400 Seventh Street, S.W.
Washington, D.C. 20590

U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

Dear Crash Data Researchers/Users:

Thank you for choosing crash data from the National Highway Traffic Safety Administration (NHTSA) for your research or other use. The information contained in this motor vehicle crash report is collected, maintained and distributed in accordance with Public Law 89-564. In accordance with this Public Law, NHTSA is required not to release any case information until completion of quality control procedures. These procedures include a review of the case material to extract all names, licenses and registration numbers, non-coded interview material, non-research related researcher comments in the margins, non-factual data, and the production number portion of the vehicle identification number (VIN).

If you requested NHTSA to query its database files in order to identify a specific crash, then that query was made using non-personal descriptors you provided for use in our search. This motor vehicle crash may have been identified from a data search and matches the general, non-personal descriptors you provided, but we cannot confirm that this is the specific crash report you requested.

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*** *** ***

TRANSPORTATION SCIENCES CENTER
ACCIDENT RESEARCH GROUP

Division of Arvin/Calspan
[redacted]

CALSPAN ON-SITE AIR BAG NON-DEPLOYMENT INVESTIGATION
CALSPAN CASE NO. 93-6
VEHICLE - POLICE 1991 CHEVROLET CAPRICE
LOCATION - [redacted] NY
ACCIDENT DATE - [redacted] 1993

Contract No. DTNH22-93-P-07222

Prepared for:

U.S. Department of Transportation
National Highway Traffic Safety Administration
Washington, D.C. 20590

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The crash investigation process is an inexact science which requires that physical evidence such as skid marks, vehicular damage measurements, and occupant contact points are coupled with the investigator's expert knowledge and experience of vehicle dynamics and occupant kinematics in order to determine the pre-crash, crash, and post-crash movements of involved vehicles and occupants.

Because each crash is a unique sequence of events, generalized conclusions cannot be made concerning the crashworthiness performance of the involved vehicle(s) or their safety systems.

TECHNICAL REPORT STANDARD TITLE PAGE

1. *Report No.* 93-6	2. *Government Accession No.*	3. *Recipient's Catalog No.*
4. *Title and Subtitle* Calspan On-Site Air Bag Non-Deployment Investigation Vehicle - Police 1991 Chevrolet Caprice Location [redacted], NY		5. *Report Date*: [redacted]1993 6. *Performing Organization Code*
7. *Author(s)* Accident Research Group		8. *Performing Organization Report No.*
9. *Performing Organization Name and Address* Transportation Sciences Center Accident Research Group Division of Arvin/Calspan [redacted]		10. *Work Unit No.* [redacted] 11. *Contract or Grant No.* DTNH22-93-P-07222
12. *Sponsoring Agency Name and Address* U.S. Department of Transportation National Highway Traffic Safety Administration Washington, D.C. 20590		13. *Type of Report and Period Covered* Technical Report Accident Date [redacted]/93 14. *Sponsoring Agency Code*

15. *Supplementary Notes*
On-site investigation of a moderate frontal crash sequence that involved a police 1991 Chevrolet Caprice equipped with a driver's side air bag system. The vehicle sustained a 23 KPH (14 mph) ΔV, therefore, the air bag system did not deploy.

16. *Abstract*

This on-site investigation focused on a police 1991 Chevrolet Caprice that was equipped with a driver's side air bag Supplemental Inflatable Restraint (SIR) system. The vehicle was involved in an initial sideswipe type collision with a 1987 Chevrolet Celebrity station wagon following a pursuit that covered several miles of an urban roadway. The police vehicle was subsequently deflected to its left where it departed the roadway and impacted a 14cm (5.5") diameter pedestrian signal support pole. The center frontal area of the Chevrolet Caprice impacted the non-breakaway pole at a CRASHPC generated speed of 23 KPH (14 mph). As a result of the crash, the front bumper of the Caprice crushed to a maximum depth of 48cm (18.8") which yielded a CRASHPC generated velocity change of 23 KPH (14 mph). The velocity change was below the required threshold for deployment of the SIR and therefore, the system did not deploy.

The driver of the police vehicle was a 39 year old male with a height of 172.7cm (68") and weight of 70kg (155 lbs.). He was not wearing the manual 3-point lap and shoulder belt system. The driver responded to the 12 o'clock impact force from the pole impact sequence and impacted the steering wheel rim and the windshield header. As a result of the contacts, the driver sustained a contusion of the anterior scalp (AIS-1) and a whiplash injury of the neck (AIS-1). These injuries probably would have been prevented had the driver worn the manual 3-point belt system.

17. *Key Words* Supplemental Inflatable Restraint (SIR) Moderate frontal impact sequence ΔV of 23 KPH (14 mph) Non-deployment	18. *Distribution Statement* General Public		
19. *Security Classif. (of this report)* Unclassified	20. *Security Classif. (of this page)* Unclassified	21. *No. of Pages* 61	22. *Price*

TABLE OF CONTENTS

CALSPAN ON-SITE AIR BAG NON-DEPLOYMENT INVESTIGATION
CALSPAN CASE NO. 93-6
VEHICLE - POLICE 1991 CHEVROLET CAPRICE
LOCATION [redacted], NY

SUMMARY

This on-site investigation focused on a two vehicle crash with a subsequent impact with a pedestrian signal support pole. The crash occurred on a four-leg oblique intersection in [redacted], NY, on [redacted] 1993 during evening hours. The involved vehicles were a marked police 1991 Chevrolet Caprice and a 1987 Chevrolet Celebrity station wagon. The Chevrolet Caprice was equipped with a driver's side air bag Supplemental Inflatable Restraint (SIR) system. The vehicle's air bag system did not deploy as a result of a frontal impact sequence with the non-breakaway pedestrian signal support pole.

The Chevrolet Caprice was a factory equipped police vehicle with a 5.7 liter, V-8 engine and a four-speed automatic overdrive transmission. In addition to the standard police package equipment which included the emergency lights wiring harnesses, transmission and engine oil coolers, etc., the Chevrolet Caprice had anti-lock (ABS) brakes, power windows, and a six-way power driver's seat. The vehicle had been in service by the police department for approximately two years and had an odometer reading of 132,967km (82,588.1 miles). The Caprice was not involved in previous collisions and had no history of extensive mechanical repairs. The department has implemented a detailed routine maintenance program which has significantly reduced the frequency of major repairs (i.e., drive train components). The Caprice was manufactured during [redacted], 1991, and was identified by the following vehicle identification number: [redacted].

The 1991 Chevrolet Caprice was driven by a 39 year old male police officer with a stated height of 172.7cm (68") and weight of 69.8kg (155 lbs.). While on routine patrol, he initiated the pursuit of a 1987 Chevrolet Celebrity station wagon on a four lane urban roadway with moderate to heavy traffic flow. The officer stated that the initial pursuit involved speeds of approximately 96 KPH (60 mph), however, as they continued, speeds declined to a maximum of 64 KPH (40 mph). The driver of the Celebrity station wagon proceeded through red signal phases at four or five consecutive intersections. The officer stated that the driver of the Celebrity slowed and proceeded cautiously through the intersections. As they approached the four-leg oblique intersection, the driver of the Celebrity slowed and entered the intersection in the outboard curb lane and against a red signal phase. He initially intended to proceed straight through the intersection, however, as he began to cross the intersecting roadway, the driver of the Celebrity initiated a rapid left turn maneuver. The Chevrolet Caprice was directly behind and to the left of the Celebrity on the inboard travel lane as the vehicles entered the intersection. As the Celebrity initiated the left turn across the Caprice's path of travel, the police officer applied a full braking force and braced against the steering wheel for the impending crash. He stated that he felt the brake pedal pulsate as the anti-lock brakes activated prior to impact.

The right front corner area of the Chevrolet Caprice impacted the left side area of the Celebrity resulting in a sideswipe type collision. Direct contact damage on the Caprice began at the corner of the bumper facia and extended 23.5cm (9.25") inboard. The direct contact damage also extended on the right side surface of bumper facia and onto the right front fender ending at a point that was 32.4cm (12.75") rearward of the leading edge of the fender. The damage from the initial impact sequence with the Celebrity also extended vertically onto the leading edge of the hood. A small gouge was noted to the hood face that was located 10-15cm (4-6") inboard of the right edge. Although the subsequent pole impact deformed the entire frontal area of the Caprice, there was no residual crush to the bumper of the vehicle, therefore, the velocity change was minimal [$\leq$ 8 KPH (5 mph)] and the SIR would not have deployed. The driver of the Caprice was not displaced or injured as a result of the vehicle-to-vehicle impact.

As a result of the crash, the Caprice was deflected in a counterclockwise direction toward the northeast quadrant of the intersection. The vehicle subsequently departed the roadway and mounted a 12.7cm (5") high barrier curb in a tracking mode. There was no damage to the vehicle from contact with the curb. The center frontal area of the Caprice impacted a 14cm (5.5") diameter pedestrian signal support pole that was located 14.2m (46'9") north of the NE tangent point of the intersection and 1.6m (5'3") outboard of the curbline. Impact speed was computed at 23 KPH (14 mph) by the damage and trajectory mode of the CRASHPC program.

The pole impact damage began on the bumper facia 5.7cm (2.25") right of center and extended 10.2cm (4") laterally to the right. The direct contact damage also extended vertically onto the hood face which began 7cm (2.75") right of center and extended 16cm (6.25") to the right. Maximum crush was 47.8cm (18.8") and was located on the bumper facia 20cm (7.75") right of center and was inboard of the right frame rail. Crush values at bumper level were as follows: $C_1 = 0$, $C_2 = 4.6$cm (1.8"), $C_3 = 20$cm (7.75"), $C_4 = 35.6$cm (14.0"), $C_5 = 17.8$cm (7.0"), $C_6 = 0$. The Caprice underwent a CRASHPC generated velocity change of 23 KPH (14 mph) as a result of the 12 o'clock direction of force impact. The small diameter non-breakaway pole was dented and deflected slightly by the impact. The impact induced deceleration was below the required threshold of 26 KPH (16 mph) necessary for deployment of the SIR.

The driver of the Chevrolet Caprice was not wearing the manual 3-point lap and shoulder belt system in the patrol vehicle due to the poor fit around his equipment belt and his frequent exits from the vehicle. The driver stated that he drove the vehicle with the seat track adjusted to a rearward position and the seat back set to a near vertical position. In addition, the driver used a lumbar support cushion to prevent aggravation of a previous lower back injury. At impact with the pedestrian signal support pole, the unrestrained driver attempted to brace against the steering wheel and initiated a forward trajectory and loaded the steering assembly with his chest. As a result of the thoracic loading, he deformed the upper rim 6.4mm (0.25") forward. There was no compression of the energy absorbing steering column. His attempted bracing action and subsequent contact with the steering wheel produced soreness across both posterior shoulder areas. His head continued forward and impacted the windshield header area which resulted in a contusion to the anterior scalp, directly above the hairline (AIS-1). The impact force and head contact also produced a minor whiplash to the lower cervical spine area (AIS-1). The driver stated that he had a history of neck and lower back injuries and that the crash aggravated both areas. He rebounded into the left front seat back where he came to rest.

The driver of the Caprice immediately exited the vehicle to check the condition of the driver of the Celebrity and to apprehend him. The driver was subsequently transported by ambulance to a local hospital where he was examined for injury and released. As a result of the crash, he missed one working day before reporting back to duty.

The front mounted discriminating crash sensors on the Caprice were visually inspected for damage. The sensors were found to be intact and free of damage and rotation from crash forces. The SIR diagnostic (DERM) were tested using the instrument panel mounted indicator lamp. Although the positive battery cable had been cut by emergency personnel at the crash scene, the cable was temporarily spliced to transmit power into the SIR. With the ignition switch turned to the run position, the SIR indicator lamp flashed a sequence of seven then remained out, indicating that the SIR system was operational. This sequence was repeated numerous times which yielded the same results.

The driver of the Chevrolet Caprice sustained minor injuries as a result of this moderate severity crush. These injuries could have been mitigated had the driver worn the manual 3-point lap and shoulder belt system.

SELECTED PRINTS

On-scene photograph of the Chevrolet Caprice at final rest

Pre-crash trajectory of the vehicles

Vehicle #2 initiates a left turn at the four-leg oblique intersection

Area of impact between the vehicles

Struck pedestrian signal support pole

Lookback view of the vehicle's trajectories

Frontal view of the Chevrolet Caprice

Pedestrian signal pole damage to the Caprice

Overhead view of the pole impact damage to the bumper and radiator support panel

Left front three-quarter view

Right front three-quarter view and initial impact damage to the right front corner area

Right side view

Right front air bag crash sensor mounted to the radiator support panel behind the headlamp assembly

Left front air bag crash sensor mounted to the radiator support panel behind the headlamp assembly

Overall view of the driver's seated position

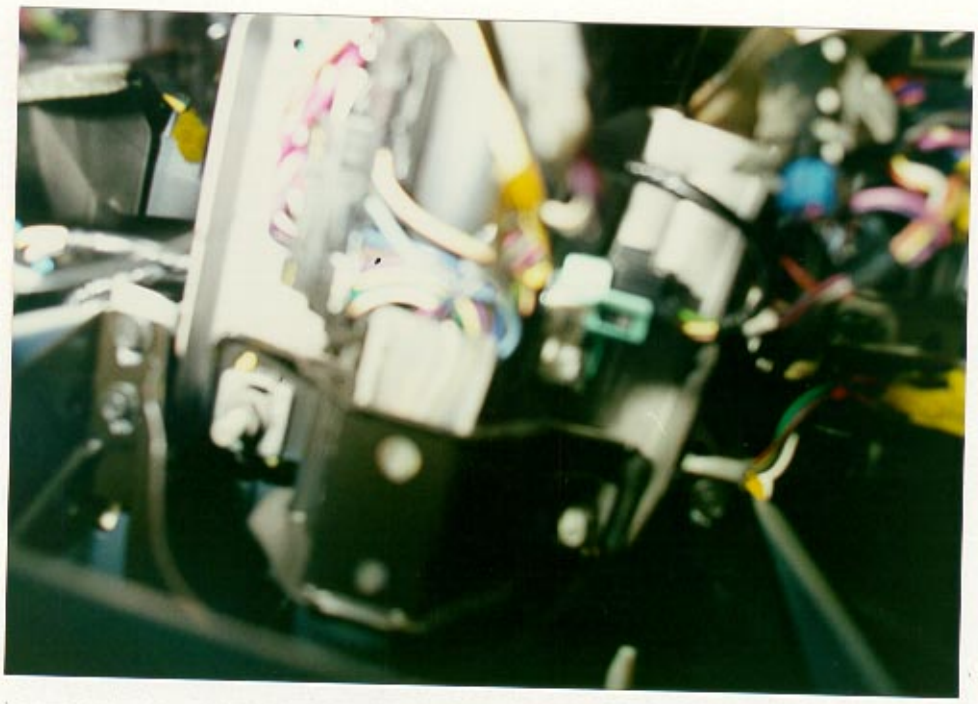
Steering and air bag module assembly

Knee bolster, no evidence of contact

Driver's seat and manual 3-point lap and shoulder belt system (not worn)

Perpendicular views across the interior of the Chevrolet Caprice

Perpendicular view of the steering wheel rim, 6.4mm (0.25") of upper rim displacement



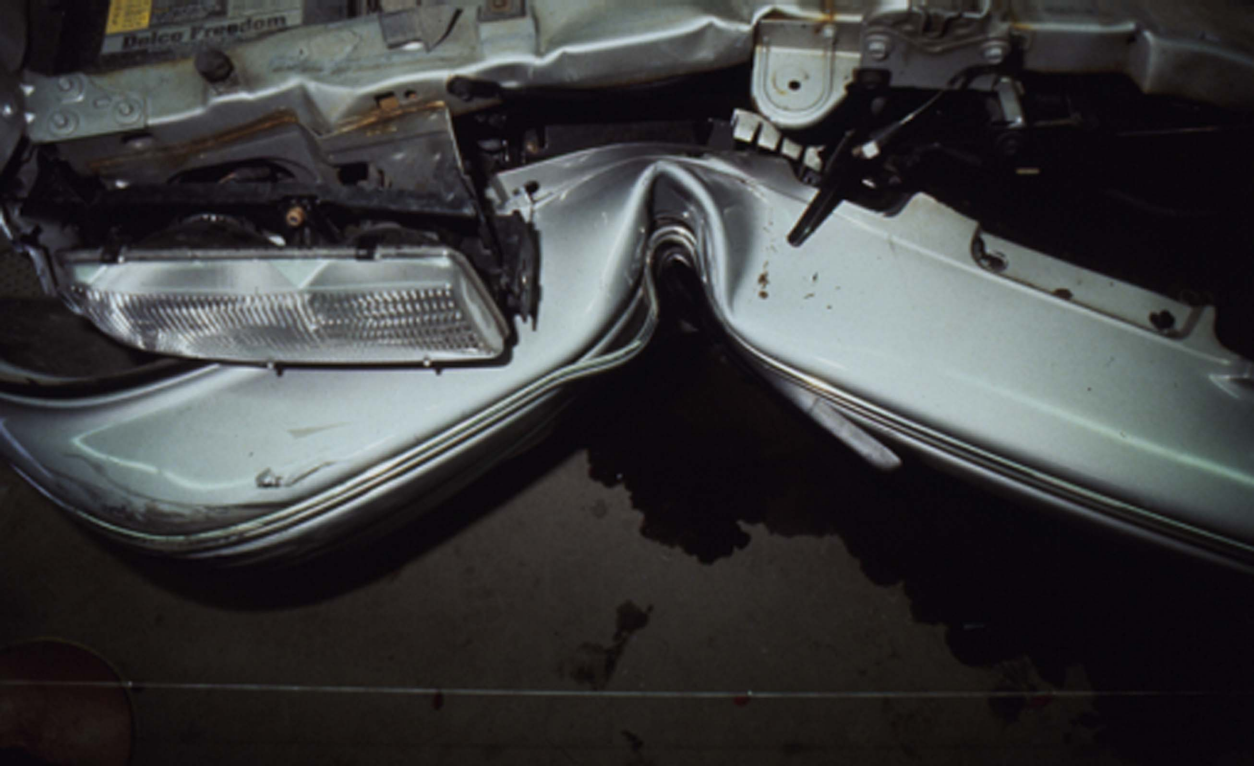
Steering column shear capsules, no compression

SIR information label on left sunvisor

SLIDE INDEX

Slide No.	Description
1,2	Pre-crash trajectories of the vehicles
3	Celebrity initiates a rapid left turn at intersection
4	Impact induced deflection of the Caprice
5	Struck pedestrian signal support pole
6	Frontal view of the Caprice
7	Initial impact damage
8	Overhead view of the pole impact damage
9	Left front three-quarter view
10,11	Perpendicular views showing the extent of frontal crush
12	Left rear three-quarter view
13	Right side view
14	Right front three-quarter view
15	Perpendicular view showing the extent of crush from the right front corner area
16	Overall interior view
17	Perpendicular view of the driver's seated position
18	Perpendicular view of the steering wheel rim
19	Flash sequence of the SIR indicator lamp
20	Overall interior view from the right door area


FORD


Delco Freedom

MAX
OFF
FUEL

ATTACHMENT A

Police Accident Report

[redacted] 93 13:44 BEST AVAILABLE COPY [redacted] P.2/4

New York State Department of Motor Vehicles

POLICE ACCIDENT REPORT

MV-104A (2/91) DMV COPY

Page 01 of 02 Pages

Local Codes [redacted]

Accident Date	Day of Week	Time	No. of Vehicles	No. Injured	No. Killed	Non-Highway	Not Investigated at Scene	Left Scene	Police Photos
[redacted] 93	[redacted]	[redacted] ☐AM ☐PM	02	01	00	☐	☐	☐	☑Yes ☐No

VEHICLE 1

Name — exactly as printed on license: [redacted]

Number and Street: [redacted]

City: [redacted] State: [redacted] Zip Code: [redacted]

Date of Birth	Sex	Unlicensed	No. of Occup.	Public Property Damaged	State of License
[redacted]	M	☐	01	☐	N.Y.

Name — exactly as printed on registration: [redacted] Date of Birth: [redacted]

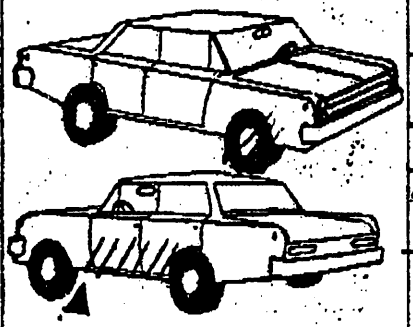
Number and Street: [redacted] Hazardous Material Code:

City: [redacted] State: [redacted] Zip Code: [redacted]

Plate Number	State of Reg.	Yr. & Vehicle Make	Vehicle Type	Ins. Code
[redacted]	N.Y.	1987 Chevr.	SUBN	[redacted]

Check if involved vehicle:
☐ is more than 95 inches wide;
☐ is more than 34 feet long;
☐ was operated with an overweight permit;
☐ was operated with an overdimension permit

VEHICLE 1 DAMAGE



☐ No Damage ☐ Undercarriage

Vehicle Towed By [redacted] Auto To (Garage)

VEHICLE 2

☐ BICYCLIST ☐ PEDESTRIAN

Name — exactly as printed on license: [redacted]

Number and Street: [redacted]

City: [redacted] State: [redacted] Zip Code: [redacted]

Date of Birth	Sex	Unlicensed	No. of Occup.	Public Property Damaged	State of License
[redacted]	M	☐	01	☐	N.Y.

Name — exactly as printed on registration: Town of [redacted] Police Dept. Date of Birth:

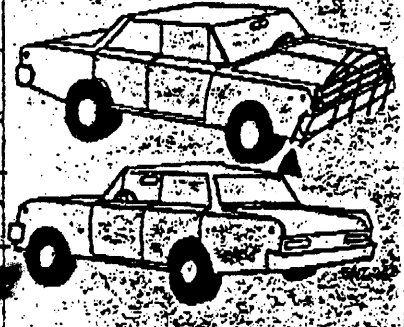
Number and Street: [redacted] Hazardous Material Code:

City: [redacted] State: [redacted] Zip Code: [redacted]

Plate Number	State of Reg.	Yr. & Vehicle Make	Vehicle Type	Ins. Code
[redacted]	—	1991 Chev.	VAN	[redacted]

Check if involved vehicle:
☐ is more than 95 inches wide;
☐ is more than 34 feet long;
☐ was operated with an overweight permit;
☐ was operated with an overdimension permit

VEHICLE 2 DAMAGE



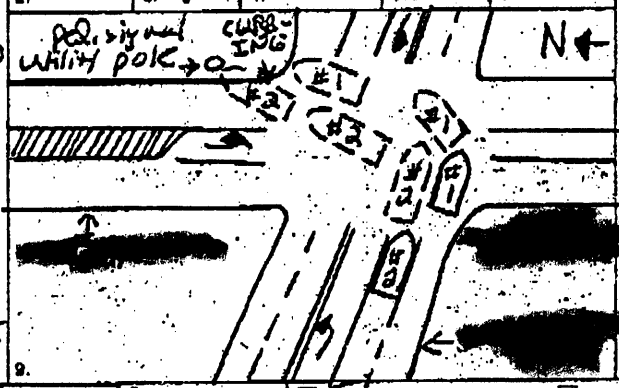
☐ No Damage ☑ Undercarriage

Vehicle Towed By [redacted] Auto To (Garage)

ACCIDENT DIAGRAM

Rear End 1. | Left Turn 3. | Right Angle | Right Turn 5. | Head On 7.

Overtaking 2. | Left Turn 0. | 4. | Right Turn 6. | Sideswipe 8.



Reference Marker	DMV USE ONLY

County Onon. ☑ City [redacted] ☐ Town ☐ Village

Route No. and Street Name: [redacted]

on [redacted] ☐ Miles ☐ Feet ☐ N ☐ S ☐ E ☐ W of ☑ At Intersection with [redacted] St.

Nearest Intersecting Route/Street:

Ticket/Arrest ☐ Other
☑ Opr 1 ☐ Pedestrian
☐ Opr 2 ☐ Bicyclist

Ticket/Arrest Number(s): [redacted]

Violation Section(s): N.Y.S. VTL Sect. 1180 (E.), 1160 (B), 1128 (C.)

Accident Description/Officer's Notes: veh.#1 was travelling Eastbound on [redacted] St. going between the Eastbound Driving and Passing lane. veh.#2 was travelling Eastbound on [redacted] St. in the passing lane. veh.#2 a T/Laddock Police veh. had it's Emergency warning lights and siren in operation and was attempting to stop veh.#1, veh.#1 failed to yield to the police vehicle and was fleeing. At that time veh.#1 attempted to complete a right turn and moved into the path of veh.#2. veh.#2 struck veh.#1, veh.#1 then continued and struck curbing at the intersection. veh.#2 continued and struck a pedestrian crossing sign.

USE COVER SHEET H

	8	9	10	11	12	13	14	15	16	17 BY	TO 18	Names - If Deceased Give Date of Death
A	1	1	3	1	57	M	—	—	—	—	—	[redacted]
B	2	1	1.	1	39	M	4	12	6	[redacted]	[redacted]	[redacted]
C												
D												
E												
F												
G												

SIGN | Officer's Rank and Name [redacted] | Badge No. | Department | Precinct/Post Troop/Zone | Station/Beat/ Sector | Reviewing Officer | Date/Time Reviewed [redacted] 93

BEST AVAILABLE COPY

CHAIRS SUPPLEMENT NARRATIVE REPORT

CODE	NAME SAME AS (2) INVESTIGATION REPORT & ACCIDENT REPORT WHITE ...	DATE OF THIS REPORT	COMPLAINT NUMBER
(1) Acc	W. [redacted] St - W. [redacted] C/[redacted]	[redacted]/93	(3) 93[redacted]
(2) CONTINUATION SHEET / FOLLOW-UP	PAGE (2) OF (2)	FORWARD COPIES TO ... OTHER-STATE	INCIDENT P I A A

CODE

utility signal pole, located on the [redacted] corner of the intersection of [illegible] before coming to its final rest. Vehicle 1 came to its final rest on the curbing at the [redacted] corner of the intersection of W. [redacted] at W. [redacted] St.

Accident Info. exchanges were completed.

Witness: Pfc. S.B. [redacted] P.D. [redacted] w/ [redacted] Wm. [redacted]

A vehicle inventory form was completed on vehicle and is attached to this report.

No Reference Markers Available in the Area. [redacted]

OFFICER (5)	APPROVAL OFFICER	STATUS OF REPORT
Dep. [redacted]	[redacted]	CLOSED / TO CONTINUE / PENDING INVESTIGATION / OTHER (EXPLAIN IN NARRATIVE)

Cover G
cardboard

BEST AVAILABLE COPY

PEDESTRIAN/BICYCLIST LOCATION
1. Pedestrian/Bicyclist at Intersection
2. Pedestrian/Bicyclist Not at Intersection

1

PEDESTRIAN/BICYCLIST ACTION
1. Crossing, With Signal
2. Crossing, Against Signal
3. Crossing, No Signal, Marked Crosswalk
4. Crossing, No Signal or Crosswalk
5. Riding/Walking Along Highway With Traffic
6. Riding/Walking Along Highway Against Traffic
7. Emerging from in Front of/Behind Parked Vehicle
8. Going To/From Stopped School Bus
9. Getting On/Off Vehicle Other Than School Bus
10. Pushing/Working On Car
11. Working in Roadway
12. Playing in Roadway *
13. Other Actions in Roadway *
14. Not in Roadway (Indicate) *

2

TRAFFIC CONTROL
1. None
2. Traffic Signal
3. Stop Sign
4. Flashing Light
5. Yield Sign
6. Officer/Guard
7. No Passing Zone
8. RR Crossing Sign
9. RR Crossing Flashing Lt.
10. RR Crossing Gates
11. Stopped School Bus-Red Lights Flashing
12. Construction Work Area
13. Maintenance Work Area
14. Utility Work Area
20. Other *

3

LIGHT CONDITIONS
1. Daylight
2. Dawn
3. Dusk
4. Dark-Road Lighted
5. Dark-Road Unlighted

4

ROADWAY CHARACTER
1. Straight and Level
2. Straight and Grade
3. Straight at Hillcrest
4. Curve and Level
5. Curve and Grade
6. Curve at Hillcrest

5

ROADWAY SURFACE CONDITION
1. Dry
2. Wet
3. Muddy
4. Snow/Ice
5. Slush
0. Other *

6

WEATHER
1. Clear
2. Cloudy
3. Rain
4. Snow
5. Sleet/Hail/Freezing Rain
6. Fog/Smog/Smoke
0. Other *

7

WHICH VEHICLE OCCUPIED
1. Vehicle No. 1 B. Bicyclist O. Other *
2. Vehicle No. 2 P. Pedestrian

POSITION IN/ON VEHICLE
1. Driver 2-7. Passengers
8. Riding/Hanging on Outside

SAFETY EQUIPMENT USED
1. None
2. Lap Belt
3. Harness
4. Lap Belt/Harness
5. Child Restraint Only
6. Helmet
7. Air Bag Only
8. Air Bag/Lap Belt
9. Air Bag/Harness
A. Air Bag/Lap Belt/Harness
B. Air Bag/Child Restraint
0. Other *

8 1 2 3 8 4 5 6 7 8

8 9 10

EJECTION FROM VEHICLE
1. Not Ejected
2. Partially Ejected
3. Ejected

AGE | SEX M/F

11 12 13

APPARENT CONTRIBUTING FACTORS

HUMAN
2. Alcohol Involvement
3. Backing Unsafely *
4. Driver Inattention (Indicate) *
5. Driver Inexperience (Indicate) *
6. Drugs (Illegal)
7. Failure to Yield Right-of-Way
8. Fell Asleep
9. Following Too Closely
10. Illness
11. Lost Consciousness
12. Passenger Distraction
13. Passing or Lane Usage Improper
14. Pedestrian's/Bicyclist's Error/Confusion
15. Physical Disability
16. Prescription Medication
17. Traffic Control Disregarded
18. Turning Improperly
19. Unsafe Speed
20. Unsafe Lane Changing
40. Other Human *

VEHICULAR
41. Accelerator Defective
42. Brakes Defective
43. Headlights Defective
44. Other Lighting Defects
45. Oversized Vehicle
46. Steering Failure
47. Tire Failure/Inadequate
48. Tow Hitch Defective
49. Windshield Inadequate
60. Other Vehicular *

ENVIRONMENTAL
61. Animal's Action
62. Glare
63. Lane Marking Improper/Inadequate
64. Obstruction/Debris
65. Pavement Defective
66. Pavement Slippery
67. Shoulders Defective/Improper
68. Traffic Control Device Improper/Non-Working
69. View Obstructed/Limited
80. Other Environmental *

Vehicle 1 1
Vehicle 1 2
Vehicle 2 2
Vehicle 2 2

DIRECTION OF TRAVEL

N NE E SE S SW W NW
1 2 3 4 5 6 7 8

Vehicle 1 2
Vehicle 2 2

New York State
Department of Motor Vehicles

POLICE ACCIDENT REPORT

MV-104A (2/91)

* EXPLAIN IN ACCIDENT DESCRIPTION

If a question DOES NOT APPLY, enter a dash (—).

If an answer is UNKNOWN, enter an "X"

PRE-ACCIDENT VEHICLE ACTION
1. Going Straight Ahead
2. Making Right Turn
16. Making Right Turn on Red
3. Making Left Turn
17. Making Left Turn on Red
4. Making U Turn
5. Starting from Parking
6. Starting in Traffic
7. Slowing or Stopping
8. Stopped in Traffic
9. Entering Parked Position
10. Parked
11. Avoiding Object in Roadway
12. Changing Lanes
13. Overtaking
14. Merging
15. Backing
20. Other *

Vehicle 1
Vehicle 2

LOCATION OF FIRST EVENT
1. On Roadway
2. Off Roadway

LOCATION OF MOST SEVERE PHYSICAL COMPLAINT
1. Head
2. Face
3. Eye
4. Neck
5. Chest
6. Back
7. Shoulder-Upper Arm
8. Elbow-Lower Arm-Hand
9. Abdomen - Pelvis
10. Hip-Upper Leg
11. Knee-Lower Leg-Foot
12. Entire Body

TYPE OF PHYSICAL COMPLAINT
1. Amputation
2. Concussion
3. Internal
4. Minor Bleeding
5. Severe Bleeding
6. Minor Burn
7. Moderate Burn
8. Severe Burn
9. Fracture - Dislocation
10. Contusion - Bruise
11. Abrasion
12. Complaint of Pain
13. None Visible

14

VICTIM'S PHYSICAL AND EMOTIONAL STATUS
1. Apparent Death
2. Unconscious
3. Semiconscious
4. Incoherent
5. Shock
6. Conscious

15

16

INJURED TAKEN
17 BY | TO 18

TYPE OF ACCIDENT
COLLISION WITH
1. Other Motor Vehicle
2. Pedestrian
3. Bicyclist
4. Animal
5. Railroad Train
10. Other Object (Not Fixed) *
COLLISION WITH FIXED OBJECT
11. Light Support/Utility Pole
12. Guide Rail
13. Crash Cushion
14. Sign Post
15. Tree
16. Building/Wall
17. Curbing
18. Fence
19. Bridge Structure
20. Culvert/Head Wall
21. Median/Barrier
22. Snow Embankment
23. Earth Embankment/Rock Cut/Ditch
24. Fire Hydrant *
30. Other Fixed Object
NON-COLLISION
31. Overturned
32. Fire/Explosion
33. Submersion
34. Ran Off Roadway Only
40. Other *

First Event

SECOND EVENT
Vehicle 1
Vehicle 2

CO
SHE

ATTACHMENT B

CRASHPC Output
(Damage and Trajectory Algorithm)

SUMMARY OF CRASHPC RESULTS USING DAMAGE

'93-6

	SPEED CHANGE (DAMAGE)	IMPACT SPEED (DAMAGE AND SPINOUT)
VEHICLE #1		
TOTAL	23 KPH (14 MPH)	23 KPH (14 MPH)
LONGITUDINAL	-23 KPH (-14 MPH)	23 KPH (14 MPH)
LATITUDINAL	0 KPH (0 MPH)	0 KPH (0 MPH)
PDOF ANGLE	0 DEGREES	
ENERGY DISSIPATED =	40341 JOULES (29750 FT-LB)	
VEHICLE #2		
TOTAL	0 KPH (0 MPH)	0 KPH (0 MPH)
LONGITUDINAL	0 KPH (0 MPH)	0 KPH (0 MPH)
LATITUDINAL	0 KPH (0 MPH)	0 KPH (0 MPH)
PDOF ANGLE	0 DEGREES	
ENERGY DISSIPATED =	0 JOULES (0 FT-LB)	

SCENE INFORMATION

	VEHICLE #1	VEHICLE #2
IMPACT X-POSITION	-2.5 M. (-8.3 FT.)	1.3 M. (4.2 FT.)
IMPACT Y-POSITION	-.2 M. (-.5 FT.)	.0 M. (.0 FT.)
IMPACT HEADING ANGLE	0 DEGREES	180 DEGREES
REST X-POSITION	-2.1 M. (-6.9 FT.)	1.3 M. (4.2 FT.)
REST Y-POSITION	-.2 M. (-.5 FT.)	.0 M. (.0 FT.)
REST HEADING ANGLE	0 DEGREES	180 DEGREES
SIDE-SLIP ANGLE	0 DEGREES	0 DEGREES
DIRECTION OF ROTATION	NONE	NONE
AMOUNT OF ROTATION	<360	<360

COLLISION AND SEPARATION

	VEHICLE #1	VEHICLE #2
COLLISION		
IMPACT X-POSITION	-2.5 M. (-8.3 FT.)	1.3 M. (4.2 FT.)
IMPACT Y-POSITION	-.2 M. (-.5 FT.)	.0 M. (.0 FT.)
IMPACT HEADING ANGLE	0 DEGREES	180 DEGREES
SEPARATION (USING SPINOUT)		
US	1 KPH (0 MPH)	0 KPH (0 MPH)
VS	0 KPH (0 MPH)	0 KPH (0 MPH)
PSISD	0 DEG/SEC	0 DEG/SEC

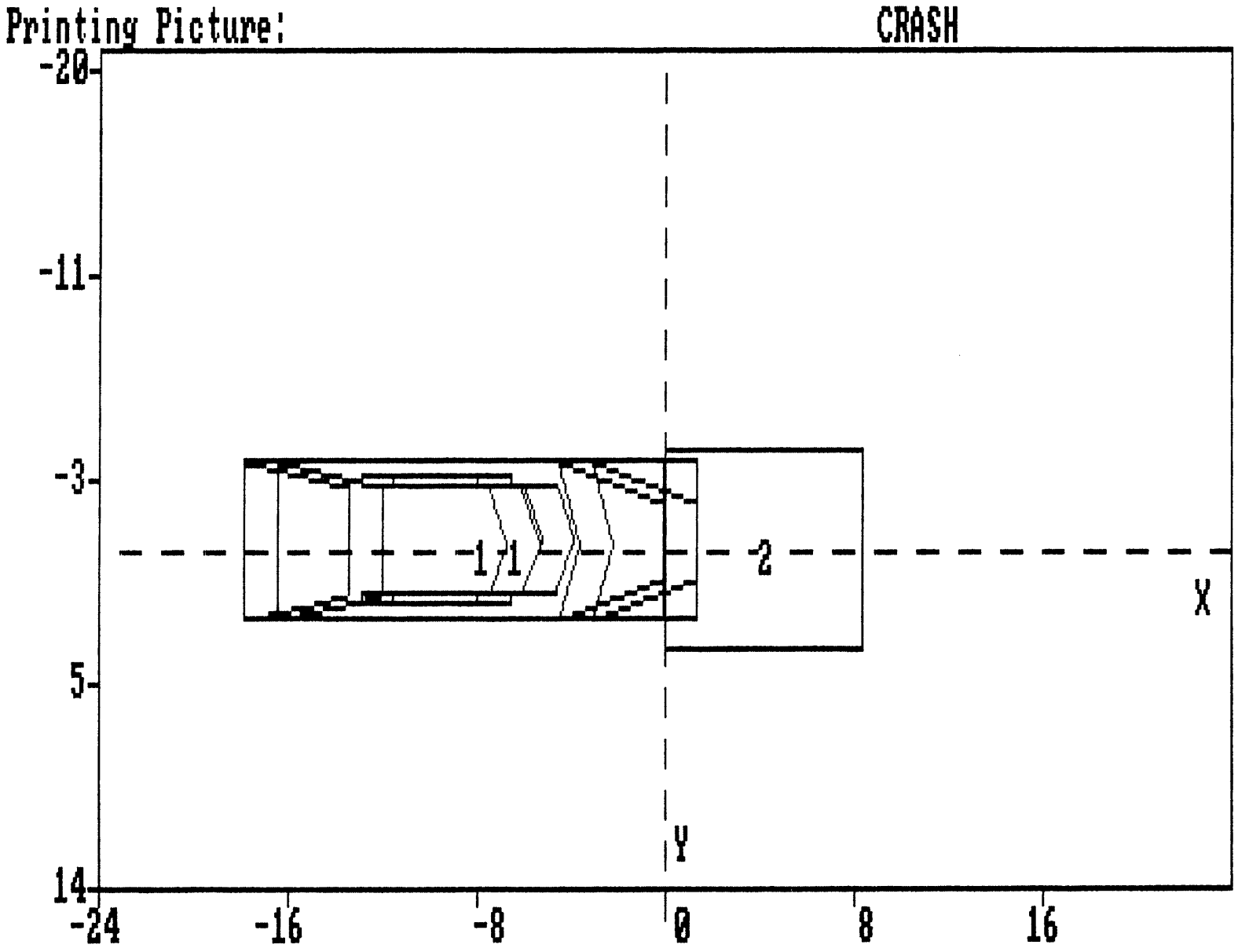
DAMAGE DATA

	VEHICLE #1	VEHICLE #2
SIZE CATEGORY	4	11
STIFFNESS CATEGORY	4	0
VEHICLE WEIGHT	1970 KGS (4342 LBS)	453600 KGS (1000000 LBS) *
CDC	12FCEN2	BARRIER
PDOF ANGLE	0 DEGREES	0 DEGREES *
CRUSH LENGTH	155 CM. (61 IN.)	0 CM. (0 IN.) *
C1	0 CM. (0 IN.)	0 CM. (0 IN.) *
C2	5 CM. (2 IN.)	0 CM. (0 IN.) *
C3	20 CM. (8 IN.)	0 CM. (0 IN.) *
C4	48 CM. (19 IN.)	0 CM. (0 IN.) *
C5	18 CM. (7 IN.)	0 CM. (0 IN.) *
C6	0 CM. (0 IN.)	0 CM. (0 IN.) *
D	10 CM. (4 IN.)	0 CM. (0 IN.) *
D'	21 CM. (8 IN.)	0 CM. (0 IN.) *

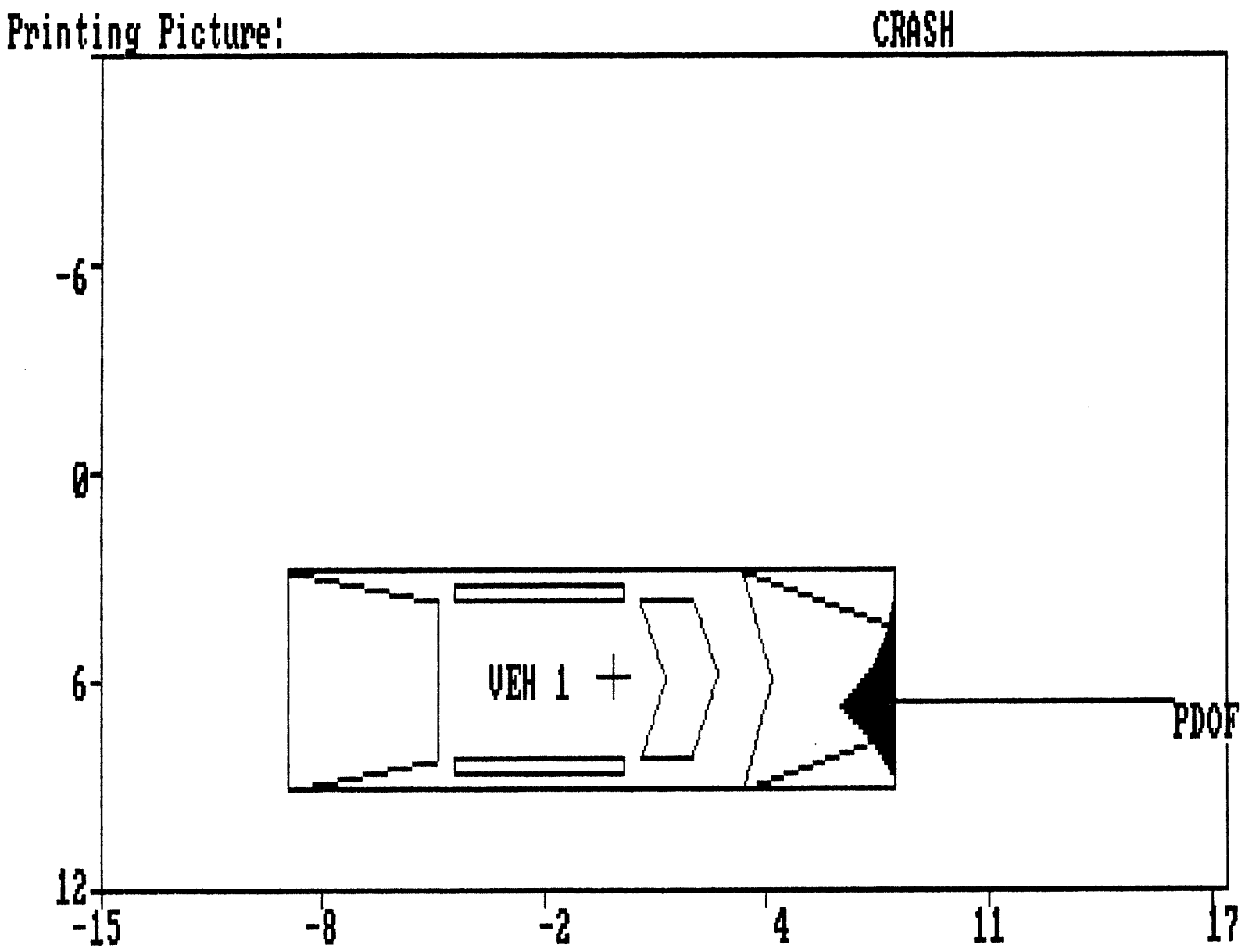
(* INDICATES DEFAULT VALUE)

DIMENSIONS AND INERTIAL PROPERTIES

	VEHICLE #1	VEHICLE #2
CG TO FRONT AXLE	139 CM. (55 IN.)	127 CM. (50 IN.)
CG TO REAR AXLE	150 CM. (59 IN.)	127 CM. (50 IN.)
TRACK	157 CM. (62 IN.)	127 CM. (50 IN.)
CG TO FRONT OF VEH	251 CM. (99 IN.)	127 CM. (50 IN.)
CG TO REAR OF VEH	-290 CM. (-114 IN.)	-127 CM. (-50 IN.)
CG TO SIDE OF VEH	98 CM. (39 IN.)	127 CM. (50 IN.)
MOMENT OF INERTIA	19158 KGS (42235 LBS)	****** KGS (******* LBS)
VEHICLE MASS	5 KGS (11 LBS)	1179 KGS (2600 LBS)
ROLLING RESISTANCE		
LEFT FRONT WHEEL	1.00	.00
RIGHT FRONT WHEEL	1.00	.00
LEFT REAR WHEEL	1.00	.00
RIGHT REAR WHEEL	1.00	.00



SCENE DESCRIPTION


Printing Picture:
CRASH
-6
0
6
12
VEH 1
PDOF
-15
-8
-2
4
11
17
DAMAGE DESCRIPTION

ATTACHMENT C

NASS Vehicle Forms

U.S. Department of Transportation
National Highway Traffic Safety Administration

GENERAL VEHICLE FORM

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. ~~Primary Sampling Unit Number~~ ____
2. Case Number - ~~Stratum~~ 9306
3. Vehicle Number 01

VEHICLE IDENTIFICATION

4. Vehicle Model Year 91
   Code the last two digits of the model year
   (99) Unknown

5. Vehicle Make (specify): 20
   CHEVROLET
   Applicable codes are found in your NASS Data Collection, Coding and Editing Manual.
   (99) Unknown

6. Vehicle Model (specify): 002
   CAPRICE (POLICE)
   Applicable codes are found in your NASS Data Collection, Coding and Editing Manual.
   (999) Unknown

7. Body Type 04
   Note: Applicable codes may be found on the back of this page.

8. Vehicle Identification Number
   1G1BL5379MW_____
   Left justify; Slash zeros and letter Z (0 and Z)
   No VIN—Code all zeros
   Unknown—Code all nine's

OFFICIAL RECORDS

9. Police Reported Vehicle Disposition 1
   (0) Not towed due to vehicle damage
   (1) Towed due to vehicle damage
   (9) Unknown

10. Police Reported Travel Speed 999
    Code to the nearest kph (NOTE: 000 means less than 0.5 kph)
    (160) 159.5 kph and above
    (999) Unknown

    ___ mph X 1.6093 = ___ kph

11. Police Reported Alcohol Presence 0
    (0) No alcohol present
    (1) Yes (alcohol present)
    (7) Not reported
    (8) No driver present
    (9) Unknown

    Note: See variables 37 through 55 (Page 4) for information on Other Drugs

12. Alcohol Test Result For Driver 96
    Code actual value (decimal implied before first digit—0.xx)
    (95) Test refused
    (96) None given
    (97) AC test performed, results unknown
    (98) No driver present
    (99) Unknown

    Source: _____

ACCIDENT RELATED

13. Speed Limit 056
    (000) No statutory limit
    Code posted or statutory speed limit in kph
    (999) Unknown

    35 mph X 1.6093 = ___ kph

14. Attempted Avoidance Maneuver 02
    (00) No impact
    (01) No avoidance actions
    (02) Braking (no lockup)
    (03) Braking (lockup) ABS Brakes
    (04) Braking (lockup unknown)
    (05) Releasing brakes
    (06) Steering left
    (07) Steering right
    (08) Braking and steering left
    (09) Braking and steering right
    (10) Accelerating
    (11) Accelerating and steering left
    (12) Accelerating and steering right
    (97) No driver present
    (98) Other action (specify):
    _____
    (99) Unknown

15. Accident Type 73 1st
    Applicable codes may be found on the back of page two of this field form
    (00) No impact
    Code the number of the diagram that best describes the accident circumstance
    (98) Other accident type (specify):
    _____
    (99) Unknown

****** SKIP TO VARIABLE GV37 IF GV07 DOES NOT EQUAL 01-49 ******

CODES FOR BODY TYPE

CDS APPLICABLE VEHICLES

Automobiles

(01) Convertible (excludes sun-roof, t-bar)
(02) 2-door sedan, hardtop, coupe
(03) 3-door/2-door hatchback
(04) 4-door sedan, hardtop
(05) 5-door/4-door hatchback
(06) Station wagon (excluding van and truck based)
(07) Hatchback, number of doors unknown
(08) Other automobile type (specify):

_____

(09) Unknown automobile type

Automobile Derivatives

(10) Auto based pickup (includes El Camino, Caballero, Ranchero, Brat, and Rabbit pickup)
(11) Auto based panel (cargo station wagon, auto based ambulance/hearse)
(12) Large limousine - more than four side doors or stretched chassis
(13) Three-wheel automobile or automobile derivative

Utility Vehicles (≤ 4,500 kgs GVWR)

(14) Compact utility (Jeep CJ-2 - CJ-7, Scrambler, Golden Eagle, Renegade, Laredo, Wrangler, Cherokee [84 and after], Dispatcher, Raider, Bronco II, Bronco [76 and before], Explorer, S-10 Blazer, Geo Tracker, Bravada, S-15 Jimmy, Thing, Pathfinder, Trooper, Trooper II, Rodeo, Amigo, Navajo, 4-Runner, Montero, Samurai, Sidekick, Rocky)
(15) Large utility (includes Jeep Cherokee [83 and before], Ramcharger, Trailduster, Bronco-fullsize [78 and after], fullsize Blazer, fullsize Jimmy, Landcruiser, Rover, Scout)
(16) Utility station wagon (Chevy Suburban, GMC Suburban, Travelall, Grand Wagoneer, includes suburban limousine)
(19) Utility, unknown body type

Van Based Light Trucks (≤ 4,500 kgs GVWR)

(20) Minivan (Chrysler Town and Country, Caravan, Grand Caravan, Voyager, Grand Voyager, Mini-Ram, Dodge/Plymouth Vista, Aerostar, Villager, Lumina APV, Trans Sport, Silhouette, Astro, Safari, Toyota Van, Toyota Minivan, Previa, Nissan Minivan, Quest, Mitsubishi Minivan, Vanagon/Camper.)
(21) Large van (B150-B350, Sportsman, Royal, Maxiwagon, Ram, Tradesman, Voyager [83 and before], E150-E350, Econoline, Clubwagon, Chateau, G10-G30, Chevy Van, Beauville, Sport Van, G15-G35, Rally Van, Vandura.)
(22) Step van or walk-in van (≤ 4,500 kgs GVWR)
(23) Van based motorhome (≤ 4,500 kgs GVWR)
(24) Van based school bus (≤ 4,500 kgs GVWR)
(25) Van based other bus (≤ 4,500 kgs GVWR)
(28) Other van type (Hi-Cube Van, Kary) (specify):

_____

(29) Unknown van type

Light Conventional Trucks (Pickup style cab, ≤ 4,500 kgs GVWR)

(30) Compact pickup (D50, Colt P/U, Ram 50, Dakota, Arrow Pickup [foreign], Ranger, Courier, S-10 , T-10, LUV, S-15, T-15, Sonoma, Datsun/Nissan Pickup, P'up, Mazda Pickup, Toyota Pickup, Mitsubishi Pickup)
(31) Large Pickup (Jeep Pickup, Comanche, Ram Pickup, D100-D350, W100-W350, F100-F350, C10-C35, K10-K35, R10-R35, V10-V35, Silverado, Sierra, R100-R500,)
(32) Pickup with slide-in camper
(33) Convertible pickup
(39) Unknown pickup style light conventional truck type

Other Light Trucks (≤ 4,500 kgs GVWR)

(40) Cab chassis based (includes rescue vehicles, light stake, dump, and tow truck)
(41) Truck based panel
(42) Light truck based motorhome (chassis mounted)
(45) Other light conventional truck type
(48) Unknown light truck type
(49) Unknown light vehicle type (automobile, utility, van, or light truck)

OTHER VEHICLES

Buses (Excludes Van Based)

(50) School bus (designed to carry students, not cross country or transit)
(58) Other bus type (e.g., transit, intercity, bus based motorhome) (specify):

_____

(59) Unknown bus type

Medium/Heavy Trucks (> 4,500 kgs GVWR)

(60) Step van (> 4,500 kgs GVWR)
(61) Single unit straight truck (4,500 kgs < GVWR ≤ 8,850 kgs)
(62) Single unit straight truck (8,850 kgs < GVWR ≤ 12,000 kgs)
(63) Single unit straight truck (> 12,000 kgs GVWR)
(64) Single unit straight truck, GVWR unknown
(65) Medium/heavy truck based motorhome
(67) Truck-tractor with no cargo trailer
(68) Truck-tractor pulling one trailer
(69) Truck-tractor pulling two or more trailers
(70) Truck-tractor (unknown if pulling trailer)
(78) Unknown medium/heavy truck type
(79) Unknown truck type (light/medium/heavy)

Motored Cycles (Does Not Include All-Terrain Vehicles/Cycles)

(80) Motorcycle
(81) Moped (motorized bicycle)
(82) Three-wheel motorcycle or moped
(88) Other motored cycle (minibike, motorscooter) (specify):_____
(89) Unknown motored cycle type

Other Vehicles

(90) ATV (All-Terrain Vehicle) and ATC (All-Terrain Cycle)
(91) Snowmobile
(92) Farm equipment other than trucks
(93) Construction equipment other than trucks
(97) Other vehicle type
(99) Unknown body type

OCCUPANT RELATED

16. Driver Presence in Vehicle — 1
    (0) Driver not present
    (1) Driver present
    (9) Unknown

17. Number of Occupants This Vehicle — 01
    (00-96) Code actual number of occupants for this vehicle
    (97) 97 or more
    (99) Unknown

18. Number of Occupant Forms Submitted — 01

VEHICLE WEIGHT ITEMS

19. Vehicle Curb Weight — 1,820
    4042 Code weight to nearest 10 kilograms.
    (045) Less than 450 kilograms
    (610) 6,100 kilograms or more
    (999) Unknown

    4,042 lbs X .4536 = 1,819 kgs

    Source: _____

20. Vehicle Cargo Weight — 0,910
    ____ Code weight to nearest 10 kilograms.
    (000) Less than 5 kilograms
    (450) 4,500 kilograms or more
    (999) Unknown

    00,200 lbs X .4536 = ___,___ kgs

RECONSTRUCTION DATA

21. Towed Trailing Unit — 0
    (0) No towed unit
    (1) Yes—towed trailing unit
    (9) Unknown

22. Documentation of Trajectory Data for This Vehicle — 1
    (0) No
    (1) Yes

23. Post Collision Condition of Tree or Pole (For Highest Delta V) — 3
    (0) Not collision (for highest delta V) with tree or pole
    (1) Not damaged
    (2) Cracked/sheared
    (3) Tilted ≤45 degrees
    (4) Tilted ≥45 degrees
    (5) Uprooted tree
    (6) Separated pole from base
    (7) Pole replaced
    (8) Other (specify):

    (9) Unknown

24. Rollover — 0
    (0) No rollover (no overturning)

    Rollover (primarily about the longitudinal axis)
    (1) Rollover, 1 quarter turn only
    (2) Rollover, 2 quarter turns
    (3) Rollover, 3 quarter turns
    (4) Rollover, 4 or more quarter turns (specify):

    (5) Rollover--end-over-end (i.e., primarily about the lateral axis)
    (9) Rollover (overturn), details unknown

OVERRIDE/UNDERRIDE (THIS VEHICLE)

25. Front Override/Underride (this Vehicle) — 0

26. Rear Override/Underride (this Vehicle) — 0

    (0) No override/underride, or not an end-to-end impact

    Override (see specific CDC)
    (1) 1st CDC
    (2) 2nd CDC
    (3) Other not automated CDC (specify):

    Underride (see specific CDC)
    (4) 1st CDC
    (5) 2nd CDC
    (6) Other not automated CDC (specify):

    (7) Medium/heavy truck or bus override
    (9) Unknown

HEADING ANGLE AT IMPACT FOR HIGHEST DELTA V

Values: (000)-(359) Code actual value
(997) Noncollision
(998) Impact with object
(999) Unknown

27. Heading Angle For This Vehicle — ___

28. Heading Angle For Other Vehicle — ___

29. Basis for Total Delta V (highest) 2

Delta V Calculated
(1) CRASH program—damage only routine
(2) CRASH program—damage and trajectory routine
(3) Missing vehicle algorithm

Delta V Not Calculated
(4) At least one vehicle (which may be this vehicle) is beyond the scope of an acceptable reconstruction program, regardless of collision conditions.
(5) All vehicles within scope (CDC applicable) of CRASH program but one of the collision conditions is beyond the scope of the CRASH program or other acceptable reconstruction technique, regardless of adequacy of damage data.
(6) All vehicle and collision conditions are within scope of one of the acceptable reconstruction programs, but there is insufficient data available.

COMPUTER GENERATED DELTA V

	Secondary	Highest
30. Total Delta V		023
____ Nearest kph		

(NOTE: 000 means less than 0.5 kph)
(160) 159.5 kph and above
(999) Unknown

	Secondary	Highest
31. Longitudinal Component of Delta V		⊕ 023
____ Nearest kph		

(NOTE: __000 means greater than −0.5 kph and less than +0.5 kph)
(±160) ±159.5 kph and above
(__999) Unknown

	Secondary	Highest
32. Lateral Component of Delta V		⊕ − 000
____ Nearest kph		

(NOTE: __000 means greater than −0.5 kph and less than +0.5 kph)
(±160) ±159.5 kph and above
(__999) Unknown

33. Energy Absorption 039,700

____ Nearest 100 joules

(NOTE: 0000 means less than 50 joules)
(9997) 999,650 joules or more
(9999) Unknown

34. Confidence In Reconstruction Program Results (For Highest Delta V) 1
(0) No reconstruction
(1) Collision fits model — results appear reasonable
(2) Collision fits model — results appear high
(3) Collision fits model — results appear low
(4) Borderline reconstruction — results appear reasonable

35. Type of Vehicle Inspection 1
(0) No inspection
(1) Complete inspection
(2) Partial inspection (specify):
_____

36. Is this an AOPS Vehicle? 2
(0) No
(1) Yes - researcher determined
(2) VIN determined air bag system
(3) VIN determined automatic (passive) belts
(4) VIN determined air bag and automatic (passive) belts

IS OLDMISS APPLICABLE FOR THIS VEHICLE? [ ] YES [✓] NO

IF YES: IS A COMPLETED OLDMISS PROGRAM SUMMARY INCLUDED? [ ] YES [ ] NO

37. Police Reported Other Drug Presence ___0___
(0) No other drugs present
(1) Yes (other drug present)
(7) Not reported
(8) No driver present
(9) Unknown

38. Police Reported Drug Evaluation Classification (DEC) Test For Driver ___0___
(0) No DEC process available or given
(1) DEC process given, results known
(2) DEC process given, results unknown
(3) DEC process available, unknown if given
(8) No driver present

39. Other Drug Specimen Test Type For Driver ___0___
(0) No specimen test given
(1) Blood test
(2) Urine test
(3) Other specimen tests (specify): _____
(7) Unspecified specimen test
(8) No driver present
(9) Unknown if specimen test given

DRUG EVALUATION CLASSIFICATION
OTHER DRUGS TEST RESULTS FOR DRIVER

	DEC Test Results	Specimen Test Results
Narcotic Drug	40. 0	41. 0
Depressant Drug	42. 0	43. 0
Stimulant Drug	44. 0	45. 0
Hallucinogen Drug	46. 0	47. 0
Cannabinoid Drug	48. 0	49. 0
Phencyclidine (PCP)	50. 0	51. 0
Inhalant Drug	52. 0	53. 0
Other Drug (Excluding Nicotine, Aspirin, Alcohol, Drugs Administered Post-Crash)	54. 0	55. 0

Codes For DEC Test Results

(0) No DEC test given
(1) Passed DEC test
(2) Failed DEC test
(3) DEC test given—results unknown
(8) No driver present
(9) Unknown if DEC test given

Codes for Specimen Test Results

(0) No specimen test given
(1) Drug not found in specimen
(2) Drug found in specimen
(7) Specimen test given, results unknown or not obtained
(8) No driver present
(9) Unknown if specimen test given

OTHER DATA

56. Driver's Zip Code [redacted]

(00000) Driver not present
(00001) Driver not a resident of U.S. or territories
_____ Code actual 5-digit zip code
(99999) Unknown

57. Driver's Race/Ethnic Origin 1
(0) Driver not present
(1) White (non-Hispanic)
(2) Black (non-Hispanic)
(3) White (Hispanic)
(4) Black (Hispanic)
(5) American Indian, Eskimo or Aleut
(6) Asian or Pacific Islander
(8) Other (specify): _____
(9) Unknown

58. Vehicle Special Use (This Trip) 5
(0) No special use
(1) Taxi
(2) Vehicle used as school bus
(3) Vehicle used as other bus
(4) Military
(5) Police
(6) Ambulance
(7) Fire truck or car
(8) Other (specify): _____
(9) Unknown

ROLLOVER DATA

If GV07 (Body Type) ≠ 1-49, leave GV59-GV63 blank.
If GV24 (Rollover) = 0, then GV59-GV63 must equal 0.
If GV24 = 9, then GV59-GV63 must equal 9.

59. Rollover Initiation Type 0
(0) No rollover
(1) Trip-over
(2) Flip-over
(3) Turn-over
(4) Climb-over
(5) Fall-over
(6) Bounce-over
(7) Collision with another vehicle
(8) Other rollover initiation type specify): _____
(9) Unknown rollover initiation type

60. Location of Rollover Initiation 0
(0) No rollover
(1) On roadway
(2) On shoulder—paved
(3) On shoulder—unpaved
(4) On roadside or divided trafficway median
(9) Unknown

61. Rollover Initiation Object Contacted 00

62. Location on Vehicle Where Initial Principal Tripping Force Is Applied 0
(0) No rollover
(1) Wheels/tires
(2) Side plane
(3) End plane
(4) Undercarriage
(5) Other location on vehicle (specify): _____
(8) Non-contact rollover forces (specify): _____
(9) Unknown

63. Direction of Initial Roll 0
(0) No rollover
(1) Roll right - primarily about the longitudinal axis
(2) Roll left - primarily about the longitudinal axis
(5) End-over-end (i.e., primarily about the lateral axis)
(9) Unknown roll direction

PRECRASH DATA

64. Pre-Event Movement (Prior to Recognition of Critical Event) 97
(01) Going straight
(02) Slowing or stopping in traffic lane
(03) Starting in traffic lane
(04) Stopped in traffic lane
(05) Passing or overtaking another vehicle
(06) Disabled or parked in travel lane
(07) Leaving a parking position
(08) Entering a parking position
(09) Turning right
(10) Turning left
(11) Making a U-turn
(12) Backing up (other than for parking position)
(13) Negotiating a curve
(14) Changing lanes
(15) Merging
(16) Successful avoidance maneuver to a previous critical event
(97) Other (specify): PURSUIT OF VEHICLE 2
(98) No driver present
(99) Unknown

CODES FOR ROLLOVER INITIATION OBJECT CONTACTED

(00) No rollover
(01-30) — Vehicle Number

Noncollision
(31) Turn-over — fall-over
(33) Jackknife

Collision With Fixed Object
(41) Tree (≤ 10 cm in diameter)
(42) Tree (> 10 cm in diameter)
(43) Shrubbery or bush
(44) Embankment

(45) Breakaway pole or post (any diameter)

Nonbreakaway Pole or Post
(50) Pole or post (≤ 10 cm in diameter)
(51) Pole or post (> 10 cm but ≤ 30 cm in diameter)
(52) Pole or post (> 30 cm in diameter)
(53) Pole or post (diameter unknown)

(54) Concrete traffic barrier
(55) Impact attenuator
(56) Other traffic barrier (includes guardrail) (specify):_____

(57) Fence
(58) Wall
(59) Building
(60) Ditch or culvert
(61) Ground
(62) Fire hydrant
(63) Curb
(64) Bridge
(68) Other fixed object (specify):

_____
(69) Unknown fixed object

Collision with Nonfixed Object
(71) Motor vehicle not in-transport
(76) Animal
(77) Train
(78) Trailer, disconnected in transport
(88) Other nonfixed object (specify):

_____
(89) Unknown nonfixed object

(98) Other event (specify):

_____
(99) Unknown event or object

PRECRASH DATA (Continued)

65. Critical Precrash Event 60

This Vehicle Loss of Control Due To:
(01) Blow out or flat tire
(02) Stalled engine
(03) Disabling vehicle failure (e.g., wheel fell off) (specify): _____
(04) Non-disabling vehicle problem (e.g., hood flew up) (specify): _____
(05) Poor road conditions (puddle, pot hole, ice, etc.) (specify): _____
(06) Traveling too fast for conditions
(08) Other cause of control loss (specify): _____
(09) Unknown cause of control loss

This Vehicle Traveling
(10) Over the lane line on left side of travel lane
(11) Over the lane line on right side of travel lane
(12) Off the edge of the road on the left side
(13) Off the edge of the road on the right side
(14) End departure
(15) Turning left at intersection
(16) Turning right at intersection
(17) Crossing over (passing through) intersection
(19) Unknown travel direction

Other Motor Vehicle In Lane
(50) Stopped
(51) Traveling in same direction with lower speed (i.e., lower steady speed or decelerating)
(52) Traveling in same direction with higher speed
(53) Traveling in opposite direction
(54) In crossover
(55) Backing
(59) Unknown travel direction of other motor vehicle in lane

Other Motor Vehicle Encroaching Into Lane
(60) From adjacent lane (same direction)—over left lane line
(61) From adjacent lane (same direction)—over right lane line
(62) From opposite direction—over left lane line
(63) From opposite direction—over right lane line
(64) From parking lane
(65) From crossing street, turning into same direction
(66) From crossing street, across path
(67) From crossing street, turning into opposite direction
(68) From crossing street, intended path not known
(70) From driveway, turning into same direction
(71) From driveway, across path
(72) From driveway, turning into opposite direction
(73) From driveway, intended path not known
(74) From entrance to limited access highway
(78) Encroachment by other vehicle—details unknown

Pedestrian or Pedalcyclist, or Other Nonmotorist
(80) Pedestrian in roadway
(81) Pedestrian approaching roadway
(82) Pedestrian - unknown location
(83) Pedalcyclist or other nonmotorist in roadway (specify): _____
(84) Pedalcyclist or other nonmotorist approaching roadway (specify): _____
(85) Pedalcyclist or other nonmotorist—unknown location (specify): _____

Object or Animal
(87) Animal in roadway
(88) Animal approaching roadway
(89) Animal—unknown location
(90) Object in roadway
(91) Object approaching roadway
(92) Object—unknown location

(98) Other critical precrash event (specify): _____
(99) Unknown

For Corrective Actions Attempted see variable GV14 (Attemped Avoidance Manuever)

66. Precrash Stability After Avoidance Maneuver 1
(0) No avoidance maneuver
(1) Tracking
(2) Skidding longitudinally—rotation less than 30 degrees
(3) Skidding laterally—clockwise rotation
(4) Skidding laterally—counterclockwise rotation
(7) Other vehicle loss-of-control (specify): _____
(8) No driver present
(9) Precrash stability unknown

67. Precrash Directional Consequences of Avoidance Maneuver (Corrective Action) 1
(0) No avoidance maneuver
(1) Vehicle stayed in travel lane where avoidance maneuver was initiated
(2) Vehicle stayed on roadway but left travel lane where avoidance maneuver was initiated
(3) Vehicle stayed on roadway, not known if left travel lane where avoidance maneuver was initiated
(4) Vehicle departed roadway
(5) Avoidance maneuver initiated off roadway
(8) No driver present
(9) Directional consequences unknown

***** IF THE CDS APPLICABLE VEHICLE WAS NOT INSPECTED (I.E., GV35=0), *****
DO NOT COMPLETE THE EXTERIOR AND INTERIOR VEHICLE FORMS.

***** IF GV07 DOES NOT EQUAL 01-49, DO NOT COMPLETE *****
THE EXTERIOR VEHICLE, INTERIOR VEHICLE,
OCCUPANT ASSESSMENT, AND OCCUPANT INJURY FORMS.

U.S. Department of Transportation
National Highway Traffic Safety Administration

EXTERIOR VEHICLE FORM

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. ~~Primary Sampling Unit Number~~ ____
2. Case Number - ~~Stratum~~ 93-06
3. Vehicle Number 01

VEHICLE IDENTIFICATION

VIN 1G1BL5379MW _____ Model Year 91

Vehicle Make (specify): CHEVROLET Vehicle Model (specify): CAPRICE

LOCATOR

Locate the end of the damage with respect to the vehicle longitudinal center line or bumper corner for end impacts or an undamaged axle for side impacts.

Specific Impact No.	Location of Direct Damage	Location of Field L
1	FRONT BUMPER FACIA, STARTS @ RF CORNER, EXTENDS 9.25" TO LEFT	N/A
2	FRONT BUMPER BEGINS 2.25" (R) OF CENTER, EXTENDS 4" TO LEFT	FULL WIDTH OF BUMPER 51.0"

CRUSH PROFILE IN CENTIMETERS

NOTES: Identify the plane at which the C-measurements are taken (e.g., at bumper, above bumper, at sill, above sill, etc.) and label adjustments (e.g., free space).

Measure and document on the vehicle diagram the location of maximum crush.

Measure C1 to C6 from driver to passenger side in front or rear impacts and rear to front in side impacts.

Free space value is defined as the distance between the baseline and the original body contour taken at the individual C locations. This may include the following: bumper lead, bumper taper, side protrusion, side taper, etc. Record the value for each C-measurement and maximum crush.

Use as many lines/columns as necessary to describe each damage profile.

Specific Impact Number	Plane of Impact C-Measurements	Direct Damage		Field L	C_1	C_2	C_3	C_4	C_5	C_6	±D
		Width (CDC)	Max Crush								
2	FRONT BUMPER	4"	19.1"	51.0	2.125	3.9	8.25	14.0	8.25	4.5"	+4.25
	FREE-SPACE		0.3"		5.625	2.125	0.5	0	1.8	5.625	
2	RESIDUAL CRUSH	4"	18.8	51.0	0	1.8"	7.75"	14.0	2.0	0	+4.25

HS Form 435A (Rev. 1/93)

ORIGINAL SPECIFICATIONS WORK SHEET

Wheelbase	115.9	inches	x	2.54	=	294 cm
Overall Length	214.1	inches	x	2.54	=	544 cm
Maximum Width	077.0	inches	x	2.54	=	196 cm
Curb Weight	04,042	pounds	x	.4536	=	1,833 kg
Average Track	61.3	inches	x	2.54	=	156 cm
Front Overhang	___.___	inches	x	2.54	=	___ cm
Rear Overhang	___.___	inches	x	2.54	=	___ cm
Undeformed End Width	061.0	inches	x	2.54	=	155 cm
Engine Size: cyl./displ.	5700	cc	x	.001	=	5.7 L
	350	CID	x	.0164	=	5.7 L

VEHICLE DAMAGE SKETCH

TIRE—WHEEL DAMAGE

a. Rotation physically restricted

RF 2
LF 2
RR 2
LR 2

b. Tire deflated

RF 2
LF 2
RR 2
LR 2

(1) Yes (2) No (8) NA (9) Unk.

TYPE OF TRANSMISSION

☐ Manual ☒ Automatic 4-SPEED

ORIGINAL SPECIFICATIONS

Wheelbase	294	cm
Overall Length	544	cm
Maximum Width	196	cm
Curb Weight	1833	kg
Average Track	156	cm
Front Overhang		cm
Rear Overhang		cm
Undeformed End Width	155	cm
Engine Size: cyl./displ.	5.7	L

WHEEL STEER ANGLES

(For locked front wheels or displaced rear axles only)

RF ± ___ ___ °
LF ± ___ ___ °
RR ± ___ ___ °
LR ± ___ ___ °

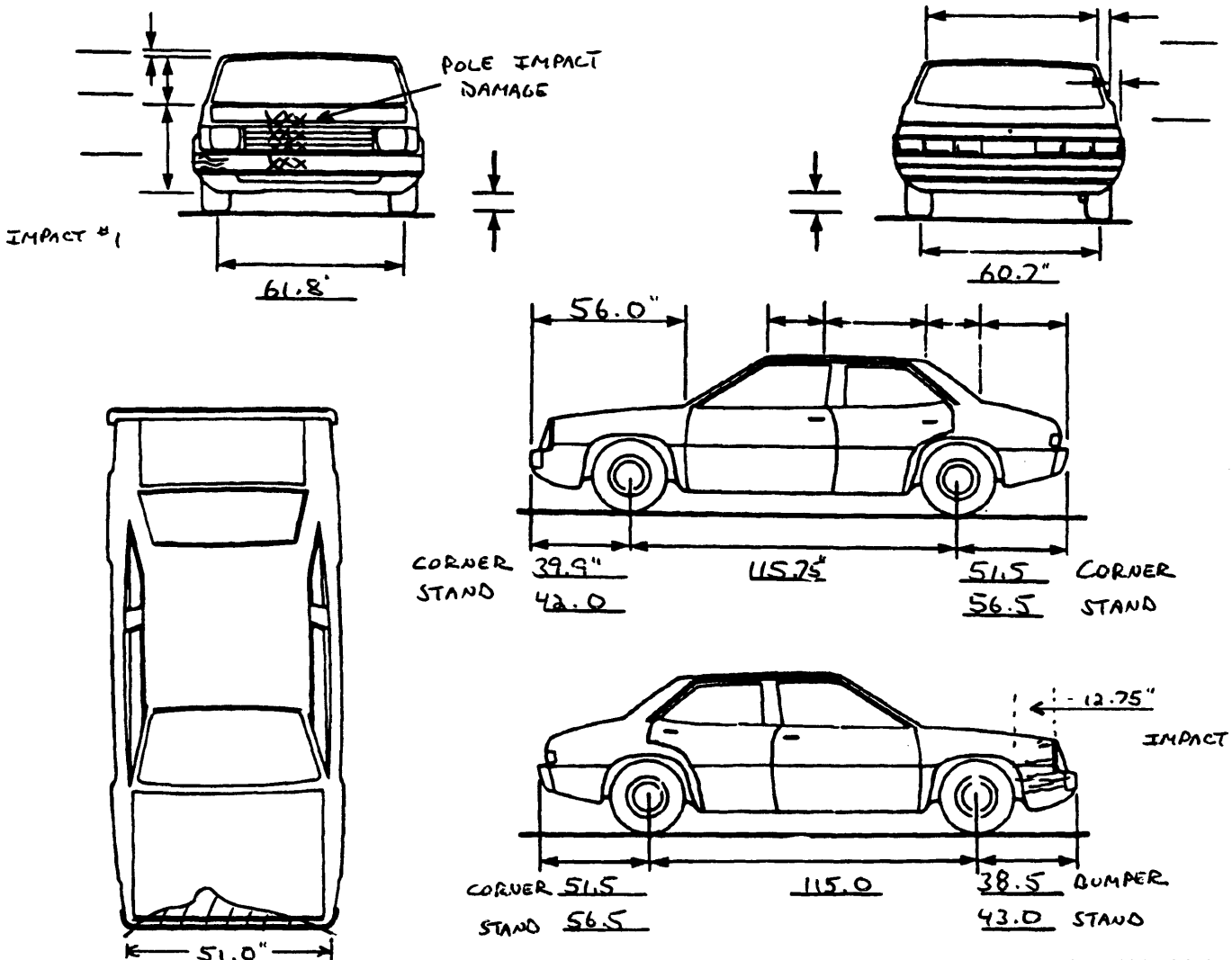
Within ± 5 degrees

DRIVE WHEELS

☐ FWD ☒ RWD ☐ 4WD

Approximate Cargo Weight 150 LBS POLICE EQUIP 67.5 kg

MEASUREMENTS IN CENTIMETERS



NOTES: Sketch new perimeter and cross hatch direct damage and single hatch induced damage on all views. Annotate observations which might be useful in reconstructing the accident (e.g., grass in tire bead, direction of striations, scuff on sidewalls, etc.). If pulling trailer, sketch type of trailer and damage received on the back of this page.

Annotate any damage caused by extrication such as component removal by torching, prying, or hydraulic shears.

CDC WORKSHEET

CODES FOR OBJECT CONTACTED

(01-30) — Vehicle Number

Noncollision
- (31) Overturn — rollover
- (32) Fire or explosion
- (33) Jackknife
- (34) Other intraunit damage (specify): _____
- (35) Noncollision injury
- (38) Other noncollision (specify): _____
- (39) Noncollision — details unknown

Collision With Fixed Object
- (41) Tree (≤ 10 cm in diameter)
- (42) Tree (> 10 cm in diameter)
- (43) Shrubbery or bush
- (44) Embankment
- (45) Breakaway pole or post (any diameter)

Nonbreakaway Pole or Post
- (50) Pole or post (≤ 10 cm in diameter)
- (51) Pole or post (> 10 cm but ≤ 30 cm in diameter)
- (52) Pole or post (> 30 cm in diameter)
- (53) Pole or post (diameter unknown)
- (54) Concrete traffic barrier
- (55) Impact attenuator
- (56) Other traffic barrier (includes guardrail) (specify): _____
- (57) Fence
- (58) Wall
- (59) Building
- (60) Ditch or culvert
- (61) Ground
- (62) Fire hydrant
- (63) Curb
- (64) Bridge
- (68) Other fixed object (specify): _____
- (69) Unknown fixed object

Collision with Nonfixed Object
- (71) Motor vehicle not in-transport
- (72) Pedestrian
- (73) Cyclist or cycle
- (74) Other nonmotorist or conveyance
- (75) Vehicle occupant
- (76) Animal
- (77) Train
- (78) Trailer, disconnected in transport
- (88) Other nonfixed object (specify): _____
- (89) Unknown nonfixed object
- (98) Other event (specify): _____
- (99) Unknown event or object

DEFORMATION CLASSIFICATION BY EVENT NUMBER

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force (degrees)	Incremental Value of Shift	(3) Deformation Location	(4) Specific Longitudinal or Lateral Location	(5) Specific Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
01	02	360	00	F	R	E	E	02
02	51	360	00	F	C	E	N	02

COLLISION DEFORMATION CLASSIFICATION

HIGHEST DELTA "V"

Accident Event Sequence Number	Object Contacted	(1) (2) Direction of Force	(3) Deformation Location	(4) Longitudinal or Lateral Location	(5) Vertical or Lateral Location	(6) Type of Damage Distribution	(7) Deformation Extent
4. 02	5. 51	6. 12	7. F	8. C	9. E	10. N	11. 02

Second Highest Delta "V"

12. 01	13. 01	14. 12	15. F	16. R	17. E	18. E	19. 02

CRUSH PROFILE IN CENTIMETERS

The crush profile for the damage described in the CDC(s) above should be documented in the appropriate space below. (ALL MEASUREMENTS ARE IN CENTIMETERS.)

HIGHEST DELTA "V"

20. L	21. C_1	C_2	C_3	C_4	C_5	C_6	22. ±D
130	000	005	020	036	018	000	⊕ 011

Second Highest Delta "V"

23. L	24. C_1	C_2	C_3	C_4	C_5	C_6	25. ±D
							+ −

26. Are CDCs Documented but Not Coded on The Automated File? 0
(0) No
(1) Yes

27. Researcher's Assessment of Vehicle Disposition 1
(0) Not towed due to vehicle damage
(1) Towed due to vehicle damage
(9) Unknown

28. Original Wheelbase 294
Code to the nearest centimeter
(999) Unknown

115.9 inches X 2.54 = 294 centimeters

29. Is This A Multi-Stage Manufactured Vehicle And/Or A Certified Altered Vehicle? 0
(0) No post manufacturer modifications
(1) Yes - post manufacturer modifications (specify): _____
_____
_____
(Include photograph of CERTIFICATION PLACARD in case report)
(9) Unknown if vehicle is modified

30. Fire Occurrence 0
(0) No fire

Yes, fire occurred
(1) Minor
(2) Major
(9) Unknown

31. Origin of Fire 0
(0) No fire
(1) Vehicle exterior (front, side, back, top)
(2) Exhaust system
(3) Fuel tank (and other fuel retention system parts)
(4) Engine compartment
(5) Cargo/trunk compartment
(6) Instrument panel
(7) Passenger compartment area
(8) Other location (specify):
_____
(9) Unknown

32. Type of Fuel Tank 1
(0) No fuel tank (electrical vehicle)
(1) Metallic
(2) Non-metallic
(9) Unknown

*** STOP: IF THE CDS APPLICABLE VEHICLE WAS NOT TOWED AND WAS NOT AN AOPS *** (I.E., GV09=0 OR 9 AND GV36=0), DO NOT COMPLETE THE INTERIOR VEHICLE FORM.

U.S. Department of Transportation
National Highway Traffic Safety Administration

INTERIOR VEHICLE FORM

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. ~~Primary Sampling Unit Number~~ ____
2. Case Number - Stratum 93 06
3. Vehicle Number 01

INTEGRITY

4. Passenger Compartment Integrity 00
(00) No integrity loss

Yes, Integrity Was Lost Through
(01) Windshield
(02) Door (side)
(03) Door/hatch (back door)
(04) Roof
(05) Roof glass
(06) Side window
(07) Rear window (backlight)
(08) Roof and roof glass
(09) Windshield and door (side)
(10) Windshield and roof
(11) Side and rear window (side window and backlight)
(12) Windshield and side window
(13) Door and side window
(98) Other combination of above (specify): _____
(99) Unknown

Door, Tailgate or Hatch Opening

5. LF 1 6. RF 1 7. LR 1 8. RR 1 9. TG/H 0

(0) No door/gate/hatch
(1) Door/gate/hatch remained closed and operational
(2) Door/gate/hatch came open during collision
(3) Door/gate/hatch jammed shut
(8) Other (specify): _____
(9) Unknown

Damage/Failure Associated with Door, Tailgate or Hatch Opening in Collision. If IV05-IV09 ≠ 2, Then code Ø

10. LF 0 11. RF 0 12. LR 0 13. RR 0 14. TG/H 0

(0) No door/gate/hatch or door not opened

Door, Tailgate or Hatch Came Open During Collision
(1) Door operational (no damage)
(2) Latch/striker failure due to damage
(3) Hinge failure due to damage
(4) Door structure failure due to damage
(5) Door support (i.e., pillar, sill, roof side rail, etc.) failure due to damage
(6) Latch/striker and hinge failure due to damage
(8) Other failure (specify): _____
(9) Unknown

GLAZING

Glazing Damage from Impact Forces

15. WS 0 16. LF 0 17. RF 0 18. LR 0 19. RR 0
20. BL 0 21. Roof 8 22. Other 8

(0) No glazing damage from impact forces
(2) Glazing in place and cracked from impact forces
(3) Glazing in place and holed from impact forces
(4) Glazing out-of-place (cracked or not) and not holed from impact forces
(5) Glazing out-of-place and holed from impact forces
(6) Glazing disintegrated from impact forces
(7) Glazing removed prior to accident
(8) No glazing
(9) Unknown if damaged

Glazing Damage from Occupant Contact

23. WS 0 24. LF 0 25. RF 0 26. LR 0 27. RR 0
28. BL 0 29. Roof 0 30. Other 0

(0) No occupant contact to glazing or no glazing
(1) Glazing contacted by occupant but no glazing damage
(2) Glazing in place and cracked by occupant contact
(3) Glazing in place and holed by occupant contact
(4) Glazing out-of-place (cracked or not) by occupant contact and not holed by occupant contact
(5) Glazing out-of-place by occupant contact and holed by occupant contact
(6) Glazing disintegrated by occupant contact
(9) Unknown if contacted by occupant

If No Glazing Damage *And* No Occupant Contact or No Glazing, Then Code IV31 Through IV46 As Ø

Type of Window/Windshield Glazing

31. WS 1 32. LF 2 33. RF 2 34. LR 2 35. RR 2
36. BL 2 37. Roof 0 38. Other 0

(0) No glazing contact and no damage, or no glazing
(1) AS-1 — Laminated
(2) AS-2 — Tempered
(3) AS-3 — Tempered-tinted
(4) AS-14 — Glass/Plastic
(8) Other (specify): _____
(9) Unknown

Window Precrash Glazing Status

39. WS 0 40. LF 0 41. RF 0 42. LR 0 43. RR 0
44. BL 0 45. Roof 0 46. Other 0

(0) No glazing contact and no damage, or no glazing
(1) Fixed
(2) Closed
(3) Partially opened
(4) Fully opened
(9) Unknown

OCCUPANT AREA INTRUSION

Note: If no intrusions, leave variables IV47-IV86 blank.

	Location of Intrusion	Intruding Component	Magnitude of Intrusion	Dominant Crush Direction
1st	47.___ ___	48.___ ___	49.___	50.___
2nd	51.___ ___	52.___ ___	53.___	54.___
3rd	55.___ ___	56.___ ___	57.___	58.___
4th	59.___ ___	60.___ ___	61.___	62.___
5th	63.___ ___	64.___ ___	65.___	66.___
6th	67.___ ___	68.___ ___	69.___	70.___
7th	71.___ ___	72.___ ___	73.___	74.___
8th	75.___ ___	76.___ ___	77.___	78.___
9th	79.___ ___	80.___ ___	81.___	82.___
10th	83.___ ___	84.___ ___	85.___	86.___

LOCATION OF INTRUSION

Front Seat
- (11) Left
- (12) Middle
- (13) Right

Second Seat
- (21) Left
- (22) Middle
- (23) Right

Third Seat
- (31) Left
- (32) Middle
- (33) Right

Fourth Seat
- (41) Left
- (42) Middle
- (43) Right

- (97) Catastrophic
- (98) Other enclosed area (specify) _____
- (99) Unknown

INTRUDING COMPONENT

Interior Components
- (01) Steering assembly
- (02) Instrument panel left
- (03) Instrument panel center
- (04) Instrument panel right
- (05) Toe pan
- (06) A (A1/A2)-pillar
- (07) B-pillar
- (08) C-pillar NO INTRUSION
- (09) D-pillar
- (10) Door panel (side)
- (12) Roof (or convertible top)
- (13) Roof side rail
- (14) Windshield
- (15) Windshield header
- (16) Window frame
- (17) Floor pan (includes sill)
- (18) Backlight header
- (19) Front seat back
- (20) Second seat back
- (21) Third seat back
- (22) Fourth seat back
- (23) Fifth seat back
- (24) Seat cushion
- (25) Back door/panel (e.g., tailgate)
- (26) Other interior component (specify): _____
- (27) Side panel - forward of the A (A2)-pillar
- (28) Side panel - rear of the A (A2)-pillar

Exterior Components
- (30) Hood
- (31) Outside surface of this vehicle (specify): _____
- (32) Other exterior object in the environment (specify): _____
- (33) Unknown exterior object
- (97) Catastrophic
- (98) Intrusion of unlisted component(s) (specify): _____
- (99) Unknown

MAGNITUDE OF INTRUSION

- (1) ≥ 3 centimeters but < 8 centimeters
- (2) ≥ 8 centimeters but < 15 centimeters
- (3) ≥ 15 centimeters but < 30 centimeters
- (4) ≥ 30 centimeters but < 46 centimeters
- (5) ≥ 46 centimeters but < 61 centimeters
- (6) ≥ 61 centimeters
- (7) Catastrophic
- (9) Unknown

DOMINANT CRUSH DIRECTION

- (1) Vertical
- (2) Longitudinal
- (3) Lateral
- (7) Catastrophic
- (9) Unknown

STEERING COLUMN

87. Steering Column Type — 2
(1) Fixed column
(2) Tilt column
(3) Telescoping column
(4) Tilt and telescoping column
(8) Other column type (specify): _____
(9) Unknown

88. Blank — X X
(This variable is left blank so that numbering consistency can be maintained with the 1988-93 CDS.

89. Blank — X X X
(This variable is left blank so that numbering consistency can be maintained with the 1988-93 CDS.

90. Blank — X X X
(This variable is left blank so that numbering consistency can be maintained with the 1988-93 CDS.

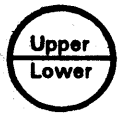
91. Blank — X X X
(This variable is left blank so that numbering consistency can be maintained with the 1988-93 CDS.

92. Steering Rim/Spoke Deformation — 0 1
.25" Code actual measured deformation to the nearest centimeter
(00) No steering rim deformation
(01-14) Actual measured value in centimeters
(15) 15 centimeters or more
(98) Observed deformation cannot be measured
(99) Unknown

93. Location of Steering Rim/Spoke Deformation — 0 5
(00) No steering rim deformation

Quarter Sections
(01) Section A
(02) Section B
(03) Section C
(04) Section D

Half Sections
(05) Upper half of rim/spoke
(06) Lower half of rim/spoke
(07) Left half of rim/spoke
(08) Right half of rim/spoke



(09) Complete steering wheel collapse
(10) Undetermined location
(99) Unknown

INSTRUMENT PANEL

94. Odometer Reading — 1 3 3 ,000
_____kilometers—Code to the nearest 1,000 kilometers
(000) No odometer
(001) Less than 1,500 kilometers
(500) 499,500 kilometers or more
(999) Unknown

82,588 miles X 1.6093 = 139,967 kilometers

Source: VEHICLE

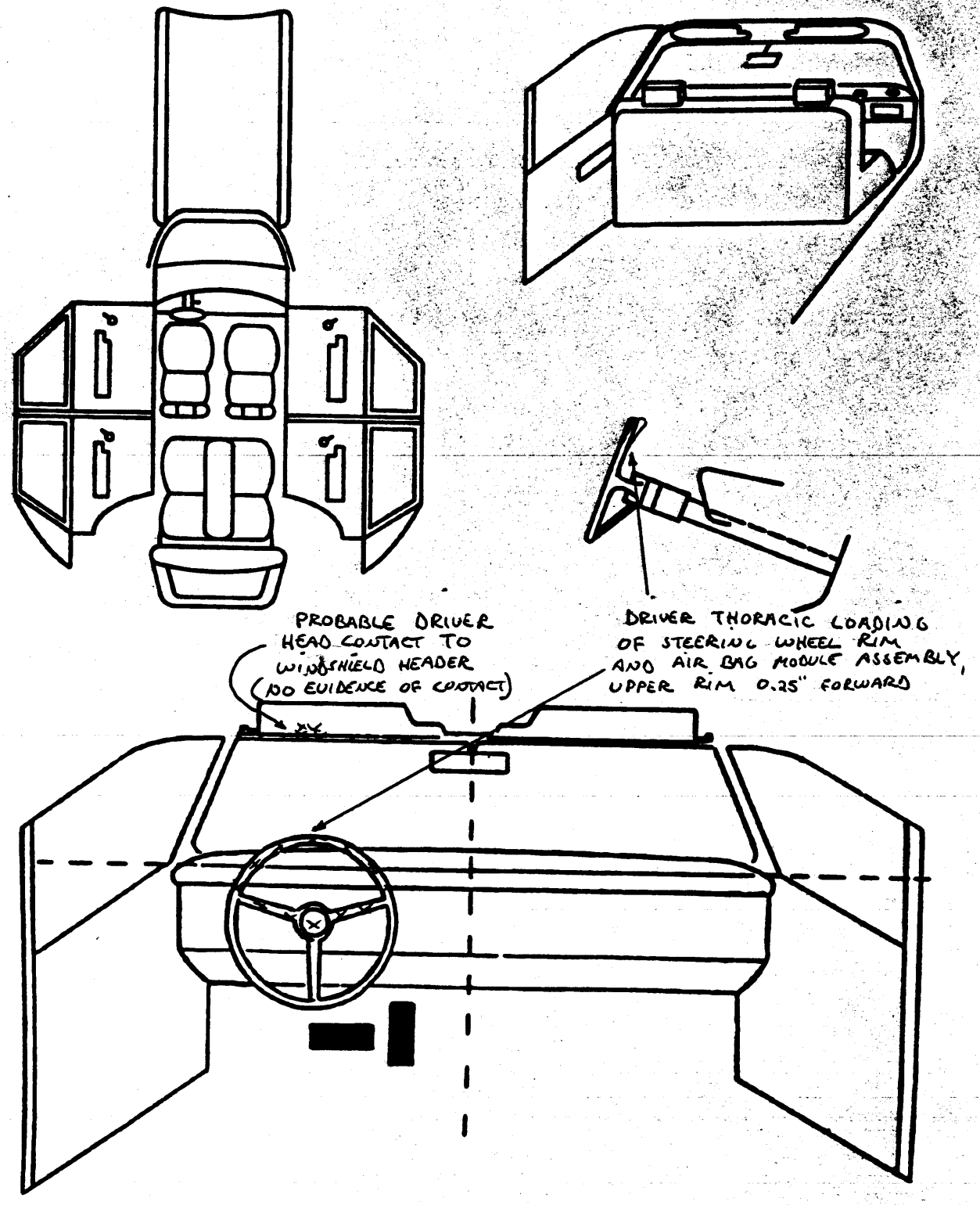
95. Instrument Panel Damage from Occupant Contact? — 0
(0) No
(1) Yes
(9) Unknown

96. Knee Bolsters Deformed from Occupant Contact? — 0
(0) No
(1) Yes
(8) Not present
(9) Unknown

97. Did Glove Compartment Door Open During Collision(s)? — 0
(0) No
(1) Yes
(8) Not present
(9) Unknown

VEHICLE INTERIOR SKETCHES

Note area of ejection/entrapment



Sketch windshield contact(s) and the damaged area(s) on the instrument panel outline (e.g., radio, glove compartment, damage to instrument panel structure.
Cross hatch contact points, draw spider webs or use other annotation as may be appropriate.
Annotate the contacted area with a letter (begin with A) and list on the Points of Occupant Contact page.

POINTS OF OCCUPANT CONTACT

Contact	Interior Component Contacted	Occupant No. If Known	Body Region If Known	Supporting Physical Evidence	Confidence Level of Contact Point
A	50	1	HEAD	NONE, SCALP CONTUSION	2
B	06	1	TORSO	UPPER RIM DISPLACEMENT	1
C					
D					
E					
F					
G					
H					
I					
J					
K					
L					
M					
N					

CODES FOR INTERIOR COMPONENTS

FRONT
- (01) Windshield
- (02) Mirror
- (03) Sunvisor
- (04) Steering wheel rim
- (05) Steering wheel hub/spoke
- (06) Steering wheel (combination of codes 04 and 05)
- (07) Steering column, transmission selector lever, other attachment
- (08) Add on equipment (e.g., CB, tape deck, air conditioner)
- (09) Left instrument panel and below
- (10) Center instrument panel and below
- (11) Right instrument panel and below
- (12) Glove compartment door
- (13) Knee bolster
- (14) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
- (15) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
- (16) Driver side air bag compartment cover
- (17) Passenger side air bag compartment cover
- (18) Windshield reinforced by exterior object (specify):_____
- (19) Other front object (specify):

LEFT SIDE
- (20) Left side interior surface, excluding hardware or armrests
- (21) Left side hardware or armrest
- (22) Left A (A1/A2)-pillar
- (23) Left B-pillar
- (24) Other left pillar (specify):
- (25) Left side window glass or frame
- (26) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (27) Other left side object (specify):
- (28) Left side window sill

RIGHT SIDE
- (30) Right side interior surface, excluding hardware or armrests
- (31) Right side hardware or armrest
- (32) Right A (A1/A2)-pillar
- (33) Right B-pillar
- (34) Other right pillar (specify):
- (35) Right side window glass or frame
- (36) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B pillar, or roof side rail.
- (37) Other right side object (specify):
- (38) Right side window sill

INTERIOR
- (40) Seat, back support
- (41) Belt restraint webbing/buckle
- (42) Belt restraint B-pillar attachment point
- (43) Other restraint system component (specify):_____
- (44) Head restraint system
- (45) Air bag (use codes "16" and "17" for injuries sustained from air bag compartment covers)
- (46) Other occupants (specify):
- (47) Interior loose objects
- (48) Child safety seat (specify):
- (49) Other interior object (specify):

ROOF
- (50) Front header
- (51) Rear header
- (52) Roof left side rail
- (53) Roof right side rail
- (54) Roof or convertible top

FLOOR
- (56) Floor (including toe pan)
- (57) Floor or console mounted transmission lever, including console
- (58) Parking brake handle
- (59) Foot controls including parking brake

REAR
- (60) Backlight (rear window)
- (61) Backlight storage rack, door, etc.
- (62) Other rear object (specify):

CONFIDENCE LEVEL OF CONTACT POINT
- (1) Certain
- (2) Probable
- (3) Possible
- (9) Unknown

AUTOMATIC RESTRAINTS

NOTES: Encode the data for each applicable front seat position. The attribute for the variables may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

AIR BAGS

		Left	Right
FIRST	Availability/Function	1	0
	Deployment	4	0
	Failure	1	0

Air Bag System Availability/Function
- (0) Not equipped/not available
- (1) Air bag

Non-functional
- (2) Air bag disconnected (specify): _____
- (3) Air bag not reinstalled
- (9) Unknown

Air Bag System Deployment
- (0) Not equipped/not available
- (1) Air bag deployed during accident (as a result of impact)
- (2) Air bag deployed inadvertently just prior to accident
- (3) Air bag deployed, accident sequence undetermined
- (4) Nondeployed
- (5) Unknown if deployed
- (6) Air bag deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
- (9) Unknown

Did Air Bag System Fail?
- (0) Not equipped/not available
- (1) No
- (2) Yes (specify): _____
- (9) Unknown

AUTOMATIC BELTS

		Left	Right
FIRST	Availability/Function	0	0
	Use	0	0
	Type	0	0
	Proper Use	0	0
	Failure Modes	0	0

Automatic (Passive) Belt System Availability/Function
- (0) Not equipped/not available
- (1) 2 point automatic belts
- (2) 3 point automatic belts
- (3) Automatic belts - type unknown

Non-functional
- (4) Automatic belts destroyed or rendered inoperative
- (9) Unknown

Automatic (Passive) Belt System Use
- (0) Not equipped/not available/destroyed or rendered inoperative
- (1) Automatic belt in use
- (2) Automatic belt not in use (manually disconnected, motorized track inoperative)
- (3) Automatic belt use unknown
- (9) Unknown

Automatic (Passive) Belt System Type
- (0) Not equipped/not available
- (1) Non-motorized system
- (2) Motorized system
- (9) Unknown

Proper Use of Automatic (Passive) Belt System
- (0) Not equipped/not available/not used
- (1) Automatic belt used properly
- (2) Automatic belt used properly with child safety seat

Automatic Belt Used Improperly
- (3) Automatic shoulder belt worn under arm
- (4) Automatic shoulder belt worn behind back
- (5) Automatic belt worn around more than one person
- (6) Lap portion of automatic belt worn on abdomen
- (7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify): _____
- (8) Other improper use of automatic belt system (specify): _____
- (9) Unknown

Automatic (Passive) Belt Failure Modes During Accident
- (0) Not equipped/not available/not in use
- (1) No automatic belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): _____
- (6) Broken retractor
- (7) Combination of above (specify):
- (8) Other automatic belt failure (specify): _____
- (9) Unknown

MANUAL RESTRAINTS

NOTES: **Encode the applicable data for each seat position in the vehicle. The attribute for the variable may be found below. Restraint systems should be assessed during the vehicle inspection then coded on the Ocupant Assessment Form.**

If a Child safety seat is present, encode the data on the back of this page.

If the vehicle has automatic restraints available, encode the appropriate data on the back of the previous page.

		Left	Center	Right
FIRST	Availability	4	3	4
	Use	00	-	-
	Failure Modes	0	-	-
SECOND	Availability	4	3	4
	Use	-	-	-
	Failure Modes	-	-	-
THIRD	Availability			
	Use			
	Failure Modes			
OTHER	Availability			
	Use			
	Failure Modes			

Manual (Active) Belt System Availability

(0) None available
(1) Belt removed/destroyed
(2) Shoulder belt
(3) Lap belt
(4) Lap and shoulder belt
(5) Belt available - type unknown

Integral Belt Partially Destroyed

(6) Shoulder belt (lap belt destroyed/removed)
(7) Lap belt (shoulder belt destroyed/removed)
(8) Other belt (specify): _____
(9) Unknown

Manual (Active) Belt System Use

(00) None used, not available, or belt removed/destroyed
(01) Inoperable (specify): _____
(02) Shoulder belt
(03) Lap belt
(04) Lap and shoulder belt
(05) Belt used - type unknown
(08) Other belt used (specify): _____
(12) Shoulder belt used with child safety seat
(13) Lap belt used with child safety seat
(14) Lap and shoulder belt used with child safety seat
(15) Belt used with child safety seat - type unknown
(18) Other belt used with child safety seat (specify): _____
(99) Unknown if belt used

Manual (Active) Belt Failure Modes During Accident

(0) No manual belt used or not available
(1) No manual belt failure(s)
(2) Torn webbing (stretched webbing not included)
(3) Broken buckle or latchplate
(4) Upper anchorage separated
(5) Other anchorage separated (specify): _____
(6) Broken retractor
(7) Combination of above (specify): _____
(8) Other manual belt failure (specify): _____
(9) Unknown

CHILD SAFETY SEAT FIELD ASSESSMENT

When a child safety seat is present enter the occupant's number in the first row and complete the column below the occupant's number using the codes listed below. Complete a column for each child safety seat present.

Occupant Number						
1. Type of Child Safety Seat						
2. Child Safety Seat Orientation						
3. Child Safety Seat Harness Usage						
4. Child Safety Seat Shield Uasge						
5. Child Safety Seat Tether Usage						
6. Child Safety Seat Make/Model	Specify Below for Each Child Safety Seat					

1. Type of Child Safety Seat
   - (0) No child safety seat
   - (1) Infant seat
   - (2) Toddler seat
   - (3) Convertible seat
   - (4) Booster seat
   - (7) Other type child safety seat (specify): _____
   - (8) Unknown child safety seat type
   - (9) Unknown if child safety seat used

2. Child Safety Seat Orientation
   - (00) No child safety seat

   Designed for Rear Facing for This Age/Weight
   - (01) Rear facing
   - (02) Forward facing
   - (08) Other orientation (specify): _____
   - (09) Unknown orientation

   Designed for Forward Facing for This Age/Weight
   - (11) Rear facing
   - (12) Forward facing
   - (18) Other orientation (specify): _____
   - (19) Unknown orientation

   Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight
   - (21) Rear facing
   - (22) Forward facing
   - (28) Other orientation (specify): _____
   - (29) Unknown orientation
   - (99) Unknown if child safety seat used

3. Child Safety Seat Harness Usage

4. Child Safety Seat Shield Usage

5. Child Safety Seat Tether Usage
   Note: Options Below Are Used for Variables 3-5.
   - (00) No child safety seat

   Not Designed with Harness/Shield/Tether
   - (01) After market harness/shield/tether added, not used
   - (02) After market harness/shield/tether used
   - (03) Child safety seat used, but no after market harness/shield/tether added
   - (09) Unknown if harness/shield/tether added or used

   Designed With Harness/Shield/Tether
   - (11) Harness/shield/tether not used
   - (12) Harness/shield/tether used
   - (19) Unknown if harness/shield/tether used

   Unknown If Designed With Harness/Shield/Tether
   - (21) Harness/shield/tether not used
   - (22) Harness/shield/tether used
   - (29) Unknown if harness/shield/tether used

   - (99) Unknown if child safety seat used

6. Child Safety Seat Make/Model
   (Specify make/model and occupant number)

   _____

   _____

   _____

   _____

HEAD RESTRAINTS/SEAT EVALUATION

NOTES: Encode the applicable data for **each seat position** in the vehicle. The attribute for these variables may be found at the bottom of the page. Head restraint type/damage and seat type/performance should be assessed during the vehicle inspection then coded on the Occupant Assessment Form.

		Left	Center	Right
FIRST	Head Restraint Type/Damage	3	-	3
	Seat Type	06	06	06
	Seat Performance	1	1	1
	Seat Orientation	1	1	1
SECOND	Head Restraint Type/Damage	0	0	0
	Seat Type	03	03	03
	Seat Performance	1	1	1
	Seat Orientation	1	1	1
THIRD	Head Restraint Type/Damage			
	Seat Type			
	Seat Performance			
	Seat Orientation			
OTHER	Head Restraint Type/Damage			
	Seat Type			
	Seat Performance			
	Seat Orientation			

Head Restraint Type/Damage by Occupant at This Occupant Position

(0) No head restraints
(1) Integral — no damage
(2) Integral — damaged during accident
(3) Adjustable — no damage
(4) Adjustable — damaged during accident
(5) Add-on — no damage
(6) Add-on — damaged during accident
(8) Other Specify): _____
(9) Unknown

Seat Type (this Occupant Position)

(00) Occupant not seated or no seat
(01) Bucket
(02) Bucket with folding back
(03) Bench
(04) Bench with separate back cushions
(05) Bench with folding back(s)
(06) Split bench with separate back cushions
(07) Split bench with folding back(s)
(08) Pedestal (i.e., column supported)
(09) Other seat type (specify): _____
(10) Box mounted seat (i.e., van type)
(99) Unknown

Seat Performance (this Occupant Position)

(0) Occupant not seated or no seat
(1) No seat performance failure(s)
(2) Seat adjusters failed
(3) Seat back folding locks or "seat back" failed specify: _____
(4) Seat tracks/anchors failed
(5) Deformed by impact of occupant
(6) Deformed by passenger compartment intrusion (specify): _____
(7) Combination of above (specify): _____
(8) Other (specify): _____
(9) Unknown

Seat Orientation (this Occupant Position)

(0) Occupant not seated or no seat
(1) Forward facing seat
(2) Rear facing seat
(3) Side facing seat (inward)
(4) Side facing seat (outward)
(8) Other (specify): _____
(9) Unknown

DESCRIBE ANY INDICATION OF ABNORMAL OCCUPANT POSTURE (I.E., UNUSUAL OCCUPANT CONTACT PATTERN)

EJECTION/ENTRAPMENT DATA

Complete the following if the researcher has any indication that an occupant was either ejected from or entrapped in the vehicle. Code the appropriate data on the Occpant Assessment Form.

EJECTION No [✓] Yes [ ]

Describe indications of ejection and body parts involved in partial ejection(s):

Occupant Number						
Ejection						
(Note on Vehicle Interior Sketch) Ejection Area						
Ejection Medium						
Medium Status						

Ejection
(1) Complete ejection
(1) Partial ejection
(3) Ejection, Unknown degree
(9) Unknown

Ejection Area
(1) Windshield
(2) Left front
(3) Right front
(4) Left rear
(5) Right rear
(6) Rear
(7) Roof
(8) Other area (e.g., back of pickup, etc.) (specify): _____
(9) Unknown

Ejection Medium
(1) Door/hatch/tailgate
(2) Nonfixed roof structure
(3) Fixed glazing
(4) Nonfixed glazing (specify): _____
(5) Integral structure
(8) Other medium (specify): _____
(9) Unknown

Medium Status (Immediately Prior to Impact)
(1) Open
(2) Closed
(3) Integral structure
(9) Unknown

ENTRAPMENT No [✓] Yes [ ]

Describe entrapment mechanism: _____

Component(s): _____

(Note in vehicle interior diagram)

ATTACHMENT D

NASS Occupant Forms

U.S. Department of Transportation
National Highway Traffic Safety Administration

OCCUPANT ASSESSMENT FORM

Form Approved
O.M.B. No. 2127-0021
NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. ~~Primary Sampling Unit Number~~ ____
2. Case Number - ~~Stratum~~ 93-06
3. Vehicle Number 01
4. Occupant Number 01

OCCUPANT'S CHARACTERISTICS

5. Occupant's Age 39
   Code actual age at time of accident.
   (00) Less than one year old (specify by month): _____
   (97) 97 years and older
   (99) Unknown

6. Occupant's Sex 1
   (1) Male
   (2) Female
   (9) Unknown

7. Occupant's Height 5'8" 173
   Code actual height to the nearest centimeter.
   (999) Unknown

   68 inches X 2.54 = 173 centimeters

8. Occupant's Weight 155 LBS. 070
   Code actual weight to the nearest kilogram.
   (999)Unknown

   155 pounds X .4536 = 070 kilograms

9. Occupant's Role 1
   (1) Driver
   (2) Passenger
   (9) Unknown

OCCUPANT'S SEATING

10. Occupant's Seat Position 11
    Front Seat
    (11) Left side
    (12) Middle
    (13) Right side
    (14) Other (specify): _____
    (15) On or in the lap of another occupant

    Second Seat
    (21) Left side
    (22) Middle
    (23) Right side
    (24) Other (specify): _____
    (25) On or in the lap of another occupant

    Third Seat
    (31) Left side
    (32) Middle
    (33) Right side
    (34) Other (specify): _____
    (35) On or in the lap of another occupant

    Fourth Seat
    (41) Left side
    (42) Middle
    (43) Right side
    (44) Other (specify): _____
    (45) On or in the lap of another occupant

    (97) In or on unenclosed area
    (98) Other seat (specify): _____
    (99) Unknown

11. Occupant's Posture 0
    (0) Normal posture

    Abnormal posture
    (1) Kneeling or standing on seat
    (2) Lying on or across seat
    (3) Kneeling, standing or sitting in front of seat
    (4) Sitting sideways or turned to talk with another occupant or to look out a rear window
    (5) Sitting on a console
    (6) Lying back in a reclined seat position
    (7) Bracing with feet or hands on a surface in front of seat
    (8) Other abnormal posture (specify): _____
    (9) Unknown

EJECTION/ENTRAPMENT

12. Ejection ___0___
    (0) No ejection
    (1) Complete ejection
    (2) Partial ejection
    (3) Ejection, unknown degree
    (9) Unknown

13. Ejection Area ___0___
    (0) No ejection
    (1) Windshield
    (2) Left front
    (3) Right front
    (4) Left rear
    (5) Right rear
    (6) Rear
    (7) Roof
    (8) Other area (e.g., back of pickup, etc.) (specify):_____
    (9) Unknown

14. Ejection Medium ___0___
    (0) No ejection
    (1) Door/hatch/tailgate
    (2) Nonfixed roof structure
    (3) Fixed glazing
    (4) Nonfixed glazing (specify):
    _____
    (5) Integral structure
    (8) Other medium (specify):
    _____
    (9) Unknown

15. Medium Status (Immediately Prior To Impact) ___0___
    (0) No ejection
    (1) Open
    (2) Closed
    (3) Integral structure
    (9) Unknown

16. Entrapment ___0___
    (NOTE: Entrapped means that part of the person was in the vehicle and mechanically restrained; jammed doors and immobilizing injuries by themselves are not sufficient to constitute entrapment.)
    (0) Not entrapped
    (1) Entrapped
    (9) Unknown

RESTRAINT SYSTEM EVALUATION

17. Manual (Active) Belt System Availability 4
(0) None available
(1) Belt removed/destroyed
(2) Shoulder belt
(3) Lap belt
(4) Lap and shoulder belt
(5) Belt available—type unknown

Integral Belt Partially Destroyed
(6) Shoulder belt (lap belt destroyed/removed)
(7) Lap belt (shoulder belt destroyed/removed)

(8) Other belt (specify): _____
(9) Unknown

18. Manual (Active) Belt System Use 00
(00) None used, not available, or belt removed/destroyed
(01) Inoperative (specify): _____
(02) Shoulder belt
(03) Lap belt
(04) Lap and shoulder belt
(05) Belt used—type unknown
(08) Other belt used (specify): _____
(12) Shoulder belt used with child safety seat
(13) Lap belt used with child safety seat
(14) Lap and shoulder belt used with child safety seat
(15) Belt used with child safety seat—type unknown
(18) Other belt used with child safety seat (specify): _____
(99) Unknown if belt used

19. Proper Use of Manual (Active) Belts 0
(0) None used or not available
(1) Belt used properly
(2) Belt used properly with child safety seat

Belt Used Improperly
(3) Shoulder belt worn under arm
(4) Shoulder belt worn behind back or seat
(5) Belt worn around more than one person
(6) Lap belt worn on abdomen
(7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): _____
(8) Other improper use of manual belt system (specify): _____
(9) Unknown

20. Manual (Active) Belt Failure Modes During Accident 0
(0) No manual belt used
(1) No manual belt failure(s)
(2) Torn webbing (stretched webbing not included)
(3) Broken buckle or latchplate
(4) Upper anchorage separated
(5) Other anchorage separated (specify): _____
(6) Broken retractor
(7) Combination of above (specify): _____
(8) Other manual belt failure (specify): _____
(9) Unknown

21. Air Bag System Availability/Function 1
(0) Not equipped/not available
(1) Air bag

Non-functional
(2) Air bag disconnected (specify): _____
(3) Air bag not reinstalled
(9) Unknown

22. Air Bag System Deployment 4
(0) Not equipped/not available
(1) Air bag deployed during accident (as a result of impact)
(2) Air bag deployed inadvertently just prior to accident
(3) Air bag deployed, accident sequence undetermined
(4) Nondeployed
(5) Unknown if deployed
(6) Air bag deployed as a result of a noncollision event during accident sequence (e.g., fire, explosion, electrical)
(9) Unknown

23. Are There Indications of Air Bag System Failure? 1
(0) Not equipped/not available
(1) No
(2) Yes (specify): _____
(9) Unknown

Note: See Variables 44 through 48 (Page 5) for Information on Automatic Belts

24. Police Reported Restraint Use 0
(0) None used
(1) Police did not indicate restraint use
(2) Shoulder belt
(3) Lap belt
(4) Lap and shoulder belt
(5) Belt used, type not specified
(6) Child safety seat
(7) Other or automatic restraint (specify): _____
(8) Restrained, type unknown
(9) Police indicated "unknown"

HEAD RESTRAINT AND SEAT EVALUATION

25. Head Restraint Type/Damage by Occupant at This Occupant Position — 3
    (0) No head restraints
    (1) Integral—no damage
    (2) Integral—damaged during accident
    (3) Adjustable—no damage
    (4) Adjustable—damaged during accident
    (5) Add-on—no damage
    (6) Add-on—damaged during accident
    (8) Other (specify): _____
    (9) Unknown

26. Seat Type (this Occupant Position) — 06
    (00) Occupant not seated or no seat
    (01) Bucket
    (02) Bucket with folding back
    (03) Bench
    (04) Bench with separate back cushions
    (05) Bench with folding back(s)
    (06) Split bench with separate back cushions
    (07) Split bench with folding back(s)
    (08) Pedestal (i.e., column supported)
    (09) Other seat type (specify): _____
    (10) Box mounted seat (i.e., van type)
    (99) Unknown

27. Seat Performance (this Occupant Position) — 1
    (0) Occupant not seated or no seat
    (1) No seat performance failure(s)
    (2) Seat adjusters failed
    (3) Seat back folding locks or "seat back" failed
    (4) Seat track/anchors failed
    (5) Deformed by impact of occupant
    (6) Deformed by passenger compartment intrusion (specify): _____
    (7) Combination of above (specify): _____
    (8) Other (specify): _____
    (9) Unknown

CHILD SAFETY SEAT

28. Child Safety Seat Make/Model ___0 0 0___
(000) No child safety seat
Applicable codes are found in your NASS CDS Data Collection, Coding and Editing
(950) Built-in child safety seat
(997) Other make/model (specify):
_____
(998) Unknown make/model
(999) Unknown if child safety seat used

29. Type of Child Safety Seat ___0___
(0) No child safety seat
(1) Infant seat
(2) Toddler seat
(3) Convertible seat
(4) Booster seat
(7) Other type child safety seat (specify):
_____
(8) Unknown child safety seat type
(9) Unknown if child safety seat used

30. Child Safety Seat Orientation ___0 0___
(00) No child safety seat

Designed for Rear Facing for This Age/Weight
(01) Rear facing
(02) Forward facing
(08) Other orientation (specify):
_____
(09) Unknown orientation

Designed For Forward Facing for This Age/Weight
(11) Rear facing
(12) Forward facing
(18) Other orientation (specify):
_____
(19) Unknown orientation

Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight
(21) Rear facing
(22) Forward facing
(28) Other orientation (specify):
_____
(29) Unknown orientation

(99) Unknown if child safety seat used

31. Child Safety Seat Harness Usage ___0 0___

32. Child Safety Seat Shield Usage ___0 0___

33. Child Safety Seat Tether Usage ___0 0___

Note: Options below applicable to Variables OA31-OA33.
(00) No child safety seat

Not Designed With Harness/Shield/Tether
(01) After market harness/shield/tether added, not used
(02) After market harness/shield/tether used
(03) Child safety seat used, but no after market harness/shield/tether added
(09) Unknown if harness/shield/tether added or used

Designed With Harness/Shield/Tether
(11) Harness/shield/tether not used
(12) Harness/shield/tether used
(19) Unknown if harness/shield/tether used

Unknown If Designed With Harness/Shield/Tether
(21) Harness/shield/tether not used
(22) Harness/shield/tether used
(29) Unknown if harness/shield/tether used

(99) Unknown if child safety seat used

INJURY CONSEQUENCES

34. Injury Severity (Police Rating) 1

(0) O - No injury
(1) C - Possible injury
(2) B - Nonincapacitating injury
(3) A - Incapacitating injury
(4) K - Killed
(5) U - Injury, severity unknown
(6) Died prior to accident
(9) Unknown

35. Treatment - Mortality 4
(0) No treatment
(1) Fatal
(2) Fatal - ruled disease (specify):

_____

Nonfatal
(3) Hospitalization
(4) Transported and released
(5) Treatment at scene - nontransported
(6) Treatment later
(8) Treatment - other (specify):

_____
(9) Unknown

36. Type Of Medical Facility (for Initial Treatment) 2
(0) Not treated at a medical facility
(1) Trauma center
(2) Hospital
(3) Medical clinic
(4) Physician's office
(5) Treatment later at medical facility
(8) Other (specify):

_____
(9) Unknown

37. Hospital Stay 00
(00) Not Hospitalized
____Code the number of days (up through 60) that the occupant stayed in hospital.
(61) 61 days or more
(99) Unknown

38. Working Days Lost 01
____Code the number of days (up through 60) that the occupant lost from work due to the accident
(00) No working days lost
(61) 61 days or more
(62) Fatally injured
(97) Not working prior to accident
(99) Unknown

STOP - GO TO VARIABLE 44 ON PAGE 7

VARIABLES 39 THROUGH 43 ARE COMPLETED BY THE ZONE CENTER

39. Time to Death 00
____Code number of hours from time of accident to time of death up through 24 hours. If time of death is greater than 24 hours, code number of days. (Note: 1 day = 31, 2 days = 32, ... n days = 30 +n up through 30 days = 60)
(00) Not fatal
(96) Fatal - ruled disease
(99) Unknown

40. 1st Medically Reported Cause of Death 00

41. 2nd Medically Reported Cause of Death 00

42. 3rd Medically Reported Cause of Death 00
____Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death
(00) Not fatal or no additional causes
(97) Other result (includes fatal ruled disease) (specify):

_____
(99) Unknown

43. Number of Recorded Injuries for This Occupant 02
____Code the actual number of injuries recorded for this occupant.
(00) No recorded injuries
(97) Injured, details unknown
(99) Unknown if injured

AUTOMATIC BELT SYSTEM

44. Automatic (Passive) Belt System Availability/ Function [0]
(0) Not equipped/not available
(1) 2 point automatic belts
(2) 3 point automatic belts
(3) Automatic belts - type unknown

Non-functional
(4) Automatic belts destroyed or rendered inoperative
(9) Unknown

45. Automatic (Passive) Belt System Use [0]
(0) Not equipped/not available/destroyed or rendered inoperative
(1) Automatic belt in use
(2) Automatic belt not in use (manually disconnected, motorized track inoperative) (specify):

(3) Automatic belt use unknown
(9) Unknown

46. Automatic (Passive) Belt System Type [0]
(0) Not equipped/not available
(1) Non-motorized system
(2) Motorized system
(9) Unknown

47. Proper Use of Automatic (Passive Belt System [0]
(0) Not equipped/not available/not used
(1) Automatic belt used properly
(2) Automatic belt used properly with child safety seat

Automatic Belt Used Improperly
(3) Automatic shoulder belt worn under arm
(4) Automatic shoulder belt worn behind back
(5) Automatic belt worn around more than one person
(6) Lap portion of automatic belt worn on abdomen
(7) Automatic lap and shoulder belt or automatic shoulder belt used improperly with child safety seat (specify):

(8) Other improper use of automatic belt system (specify):
(9) Unknown

48. Automatic (Passive) Belt Failure Modes During Accident [0]
(0) Not equipped/not available/not in use
(1) No automatic belt failure(s)
(2) Torn webbing (stretched webbing not included)
(3) Broken buckle or latchplate
(4) Upper anchorage separated
(5) Other anchorage separated (specify):

(6) Broken retractor
(7) Combination of above (specify):
(8) Other automatic belt failure (specify):

(9) Unknown

49. Seat Orientation (this Occupant Position) [1]
(0) Occupant not seated or no seat
(1) Forward facing seat
(2) Rear facing seat
(3) Side facing seat (inward)
(4) Side facing seat (outward)
(8) Other (specify):

(9) Unknown

STOP - VARIABLES 50 THROUGH 52 ARE COMPLETED BY THE ZONE CENTER

TRAUMA DATA

50. Glasgow Coma Scale (GCS) Score (at Medical Facility) [15]
(00) Not injured
(01) Injured - not treated at medical facility
(02) No GCS Score at medical facility
(03-15) Code the actual value of the initial GCS Score recorded at medical facility.
(97) Injured, details unknown
(99) Unknown if injured

51. Was the Occupant Given Blood? [1]
(1) No - blood not given
(2) Yes - blood given (specify units):
(9) Unknown if blood given

52. Arterial Blood Gases (ABG) – HCO_3 [01]
(00) Not injured
(01) Injured, ABGs not measured or reported
(02-50) Code the actual value of the HCO_3
(96) ABGs reported , HCO_3 unknown
(97) Injured, details unknown
(99) Unknown if injured

ARE ALL APPLICABLE MEDICAL RECORDS INCLUDED WITH INITIAL SUBMISSION? NO [ ] YES [ ]

UPDATE CANDIDATE? NO [ ] YES [ ]

U.S. Department of Transportation
National Highway Traffic Safety Administration

OCCUPANT INJURY FORM

Form Approved
O.M.B. No. 2127-0021
NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. ~~Primary Sampling Unit Number~~ ____
2. Case Number - ~~Stratum~~ 93-06
3. Vehicle Number 01
4. Occupant Number 01

INJURY DATA

Record below the actual injuries sustained by this occupant that were identified from the official and unofficial data sources. Remember not to double count an injury just because it was identified from two different sources. If greater than ten injuries have been documented, encode the balance on the Occupant Injury Supplement.

	Source of Injury Data	O.I.C.-A.I.S Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect	Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number
1st	5. 3	6. 1	7. 9	8. 04	9. 02	10. 1	11. 5	12. 50	13. 1	14. 1	15. 00
2nd	16. 3	17. 6	18. 4	19. 02	20. 78	21. 1	22. 6	23. 50	24. 2	25. 2	26. 00
3rd	27.	28.	29.	30.	31.	32.	33.	34.	35.	36.	37.
4th	38.	39.	40.	41.	42.	43.	44.	45.	46.	47.	48.
5th	49.	50.	51.	52.	53.	54.	55.	56.	57.	58.	59.
6th	60.	61.	62.	63.	64.	65.	66.	67.	68.	69.	70.
7th	71.	72.	73.	74.	75.	76.	77.	78.	79.	80.	81.
8th	82.	83.	84.	85.	86.	87.	88.	89.	90.	91.	92.
9th	93.	94.	95.	96.	97.	98.	99.	100.	101.	102.	103.
10th	104.	105.	106.	107.	108.	109.	110.	111.	112.	113.	114.

HS Form 433B (1/93)

This report is authorized by P.L. 89-563, Title 1, Section 106, 108, and 112. While you are not required to respond, your cooperation is needed to make the results of this data collection effort comprehensive, accurate, and timely.

SOURCE OF INJURY DATA

OFFICIAL
(1) Autopsy records with or without hospital/medical records
(2) Hospital/medical records other than emergency room (e.g., discharge summary)
(3) Emergency room records only (including associated X-rays or other lab reports)
(4) Private physician, walk-in or emergency clinic

UNOFFICIAL
(5) Lay coroner report
(6) E.M.S. personnel
(7) Interviewee
(8) Other source (specify):

(9) Police

INJURY SOURCE

FRONT
(01) Windshield
(02) Mirror
(03) Sunvisor
(04) Steering wheel rim
(05) Steering wheel hub/spoke
(06) Steering wheel (combination of codes 04 and 05)
(07) Steering column, transmission selector lever, other attachment
(08) Add on equipment (e.g., CB, tape deck, air conditioner)
(09) Left instrument panel and below
(10) Center instrument panel and below
(11) Right instrument panel and below
(12) Glove compartment door
(13) Knee bolster
(14) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, mirror, or steering assembly (driver side only)
(15) Windshield including one or more of the following: front header, A (A1/A2)-pillar, instrument panel, or mirror (passenger side only)
(16) Driver side air bag compartment cover
(17) Passenger side air bag compartment cover
(18) Windshield reinforced by exterior object (specify):
(19) Other front object (specify):

LEFT SIDE
(20) Left side interior surface, excluding hardware or armrests
(21) Left side hardware or armrest
(22) Left A (A1/A2)-pillar
(23) Left B-pillar
(24) Other left pillar (specify):
(25) Left side window glass or frame
(26) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
(27) Other left side object (specify):
(28) Left side window sill

RIGHT SIDE
(30) Right side interior surface, excluding hardware or armrests
(31) Right side hardware or armrest
(32) Right A (A1/A2)-pillar
(33) Right B-pillar
(34) Other right pillar (specify):
(35) Right side window glass or frame
(36) Right side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
(37) Other right side object (specify):
(38) Right side window sill

INTERIOR
(40) Seat, back support
(41) Belt restraint webbing/buckle
(42) Belt restraint B-pillar or door frame attachment point
(43) Other restraint system component (specify):
(44) Head restraint system
(45) Air bag (use codes "16" and "17" for injuries sustained from air bag compartment covers)
(46) Other occupants (specify):
(47) Interior loose objects
(48) Child safety seat (specify):
(49) Other interior object (specify):

ROOF
(50) Front header
(51) Rear header
(52) Roof left side rail
(53) Roof right side rail
(54) Roof or convertible top

FLOOR
(56) Floor (including toe pan)
(57) Floor or console mounted transmission lever, including console
(58) Parking brake handle
(59) Foot controls including parking brake

REAR
(60) Backlight (rear window)
(61) Backlight storage rack, door, etc.
(62) Other rear object (specify):

EXTERIOR of OCCUPANT'S VEHICLE
(65) Hood
(66) Outside hardware (e.g., outside mirror, antenna)
(67) Other exterior surface or tires (specify):
(68) Unknown exterior objects

EXTERIOR OF OTHER MOTOR VEHICLE
(70) Front bumper
(71) Hood edge
(72) Other front of vehicle (specify):
(73) Hood
(74) Hood ornament
(75) Windshield, roof rail, A-pillar
(76) Side surface
(77) Side mirrors
(78) Other side protrusions (specify)
(79) Rear surface
(80) Undercarriage
(81) Tires and wheels
(82) Other exterior of other motor vehicle (specify):
(83) Unknown exterior of other motor vehicle

OTHER VEHICLE OR OBJECT IN THE ENVIRONMENT
(84) Ground
(85) Other vehicle or object (specify)
(86) Unknown vehicle or object

NONCONTACT INJURY
(90) Fire in vehicle
(91) Flying glass
(92) Other noncontact injury source (specify):
(93) Air bag exhaust gases
(97) Injured, unknown source

INJURY SOURCE CONFIDENCE LEVEL

(1) Certain
(2) Probable
(3) Possible
(9) Unknown

DIRECT/INDIRECT INJURY

(1) Direct contact injury
(2) Indirect contact injury
(3) Noncontact injury
(7) Injured, unknown source

OCCUPANT INJURY CLASSIFICATION

Body Region

(1) Head
(2) Face
(3) Neck
(4) Thorax
(5) Abdomen
(6) Spine
(7) Upper Extremity
(8) Lower Extremity
(9) Unspecified

Type of Anatomic Structure

(1) Whole Area
(2) Vessels
(3) Nerves
(4) Organs (includes muscles/ligaments)
(5) Skeletal (includes joints)
(6) Head - LOC
(9) Skin

Specific Anatomic Structure

Whole Area
(02) Skin - Abrasion
(04) Skin - Contusion
(06) Skin - Laceration
(08) Skin - Avulsion
(10) Amputation
(20) Burn
(30) Crush
(40) Degloving
(50) Injury - NFS
(90) Trauma, other than mechanical

Head - LOC
(02) Length of LOC
(04, 06, 08) Level of Consciousness
(10) Concussion

Spine
(02) Cervical
(04) Thoracic
(06) Lumbar

Vessels, Nerves, Organs, Bones, Joints are assigned consecutive two digit numbers beginning with 02

Level of Injury

Specific injuries are assigned consecutive two-digit numbers beginning with 02.

To the extent possible, within the organizational framework of the AIS, 00 is assigned to an injury NFS as to severity or where only one injury is given in the dictionary for that anatomic structure. 99 is assigned to any injury NFS as to lesion or severity.

Abbreviated Injury Scale

(1) Minor injury
(2) Moderate injury
(3) Serious injury
(4) Severe injury
(5) Critical injury
(6) Maximum (untreatable)
(7) Injured, unknown severity

Aspect

(1) Right
(2) Left
(3) Bilateral
(4) Central
(5) Anterior
(6) Posterior
(7) Superior
(8) Inferior
(9) Unknown
(0) Whole region

OFFICIAL INJURY DATA — SOFT TISSUE INJURIES

Indicate the Location, Specific Anatomic Structure, Detail (size, depth, fracture type, head injury clinical signs and neurological deficits), and Source of all injuries indicated by official sources (or from PAR or other unofficial sources if medical records and interviewee data are unavailable.)