Expert VIN DeCoder®

Version Number 3.1.0

DeCoded VIN:	1FAHP35NX8W226257
Model:	2008 Ford Focus 2 door Coupe
Engine Size:	2.0 L/ 121 cu.in.
Engine Description:	Inline 4 cylinder with Dual Overhead Cam
Horse Power:	136 @ 6000 rpm
Torque:	133 lb-ft at 4500 rpm
Injection System:	Sequential Fuel Injection (SFI)
PSI:	N/A
Ignition:	Electronic
Manufacturer:	Ford
Assembly Plant:	Wayne, MI
Drive Wheels:	This is a Front Wheel Drive vehicle w/ Manual Seatbelts + Driver/Passenger Front/Side Air Bags

The First through Third characters (1FA) indicate a Ford Passenger Car made in the U.S.A.

The Fourth character (H) indicates Manual Seatbelts + Driver/Passenger Front/Side Air Bags

The Fifth through Seventh characters (P35) indicate a Focus and a 2 door Coupe

The Eighth character (N) indicates the OEM engine: 2.0 L/ 121 cu.in., L4, DOHC PZEV

The Ninth character (the check digit) is entered as X.
The VIN appears Valid, the calculated value is 10. (The display Character should be X)

The Tenth character (8) indicates the model year 2008

The Eleventh character (W) indicates the vehicle was made in the assembly plant in Wayne, MI

The Twelfth through Seventeenth characters (226257) indicate the Serial Number and are unique to this vehicle.

Expert AutoStats®

Version 5.2.0

JEREMY S DAILY PHD PE
TUCRRC
800 TUCKER DRIVE
TULSA OK 74104-9700

9/6/2012

2008 FORD FOCUS 2 DOOR COUPE

Curb Weight:		2650	lbs.	1202	kg.
Curb Weight Distribution -	Front:	59	%	Rear: 41	%
Gross Vehicle Weight Rating:		3715	lbs.	1685	kg.
Number of Tires on Vehicle:		4			
Drive Wheels:		FRONT			

Horizontal Dimensions	Inches	Feet	Meters
Total Length	175	14.58	4.44
Wheelbase:	103	8.58	2.62
Front Bumper to Front Axle:	34	2.83	0.86
Front Bumper to Front of Front Well:	20	1.67	0.51
Front Bumper to Front of Hood:	7	0.58	0.18
Front Bumper to Base of Windshield:	42	3.50	1.07
Front Bumper to Top of Windshield:	73	6.08	1.85
Rear Bumper to Rear Axle:	38	3.17	0.97
Rear Bumper to Rear of Rear Well:	23	1.92	0.58
Rear Bumper to Rear of Trunk:	5	0.42	0.13
Rear Bumper to Base of Rear Window:	19	1.58	0.48

Width Dimensions			
Maximum Width:	68	5.67	1.73
Front Track:	59	4.92	1.50
Rear Track:	58	4.83	1.47

Vertical Dimensions			
Height:	59	4.92	1.50
Ground to -			
Front Bumper (Top)	23	1.92	0.58
Headlight - center	28	2.33	0.71
Hood - top front:	30	2.50	0.76
Base of Windshield	38	3.17	0.97
Rear Bumper - top:	29	2.42	0.74
Trunk - top rear:	44	3.67	1.12
Base of Rear Window:	46	3.83	1.17

2008 FORD FOCUS 2 DOOR COUPE

Interior Dimensions	Inches	Feet	Meters
Front Seat Shoulder Width	53	4.42	1.35
Front Seat to Headliner	39	3.25	0.99
Front Leg Room - seatback to floor (max)	42	3.50	1.07
Rear Seat Shoulder Width	54	4.50	1.37
Rear Seat to Headliner	38	3.17	0.97
Front Leg Room - seatback to floor (min)	36	3.00	0.91

Seatbelts: 3pt - front and rear
Airbags: FRONT SEAT AIRBAGS + SIDE AIRBAGS

Steering Data

Turning Circle (Diameter)	408	34.00	10.36
Steering Ratio:	:1		
Wheel Radius:			
Tire Size (OEM):	P195/60R15		

Acceleration & Braking Information

Brake Type: FRONT DISC - REAR DRUM
ABS System: ABS UNKNOWN

Braking, 60 mph to 0 (Hard pedal, no skid, dry pavement):
d = 136.0 ft t = 3.1 sec a = -28.4 ft/sec² G-force = -0.88

Acceleration:

0 to 30mph	t =	2.5	sec	a =	17.6	ft/sec²	G-force = 0.55
0 to 60mph	t =	8.0	sec	a =	11.0	ft/sec²	G-force = 0.34
45 to 65mph	t =	4.7	sec	a =	6.2	ft/sec²	G-force = 0.20

Transmission Type: 5spd MANUAL

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

N.S.D.C = 2008 - 2011

2008 FORD FOCUS 2 DOOR COUPE

Other Information

Tip-Over Stability Ratio =	1.22	Reasonably Stable
NHTSA Star Rating (calculated)		***

Center of Gravity (No Load):

Inches behind front axle	=	42.23
Inches in front of rear axle	=	60.77
Inches from side of vehicle	=	34.00
Inches from ground	=	24.10
Inches from front corner	=	83.47
Inches from rear corner	=	104.46
Inches from front bumper	=	76.23
Inches from rear bumper	=	98.77

Moments of Inertia Approximations (No Load):

Yaw Moment of Inertia	=	1523.50	lb*ft*sec²
Pitch Moment of Inertia	=	1474.50	lb*ft*sec²
Roll Moment of Inertia	=	327.00	lb*ft*sec²

Front Profile Information

Angle Front Bumper to Hood Front	=	45.0	deg
Angle Front of Hood to Windshield Base	=	12.9	deg
Angle Front of Hood to Windshield Top	=	22.2	deg
Angle of Windshield	=	31.5	deg
Angle of Steering Tires at Max Turn	=	28.9	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:

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

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

#6270

2008 FORD FOCUS

Provided By

4N6XPRT StifCalcs®

Registered to:

TUCRRC
800 TUCKER DRIVE
TULSA OK 74104-9700
12R-110829SC03101

4N6XPRT Systems | 8387 University Avenue | La Mesa, CA 91942 | USA
(800) 266-9778 | (619) 464-3478 | FAX: (619) 464-2206 | Email: 4n6@4n6xprt.com

Similar Vehicle database reader

You entered: **2008 FORD FOCUS**

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

Year Range	Make	Model	Body Styles	Wheelbase
2000 - 2012	FORD	FOCUS	2D, 3D, 4D, 5D, SW	103, 133

Remarks:

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 #	6270	NHTSA Test Reference Guide Version #	V5			
Test Date	2007-12-14	Contract #	DTNH22-03-D-12005			
Contract/Study Title	NCAP SIDE - 2008 FORD FOCUS 2-DOOR COUPE					
Test Objective(s)	VEHICLE CRASHWORTHINESS AND OCCUPANT RESTRAINT PERFORMANCE DATA					
Test Type	NEW CAR ASSESSMENT TEST	Configuration	IMPACTOR INTO VEHICLE			
Impact Angle	270	Side Impact Point	N/A	mm	N/A	inches
		Offset Distance	0	mm	0.0	inches
		Closing Speed	62.3	Km/Hr	38.71	MPH
Test Performer	MGA RESEARCH					
Test Reference #	BT07121401					
Test Track Surface	CONCRETE	Condition	DRY			
Ambient Temperature	21 C	69.8 F	Total Number of Curves	71		
Data Recorder Type	OTHER	Data Link	OTHER			
Test Commentary	DTS TDAS PRO ON BOARD DAS					

Fixed Barrier Information

Barrier Type		Pole Barrier Diameter		mm	inches
Barrier Shape					
Barrier Commentary					

2008 FORD FOCUS LEFT FRONT SEAT OCCUPANT

Test #	6270		
Vehicle #	2	Sex	MALE
Location	LEFT FRONT SEAT	Age	0
Position	CENTER POSITION	Height	0 mm 0.0 inches
Type	SID WITH HYBRID III HEAD/NECK	Weight	0.0 kg 0 pounds
Size	50 PERCENTILE		
Calibration Method	SIDE IMPACT DUMMY		
Occupant Manufacturer	FIRST TECHNOLOGY S/N 904		
Occupant Modification			
Occupant Description			
Occupant Commentary	HEAD TO CURTAIN AIRBAG & HEADREST		

Head

Head to -

Windshielder Header	367	mm	14.4	inches	Head Injury Criteria (HIC)	160	
WindShield	594	mm	23.4	inches	HIC Lower Time Interval (ms)	41.3	
Seatback	0	mm	0.0	inches	HIC Upper Time Interval (ms)	68.3	
Side Header	165	mm	6.5	inches			
Side Window	296	mm	11.7	inches			

Neck to Seatback 0 mm 0.0 inches

First Contact Region (Head): AIR BAG

Second Contact Region (Head):

Chest

Chest to -

Dash	541	mm	21.3	inches	Arm to Door	99	mm	3.9	inches
Steering Wheel	373	mm	14.7	inches	Hip to Door	140	mm	5.5	inches
Seatback	0	mm	0.0	inches					

Chest Severity Index	0	Pelvic Peak Lateral Acceleration (g's)	75.8
Thoracic Trauma Index	86	Thorax Peak Acceleration (g's)	0

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 138 mm 5.4 inches Knees to Seatback 0 mm 0.0 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): DOOR

Second Contact Region (Legs):

2008 FORD FOCUS LEFT FRONT SEAT OCCUPANT

Test #	6270					
Vehicle #	2	Sex	MALE			
Location	LEFT FRONT SEAT	Age	0			
Position	CENTER POSITION	Height	0	mm	0.0	inches
Type	SID WITH HYBRID III HEAD/NECK	Weight	0.0	kg	0	pounds
Size	50 PERCENTILE					

Calibration Method	SIDE IMPACT DUMMY
Occupant Manufacturer	FIRST TECHNOLOGY S/N 904
Occupant Modification	
Occupant Description	
Occupant Commentary	HEAD TO CURTAIN AIRBAG & HEADREST

Restraints

Restraint # 1	3 POINT BELT
Mounted	BELT - CONVENTIONAL MOUNT
Deployment	NOT APPLICABLE
Restraint Commentary	PRIMARY
Restraint # 2	CURTAIN AIRBAG
Mounted	HEADER - SIDE
Deployment	DEPLOYED PROPERLY
Restraint Commentary	SECONDARY
Restraint # 3	FRONTAL AIRBAG
Mounted	SEAT BACK
Deployment	DEPLOYED PROPERLY
Restraint Commentary	SECONDARY

2008 FORD FOCUS LEFT REAR SEAT OCCUPANT

Test #	6270		
Vehicle #	2	Sex	MALE
Location	LEFT REAR SEAT	Age	0
Position	NON-ADJUSTABLE SEAT	Height	0 mm 0.0 inches
Type	SID WITH HYBRID III HEAD/NECK	Weight	0.0 kg 0 pounds
Size	50 PERCENTILE		
Calibration Method	SIDE IMPACT DUMMY		
Occupant Manufacturer	FIRST TECHNOLOGY S/N 271		
Occupant Modification			
Occupant Description			
Occupant Commentary	HEAD TO HEADLINER & CURTAIN AIRBAG		

Head

Head to -

Windshielder Header	0	mm	0.0	inches	Head Injury Criteria (HIC)	513	
WindShield	0	mm	0.0	inches	HIC Lower Time Interval (ms)	43.5	
Seatback	507	mm	20.0	inches	HIC Upper Time Interval (ms)	63.6	
Side Header	155	mm	6.1	inches			
Side Window	294	mm	11.6	inches			
Neck to Seatback	0	mm	0.0	inches			
First Contact Region (Head)	OTHER						
Second Contact Region (Head)							

Chest

Chest to -

Dash	0	mm	0.0	inches	Arm to Door	52	mm	2.0	inches
Steering Wheel	0	mm	0.0	inches	Hip to Door	120	mm	4.7	inches
Seatback	450	mm	17.7	inches					
Chest Severity Index	0				Pelvic Peak Lateral Acceleration (g's)	78.1			
Thoracic Trauma Index	87				Thorax Peak Acceleration (g's)	0			
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	150	mm	5.9	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)	DOOR								
Second Contact Region (Legs)									

2008 FORD FOCUS LEFT REAR SEAT OCCUPANT

Test #	6270					
Vehicle #	2	Sex	MALE			
Location	LEFT REAR SEAT	Age	0			
Position	NON-ADJUSTABLE SEAT	Height	0	mm	0.0	inches
Type	SID WITH HYBRID III HEAD/NECK	Weight	0.0	kg	0	pounds
Size	50 PERCENTILE					

Calibration Method	SIDE IMPACT DUMMY
Occupant Manufacturer	FIRST TECHNOLOGY S/N 271
Occupant Modification	
Occupant Description	
Occupant Commentary	HEAD TO HEADLINER & CURTAIN AIRBAG

Restraints

Restraint # 1	3 POINT BELT
Mounted	BELT - CONVENTIONAL MOUNT
Deployment	NOT APPLICABLE
Restraint Commentary	PRIMARY
Restraint # 2	CURTAIN AIRBAG
Mounted	HEADER - SIDE
Deployment	DEPLOYED PROPERLY
Restraint Commentary	SECONDARY

Vehicle 1 0 NHTSA DEFORMABLE IMPACTOR

Test #	6270		
VIN		NHTSA Test Vehicle Number	1
Year	0	Vehicle Modification Indicator	RESEARCH VEHICLE
Make	NHTSA	Post-test Steering Column Shear Capsule Seperation	NOT APPLICABLE
Model	DEFORMABLE IMPACTOR	Steering Column Collapse Mechanism	NOT APPLICABLE
Body	NOT APPLICABLE		
Engine	NOT APPLICABLE		
Displacement	0 Liter	Transmission	NOT APPLICABLE
Vehicle Modification(s) Description			
Vehicle Commentary	FMVSS 214 DEFORMABLE BARRIER AND IMPACTOR		

Vehicle Length	4115	mm	162.0	inches	CG behind Front Axle	1101	mm	43.3	inches
Vehicle Width	1252	mm	49.3	inches	Center of Damage to CG Axis	0	mm	0.0	inches
Vehicle Wheelbase	2588	mm	101.9	inches	Total Length of Indentation	0	mm	0.0	inches
Vehicle Test Weight	1361	KG	3000	pounds	Maximum Static Crush Depth	0	mm	0.0	inches
					Pre-Impact Speed	62	kph	38.7	mph

Vehicle Damage Index: | Principal Direction of Force: 0

Damage Profile Distance Measurements

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

DPD 1	0	mm	0.0	inches
DPD 2	0	mm	0.0	inches
DPD 3	0	mm	0.0	inches
DPD 4	0	mm	0.0	inches
DPD 5	0	mm	0.0	inches
DPD 6	0	mm	0.0	inches

Crush from Pre & Post Test Damage Measurements

	Pre-Test		Post-Test		Crush Depth	
Left Bumper Corner	0.0	inches	0.0	inches	0.0	inches
	0	mm	0	mm	0	mm
Centerline	0.0	inches	0.0	inches	0.0	inches
	0	mm	0	mm	0	mm
Right Bumper Corner	0.0	inches	0.0	inches	0.0	inches
	0	mm	0	mm	0	mm

Bumper Engagement (Inline Impact Only)	Sill Engagement (Side Impact Only)	A-pillar Engagement (Side Impact Only)
27.0	NOT APPLICABLE	0.0

Moving Test Cart Angle	Moving Test Cart/Vehicle Crabbed Angle	Vehicle Orientation on Cart Moving Test Cart
NOT APPLICABLE	27.0	NOT APPLICABLE
Magnitude of the Tilt Angle Measured between surface of a Rollover Test Cart and the Ground	*Magniture of the Crabbed Angle Measure Clockwise from Longitudinal Vector to Velocity Vector of Vehicle*	*Magnitude of the Angle Measured between the Vehicle Orientation and Direction of Test Cart Motion*

Vehicle 1 0 NHTSA DEFORMABLE IMPACTOR

Test #	6270		
VIN		NHTSA Test Vehicle Number	1
Year	0	Vehicle Modification Indicator	RESEARCH VEHICLE
Make	NHTSA	Post-test Steering Column Shear Capsule Seperation	NOT APPLICABLE
Model	DEFORMABLE IMPACTOR	Steering Column Collapse Mechanism	NOT APPLICABLE
Body	NOT APPLICABLE		
Engine	NOT APPLICABLE		
Displacement	0 Liter	Transmission	NOT APPLICABLE
Vehicle Modification(s) Description			
Vehicle Commentary	FMVSS 214 DEFORMABLE BARRIER AND IMPACTOR		

Vehicle Length	4115	mm	162.0	inches	CG behind Front Axle	1101	mm	43.3	inches
Vehicle Width	1252	mm	49.3	inches	Center of Damage to CG Axis	0	mm	0.0	inches
Vehicle Wheelbase	2588	mm	101.9	inches	Total Length of Indentation	0	mm	0.0	inches
Vehicle Test Weight	1361	KG	3000	pounds	Maximum Static Crush Depth	0	mm	0.0	inches
					Pre-Impact Speed	62	kph	38.7	mph

Vehicle Damage Index		Principal Direction of Force	0

Pre & Post Test Damage Measurements

(Measurements are taken in a longitudinaldirection. 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							
				0	0.0	0	0.0				
				Engine Block							
				0	0.0	0	0.0				
0	0.0	0	0.0	Front Bumper Corner				0	0.0	0	0.0
				Front of Engine							
				0	0.0	0	0.0				
0	0.0	0	0.0	Firewall				0	0.0	0	0.0
				0	0.0	0	0.0				
0	0.0	0	0.0	Upper Leading Edge of Door				0	0.0	0	0.0
0	0.0	0	0.0	Lower Leading Edge of Door				0	0.0	0	0.0
0	0.0	0	0.0	Bottom of 'A' Post				0	0.0	0	0.0
0	0.0	0	0.0	Upper Trailing Edge of Door				0	0.0	0	0.0
0	0.0	0	0.0	Lower Trailing Edge of Door				0	0.0	0	0.0
				Steering Column							
				0	0.0	0	0.0				
				Center of Seering Column to 'A' Post (Horizontal)							
				0	0.0	0	0.0				
				Center of Steering Column to Headliner (Vertical)							
				0	0.0	0	0.0				

Vehicle 2 2008 FORD FOCUS

Test #	6270		
VIN	1FAHP32N78W132339	NHTSA Test Vehicle Number	2
Year	2008	Vehicle Modification Indicator	PRODUCTION VEHICLE
Make	FORD	Post-test Steering Column Shear Capsule Seperation	UNKNOWN
Model	FOCUS	Steering Column Collapse Mechanism	UNKNOWN
Body	TWO DOOR COUPE		
Engine	4 CYLINDER TRANSVERSE FRONT		
Displacement	2 Liter	Transmission	MANUAL - FRONT WHEEL DRIVE
Vehicle Modification(s) Description			
Vehicle Commentary			

Vehicle Length	4437	mm	174.7	inches	CG behind Front Axle	1118	mm	44.0	inches
Vehicle Width	1681	mm	66.2	inches	Center of Damage to CG Axis	-380	mm	-15.0	inches
Vehicle Wheelbase	2614	mm	102.9	inches	Total Length of Indentation	3450	mm	135.8	inches
Vehicle Test Weight	1381	KG	3044	pounds	Maximum Static Crush Depth	331	mm	13.0	inches
					Pre-Impact Speed	0	kph	0.0	mph

Vehicle Damage Index: 03LPAW2

Principal Direction of Force: 297

Damage Profile Distance Measurements

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

DPD 1	5	mm	0.2	inches
DPD 2	62	mm	2.4	inches
DPD 3	307	mm	12.1	inches
DPD 4	333	mm	13.1	inches
DPD 5	188	mm	7.4	inches
DPD 6	13	mm	0.5	inches

Crush from Pre & Post Test Damage Measurements

	Pre-Test		Post-Test		Crush Depth	
Left Bumper Corner	146.1	inches	143.0	inches	3.0	inches
	3710	mm	3633	mm	77	mm
Centerline	174.8	inches	172.3	inches	2.5	inches
	4439	mm	4376	mm	63	mm
Right Bumper Corner	146.1	inches	146.5	inches	-0.5	inches
	3710	mm	3722	mm	-12	mm

Bumper Engagement (Inline Impact Only): 27.0

Sill Engagement (Side Impact Only): NO DIRECT ENGAGEMENT

A-pillar Engagement (Side Impact Only): 0.0

Moving Test Cart Angle: NOT APPLICABLE

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

Moving Test Cart/Vehicle Crabbed Angle: 0.0

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

Vehicle Orientation on Cart Moving Test Cart: NO DIRECT ENGAGEMENT

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

Vehicle 2 2008 FORD FOCUS

Test #	6270		
VIN	1FAHP32N78W132339	NHTSA Test Vehicle Number	2
Year	2008	Vehicle Modification Indicator	PRODUCTION VEHICLE
Make	FORD	Post-test Steering Column Shear Capsule Seperation	UNKNOWN
Model	FOCUS	Steering Column Collapse Mechanism	UNKNOWN
Body	TWO DOOR COUPE		
Engine	4 CYLINDER TRANSVERSE FRONT		
Displacement	2 Liter	Transmission	MANUAL - FRONT WHEEL DRIVE
Vehicle Modification(s) Description			
Vehicle Commentary			

Vehicle Length	4437	mm	174.7	inches	CG behind Front Axle	1118	mm	44.0	inches
Vehicle Width	1681	mm	66.2	inches	Center of Damage to CG Axis	-380	mm	-15.0	inches
Vehicle Wheelbase	2614	mm	102.9	inches	Total Length of Indentation	3450	mm	135.8	inches
Vehicle Test Weight	1381	KG	3044	pounds	Maximum Static Crush Depth	331	mm	13.0	inches
					Pre-Impact Speed	0	kph	0.0	mph

Vehicle Damage Index	03LPAW2	Principal Direction of Force	297

Pre & Post Test Damage Measurements

(Measurements are taken in a longitudinaldirection. 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							
				4439	174.8	4376	172.3				
				Engine Block							
				0	0.0	0	0.0				
3710	146.1	3633	143.0	Front Bumper Corner				3710	146.1	3722	146.5
				Front of Engine							
				0	0.0	0	0.0				
0	0.0	0	0.0	Firewall				0	0.0	0	0.0
				0	0.0	0	0.0				
0	0.0	0	0.0	Upper Leading Edge of Door				0	0.0	0	0.0
0	0.0	0	0.0	Lower Leading Edge of Door				0	0.0	0	0.0
0	0.0	0	0.0	Bottom of 'A' Post				0	0.0	0	0.0
0	0.0	0	0.0	Upper Trailing Edge of Door				0	0.0	0	0.0
0	0.0	0	0.0	Lower Trailing Edge of Door				0	0.0	0	0.0
				Steering Column							
				0	0.0	0	0.0				
				Center of Seering Column to 'A' Post (Horizontal)							
				0	0.0	0	0.0				
				Center of Steering Column to Headliner (Vertical)							
				0	0.0	0	0.0				

2008 FORD FOCUS

NHTSA Crash Test - #6270 - Side Impact

Damage Profile Distances - Indention Length - KE Equivalent Speed - Trapezoidal Average

Test Vehicle Weight = 3044 pounds
KE Equivalent Speed = 27.3 MPH
Test Crush Length = 135.8 inches

Impactor Weight = 3000
Impactor Test Speed = 38.7

Damage Profile Distance Collision Crush Depths (inches)

	DPD1	DPD2	DPD3	DPD4	DPD5	DPD6	
(Rear)	0.2	2.4	12.1	13.1	7.4	0.5	(Front)

		CRASH 3 Stiffness Coefficents			SMAC Stiffness
		A	B	G	Kv
Minimum Crush = 0.2 inches					334078.1
Using a Rated No Damage Speed of	1.0mph	2360.0	310028.4	9.0	
Using a Rated No Damage Speed of	2.0mph	4540.4	286877.1	35.9	
Using a Rated No Damage Speed of	3.0mph	6541.2	264624.0	80.8	
Using a Rated No Damage Speed of	5.0mph	10003.7	222812.7	224.6	
Average Crush = 7.1 inches					265.1
Using a Rated No Damage Speed of	1.0mph	66.5	246.0	9.0	
Using a Rated No Damage Speed of	2.0mph	127.9	227.6	35.9	
Using a Rated No Damage Speed of	3.0mph	184.3	210.0	80.8	
Using a Rated No Damage Speed of	5.0mph	281.8	176.8	174.4	
Maximum Crush = 13.1 inches					77.9
Using a Rated No Damage Speed of	1.0mph	36.0	72.3	9.0	
Using a Rated No Damage Speed of	2.0mph	69.3	66.9	35.9	
Using a Rated No Damage Speed of	3.0mph	99.9	61.7	80.8	
Using a Rated No Damage Speed of	5.0mph	152.7	51.9	224.6	

Rated No Damage Speed = Impact speed with a barrier resulting in no permanant 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^2
G = Energy dissipated without permanent damage, lb
Kv = Crush resistance per inch of damage width (SMAC), lb/in^2

****

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

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

KE Speed (mph) = SQRT(30 * CF * max crush in feet)

Crush Factor	Maximum Crush (inches)	Calculated KE Speed (mph)	Calculated Error (mph)	Calculated Error (%)
21	13.1	26.2	-1.0	-4.0

4N6XPRT Systems Specific Crush Factor (CF Specific to this test) = 22.7

CF = (mph * mph) / (30 * max crush in feet), dimensionless

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

Available Test Results
Side Impact Test Summary

Report Filter Settings

Year Range: 2000 - 2012
Make: FORD
Model: FOCUS

Test Number	Vehicle Info	No Damage Speed (mph)	Average Crush (inch)	KEES (mph)	Indention Stiffness A	Indention Stiffness B	Length Values G	Length Values Kv	Crush Factor
6245	2008 FORD FOCUS TWO DOOR COUPE	2.0	7.3	26.9	124.2	210.9	36.6	246.1	39.5
6270	2008 FORD FOCUS TWO DOOR COUPE	2.0	7.1	27.3	128.3	229.0	35.9	266.7	42.0
3341	2000 FORD FOCUS THREE DOOR HATCHBACK	2.0	6.8	23.3	138.0	217.5	43.8	260.2	32.2
3280	2000 FORD FOCUS THREE DOOR HATCHBACK	2.0	8.3	26.8	140.6	209.3	47.2	244.5	34.5
5115	2005 FORD FOCUS THREE DOOR HATCHBACK	2.0	7.4	27.0	141.6	238.2	42.1	277.8	39.3
	Average (AVG)				**134.5**	**221.0**	**41.1**	**259.1**	**37.5**
	Minimum (MIN)				**124.2**	**209.3**	**35.9**	**244.5**	**32.2**
	Maximum (MAX)				**141.6**	**238.2**	**47.2**	**277.8**	**42.0**
	Standard Deviation (STDev-sample)				**7.8**	**12.4**	**4.8**	**14.1**	**4.0**
	Number of Tests (n)			**5**					

Available Test Results
Side Impact Test Summary

Report Filter Settings

Year Range: 2000 - 2012
Make: FORD
Model: FOCUS

Test Number	Vehicle Info	No Damage Speed (mph)	Max Crush (inch)	KEES (mph)	Indention Stiffness A	Indention Stiffness B	Length Values G	Length Values Kv	Crush Factor
6245	2008 FORD FOCUS TWO DOOR COUPE	2.0	14.1	26.9	64.9	57.6	36.6	67.2	20.6
6270	2008 FORD FOCUS TWO DOOR COUPE	2.0	13.1	27.3	69.3	66.8	35.9	77.7	22.7
5115	2005 FORD FOCUS THREE DOOR HATCHBACK	2.0	13.7	27.0	77.1	70.6	42.1	82.3	21.4
3341	2000 FORD FOCUS THREE DOOR HATCHBACK	2.0	11.5	23.3	81.3	75.5	43.8	90.3	19.0
3280	2000 FORD FOCUS THREE DOOR HATCHBACK	2.0	13.4	26.8	87.4	80.9	47.2	94.5	21.4
	Average (AVG)				**76.0**	**70.3**	**41.1**	**82.4**	**21.0**
	Minimum (MIN)				**64.9**	**57.6**	**35.9**	**67.2**	**19.0**
	Maximum (MAX)				**87.4**	**80.9**	**47.2**	**94.5**	**22.7**
	Standard Deviation (STDev-sample)				**9.1**	**8.9**	**4.8**	**10.8**	**1.4**
	Number of Tests (n)			**5**					

Expert VIN DeCoder®

Version Number 3.1.0

DeCoded VIN: 2G1WC583X89229146

Model:	2008 Chevrolet Impala 2LT 4 Door Sedan
Engine Size:	2.3 L/ 231 cu.in.
Engine Description:	Inline 4 Cylinder
Horse Power:	115@ 5200rpm
Torque:	140 lb-ft at 3200 rpm
Injection System:	Multi-Port Fuel Injection (MFI)
PSI:	41-47 psi
Ignition:	Electronic
Manufacturer:	Pontiac, GM Canada
Assembly Plant:	Oshawa #1, ON
Drive Wheels:	This is a Front Wheel Drive vehicle w/ Manual Blts w/Driver & Passenger Front Air Bags

The First through Third characters (2G1) indicate a Chevrolet Car made in Canada

The Fourth and Fifth characters (WC) indicate an Impala 2LT

The Sixth character (5) indicates a 4 Door Sedan

The Seventh character (8) indicates Manual Blts w/Driver & Passenger Front Air Bags

The Eighth character (3) indicates the OEM engine: 2.3 L/ 231 cu.in., L4

The Ninth character (the check digit) is entered as X.
The VIN appears Valid, the calculated value is 10. (The display Character should be X)

The Tenth character (8) indicates the model year 2008

The Eleventh character (9) indicates the vehicle was made in the assembly plant in Oshawa #1, ON

The Twelfth through Seventeenth characters (229146) indicate the Serial Number and are unique to this vehicle.

Expert AutoStats®

Version 5.2.0

JEREMY S DAILY PHD PE
TUCRRC
800 TUCKER DRIVE
TULSA OK 74104-9700

9/6/2012

2008 CHEVROLET IMPALA 4 DOOR SEDAN

Curb Weight:	3632 lbs.		1647	kg.
Curb Weight Distribution - Front:	62 %	Rear:	38	%
Gross Vehicle Weight Rating:	4678 lbs.		2122	kg.
Number of Tires on Vehicle:	4			
Drive Wheels:	FRONT			

Horizontal Dimensions	Inches	Feet	Meters
Total Length	200	16.67	5.08
Wheelbase:	111	9.25	2.82
Front Bumper to Front Axle:	42	3.50	1.07
Front Bumper to Front of Front Well:	26	2.17	0.66
Front Bumper to Front of Hood:	7	0.58	0.18
Front Bumper to Base of Windshield:	50	4.17	1.27
Front Bumper to Top of Windshield:	83	6.92	2.11
Rear Bumper to Rear Axle:	47	3.92	1.19
Rear Bumper to Rear of Rear Well:	33	2.75	0.84
Rear Bumper to Rear of Trunk:	9	0.75	0.23
Rear Bumper to Base of Rear Window:	26	2.17	0.66
Width Dimensions			
Maximum Width:	73	6.08	1.85
Front Track:	62	5.17	1.57
Rear Track:	62	5.17	1.57
Vertical Dimensions			
Height:	59	4.92	1.50
Ground to -			
Front Bumper (Top)	23	1.92	0.58
Headlight - center	28	2.33	0.71
Hood - top front:	30	2.50	0.76
Base of Windshield	38	3.17	0.97
Rear Bumper - top:	28	2.33	0.71
Trunk - top rear:	44	3.67	1.12
Base of Rear Window:	45	3.75	1.14

2008 CHEVROLET IMPALA 4 DOOR SEDAN

Interior Dimensions

	Inches	Feet	Meters
Front Seat Shoulder Width	58	4.83	1.47
Front Seat to Headliner	39	3.25	0.99
Front Leg Room - seatback to floor (max)	41	3.42	1.04
Rear Seat Shoulder Width	58	4.83	1.47
Rear Seat to Headliner	38	3.17	0.97
Front Leg Room - seatback to floor (min)	26	2.17	0.66

Seatbelts: 3pt - front and rear

Airbags: FRONT SEAT AIRBAGS

Steering Data

Turning Circle (Diameter)	492	41.00	12.50
Steering Ratio:	:1		
Wheel Radius:	12	1.00	0.30
Tire Size (OEM):	P225/60R16		

Acceleration & Braking Information

Brake Type: ALL DISC

ABS System: ALL WHEEL ABS - OPTIONAL

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

d = 134.0 ft t = 3.1 sec a = -28.8 ft/sec² G-force = -0.90

Acceleration:

0 to 30mph	t =		sec	a =		ft/sec²	G-force =	
0 to 60mph	t =	5.7	sec	a =	15.4	ft/sec²	G-force =	0.48
45 to 65mph	t =	5.4	sec	a =	5.4	ft/sec²	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 = 2006 - 2012

2008 CHEVROLET IMPALA 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	=	42.18
Inches in front of rear axle	=	68.82
Inches from side of vehicle	=	36.50
Inches from ground	=	23.16
Inches from front corner	=	91.75
Inches from rear corner	=	121.44
Inches from front bumper	=	84.18
Inches from rear bumper	=	115.82

Moments of Inertia Approximations (No Load):

Yaw Moment of Inertia	=	2534.96	lb*ft*sec²
Pitch Moment of Inertia	=	2446.68	lb*ft*sec²
Roll Moment of Inertia	=	503.76	lb*ft*sec²

Front Profile Information

Angle Front Bumper to Hood Front	=	45.0	deg
Angle Front of Hood to Windshield Base	=	10.5	deg
Angle Front of Hood to Windshield Top	=	19.6	deg
Angle of Windshield	=	29.9	deg
Angle of Steering Tires at Max Turn	=	25.9	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:

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

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

#7488

2012 CHEVROLET IMPALA

Provided By

4N6XPRT StifCalcs®

Registered to:

TUCRRC
800 TUCKER DRIVE
TULSA OK 74104-9700
12R-110829SC03101

4N6XPRT Systems | 8387 University Avenue | La Mesa, CA 91942 | USA
(800) 266-9778 | (619) 464-3478 | FAX: (619) 464-2206 | Email: 4n6@4n6xprt.com

Similar Vehicle database reader

You entered: **2008 CHEVROLET IMPALA**

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

Year Range	Make	Model	Body Styles	Wheelbase
2005 - 2009	BUICK	LACROSSE	4D	111.7
Remarks:				
2006 - 2008	PONTIAC	GRAND PRIX	2D, 4D	110.5
Remarks:				
2006 - 2007	CHEVROLET	MONTE CARLO	2D	108
Remarks:				
2006 - 2012	CHEVROLET	IMPALA	2D, 4D, SW	110.5, 125
Remarks:				

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 #	7488	NHTSA Test Reference Guide Version #	V5			
Test Date	2011-10-22	Contract #	DTNH22-06-D-00024			
Contract/Study Title	NEW CAR ASSESSMENT PROGRAM FRONTAL BARRIER IMPACT TEST					
Test Objective(s)	TO OBTAIN VEHICLE CRASHWORTHINESS AND OCCUPANT RESTRAINT INFORMATION					
Test Type	NEW CAR ASSESSMENT TEST	Configuration	VEHICLE INTO BARRIER			
Impact Angle	0	Side Impact Point	0	mm	0.0	inches
		Offset Distance	0	mm	0.0	inches
		Closing Speed	56.2	Km/Hr	34.89	MPH
Test Performer	CALSPAN					
Test Reference #	RUN2544					
Test Track Surface	CONCRETE	Condition	DRY			
Ambient Temperature	9 C	48.2 F	Total Number of Curves	137		
Data Recorder Type	DIGITAL DATA ACQUISITION	Data Link	UMBILICAL CABLE			
Test Commentary	TR2544 - MC0100 - 2012 CHEVROLET IMPALA NCAP (FRONTAL) - TARGET 35.0					

Fixed Barrier Information

Barrier Type	RIGID	Pole Barrier Diameter	0	mm	0	inches
Barrier Shape	LOAD CELL BARRIER					
Barrier Commentary	FRONTAL FLAT BARRIER WITH 36 LOADCELLS					

2012 CHEVROLET IMPALA LEFT FRONT SEAT OCCUPANT

Test #	7488		
Vehicle #	1	Sex	MALE
Location	LEFT FRONT SEAT	Age	0
Position	CENTER POSITION	Height	0 mm 0.0 inches
Type	HYBRID III DUMMY	Weight	0.0 kg 0 pounds
Size	50 PERCENTILE		
Calibration Method	HYBRID III		
Occupant Manufacturer	MFG: FIRST TECHNOLOGY SAFETY SYSTEMS: 064		
Occupant Modification	NO COMMENTS		
Occupant Description	NO COMMENTS		
Occupant Commentary	CNTRH2 =HEADREST		

Head

Head to -

Windshielder Header	358	mm	14.1	inches	Head Injury Criteria (HIC)	223	
WindShield	683	mm	26.9	inches	HIC Lower Time Interval (ms)	66.7	
Seatback	0	mm	0.0	inches	HIC Upper Time Interval (ms)	81.7	
Side Header	223	mm	8.8	inches			
Side Window	380	mm	15.0	inches			

Neck to Seatback 0 mm 0.0 inches

First Contact Region (Head): AIR BAG

Second Contact Region (Head):

Chest

Chest to -

Dash	558	mm	22.0	inches	Arm to Door	128	mm	5.0	inches
Steering Wheel	311	mm	12.2	inches	Hip to Door	149	mm	5.9	inches
Seatback	0	mm	0.0	inches					

Chest Severity Index	380	Pelvic Peak Lateral Acceleration (g's)	0
Thoracic Trauma Index	0	Thorax Peak Acceleration (g's)	45.6

Lap Belt Peak Load	7885	Newtons	1772.6	pound Force
Shoulder Belt Peak Load	3563	Newtons	801.0	pound Force

First Contact Region (Chest/Abdomen): AIR BAG

Second Contact Region (Chest/Abdomen): NONE

Legs

Knees to Dash	180	mm	7.1	inches	Knees to Seatback	0	mm	0.0	inches

Left Femur Peak Load	-208	Newtons	-46.8	pounds Force
Right Femur Peak Load	-963	Newtons	-216.5	pounds Force

First Contact Region (Legs): DASHPANEL

Second Contact Region (Legs):

2012 CHEVROLET IMPALA LEFT FRONT SEAT OCCUPANT

Test #	7488					
Vehicle #	1	Sex	MALE			
Location	LEFT FRONT SEAT	Age	0			
Position	CENTER POSITION	Height	0	mm	0.0	inches
Type	HYBRID III DUMMY	Weight	0.0	kg	0	pounds
Size	50 PERCENTILE					

Calibration Method	HYBRID III
Occupant Manufacturer	MFG: FIRST TECHNOLOGY SAFETY SYSTEMS: 064
Occupant Modification	NO COMMENTS
Occupant Description	NO COMMENTS
Occupant Commentary	CNTRH2 =HEADREST

Restraints

Restraint # 1	3 POINT BELT
Mounted	BELT - CONVENTIONAL MOUNT
Deployment	NOT APPLICABLE
Restraint Commentary	BELT PRETENSIONER & LOAD LIMITER
Restraint # 2	FRONTAL AIRBAG
Mounted	STEERING WHEEL
Deployment	DEPLOYED PROPERLY
Restraint Commentary	FRONTAL AIRBAG

2012 CHEVROLET IMPALA RIGHT FRONT SEAT OCCUPANT

Test #	7488		
Vehicle #	1	Sex	FEMALE
Location	RIGHT FRONT SEAT	Age	0
Position	FORWARD OF CENTER POSITION	Height	0 mm 0.0 inches
Type	HYBRID III DUMMY	Weight	0.0 kg 0 pounds
Size	5 PERCENTILE		
Calibration Method	HYBRID III		
Occupant Manufacturer	MFG: FIRST TECHNOLOGY SAFETY SYSTEMS S/N:273		
Occupant Modification	NO COMMENTS		
Occupant Description	NO COMMENTS		
Occupant Commentary	CNTRH2 =HEADREST		

Head

Head to -

Windshielder Header	290	mm	11.4	inches	Head Injury Criteria (HIC)	236	
WindShield	602	mm	23.7	inches	HIC Lower Time Interval (ms)	69	
Seatback	0	mm	0.0	inches	HIC Upper Time Interval (ms)	84	
Side Header	238	mm	9.4	inches			
Side Window	370	mm	14.6	inches			
Neck to Seatback	0	mm	0.0	inches			
First Contact Region (Head)	AIR BAG						
Second Contact Region (Head)							

Chest

Chest to -

Dash	454	mm	17.9	inches	Arm to Door	73	mm	2.9	inches
Steering Wheel	0	mm	0.0	inches	Hip to Door	222	mm	8.7	inches
Seatback	0	mm	0.0	inches					
Chest Severity Index	287				Pelvic Peak Lateral Acceleration (g's)	0			
Thoracic Trauma Index	0				Thorax Peak Acceleration (g's)	36.5			
Lap Belt Peak Load	3503	Newtons	787.5	pound Force					
Shoulder Belt Peak Load	3469	Newtons	779.9	pound Force					
First Contact Region (Chest/Abdomen)	AIR BAG								
Second Contact Region (Chest/Abdomen)	NONE								

Legs

Knees to Dash	115	mm	4.5	inches	Knees to Seatback	0	mm	0.0	inches
Left Femur Peak Load	-3105	Newtons	-698.0	pounds Force					
Right Femur Peak Load	-1406	Newtons	-316.1	pounds Force					
First Contact Region (Legs)	DASHPANEL								
Second Contact Region (Legs)									

2012 CHEVROLET IMPALA RIGHT FRONT SEAT OCCUPANT

Test #	7488					
Vehicle #	1	Sex	FEMALE			
Location	RIGHT FRONT SEAT	Age	0			
Position	FORWARD OF CENTER POSITION	Height	0	mm	0.0	inches
Type	HYBRID III DUMMY	Weight	0.0	kg	0	pounds
Size	5 PERCENTILE					

Calibration Method	HYBRID III
Occupant Manufacturer	MFG: FIRST TECHNOLOGY SAFETY SYSTEMS S/N:273
Occupant Modification	NO COMMENTS
Occupant Description	NO COMMENTS
Occupant Commentary	CNTRH2 =HEADREST

Restraints

Restraint # 1	3 POINT BELT
Mounted	BELT - CONVENTIONAL MOUNT
Deployment	NOT APPLICABLE
Restraint Commentary	BELT PRETENSIONER & LOAD LIMITER
Restraint # 2	FRONTAL AIRBAG
Mounted	DASH PANEL - TOP
Deployment	DEPLOYED PROPERLY
Restraint Commentary	FRONTAL AIRBAG

Vehicle 1 2012 CHEVROLET IMPALA

Test #	7488		
VIN	2G1WA5E37C1117437	NHTSA Test Vehicle Number	1
Year	2012	Vehicle Modification Indicator	PRODUCTION VEHICLE
Make	CHEVROLET	Post-test Steering Column Shear Capsule Seperation	NO SEPARATION
Model	IMPALA	Steering Column Collapse Mechanism	NONE
Body	FOUR DOOR SEDAN		
Engine	V6 TRANSVERSE FRONT		
Displacement	3.6 Liter	Transmission	AUTOMATIC - FRONT WHEEL DRIVE
Vehicle Modification(s) Description	NONE		
Vehicle Commentary	TR2544 - MC0100 - 2012 CHEVROLET IMPALA NCAP (FRONTAL) - TARGET 35.0		

Vehicle Length	5094	mm	200.6	inches	CG behind Front Axle	1195	mm	47.0	inches
Vehicle Width	1843	mm	72.6	inches	Center of Damage to CG Axis	153	mm	6.0	inches
Vehicle Wheelbase	2808	mm	110.6	inches	Total Length of Indentation	1399	mm	55.1	inches
Vehicle Test Weight	1851	KG	4080	pounds	Maximum Static Crush Depth	674	mm	26.5	inches
					Pre-Impact Speed	56	kph	34.9	mph

Vehicle Damage Index: 12FDEW3

Principal Direction of Force: 0

Damage Profile Distance Measurements

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

DPD 1	479	mm	18.9	inches
DPD 2	629	mm	24.8	inches
DPD 3	666	mm	26.2	inches
DPD 4	651	mm	25.6	inches
DPD 5	599	mm	23.6	inches
DPD 6	492	mm	19.4	inches

Crush from Pre & Post Test Damage Measurements

	Pre-Test		Post-Test		Crush Depth	
Left Bumper Corner	197.4	inches	173.0	inches	24.4	inches
	5014	mm	4394	mm	620	mm
Centerline	200.6	inches	174.1	inches	26.5	inches
	5094	mm	4421	mm	673	mm
Right Bumper Corner	197.6	inches	174.5	inches	23.0	inches
	5018	mm	4433	mm	585	mm

Bumper Engagement (Inline Impact Only)	Sill Engagement (Side Impact Only)	A-pillar Engagement (Side Impact Only)
0.0	NOT APPLICABLE	0.0

Moving Test Cart Angle	Moving Test Cart/Vehicle Crabbed Angle	Vehicle Orientation on Cart Moving Test Cart
DIRECT ENGAGEMENT	0.0	NOT APPLICABLE
Magnitude of the Tilt Angle Measured between surface of a Rollover Test Cart and the Ground	*Magniture of the Crabbed Angle Measure Clockwise from Longitudinal Vector to Velocity Vector of Vehicle*	*Magnitude of the Angle Measured between the Vehicle Orientation and Direction of Test Cart Motion*

Vehicle 1 2012 CHEVROLET IMPALA

Test #	7488		
VIN	2G1WA5E37C1117437	NHTSA Test Vehicle Number	1
Year	2012	Vehicle Modification Indicator	PRODUCTION VEHICLE
Make	CHEVROLET	Post-test Steering Column Shear Capsule Seperation	NO SEPARATION
Model	IMPALA	Steering Column Collapse Mechanism	NONE
Body	FOUR DOOR SEDAN		
Engine	V6 TRANSVERSE FRONT		
Displacement	3.6 Liter	Transmission	AUTOMATIC - FRONT WHEEL DRIVE
Vehicle Modification(s) Description	NONE		
Vehicle Commentary	TR2544 - MC0100 - 2012 CHEVROLET IMPALA NCAP (FRONTAL) - TARGET 35.0		

Vehicle Length	5094	mm	200.6	inches	CG behind Front Axle	1195	mm	47.0	inches
Vehicle Width	1843	mm	72.6	inches	Center of Damage to CG Axis	153	mm	6.0	inches
Vehicle Wheelbase	2808	mm	110.6	inches	Total Length of Indentation	1399	mm	55.1	inches
Vehicle Test Weight	1851	KG	4080	pounds	Maximum Static Crush Depth	674	mm	26.5	inches
					Pre-Impact Speed	56	kph	34.9	mph

Vehicle Damage Index 12FDEW3 Principal Direction of Force 0

Pre & Post Test Damage Measurements

(Measurements are taken in a longitudinaldirection. 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							
				5094	200.6	4421	174.1				
				Engine Block							
				401	15.8	392	15.4				
5014	197.4	4394	173.0	Front Bumper Corner				5018	197.6	4433	174.5
				Front of Engine							
				4430	174.4	4136	162.8				
3902	153.6	3844	151.3	Firewall				3876	152.6	3826	150.6
				3905	153.7	0	0.0				
3501	137.8	3503	137.9	Upper Leading Edge of Door				3504	138.0	3500	137.8
3492	137.5	3493	137.5	Lower Leading Edge of Door				3494	137.6	3488	137.3
3491	137.4	3489	137.4	Bottom of 'A' Post				3491	137.4	3488	137.3
2408	94.8	2407	94.8	Upper Trailing Edge of Door				2409	94.8	2406	94.7
2414	95.0	2415	95.1	Lower Trailing Edge of Door				2419	95.2	2411	94.9
				Steering Column							
				3000	118.1	2981	117.4				
				Center of Seering Column to 'A' Post (Horizontal)							
				281	11.1	249	9.8				
				Center of Steering Column to Headliner (Vertical)							
				437	17.2	401	15.8				

2012 CHEVROLET IMPALA

NHTSA Crash Test - #7488 - Front Impact

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

Test Vehicle Weight = 4080 pounds
Vehicle Closing Speed = 34.9 mph
Test Crush Length = 72.6 inches

Pre/Post Collision Crush Depths (inches)

	Left Side Crush	Centerline Crush	Right Side Crush	
(Driver Side)	24.4	26.5	23.0	(Pass. Side)

		CRASH 3 Stiffness Coefficents			SMAC Stiffness
		A	B	G	Kv
Minimum Crush = 23.0 inches					103.7
Using a Rated No Damage Speed of	2.5mph	158.7	89.4	140.9	
Using a Rated No Damage Speed of	5.0mph	292.9	76.1	563.5	
Using a Rated No Damage Speed of	7.5mph	402.6	63.9	1267.8	
Using a Rated No Damage Speed of	10.0mph	487.8	52.8	2253.8	
Average Crush = 25.1 inches					87.1
Using a Rated No Damage Speed of	2.5mph	145.4	75.1	140.9	
Using a Rated No Damage Speed of	5.0mph	268.4	63.9	563.5	
Using a Rated No Damage Speed of	7.5mph	368.9	53.7	1267.8	
Using a Rated No Damage Speed of	10.0mph	447.0	44.3	2253.8	
Maximum Crush = 26.5 inches					78.1
Using a Rated No Damage Speed of	2.5mph	137.7	67.3	140.9	
Using a Rated No Damage Speed of	5.0mph	254.2	57.3	563.5	
Using a Rated No Damage Speed of	7.5mph	349.4	48.2	1267.8	
Using a Rated No Damage Speed of	10.0mph	423.4	39.8	2253.8	

Rated No Damage Speed = Impact speed with a barrier resulting in no permanant 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^2
G = Energy dissipated without permanent damage, lb
Kv = Crush resistance per inch of damage width (SMAC), lb/in^2

****

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

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

KE Speed (mph) = SQRT(30 * CF * max crush in feet)

Crush Factor	Maximum Crush (inches)	Calculated KE Speed (mph)	Calculated Error (mph)	Calculated Error (%)
21	26.5	37.3	2.4	6.5

4N6XPRT Systems Specific Crush Factor (CF Specific to this test) = 18.4

CF = (mph * mph) / (30 * max crush in feet), dimensionless

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

2012 CHEVROLET IMPALA

NHTSA Crash Test - #7488 - Front Impact

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

Test Vehicle Weight = 4080 pounds
Vehicle Closing Speed = 34.9 mph
Test Crush Length = 55.1 inches

Pre/Post Collision Crush Depths (inches)

	Left Side Crush	Centerline Crush	Right Side Crush	
(Driver Side)	24.4	26.5	23.0	(Pass. Side)

		CRASH 3 Stiffness Coefficents			SMAC Stiffness
		A	B	G	Kv
Minimum Crush = 23.0 inches					136.6
Using a Rated No Damage Speed of	2.5mph	209.1	117.8	185.6	
Using a Rated No Damage Speed of	5.0mph	385.9	100.3	742.3	
Using a Rated No Damage Speed of	7.5mph	530.4	84.2	1670.1	
Using a Rated No Damage Speed of	10.0mph	642.6	69.5	2969.1	
Average Crush = 25.1 inches					114.7
Using a Rated No Damage Speed of	2.5mph	191.6	98.9	185.6	
Using a Rated No Damage Speed of	5.0mph	353.6	84.2	742.3	
Using a Rated No Damage Speed of	7.5mph	486.0	70.7	1670.1	
Using a Rated No Damage Speed of	10.0mph	588.9	58.4	2969.1	
Maximum Crush = 26.5 inches					102.9
Using a Rated No Damage Speed of	2.5mph	181.5	88.7	185.6	
Using a Rated No Damage Speed of	5.0mph	334.9	75.5	742.3	
Using a Rated No Damage Speed of	7.5mph	460.3	63.4	1670.1	
Using a Rated No Damage Speed of	10.0mph	557.7	52.4	2969.1	

Rated No Damage Speed = Impact speed with a barrier resulting in no permanant 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^2
G = Energy dissipated without permanent damage, lb
Kv = Crush resistance per inch of damage width (SMAC), lb/in^2

****

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

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

KE Speed (mph) = SQRT(30 * CF * max crush in feet)

Crush Factor	Maximum Crush (inches)	Calculated KE Speed (mph)	Calculated Error (mph)	Calculated Error (%)
21	26.5	37.3	2.4	6.5

4N6XPRT Systems Specific Crush Factor (CF Specific to this test) = 18.4

CF = (mph * mph) / (30 * max crush in feet), dimensionless

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

2012 CHEVROLET IMPALA

NHTSA Crash Test - #7488 - Front Impact

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

Test Vehicle Weight = 4080 pounds
Vehicle Closing Speed = 34.9 MPH
Test Crush Length = 72.6 inches

Damage Profile Distance Collision Crush Depths (inches)

	DPD1	DPD2	DPD3	DPD4	DPD5	DPD6	
(Driver Side)	18.9	24.8	26.2	25.6	23.6	19.4	(Pass Side)

		CRASH 3 Stiffness Coefficents			SMAC Stiffness
		A	B	G	Kv
Minimum Crush = 18.9 inches					153.6
Using a Rated No Damage Speed of	2.5mph	193.1	132.4	140.9	
Using a Rated No Damage Speed of	5.0mph	356.4	112.7	563.5	
Using a Rated No Damage Speed of	7.5mph	489.9	94.7	1267.8	
Using a Rated No Damage Speed of	10.0mph	593.6	78.2	2253.8	
Average Crush = 23.9 inches					96.1
Using a Rated No Damage Speed of	2.5mph	152.7	82.8	140.9	
Using a Rated No Damage Speed of	5.0mph	281.9	70.5	563.5	
Using a Rated No Damage Speed of	7.5mph	387.4	59.2	1267.8	
Using a Rated No Damage Speed of	10.0mph	469.4	48.9	1562.8	
Maximum Crush = 26.2 inches					79.9
Using a Rated No Damage Speed of	2.5mph	139.3	68.9	140.9	
Using a Rated No Damage Speed of	5.0mph	257.1	58.7	563.5	
Using a Rated No Damage Speed of	7.5mph	353.4	49.3	1267.8	
Using a Rated No Damage Speed of	10.0mph	428.2	40.7	2253.8	

Rated No Damage Speed = Impact speed with a barrier resulting in no permanant 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^2
G = Energy dissipated without permanent damage, lb
Kv = Crush resistance per inch of damage width (SMAC), lb/in^2

****

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

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

KE Speed (mph) = SQRT(30 * CF * max crush in feet)

Crush Factor	Maximum Crush (inches)	Calculated KE Speed (mph)	Calculated Error (mph)	Calculated Error (%)
21	26.2	37.1	2.2	5.9

4N6XPRT Systems Specific Crush Factor (CF Specific to this test) = 18.6

CF = (mph * mph) / (30 * max crush in feet), dimensionless

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

2012 CHEVROLET IMPALA

NHTSA Crash Test - #7488 - Front Impact

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

Test Vehicle Weight = 4080 pounds
Vehicle Closing Speed = 34.9 MPH
Test Crush Length = 55.1 inches

Damage Profile Distance Collision Crush Depths (inches)

	DPD1	DPD2	DPD3	DPD4	DPD5	DPD6	
(Driver Side)	18.9	24.8	26.2	25.6	23.6	19.4	(Pass Side)

		CRASH 3 Stiffness Coefficents			SMAC Stiffness
		A	B	G	Kv
Minimum Crush = 18.9 inches					202.4
Using a Rated No Damage Speed of	2.5mph	254.4	174.4	185.6	
Using a Rated No Damage Speed of	5.0mph	469.6	148.5	742.3	
Using a Rated No Damage Speed of	7.5mph	645.4	124.7	1670.1	
Using a Rated No Damage Speed of	10.0mph	782.0	103.0	2969.1	
Average Crush = 23.9 inches					126.5
Using a Rated No Damage Speed of	2.5mph	201.2	109.1	185.6	
Using a Rated No Damage Speed of	5.0mph	371.3	92.9	742.3	
Using a Rated No Damage Speed of	7.5mph	510.4	78.0	1670.1	
Using a Rated No Damage Speed of	10.0mph	618.4	64.4	2058.8	
Maximum Crush = 26.2 inches					105.3
Using a Rated No Damage Speed of	2.5mph	183.5	90.8	185.6	
Using a Rated No Damage Speed of	5.0mph	338.7	77.3	742.3	
Using a Rated No Damage Speed of	7.5mph	465.6	64.9	1670.1	
Using a Rated No Damage Speed of	10.0mph	564.1	53.6	2969.1	

Rated No Damage Speed = Impact speed with a barrier resulting in no permanant 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^2
G = Energy dissipated without permanent damage, lb
Kv = Crush resistance per inch of damage width (SMAC), lb/in^2

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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 Speed (mph) = SQRT(30 * CF * max crush in feet)

Crush Factor	Maximum Crush (inches)	Calculated KE Speed (mph)	Calculated Error (mph)	Calculated Error (%)
21	26.2	37.1	2.2	5.9

4N6XPRT Systems Specific Crush Factor (CF Specific to this test) = 18.6

CF = (mph * mph) / (30 * max crush in feet), 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: 2006 - 2012
Make: CHEVROLET
Model: IMPALA

Test Number	Vehicle Info	No Damage Speed (mph)	Average Crush (inch)	Closing Speed (mph)	Vehicle Stiffness A	Vehicle Stiffness B	Vehicle Width Values G	Vehicle Width Values Kv	Crush Factor
5578	2006 CHEVROLET MONTE CARLO TWO DOOR C...	5.0	26.3	35.0	250.4	57.1	549.0	77.7	18.6
7488	2012 CHEVROLET IMPALA FOUR DOOR SEDAN	5.0	23.9	34.9	282.3	70.7	563.5	96.4	20.4
5468	2006 PONTIAC GRAND PRIX FOUR DOOR SEDAN	5.0	23.5	35.1	283.3	72.5	553.6	98.6	20.9
5547	2006 CHEVROLET IMPALA FOUR DOOR SEDAN	5.0	23.8	35.2	286.3	72.4	565.9	98.5	20.7
5274	2005 BUICK LACROSSE FOUR DOOR SEDAN	5.0	23.4	35.1	287.8	74.2	558.3	100.9	21.1
6052	2007 CHEVROLET IMPALA FOUR DOOR SEDAN	5.0	12.4	24.7	382.5	121.6	601.5	191.1	19.7
7496	2012 CHEVROLET IMPALA FOUR DOOR SEDAN	5.0	6.5	20.0	494.8	229.5	533.3	407.7	24.8
	Average (AVG)				**323.9**	**99.7**	**560.7**	**153.0**	**20.9**
	Minimum (MIN)				**250.4**	**57.1**	**533.3**	**77.7**	**18.6**
	Maximum (MAX)				**494.8**	**229.5**	**601.5**	**407.7**	**24.8**
	Standard Deviation (STDev-sample)				**85.8**	**60.7**	**21.0**	**118.2**	**1.9**
	Number of Tests (n)			**7**					

Available Test Results
Front Impact Test Summary

Report Filter Settings

Year Range: 2006 - 2012
Make: CHEVROLET
Model: IMPALA

Test Number	Vehicle Info	No Damage Speed (mph)	Max Crush (inch)	Closing Speed (mph)	Vehicle Stiffness A	Vehicle Stiffness B	Vehicle Width Values G	Vehicle Width Values Kv	Crush Factor
7496	2012 CHEVROLET IMPALA FOUR DOOR SEDAN	5.0	15.4	20.0	207.6	40.4	533.3	71.8	10.4
5578	2006 CHEVROLET MONTE CARLO TWO DOOR C...	5.0	28.0	35.0	235.7	50.6	549.0	68.9	17.5
5547	2006 CHEVROLET IMPALA FOUR DOOR SEDAN	5.0	28.3	35.2	240.8	51.2	565.9	69.6	17.4
5468	2006 PONTIAC GRAND PRIX FOUR DOOR SEDAN	5.0	26.7	35.1	249.3	56.1	553.6	76.3	18.4
7488	2012 CHEVROLET IMPALA FOUR DOOR SEDAN	5.0	26.5	34.9	253.9	57.2	563.5	77.9	18.4
5274	2005 BUICK LACROSSE FOUR DOOR SEDAN	5.0	24.9	35.1	269.7	65.2	558.3	88.6	19.8
6052	2007 CHEVROLET IMPALA FOUR DOOR SEDAN	5.0	13.9	24.7	340.6	96.4	601.5	151.5	17.6
	Average (AVG)				**256.8**	**59.6**	**560.7**	**86.4**	**17.1**
	Minimum (MIN)				**207.6**	**40.4**	**533.3**	**68.9**	**10.4**
	Maximum (MAX)				**340.6**	**96.4**	**601.5**	**151.5**	**19.8**
	Standard Deviation (STDev-sample)				**41.6**	**17.9**	**21.0**	**29.5**	**3.1**
	Number of Tests (n)			**7**					

4N6XPRT Systems
Expert System Software for Litigation

8387 University Avenue
La Mesa, CA 91942

Phone: (619) 464-3478
Fax: (619) 464-2206
Toll Free: 1- 800-266-9778

Web Site: http://www.4n6xprt.com

E-Mail: 4n6@4n6xprt.com

Dear Conference Attendee,

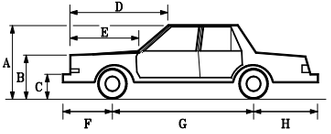
We at 4N6XPRT Systems in conjunction with the Tulsa University Crash Reconstruction Research Consortium (TUCRRC) were pleased to be able to provide you with the preceding data for the crash test vehicles.

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.

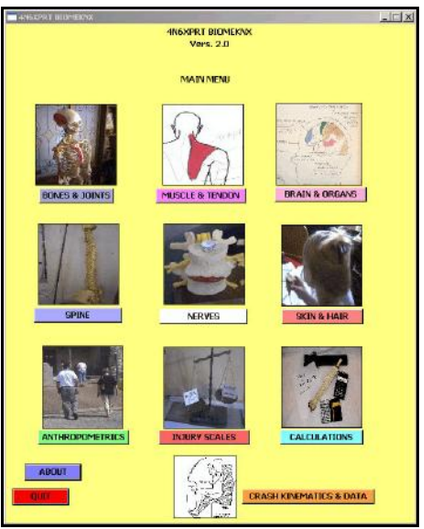
For many vehicles mid-1960's to present, data such as bumper height, front and rear overhang, hood height, etc., are also included.

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.	**Weight Dimensions**		
Rear Bumper to Rear Axle	54	in.	Curb Weight	4184	lbs.
Depth Dimensions			Curb Weight Distribution:		
Width	78	in.	Front =	56	%
Front Track	63	in.	Rear =	44	%
Rear Track	66	in.	Gross Vehicle Weight Rating	5500	lbs.

4N6XPRT BioMeknx®



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

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.

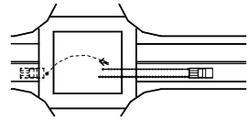
3FAPP1280MR117253

Expert VIN DeCoder®

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 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 Clacs® 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 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.

4N6XPRT StifCalcs®

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:

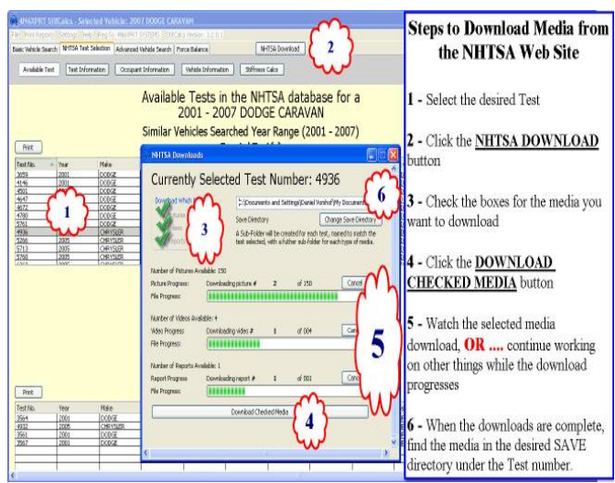
★ Lookup individual tests and get basic front, side, and rear **STIFFNESS VALUES** from these tests. The values are based on the reported crush depths and lengths within each test.
★ Obtain Similar Vehicle group summary STIFFNESS data with Statistical measures.
★ Create "CLASS" vehicles and get summary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

FRONTAL STATISTICAL MEASURES EXAMPLE:

		Vehicle Width			
		Stiffness Values			
		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 THE INTERNET the user can:

★ **RESEARCH** and **easily download** the **PICTURES**, **VIDEOS**, and **REPORTS** available for 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 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: (_____)_____

E-Mail: _____

PAYMENT BY: Check____ Money Order____ Govt. Purchase Order____

for Credit Card Orders, **please circle Credit Card type: Am. Express / Visa / MasterCard**, then complete the following:

Card Number: _____Expiration Date (MM/YY):____/____

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

←Visa/MasterCard | Security | American Express →

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

(This is the address that the credit card bill would go to, not where we would send the data or product to)

Zip for where the **credit card bill is sent**:_____

(This is the zip code that the credit card bill would go to, not where we would send the data or product to)

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 $_____

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☐ - 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:_____

Authorized signature: _____

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 **N**o **S**ignificant **D**imensional **C**hanges VIN DeCoding when VIN is provided Information available

Mid-60's to present **also includes** (*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@4n6xprt.com**

Web: **http://www.4n6xprt.com**

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.

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Company/Dept:_____
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Expert VIN DeCoder®
_____ (copies) x $525.00 . . . . . = $_____
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(Check with order = $5.00, Credit Card = $10.00 , Govt. P.O.r = $15.00)
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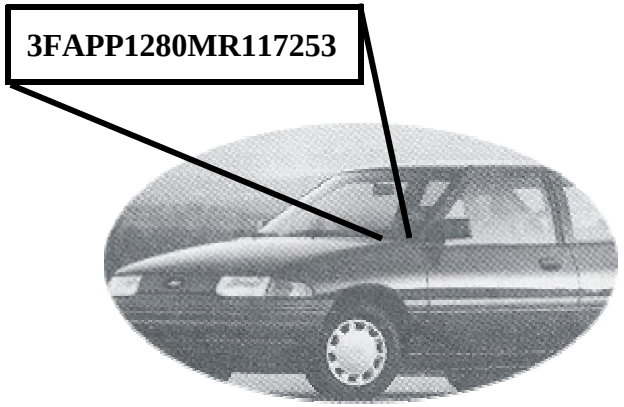
Expert VIN DeCoder®



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

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Forensic Expert Software
8387 University Avenue
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Web: http://www.4n6xprt.com
E-Mail: VIN@4n6xprt.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 twelveth through the seventeenth characters { 117253 } is the Serial Number unique to this vehicle.

01-01-2001 S/N:930114VD01201 Reg. User: 4N6XPRT SYSTEMS

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

Contact Name: _____
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AutoStats® _____ (copies) x $625.00 . . = $_____
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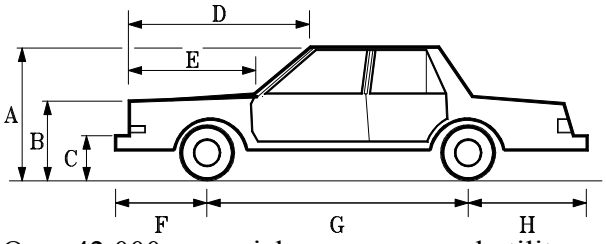
** Checks MUST be drawn from a bank in the U.S.A.*

Expert AutoStats®



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

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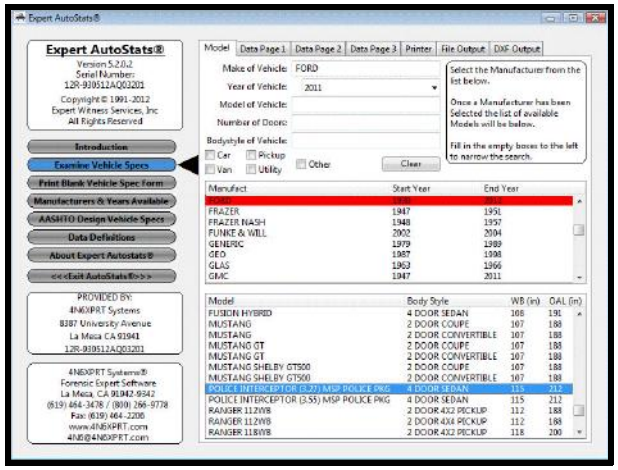
1-800-266-9778

Select Your Vehicle

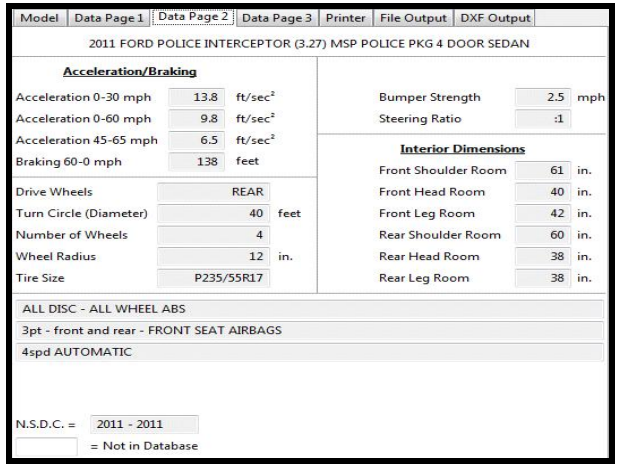


After typing in the Make, Year, and Type of vehicle, you are presented with the vehicles which are available for that year.

Screen 1

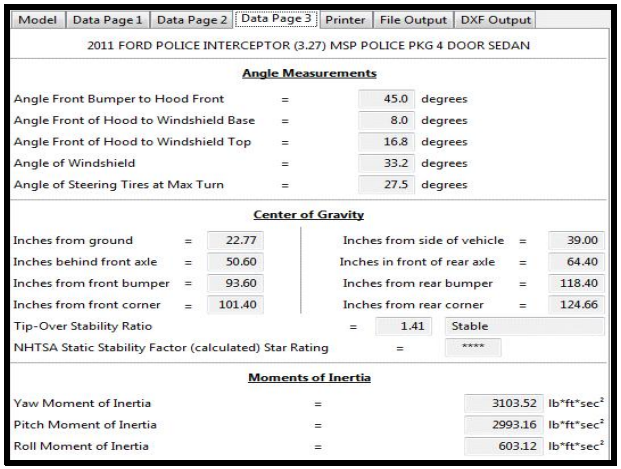
The first screen of data contains exterior dimensions and weight data. Length, Height, Wheelbase, Width, and Weight Distribution are published dimensions. Curb Weight is an average of published curb weights for the given vehicle. Detail dimensions such as the bumper heights and Front Bumper to Front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

Screen 2



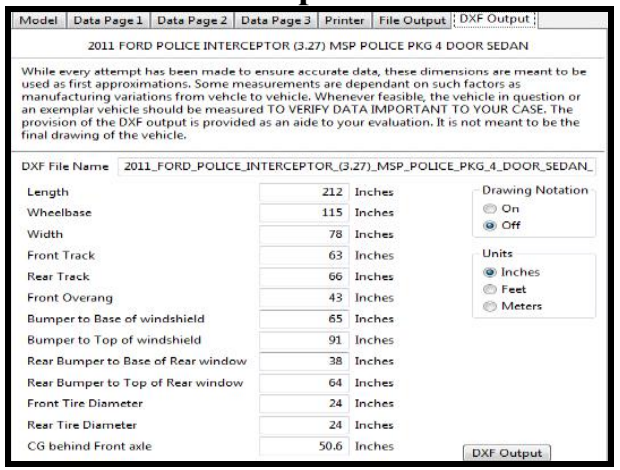
The second screen of data contains interior dimensions and various performance data. The data contained in the second screen comes from various published sources.

Screen 3



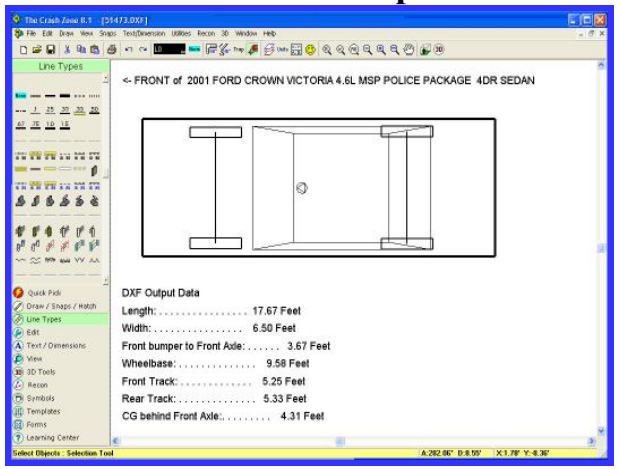
The third and last screen contains a number of calculated items of information which may be of use depending upon the type of case, the other software that you use, and the questions which need to be answered.

DXF Output Screen



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



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:

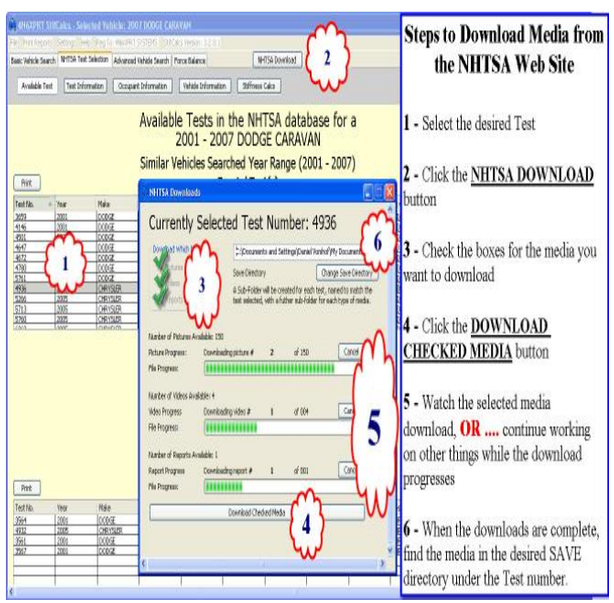
		Vehicle Width			
		Stiffness Values			
		A	B	G	Kv
Average (AVG)		305.7	93.5	523.6	143.1
Minimum (MIN)		115.0	13.2	465.2	23.5
Maximum (MAX)		461.6	200.0	614.1	387.3
Standard Deviation (STDev-sample)		73.4	38.4	36.2	72.8
Number of Tests (n)	53				

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



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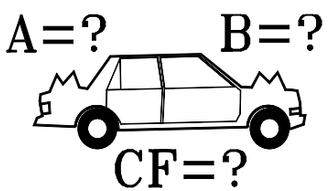

Quick, Convenient, Easy access to the NHTSA Crash Test data on your own MS-Windows computer without the need for an internet connection.

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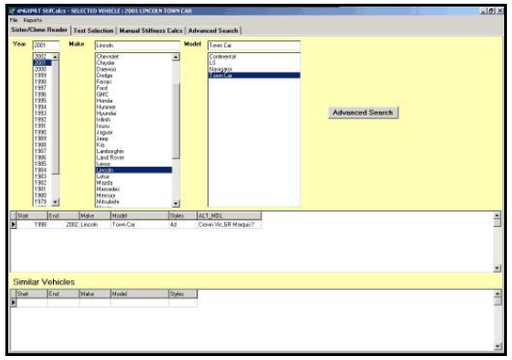
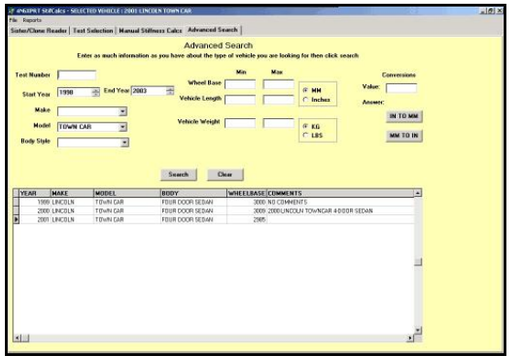
BASIC VEHICLE CRASH TEST SEARCH

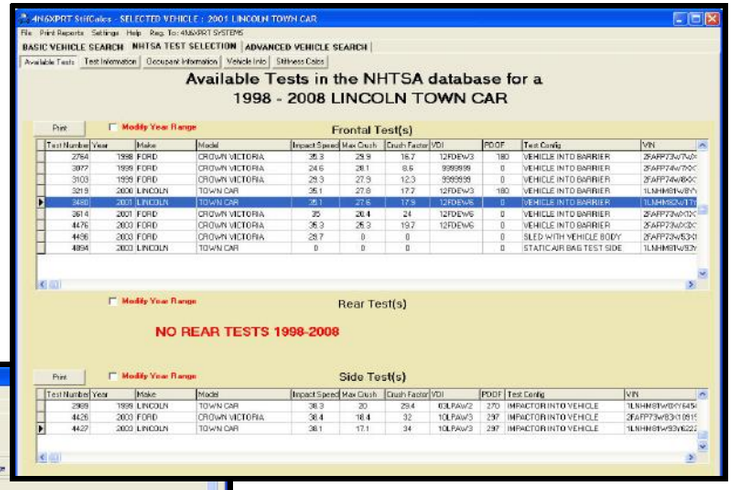
Select the desired vehicle through our **SIMILAR VEHICLE READER**

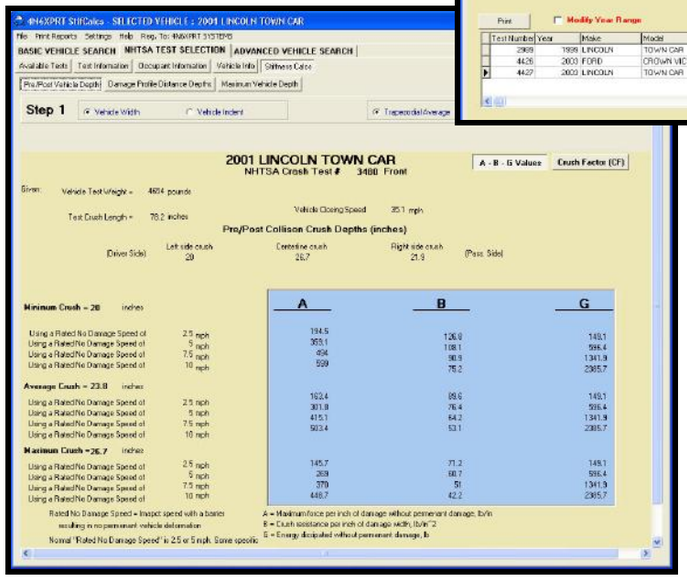
.





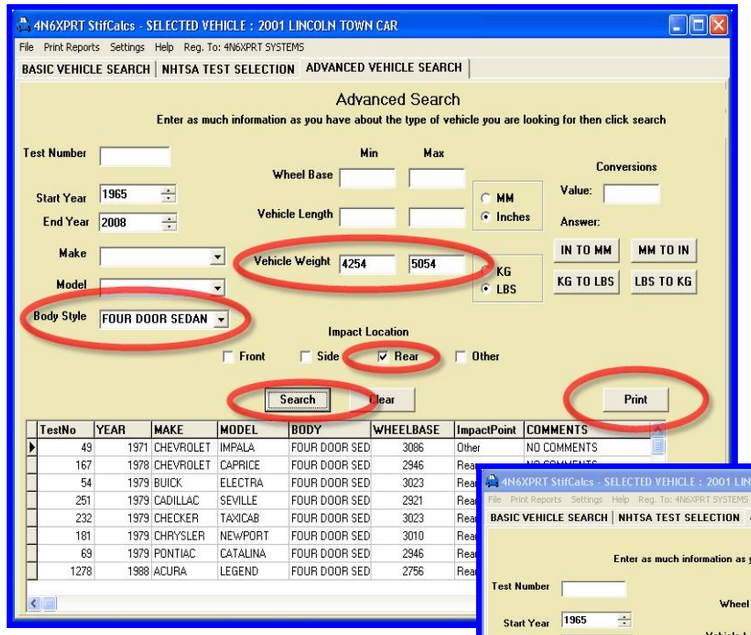
Once the desired vehicle is found/selected, click on the Test Selection tab. From here, select the test to be viewed



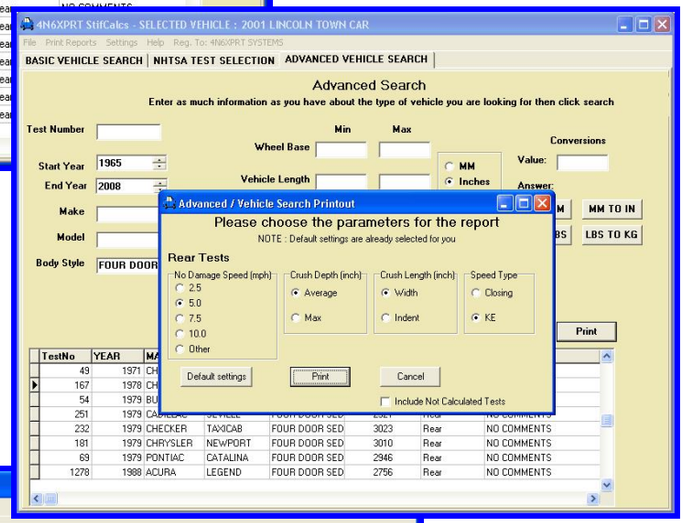


Once a test is selected, the available data for the Test, Occupant(s), Vehicle(s), and Stiffness data can be viewed. The stiffness values are automatically generated from the available test data.

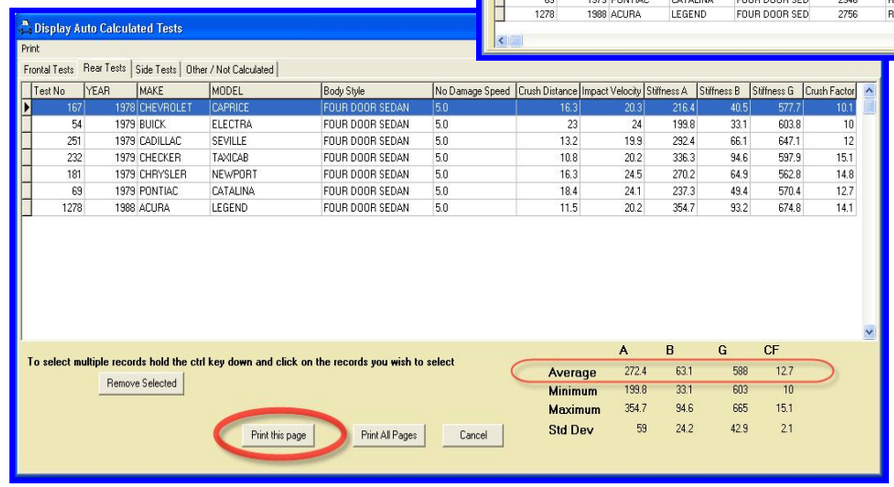
"CLASS" VEHICLE CRASH TEST SEARCH



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.4n6xprt.com***

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4N6XPRT StifCalcs®**:**	$ 600.00 *	$_____
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		======
	SUB-TOTAL	$_____

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(*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.4n6xprt.com

E-Mail: 4n6@4n6xprt.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.

*Pricing is for multiple vehicles on same Order/Request. Similar Vehicles may be required when it is not possible to determine the exact model of vehicle requested, based upon the information provided.

VIN DeCoding Information

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:

_____

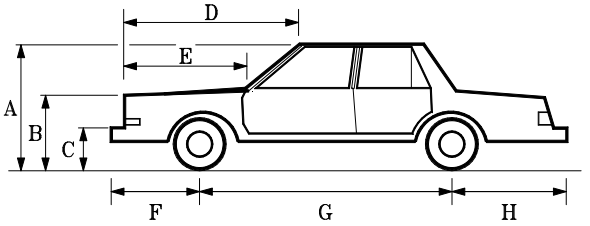
_____

_____

_____

Case Reference Name/Number:_____

Individual Vehicle Data Search Service®



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

E-Mail: **ivdss@4n6xprt.com**

FAX: (619) 464-2206
Phone: (619) 464-3478 / 1-800-266-9778

4N6XPRT Systems®
Forensic Expert Software
8387 University Avenue, Suite P
La Mesa, CA 91942-9342

Web: http://www.4n6xprt.com

How often have you been confronted with the

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	Iginition 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 yeasr with **N**o **S**ignificant **D**imensional **C**hanges
VIN DeCoding when VIN is provided Information available

Mid-60's to present **also includes** (*when available*)

Fron/Reart 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® 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 <u>ALL OPTIONS</u> 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 <u>ALL OPTIONS</u> that apply

YEAR & MAKE:
_____
MODEL: _____

If you are requesting
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No. of Doors:	2/3/4/5
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PICKUPS:	Std. / Extra / Super / Crew Cab
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VANS:	Cargo / Passenger
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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.4n6xprt.com

E-Mail: 4n6@4n6xprt.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

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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

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E-Mail: 4n6@4n6xprt.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_____

A Division of Expert Witness Services, Inc.

4N6XPRT Systems

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