

Case 428 : Narrative

Case Vehicle (A): 2002 Chevrolet
Type: Monte Carlo LS, 2-door coupe
Driver: 17-year-old male
CDC: 12-FREE-4

SITUATION

[1](#) [2](#) It was dark and raining, and the asphalt road surface was wet and unlighted as case vehicle (A) was traveling south at an Event Data-Recorded (EDR) speed of 31 mph (50 kph) in the southbound lane of a north-south, two-lane road with a posted speed limit of 55 mph (89 kph). The driver of case vehicle (A) had just negotiated a curve to the left and was approaching [3](#) [4](#) a straight section of the road over a small bridge when he turned around to locate a cell phone in the back seat. This caused [5](#) case vehicle (A) to move to the right and cross over the fog line on the west edge of the road. When the driver turned back to the front, he saw that his vehicle was about to collide with the concrete guardrail of the bridge and tried to steer to the left, but the right front of case vehicle (A) [6](#) struck the 67-cm-high guardrail at an EDR-recorded speed of 32 mph (51 kph). Case vehicle (A) was 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 he was treated and released.

GENERAL VEHICLE DAMAGE AND ESTIMATED CRASH SEVERITIES

[7](#) Damage to the right front of case vehicle (A) was severe. Direct damage began at the right-front bumper corner and extended 20-cm to the left, resulting in 17% vehicle overlap (%VOL). [8](#) The maximum rearward crush occurred at the right-front corner and was 17 cm at bumper level and 46 cm above the bumper. Direct damage also extended 101-cm rearward along the right fender.

Using the WinSMASH crash-reconstruction program and [8](#) [9](#) [10](#) [11](#) crush profiles for case vehicle (A) measured at the bumper and above the bumper, the following impact severity was estimated:

Vehicle	Variable	Estimated Velocity Change - kph (mph)		
		Total	Longitudinal	Latitudinal
Case Vehicle (A)	delta V	43 (27)	-41 (-26)	-11 (-7)

Case vehicle (A) was equipped with an Event Data Recorder (EDR) that recorded both deployment and non-deployment events, but the latter was not related to this crash. The EDR data indicate that the driver seatbelt was unbuckled, that the brakes were applied with the throttle at 0%, and that the vehicle speed was 31 mph (50 kph) at five seconds before airbag deployment. At four seconds before airbag deployment, the brake switch was deactivated and the vehicle speed was 32 mph (51 kph), and both remained unchanged until impact. The data indicate that the maximum longitudinal velocity change during the impact was -31 mph (-50 kph).

DESCRIPTION OF DAMAGE TO CASE VEHICLE (A)

Exterior

[12](#) In the front, the right half of the bumper cover was torn and separated from its attachments and the right side of the grille was damaged. The right headlight assembly was crushed rearward but there was no damage to the left headlight assembly. [13 14 15 16 17 18](#) The right-front portion of the hood was crushed rearward, the middle of the hood was bowed up, and the rear edge of the hood was elevated but it did not contact the windshield. [19 20](#) There was a spider-web crack in the windshield just to the left of center from an internal contact, which caused the glazing in this area to bulge out.

On the right side, direct damage extended 101-cm rearward from the right-front bumper corner. [21 22 23 24](#) The fender and the right-front wheel were crushed rearward, the wheel was rotated out at about 45 degrees, the inside and outside of the wheel rim were bent, and there was a 15-cm decrease in the right wheelbase. [25 26](#) The right-front door was jammed shut, the upper section of the door was displaced to the right, and [27](#) there was slight buckling of the roof siderail above the B-pillar. [28 29](#) There was no other damage to the right side.

[30](#) There was no damage to the rear of case vehicle (A). [31 32](#) On the left side, there was no damage and there was no significant change in the left wheelbase.

Interior

[33](#) This vehicle was equipped with steering-wheel and dash-mounted frontal-impact airbags and both deployed in the narrow-frontal impact with the concrete bridge rail. [34 35 36](#) In the driver area, there was no damage to the steering-wheel airbag or to the module cover. The top of the steering-wheel rim was slightly deformed but there was no damage to the spokes or to the hub, and there was no rotation of the steering column. The plastic cover to the upper section of the instrument panel in the driver area was displaced up due to deployment of the steering-wheel airbag and [37 38](#) there was a spider-web crack with hair in the cracks in the upper section of the windshield to the right of the steering wheel. [39 40 41 42](#) There was no other damage in the driver area.

[43 44](#) In the center-front area, there were cracks in the windshield emanating from the spider-web crack, the rearview mirror was detached from the windshield mount and hanging by the electrical cable, and the mirror was cracked. The plastic cover to the upper section of the instrument panel was displaced up due to deployment of the dash-mounted airbag and the air vent above the radio was damaged. There was no other damage in the center-front area.

[45 46](#) In the right-front seating area, there was no damage to the dash-mounted airbag but the plastic cover to the upper section of the dashboard was displaced up from airbag deployment. There were a few cracks in the windshield emanating from the spider-web crack in the driver area, but [45 46 47](#) there was no other damage in the right-front area.

[48 49](#) There was no damage in the rear interior of the vehicle and there were no intrusions of vehicle components into the occupant space of case vehicle (A).

OCCUPANT KINEMATICS AND INJURIES

[50](#) The 180-cm, 66-kg (5-ft 11-in, 145-lb) 17-year-old male driver was **not** using the three-point belt and

the steering-wheel airbag deployed during the frontal impact. [51](#) [52](#) There was no evidence of belt use on the continuous loop and the driver stated that he was not using the seatbelt. Just prior to the impact, the driver may have been leaning slightly to the right, having just turned around from reaching for a cell phone in the rear seat. During the frontal impact, he moved forward relative to the interior of the vehicle, into and over the airbag. He sustained a spiral fracture to the left-middle metacarpal, probably from contact by the deploying airbag or possibly from contact with the steering-wheel rim. He sustained a laceration to the upper-right aspect of the scalp due to head contact with the windshield.

The following table and [53](#) attached drawing summarize the injuries sustained by the unbelted driver of case vehicle (A).

Occupant: Driver	Age: 17 years	Gender: Male		
Restraints: Steering-wheel airbag	Stature: 180 cm (5 ft, 11 in)	Mass: 66 kg (145 lb)		
Injury Description	A.I.S.	Injury Source		
		Definite	Probable	Possible
—	—	—	—	—
Spiral fracture, left-middle metacarpal	2	—	Airbag	Steering-wheel rim
Laceration, upper-right aspect of the scalp	1	Windshield	—	—
Maximum A.I.S. Level	2	—	—	—
Injury Severity Score	5	—	—	—

CASE NO.: 428

CASE VEHICLE: 2002 Chevrolet

TYPE: Monte Carlo LS, 2-door coupe

OCCUPANT: (Driver) 17-year-old male

STATURE: 180 cm (5 ft, 11 in) MASS: 66 kg (145 lb)

RESTRAINTS: Steering-wheel airbag

SEVERITY: MAIS - 2 ISS - 5

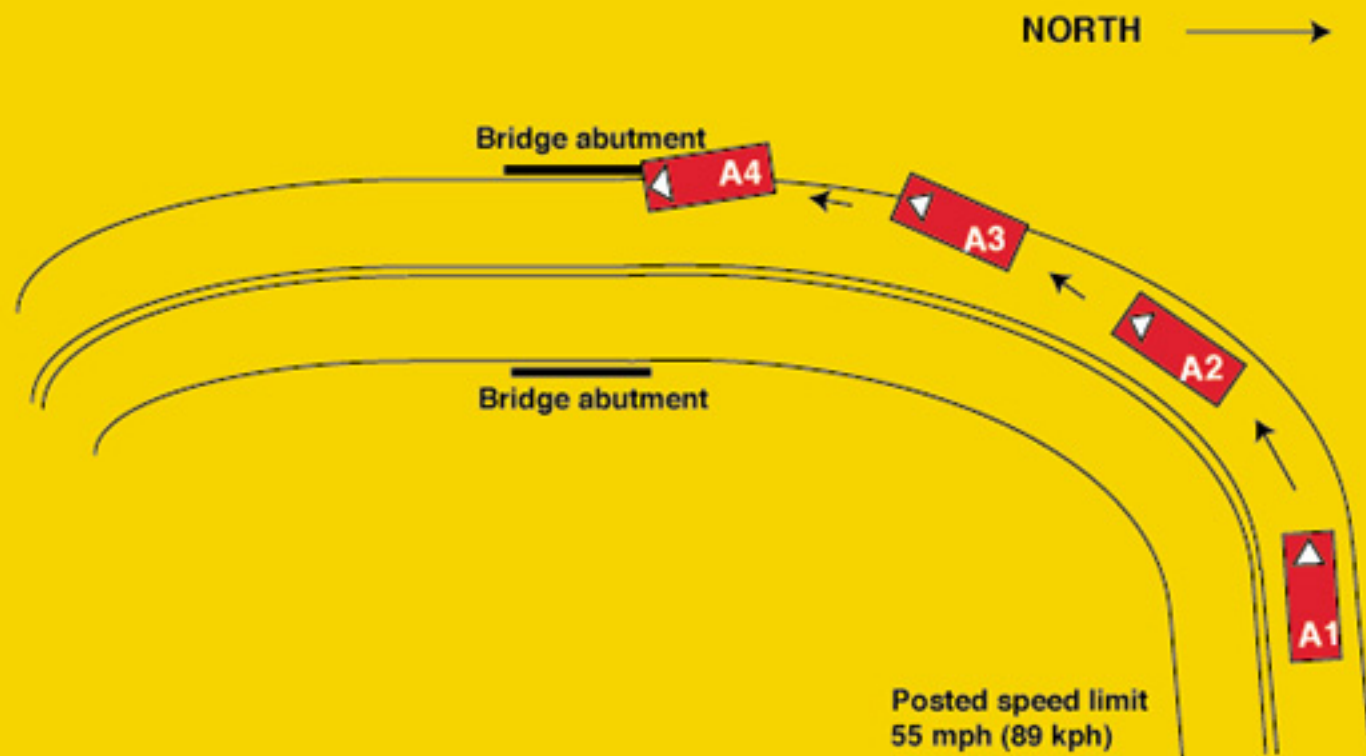
Laceration, upper-right
aspect of the scalp
(1)



Spiral fracture,
left-middle
metacarpal
(2)

Case No.: 428
Case Vehicle (A): 2002 Chevrolet
Type: Monte Carlo LS, 2-door coupe
Driver: 17-year-old male

Light Conditions: **Dark, unlighted**
Weather: **Rain**
Road Surface: **Wet**
Road Construction: **Asphalt**



Vehicle Report

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General Conditions

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Variable Number and Name	Code Value	Code Description	Other Options
V206 — Urban/Rural Area	2	Rural	more
V207 — Limited Access Highway	0	No	more
V208 — Road Total Lanes	2	2 lanes	more
V209 — Intersecting Road Total Lanes	8	Not applicable	more
V210 — Road Surface Type	1	Asphalt	more
V211 — Road Defects	0	No	more
V212 — Construction Zone	0	No	more
V213 — Road Alignment Vertical Plane	1	Level	more
V214 — Road Alignment Horizontal Plane	2	Curve	more
V215 — Surface Covering	22	Water - wet	more
V216 — Visibility Limitation	0	None	more
V217 — Visibility Obstruction	0	None	more
V218 — Speed Limit	6	86-90 km/h .. 55 mph	more
V219 — Precipitation Type	1	Rain	more
V220 — Precipitation Rate	9	Unknown	more
V221 — Temperature	9	Unknown	more

V222 — Crosswind	9	Unknown	more
V223 — Light Conditions	5	Dark, unlighted	more
V224 — Mechanical Malfunction Mention	0	No	more
V225 — Case Vehicle and Object	1	Yes	more
V226 — Case Vehicle Rollover	0	No	more
V227 — Case Vehicle Ran Off Roadway	1	Yes	more
V228 — Moving Case Vehicle/Contacted Moving Vehicle	0	No	more
V229 — Case Vehicle/Contacted Stopped Vehicle	0	No	more
V230 — Stopped Case Vehicle/Contactd Vehicle	0	No	more
V231 — Total Vehicles Hit By Case Vehicle	0	0 vehicles	more
V232 — Any Fire in Crash	0	No	more
V233 — Max Police Severity-PAR	2	B - Non-Incapacitating Injury	more
V234 — Driver Alcohol Involvement	0	Had not been drinking	more
V235 — Driver Alcohol BAC	80	Not tested	more
V236 — Driver Impairment Mention	0	No	more
V237 — Driven/Towed From Scene	2	Towed Due to Damage	more

Other Vehicle

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Variable Number and Name	Code Value	Code Description	Other Options
V301 — Other Vehicle VIN	none	—	—
V302 — Other Vehicle Manufacturer/Body Code	99898	—	—
V303 — Other Vehicle Manufacturer	998	No Other Vehicle	more
V304 — Other Vehicle Body Code	98	No Other Vehicle	more
V305 — Other Vehicle Make/Model	0000	No other vehicle	more
V306 — Other Vehicle Model Year	9999	No other vehicle	more
V307 — Other Vehicle Mass	999998	No other vehicle	more
V308 — Other Vehicle Number	8	No other vehicle	more
V309 — Other Vehicle Number of Occupants	98	No other vehicle	more
V310 — Other Vehicle Traveling Speed	999	Unknown	more

V311 — Highest Police Injury Severity	8	Unoccupied Vehicle	more
V312 — Other Vehicle Type	98	No Other Vehicle	more
V313 — Other Vehicle Wheelbase (cm)	998	No other vehicle	more
V314 — Average Track Width	999	Unknown	more
V315 — Overall Length	999	Unknown	more
V316 — Overall Width (OAW)	999	Unknown	more
V317 — Front Overhang (FOH)	999	Unknown	more
V318 — Rear Overhang (ROH)	999	Unknown	more
V319 — Undeformed End Width (UEW)	999	Unknown	more
V320 — Engine Displacement	9.9 l	—	—
V321 — Engine: Number of Cylinders	99	Unknown	more
V322 — Direct Damage Length (DDL)	999	Unknown	more
V323 — Front-End Overlap % (FEO)	99	Missing or Not applicable	more
V324 — Vehicle Overlap % (VOL)	99	Missing or Not applicable	more

Case Vehicle General



[Click for case vehicle figure](#)

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Variable Number and Name	Code Value	Code Description	Other Options
V401 — VIN	2G1WW12E1291	—	—
V402 — Manufacturer/Body Code	11329	—	—
V403 — Vehicle Manufacturer	113	Chevrolet	more
V404 — Vehicle Body Code	29	—	—
V405 — Make/Model Code	0151	Monte Carlo	more
V406 — Model Year	2002	—	—
V407 — Vehicle Mass	001516 kg	—	—
V408 — Odometer Reading	888888	—	—
V409 — Number of Occupants	01	—	—
V410 — Traveling Speed	050 kph	—	—
V411 — Body Type	12	2-door sedan or coupe (any upper B-pillar)	more
V412 — Stolen Vehicle	8	Not currently collected	more
V413 — Body Structure	2	Unitized	more
V414 — Transmission Type	1	Automatic	more
V415 — Transmission Lever Location	2	Console	more

V416 — Steering	1	Power	more
V417 — Brakes	1	Power	more
V418 — Brake Type	3	Disc - all wheels	more
V419 — Brake Anti-lock Device	2	Four-wheel	more
V420 — Air Conditioning in Vehicle	8	Not currently collected	more
V421 — Drive Type	2	Front wheel	more
V422 — Dual Rear Wheels	0	No	more
V423 — Original Restraint System Type	3	Airbag	more
V424 — Equipped With Roll Bar	0	No	more
V425 — Roof Type	1	Solid	more
V426 — Wheelbase	281 cm	—	—
V427 — Anti-lacerative Glass	0	None	more
V428 — Average Track Width	157 cm	—	—
V429 — Overall Length	502 cm	—	—
V430 — Overall Width (OAW)	184 cm	—	—
V431 — Front Overhang	111 cm	—	—
V432 — Rear Overhang	113 cm	—	—
V433 — Undeformed End Width (UEW)	160 cm	—	—
V434 — Engine Displacement	3.4 l	—	—
V435 — Engine: Number of Cylinders	06	—	—
V436 — Direct Damage Length (DDL)	020 cm	—	—
V437 — Front End Overlap % (FEO)	13	—	—
V438 — Vehicle Overlap % (VOL)	17	—	—

Case Vehicle Damage Description

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Variable Number and Name	Code Value	Code Description	Other Options
V501 — Maximum Crush - Front	046 cm	—	—
V502 — Maximum Crush - Right Side	000 cm	No crush (or less than 1 cm.)	more
V503 — Maximum Crush - Rear	000 cm	No crush (or less than 1 cm.)	more
V504 — Maximum Crush - Left Side	000 cm	No crush (or less than 1 cm.)	more

V505 — Maximum Crush - Roof	000 cm	No crush (or less than 1 cm.)	more
V506 — Maximum Crush - Other	000 cm	No crush (or less than 1 cm.)	more
V507 — Are Events In Chronological Order	1	Yes	more
V508 — Event 1 Impact Location	2	Shoulder/Median/Gore	more
V509 — Event 1 Impact Configuration	17	FRONT of case veh - object	more
V510 — Event 1 Object/Vehicle Contacted	88	Abutment, retaining wall	more
V511 — Event 2 Impact Location	8	No 2nd event	more
V512 — Event 2 Impact Configuration	88	No 2nd event	more
V513 — Event 2 Object/Vehicle Contacted	00	No object/vehicle contacted	more
V514 — Event 3 Impact Location	8	No 3rd event	more
V515 — Event 3 Impact Configuration	88	No 3rd event	more
V516 — Event 3 Object/Vehicle Contacted	00	No object/vehicle contacted	more
V517 — Event 4 Impact Location	8	No 4th event	more
V518 — Event 4 Impact Configuration	88	No 4th event	more
V519 — Event 4 Object/Vehicle Contacted	00	No object/vehicle contacted	more
V520 — Event 5 Impact Location	8	No 5th event	more
V521 — Event 5 Impact Configuration	88	No 5th event	more
V522 — Event 5 Object/Vehicle Contacted	00	No object/vehicle contacted	more
V523 — Event 6 Impact Location	8	No 6th event	more
V524 — Event 6 Impact Configuration	88	No 6th event	more
V525 — Event 6 Object/Vehicle Contacted	00	No object/vehicle contacted	more
V526 — Event 7 Impact On Road	8	No 7th event	more
V527 — Event 7 Impact Configuration	88	No 7th event	more
V528 — Event 7 Object/Vehicle Contacted	00	No object/vehicle contacted	more
V529 — Primary CDC Case Vehicle -event Number	1	Event 1	more
V530 — Primary CDC Case Vehicle - impact speed	051	—	—
V531 — Primary CDC Case Vehicle - Estimated By	7	Other	more
V532 — Primary CDC Case Vehicle -crush	046	—	—

V533 — Primary CDC Case Vehicle -clock #1	12	12 o'clock	more
V534 — Primary CDC Case Vehicle letter 1 #1	06	F - Front	more
V535 — Primary CDC Case Vehicle letter 2 #1	18	R - Right (Front or Rear)	more
V536 — Primary CDC Case Vehicle letter 3 #1	05	E - Everything below belt line	more
V537 — Primary CDC Case Vehicle letter 4 #1	05	E - Corner (extends from corner to = or < 16 in [410mm])	more
V538 — Primary CDC Case Vehicle Extent #1	04	Extent 4	more
V539 — Primary CDC Case Vehicle -CDC #1	12FREE4	—	—
V541 — Primary CDC Case Vehicle letter 1 #2	00	Missing Data/Not applicable	more
V542 — Primary CDC Case Vehicle letter 2 #2	00	Missing Data/Not applicable	more
V543 — Primary CDC Case Vehicle letter 3 #2	00	Missing Data/Not applicable	more
V544 — Primary CDC Case Vehicle letter 4 #2	00	Missing Data/Not applicable	more
V545 — Primary CDC Case Vehicle Extent #2	00	Missing Data/Not applicable	more
V546 — Primary CDC Case Vehicle -CDC #2	9800000	—	—
V547 — Primary CDC Contacted Vehicle - Impact Speed	998	Not Applicable	more
V548 — Primary CDC Contacted Vehicle - Estimated By	8	Not applicable (no vehicle/no impact)	more
V549 — Primary CDC Contacted Vehicle - crush	998	Not Applicable	more
V550 — Primary CDC Contacted Vehicle - clock #1	98	Not Applicable	more
V551 — Primary CDC Contacted Vehicle letter 1 #1	00	Missing Data/Not applicable	more
V552 — Primary CDC Contacted Vehicle letter 2 #1	00	Missing Data/Not applicable	more
V553 — Primary CDC Contacted Vehicle letter 3 #1	00	Missing Data/Not applicable	more
V554 — Primary CDC Contacted Vehicle letter 4 #1	00	Missing Data/Not applicable	more

V555 — Primary CDC Contacted Vehicle Extent #1	00	Missing Data/Not applicable	more
V556 — Primary CDC Contacted Vehicle - CDC #1	9800000	—	—
V558 — Primary CDC Contacted Vehicle letter 1 #2	00	Missing Data/Not applicable	more
V559 — Primary CDC Contacted Vehicle letter 2 #2	00	Missing Data/Not applicable	more
V560 — Primary CDC Contacted Vehicle letter 3 #2	00	Missing Data/Not applicable	more
V561 — Primary CDC Contacted Vehicle letter 4 #2	00	Missing Data/Not applicable	more
V562 — Primary CDC Contacted Vehicle Extent #2	00	Missing Data/Not applicable	more
V563 — Primary CDC Contacted Vehicle - CDC #2	9800000	—	—
V564 — Secondary CDC Case Vehicle - Event No	8	Not applicable	more
V565 — Secondary CDC Case Vehicle - Impact Speed	998	Not Applicable	more
V566 — Secondary CDC Case Vehicle - Estimated By	8	Not applicable (no vehicle/no impact)	more
V567 — Secondary CDC Case Vehicle - crush	998	Not Applicable	more
V568 — Secondary CDC Case Vehicle - clock #1	98	Not Applicable	more
V569 — Secondary CDC Case Vehicle letter 1 #1	00	Missing Data/Not applicable	more
V570 — Secondary CDC Case Vehicle letter 2 #1	00	Missing Data/Not applicable	more
V571 — Secondary CDC Case Vehicle letter 3 #1	00	Missing Data/Not applicable	more
V572 — Secondary CDC Case Vehicle letter 4 #1	00	Missing Data/Not applicable	more
V573 — Secondary CDC Case Vehicle Extent #1	00	Missing Data/Not applicable	more
V574 — Secondary CDC Case Vehicle - CDC #1	9800000	—	—
V576 — Secondary CDC Case Vehicle letter 1 #2	00	Missing Data/Not applicable	more
V577 — Secondary CDC Case Vehicle letter 2 #2	00	Missing Data/Not applicable	more
V578 — Secondary CDC Case Vehicle letter	00	Missing Data/Not	more

3 #2		applicable	
V579 — Secondary CDC Case Vehicle letter 4 #2	00	Missing Data/Not applicable	more
V580 — Secondary CDC Case Vehicle Extent #2	00	Missing Data/Not applicable	more
V581 — Secondary CDC Case Vehicle - CDC #2	9800000	—	—
V582 — Secondary CDC Contacted Vehicle - Impact Speed	998	Not Applicable	more
V583 — Secondary CDC Contacted Vehicle - Estimated By	8	Not applicable (no vehicle/no impact)	more
V584 — Secondary CDC Contacted Vehicle -crush	998	Not Applicable	more
V585 — Secondary CDC Contacted Vehicle -clock #1	98	Not Applicable	more
V586 — Secondary CDC Contacted Vehicle letter 1 #1	00	Missing Data/Not applicable	more
V587 — Secondary CDC Contacted Vehicle letter 2 #1	00	Missing Data/Not applicable	more
V588 — Secondary CDC Contacted Vehicle letter 3 #1	00	Missing Data/Not applicable	more
V589 — Secondary CDC Contacted Vehicle letter 4 #1	00	Missing Data/Not applicable	more
V590 — Secondary CDC Contacted Vehicle Extent #1	00	Missing Data/Not applicable	more
V591 — Secondary CDC Contacted Vehicle -CDC #1	9800000	—	—
V593 — Secondary CDC Contacted Vehicle letter 1 #2	00	Missing Data/Not applicable	more
V594 — Secondary CDC Contacted Vehicle letter 2 #2	00	Missing Data/Not applicable	more
V595 — Secondary CDC Contacted Vehicle letter 3 #2	00	Missing Data/Not applicable	more
V596 — Secondary CDC Contacted Vehicle letter 4 #2	00	Missing Data/Not applicable	more
V597 — Secondary CDC Contacted Vehicle Extent #2	00	Missing Data/Not applicable	more
V598 — Secondary CDC Contacted Vehicle -CDC #2	9800000	—	—

Crash Severity

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Variable			
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Number and Name	Code Value	Code Description	Other Options
V601 — Case Vehicle Primary Impact Number	1	—	—
V602 — Primary Impact Total Delta-V	043 kph	—	—
V603 — Primary Case Vehicle Reconstructed Longitudinal Delta-V	-041 kph	—	—
V604 — Primary Case Vehicle Reconstructed Lateral Delta-V	-011 kph	—	—
V605 — Primary Case Vehicle Reconstructed Crush Energy	0112 kJ	—	—
V606 — Primary Impact Case Vehicle - reconstruction	22	Reconstructed, moderate confidence level	more
V607 — Primary Case Vehicle Reconstruction Mode	2	CDC & detailed damage	more
V608 — Primary Contacted Vehicle Reconstructed Total Delta-V	888	N/A	more
V609 — Primary Contacted	8888		

Vehicle Reconstructed Longitudinal Delta-V			—	—
V610 — Primary Contacted Vehicle Reconstructed Lateral Delta-V	8888		—	—
V611 — Primary Contacted Vehicle Reconstructed Crush Energy	8888		—	—
V612 — Case Vehicle Secondary Impact Number	8		—	—
V613 — Secondary Case Vehicle Reconstructed Total Delta-V	888	N/A		more
V614 — Secondary Case Vehicle Reconstructed Longitudinal Delta-V	8888		—	—
V615 — Secondary Case Vehicle Reconstructed Lateral Delta-V	8888		—	—
V616 — Secondary Case Vehicle Reconstructed Crush Energy	8888		—	—
V617 — Secondary Case Vehicle Reconstruction	88		—	—

Note			
V618 — Secondary Case Vehicle Reconstruction Mode	8	Not applicable	more
V619 — Secondary Contacted Vehicle Reconstructed Total Delta-V	888	N/A	more
V620 — Secondary Contacted Vehicle Reconstructed Longitudinal Delta-V	8888	—	—
V621 — Secondary Contacted Vehicle Reconstructed Lateral Delta- V	8888	—	—
V622 — Secondary Contacted Vehicle Reconstructed Crush Energy	8888	—	—
V623 — Case Vehicle Primary Impact Number	1	—	—
V624 — Primary Case Vehicle Reconstructed Total EBS	043 kph	—	—
V625 — Primary Case Vehicle Reconstructed Longitudinal EBS	-041 kph	—	—

V626 — Primary Case Vehicle Reconstructed Lateral EBS	-011 kph	—	—
V627 — Primary Case Vehicle Reconstructed Crush Energy	0112 kJ	—	—
V628 — Primary Case Vehicle Reconstruction Note	22	Reconstructed, moderate confidence level	more
V629 — Primary Case Vehicle Reconstruction Mode	2	CDC & detailed damage	more
V630 — Primary Contacted Vehicle Reconstruction Total EBS	888	N/A	more
V631 — Primary Contacted Vehicle Reconstruction Longitudinal EBS	8888	—	—
V632 — Primary Contacted Vehicle Reconstruction Lateral EBS	8888	—	—
V633 — Primary Contacted Vehicle Reconstruction Crush Energy	8888	—	—
V634 — Case Vehicle Secondary	8	Not applicable	more

Impact Number			
V635 — Secondary Case Vehicle Reconstruction Total EBS	888	N/A	more
V636 — Secondary Case Vehicle Reconstruction Longitudinal EBS	8888	—	—
V637 — Secondary Case Vehicle Reconstruction Lateral EBS	8888	—	—
V638 — Secondary Case Vehicle Reconstruction Crush Energy	8888	—	—
V639 — Secondary Case Vehicle Reconstruction Note	88	—	—
V640 — Secondary Case Vehicle Reconstruction Mode	8	Not applicable	more
V641 — Secondary Contacted Vehicle Reconstruction Total EBS	888	N/A	more
V642 — Secondary Contacted Vehicle Reconstruction Longitudinal EBS	8888	—	—
V643 —	8888		

Secondary Contacted Vehicle Reconstruction Lateral EBS		—	—
V644 — Secondary Contacted Vehicle Reconstruction Crush Energy	8888	—	—
V645 — Case Vehicle Reconstructed Impact Number	1	—	—
V646 — Case Vehicle Impact 1 Plane	1	Bumper	more
V647 — Case Vehicle Impact 1 Direct Damage Length [DDL]	020 cm	—	—
V648 — Case Vehicle Impact 1 Max Crush	046 cm	—	—
V649 — Case Vehicle Impact 1 Field-L	135 cm	—	—
V650 — Case Vehicle Impact 1 C1	000 cm	No Crush	more
V651 — Case Vehicle Impact 1 C2	000 cm	No Crush	more
V652 — Case Vehicle Impact 1 C3	000 cm	No Crush	more
V653 — Case Vehicle Impact 1 C4	005 cm	—	—
V654 — Case Vehicle	003 cm	—	—

Impact 1 C5			
V655 — Case Vehicle Impact 1 C6	017 cm	—	—
V656 — Case Vehicle Impact 1 +/- D	0000 cm	—	—
V657 — Case Vehicle Reconstructed Impact Number	2	—	—
V658 — Case Vehicle Impact 2 Plane	8	Not applicable	more
V659 — Case Vehicle Impact 2 Direct Damage Length [DDL]	998	Not applicable	more
V660 — Case Vehicle Impact 2 Max Crush	998	Not applicable	more
V661 — Case Vehicle Impact 2 Field-L	998	Not applicable	more
V662 — Case Vehicle Impact 2 C1	998	Not applicable	more
V663 — Case Vehicle Impact 2 C2	998	Not applicable	more
V664 — Case Vehicle Impact 2 C3	998	Not applicable	more
V665 — Case Vehicle Impact 2 C4	998	Not applicable	more
V666 — Case Vehicle Impact 2 C5	998	Not applicable	more
V667 — Case Vehicle	998	Not applicable	more

Impact 2 C6			
V668 — Case Vehicle Impact 2 +/- D	9998	—	—
V669 — Other Vehicle Reconstructed Impact Number	9	Unknown	more
V670 — Other Vehicle Impact 1 Plane	9	Unknown	more
V671 — Other Vehicle Impact 1 Direct Damage Length [DDL]	999	Unknown	more
V672 — Other Vehicle Impact 1 Max Crush	999	Unknown	more
V673 — Other Vehicle Impact 1 Field-L	999	Unknown	more
V674 — Other Vehicle Impact 1 C1	999	Unknown	more
V675 — Other Vehicle Impact 1 C2	999	Unknown	more
V676 — Other Vehicle Impact 1 C3	999	Unknown	more
V677 — Other Vehicle Impact 1 C4	999	Unknown	more
V678 — Other Vehicle Impact 1 C5	999	Unknown	more
V679 — Other Vehicle Impact 1 C6	999	Unknown	more
V680 — Other Vehicle	9999	—	—

Impact 1 +/- D			
V681 — Other Vehicle Reconstructed Impact Number	9	Unknown	more
V682 — Other Vehicle Impact 2 Plane	9	Unknown	more
V683 — Other Vehicle Impact 2 Direct Damage Length [DDL]	999	Unknown	more
V684 — Other Vehicle Impact 2 Max Crush	999	Unknown	more
V685 — Other Vehicle Impact 2 Field-L	999	Unknown	more
V686 — Other Vehicle Impact 2 C1	999	Unknown	more
V687 — Other Vehicle Impact 2 C2	999	Unknown	more
V688 — Other Vehicle Impact 2 C3	999	Unknown	more
V689 — Other Vehicle Impact 2 C4	999	Unknown	more
V690 — Other Vehicle Impact 2 C5	999	Unknown	more
V691 — Other Vehicle Impact 2 C6	999	Unknown	more
V692 — Other Vehicle Impact 2 +/- D	9999	—	—

Case Vehicle Tires & Rims

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Variable Number and Name	Code Value	Code Description	Other Options
V701 — Left Front Wheel Damaged	0	No	more
V702 — Right Front Wheel Damaged	1	Yes	more
V703 — Right Rear Wheel Damaged	0	No	more
V704 — Left Rear Wheel Damaged	0	No	more
V705 — Left Front Tire Tread Type	4	All Weather	more
V706 — Right Front Tire Tread Type	4	All Weather	more
V707 — Right Rear Tire Tread Type	4	All Weather	more
V708 — Left Rear Tire Tread Type	4	All Weather	more
V709 — Left Front Carcass Construction	3	Radial	more
V710 — Right Front Carcass Construction	3	Radial	more
V711 — Right Rear Carcass Construction	3	Radial	more
V712 — Left Rear Carcass Construction	3	Radial	more
V717 — Left Front Tire Size	P22560R169	—	—
V718 — Right Front Tire Size	P22560R169	—	—
V719 — Right Rear Tire Size	P22560R169	—	—
V720 — Left Rear Tire Size	P22560R169	—	—

Case Vehicle Fuel, Tank, Fire

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Variable Number and Name	Code Value	Code Description	Other Options
V801 — Propulsive Fuel Type	1	Gasoline	more
V802 — Main Tank Location	122	Within frame/centered laterally - within vertically	more
V803 — Main Filler Cap Location	113	Left of frame laterally - above vertically	more
V804 — Main Tank Material	1	Steel	more



V805 — Aux Tank Type	8	Not applicable (not equipped)	more
V806 — Aux Tank Location	888	Not applicable (not equipped)	more
V807 — Aux Filler Cap Location	888	Not applicable (not equipped)	more
V808 — Aux Tank Material	8	Not applicable	more
V901 — Fuel Leakage From Crash	0	No	more
V1001 — Fire In Or On Case Vehicle	0	No	more

Case Vehicle Exterior

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Variable Number and 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	0	No	more
V1104 — Left Hood Hinge Damaged	1	Yes	more
V1105 — Left Hood Hinge Separated	0	No	more
V1106 — Right Hood Hinge Damaged	1	Yes	more
V1107 — Right Hood Hinge Separated	0	No	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 Separation	0	No	more
V1114 — Steerng Column Flex Coupling	9	Unknown if equipped	more
V1115 — Steerng Column Coupling Damaged	9	Unknown	more
V1116 — Steerng Column Coupling Separated	9	Unknown	more
V1117 — Eng Comp Telescopng Unit	88	Not collected	more
V1118 — Comp Orig/Telescopd Diff	888	Not collected	more
V1119 — Left Side Body Mount Separation	8	Not applicable (unitized)	more
V1120 — Upper Left A-pillar Separation	0	No	more
V1121 — Lower Left A-pillar	0	No	more

Separation			
V1122 — Upper Left B-pillar Separation	0	No	more
V1123 — Lower Left B-pillar Separation	0	No	more
V1124 — Upper Left C-pillar Separation	0	No	more
V1125 — Lower Left C-pillar Separation	8	Not applicable (not equipped)	more
V1126 — Upper Left D-pillar Separation	8	Not applicable (not equipped)	more
V1127 — Lower Left D-pillar Separation	8	Not applicable (not equipped)	more
V1128 — Left Front Door Opening Cause	0	Door did not open	more
V1129 — Left Rear Door Opening Cause	8	Not applicable (no left rear door)	more
V1130 — Left Front Door Jammed Closed	0	No	more
V1131 — Left Rear Door Jammed Closed	8	Not applicable (no left rear door)	more
V1132 — Rear Door Type	0	No door (includes pickups)	more
V1133 — Rear Door Opening Cause	8	Not applicable (no rear door)	more
V1134 — Rear Door Jammed Closed	8	Not applicable (no rear door)	more
V1135 — Luggage Partition Damagd	8	Not applicable	more
V1136 — Spare Tire Status	8	Not collected	more
V1137 — Trailer Hitch Type	0	No hitch	more
V1138 — Trailer Type	0	No trailer	more
V1139 — Right Side Body Mount Separation	8	Not applicable (unitized)	more
V1140 — Upper Right A-pillar Separation	0	No	more
V1141 — Lower Right A-pillar Separation	0	No	more
V1142 — Upper Right B-pillar Separation	0	No	more
V1143 — Lower Right B-pillar Separation	0	No	more
V1144 — Upper Right C-pillar Separation	0	No	more
V1145 — Lower Right C-pillar Separation	8	Not applicable (not equipped)	more

V1146 — Upper Right D-pillar Separation	8	Not applicable (not equipped)	more
V1147 — Lower Right D-pillar Separation	8	Not applicable (not equipped)	more
V1148 — Right Front Door Opening Cause	00	Door did not open	more
V1149 — Right Rear Door Opening Cause	98	Not applicable (no right rear door)	more
V1150 — Right Front Door Jammed Closed	1	Yes	more
V1151 — Right Rear Door Jammed Closed	8	Not applicable (no right rear door)	more
V1152 — Van Rear Door Type	8	Not applicable (not a van)	more
V1153 — Windshield Cracked		Yes	more
V1154 — Windshield Broken	0	No	more
V1155 — Windshield Cracked or Broken by Occupant	1	Yes	more
V1156 — Bond Separation Extent	0	None	more
V1157 — Windshield Code		—	—
V1158 — Did Sun/T Roof Open	8	Not Applicable	more

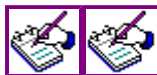
**Case Vehicle
Steering
Column/Rim**

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Variable Number and Name	Code Value	Code Description	Other Options
V1201 — Steering Wheel Rim Damage	1	Deformed slightly	more
V1202 — Number of Steering Wheel Spokes	3	3 spokes	more
V1203 — Steering Wheel Spoke Damage	0	None	more
V1204 — Column Tilt Feature	4	Lower	more

V1205 — Column Swing-away Feature	0	Not equipped	more
V1206 — Column Telescoping Feature	0	Not equipped	more
V1207 — Wheel Energy Absorb Device	8	Not collected	more
V1208 — Wheel Ea Orig/Damaged Diff	888	Not collected	more
V1209 — Column Energy Absorb Device	88	Not collected	more
V1210 — Column Ea Orig/Comprss Diff	888	Not collected	more
V1211 — Shear Capsule Separation	888	Not collected	more
V1212 — Column Vertical Rotation	0	No apparent rotation	more
V1213 — Column Lateral Rotation	0	No apparent rotation	more
V1214 — Steering Wheel Hub Damage	0	None	more

Case Vehicle Intrusion



Click for intrusion figures

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Variable Number and Name	Code Value	Code Description	Other Options
V1301 — Occupant Compartment Intrusion	0	No	more
V1302 — Was Intrusion Catastrophic	8	Not applicable	more
V1303 — Intrusion Number 01	00	No Intrusion, None	more
V1304 — Intrusion 01 Occupant Space Number	00	No Intrusion, None	more
V1305 — Intrusion 01 Intruding Object	00	No Intrusion, None	more
V1306 — Intrusion 01 Assoc Event Number	0	No Intrusion, None	more
V1307 — Intrusion 01 Max Intrusion X-axis	00 cm	0 cm or No Intrusion	more
V1308 — Intrusion 01 Max Intrusion Y-axis	00 cm	0 cm or No Intrusion	more
V1309 — Intrusion 01 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1310 — Intrusion 01 Occupant Number	00	No contact or no intrusion	more
V1311 — Intrusion 01 Injury Number	00	No injury or no intrusion	more

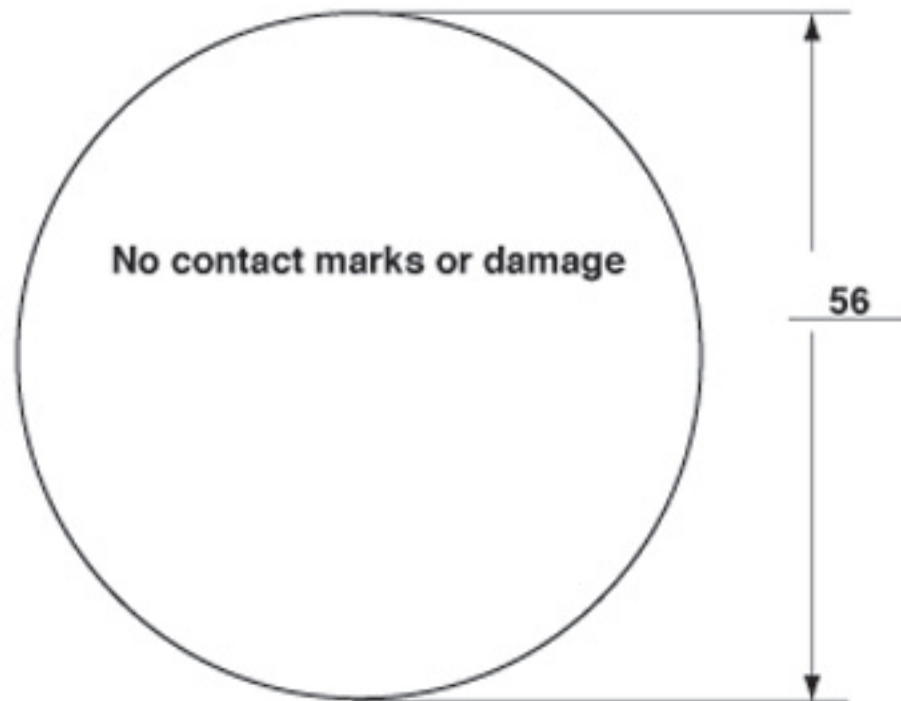
V1312 — Intrusion 01 Occupant Number	00	No contact or no intrusion	more
V1313 — Intrusion 01 Injury Number	99	Contact, injury unknown or data not collected	more
V1314 — Intrusion Number 02	00	No Intrusion, None	more
V1315 — Intrusion 02 Occupant Space Number	00	No Intrusion, None	more
V1316 — Intrusion 02 Intruding Object	00	No Intrusion, None	more
V1317 — Intrusion 02 Assoc Event Number	0	No Intrusion, None	more
V1318 — Intrusion 02 Max Intrusion X-axis	00 cm	0 cm or No Intrusion	more
V1319 — Intrusion 02 Max Intrusion Y-axis	00 cm	0 cm or No Intrusion	more
V1320 — Intrusion 02 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1321 — Intrusion 02 Occupant Number	00	No contact or no intrusion	more
V1322 — Intrusion 02 Injury Number	00	No injury or no intrusion	more
V1323 — Intrusion 02 Occupant Number	00	No contact or no intrusion	more
V1324 — Intrusion 02 Injury Number	99	Contact, injury unknown or data not collected	more
V1325 — Intrusion Number 03	00	No Intrusion, None	more
V1326 — Intrusion 03 Occupant Space Number	00	No Intrusion, None	more
V1327 — Intrusion 03 Intruding Object	00	No Intrusion, None	more
V1328 — Intrusion 03 Assoc Event Number	0	No Intrusion, None	more
V1329 — Intrusion 03 Max Intrusion X-axis	00 cm	0 cm or No Intrusion	more
V1330 — Intrusion 03 Max Intrusion Y-axis	00 cm	0 cm or No Intrusion	more
V1331 — Intrusion 03 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1332 — Intrusion 03 Occupant Number	00	No contact or no intrusion	more
V1333 — Intrusion 03 Injury Number	00	No injury or no intrusion	more
V1334 — Intrusion 03 Occupant Number	00	No contact or no intrusion	more
	99	Contact, injury unknown or data	

V1335 — Intrusion 03 Injury Number		not collected	more
V1336 — Intrusion Number 04	00	No Intrusion, None	more
V1337 — Intrusion 04 Occupant Space Number	00	No Intrusion, None	more
V1338 — Intrusion 04 Intruding Object	00	No Intrusion, None	more
V1339 — Intrusion 04 Assoc Event Number	0	No Intrusion, None	more
V1340 — Intrusion 04 Max Intrusion X-axis	00 cm	0 cm or No Intrusion	more
V1341 — Intrusion 04 Max Intrusion Y-axis	00 cm	0 cm or No Intrusion	more
V1342 — Intrusion 04 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1343 — Intrusion 04 Occupant Number	00	No contact or no intrusion	more
V1344 — Intrusion 04 Injury Number	00	No injury or no intrusion	more
V1345 — Intrusion 04 Occupant Number	00	No contact or no intrusion	more
V1346 — Intrusion 04 Injury Number	99	Contact, injury unknown or data not collected	more
V1347 — Intrusion Number 05	00	No Intrusion, None	more
V1348 — Intrusion 05 Occupant Space Number	00	No Intrusion, None	more
V1349 — Intrusion 05 Intruding Object	00	No Intrusion, None	more
V1350 — Intrusion 05 Assoc Event Number	0	No Intrusion, None	more
V1351 — Intrusion 05 Max Intrusion X-axis	00 cm	0 cm or No Intrusion	more
V1352 — Intrusion 05 Max Intrusion Y-axis	00 cm	0 cm or No Intrusion	more
V1353 — Intrusion 05 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1354 — Intrusion 05 Occupant Number	00	No contact or no intrusion	more
V1355 — Intrusion 05 Injury Number	00	No injury or no intrusion	more
V1356 — Intrusion 05 Occupant Number	00	No contact or no intrusion	more
V1357 — Intrusion 05 Injury Number	99	Contact, injury unknown or data not collected	more
V1358 — Intrusion Number 06	00	No Intrusion, None	more

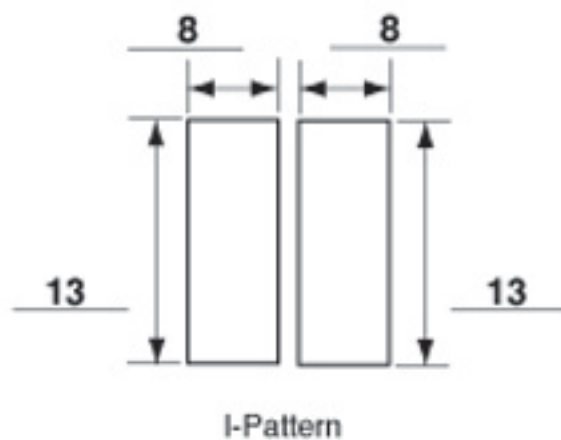
V1359 — Intrusion 06 Occupant Space Number	00	No Intrusion, None	more
V1360 — Intrusion 06 Intruding Object	00	No Intrusion, None	more
V1361 — Intrusion 06 Assoc Event Number	0	No Intrusion, None	more
V1362 — Intrusion 06 Max Intrusion X-axis	00 cm	0 cm or No Intrusion	more
V1363 — Intrusion 06 Max Intrusion Y-axis	00 cm	0 cm or No Intrusion	more
V1364 — Intrusion 06 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1365 — Intrusion 06 Occupant Number	00	No contact or no intrusion	more
V1366 — Intrusion 06 Injury Number	00	No injury or no intrusion	more
V1367 — Intrusion 06 Occupant Number	00	No contact or no intrusion	more
V1368 — Intrusion 06 Injury Number	99	Contact, injury unknown or data not collected	more
V1369 — Intrusion Number 07	00	No Intrusion, None	more
V1370 — Intrusion 07 Occupant Space Number	00	No Intrusion, None	more
V1371 — Intrusion 07 Intruding Object	00	No Intrusion, None	more
V1372 — Intrusion 07 Assoc Event Number	0	No Intrusion, None	more
V1373 — Intrusion 07 Max Intrusion X-axis	00 cm	0 cm or No Intrusion	more
V1374 — Intrusion 07 Max Intrusion Y-axis	00 cm	0 cm or No Intrusion	more
V1375 — Intrusion 07 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1376 — Intrusion 07 Occupant Number	00	No contact or no intrusion	more
V1377 — Intrusion 07 Injury Number	00	No injury or no intrusion	more
V1378 — Intrusion 07 Occupant Number	00	No contact or no intrusion	more
V1379 — Intrusion 07 Injury Number	99	Contact, injury unknown or data not collected	more
V1380 — Intrusion Number 08	00	No Intrusion, None	more
V1381 — Intrusion 08 Occupant Space Number	00	No Intrusion, None	more
V1382 — Intrusion 08 Intruding	00		

Object		No Intrusion, None	more
V1383 — Intrusion 08 Assoc Event Number	0	No Intrusion, None	more
V1384 — Intrusion 08 Max Intrusion X-axis	00 cm	0 cm or No Intrusion	more
V1385 — Intrusion 08 Max Intrusion Y-axis	00 cm	0 cm or No Intrusion	more
V1386 — Intrusion 08 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1387 — Intrusion 08 Occupant Number	00	No contact or no intrusion	more
V1388 — Intrusion 08 Injury Number	00	No injury or no intrusion	more
V1389 — Intrusion 08 Occupant Number	00	No contact or no intrusion	more
V1390 — Intrusion 08 Injury Number	99	Contact, injury unknown or data not collected	more
V1391 — Intrusion Number 09	00	No Intrusion, None	more
V1392 — Intrusion 09 Occupant Space Number	00	No Intrusion, None	more
V1393 — Intrusion 09 Intruding Object	00	No Intrusion, None	more
V1394 — Intrusion 09 Assoc Event Number	0	No Intrusion, None	more
V1395 — Intrusion 09 Max Intrusion X-axis	00 cm	0 cm or No Intrusion	more
V1396 — Intrusion 09 Max Intrusion Y-axis	00 cm	0 cm or No Intrusion	more
V1397 — Intrusion 09 Max Intrusion Z-axis	00 cm	0 cm or No Intrusion	more
V1398 — Intrusion 09 Occupant Number	00	No contact or no intrusion	more
V1399 — Intrusion 09 Injury Number	00	No injury or no intrusion	more

Driver Airbag



Driver Airbag Doors

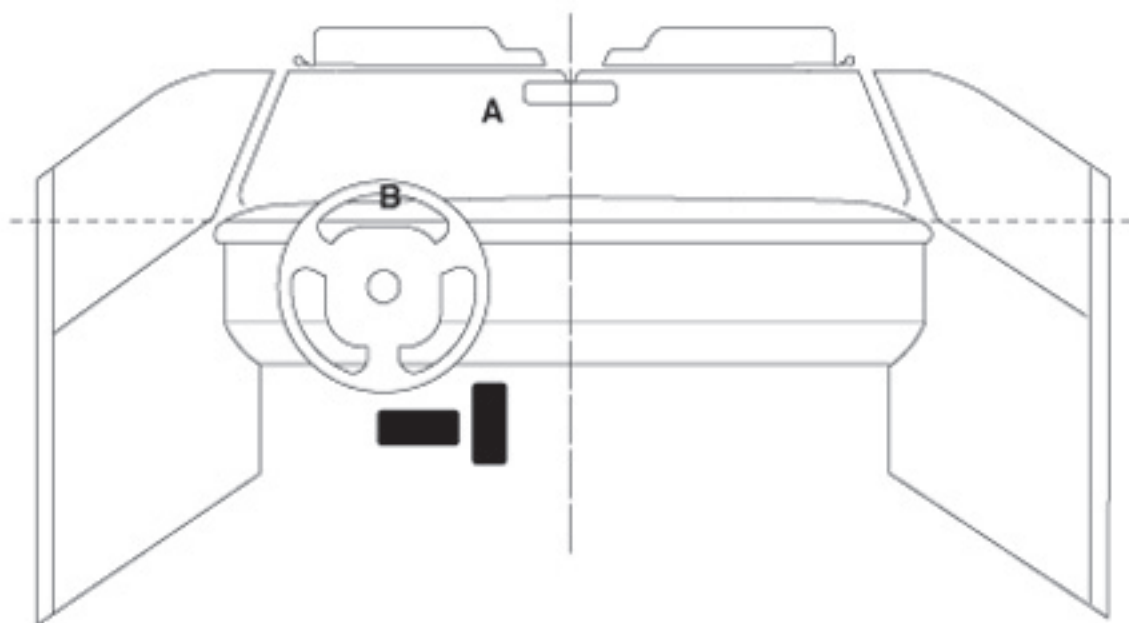
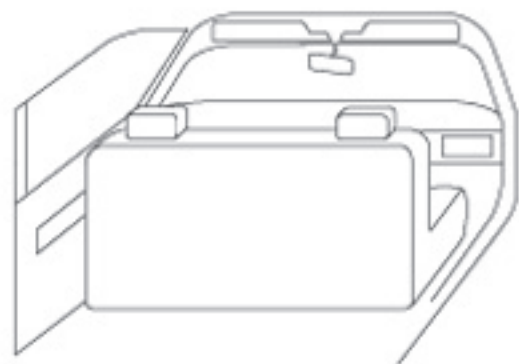
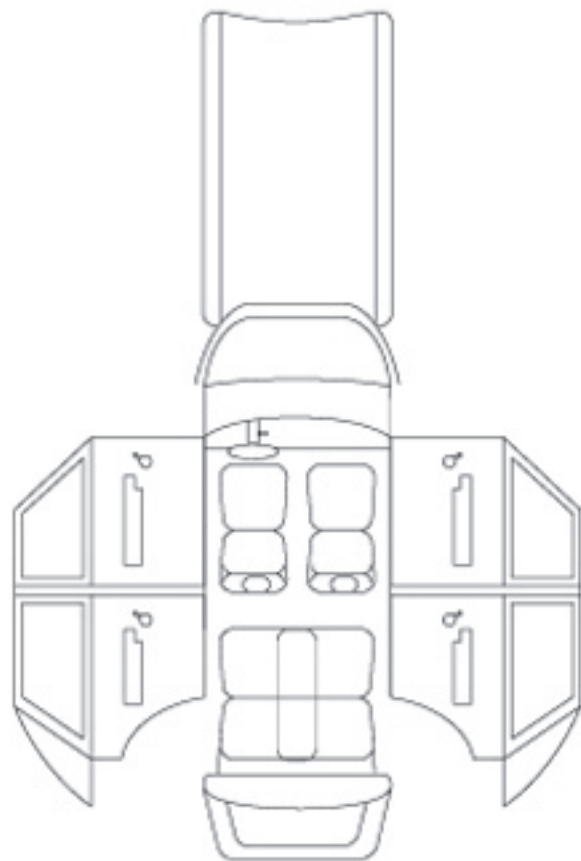


Vents: Y N

if yes, how many: 2

Tethers: Y N

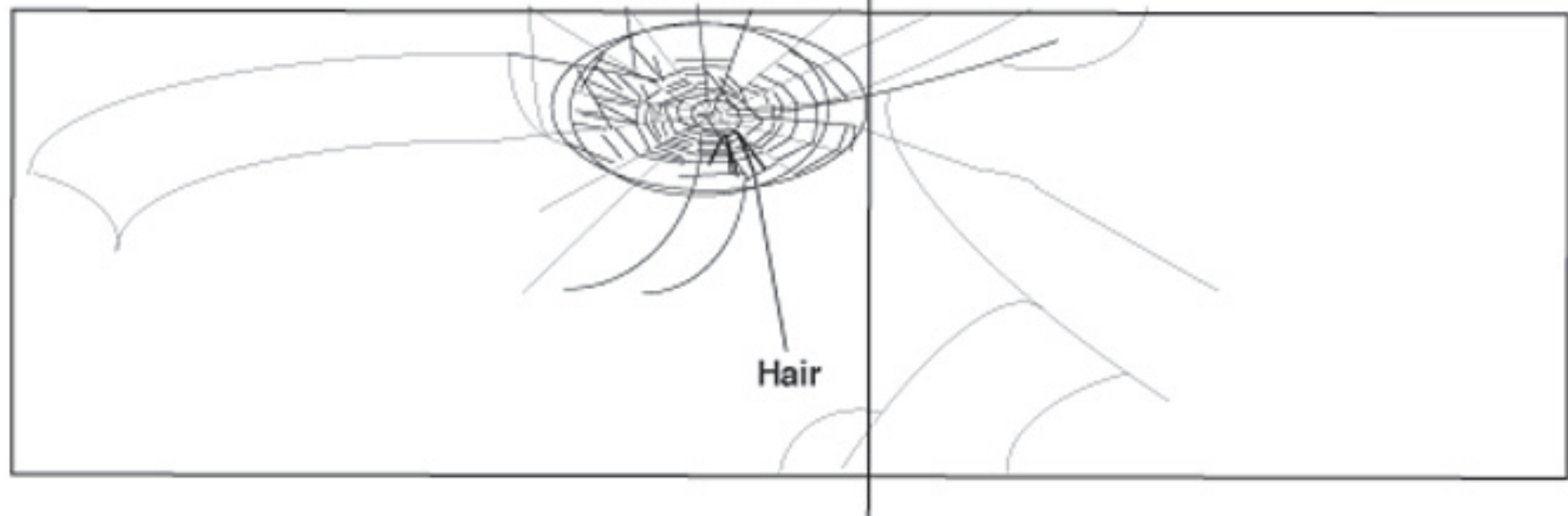
if yes, how many: 4



A = Spider-web crack with hair

B = Steering wheel deformed

Driver contact



Hair

WINDSHIELD MARK ON CASE VEHICLE:

SHADED
SOLAR-RAY

SAFETY



FLO-LITE

AS-1

C.

LAMINATED

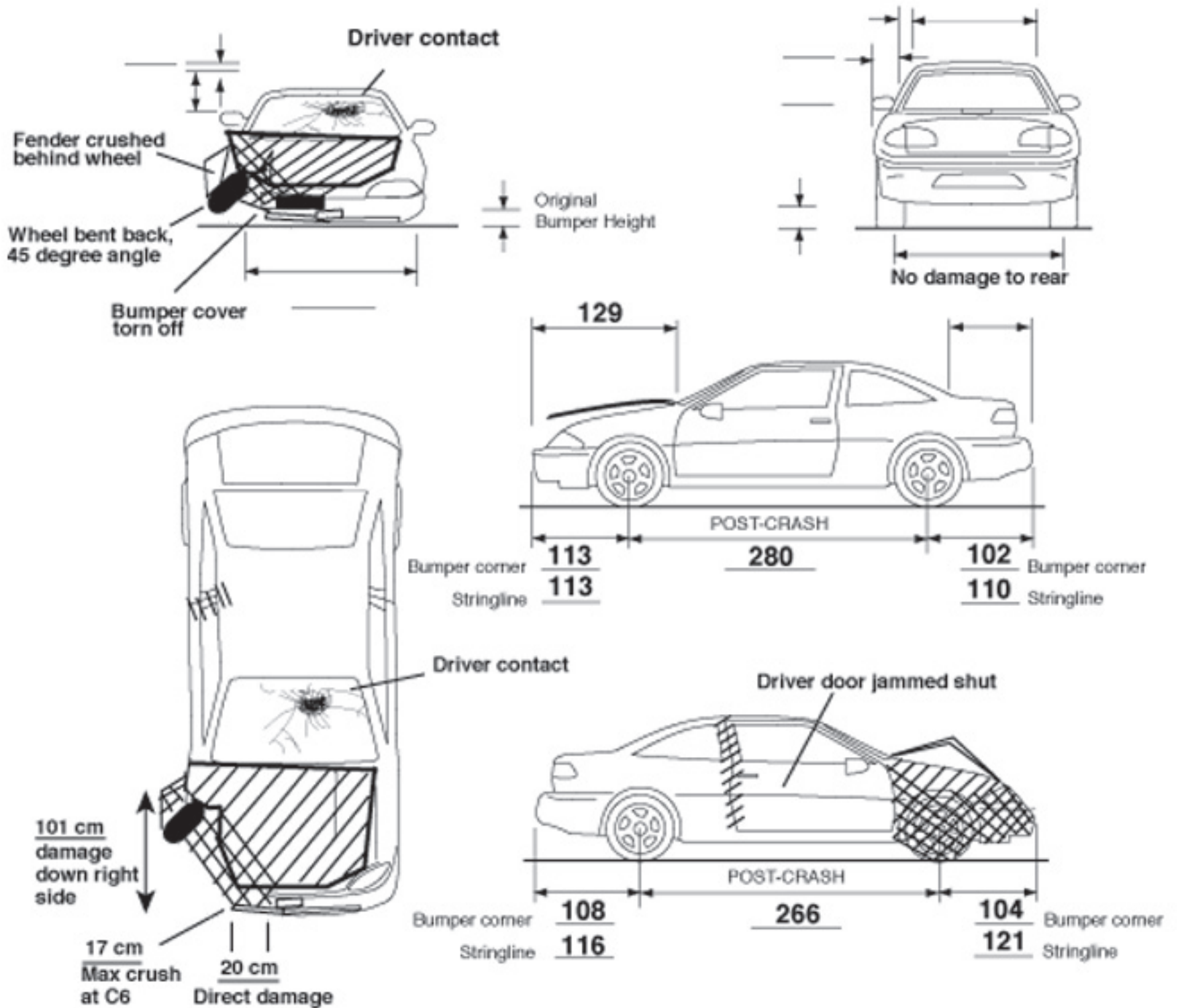
A

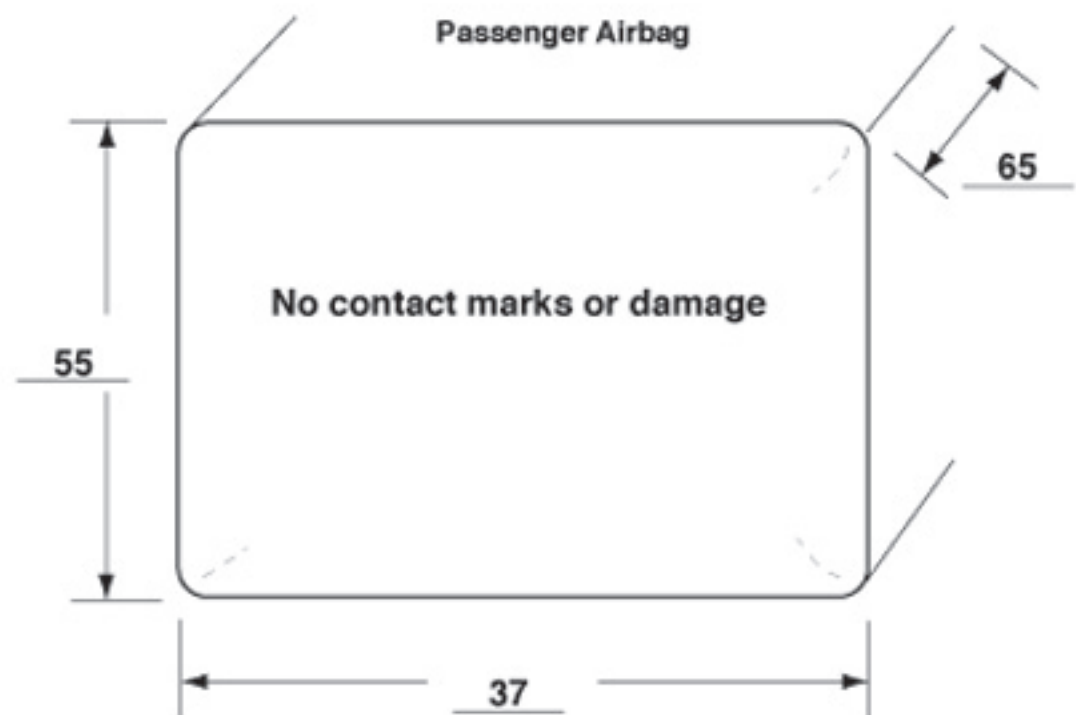
1

DOT15 M10

MADE IN CANADA

MEASUREMENTS IN CENTIMETERS





Passenger Airbag Door

Single Door



Vents: Y N
if yes, how many: 2

Tethers: Y N
if yes, how many: 1



































WARNING
DO NOT REMOVE THIS LABEL FROM THE WINDSHIELD. IT CONTAINS IMPORTANT INFORMATION REGARDING THE PROPER USE OF THE AIR BAGS AND SEATBELTS. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN DEATH OR SERIOUS INJURY.
AIR BAGS
Always use proper tie-up technique. Always use proper tie-down technique. Always use proper tie-down technique. Always use proper tie-down technique.
SEATBELTS
Always use proper tie-up technique. Always use proper tie-down technique. Always use proper tie-down technique. Always use proper tie-down technique.











Hoosier

Malibu



7.0L VLT
V6











































F-150

FORD GTC





on GTC

F-350
SUPER DUTY











