENTS		
Occupant Commentary	NO COMMENTS		

Head

Head to -

Windshield Header	274	mm	10.8	inches	Head Injury Criteria (HIC)	575
WindShield	530	mm	20.9	inches	HIC Lower Time Interval (ms)	52.7
Seatback	0	mm	0.0	inches	HIC Upper Time Interval (ms)	88.6
Side Header	202	mm	8.0	inches		
Side Window	314	mm	12.4	inches		
Neck to Seatback	0	mm	0.0	inches		
First Contact Region (Head)	AIR BAG					
Second Contact Region (Head)						

Chest

Chest to -

Dash	515	mm	20.3	inches	Arm to Door	121	mm	4.8	inches
Steering Wheel	320	mm	12.6	inches	Hip to Door	132	mm	5.2	inches
Seatback	0	mm	0.0	inches					
Chest Severity Index	0				Pelvic Peak Lateral Acceleration (g's)	0			
Thoracic Trauma Index	0				Thorax Peak Acceleration (g's)	42.4			
Lap Belt Peak Load	5378	Newtons	1209.0	pound Force					
Shoulder Belt Peak Load	5087	Newtons	1143.6	pound Force					
First Contact Region (Chest/Abdomen)	AIR BAG								
Second Contact Region (Chest/Abdomen)	NONE								

Legs

Knees to Dash	149	mm	5.9	inches	Knees to Seatback	0	mm	0.0	inches
Left Femur Peak Load	-4644	Newtons	-1044.0	pounds Force					
Right Femur Peak Load	-2873	Newtons	-645.9	pounds Force					
First Contact Region (Legs)	DASHBOARD								
Second Contact Region (Legs)									



2001 PONTIAC GRAND AM LEFT FRONT SEAT OCCUPANT

Test #	3617	Sex	MALE	
Vehicle #	1	Age	0	
Location	LEFT FRONT SEAT	Height	0 mm	0.0 inches
Position	CENTER POSITION	Weight	0.0 kg	0 pounds
Type	HYBRID III DUMMY			
Size	50 PERCENTILE			
Calibration Method	HYBRID III			
Occupant Manufacturer	VECTOR, S/N:035			
Occupant Modification	UNMODIFIED			
Occupant Description	NO COMMENTS			
Occupant Commentary	NO COMMENTS			

Restraints

Restraint # 1	3 POINT BELT
Mounted	BELT - CONVENTIONAL MOUNT
Deployment	NOT APPLICABLE
Restraint Commentary	NO COMMENTS
Restraint # 2	FRONTAL AIRBAG
Mounted	STEERING WHEEL
Deployment	DEPLOYED PROPERLY
Restraint Commentary	NO COMMENTS

## 2001 PONTIAC GRAND AM RIGHT FRONT SEAT OCCUPANT

Test #	<b>3617</b>	Sex	<b>MALE</b>
Vehicle #	<b>1</b>	Age	<b>0</b>
Location	<b>RIGHT FRONT SEAT</b>	Height	<b>0</b> mm <b>0.0</b> inches
Position	<b>CENTER POSITION</b>	Weight	<b>0.0</b> kg <b>0</b> pounds
Type	<b>HYBRID III DUMMY</b>		
Size	<b>50 PERCENTILE</b>		
Calibration Method	<b>HYBRID III</b>		
Occupant Manufacturer	<b>VECTOR, S/N:034</b>		
Occupant Modification	<b>UNMODIFIED</b>		
Occupant Description	<b>NO COMMENTS</b>		
Occupant Commentary	<b>NO COMMENTS</b>		

**Head**

Head to -

Windshield Header	<b>275</b> mm	<b>10.8</b> inches	Head Injury Criteria (HIC)	<b>493</b>
WindShield	<b>522</b> mm	<b>20.6</b> inches	HIC Lower Time Interval (ms)	<b>56.2</b>
Seatback	<b>0</b> mm	<b>0.0</b> inches	HIC Upper Time Interval (ms)	<b>92.1</b>
Side Header	<b>205</b> mm	<b>8.1</b> inches		
Side Window	<b>309</b> mm	<b>12.2</b> inches		
Neck to Seatback	<b>0</b> mm	<b>0.0</b> inches		
First Contact Region (Head)	<b>AIR BAG</b>			
Second Contact Region (Head)				

**Chest**

Chest to -

Dash	<b>470</b> mm	<b>18.5</b> inches	Arm to Door	<b>38</b> mm	<b>1.5</b> inches
Steering Wheel	<b>0</b> mm	<b>0.0</b> inches	Hip to Door	<b>130</b> mm	<b>5.1</b> inches
Seatback	<b>0</b> mm	<b>0.0</b> inches			
Chest Severity Index	<b>0</b>		Pelvic Peak Lateral Acceleration (g's)	<b>0</b>	
Thoracic Trauma Index	<b>0</b>		Thorax Peak Acceleration (g's)	<b>42</b>	
Lap Belt Peak Load	<b>5469</b> Newtons	<b>1229.5</b> pound Force			
Shoulder Belt Peak Load	<b>5362</b> Newtons	<b>1205.4</b> pound Force			
First Contact Region (Chest/Abdomen)	<b>AIR BAG</b>				
Second Contact Region (Chest/Abdomen)	<b>NONE</b>				

**Legs**

Knees to Dash	<b>128</b> mm	<b>5.0</b> inches	Knees to Seatback	<b>0</b> mm	<b>0.0</b> inches
Left Femur Peak Load	<b>-4316</b> Newtons	<b>-970.3</b> pounds Force			
Right Femur Peak Load	<b>-2220</b> Newtons	<b>-499.1</b> pounds Force			
First Contact Region (Legs)	<b>DASHBOARD</b>				
Second Contact Region (Legs)					

## 2001 PONTIAC GRAND AM RIGHT FRONT SEAT OCCUPANT

Test #	3617	Sex	MALE	
Vehicle #	1	Age	0	
Location	RIGHT FRONT SEAT	Height	0 mm	0.0 inches
Position	CENTER POSITION	Weight	0.0 kg	0 pounds
Type	HYBRID III DUMMY			
Size	50 PERCENTILE			
Calibration Method	HYBRID III			
Occupant Manufacturer	VECTOR, S/N:034			
Occupant Modification	UNMODIFIED			
Occupant Description	NO COMMENTS			
Occupant Commentary	NO COMMENTS			

Restraints

Restraint # 1	3 POINT BELT
Mounted	BELT - CONVENTIONAL MOUNT
Deployment	NOT APPLICABLE
Restraint Commentary	NO COMMENTS
Restraint # 2	FRONTAL AIRBAG
Mounted	DASH PANEL - TOP
Deployment	DEPLOYED PROPERLY
Restraint Commentary	NO COMMENTS

**Vehicle 1 2001 PONTIAC GRAND AM**

Test #	3617				
VIN	1G2NE12T11M523711	NHTSA Test Vehicle Number	1		
Year	2001	Vehicle Modification Indicator	PRODUCTION VEHICLE		
Make	PONTIAC	Post-test Steering Column Shear Capsule Separation	UNKNOWN		
Model	GRAND AM	Steering Column Collapse Mechanism	UNKNOWN		
Body	TWO DOOR COUPE				
Engine	4 CYLINDER TRANSVERSE FRONT				
Displacement	2.4 Liter	Transmission	AUTOMATIC - FRONT WHEEL DRIVE		
Vehicle Modification(s) Description	UNMODIFIED				
Vehicle Commentary	NO COMMENTS				
Vehicle Length	4723 mm	185.9 inches	CG behind Front Axle	1068 mm	42.0 inches
Vehicle Width	1793 mm	70.6 inches	Center of Damage to CG Axis	0 mm	0.0 inches
Vehicle Wheelbase	2718 mm	107.0 inches	Total Length of Indentation	1576 mm	62.0 inches
Vehicle Test Weight	1582 KG	3487 pounds	Maximum Static Crush Depth	463 mm	18.2 inches
			Pre-Impact Speed	56 kph	34.7 mph
Vehicle Damage Index	12FDEW6		Principal Direction of Force	0	

Damage Profile Distance Measurements

(Measured Left-to-Right, Rear-to-Front)

DPD 1	-260 mm	-10.2 inches
DPD 2	-383 mm	-15.1 inches
DPD 3	-460 mm	-18.1 inches
DPD 4	-463 mm	-18.2 inches
DPD 5	-461 mm	-18.1 inches
DPD 6	-335 mm	-13.2 inches

Crush from Pre & Post Test Damage Measurements

	Pre-Test	Post-Test	Crush Depth
Left Bumper Corner	172.1 inches	161.8 inches	10.3 inches
	4371 mm	4109 mm	262 mm
Centerline	185.9 inches	168.2 inches	17.8 inches
	4723 mm	4272 mm	451 mm
Right Bumper Corner	172.1 inches	159.1 inches	13.0 inches
	4371 mm	4041 mm	330 mm

Bumper Engagement  
(Inline Impact Only)

0.0

Sill Engagement  
(Side Impact Only)

NOT APPLICABLE

A-pillar Engagement  
(Side Impact Only)

0.0

Moving Test Cart  
Angle

DIRECT ENGAGEMENT

Magnitude of the Tilt Angle  
Measured between surface of a  
Rollover Test Cart and the Ground

Moving Test Cart/Vehicle  
Crabbed Angle

0.0

Magnitude of the Crabbed Angle  
Measure Clockwise from  
Longitudinal Vector to Velocity Vector of Vehicle

Vehicle Orientation on Cart  
Moving Test Cart

NOT APPLICABLE

Magnitude of the Angle  
Measured between the Vehicle Orientation  
and Direction of Test Cart Motion

**Vehicle 1 2001 PONTIAC GRAND AM**

Test #	3617			
VIN	1G2NE12T11M523711		NHTSA Test Vehicle Number	1
Year	2001		Vehicle Modification Indicator	PRODUCTION VEHICLE
Make	PONTIAC	Post-test Steering Column Shear Capsule Separation	UNKNOWN	
Model	GRAND AM		Steering Column Collapse Mechanism	UNKNOWN
Body	TWO DOOR COUPE			
Engine	4 CYLINDER TRANSVERSE FRONT			
Displacement	2.4	Liter	Transmission	AUTOMATIC - FRONT WHEEL DRIVE
Vehicle Modification(s) Description	UNMODIFIED			
Vehicle Commentary	NO COMMENTS			
Vehicle Length	4723	mm	185.9	inches
Vehicle Width	1793	mm	70.6	inches
Vehicle Wheelbase	2718	mm	107.0	inches
Vehicle Test Weight	1582	KG	3487	pounds
			CG behind Front Axle	1068 mm 42.0 inches
			Center of Damage to CG Axis	0 mm 0.0 inches
			Total Length of Indentation	1576 mm 62.0 inches
			Maximum Static Crush Depth	463 mm 18.2 inches
			Pre-Impact Speed	56 kph 34.7 mph
Vehicle Damage Index	12FDEW6		Principal Direction of Force	0

Pre & Post Test Damage Measurements

(Measurements are taken in a longitudinal direction. Except for Engine Block, all measurements are take from the Rear Vehicle Surface forward.)

Left Side				Centerline				Right Side			
Pre-Test		Post-Test		Pre-Test		Post-Test		Pre-Test		Post-Test	
mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches
Length of Vehicle at Centerline											
4723	185.9	4272	168.2								
Engine Block											
230	9.1	230	9.1								
Front Bumper Corner											
4371	172.1	4109	161.8					4371	172.1	4041	159.1
Front of Engine											
3873	152.5	3832	150.9								
Firewall											
3543	139.5	3480	137.0					3593	141.5	3531	139.0
3205	126.2	3197	125.9					3196	125.8	3192	125.7
3177	125.1	3171	124.8					3174	125.0	3177	125.1
3170	124.8	3162	124.5					3166	124.6	3181	125.2
1880	74.0	1876	73.9					1875	73.8	1876	73.9
1849	72.8	1845	72.6					1842	72.5	1855	73.0
Steering Column											
2883	113.5	2815	110.8								
Center of Seering Column to 'A' Post (Horizontal)											
400	15.7	386	15.2								
Center of Steering Column to Headliner (Vertical)											
418	16.5	395	15.6								

# 2001 PONTIAC GRAND AM

NHTSA Crash Test - #3617 - Front Impact

Pre/Post Depths - Vehicle Width - Closing Speed - Trapezoidal Average

Test Vehicle Weight = 3487 pounds  
 Vehicle Closing Speed = 34.7 mph  
 Test Crush Length = 70.6 inches

### Pre/Post Collision Crush Depths (inches)

	Left Side Crush	Centerline Crush	Right Side Crush	(Pass. Side)
(Driver Side)	10.3	17.8	13.0	

### CRASH 3 Stiffness Coefficients

### SMAC Stiffness

Minimum Crush = 10.3 inches  
 Using a Rated No Damage Speed of 2.5mph  
 Using a Rated No Damage Speed of 5.0mph  
 Using a Rated No Damage Speed of 7.5mph  
 Using a Rated No Damage Speed of 10.0mph  
 Average Crush = 14.7 inches  
 Using a Rated No Damage Speed of 2.5mph  
 Using a Rated No Damage Speed of 5.0mph  
 Using a Rated No Damage Speed of 7.5mph  
 Using a Rated No Damage Speed of 10.0mph  
 Maximum Crush = 17.8 inches  
 Using a Rated No Damage Speed of 2.5mph  
 Using a Rated No Damage Speed of 5.0mph  
 Using a Rated No Damage Speed of 7.5mph  
 Using a Rated No Damage Speed of 10.0mph

	A	B	G	Kv
				450.3
	309.8	387.8	123.7	
	571.6	330.0	495.0	
	785.3	276.9	1113.7	
	951.0	228.4	1980.0	
				221.1
	217.1	190.4	123.7	
	400.5	162.0	495.0	
	550.2	135.9	1113.7	
	666.3	112.1	1980.0	
				150.8
	179.3	129.9	123.7	
	330.8	110.5	495.0	
	454.4	92.7	1113.7	
	550.3	76.5	1980.0	

Rated No Damage Speed = Impact speed with a barrier resulting in no permanent vehicle deformation

Normal "Rated No Damage Speed" is 2.5 or 5 mph. Some Specific vehicles may, however, have a higher rating

A = Maximum force per inch of damage without permanent damage, lb/in  
 B = Crush resistance per inch of damage width (Crash), lb/in<sup>2</sup>  
 G = Energy dissipated without permanent damage, lb  
 Kv = Crush resistance per inch of damage width (SMAC), lb/in<sup>2</sup>

\*\*\*\*\*

### 4N6XPRT System's First Approximation Crush Factor (CF)

Speed from Crush calculation using a generic CF of 21 as suggested in Expert AutoStats

$$KE \text{ Speed (mph)} = \text{SQRT}(30 * CF * \text{max crush in feet})$$

Crush Factor	Maximum Crush (inches)	Calculated KE Speed (mph)	Calculated Error (mph)	Calculated Error (%)
21	17.8	30.6	-4.2	-13.6

**4N6XPRT Systems Specific Crush Factor (CF Specific to this test) = 27.1**

$$CF = (\text{mph} * \text{mph}) / (30 * \text{max crush in feet}), \text{ dimensionless}$$

**4N6XPRT Systems CF is calculated based upon the data reported and is specific to this vehicle and this test**

# 2001 PONTIAC GRAND AM

NHTSA Crash Test - #3617 - Front Impact

Pre/Post Depths - Indentation Length - Closing Speed - Trapezoidal Average

Test Vehicle Weight = 3487 pounds  
 Vehicle Closing Speed = 34.7 mph  
 Test Crush Length = 62.0 inches

### Pre/Post Collision Crush Depths (inches)

	Left Side Crush	Centerline Crush	Right Side Crush	(Pass. Side)
(Driver Side)	10.3	17.8	13.0	

### CRASH 3 Stiffness Coefficients

### SMAC Stiffness

Minimum Crush = 10.3 inches  
 Using a Rated No Damage Speed of 2.5mph  
 Using a Rated No Damage Speed of 5.0mph  
 Using a Rated No Damage Speed of 7.5mph  
 Using a Rated No Damage Speed of 10.0mph

Average Crush = 14.7 inches  
 Using a Rated No Damage Speed of 2.5mph  
 Using a Rated No Damage Speed of 5.0mph  
 Using a Rated No Damage Speed of 7.5mph  
 Using a Rated No Damage Speed of 10.0mph

Maximum Crush = 17.8 inches  
 Using a Rated No Damage Speed of 2.5mph  
 Using a Rated No Damage Speed of 5.0mph  
 Using a Rated No Damage Speed of 7.5mph  
 Using a Rated No Damage Speed of 10.0mph

	A	B	G	Kv
Minimum Crush = 10.3 inches				512.4
Using a Rated No Damage Speed of 2.5mph	352.5	441.3	140.8	
Using a Rated No Damage Speed of 5.0mph	650.3	375.5	563.2	
Using a Rated No Damage Speed of 7.5mph	893.4	315.0	1267.1	
Using a Rated No Damage Speed of 10.0mph	1081.9	259.8	2252.6	
Average Crush = 14.7 inches				251.5
Using a Rated No Damage Speed of 2.5mph	247.0	216.6	140.8	
Using a Rated No Damage Speed of 5.0mph	455.7	184.3	563.2	
Using a Rated No Damage Speed of 7.5mph	626.0	154.6	1267.1	
Using a Rated No Damage Speed of 10.0mph	758.1	127.6	2252.6	
Maximum Crush = 17.8 inches				171.6
Using a Rated No Damage Speed of 2.5mph	204.0	147.7	140.8	
Using a Rated No Damage Speed of 5.0mph	376.3	125.7	563.2	
Using a Rated No Damage Speed of 7.5mph	517.0	105.5	1267.1	
Using a Rated No Damage Speed of 10.0mph	626.0	87.0	2252.6	

Rated No Damage Speed = Impact speed with a barrier resulting in no permanent vehicle deformation

Normal "Rated No Damage Speed" is 2.5 or 5 mph. Some Specific vehicles may, however, have a higher rating

A = Maximum force per inch of damage without permanent damage, lb/in

B = Crush resistance per inch of damage width (Crash), lb/in<sup>2</sup>

G = Energy dissipated without permanent damage, lb

Kv = Crush resistance per inch of damage width (SMAC), lb/in<sup>2</sup>

\*\*\*\*\*

### 4N6XPRT System's First Approximation Crush Factor (CF)

Speed from Crush calculation using a generic CF of 21 as suggested in Expert AutoStats

$$KE \text{ Speed (mph)} = \text{SQRT}(30 * CF * \text{max crush in feet})$$

Crush Factor	Maximum Crush (inches)	Calculated KE Speed (mph)	Calculated Error (mph)	Calculated Error (%)
21	17.8	30.6	-4.2	-13.6

**4N6XPRT Systems Specific Crush Factor (CF Specific to this test) = 27.1**

$$CF = (\text{mph} * \text{mph}) / (30 * \text{max crush in feet}), \text{ dimensionless}$$

**4N6XPRT Systems CF is calculated based upon the data reported and is specific to this vehicle and this test**

**Available Test Results**  
**Front Impact Test Summary**

Report Filter Settings

Year Range: 1999 - 2005  
 Make: PONTIAC  
 Model: GRANDAM

Test Number	Vehicle Info	No Damage Speed (mph)	Max Crush (inch)	Closing Speed (mph)	Vehicle Width Stiffness Values				Crush Factor
					A	B	G	Kv	
3617	2001 PONTIAC GRAND AM TWO DOOR COUPE	5.0	18.2	34.7	323.0	105.4	495.0	143.8	26.5
4145	2000 OLDSMOBILE ALERO TWO DOOR COUPE	5.0	23.1	24.9	174.1	30.1	504.3	47.1	10.8
<b>Average (AVG)</b>					<b>248.6</b>	<b>67.7</b>	<b>499.6</b>	<b>95.4</b>	<b>18.6</b>
<b>Minimum (MIN)</b>					<b>174.1</b>	<b>30.1</b>	<b>495.0</b>	<b>47.1</b>	<b>10.8</b>
<b>Maximum (MAX)</b>					<b>323.0</b>	<b>105.4</b>	<b>504.3</b>	<b>143.8</b>	<b>26.5</b>
<b>Standard Deviation (STDev-sample)</b>					<b>105.2</b>	<b>53.2</b>	<b>6.6</b>	<b>68.4</b>	<b>11.1</b>
<b>Number of Tests (n)</b>				<b>2</b>					



# 4N6XPRT Systems

Expert System Software for Litigation

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E-Mail: [4n6@4n6xpert.com](mailto:4n6@4n6xpert.com)

The NHTSA Crash Test database contains only TWO FRONT Impact tests, based on Maximum Crush measurements, for the Pontiac Grand Am in the desired year range.

To create a SIMILAR class of vehicle, we used the reported test weight of 3487 pounds for Test # 3617.

We then looked at the NHTSA database for CARS within the year range of 1990-2013 that have FRONT IMPACT TESTS and had a weight range of 3477-3497 pounds (+/- 10 pounds).

The Test Summary Reports based on the Average and Maximum crush depths follow.

4N6XPRT StifCalcs®

**Available Test Results**  
**Front Impact Test Summary**

**Report Filter Settings**

Year Range: 1990 - 2013

Vehicle Weight Range: 3477-3497

Test Number	Vehicle Info	No		Closing Speed (mph)	Vehicle Width Stiffness Values				Crush Factor
		Damage Speed (mph)	Average Crush (inch)		A	B	G	Kv	
1632	1991 FORD MUSTANG CONVERTIBLE	5.0	16.9	29.5	293.8	85.3	506.0	123.6	20.6
1707	1992 TOYOTA CAMRY FOUR DOOR SEDAN	5.0	15.5	29.5	316.6	100.2	500.1	145.2	22.5
3188	2000 HONDA ACCORD FOUR DOOR SEDAN	5.0	18.5	35.0	323.1	104.8	497.8	142.7	26.5
6699	2009 KIA OPTIMA FOUR DOOR SEDAN	5.0	14.7	29.6	325.7	109.0	486.7	157.8	23.8
1875	1993 HONDA ACCORD FOUR DOOR SEDAN	5.0	19.0	34.8	326.7	102.7	519.9	140.0	25.5
4457	2003 HONDA ACCORD TWO DOOR COUPE	5.0	18.1	35.1	326.8	108.6	491.6	147.7	27.2
6181	2008 SUBARU IMPREZA FOUR DOOR SEDAN	5.0	18.6	34.7	327.9	104.5	514.3	142.7	25.8
2806	1998 FORD MUSTANG TWO DOOR COUPE	5.0	17.6	34.9	332.1	112.9	488.6	153.8	27.7
4488	2003 MAZDA MAZDA6 FOUR DOOR SEDAN	5.0	17.4	34.7	338.1	115.0	496.8	157.1	27.6
3643	2001 NISSAN MAXIMA FOUR DOOR SEDAN	5.0	17.6	34.8	340.1	115.0	502.9	156.9	27.5
4137	2001 FORD ESCAPE FIVE DOOR HATCHBACK	5.0	14.3	29.5	341.4	117.4	496.5	170.2	24.4
5710	2001 HONDA CIVIC TWO DOOR COUPE	5.0	18.0	34.9	348.8	115.8	525.2	157.8	27.1
3660	2001 DODGE STRATUS TWO DOOR COUPE	5.0	16.8	34.8	354.6	125.8	499.6	171.6	28.9
2676	1998 DODGE STRATUS FOUR DOOR SEDAN	5.0	17.9	35.0	361.7	120.9	540.8	164.7	27.3
3617	2001 PONTIAC GRAND AM TWO DOOR COUPE	5.0	15.5	34.7	378.9	145.0	495.0	197.9	31.1
2154	1995 FORD CONTOUR FOUR DOOR SEDAN	5.0	14.9	34.9	403.8	161.9	503.4	220.6	32.7
5661	2007 DODGE CALIBER FIVE DOOR HATCHBACK	5.0	14.3	34.9	428.2	179.7	510.1	244.8	34.2
2678	1996 TOYOTA CAMRY FOUR DOOR SEDAN	5.0	14.5	37.8	451.9	204.1	500.1	271.2	39.3
4725	2002 NISSAN ALTIMA FOUR DOOR SEDAN	5.0	13.8	37.4	469.9	221.3	498.8	294.9	40.7
<b>Average (AVG)</b>					<b>357.4</b>	<b>129.0</b>	<b>503.9</b>	<b>176.9</b>	<b>28.4</b>
<b>Minimum (MIN)</b>					<b>293.8</b>	<b>85.3</b>	<b>486.7</b>	<b>123.6</b>	<b>20.6</b>
<b>Maximum (MAX)</b>					<b>469.9</b>	<b>221.3</b>	<b>540.8</b>	<b>294.9</b>	<b>40.7</b>
<b>Standard Deviation (STDev-sample)</b>					<b>48.0</b>	<b>36.9</b>	<b>13.3</b>	<b>47.4</b>	<b>5.2</b>
<b>Number of Tests (n)</b>				<b>19</b>					

4N6XPRT StifCalcs®

**Available Test Results  
Front Impact Test Summary**

**Report Filter Settings**

Year Range: 1990 - 2013

Vehicle Weight Range: 3477-3497

Test Number	Vehicle Info	No Damage Speed (mph)	Max Crush (inch)	Closing Speed (mph)	-----V e h i c l e   W i d t h-----				Crush Factor
					-----S t i f f n e s s   V a l u e s-----				
					A	B	G	Kv	
2678	1996 TOYOTA CAMRY FOUR DOOR SEDAN	5.0	26.4	37.8	248.6	61.8	500.1	82.1	21.6
1613	1991 FORD MUSTANG CONVERTIBLE	5.0	19.5	29.2	254.3	63.2	511.9	92.0	17.5
1627	1992 ACURA VIGOR FOUR DOOR SEDAN	5.0	17.7	29.5	275.1	76.1	497.1	110.4	19.7
2676	1998 DODGE STRATUS FOUR DOOR SEDAN	5.0	23.4	35.0	276.9	70.9	540.8	96.5	20.9
1632	1991 FORD MUSTANG CONVERTIBLE	5.0	17.9	29.5	277.0	75.8	506.0	109.9	19.5
4457	2003 HONDA ACCORD TWO DOOR COUPE	5.0	21.0	35.1	281.5	80.6	491.6	109.6	23.4
1707	1992 TOYOTA CAMRY FOUR DOOR SEDAN	5.0	17.4	29.5	281.8	79.4	500.1	115.1	20.0
6699	2009 KIA OPTIMA FOUR DOOR SEDAN	5.0	16.9	29.6	282.6	82.1	486.7	118.9	20.7
6181	2008 SUBARU IMPREZA FOUR DOOR SEDAN	5.0	21.6	34.7	283.2	78.0	514.3	106.4	22.3
4488	2003 MAZDA MAZDA6 FOUR DOOR SEDAN	5.0	20.6	34.7	286.4	82.5	496.8	112.7	23.4
4137	2001 FORD ESCAPE FIVE DOOR HATCHBACK	5.0	16.8	29.5	290.3	84.9	496.5	123.0	20.8
3188	2000 HONDA ACCORD FOUR DOOR SEDAN	5.0	20.6	35.0	290.5	84.8	497.8	115.4	23.8
1875	1993 HONDA ACCORD FOUR DOOR SEDAN	5.0	21.1	34.8	293.6	82.9	519.9	113.1	23.0
3660	2001 DODGE STRATUS TWO DOOR COUPE	5.0	19.8	34.8	301.1	90.8	499.6	123.7	24.5
2806	1998 FORD MUSTANG TWO DOOR COUPE	5.0	18.5	34.9	316.7	102.6	488.6	139.8	26.4
3643	2001 NISSAN MAXIMA FOUR DOOR SEDAN	5.0	18.9	34.8	317.2	100.0	502.9	136.4	25.6
3617	2001 PONTIAC GRAND AM TWO DOOR COUPE	5.0	18.2	34.7	323.0	105.4	495.0	143.8	26.5
4725	2002 NISSAN ALTIMA FOUR DOOR SEDAN	5.0	19.5	37.4	331.8	110.3	498.8	147.0	28.7
5710	2001 HONDA CIVIC TWO DOOR COUPE	5.0	18.7	34.9	336.8	108.0	525.2	147.1	26.1
5661	2007 DODGE CALIBER FIVE DOOR HATCHBACK	5.0	17.3	34.9	352.3	121.6	510.1	165.7	28.1
2154	1995 FORD CONTOUR FOUR DOOR SEDAN	5.0	16.0	34.9	376.9	141.1	503.4	192.2	30.5
1459	1990 MERCEDES 190 FOUR DOOR SEDAN	5.0	13.4	34.8	468.5	208.6	526.1	284.4	36.2
<b>Average (AVG)</b>					<b>306.6</b>	<b>95.1</b>	<b>505.0</b>	<b>131.1</b>	<b>24.1</b>
<b>Minimum (MIN)</b>					<b>248.6</b>	<b>61.8</b>	<b>486.7</b>	<b>82.1</b>	<b>17.5</b>
<b>Maximum (MAX)</b>					<b>468.5</b>	<b>208.6</b>	<b>540.8</b>	<b>284.4</b>	<b>36.2</b>
<b>Standard Deviation (STDev-sample)</b>					<b>47.6</b>	<b>31.8</b>	<b>13.4</b>	<b>42.4</b>	<b>4.3</b>
<b>Number of Tests (n)</b>				<b>22</b>					

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Dear Conference Attendee,

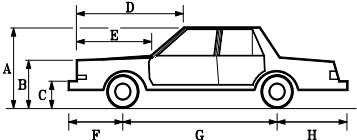
We at 4N6XPRT Systems in conjunction with the Tulsa University Crash Reconstruction Research Consortium (TUCRRC) were pleased to be able to provide you with the preceding data for the crash test vehicles.

Information regarding the Services available to you through 4N6XPRT Systems, as well as the Programs used to create the data report follows this page.

We look forward to providing you similar information in the near future.

Sincerely,

Daniel W. Vomhof III  
Daniel W. Vomhof, Ph.D.



## Expert AutoStats®

Expert AutoStats® is a program that has over 42,000 cars, pick-ups, vans, and utility vehicles that range in years from the 1940's to the present. Expert AutoStats® has specifications that can assist in reconstructing accidents when the data for the vehicle is unavailable or the vehicle is too severely damaged to get correct measurements.

For many vehicles mid-1960's to present, data such as bumper height, front and rear overhang, hood height, etc., are also included.

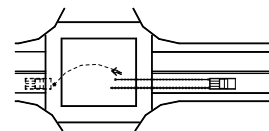
2011 FORD POLICE INTERCEPTOR (3.27) MSP POLICE PKG 4 DOOR SEDAN			
<b>Horizontal Dimensions</b>		<b>Vertical Dimensions</b>	
Length	212 in.	Height	58 in.
Wheelbase	115 in.	Ground to:	
Front Bumper to Front Axle	43 in.	Front Bumper (Top)	23 in.
Front Bumper to Front of Hood	8 in.	Headlight - Center	27 in.
Front Bumper to Base of Windshield	65 in.	Hood - Top Front	31 in.
Front Bumper to Top of Windshield	91 in.	Base of Windshield	39 in.
Front Bumper to Front Wheel Well	26 in.	Rear Bumper (Top)	25 in.
Rear Bumper to Rear of Trunk	8 in.	Trunk - Top Rear	39 in.
Rear Bumper to Base of Rear Window	38 in.	Base of Rear Window	40 in.
Rear Bumper to Rear Well	38 in.		
Rear Bumper to Rear Axle	54 in.		
		<b>Weight Dimensions</b>	
		Curb Weight	4184 lbs.
<b>Depth Dimensions</b>		Curb Weight Distribution:	
Width	78 in.	Front =	56 %
Front Track	63 in.	Rear =	44 %
Rear Track	66 in.	Gross Vehicle Weight Rating	5500 lbs.

Biomechanics is the application of physics to describe, evaluate, or model living tissue and biological materials. Originally it was the application of the part of physics known as Mechanics to living systems. This is the same portion of physics which is used as the basis for much of accident reconstruction.

Biomechanics is important in many aspects of forensic work from vehicle accident reconstruction to slip-trip-stumble-fall cases. This particular program contains modules containing information on a variety of biomechanics and injury modalities, physical data found in the literature for failure of bone and tissue, calculation modules to evaluate individual specific parameters, and definitions and terminology used in the literature and found in medical reports.

4N6XPRT BioMeknx® is a program designed for the accident investigator. The BioMeknx program incorporates information from a number of different sources, as well as over 30 years of reconstruction experience. 4N6XPRT BioMeknx™ compiles into one source a number of items of information to assist in reconstructing accidents by tying in the human component more tightly without the need to be a BioMechanics expert. Identification of body location, body part illustrations, failure threshold limits, definitions of terms, calculation modules for body link lengths, weights, stride lengths, and formulas for other types of calculations are only some of the material included in the program.

To gather into your library the material included in the 4N6XPRT BioMeknx™, you would need a minimum of 10-15 Anatomy and Physiology, Human Factors, and Biomechanics books, as well as conduct over 50 hours of internet research.



## 4N6XPRT Ped & Bike Calcs®

The 4N6XPRT Ped & Bike Calcs® program is a program that provides FIRST ESTIMATE calculations to evaluate the speed of a vehicle involved in striking a pedestrian or bicyclist, IF Vehicle, scene, and pedestrian {or pedestrian and bicycle in a vehicle-bike accident} measurements are available. This program may also be used when skateboards or roller skates are involved.



>>>Calculate Time given D & V<<<  
Enter Distance (in feet) : 45  
Enter Velocity (in mph) : 6

## Expert Qwic Calcs®

Expert Qwic Calcs® quickly provides answers to questions important in vehicle collision litigation. The user inputs data in response to relevant questions, Expert Qwic Calcs® performs the mathematical calculations required. Both the input data and the calculated result are then displayed, and may be "dumped" to a printer.

When the law enforcement accident report gives insufficient information to do a full - blown accident reconstruction, Expert Qwic Calcs® may be used to "scope out" the parameters of speeds, times, and distances to determine these relationships in a vehicle accident.

## Expert VIN DeCoder®

3FAPP1280MR117253



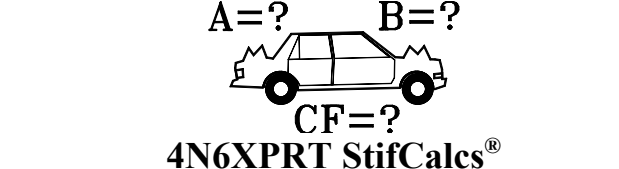
Expert VIN DeCoder® is a program that "DeCodes" the 17 character VIN number for Cars, Vans, Pickups, and Utility vehicles manufactured from 1981 to the present.

Cars/Vans/Utility/Lt. Trucks Modules: 1981 to Present  
Ford Chevrolet/Geo  
Mercury/Lincoln Pontiac / Buick / Oldsmobile  
Chrysler/AMC/Jeep Cadillac/Saturn  
European Import Asian Import

## 4N6XPRT BioMeknx®



Collecting the Biomechanical data of importance to the Accident Investigator into one easily accessible reference location



4N6XPRT StifCalcs®. Is a program which puts the NHTSA Crash Test database at your fingertips with no need to access the internet in order to obtain Stiffness Values!

In addition to the NHTSA Crash Test data, the program includes a "Similar Vehicle List Reader" which allows quick retrieval of the data for the desired and "similar" vehicle(s). This will drive the initial selection of the available tests. Alternatively, we have an ADVANCED SEARCH module which allows the creation of "Class" vehicles.

## WITHOUT THE INTERNET the user can:

- ★ Lookup individual tests and get basic front, side, and rear STIFFNESS VALUES from these tests. The values are based on the reported crush depths and lengths within each test.
- ★ Obtain Similar Vehicle group summary STIFFNESS data with Statistical measures.
- ★ Create "CLASS" vehicles and get summary STIFFNESS data with Statistical measures.

## FRONTAL STATISTICAL MEASURES EXAMPLE:

	-----Vehicle Width-----			
	A	B	G	Kv
Average (AVG)	305.7	93.5	523.6	143.1
Minimum (MIN)	115.0	13.2	465.2	23.5
Maximum (MAX)	461.6	200.0	614.1	387.3
Standard Deviation (STDev-sample)	73.4	38.4	36.2	72.8
Number of Tests (n)	53			

## Expert TireStuf®



The Expert TireStuf® program is a Menu Driven program which has 19 modules explaining the various tire size designation systems, the information which MAY be in the DOT tire number, the DOT mandated Tire Grading system, Lug Nut Tightening and Tire Rotation schemes, Mix and Match precautions, a glossary of Tire Terms, and Addresses of a few of the sources of additional information on tires and rims.

Also included is a calculation of the number of revolutions in one mile given the tire dimensions.

## WITH THE INTERNET the user can:

- ★ RESEARCH and easily download the PICTURES, VIDEOS, and REPORTS available for individual tests

- 1 - Select the desired Test
- 2 - Click the **NHTSA DOWNLOAD** button
- 3 - Check the boxes for the media you want to download
- 4 - Click the **DOWNLOAD CHECKED MEDIA** button
- 5 - Watch the selected media download, OR ... continue working on other things while the download progresses
- 6 - When the downloads are complete, find the media in the desired SAVE directory under the Test number.



Please use this order form when ordering. Due to conditions and rising costs beyond our control, Shipping & Handling for program orders must be paid per the included schedule.

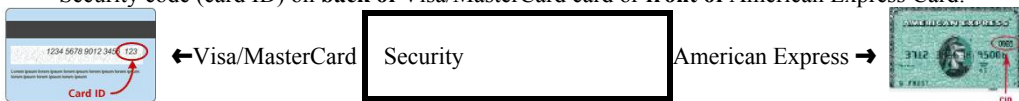
Contact Name: \_\_\_\_\_  
 Title: \_\_\_\_\_  
 Company/Organization: \_\_\_\_\_  
 Street: \_\_\_\_\_  
 City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Phone: (\_\_\_\_) \_\_\_\_\_ FAX: (\_\_\_\_) \_\_\_\_\_

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**PROGRAM ORDER FORM:**

*(Pricing effective as of 8/30/12 - prices subject to change without notice)*

Expert AutoStats®: \$ 625.00 \* \$ \_\_\_\_\_  
 4N6XPRT BioMeknx®: \$ 495.00 \* \$ \_\_\_\_\_  
 4N6XPRT Ped & Bike Calcs®: \$ 375.00 \* \$ \_\_\_\_\_  
 Expert Qwic Calcs®: \$ 275.00 \* \$ \_\_\_\_\_  
 Expert TireStuf®: \$ 85.00 \* \$ \_\_\_\_\_  
 4N6XPRT StifCalcs®: \$ 650.00 \* \$ \_\_\_\_\_  
 Expert VIN DeCoder®: \$ 550.00 \* \$ \_\_\_\_\_

**SUB-TOTAL** \$ \_\_\_\_\_

Handling \*\*: \$ \_\_\_\_\_

**( Cash or Check with order = \$5.00, Credit Card = \$10.00, Govt. Purchase Order = \$15.00 )**

Notarized Affidavit Filing Requirement \$ \_\_\_\_\_

**( \$25.00 per required Notarized Signature )**

*Normal delivery is via electronic download*

- Deliver via electronic download link (e-mail address required) \$ 0.00

- Deliver on USB - **additional cost of \$35.00 / disk / program** \$ \_\_\_\_\_

**SUB-TOTAL** \$ \_\_\_\_\_

California shipping addresses add **8.50%** sales tax \$ \_\_\_\_\_

*(California orders delivered electronically **DO NOT** owe sales tax)*

**TOTAL** \$ \_\_\_\_\_

**Individual Vehicle Data FAX/Order Form**

Expert VIN Decoder & Expert AutoStats

NHTSA Crash Test Results

BOTH

**Please circle ALL OPTIONS that apply**

YEAR & MAKE: \_\_\_\_\_

MODEL: \_\_\_\_\_

If you are requesting **VIN DeCoder & AutoStats** please also provide:

Vehicle Type: Car - Pickup - Utility - Van  
 No. of Doors: 2/3/4/5  
 Car Body Style: Coupe/Conv./Sedan/Wagon  
 DRIVE WHEELS: 4x2 / 4x4  
 PICKUPS: Dual Rear Wheel - Std. / Extra / Super / Crew Cab - Short Bed / Long Bed  
 VANS: Cargo / Passenger - Short / Long Wheelbase

VIN Information

\_\_\_\_\_  
 1 2 3 4 5 6 7 8 9  
 \_\_\_\_\_  
 10 11 12 13 14 15 16 17

NHTSA Crash Test Information

Impact location - Front / Side / Rear  
 Impact Speed - Lower / Higher

Case Reference/Number: \_\_\_\_\_

**Individual Vehicle Data Search Service®**

**Charges & Services**

Individual Vehicle Specifications

**\$40.00-First vehicle\***, \$35.00/Additional Vehicles\*, \$20.00/Additional Similar Model\*

Medium/Heavy Truck Specifications

**\$40.00-First vehicle\***, \$35.00/Additional Vehicles\*, \$20.00/Additional Similar Model\*

Motorcycle Specifications (1970+)

**\$40.00-First cycle\***, \$35.00/Additional cycles\*, \$20.00/Additional Similar Model\*

NHTSA Crash Test Results

**\$40.00 per test** - Includes A, B, & G values  
 Calculations are based on the test results

Individual Vehicle Specifications

Now you can get the Expert AutoStats® data for the vehicles in your case **QUICKLY, EASILY, and ECONOMICALLY**, instead of guessing, or begging a printout from a friend.

Our vehicle database includes dimensions on over 42,000 Cars, Vans, Lt. Pickups, and Utility Vehicles covering 1945 to the present.

Minimum Vehicle specifications include:

Overall Length	Curb Weight
Overall Width	Weight Distribution
Overall Height	Front/Rear Track
Wheelbase	CG Location
Model years with No Significant Dimensional Changes VIN DeCoding when VIN is provided Information available	
Mid-60's to present <b>also includes</b> (when available)	
Front/Rear Overhang	Bumper Heights
Hood height	Turning Circle
Bumper-to-hood	Ground-to-hood

Dimensions are given in both Imperial and metric (SI) units.

Motorcycle specifications will be similar to the Vehicle specifications with appropriate changes where applicable.

NHTSA Crash Test Results

Test results include: General Test information, Barrier Data when provided, Vehicle Data as reported by the testing organization, Occupant (Dummy) data when provided, and A-B-G Stiffness calculations based on the test results.

**4N6XPRT Systems®**

Providing Vehicle dimensional data, VIN DeCoding, and NHTSA Crash Test Results as a service to the Litigation community, in the form of:

Expert Systems Software Programs for Litigation

**Expert AutoStats®**

**4N6XPRT StifCalcs®**

**4N6XPRT BioMeknx®**

**4N6XPRT Ped & Bike Calcs®**

**Expert Qwic Calcs®**

**Expert TireStuf®**

**Expert VIN DeCoder®**

Vehicle Data Service

**Individual Vehicle Data Search Service®**

8387 University Avenue, Suite P  
 La Mesa, CA 91942-9342

Phone: 1-800-266-9778

Fax: (619) 464-2206

E-Mail: [4n6@4n6xpert.com](mailto:4n6@4n6xpert.com)

Web: <http://www.4n6xpert.com>

Authorized signature: \_\_\_\_\_

## Expert VIN DeCoder®

Expert VIN DeCoder® is a program that "DeCodes" the 17 character VIN number for vehicles manufactured from 1981 to the present.

### Modules: 1981 to Present

Control Module - One Required per Set

Ford Cars (includes Festiva & Merkur)  
Mercury/Lincoln Cars  
Ford vans/Utility/Lt. Trucks

Chevrolet/Geo Cars  
Pontiac/GM of Canada Cars  
Oldsmobile Cars  
Buick Cars  
Cadillac/Saturn Cars

General Motors Vans/Utility/Lt. Trucks

Chrysler/AMC/Jeep Cars  
Chrysler/Jeep Vans/Utility/Lt. Trucks

European Import Cars/Vans/Utility/Lt. Trucks  
Asian Import Cars/Vans/Utility/Lt. Trucks

## SYSTEM REQUIREMENTS

Expert VIN DeCoder® has been tested on a wide variety of IBM laptop and desktop clones ranging from 8088 through Pentium® chips. A math co-processor chip is NOT required. Expert VIN DeCoder® has also been tested under the various versions of MS-DOS 3.0 thru 7.0, DrDOS 6.0, and PC DOS 7.0. It also works as a DOS program under Windows 3.x, Windows, 95, Windows 98, Windows NT, OS/2 2.x, OS/2 Warp, and various versions of LINUX.

A variety of dot matrix printers emulating the EPSON series have been used with no difficulty. The output is also compatible with the Hewlett-Packard II, IIP, III and IIIP Laser printers. Expert VIN DeCoder® works with monochrome and color monitors.

As of April 1995 the 4N6XPRT Systems® programs Expert AutoStats®, Expert Qwic Calcs®, Expert TireStuf®, 4N6XPRT Ped & Bike Calcs®, and Expert VIN DeCoder® are accessible from within RECTEC.

## PLEASE PRINT

Contact Name: \_\_\_\_\_  
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City: \_\_\_\_\_ State: \_\_\_\_ Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_  
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Expert VIN DeCoder®  
\_\_\_\_\_ (copies) x \$550.00 ..... = \$ \_\_\_\_\_  
Handling \*\*: \$ \_\_\_\_\_  
( Check with order = \$5.00, Credit Card = \$10.00 , Govt. P.O.r = \$15.00 )  
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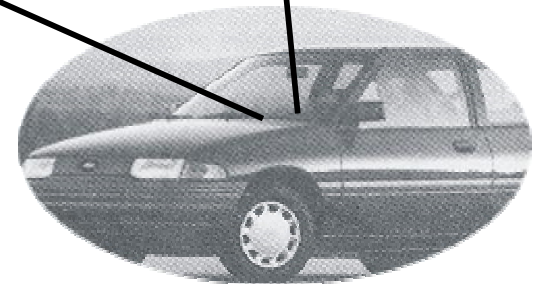
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# Expert VIN DeCoder®

3FAPP1280MR117253



User Friendly Software to provide interpretation of the 17 character VIN Number on Cars, Lt. Pickups, Utility Vehicles, and Vans.

## 4N6XPRT Systems®

Forensic Expert Software  
8387 University Avenue  
La Mesa, CA 91942-9342

**Web: <http://www.4n6xpirt.com>**

**E-Mail: [VIN@4n6xpirt.com](mailto:VIN@4n6xpirt.com)**

**1-800-266-9778**

## Expert VIN DeCoder® example

---

### INPUT:

1) Enter VIN Numbers to be DeCoded: 3FAPP1280MR117253  
-----

**3FA PP128 0 MR 117253**

2) Is this the VIN Number to be DeCoded (Y/N)? **Y**

---

### OUTPUT:

#### EXPERT VIN DeCoder

The VIN Number is 3FA PP128 0 MR 117253

The vehicle should be a 1991 Ford

The model: Escort 2/3-door Hatchback GT

The assembly plant: Hermosillo, Mexico

The 4 passenger vehicle had : Passive (Automatic) Front Belts

The OEM engine was: In-line 4 cylinder with Double Overhead Cam

Engine Displacement/Type = 1.8 L/ 112 cu.in. L4, DOHC

Brake Horsepower (SAE) = 127 @ 6500 rpm

Torque (SAE) = 114 lb-ft at 4500 rpm

Engine manufacturer = Mazda

The fuel distribution system: Electronic Fuel Injection (EFI)

Fuel pump/line pressure = 35-45 psi

The ignition system = electronic

This is a Front Wheel Drive vehicle.

The first three characters {3, F, A} indicates that the vehicle  
was a Ford made in Mexico

The fourth character {P} indicates the vehicle had  
Passive (Automatic) Front Belts

The fifth character {P} indicates it was a Passenger Car

The sixth with the seventh character {12} indicates a  
Escort 2/3-door Hatchback GT

The eighth character {8} indicates the OEM engine :  
1.8 L/ 112 cu.in. L4, DOHC

The 9th Character { the Check Digit } is 0  
The calculated Check Digit value is 0

The tenth character {M} indicates the Model Year was 1991

The eleventh character {R} indicates it was made  
at the assembly plant in Hermosillo, Mexico

The twelfth through the seventeenth characters { 117253 } is  
the Serial Number unique to this vehicle.



## Expert AutoStats®

The Expert AutoStats® program contains data on more than 42,000 cars, pick-ups, vans, and utility vehicles that range in years from the 1940's to the present. The Expert AutoStats® base information can assist in reconstructing accidents when the data for the vehicle is unavailable or the vehicle is too severely damaged to get correct measurements. The program is currently relied upon by over 700 private and 300 Government entities within the United States for this very purpose. Additionally, for many vehicles mid-1960's to present, data such as bumper height, front and rear overhang, hood height, etc., are also included.

As of April 1995 the 4N6XPRT Systems® programs Expert AutoStats®, Expert Qwic Calcs®, Expert TireStuf®, and Expert VIN DeCoder® are accessible from within RECTEC.

### SYSTEM REQUIREMENTS

Expert AutoStats® has been tested on a wide variety of IBM laptop and desktop clones ranging from 8088 through Pentium® chips. A math co-processor chip is NOT required. Expert AutoStats® has also been tested under the various versions of MS-DOS 3.0 thru 7.0, DrDOS 6.0, and PC DOS 7.0. It also works as a DOS program under Windows 3.x, Windows, 95, Windows 98, Windows NT, Windows Me, Windows 2000, Windows XP, Windows Vista, OS/2 2.x, OS/2 Warp, and various versions of LINUX.

A variety of dot matrix printers emulating the EPSON series have been used with no difficulty. The output is also compatible with the Hewlett-Packard II, IIP, III and IIIP Laser printers and Hewlett-Packard Desk Jet inkjet printers. Expert AutoStats® works with monochrome and color monitors.

### PLEASE PRINT

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AutoStats® \_\_\_\_\_ (copies) x \$625.00 . . = \$ \_\_\_\_\_  
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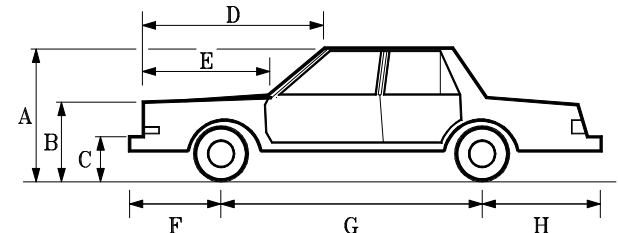
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*Orders will be shipped Priority Mail within 10 working days of receipt of order.  
Prices subject to change WITHOUT NOTICE.  
\* Checks MUST be drawn from a bank in the U.S.A.*

# Expert AutoStats®



Over 42,000 cars, pick-ups, vans, and utility vehicles 1940's to the present are represented.

### 4N6XPRT Systems®

Forensic Expert Software  
8387 University Avenue  
La Mesa, CA 91942-9342

**Web: <http://www.4n6xpirt.com>**  
**E-Mail: [autostats@4n6xpirt.com](mailto:autostats@4n6xpirt.com)**

1-800-266-9778

## Select Your Vehicle

Expert AutoStats®  
Version 5.2.0.2  
Serial Number:  
128-81911A002001  
Copyright © 1991-2012  
Expert Witness Services, Inc.  
All Rights Reserved

Model: Data Page 1 | Data Page 2 | Data Page 3 | Printer | File Output | DXF Output

Make of Vehicle: FORD  
Year of Vehicle: 2011  
Model of Vehicle: Select the Manufacturer from the list below.  
Once a Manufacturer has been Selected the list of available Models will be below.  
Number of Doors: Fill in the empty boxes to the left to narrow the search.

Bodystyle of Vehicle:  
 Car  Pickup  Other  
 Van  Utility  Clear

Manufact	Start Year	End Year
FRAZER	1947	1951
FRAZER NASH	1948	1957
FUNK & WILL	2002	2004
GENESC	1979	1999
GED	1987	1998
GLAS	1969	1966
GLAC	1947	2011

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4N@4NEXPRT.com

After typing in the Make, Year, and Type of vehicle, you are presented with the vehicles which are available for that year.

## Screen 1

Model: Data Page 1 | Data Page 2 | Data Page 3 | Printer | File Output | DXF Output

2011 FORD POLICE INTERCEPTOR (3.27) MSP POLICE PKG 4 DOOR SEDAN

Horizontal Dimensions		Vertical Dimensions	
Length	212 in.	Height	58 in.
Wheelbase	115 in.	Ground to:	
Front Bumper to Front Axle	43 in.	Front Bumper (Top)	23 in.
Front Bumper to Front of Hood	8 in.	Headlight - Center	27 in.
Front Bumper to Base of Windshield	65 in.	Hood - Top Front	31 in.
Front Bumper to Top of Windshield	91 in.	Base of Windshield	39 in.
Front Bumper to Front Wheel Well	26 in.	Rear Bumper (Top)	25 in.
Rear Bumper to Rear of Trunk	8 in.	Trunk - Top Rear	39 in.
Rear Bumper to Base of Rear Window	38 in.	Base of Rear Window	40 in.
Rear Bumper to Rear Well	38 in.		
Rear Bumper to Rear Axle	54 in.		

Weight Dimensions	
Curb Weight	4184 lbs.
Curb Weight Distribution:	
Front	56 %
Rear	44 %
Gross Vehicle Weight Rating	5500 lbs.

Depth Dimensions	
Width	78 in.
Front Track	63 in.
Rear Track	66 in.

The first screen of data contains exterior dimensions and weight data. Length, Height, Wheelbase, Width, and Weight Distribution are published dimensions. Curb Weight is an average of published curb weights for the given vehicle. Detail dimensions such as the bumper heights and Front Bumper to Front of

Hood are measurements obtained by our staff from actual vehicles.

## Screen 2

Model: Data Page 1 | Data Page 2 | Data Page 3 | Printer | File Output | DXF Output

2011 FORD POLICE INTERCEPTOR (3.27) MSP POLICE PKG 4 DOOR SEDAN

Acceleration/Braking		Interior Dimensions	
Acceleration 0-30 mph	13.8 ft/sec <sup>2</sup>	Bumper Strength	2.5 mph
Acceleration 0-60 mph	9.8 ft/sec <sup>2</sup>	Steering Ratio	:1
Acceleration 45-65 mph	6.5 ft/sec <sup>2</sup>	Front Shoulder Room	61 in.
Braking 60-0 mph	138 feet	Front Head Room	40 in.
Drive Wheels	REAR	Front Leg Room	42 in.
Turn Circle (Diameter)	40 feet	Rear Shoulder Room	60 in.
Number of Wheels	4	Rear Head Room	38 in.
Wheel Radius	12 in.	Rear Leg Room	38 in.
Tire Size	P235/55R17		

ALL DISC - ALL WHEEL ABS  
3pt - front and rear - FRONT SEAT AIRBAGS  
4spd AUTOMATIC

N.S.D.C. = 2011 - 2011  
= Not in Database

The second screen of data contains interior dimensions and various performance data. The data contained in the second screen comes from various published sources.

## Screen 3

Model: Data Page 1 | Data Page 2 | Data Page 3 | Printer | File Output | DXF Output

2011 FORD POLICE INTERCEPTOR (3.27) MSP POLICE PKG 4 DOOR SEDAN

Angle Measurements	
Angle Front Bumper to Hood Front	45.0 degrees
Angle Front of Hood to Windshield Base	8.0 degrees
Angle Front of Hood to Windshield Top	16.8 degrees
Angle of Windshield	33.2 degrees
Angle of Steering Tires at Max Turn	27.5 degrees

Center of Gravity	
Inches from ground	22.77
Inches behind front axle	50.60
Inches from front bumper	93.60
Inches from front corner	101.40
Inches from side of vehicle	39.00
Inches in front of rear axle	64.40
Inches from rear bumper	118.40
Inches from rear corner	124.66
Tip-Over Stability Ratio	1.41 Stable
NHTSA Static Stability Factor (calculated) Star Rating	****

Moments of Inertia	
Yaw Moment of Inertia	3103.52 lb*ft <sup>2</sup> sec <sup>2</sup>
Pitch Moment of Inertia	2993.16 lb*ft <sup>2</sup> sec <sup>2</sup>
Roll Moment of Inertia	603.12 lb*ft <sup>2</sup> sec <sup>2</sup>

The third and last screen contains a number of calculated items of information which may be of use depending upon the type of case, the

other software that you use, and the questions which need to be answered.

## DXF Output Screen

Model: Data Page 1 | Data Page 2 | Data Page 3 | Printer | File Output | DXF Output

2011 FORD POLICE INTERCEPTOR (3.27) MSP POLICE PKG 4 DOOR SEDAN

While every attempt has been made to ensure accurate data, these dimensions are meant to be used as first approximations. Some measurements are dependent on such factors as manufacturing variations from vehicle to vehicle. Whenever feasible, the vehicle in question or an exemplar vehicle should be measured TO VERIFY DATA IMPORTANT TO YOUR CASE. The provision of the DXF output is provided as an aide to your evaluation. It is not meant to be the final drawing of the vehicle.

DXF File Name: 2011\_FORD\_POLICE\_INTERCEPTOR\_(3.27)\_MSP\_POLICE\_PKG\_4\_DOOR\_SEDAN\_

Length	212 Inches
Wheelbase	115 Inches
Width	78 Inches
Front Track	63 Inches
Rear Track	66 Inches
Front Overhang	43 Inches
Bumper to Base of windshield	65 Inches
Bumper to Top of windshield	91 Inches
Rear Bumper to Base of Rear window	38 Inches
Rear Bumper to Top of Rear window	64 Inches
Front Tire Diameter	24 Inches
Rear Tire Diameter	24 Inches
CG behind Front axle	50.6 Inches

Drawing Notation:  
 On  
 Off

Units:  
 Inches  
 Feet  
 Meters

DXF Output

From within the Expert AutoStats program you have the ability to output the data to a 2-D DXF file for importation into your CAD Scene Drawings. The screen below shows an import of the DXF file with Text into the CAD Zone program.

## CADZONE Import

The Crash Zone 8.1 [1/17/3.05/1]

DXF Output Data

Length	17.67 Feet
Width	6.50 Feet
Front bumper to Front Axle	3.67 Feet
Wheelbase	9.58 Feet
Front Track	5.25 Feet
Rear Track	5.33 Feet
CG behind Front Axle	4.31 Feet

# 4N6XPRT StifCalcs®

Introducing ..... 4N6XPRT StifCalcs®. A program which puts the NHTSA Crash Test database at your fingertips with no need to access the internet in order to obtain Stiffness Values!

In addition to the NHTSA Crash Test data, the program includes a "Similar Vehicle Reader". Initially developed in cooperation with Greg Anderson and maintained by 4N6XPRT Systems starting with the 2013 version, the reader allows quick retrieval of vehicles similar to the desired vehicle. The Reader drives the initial selection of the available tests. Alternatively, we have an ADVANCED SEARCH module which allows the creation of "CLASS" vehicles.

**STIFFNESS DATA**, based on the selected test or test grouping is automatically calculated based on the reported crush depths and widths for front, side, and rear tests.

The User can - **WITHOUT** the need for the internet:

★ Lookup individual tests and get basic front, side, or rear (as appropriate to the test) **STIFFNESS VALUES** from the selected test. The values are based on the reported crush depths and lengths within each test.

**SYSTEM REQUIREMENTS**

4N6XPRT StifCalcs® is a MS-Windows program designed to work under a 32 or 64-bit (2000/XP/Vista/7) Windows System.

★ Obtain Similar Vehicle group summary **STIFFNESS VALUES** with Statistical measures.  
 ★ Create "CLASS" vehicles and get summary **STIFFNESS VALUES** with Statistical measures.

## FRONTAL STATISTICAL MEASURES EXAMPLE:

	Vehicle Width			
	A	B	G	Kv
Average (AVG)	305.7	93.5	523.6	143.1
Minimum (MIN)	115.0	13.2	465.2	23.5
Maximum (MAX)	461.6	200.0	614.1	387.3
Standard Deviation (STDev-sample)	73.4	38.4	36.2	72.8
Number of Tests (n)	53			

**WITH** an internet connection the User will also be able to -

★ **RESEARCH** and **easily download** the **PICTURES, VIDEOS, and REPORTS**

that are available for the individual tests

**Steps to Download Media from the NHTSA Web Site**

- 1 - Select the desired Test
- 2 - Click the **NHTSA DOWNLOAD** button
- 3 - Check the boxes for the media you want to download
- 4 - Click the **DOWNLOAD CHECKED MEDIA** button
- 5 - Watch the selected media download, **OR ...** continue working on other things while the download progresses
- 6 - When the downloads are complete, find the media in the desired SAVE directory under the Test number.

## PLEASE PRINT

Contact Name: \_\_\_\_\_  
 Company/Dept: \_\_\_\_\_  
 Mailing Address: \_\_\_\_\_  
 City:State:Zip: \_\_\_\_\_  
 Phone: \_\_\_\_\_  
 Fax: \_\_\_\_\_  
 E-Mail: \_\_\_\_\_

(E-mail address required for electronic delivery)  
 StifCalcs® \_\_\_\_\_ (copies) x \$650.00 . . . = \$ \_\_\_\_\_  
 Handling \*\*: \$ \_\_\_\_\_  
 (Check with order = \$5.00, Credit Card = \$10.00, Govt. P.O. = \$15.00)  
 Notarized Affidavit Filing Requirement \$ \_\_\_\_\_  
 (\$25.00 per required Notarized Signature )

*Normal delivery is via electronic download*  
 - Deliver via electronic download link (e-mail address required) \$ 0.00  
 Please deliver on USB at an **additional cost of \$35.00 per disk** \$ \_\_\_\_\_  
**SUB-TOTAL = \$** \_\_\_\_\_  
 CA Addresses add 8.50% sales tax . . . = \$ \_\_\_\_\_  
 (California orders delivered by e-mail attachment **DO NOT** owe sales tax)  
**TOTAL = \$** \_\_\_\_\_

Enclosed is:  
 Check/M. O. : \_\_\_ Credit Card: \_\_\_ P.O.: \_\_\_

Please make check/M.O./P.O. payable to:  
**4N6XPRT Systems®**

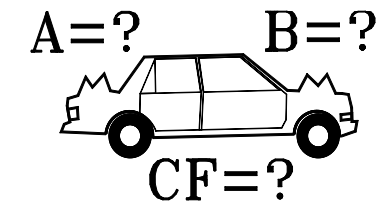
**Credit Card Orders:**  
 MasterCard: \_\_\_ Visa: \_\_\_ Am.Ex.: \_\_\_

Card #: \_\_\_\_\_  
 Expires: \_\_\_\_\_  
 Name on Card: \_\_\_\_\_  
 Signature: \_\_\_\_\_  
 Billing Add. #: \_\_\_\_\_  
 Billing Zip: \_\_\_\_\_

Mail to: **4N6XPRT Systems®**  
 8387 University Avenue  
 La Mesa, CA 91942-9342  
 Telephone Orders:  
 Monday-Friday - 9:30am-5:00pm PST  
 Phone: (619) 464-3478 Fax: (619) 464-2206

*Orders within the U.S. will be shipped Priority Mail or via E-mail attachment within 10 working days of receipt of order.  
 All prices are in U.S. Dollars, and subject to change **WITHOUT NOTICE**.  
 Orders outside of U.S.A. shipped via E-Mail attachment **ONLY**.*

# 4N6XPRT StifCalcs®



Quick, Convenient, Easy access to the NHTSA Crash Test data on your own MS-Windows computer without the need for an internet connection.

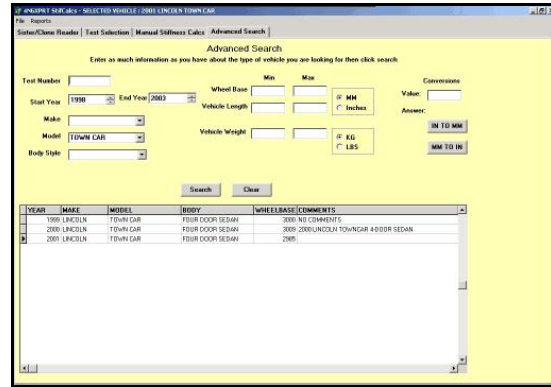
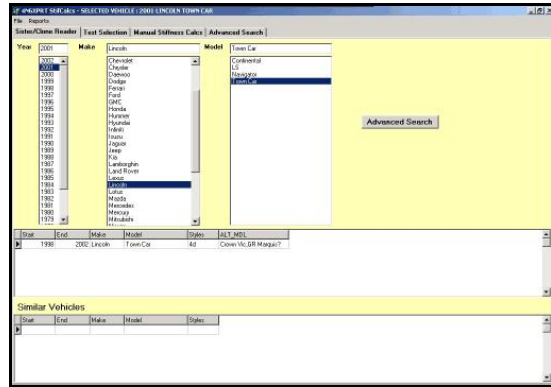
**4N6XPRT Systems®**  
 Forensic Expert Software  
 8387 University Avenue  
 La Mesa, CA 91942-9342  
**Web: <http://www.4n6xpirt.com>**  
**E-Mail: [stifcalcs@4n6xpirt.com](mailto:stifcalcs@4n6xpirt.com)**

1-800-266-9778

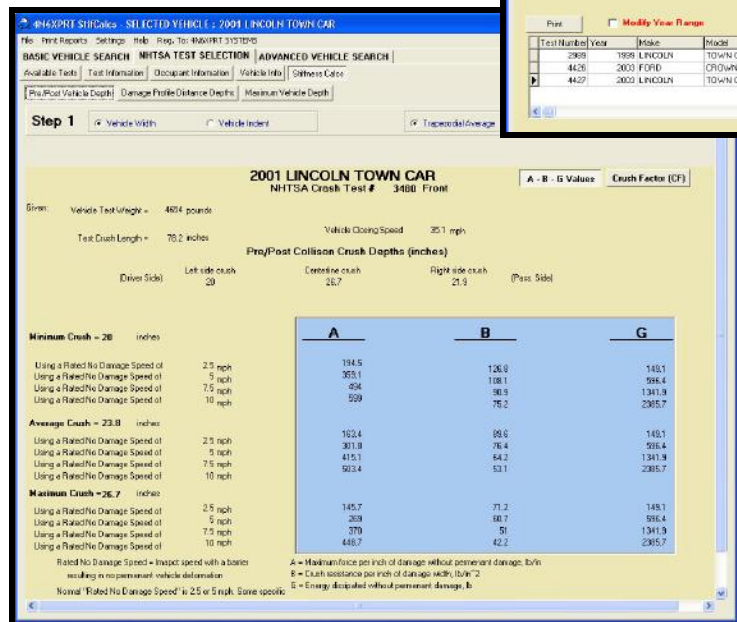
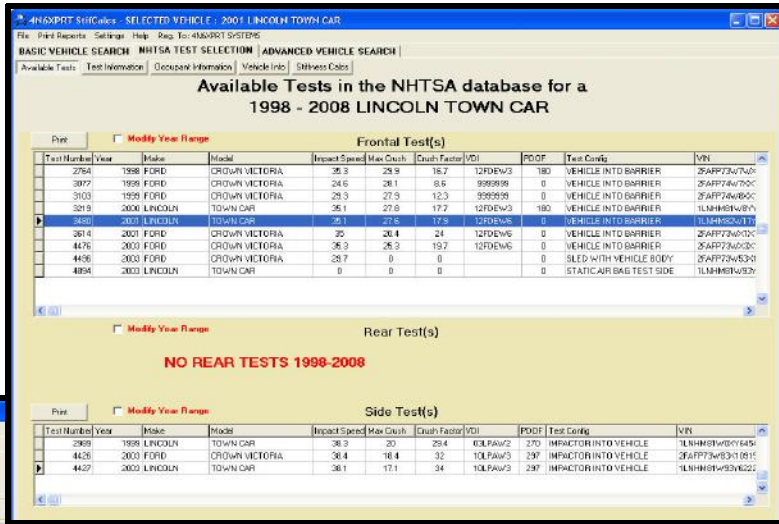


# BASIC VEHICLE CRASH TEST SEARCH

Select the desired vehicle through our **SIMILAR VEHICLE READER**

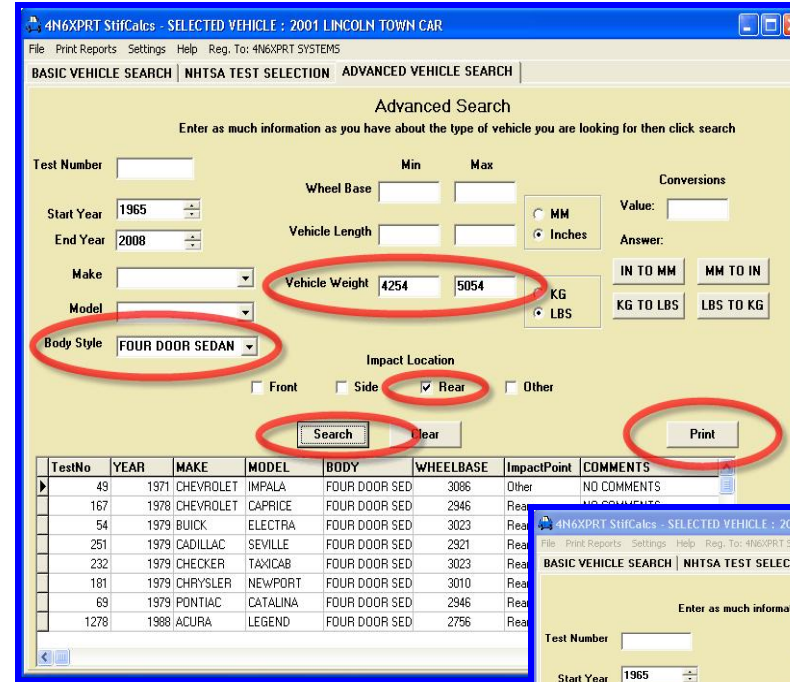


Once the desired vehicle is found/selected, click on the **Test Selection** tab. From here, select the test to be viewed



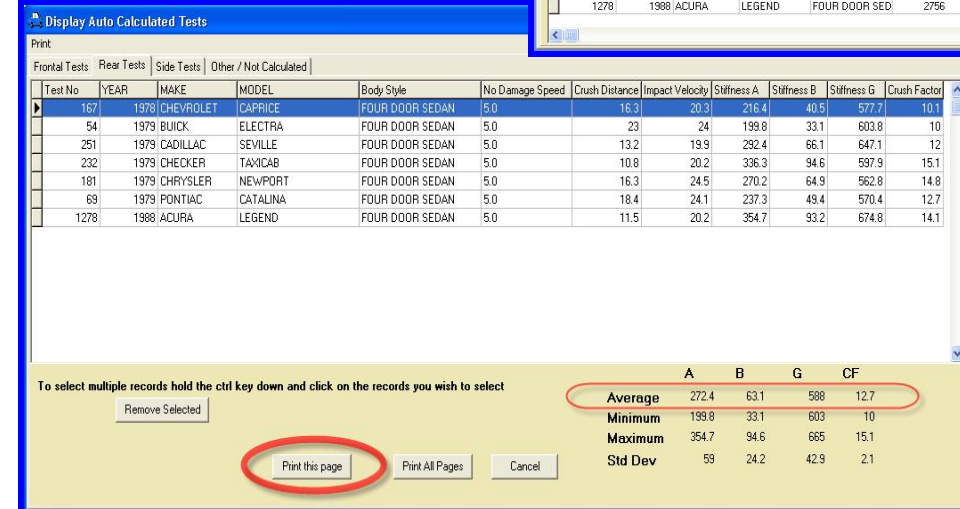
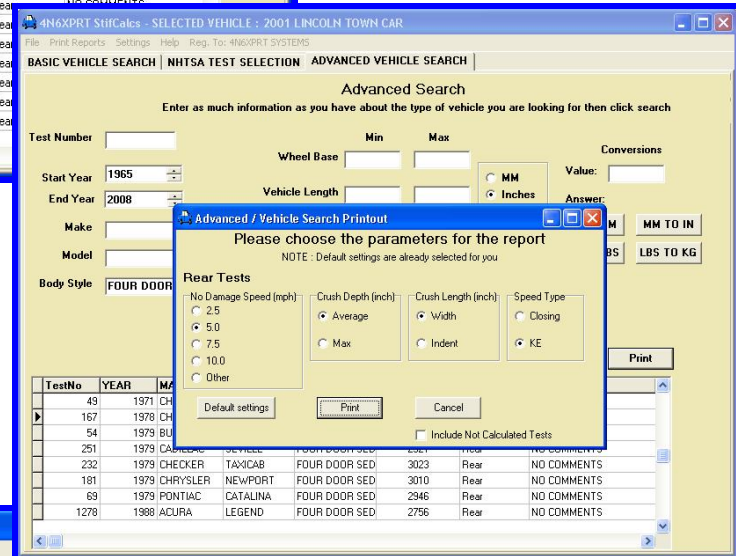
Once a test is selected, the available data for the Test, Occupant(s), Vehicle(s), and Stiffness data can be viewed. The stiffness values are automatically generated from the available test data.

# "CLASS" VEHICLE CRASH TEST SEARCH



Using the **ADVANCED SEARCH** tab, you can also create a **CLASS** of vehicle for when there are no tests available for the specific vehicle and test type. To create a class of **REAR IMPACT** stiffness values for the Lincoln, first set the **weight range**, **body style**, and **test type**, then **search** the database, when you have a sufficient number of tests (that is, more than one or two) that have been found, click the **PRINT** button:

Now Set your calculation parameters - **No Damage Speed - Crush Depth - Indentation (Crush) Length - and Speed**, then view your results, and if desired, print them to hard copy



The program will calculate the **AVERAGE**, **MINIMUM**, **MAXIMUM**, and **Standard Deviation** of the Stiffness Values calculated based upon the parameters you set in the preceding step.

# 4N6XPRT Systems

Expert System Software for Litigation

8387 University Avenue  
La Mesa, CA 91942-9342

FED Tax ID No.: 95-3121248

Phone: 1- 800-266-9778  
Fax: (619) 464-2206

Web Site: <http://www.4n6xpert.com>

E-Mail: [4n6@4n6xpert.com](mailto:4n6@4n6xpert.com)

## 2012 ORDER FORM

**Expert AutoStats® - Expert VIN DeCoder® - 4N6XPRT StifCalcs® - 4N6XPRT BioMeknx™  
Expert Qwic Calcs® - Expert TireStuf® - 4N6XPRT Ped & Bike Calcs®**

Please use this order form when ordering your programs. Due to conditions and rising costs beyond our control, Shipping & Handling must be paid per the included schedule.

Contact Name: \_\_\_\_\_

Title: \_\_\_\_\_

Company/Organization: \_\_\_\_\_

Street: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Phone: (\_\_\_\_) \_\_\_\_\_ FAX: (\_\_\_\_) \_\_\_\_\_

E-Mail: \_\_\_\_\_

Expert AutoStats®:	\$ 595.00 *	\$ _____
4N6XPRT BioMeknx™:	\$ 495.00 *	\$ _____
4N6XPRT Ped & Bike Calcs®:	\$ 375.00 *	\$ _____
Expert Qwic Calcs®:	\$ 275.00 *	\$ _____
Expert TireStuf®:	\$ 85.00 *	\$ _____
4N6XPRT StifCalcs®:	\$ 600.00 *	\$ _____
Expert VIN DeCoder®:	\$ 525.00 *	\$ _____

**SUB-TOTAL** \$ \_\_\_\_\_

California shipping addresses add **8.50%** sales tax \$ \_\_\_\_\_

*(California orders delivered by e-mail attachment **DO NOT** owe sales tax)*

Handling \*\*: *(Cash or Check with order = \$5.00, Credit Card = \$10.00, Govt. Purchase Order = \$15.00)* \$ \_\_\_\_\_

Notarized Affidavit filing requirement - **\$25.00 per required notarized signature:** \$ \_\_\_\_\_

*Normal delivery will be via email of a download link to a self extracting zip file*

- Deliver via electronic download link (e-mail address required) \$ 0.00

- Please deliver on USB at an **additional cost of \$35.00 per program** \$ \_\_\_\_\_

**TOTAL** \$ \_\_\_\_\_

Enclosed is:

Check \_\_\_\_\_ Money Order \_\_\_\_\_ Purchase Order \_\_\_\_\_ Credit Card: Visa \_\_\_\_\_ Master Card \_\_\_\_\_ American Express \_\_\_\_\_

Card # \_\_\_\_\_ Expires \_\_\_\_\_ SecCode \_\_\_\_\_

Billing Add. : \_\_\_\_\_ Billing Zip: \_\_\_\_\_

Name on Card: \_\_\_\_\_ Signature: \_\_\_\_\_

### \*PLEASE NOTE\*

- Orders cannot be shipped without correct Shipping & Handling included.
- California orders cannot be shipped without sales tax included.
- Written Purchase Orders must be received in office before shipping.

\* Prices are subject to change without notice. Call for Multi-program and package purchase discounts.

\*\* Orders will be shipped within 10 working days. Other shipping methods may cost extra. The Handling charge listed is for the first program, add \$5.00 per additional program ordered at the same time and shipped to the same address.

Please make checks, money orders or Purchase Orders Payable to: **4N6XPRT Systems®**

You may call or fax your order to us if paying by credit card.

# 4N6XPRT Systems

Expert System Software for Litigation

8387 University Avenue  
La Mesa, CA 91942-9342

FED Tax ID No.: 95-3121248

Phone: 1- 800-266-9778  
Fax: (619) 464-2206

Web Site: <http://www.4n6xpert.com>

E-Mail: [4n6@4n6xpert.com](mailto:4n6@4n6xpert.com)

Dear Customer,

Due to the governments desire ( both U.S. & California ) to “protect us” we will need the following information from you in order to process your credit card(s). Please complete this form and return it with your order.

Card type: Am. Express / Visa / MasterCard

Card Number: \_\_\_\_\_

Expiration Date ( MM/YY): \_\_\_\_/\_\_\_\_



← Visa/MasterCard

American Express →



Security code (card ID) on back of Visa/MasterCard card or front of American Express Card:

Address for where the **credit card bill is sent**:

\_\_\_\_\_  
( This is the address number - for instance, ours would be **8387 University Avenue** - that the credit card bill would go to, not where we would send the data or product to )

City/State/Zip for where the **credit card bill is sent**:

\_\_\_\_\_  
( - for instance, ours would be **La Mesa, CA 91941** - that the credit card bill would go to, not where we would send the data or product to )

Authorized signature: \_\_\_\_\_

We appreciate your cooperation in supplying us with this information and understanding that it is being required of us to obtain the information.

Sincerely,

Daniel W. Vomhof III  
General Manager/Technical Support

## SERVICE

You may make your request by phone or fax. Our fax machine is on 24 hours, 7 days a week, and can be reached at (619) 464-2206. A request may also be made by e-mail, which reaches us when we are "on the road" as well as in the office..

Upon receiving your request, we will research you request and **fax the information to you at NO ADDITIONAL CHARGE!** Normal response time is one working day or less. Your hard copy will follow in the mail.

Please include the vehicle information on the sample order form when requesting your Individual Vehicle Data Search. Please also be sure to provide a Visa, MasterCard, or American Express number, name as it appears on the card, Expiration date, and the billing address # and Zip.

## FAX/Order Form

- Expert VIN Decoder & Expert AutoStats
- NHTSA Crash Test Results
- BOTH

*Please circle ALL OPTIONS that apply*

YEAR & MAKE: \_\_\_\_\_

MODEL: \_\_\_\_\_

If you are requesting

**VIN DeCoder & AutoStats**

please also provide the following information:

No. of Doors: 2/3/4/5  
Body Style: Coupe/Conv./Sedan/Wagon  
SUV & P/U: 4x2 / 4x4 / Dual Rear Wheel  
PICKUPS: Std. / Extra / Super / Crew Cab  
Short Bed / Long Bed  
VANS: Cargo / Passenger  
Short / Long Wheelbase

VIN Information

1	2	3	4	5	6	7	8	9
10	11	12	13	14	15	16	17	

**NHTSA Crash Test Information**

Impact location - Front / Side / Rear  
Impact Speed - Lower / Higher

PAYMENT INFORMATION

Visa/MasterCard / American Express:

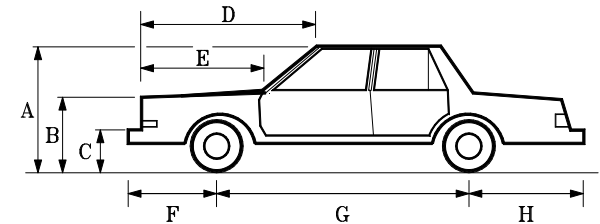
Expires: \_\_\_\_ / \_\_\_\_

Name & Address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Case Reference Name/Number: \_\_\_\_\_

# Individual Vehicle Data Search Service<sup>®</sup>



Providing Vehicle dimensional data, VIN DeCoding, and NHTSA Crash Test Results as a service to the Litigation community.

E-Mail: [ivdss@4n6xpirt.com](mailto:ivdss@4n6xpirt.com)

**FAX: (619) 464-2206**

**Phone: (619) 464-3478 / 1-800-266-9778**

**4N6XPRT Systems<sup>®</sup>**

Forensic Expert Software  
8387 University Avenue, Suite P  
La Mesa, CA 91942-9342

**Web: <http://www.4n6xpirt.com>**

How often have you been confronted with the

**VIN DeCoding Information**

following on a Traffic Collision Report - "87 Ford, 4 door, Blue"? We have the answer to the problem of determining WHICH Ford 4 door model this was!

We will DeCode the VIN number and provide you with the information contained within that VIN number

Information generally includes:

Year	OEM Engine
Make	Displacement/Type
Model	Rated Horsepower
Drive Wheels	Rated Torque
Rated Pass. Load	Ignition System
Plant of Manufacture	Fuel Line Pressure
Also (when provided by VIN)	
Gross Vehicle Weight	Safety Equipment
Transmission	

A DMV search for a vehicle identification from the registration will typically cost less than \$10.00 and will give the VIN number, Make, and Year of vehicle. However, to also obtain the vehicle Model requires a "Manual Search" which will typically cost \$30.00/vehicle/year searched.

With our service, you will be able to find out the model of vehicle as well as all of the other information mentioned above. This information will be faxed to you, typically in less than one working day, and the hard copy will follow in the mail.

Allow us to help you have all the information you require in your next Accident, Personal Injury, Criminal, Domestic, or Product Liability case.

## Individual Vehicle Specifications

Now you can get the Expert AutoStats® data for the vehicles in your case **QUICKLY, EASILY,** and **ECONOMICALLY,** instead of guessing, or begging a printout from a friend.

Our vehicle database includes dimensions on over 35,000 Cars, Vans, Lt. Pickups, and Utility Vehicles covering 1945 to the present.

Minimum Vehicle specifications include:

Overall Length	Curb Weight
Overall Width	Weight Distribution
Overall Height	Front/Rear Track
Wheelbase	CG Location
Model year with No Significant Dimensional Changes VIN DeCoding when VIN is provided Information available	
Mid-60's to present <b>also includes</b> (when available)	
Fron/Rear Overhang	Bumper Heights
Hood height	Turning Circle
Bumper-to-hood	Ground-to-hood

Dimensions are given in both Imperial and metric (SI) units. Motorcycle specifications will be similar to the Vehicle specifications with appropriate changes where applicable.

While the VIN number contains much information, it does not contain everything needed to identify a particular vehicle in every situation. Therefore, we would appreciate you providing as much of the information on the order form as possible.

If you are not sure of the specific model, we will provide dimensions on the similar model vehicles matching the provided data for a small additional cost per model\*.

## **Individual Vehicle Data Search Service® Charges & Services**

### Individual Vehicle Specifications

**\$40.00-First vehicle\***, \$35.00/Additional Vehicles\*,  
\$20.00/Additional Similar Model\*

### Medium/Heavy Truck Specifications

**\$40.00-First vehicle\***, \$35.00/Additional Vehicles\*,  
\$20.00/Additional Similar Model\*

### Motorcycle Specifications (1970+)

**\$40.00-First cycle\***, \$35.00/Additional cycles\*,  
\$20.00/Additional Similar Model\*

### NHTSA Crash Test Results

**\$40.00 per test** - Includes A, B, & G values  
Calculations are based on the test results

## NHTSA Crash Test Results

Test results include: General Test information, Barrier Data when provided, Vehicle Data as reported by the testing organization, Occupant (Dummy) data when provided, and A-B-G Stiffness calculations based on the test results.

You may make your request by phone or fax. Our fax machine is on 24 hours/day and can be reached at:

**(619) 464-2206**



# Individual Vehicle Data Search Service<sup>®</sup> Charges & Services

You may make your request by phone or fax. Our fax machine is on 24 hours/day and can be reached at

**(619) 464-2206**

## Individual Vehicle Specifications

**\$40.00-First vehicle\***, \$35.00/Additional Vehicles\*,  
\$20.00/Additional Similar Model\*

## Medium/Heavy Truck Specifications

**\$40.00-First vehicle\***, \$35.00/Additional Vehicles\*,  
\$20.00/Additional Similar Model\*

## Motorcycle Specifications (1970+)

**\$40.00-First cycle\***, \$35.00/Additional cycles\*,  
\$20.00/Additional Similar Model\*

## NHTSA Crash Test Results

**\$40.00 per test** - Includes A, B, & G values  
Calculations are based on the test results

Contact Name & Address:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Phone: (\_\_\_\_) \_\_\_\_\_

Fax: (\_\_\_\_) \_\_\_\_\_

### PAYMENT INFORMATION

Visa/MasterCard / American Express:

Expires: \_\_\_\_ / \_\_\_\_

Credit Card billing address and Zip:

Address: \_\_\_\_\_

Zip: \_\_\_\_\_

Security Code # \_\_\_\_\_

## FAX/Order Form

- Expert VIN Decoder & Expert AutoStats
- NHTSA Crash Test Results
- BOTH

Please circle ALL OPTIONS that apply

YEAR & MAKE:

MODEL: \_\_\_\_\_

If you are requesting  
**VIN DeCoder & AutoStats**  
please also provide:

No. of Doors: 2/3/4/5  
Body Style: Coupe/Conv./Sedan/Wagon  
SUV - P/U: 4x2 / 4x4 / Dual Rear Wheel  
PICKUPS: Std. / Extra / Super / Crew Cab  
Short Bed / Long Bed  
VANS: Cargo / Passenger  
Short / Long Wheelbase

### VIN Information

1	2	3	4	5	6	7	8	9
_____	_____	_____	_____	_____	_____	_____	_____	_____
10	11	12	13	14	15	16	17	
_____	_____	_____	_____	_____	_____	_____	_____	

## NHTSA Crash Test Information

YEAR & MAKE:

MODEL: \_\_\_\_\_

Impact location - Front / Side / Rear  
Impact Speed - Lower / Higher

Case Reference/Number: \_\_\_\_\_

## FAX/Order Form

- Expert VIN Decoder & Expert AutoStats
- NHTSA Crash Test Results
- BOTH

Please circle ALL OPTIONS that apply

YEAR & MAKE:

MODEL: \_\_\_\_\_

If you are requesting  
**VIN DeCoder & AutoStats**  
please also provide:

No. of Doors: 2/3/4/5  
Body Style: Coupe/Conv./Sedan/Wagon  
SUV - P/U: 4x2 / 4x4 / Dual Rear Wheel  
PICKUPS: Std. / Extra / Super / Crew Cab  
Short Bed / Long Bed  
VANS: Cargo / Passenger  
Short / Long Wheelbase

### VIN Information

1	2	3	4	5	6	7	8	9
_____	_____	_____	_____	_____	_____	_____	_____	_____
10	11	12	13	14	15	16	17	
_____	_____	_____	_____	_____	_____	_____	_____	

## NHTSA Crash Test Information

YEAR & MAKE:

MODEL: \_\_\_\_\_

Impact location - Front / Side / Rear  
Impact Speed - Lower / Higher

Case Reference/Number: \_\_\_\_\_

# 4N6XPRT Systems

Expert System Software for Litigation

8387 University Avenue  
La Mesa, CA 91942-9342

FED Tax ID No.: 95-3121248

Phone: 1- 800-266-9778

Fax: (619) 464-2206

Web Site: <http://www.4n6xpert.com>

E-Mail: [4n6@4n6xpert.com](mailto:4n6@4n6xpert.com)

Dear Customer,

Due to the governments desire ( both U.S. & California ) to “protect us” we will need the following information from you in order to process your credit card(s). Please complete this form and return it with your order.

Card type: Am. Express / Visa / MasterCard

Card Number: \_\_\_\_\_

Expiration Date ( MM/YY): \_\_\_\_/\_\_\_\_



← Visa/MasterCard

American Express →



Security code (card ID) on back of Visa/MasterCard card or front of American Express Card:

Address for where the **credit card bill is sent**:

\_\_\_\_\_  
( This is the address number - for instance, ours would be **8387 University Avenue** - that the credit card bill would go to, not where we would send the data or product to )

City/State/Zip for where the **credit card bill is sent**:

\_\_\_\_\_  
( - for instance, ours would be **La Mesa, CA 91941** - that the credit card bill would go to, not where we would send the data or product to )

Authorized signature: \_\_\_\_\_

We appreciate your cooperation in supplying us with this information and understanding that it is being required of us to obtain the information.

Sincerely,

A handwritten signature in black ink that reads "Daniel W. Vomhof III".

Daniel W. Vomhof III  
General Manager/Technical Support

# 4N6XPRT Systems

Expert System Software for Litigation

8387 University Avenue  
La Mesa, CA 91942-9342

FED Tax ID No.: 95-3121248

Phone: 1- 800-266-9778  
Fax: (619) 464-2206

Web Site: <http://www.4n6xpert.com>

E-Mail: [4n6@4n6xpert.com](mailto:4n6@4n6xpert.com)

The 2011 version of 4N6XPRT StifCalcs® contains a Force Balance module -

The Force Balance approach to Stiffness values is based on the concept of "Equal and Opposite Forces" in combination with the assumption that one of the vehicles involved has a good set of Stiffness values based on testing.

There are essentially only TWO requirements in order to use a Force Balance approach, and they are:

- You must have A-B values for one of the vehicles for the surface that was hit
- Both vehicles must have SOME damage

Beyond these two requirements, the QUALITY of your calculation results will be impacted by :

- The quality of the information you have on each vehicle (weight, pass/cargo load, etc.)
- The quality/accuracy of your crush measurements
- The quality of your A-B stiffness values

while the Force Balance analysis CAN be run with degraded information in the above three areas, the quality of the results will also be degraded, sometimes significantly so.

As an extension of our **I**ndividual **V**ehicle **D**ata **S**earch **S**ervice, we have now added Force Balance Analysis runs to our services. An order form with pricing follows on the next page.

With respect to the Order Form -

- A) Please be SPECIFIC on the vehicle make and model, including drive wheels, bed length, etc.
- B) The Curb Weight used will come from Expert AutoStats unless you specify some other weight
- C) The PDOF Lever Arm default length is 0 inches
- D) The Angle of Collision Force to Normal Force default value is 0 degrees
- E) If no Crush Spacing is indicated, equal spacing will be used.

If you have any specific questions, please be sure to call.

Sincerely,



Daniel W. Vomhof III  
General Manager/Technical Support

# 4N6XPRT Systems

Expert System Software for Litigation

8387 University Avenue  
La Mesa, CA 91942-9342

FED Tax ID No.: 95-3121248

Phone: 1- 800-266-9778  
Fax: (619) 464-2206

Web Site: <http://www.4n6xpert.com>

E-Mail: [4n6@4n6xpert.com](mailto:4n6@4n6xpert.com)

## FORCE BALANCE ORDER FORM

**\$40 for the first "Run" / \$20 for each additional crush variation with same vehicles**

Vehicle 1 (KNOWN Stiffness) - Year/Make/Model

Curb Weight (pounds) = \_\_\_\_\_  
Occupant + Cargo Weight (pounds) = \_\_\_\_\_  
Total Weight (pounds) = \_\_\_\_\_

Angle of Collision Force to Force Normal to  
Collision Face (degrees) = \_\_\_\_\_  
PDOF Lever Arm Distance (inches) = \_\_\_\_\_

Damage Length (inches) = \_\_\_\_\_

If Crush Depth measurements are equally spaced, you do not  
need to fill in the distance between Crush measurements.

### Crush Depth

### Crush Spacing EQUAL?? Yes / No

C1 (inches) = \_\_\_\_\_ Distance C1 to C2 (inches) = \_\_\_\_\_  
C2 (inches) = \_\_\_\_\_ Distance C2 to C3 (inches) = \_\_\_\_\_  
C3 (inches) = \_\_\_\_\_ Distance C3 to C4 (inches) = \_\_\_\_\_  
C4 (inches) = \_\_\_\_\_ Distance C4 to C5 (inches) = \_\_\_\_\_  
C5 (inches) = \_\_\_\_\_ Distance C5 to C6 (inches) = \_\_\_\_\_  
C6 (inches) = \_\_\_\_\_ Distance C6 to C7 (inches) = \_\_\_\_\_  
C7 (inches) = \_\_\_\_\_ Distance C7 to C8 (inches) = \_\_\_\_\_  
C8 (inches) = \_\_\_\_\_ Distance C8 to C9 (inches) = \_\_\_\_\_  
C9 (inches) = \_\_\_\_\_ Distance C9 to C10 (inches) = \_\_\_\_\_  
C10 (inches) = \_\_\_\_\_

Vehicle 2 - Year/Make/Model

Curb Weight (pounds) = \_\_\_\_\_  
Occupant + Cargo Weight (pounds) = \_\_\_\_\_  
Total Weight (pounds) = \_\_\_\_\_

Angle of Collision Force to Force Normal to  
Collision Face (degrees) = \_\_\_\_\_  
PDOF Lever Arm Distance (inches) = \_\_\_\_\_

Damage Length (inches) = \_\_\_\_\_

If Crush Depth measurements are equally spaced, you do not  
need to fill in the distance between Crush measurements.

### Crush Depth

### Crush Spacing EQUAL?? Yes / No

C1 (inches) = \_\_\_\_\_ Distance C1 to C2 (inches) = \_\_\_\_\_  
C2 (inches) = \_\_\_\_\_ Distance C2 to C3 (inches) = \_\_\_\_\_  
C3 (inches) = \_\_\_\_\_ Distance C3 to C4 (inches) = \_\_\_\_\_  
C4 (inches) = \_\_\_\_\_ Distance C4 to C5 (inches) = \_\_\_\_\_  
C5 (inches) = \_\_\_\_\_ Distance C5 to C6 (inches) = \_\_\_\_\_  
C6 (inches) = \_\_\_\_\_ Distance C6 to C7 (inches) = \_\_\_\_\_  
C7 (inches) = \_\_\_\_\_ Distance C7 to C8 (inches) = \_\_\_\_\_  
C8 (inches) = \_\_\_\_\_ Distance C8 to C9 (inches) = \_\_\_\_\_  
C9 (inches) = \_\_\_\_\_ Distance C9 to C10 (inches) = \_\_\_\_\_  
C10 (inches) = \_\_\_\_\_

Name \_\_\_\_\_  
Company \_\_\_\_\_  
Address \_\_\_\_\_  
City/State/Zip \_\_\_\_\_  
Phone \_\_\_\_\_  
Case Reference \_\_\_\_\_

Visa/MasterCard/American Express  
Card Number \_\_\_\_\_  
Expiration \_\_\_\_\_ / \_\_\_\_\_  
Security Code \_\_\_\_\_  
Card Billing Address \_\_\_\_\_  
City/State/Zip \_\_\_\_\_

E-Mail \_\_\_\_\_

# 4N6XPRT Systems

Expert System Software for Litigation

8387 University Avenue  
La Mesa, CA 91942-9342

FED Tax ID No.: 95-3121248

Phone: 1- 800-266-9778  
Fax: (619) 464-2206

Web Site: <http://www.4n6xpert.com>

E-Mail: [4n6@4n6xpert.com](mailto:4n6@4n6xpert.com)

Dear Customer,

Due to the governments desire ( both U.S. & California ) to “protect us” we will need the following information from you in order to process your credit card(s). Please complete this form and return it with your order.

Card type: Am. Express / Visa / MasterCard

Card Number: \_\_\_\_\_

Expiration Date ( MM/YY): \_\_\_\_/\_\_\_\_



← Visa/MasterCard

American Express →



Security code (card ID) on back of Visa/MasterCard card or front of American Express Card:

Address for where the **credit card bill is sent**:

\_\_\_\_\_  
( This is the address number - for instance, ours would be **8387 University Avenue** - that the credit card bill would go to, not where we would send the data or product to )

City/State/Zip for where the **credit card bill is sent**:

\_\_\_\_\_  
( - for instance, ours would be **La Mesa, CA 91941** - that the credit card bill would go to, not where we would send the data or product to )

Authorized signature: \_\_\_\_\_

We appreciate your cooperation in supplying us with this information and understanding that it is being required of us to obtain the information.

Sincerely,

Daniel W. Vomhof III  
General Manager/Technical Support