## Case 435 : Narrative

Case Vehicle (A): 1999 Chevrolet	Vehicle (B): 2001 Chrysler
Type: Blazer LS, 4-door SUV, 4x4	Type: Sebring LX, 4-door sedan
Driver: 31-year-old female	Driver: 45-year-old male
CDC: 12-FDEW-2	CDC: 10-LPAW-3

### SITUATION

<u>123</u> It was daylight, the sky was clear, and the road surface was dry, as case vehicle (A) was traveling south at a driver-estimated speed of 45 mph (72 kph) in the southbound lane of a rural four-lane asphalt road with a posted speed limit of 55 mph (89 kph). <u>45</u> Vehicle (B) was stopped in the eastbound lane of a business driveway that connects with the north-south road from the west. <u>67</u> As case vehicle (A) approached the driveway, <u>89</u> the driver of vehicle (B) began to pull out to make a left turn and vehicle (B) entered the southbound lane. The driver of case vehicle (A) braked but was unable to prevent the front of vehicle (A) from striking the left side of vehicle (B) in a T-type impact. Both vehicles were towed from the scene due to damage.

The police accident report (PAR) indicates B-level injuries for the driver of case vehicle (A) who was transported to a local hospital, where she was treated and released. The PAR indicates A-level injuries for the driver of vehicle (B), and he was airlifted to a local trauma center where he was hospitalized for five days.

# GENERAL VEHICLE DAMAGE AND ESTIMATED CRASH SEVERITIES

10 11 Direct damage to the front of case vehicle (A) extended across the entire front end (170 cm). The maximum crush was 36 cm and it occurred at the left-front bumper corner.

12 Damage to vehicle (B) was to the left side. It began 22-cm in front of the left-rear axle and extended forward 198-cm through both left-side doors. The maximum crush was 38 cm and it occurred at the driver door. 13 Both left-side doors were crushed in and jammed closed but the driver door had been removed for extrication of the driver. The windows of both left-side doors were shattered and the left side of the roof was buckled. There was no damage to the left-side wheels but the left wheelbase was reduced by 4 cm and the right wheelbase was increased by 2 cm.

<u>14 15 16 17 18 19</u> Using the WinSMASH crash-reconstruction program and crush profiles measured for both vehicles, the following impact severities were estimated for the T-type collision between the front of case vehicle (A) and the left side of vehicle (B):

		Estimat	ed Velocity Change -	kph (mph)
Vehicle	Variable	Total	Longitudinal	Latitudinal
Case vehicle (A)	delta V	29 (18)	-29 (-18)	-5 (-3)
Vehicle (B)	delta V	36 (22)	-12 (-8)	34 (21)

Data from the Event Data Recorder (EDR) indicates a longitudinal delta V of -19.09 at 150 ms. The EDR did not record any pre-deployment information.

## **DESCRIPTION OF DAMAGE TO CASE VEHICLE (A)**

### Exterior

20 In the front, most of the damage was to the left and center sections of the bumper 21 but the entire bumper was crushed rearward, 22 23 both headlight assemblies were damaged, and both of the headlamps were shattered. 24 The grille and the entire hood were crushed rearward, the hood folded up in the middle, and the hood latch was damaged and jammed. 25 The left hood hinge was bent up and back, which allowed the left-rear edge of the hood to elevate but it did not contact the windshield. 26 There was no damage to the right hood hinge but the right-rear section of the hood was slightly elevated. 27 There were a few minor cracks in the left side of the windshield, which radiated from the windshield header down to the cowl, but 28 there was no damage to the center or right sections of the windshield.

29 On the left side, the bumper corner and the fender were pushed rearward into the front wheel, the front section of the fender was crumpled, and the rear section of the fender was pushed into the front edge of the driver door. 30 There was no damage to the upper or lower sections of the left-side pillars and both left-side doors were undamaged and operational. The left-side glazing was intact and 31 there was no damage to the left quarter panel. 32 The left-front tire was no damaged but the axle was pushed slightly rearward, which reduced the left wheelbase by 6 cm. 33 There was no damage to the left-rear wheel.

34 On the right side, the fender was slightly buckled but 35 there was no damage to the right-side pillars and both right-side doors were undamaged and operational. The right-side glazing was intact and 36 there was no damage to the right quarter panel. 37 The right-front wheel was not damaged but the tire was flat. 38 There was no damage to the right-rear wheel and there was no change in the right wheelbase.

<u>39</u> There was no damage to the rear of case vehicle (A).

### Interior

<u>40</u> This vehicle was equipped with steering-wheel and dash-mounted frontal-impact airbags, which deployed during the frontal impact. <u>41</u> There was no damage to the steering-wheel airbag or <u>42</u> to the module cover <u>43</u> but there was facial makeup on the upper-left section of the fabric. <u>44</u> In the driver seating area, there was no damage to the roof, to the roof header, to the sunvisor, or to the A-pillar, and there was no internal windshield damage. <u>45</u> There was no damage to the steering-wheel rim and <u>46</u> <u>47</u> there was no rotation of the steering column. <u>48</u> The upper and mid portions of the instrument panel <u>49</u> and the knee bolster were not damaged, <u>50</u> but there were scuffmarks on the left <u>51</u> <u>52</u> and right sides of the knee bolster and on <u>53</u> the underside of the steering column. <u>54</u> There was no damage to the floor or to the toepan, and there was no deformation of the foot controls.

55 56 57 There was no damage in the center-front area. 58 59 60 61 62. There was also no damage in the right-front seating area and there were no intrusions into the occupant space.

### **OCCUPANT KINEMATICS AND INJURIES**

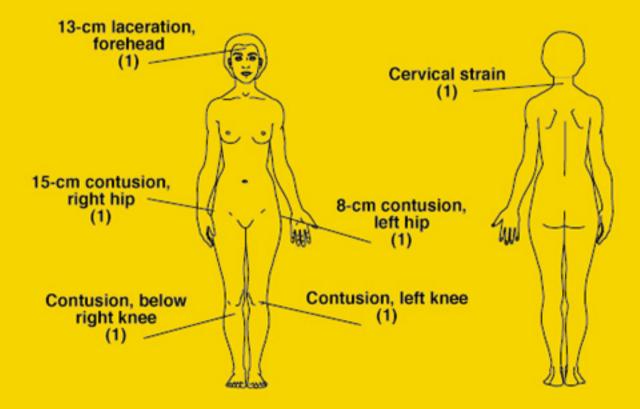
 $\underline{63}$   $\underline{64}$  The 183-cm, 75-kg (6-ft, 165-lb) 31-year-old female driver was using the three-point belt and  $\underline{41}$  the steering-wheel airbag deployed.  $\underline{65}$  Belt use at the time of the crash is indicated by loading marks on the D-ring and  $\underline{67}$   $\underline{68}$  by the fact that the load-limiter tab was pulled out,  $\underline{66}$  but there were no marks on the continuous loop of the latch plate or on the belt webbing. The driver reportedly had adjusted the seat to a mid-track position and she was braking at the time of the collision.

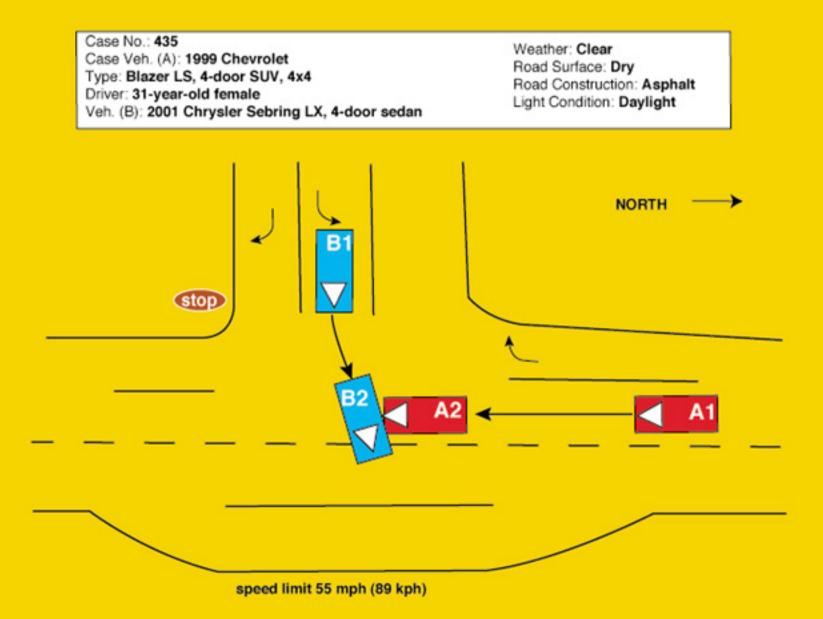
During the frontal impact, the driver moved forward relative to the vehicle interior, into the belt restraints and  $42\ 43$  airbag. She sustained cervical strain, probably from non-contact impact forces, and a 13-cm laceration to the forehead from an unknown source. She sustained contusions to both hips, probably from loading by the lap belt. She sustained a contusion to the left knee, probably from contact with the knee bolster or the steering column,  $50\ 51\ 52\ 53$  as evidenced by scuffmarks on both. She sustained a contusion below the right knee from contact with the knee bolster,  $49\ 50\ 51\ 52$  as evidenced by scuffmarks on the right section of the knee bolster cover.

The following table <u>69</u> and attached drawing summarize the injuries for the belt- and airbag-restrained driver.

Occupant: Driver Age: 31 yea		31 years Gender: Female			
Restraints: 3-point belt, steering-wheel airbag	Stature: 18	3 cm (6 ft)	Mass: 7	75 kg (165	lb)
Injury Description		A.I.S.	Inj	ury Sourc	e
			Definite	Probable	Possible
Cervical strain		1		Non- contact impact forces	
13-cm laceration, forehead		1	Unknown		
15-cm contusion, right hip		1		Lap belt	
8-cm contusion, left hip		1		Lap belt	
Contusion, left knee		1		Knee bolster, steering column	
Contusion, below right knee		1	Knee bolster		
Maximum A.I.S. Level		1			
Injury Severity Score		2			

CASE NO.: 435 CASE VEHICLE: 1999 Chevrolet TYPE: Blazer LS, 4-door SUV, 4x4 OCCUPANT: (Driver) 31-year-old female STATURE: 183 cm (6 ft) MASS: 75 kg (165 lb) RESTRAINTS: 3-point belt, steering-wheel airbag SEVERITY: MAIS - 1 ISS - 2





### Case # 435: Vehicle Report

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- Case Vehicle Steering Column/Rim
- Case Vehicle Intrusion
- <u>Case Vehicle Airbag(s)</u>
- Case Vehicle Interior
- Case Vehicle Seats
- <u>Case Vehicle Side Airbag(s)</u>
- EDR -- Event Data Recorder

#### **General Information**

Variable Number	Variable Name	Code Value	Code Description	Other Options
V0201	Collision Month	02	February	more
V0202	Collision Day	04	Actual day of the month	more
V0203	Collision Year	2004	2004	more
V0204	Collision Hour	1558	Time of day (24 hour clock)	more
V0205	State Fips Code	26	Michigan	more
V0206	Urban/rural Area	2	Rural	more
V0207	Limited Access Highway	0	No	more
V0208	Road Total Lanes	4	4 lanes or more	more
V0209	Intersect Road Total Lanes	6	Parking lot/driveway	more
V0210	Trafficway Flow	0	Not physically divided - two way traffic	more
V0211	Road Surface Type	1	Asphalt	more

V0212	Road Defects	0	No	more
V0213	Construction Zone	0	No	more
V0214	Road Alignment Vertical Plane	1	Level	more
V0215	Road Alignment Horzontal Plane	1	Straight	more
V0216	Surface Covering	10	Dry	more
V0217	Visibility Limitation	0	None	more
V0218	Visibility Obstruction	0	None	more
V0219	Speed Limit	6	86-90 km/h 55 mph	more
V0220	Precipitation Type	0	None	more
V0221	Precipitation Rate	8	Not applicable	more
V0222	Temperature	9	Unknown	more
V0223	Crosswind	9	Unknown	more
V0224	Light Conditions	1	Daylight	more
V0225	Mechanical Malfunction Mention	0	No	more
V0226	Case Vehicle And Object	0	No	more
V0227	Case Vehicle Rollover	0	No	more
V0228	Rollover Location	0	No rollover	more
V0229	Roll Direction	0	No rollover	more
V0230	Rollover Initation Type	0	No rollover	more
V0231	Rollover Number Of Turns	0	No rollover	more
V0232	Case Vehicle Preimpact Braking	1	Yes	more
V0233	Case Vehicle Preimpact Stability	1	Case vehicle tracking before impact	more
V0234	Case Vehicle Ran Off Roadway	0	No	more
V0235	Moving Case Vehicle Contacted Moving Vehicle	1	Yes	more
V0236	Case Vehicle Contacted Stopped Vehicle	0	No	more
V0237	Stopped Case Vehicle Contacted Vehicle	0	No	more
V0238	Total Vehicles Hit By Case Vehicle	1	1 vehicle	more
V0239	Any Fire In Crash?	0	No	more
V0240	Maximum Police Severity- acc	3	A - Incapacitating Injury	more

V0241	Driver Alcohol Involvmnt	0	Had not been drinking	more
$\mathbf{V}\mathbf{U}/\mathbf{U}$	Driver Alcohol BAC (Case Vehicle)	8.0	No test	more
V0243	Driver Impairment Mention	0	No	more
V0244	Driver Distraction	01	Attentive or not distracted	more
V0245	Driver Drug Involvement	0	None	more
V0246	Driver Drug Type	0	No drug use	more
V0247	Driven/towed From Scene	2	Towed Due to Damage	more

#### **Other Vehicle**

Variable Number	Variable Name	Code Value	Code Description	Other Options
V0301	Other Vehicle VIN	1C3EL46U41XXXXXXX	Click for Contacted Vehicle figure	more
V0302	Other Vehicle Manufacturer/Body Code	13128		
V0303	Other Vehicle Manufacturer	131	Chrysler	more
V0304	Other Vehicle Body Code	28	Intermediate 105-109.9 in. wb.	more
V0305	Other Vehicle Make/model	1250	Sebring	more
V0306	Other Vehicle Model Year	2001	Year	more
V0307	Other Vehicle Mass	001479 kg	Mass (Kg.)	more
V0308	Other Vehicle Number	2	Vehicle #2	more
V0309	Other Vehicle Number of Occupants	01	number of occupants	more
V0310	Other Vehicle Traveling Speed	995	Just starting	more
V0311	Highest Police Injury Severity	3	A - Incapacitating Injury	more
V0312	Other Vehicle Type	28	Intermediate 105-109.9 in. wb.	more
V0313	Other Vehicle Wheelbase in Centimeters	274 cm	Actual Wheelbase (cm)	more
V0314	Other Vehicle Average Track Width	153 cm	actual measurement (cm)	more
V0315	Other Vehicle Overall Length	486 cm	actual measurement (cm)	more

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V0316	Other Vehicle Overall Width (OAW)	179 cm	actual measurement (cm)	more
V0317	Other Vehicle Front Overhang	101 cm	actual measurement (cm)	more
V0318	Other Vehicle Rear Overhang	111 cm	actual measurement (cm)	more
V0319	Other Vehicle Undeformed End Width (UEW)	140 cm	actual measurement (cm)	more
V0320	Other Vehicle Engine Displacement	2.7 l	Liters	more
V0321	Other Vehicle Engine: Number of Cylinders	06	number of cylinders	more
V0322	Other Vehicle Direct Damage Length (DDL)	999	Unknown	more
V0323	Other Vehicle Front- End Overlap	99	Missing or Not applicable	more
V0324	Other Vehicle - Vehicle Overlap	99	Missing or Not applicable	more

**Case Vehicle General** 

Variable Number	Variable Name	Code Value	Code Description	Other Options
V0401	VIN	1GNDT13W8YXXXXXXX	Click for Case Vehicle figure	more
V0402	Manufacturer/Body Code	11315		
V0403	Vehicle Manufacturer	113	Chevrolet	more
V0404	Vehicle Body Code	15	Long wheelbase utility vehicle (Carryall, Suburb	more
V0405	Make/model Code	2933	S/T Blazer	more
V0406	Model Year	1999	Model year	more
V0407	Vehicle Mass	001864 kg	Mass (Kg)	more
V0408	Odometer Reading	888888		
V0409	Number of Occupants	01	1 occupant	more
V0410	Traveling Speed	072 kph	Speed (km/h)	more
V0411	Body Type	22	Large utility (e.g. Suburban)	more
V0412	Stolen Vehicle	8	Not currently collected	more
V0413	Body Structure	2	Unitized	more
V0414	Transmission Type	1	Automatic	more

V0415	Transmission Lever Location	3	Column	more
V0416	Steering	1	Power	more
V0417	Brakes	1	Power	more
V0418	Brake Type	2	Disc - front wheels	more
V0419	Adjustable Pedals?	0	No	more
V0420	Brake Anti-lock Device	2	Four-wheel	more
V0421	Air Conditioning in Vehicle	8	Not currently collected	more
V0422	Drive Type	3	Four wheel	more
V0423	Dual Rear Wheels	0	No	more
V0424	Original Restraint System Type	3	Air bag	more
V0425	Equipped With Roll Bar	0	No	more
V0426	Roof Type	1	Solid	more
V0427	Case Vehicle Wheelbase in Centimeters	272 cm	Actual Wheelbase	more
V0428	Anti-lacerative Glass	8	Not Collected	more
V0429	Case Vehicle average track Width	142 cm	actual measurement (cm)	more
V0430	Case Vehicle Overall Length	466 cm	actual measurement (cm)	more
V0431	Case Vehicle Overall Width (OAW)	172	actual measurement (cm)	more
V0432	Case Vehicle Front Overhang	088 cm	actual measurement (cm)	more
V0433	Case Vehicle Rear Overhang	106 cm	actual measurement (cm)	more
V0434	Case Vehicle Undeformed End Width (UEW)	170 cm	actual measurement (cm)	more
V0435	Case Vehicle Engine Displacement	4.3 <i>l</i>	Liters	more
V0436	Case Vehicle Engine: Number of Cylinders	06	number of cylinders	more
V0437	Case Vehicle Direct Damage Length (DDL)	170 cm	actual measurement (cm)	more
V0438	Case Vehicle Front- end Overlap	98	98% or more	more

V0439	Case Vehicle - Vehicle Overlap	
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98

98% or more

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### Case Vehicle Damage Description

on	Other

Variable Number	Variable Name	Code Value	Code Description	Other Options
V0501	Maximum Sheet Metal Crush - Front	036 cm	Depth of Crush (cm)	more
V0502	Maximum Sheet Metal Crush - Rear	000 cm	No Crush (or less than 1 cm.)	more
V0503	Maximum Sheet Metal Crush - Roof	000 cm	No Crush (or less than 1 cm.)	more
V0504	Maximum Sheet Metal Crush - Right Side	000 cm	No Crush (or less than 1 cm.)	more
V0505	Maximum Sheet Metal Crush - Left Side	000 cm	No Crush (or less than 1 cm.)	more
V0506	Maximum Sheet Metal Crush - Other	000 cm	No Crush (or less than 1 cm.)	more
V0507	Seq In Chronologicl Ordr	1	Yes	more
V0508	Event 1 -impact Location	1	On Roadway	more
V0509	Event 1 -Impact Configuration	21	LEFT of case veh - FRONT of contacted veh (type	more
V0510	Event 1 -Object/Vehicle Contactd	28	Intermediate 105-109.9 in. wb.	more
V0511	Event 2 -impact Location	8	No 2nd event	more
V0512	Event 2 -Impact Configuration	88	No 2nd event	more
V0513	Event 2 -Object/Vehicle Contactd	00	No object/vehicle contacted	more
V0514	Event 3 -impact Location	8	No 3rd event	more
V0515	Event 3 -Impact Configuration	88	No 3rd event	more
V0516	Event 3 -Object/Vehicle Contactd	0.0	No object/vehicle contacted	more
V0517	Event 4 -impact Location	8	No 4th event	more
V0518	Event 4 -Impact Configuration	88	No 4th event	more
V0519	Event 4 -Object/Vehicle Contactd	00	No object/vehicle contacted	more
V0520	Event 5 -impact Location	8	No 5th event	more
	Event 5 -Impact			

more

V0521	Configuration	88	No 5th event	more
V0522	Event 5 -Object/Vehicle Contactd	00	No object/vehicle contacted	more
V0523	Event 6 -impact Location	8	No 6th event	more
V0524	Event 6 -Impact Configuration	88	No 6th event	more
V0525	Event 6 -Object/Vehicle Contactd	00	No object/vehicle contacted	more
V0526	Event 7 -impact Location	8	No 7th event	more
V0527	Event 7 -Impact Configuration	88	No 7th event	more
V0528	Event 7 -Object/Vehicle Contactd	00	No object/vehicle contacted	more
V0529	Primary CDC Case Vehicle - event Number	1	Event 1	more
V0530	Primary CDC Case Vehicle - Impact Speed (kph)	019	Impact speed (kph)	more
V0531	Primary CDC Case Vehicle- estimatr	1	Investigator	more
V0532	Primary CDC Case Vehicle - Crush (CM)	036	Crush measurements in cm	more
V0533	Primary CDC Case Vehicle- clock #1	12	12 o'clock	more
V0534	Primary CDC Case Vehicle- Letter 1 #1	06	F - Front	more
V0535	Primary CDC Case Vehicle- Letter 2 #1	04	D - Distributed (Side or End)	more
V0536	Primary CDC Case Vehicle- Letter 3 #1	05	E - Everything below belt line	more
V0537	Primary CDC Case Vehicle- Letter 4 #1	23	W - Wide impact area	more
V0538	Primary CDC Case Vehicle - Extent #1	2		
V0539	Primary CDC - Contacted Vehicles Assoc CDC - CDC #1	12FDEW2		
V0540	Primary CDC Case Vehicle- clock #2	98	Not Applicable	more
V0541	Primary CDC Case Vehicle- Letter 1 #2	00	Missing Data/Not applicable	more
V0542	Primary CDC Case Vehicle- Letter 2 #2	00	Missing Data/Not applicable	more

V0543	Primary CDC Case Vehicle- Letter 3 #2	00	Missing Data/Not applicable	more
V0544	Primary CDC Case Vehicle- Letter 4 #2	00	Missing Data/Not applicable	more
V0545	Primary CDC Case Vehicle - Extent #2	0		
V0546	Primary CDC - Case Vehicle Assoc CDC - CDC #2	9800000		
V0547	Primary CDC Contacted Vehicle - Impact Speed (kph)	999	Unknown	more
V0548	Primary CDC Contacted Vehicle-estimater	1	Investigator	more
V0549	Primary CDC Contacted Vehicle - Crush (CM)	038	Crush measurements in cm	more
V0550	Primary CDC Contacted Vehicle-clock #1	10	10 o'clock	more
V0551	Primary CDC Contacted Vehicle-Letter 1 #1	12	L - Left Side	more
V0552	Primary CDC Contacted Vehicle-Letter 2 #1	16	P - Side Center Section (Left or Right) or Cab	more
V0553	Primary CDC Contacted Vehicle-Letter 3 #1	01	A - All or Top of vehicle to bottom of vehicle e	more
V0554	Primary CDC Contacted Vehicle-Letter 4 #1	23	W - Wide impact area	more
V0555	Primary CDC Contacted Vehicle - Extent #1	3		
V0556	primary CDC - Contacted Vehicles Assoc CDC - CDC #1	10LPAW3		
V0557	Primary CDC Contacted Vehicle-clock #2	98	Not Applicable	more
V0558	Primary CDC Contacted Vehicle-Letter 1 #2	00	Missing Data/Not applicable	more
V0559	Primary CDC Contacted Vehicle-Letter 2 #2	00	Missing Data/Not applicable	more
V0560	Primary CDC Contacted Vehicle-Letter 3 #2	00	Missing Data/Not applicable	more
V0561	Primary CDC Contacted Vehicle-Letter 4 #2	00	Missing Data/Not applicable	more
V0562	Primary CDC Contacted Vehicle - Extent #2	0		
	Primary CDC - Contacted	9800000		

V0563	Vehicles Assoc CDC - CDC #2			
V0564	Secondary CDC Case Vehicle-event No	8	Not applicable	more
V0565	Secondary CDC Case Vehicle - Impact Speed (kph)	998	Not Applicable	more
V0566	Secondary CDC Case Vehicle-estimater	8	Not applicable (no vehicle/no impact)	more
V0567	Secondary CDC Case Vehicle - Crush (CM)	998	Not Applicable	more
V0568	Secondary CDC Case Vehicle-clock #1	98	Not Applicable	more
V0569	Secondary CDC Case Vehicle-Letter 1 #1	00	Missing Data/Not applicable	more
V0570	Secondary CDC Case Vehicle-Letter 2 #1	00	Missing Data/Not applicable	more
V0571	Secondary CDC Case Vehicle-Letter 3 #1	00	Missing Data/Not applicable	more
V0572	Secondary CDC Case Vehicle-Letter 4 #1	00	Missing Data/Not applicable	more
V0573	SECONDARY CDC CASE VEHICLE - EXTENT #1	0		_
V0574	Secondary CDC - Case Vehicle Assoc CDC - CDC #1	9800000		
V0575	Secondary CDC Case Vehicle-clock #2	98	Not Applicable	more
V0576	Secondary CDC Case Vehicle-Letter 1 #2	0 0	Missing Data/Not applicable	more
V0577	Secondary CDC Case Vehicle-Letter 2 #2	00	Missing Data/Not applicable	more
V0578	Secondary CDC Case Vehicle-Letter 3 #2	00	Missing Data/Not applicable	more
V0579	Secondary CDC Case Vehicle-Letter 4 #2	00	Missing Data/Not applicable	more
V0580	SECONDARY CDC CASE VEHICLE - EXTENT #2	0		
V0581	Secondary CDC - Case Vehicle Assoc CDC - CDC #2	9800000		
V0582	Secondary CDC Contacted Vehicle - Impact Speed (kph)	998	Not Applicable	more

V0583	Secondary CDC Contacted Vehicle-estimater	8	Not applicable (no vehicle/no impact)	more
V0584	Secondary CDC Contacted Vehicle - Crush (CM)	998	Not Applicable	more
V0585	Secondary CDC Contacted Vehicle-clock #1	98	Not Applicable	more
V0586	Secondary CDC Contacted Vehicle-Letter 1 #1	0 0	Missing Data/Not applicable	more
V0587	Secondary CDC Contacted Vehicle-Letter 2 #1	00	Missing Data/Not applicable	more
V0588	Secondary CDC Contacted Vehicle-Letter 3 #1	0 0	Missing Data/Not applicable	more
V0589	Secondary CDC Contacted Vehicle-Letter 4 #1	00	Missing Data/Not applicable	more
V0590	Secondary CDC Contacted Vehicle - Extent #1	0		
V0591	Secondary CDC - Contacted Vehicle Assoc CDC - CDC #1	9800000		
V0592	Secondary CDC Contacted Vehicle-clock #2	98	Not Applicable	more
V0593	Secondary CDC Contacted Vehicle-Letter 1 #2	00	Missing Data/Not applicable	more
V0594	Secondary CDC Contacted Vehicle-Letter 2 #2	0 0	Missing Data/Not applicable	more
V0595	Secondary CDC Contacted Vehicle-Letter 3 #2	0 0	Missing Data/Not applicable	more
V0596	Secondary CDC Contacted Vehicle-Letter 4 #2	00	Missing Data/Not applicable	more
V0597	Secondary CDC Contacted Vehicle - Extent #2	0		
V0598	Secondary CDC - Contacted Vehicle Assoc CDC - CDC #2	9800000		

### **Crash Reconstruction**

Variable Number	Variable Name	Code Value	Code Description	Other Options
V0601	Primary Delta-V Case Vehicle-event #	1	Event number 1	more
V0602	Primary Delta V Case	029 kph	kph	more

	Vehicle - Total Delta V			
V0603	Primary delta-V Case Vehicle -LONGITUD	-029		
V0604	Primary delta-V Case Vehicle-Lateral	-005		
V0605	Primary Delta V Case Vehicle - Energy Dissipated by Crush (k	0066		
V0606	Primary Delta-V Case Vehicle-Reconstruction	22	Reconstructed, moderate confidence level	more
V0607	Primary Delta-V Case Vehicle- Mode	2	CDC & detailed damage	more
V0608	Primary Delta V Contacted Vehicle - Total Delta V	036 kph	kph	more
V0609	Primary delta-V Contacted Vehicle-LONGITUD	-012		
V0610	Primary delta-V Contacted Vehicle-Lateral	0034		
V0611	Primary delta-V Contacted Vehicle - Energy Dissipated by Cru	0069		
V0612	Secondary Delta-V Case Vehicle-event #	8	Not applicable	more
V0613	Secondary Delta V Case Vehicle - Total Delta V	888	Not applicable	more
V0614	Secondarydelta-V Case Vehicle -LONGITUD	8888		
V0615	Secondary delta-V Case Vehicle-Lateral	8888		
V0616	Secondary delta-V Case Vehicle - Energy Dissipated by Crush	8888		_
V0617	Secondary Delta-V Case Vehicle-Reconstruction	88	Not applicable	more
V0618	Secondary Delta-V Case Vehicle- Mode	8	Not applicable	more
V0619	Secondary Delta V Contacted Vehicle - Total Delta V	888	Not applicable	more
V0620	Secondary delta-V Contacted Vehicle-LONGITUD	8888		
	Secondary delta-V Contacted			

V0621	Vehicle-Lateral	8888		_
V0622	Secondary delta-V Contacted Vehicle - Energy Dissipated By C	8888		
V0623	Primary EBS Case Vehicle- event #	1	Event number 1	more
V0624	Primary EBS Case Vehicle - Total EBS	029 kph	kph	more
V0625	Primary EBS Case Vehicle - LONGITUD	-029		
V0626	Primary EBS Case Vehicle- Lateral	-005		
V0627	Primary EBS Case Vehicle - Energy Dissipated by Crush (kj)	0066		
V0628	Primary EBS Case Vehicle- Reconstruction	22	Reconstructed, moderate confidence level	more
V0629	Primary EBS Case Vehicle- Mode	2	CDC & detailed damage	more
V0630	Primary EBS Contacted Vehicle - Total EBS	036 kph	kph	more
V0631	Primary EBS Contacted Vehicle-LONGITUD	-012		
V0632	Primary EBS Contacted Vehicle-Lateral	0034		
V0633	Primary EBS Contact Vehicle - Energy Dissipated by Crush (kj	0069		
V0634	Secondary EBS Case Vehicle-event #	8	Not applicable	more
V0635	Secondary EBS Case Vehicle - Total EBS	888	Not Applicable	more
V0636	Secondary EBS Case Vehicle -LONGITUD	8888		
V0637	Secondary EBS Case Vehicle-Lateral	8888		
V0638	Secondary EBS Case Vehicle - Energy Dissipated by Crush (kj)	8888		_
V0639	Secondary EBS Case Vehicle-Reconstruction	88	Not applicable	more

V0640	Secondary EBS Case Vehicle- Mode	8	Not applicable	more
V0641	Secondary EBS Contacted Vehicle - Total EBS	888	Not Applicable	more
V0642	Secondary EBS Contacted Vehicle-LONGITUD	8888		
V0643	Secondary EBS Contacted Vehicle-Lateral	8888		
V0644	Secondary EBS Contact Vehicle - Energy Dissipated by Crush (	8888		
V0645	Specific Event # Case(1)	1	Event number 1	more
V0646	Plane of Impact Case Vehicle (1)	1	Bumper	more
V0647	Direct Damage Length (DDL) - Case Vehicle (1)	170 cm	cm	more
V0648	Direct Damage Maximum Crush - Case Vehicle (1)	036 cm	cm	more
V0649	Direct and Induced Damage Length in CM	145 cm	cm	more
V0650	Field C1 - Case Vehicle (1)	036 cm	cm	more
V0651	Field C2 - Case Vehicle (1)	025 cm	cm	more
V0652	Field C3 - Case Vehicle (1)	021 cm	cm	more
V0653	Field C4 - Case Vehicle (1)	029 cm	cm	more
V0654	Field C5 - Case Vehicle (1)	019 cm	cm	more
V0655	Field C6 - Case Vehicle (1)	015 cm	cm	more
V0656	Direct Damage D Value = The Center of Direct Damage Offset t	+000 cm	Offset (cm)	more
V0657	Specific Event # Case(2)	1	Event number 1	more
V0658	Plane of Impact Case Vehicle(2)	1	Bumper	more
V0659	Direct Damage Length (DDL) - Case Vehicle (2)	170 cm	cm	more
V0660	Direct Damage MaximumCrush - Case Vehicle (2)	036 cm	cm	more
V0661	Direct and Induced Damage Length in CM	145 cm	cm	more
V0662	Field C1 - Case Vehicle (2)	036 cm	cm	more
V0663	Field C2 - Case Vehicle (2)	025 cm	cm	more
V0664	Field C3 - Case Vehicle (2)	021 cm	cm	more

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V0665	Field C4 - Case Vehicle (2)	029 cm	cm	more
V0666	Field C5 - Case Vehicle (2)	019 cm	cm	more
V0667	Field C6 - Case Vehicle (2)	015 cm	cm	more
V0668	Direct Damage D Value = The Center of Direct Damage Offset t	+000 cm	cm	more
V0669	Specific Event # Cont(1)	1	Event number 1	more
V0670	Plane of Impact Contacted Vehicle(1)	4	Above sill	more
V0671	Direct Damage Length (DDL) - Contacted Vehicle (1)	198 cm	cm	more
V0672	Direct Damage Maximum Crush - Contacted Vehicle (1)	038 cm	cm	more
V0673	Field L - Contacted Vehicle (1)	224 cm	cm	more
V0674	Field C1 - Contacted Vehicle (1)	000 cm	No Crush	more
V0675	Field C2 - Contacted Vehicle (1)	021 cm	cm	more
V0676	Field C3 - Contacted Vehicle (1)	027 cm	cm	more
V0677	Field C4 - Contacted Vehicle (1)	033 cm	cm	more
V0678	Field C5 - Contacted Vehicle (1)	026 cm	cm	more
V0679	Field C6 - Contacted Vehicle (1)	000 cm	No Crush	more
V0680	Direct Damage D Value = The Center of Direct Damage Offset t	-014 cm	offset (cm)	more
V0681	Specific Event # Contacted Vehicle (2)	1	Event number	more
V0682	Plane of Impact Contacted Vehicle(2)	4	Above sill	more
V0683	Direct Damage Length (DDL) - Contacted Vehicle (2)	198 cm	cm	more
V0684	Direct Damage Maximum Crush - Contacted Vehicle (2)	038 cm	cm	more
V0685	Direct and Induced Damage	224 cm	cm	more

	Length in CM			
V0686	Field C1 - Contacted Vehicle (2)	000 cm	No Crush	more
V0687	Field C2 - Contacted Vehicle (2)	021 cm	cm	more
V0688	Field C3 - Contacted Vehicle (2)	027 cm	cm	more
V0689	Field C4 - Contacted Vehicle (2)	033 cm	cm	more
V0690	Field C5 - Contacted Vehicle (2)	026 cm	cm	more
V0691	Field C6 - Contacted Vehicle (2)	000 cm	No Crush	more
V0692	Direct Damage D Value = The Center of Direct Damage Offset t	-014 cm	Offset (cm)	more

**Case Vehicle Tires & Rims** 

Variable Number	Variable Name	Code Value	Code Description	Other Options
V0701	Left Front Wheel Damaged	1	Yes	more
V0702	Right Front Wheel Damaged	0	No	more
V0703	Right Rear Wheel Damaged	0	No	more
V0704	Left Rear Wheel Damaged	0	No	more
V0705	Left Front Tire Tread Type	4	All Weather	more
V0706	Right Front Tire Tread Type	4	All Weather	more
V0707	Right Rear Tire Tread Type	4	All Weather	more
V0708	Left Rear Tire Tread Type	4	All Weather	more
V0709	Left Front Carcass Construction	3	Radial	more
V0710	Right Front Carcass Construction	3	Radial	more
V0711	Right Rear Carcass Construction	3	Radial	more
V0712	Left Rear Carcass Construction	3	Radial	more
V0713	Left Front Tire Condition Precrash	0	Normal - no pre-crash problems	more
	Right Front Tire Condition			

V0714	Precrash	0	Normal - no pre-crash problems	more
V0715	Right Rear Tire Condition Precrash	0	Normal - no pre-crash problems	more
V0716	Left Rear Tire Condition Precrash	0	Normal - no pre-crash problems	more
V0717	Left Front Tire Condition Postcrash	0	Normal - no damage to tire	more
V0718	Right Front Tire Condition Postcrash	2	Completely deflated	more
V0719	Right Rear Tire Condition Postcrash	0	Normal - no damage to tire	more
V0720	Left Rear Tire Condition Postcrash	0	Normal - no damage to tire	more
V0721	Left Front Tire Involvement	0	No	more
V0722	Right Front Tire Involvement	0	No	more
V0723	Right Rear Tire Involvement	0	No	more
V0724	Left Rear Tire Involvement	0	No	more
V0725	Left Front Tire Size	P23575R15		
V0726	Right Front Tire Size	P23575R15		
V0727	Right Rear Tire Size	P23575R15		
V0728	Left Rear Tire Size	P23575R15		
V0729	Left Front Tire Pressure (recorded in PSI)	32.0 psi	actual tire pressure in PSI	more
V0730	Right Front Tire Pressure (recorded in PSI)	00.0 psi	actual Tire pressure in PSI	more
V0731	Right Rear Tire Pressure (recorded in PSI)	33.5 psi	actual Tire pressure in PSI	more
V0732	Left Rear Tire Pressure (recorded in PSI)	34.0 psi	actual Tire pressure in PSI	more
V0733	Left Front Tread Depth	10	10/32"	more
V0734	Right Front Tread Depth	10	10/32"	more
V0735	Right Rear Tread Depth	10	10/32"	more
V0736	Left Rear Tread Depth	10	10/32"	more

**Case Vehicle Fuel Tank** 

Variable	Code	Code Description	Other
Number	Value		Options

V0801	Propulsive Fuel Type	1	Gasoline	more
V0802	Main Tank Location	322	Within frame/centered laterally - within vertica	more
V0803	Main Filler Cap Location	113	Left of frame laterally - above vertically	more
V0804	Main Tank Material	9	Unknown	more
V0805	Aux Tank Type	8	Not applicable (not equipped)	more
V0806	Aux Tank Location	888	Not applicable (not equipped)	more
V0807	Aux Filler Cap Location	888	Not applicable (not equipped)	more
V0808	Aux Tank Material	8	Not applicable	more

### Case Vehicle Fuel Leakage

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Variable Number	e Name	Code Value	Code Description	Other Options
V0901 Fuel Leal	kage From Crash	0	No	more

### **Case Vehicle Fire**

Variable Number	Variable Name	Code Value	Code Description	Other Options
V1001	Fire In Or On Case Vehicle	0	No	more

#### **Case Vehicle Exterior**

Variable Number	Variable Name	Code Value	Code Description	Other Options
V1101	Hood Latch Released	0	No	more
V1102	Hood Latch Damaged	1	Yes	more
V1103	Hood Latch Jammed	1	Yes	more
V1104	Left Hood Hinge Damaged	1	Yes	more
V1105	Left Hood Hinge Separated	0	No	more
V1106	Right Hood Hinge Damaged	0	No	more
V1107	Right Hood Hinge Separated	8	Not applicable	more
V1108	Hood Remained On Vehicle	1	Yes	more
V1109	Rear Hood Edge Elevated	1	Yes	more
V1110	Edge Contacted Windshield	0	No	more
V1111	Edge Penetrated Windshield	8	Not applicable	more
V1112	Hood Latch Location	1	Front of Vehicle	more
V1113	Eng/transmissn Mount	0	No	more

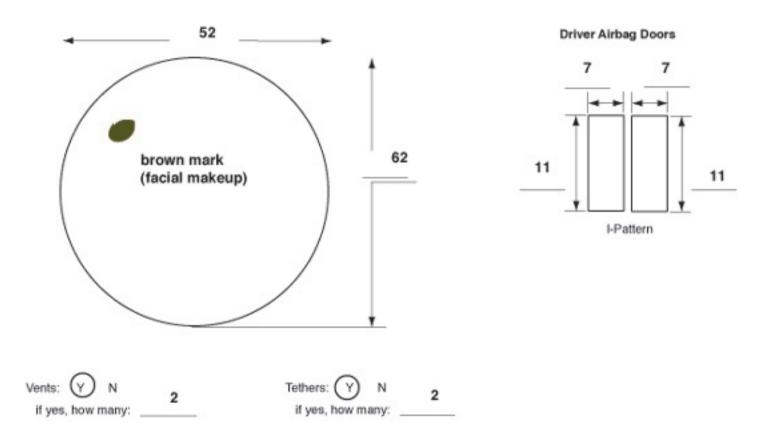
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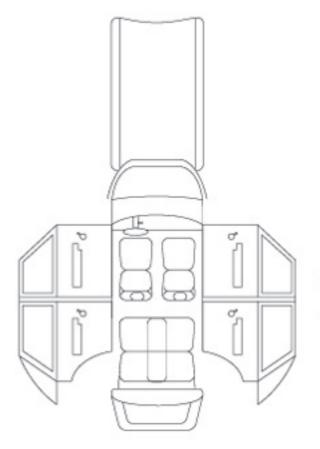
	Separated			
V1114	Steering Column Flex Couplng	9	Unknown if equipped	more
V1115	Steering Column Coupling Dam	9	Unknown	more
V1116	Steering Column Coupling Separated	9	Unknown	more
V1117	Eng Comp Telescopng Unit	88	Not currently collected	more
V1118	Compartment Unit's Original/telescoped Length Difference	888	Not currently collected	more
V1119	Left Side Body Mount Separated	8	Not applicable (unitized)	more
V1120	Upper Left A-pillar Sep	0	No	more
V1121	Lower Left A-pillar Sep	0	No	more
V1122	Upper Left B-pillar Sep	0	No	more
V1123	Lower Left B-pillar Sep	0	No	more
V1124	Upper Left C-pillar Sep	0	No	more
V1125	Lower Left C-pillar Sep	0	No	more
V1126	Upper Left D-pillar Sep	0	No	more
V1127	Lower Left D-pillar Sep	0	No	more
V1128	Left Front Door Opening Cause	00	Door did not open	more
V1129	Left Rear Door Opening Cause	00	Door did not open	more
V1130	Left Front Door Jammed Closed	0	No	more
V1131	Left Rear Door Jammed Closed	0	No	more
V1132	Van Left Rear Door Type	8	Not applicable (not a van)	more
V1133	Left Front Glazing Availability	2	Closed	more
V1134	Left Rear Glazing Availability	2	Closed	more
V1135	Lr2 Glazing Availability	1	Fixed	more
V1136	Left Front Glazing Damage	0	No damage	more
V1137	Left Rear Glazing Damage	0	No damage	more
V1138	Lr2 Glazing Damage	0	No damage	more
V1139	Rear Door Type	2	One-way tailgate	more
V1140	Rear Door Opening Cause	0	Door did not open	more
V1141	Rear Door Jammed Closed	0	No	more

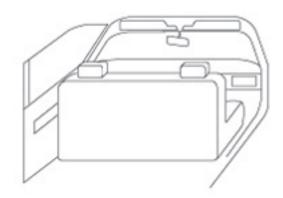
V1142	Rear Glazng Availability	1	Fixed	more
V1142 V1143		0		more
L	Rear Glazing Damage	8	No damage	more
V1144	Luggage Partition Damaged Spare Tire Status	8	Not applicable Not collected	more
V1145		2		more
V1146	Trailer Hitch Type	0	Bumper mount only (e.g. light truck)	more
V1147	Trailer Type	0	No trailer	more
V1148	Rght Side Body Mount Separated	8	Not applicable (unitized)	more
V1149	Upper Right A-pillar Separated	0	No	more
V1150	Lower Right A-pillar Separated	0	No	more
V1151	Upper Right B-pillar Separated	0	No	more
V1152	Lower Right B-pillar Separated	0	No	more
V1153	Upper Right C-pillar Separated	0	No	more
V1154	Lower Right C-pillar Separated	0	No	more
V1155	Upper Right D-pillar Separated	0	No	more
V1156	Lower Right D-pillar Separated	0	No	more
V1157	Right Front Door Opening Cause	00	Door did not open	more
V1158	Right Rear Door Opening Cause	00	Door did not open	more
V1159	Right Front Door Jammed Closed	0	No	more
V1160	Right Rear Door Jammed Closed	0	No	more
V1161	Van Right-rear Door Type	8	Not applicable (not a van)	more
V1162	Right Front Glazing Availability	2	Closed	more
V1163	Right Rear Glazing Availability	2	<sup>2</sup> Closed <u>n</u>	
V1164	Rr2 Glazing Availability	1	Fixed	more
V1165	Right Front Glazing Damage	0	No damage	more
V1166	Right Rear Glazing Damage	0	No damage	more

**Driver Airbag** 

#### AIRBAG NUMBER ON DRIVER SIDE:

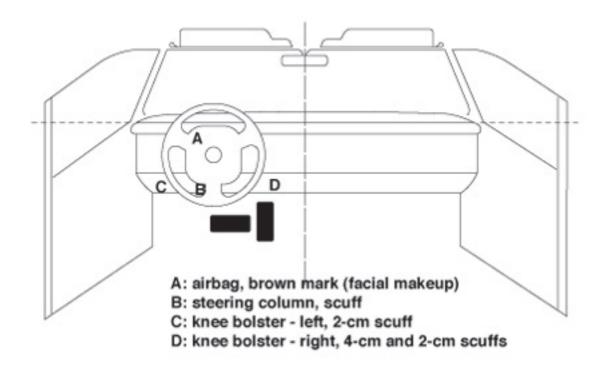






driver evidence of belt use - yes: - scratch on D-ring

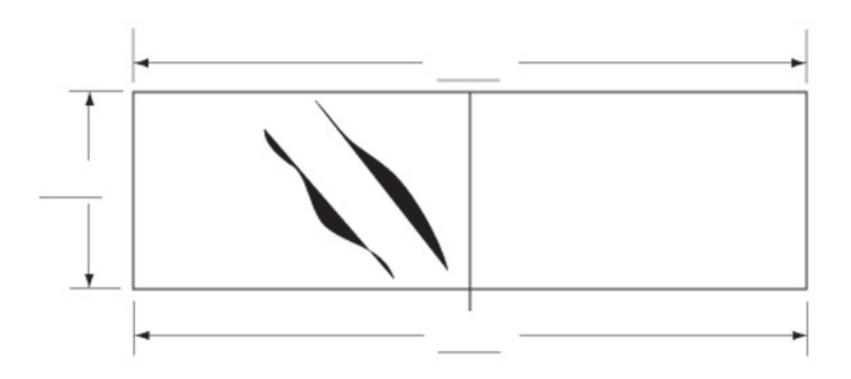
- replacement tab pulled out



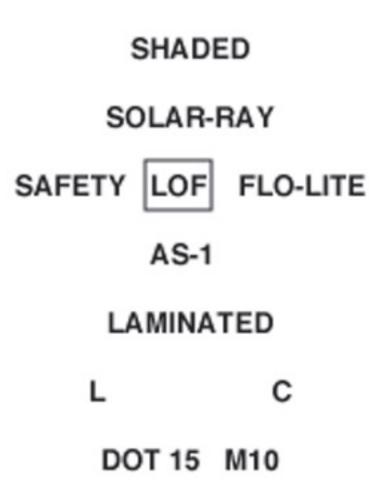
1 = Definitely	2 = Probably	3 = Possible
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#### **INTRUSION IT-1** (All Measurements Are in Centimeters) Dominant Location of Comparison Intruded Crush \_ = **Intruded Component** Value Value Intrusion Direction Intrusion \_ = \_ = \_ = \_ = \_ = \_ = \_ = \_ = \_ = \_ = \_ = = \_ \_ = OCCUPANT CONTACT WORKSHEET Confidence Interior Occupant Body Level of No. if Region Component Contact Contacted Supporting Physical Evidence if Known Point Contact Known Brown mark (facial makeup) Airbag Face 1 1 А Steering 1 Knee 4-cm scuff 1 В column Knee bolster 1 Left knee Left side, 2-cm scuff 1 С Right side, 2-cm and 4-cm scuffs 1 Knee bolster 1 Right D knee/leg Е F G Н

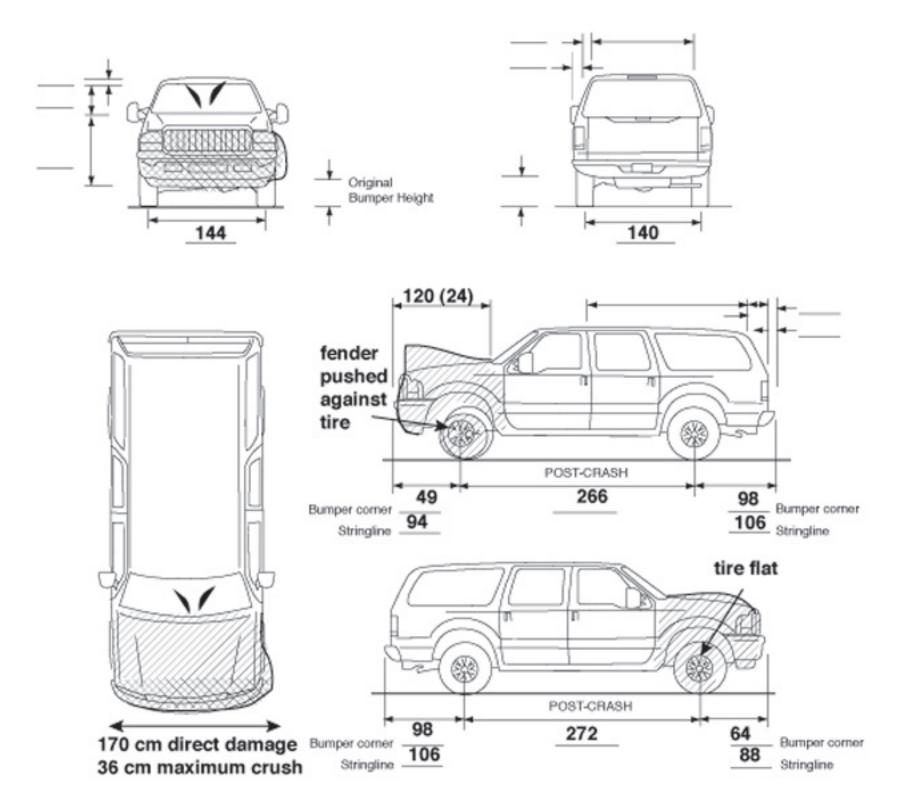
32

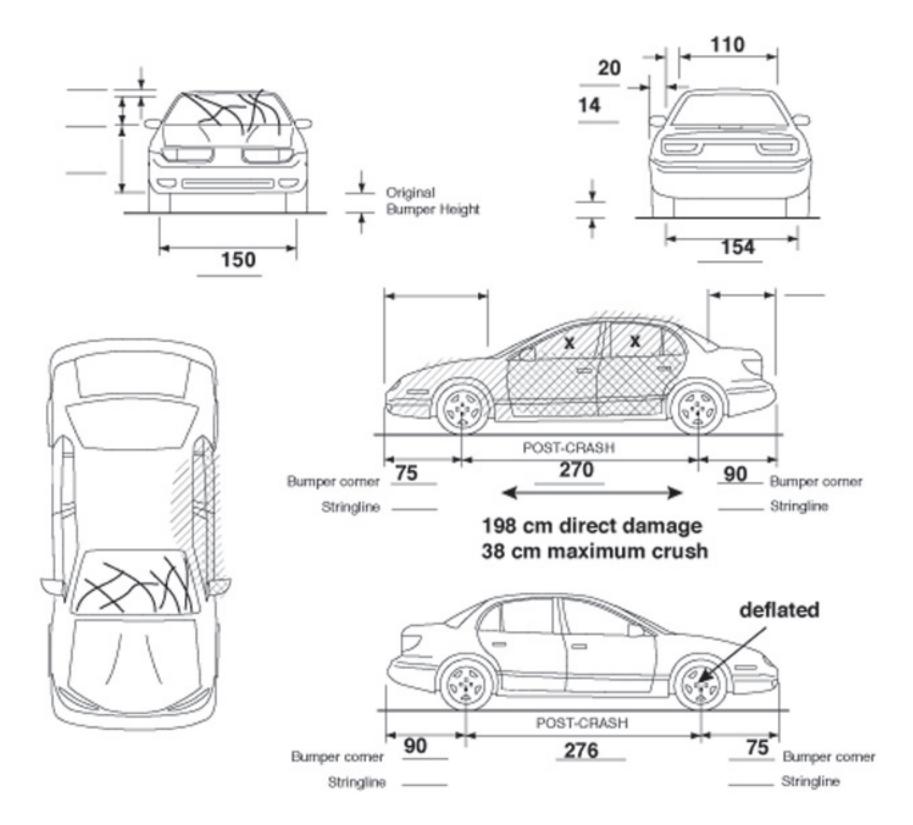


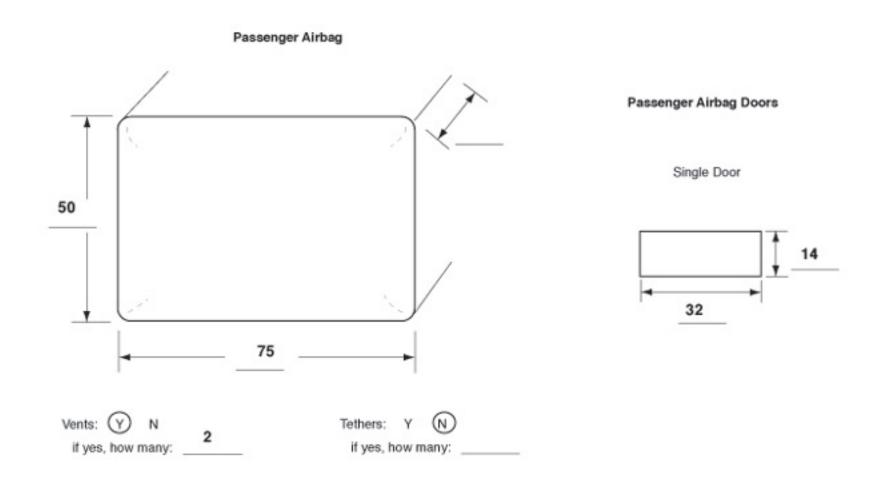
## WINDSHIELD MARK ON CASE VEHICLE:



#### MEASUREMENTS IN CENTIMETERS

































































































































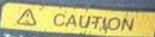












To help avoid personal injury, belt assembly must be replaced if this vehicle is in a collision or if "Replace Belt" appears below. See Owner's Menual for more information.

Remplacer La Geinlure

Replace Belt

UNISED