



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

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

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AUTO SAFETY HOTLINE
(800) 424-9393
Wash. D.C. Area 366-0123

TRANSPORTATION RESEARCH CENTER

Indiana University
[REDACTED], Indiana [REDACTED]

REMOTE AIR BAG REPORT

CASE NO. - 92-08
FLEET - PRIVATE VEHICLE
LOCATION - [REDACTED] FLORIDA
ACCIDENT DATE - [REDACTED], 1991

Submitted By:

[REDACTED]
Research Scientist

[REDACTED], 1992

Revised Submission:

[REDACTED], 1993

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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 be coupled with the investigator's expert knowledge and experience of vehicle dynamics and occupant kinematics in order to determine the precrash, 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.

Transportation Research Center
Indiana University

Remote Air Bag Case No. 92-08

Summary

This report concerns a motor vehicle accident involving an air bag equipped 1990 Mazda Miata two-door convertible, occurring on [REDACTED], [REDACTED] 1991, between [REDACTED] a.m. and [REDACTED], in [REDACTED] Florida on a City Street.

The Miata was traveling west in the left-hand through lane of a five-lane divided trafficway (two westbound through lanes, one westbound left-turn lane, and two eastbound through lanes), when the driver changed lanes to the left into the westbound left-turn lane and downshifted from fourth gear to third gear. The vehicle rotated clockwise off the left-hand side of the roadway and entered the median, impacting an eight-inch (twenty-centimeter) diameter concrete light pole located in the median. The Miata probably continued its clockwise rotation after impact and came to rest in the intersection.

The front right of the Miata impacted the eight-inch (twenty-centimeter) diameter concrete light pole. CDC is not estimable (i.e., no photographs of the damage are available) for the Miata. No reconstruction program was used on this collision.

According to the interview with the driver, the 1990 Mazda Miata was equipped with a driver supplemental restraint system (air bag), which deployed as a result of the frontal impact. The driver of the vehicle (44 year-old male) was also restrained by the available, active, three-point lap and shoulder belt. According to the driver, who indicated that he wears contact lenses, he sustained a perforated retina, which became separated (AIS-2, legal blindness resulted), and a vitreous hemorrhage of the left eye; however, the driver refused to allow us to obtain a copy of his medical records. No police accident report was completed on this crash. According to the driver, the passenger (34 year-old female) in the Miata did not sustain any injury.

TRC/IU REMOTE AIR BAG REPORT

FLEET - PRIVATE VEHICLE
LOCATION - [REDACTED] FLORIDA
CASE NO. - 92-08

ACCIDENT DATA

Location/Street: City Street
City/Township: [REDACTED] County, [REDACTED]
Florida
Area/Type: Urban/residential
Accident Date/Time: [REDACTED], 1991, between
[REDACTED] and [REDACTED]
Investigating Police Agency: Not reported/investigated
Accident Type: Car - ran-off-roadway
Occupant Injury Severity
(air bag vehicle): Detached/separated left retina
(AIS-2)--legal blindness resulted to
left eye

AMBIENT CONDITIONS

Light conditions: Dark, street lights
Weather Condition: Clear
Precipitation: None
Road Surface: Wet (from median sprinkler system)

ROADWAY

Case Vehicle

Location: City street
Number of Travel Lanes: 5-lanes, divided (two westbound through lanes,
one westbound left-turn lane, two eastbound
through lanes)
Surface Type: Asphalt
Vertical alignment: Level
Horizontal alignment: Straight

ROADWAY (CONT'D.)**Case Vehicle**

Traffic Density: Light
Speed Limit: 35-40 m.p.h. (56-64 k.p.h.)
Traffic Controls: Lane lines, on-colors traffic signal with separate left-turn indicator

VEHICLES**Case Vehicle**

Year: 1990
Make: Mazda
Model: Miata
Body Type: 2-door, convertible
V.I.N.: Unknown
Mileage: Approximately 12,000 miles (19,312 kilometers)
Securiflex windshield: Unknown
Windshield damage/source: None
Fleet: Private vehicle
Tow status: Towed due to damage
Reported Defects: None

VEHICLE DAMAGE**Case Vehicle****Deployment Impact**

Object Struck: 8-inch (20-centimeter) concrete light pole
Event number: 1
Damage location: front right
CDC: Unknown
Estimated Maximum Crush: Unknown

VEHICLE DAMAGE (CONT'D.)**Case Vehicle**

Damage components: Right front fender, left front door glass, left front door sprung--(Note: Given the reported crash configuration, logic indicates that at least the front bumper also must have been damaged.)

Repair Estimate: Unknown

Interior damage: Unknown

COLLISION SEQUENCE

According to the driver, the case vehicle (Miata) and occupants were en-route home from a party and were traveling west in the left-hand through lane of a five-lane divided trafficway (two westbound through lanes, one westbound left-turn lane, and two eastbound through lanes) when the driver changed lanes to the left into the westbound left-turn lane and downshifted from fourth gear to third gear. The driver reported that the vehicle rotated clockwise off the left-hand side of the roadway and entered the median where the crash occurred.

The driver indicated that the case vehicle impacted an eight-inch (twenty-centimeter) diameter concrete light pole located in the median. Given that the vehicle had rotated clockwise prior to impact and an impact to the front right, the case vehicle probably continued its clockwise rotation after impact. According to the driver, the case vehicle came to rest in the intersection.

The driver indicated that the case vehicle was equipped with a driver supplemental restraint system (air bag) which deployed as a result of the frontal impact. The driver also indicated that he was restrained by the available, active, three-point lap and shoulder belt. The driver reported that he sustained a perforated retina, which became separated (AIS-2), and a vitreous hemorrhage of the left eye; however, the driver refused to allow us to obtain a copy of his medical records. The driver stated that the crash was not reported to the police. The driver indicated that the passenger (34 year-old female) in the case vehicle was wearing the available, active, three-point lap and shoulder belt and did not sustain any injury.

Note: Given that the driver refused to allow his medical records to be obtained and reported: (1) clockwise rotation, (2) impact to the vehicle's front right, (3) damage to the driver's window glass (unknown if shattered or simply broken), and (4) air bag deployment, it is our opinion that the driver most likely moved forward and to the left in response to the direction of principle force. Since it is unknown how much rotation occurred at the point of impact, TRC can only speculate as to the driver's leftward versus forward movement. It is possible that the driver contacted the air bag and was deflected leftward into the driver's window glass. In this scenario, the contact mechanism that produced the perforation to the retina could have been either the air bag (as alleged by the driver) or the window frame or the window glass.

DRIVER DATA**Case Vehicle**

Age: 44

Sex: Male

Height: 68 inches (173 centimeters)

Weight: 194 pounds (88 kilograms)

Occupation: Attorney

Active Restraint System/Usage: 3-point lap and shoulder/used

Usage Source: Driver

Eye glasses/contacts: Contact lenses

Vehicle Familiarity: 15 months

Route Familiarity: Daily

Trip Plan: Party to home

Manner of Leaving Scene: Wife walked home (two or three blocks), returned to scene in another vehicle and drove husband home

Type of Medical Treatment: Initial: treated and released--home to emergency room approximately one hour after returning home from crash site

Subsequent: hospitalized overnight following eye surgery, approximately two months post-crash

DRIVER INJURIES

<u>Injury</u>	<u>Severity (OIC/AIS)</u>	<u>Source</u>
Detached/separated left retina	FLG0-2	Air bag or left front window glass/frame
Perforated left retina	FLLO-1	Air bag or left front window glass/frame
Vitreous hemorrhage left eye	FLU0-1	Air bag or left front window glass/frame

The driver indicated that he now suffers from permanent, partial loss of vision in the left eye and is legally blind in that eye.

PASSENGER INJURIES

<u>Injury</u>	<u>Severity (OIC/AIS)</u>	<u>Source</u>
None	Not applicable	Not applicable

ATTACHMENTS

NASS CDS General Vehicle Form
NASS CDS Interview Form--Case Vehicle Driver
NASS CDS Occupant Assessment Form--Case Vehicle Driver
NASS CDS Occupant Injury Form--Case Vehicle Driver
NASS CDS Occupant Assessment Form--Case Vehicle Passenger

NASS CDS General Vehicle Form

OCCUPANT RELATED

- 16. Driver Presence in Vehicle 1
 (0) Driver not present
 (1) Driver present
 (9) Unknown
- 17. Number of Occupants This Vehicle 02
 (00-96) Code actual number of occupants for this vehicle
 (97) 97 or more
 (99) Unknown
- 18. Number of Occupant Forms Submitted 02

- 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

VEHICLE WEIGHT ITEMS

- 19. Vehicle Curb Weight 02,200
2182 Code weight to nearest 100 pounds.
 (010) Less than 1050 pounds
 (135) 13,500 pounds or more
 (999) Unknown

Source: [REDACTED]

- 20. Vehicle Cargo Weight 9,900
 _____ Code weight to nearest 100 pounds.
 (00) Less than 50 pounds
 (97) 9,650 pounds or more
 (99) 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

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 0
 (0) No
 (1) Yes
- 23. Post Collision Condition of Tree or Pole (For Highest Delta V) 9
 (0) Not collision (for highest delta V) with tree or pole
 (1) Not damaged
 (2) Cracked/sheared Unknown if code 2 or 6
 (3) Tilted < 45 degrees
 (4) Tilted ≥ 45 degrees
 (5) Uprooted tree
 (6) Separated pole from base
 (7) Pole replaced
 (8) Other (specify):

 (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 998
 - 28. Heading Angle For Other Vehicle 998

29. Basis for Total Delta V (highest) 5

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

30. Total Delta V

Secondary Highest 99

____ Nearest mph _____

(NOTE: 00 means less than 0.5 mph)
 (97) 96.5 mph and above
 (99) Unknown

31. Longitudinal Component of Delta V

+ 99

____ Nearest mph _____

(NOTE: __00 means greater than -0.5 and less than +0.5 mph)
 (±97) ±96.5 mph and above
 (_99) Unknown

32. Lateral Component of Delta V

Secondary Highest

+ 99

____ Nearest mph _____

(NOTE: __00 means greater than -0.5 and less than +0.5 mph)
 (±97) ±96.5 mph and above
 (_99) Unknown

33. Energy Absorption

999.900

____ Nearest 100 foot-lbs _____

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

34. Confidence In Reconstruction Program Results (For Highest Delta V)

0

- (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

0

- (0) No inspection
- (1) Complete inspection
- (2) Partial inspection (specify): _____

36. Is this an AOPS Vehicle?

1

- (0) No
- (1) Yes

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 9
 (0) No other drugs present
 (1) Yes (other drug present) NA
 (7) Not reported
 (8) No driver present
 (9) Unknown

38. Police Reported Observation/Perception Test Type For Driver 0
 (0) No observation/perception test given
 (1) Drug recognition technician (DRT) determination using DEC process
 (2) Behavioral
 (3) Other physical observation/perception determination (specify):

 (4) DEC process available, unknown if determination made
 (5) DEC process not available, unknown if other observation/perception test given
 (7) Other observation/perception test (specify):

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

Codes For Observation/Perception Test Results

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

9 9 9 9 9

- (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)

- 0
 (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) Hearse
 (8) Fire truck or car
 (9) Unknown

ROLLOVER DATA

If GV07 (Body Type) \neq 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

0 0

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)

1 4

- (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):

 (98) No driver present
 (99) Unknown

PRECRASH DATA (Continued)

65. Critical Precrash Event 06*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 (Attempted Avoidance Manuever)

66. Precrash Stability After Avoidance Maneuver 9

- (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) 9

- (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.

NASS CDS Interview Form--Case Vehicle Driver



INTERVIEW FORM

1. Primary Sampling Unit Number <u>10</u>	Interviewee(s) Role or Name(s): <u>DRIVER</u>
2. Case Number - Stratum <u>9708</u>	
3. Vehicle Number <u>01</u>	

Review the Interview Cue Sheet prior to conducting interview(s) to ensure the acquisition of all pertinent data.

GENERAL DESCRIPTION OF ACCIDENT SEQUENCE

VEHICLE WESTBOUND ON 4-LANE, DIVIDED CITY STREET, TRAVELING IN THE LEFT HAND LANE. AS THE VEHICLE APPROACHED AN INTERSECTION, THE DRIVER "SLOGGED" THE VEHICLE INTO A LEFT-TURN-ONLY LANE, DOWNSHIFTING FROM 4TH TO 3RD GEAR. THE TURN LANE PAVEMENT WAS WET FROM AN AUTOMATIC SPRINKLER SYSTEM FOR MEDIAN GRASS, FLOWERS, AND TREES. THE VEHICLE ROTATED CLOCKWISE ("FACING PERPENDICULAR TO ORIGINAL TRAVEL PATH"), ENTERED THE MEDIAN, AND STRUCK 8-INCH DIAMETER, CONCRETE LIGHT POLE WITH THE FRONT-RIGHT. THE IMPACT SEVERED THE LIGHT POLE BUT IT REMAINED UPRIGHT. THE DRIVER'S RIGHT-FRONT PASSENGER (UNINSURED WIFE) WALKED HOME

SPECIFIC QUESTIONS

(2-3 BLOCKS) TO GET ANOTHER VEHICLE AND DRIVE BACK TO THE CRASH SCENE. THE DRIVER HAD THE CASE VEHICLE TOWED FROM THE CRASH SCENE. THIS CRASH WAS NOT INVESTIGATED BY A POLICE AGENCY, SO NO REPORT IS AVAILABLE. THE DRIVER RETURNED HOME WITH HIS WIFE, BUT, ABOUT AN HOUR LATER, HAD HER TRANSPORT HIM TO A HOSPITAL EMERGENCY ROOM WHERE HIS VISION BEGAN TO BLUR. THE DRIVER WAS TREATED FOR A BLOODCLOT TO THE LEFT EYE AND RELEASED. SOME TWO MONTHS LATER, THE DRIVER

Key to Researcher: Have you obtained the following through the interviewee(s) description and specific questions?

- | | | |
|---|--|--|
| <input type="checkbox"/> PRE-CRASH, AT IMPACT vehicle travel/driver intention | <input type="checkbox"/> Speed estimate (precrash/at impact) | <input type="checkbox"/> Previous vehicle damage |
| <input type="checkbox"/> Direction of travel | <input type="checkbox"/> Post-impact trajectory | <input type="checkbox"/> Glazing type |
| <input type="checkbox"/> Avoidance maneuvers | <input type="checkbox"/> Door status (precrash/postcrash) | <input type="checkbox"/> Vehicle glazing status |
| <input type="checkbox"/> Impact description/orientation | <input type="checkbox"/> Final rest position | <input type="checkbox"/> PAR clarifications |
| | | <input type="checkbox"/> Glove box status |

Cargo? No Yes Interviewee's Estimated Cargo Weight _____

Description of Cargo _____

Present Location of Vehicle (if not yet inspected)? _____

ACCIDENT DIAGRAM



NORTH

The use of this diagram is optional. It may serve to aid in relating interviewee accident trajectory data (i.e., pre-impact to FRP orientations) to identifiable objects in the environment.

UNDERWENT EYE SURGERY TO REPAIR A PERFORATED RETINA AND VITREOUS HEMORRHAGE. HE NOW SUFFERS FROM PERMANENT, PARTIAL LOSS OF VISION IN THE LEFT EYE AND IS LEGALLY BLIND IN THAT EYE. THE DRIVER'S WIFE WAS UNINJURED. BOTH THE DRIVER AND RIGHT-FRONT PASSENGER WERE WEARING THE AVAILABLE 3-POINT LAP AND SHOULDER BELTS. THE CAR'S VEHICLE'S AIRBAG DEPLOYED ON IMPACT WITH THE LIGHT POLE. THE DRIVER WAS WEARING CONTACT LENSES.

CRASH OCCURRED BETWEEN [REDACTED] NIGHT/[REDACTED] HOUR PRIOR TO [REDACTED]
 [REDACTED] 1990 MAZDA MIATA 2 DR, ≈ 12,000 MILES, OWNED 15 MONTHS, RETURNING HOME FROM A PARTY, DRIVES ROUTE DAILY, ATTORNEY, 6'8", 194 LBS., CAR COINED, TOWED, AIR CONDITIONER DID NOT WORK.

DARK, WITH STREET LIGHTS, 4 LANES DIVIDED, 8'-10' WIDE MEDIAN w/ GRASS, FLOWERS, TREES - LIGHT POLE AT END OF MEDIAN, ASPHALT, STRAIGHT, LEVEL, 35-40 mph SPEED LIMIT, TRAFFIC SIGNAL AT INTERSECTION WITH LEFT TURN INDICATOR, RESIDENTIAL AREA, CITY STREET

DRIVER 44 YRS, MALE, PASSENGER 34 YRS, F

BOTH WEARING 3-POINT LYS BELTS

VEHICLE DAMAGE: RF FENDER, DRIVER SIDE GLASS, DRIVER DOOR SPRINGS, AIRBAG DRIVER SIDE ONLY, DEPLOYED

OVERNIGHT STAY AT HOSPITAL WHEN OPERATED ON
 1-2 WEEKS LOST WORKTIME

GLOVE BOX REMAINED CLOSED

NO EJECTION, ENTRAPMENT

OCCUPANT DATA

Enter the occupant's seat position in the first row and complete the column below it using the information from the interviewee(s).

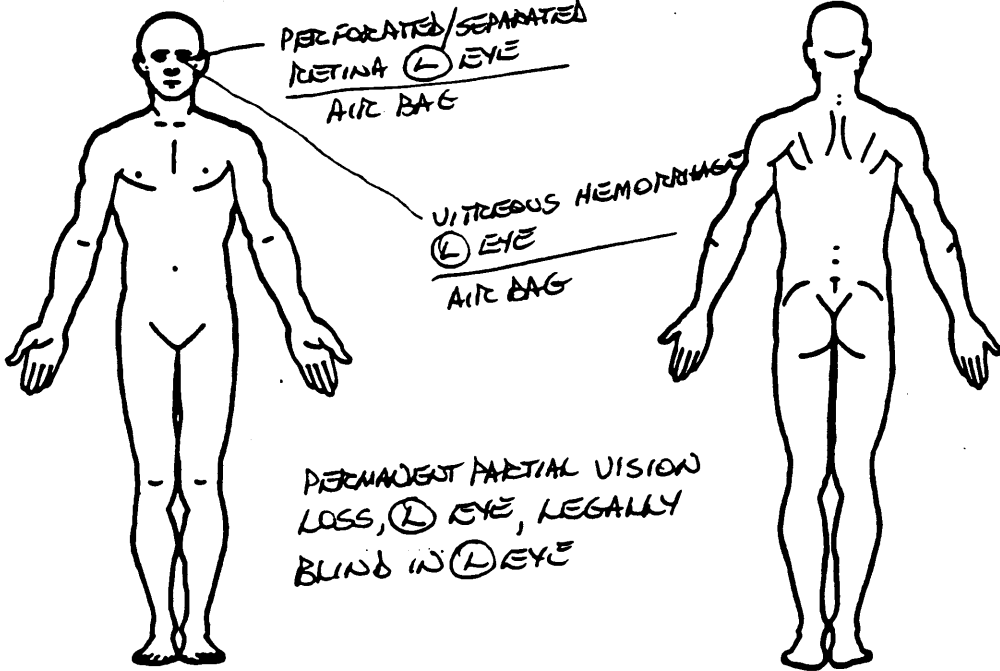
SEAT POSITION	DRIVER	PASSENGER		
RACE ? HISPANIC? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	White NO - HISPANIC	XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX	XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX XXXXXXXXXXXXXXXXXXXX
AGE/SEX	44- M	34 F		
HEIGHT (IN)	68	UNKNOWN		
WEIGHT (LBS.)	194	UNKNOWN		
POSTURE	NORMAL	NORMAL		
EJECTED? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	No	No		
DESCRIBE THE EJECTION PATH	N/A	N/A		
ENTRAPPED? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes	No	No		
DESCRIBE ENTRAPMENT	N/A	N/A		
DESCRIBE TYPE OF RESTRAINT	3-POINT MANUAL LAP + SHOULDER	3-POINT MANUAL LAP + SHOULDER		
WERE BELTS WORN? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	YES	YES		
HOW WHERE THE BELTS WORN?	NORMAL	NORMAL		
DESCRIBE ANY RESTRAINT FAILURES	NONE	NONE		
TYPE OF TREATMENT	TREATED + RELEASED 1 1/2 - TO - 2 HOURS POST-CRASH	NOT INJURED, NONE		
NAME OF TREATMENT FACILITY	UNKNOWN	N/A		
DAYS IN HOSPITAL?	0	N/A		
NO. OF LOST WORK DAYS?	1-2 WEEKS	N/A		
FOLLOW-UP TREATMENT	≈ 2 MONTHS LATER HAD EYE SURGERY REPAIR RETINA SEPARATION	N/A		
WOULD YOU SIGN A MEDICAL RELEASE?	No	N/A		

PSU Number 10 Case Number-Stratum 9208 Vehicle Number 01 Occupant Number 01

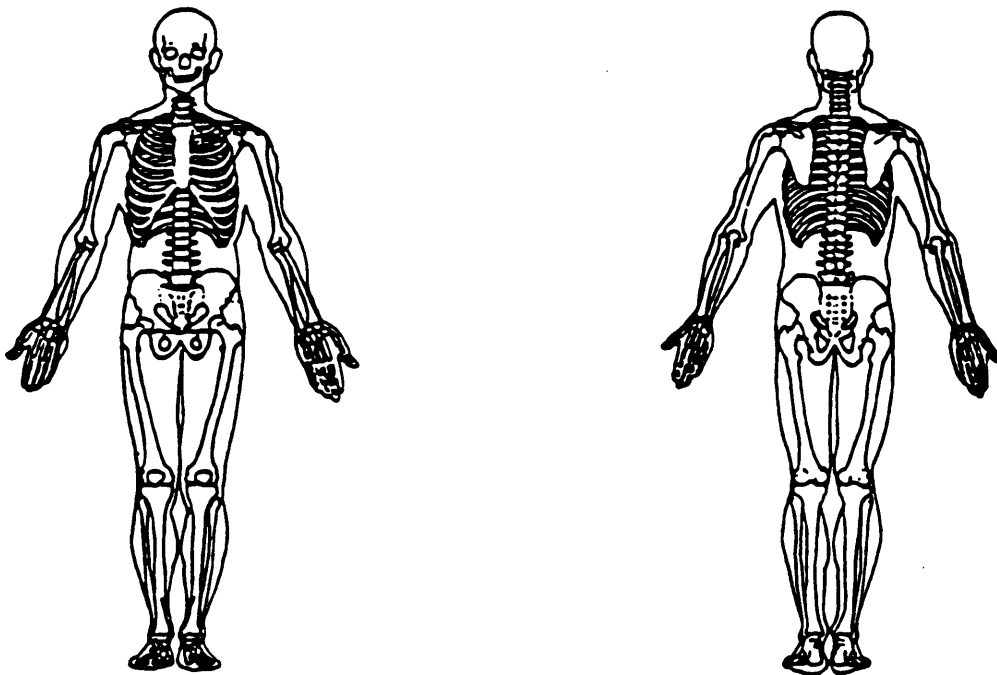
INJURY DATA FROM INTERVIEWEE(S)

Indicate the Location, Lesion, Detail, and Source of all injuries. Specify interviewee(s): DRIVER

SOFT TISSUE/INTERNAL INJURIES



SKELETAL INJURIES



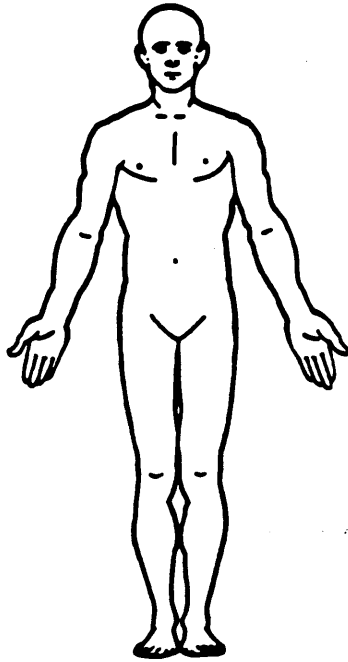
The space provided on the back of this page may be used to document injuries noted by the interviewee(s).

PSU Number 10 Case Number-Stratum 9708 Vehicle Number 01 Occupant Number 02

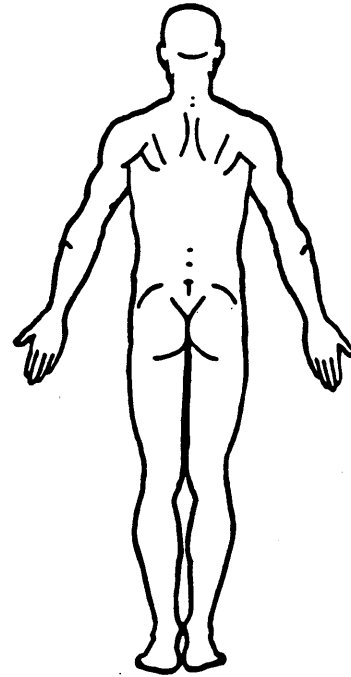
INJURY DATA FROM INTERVIEWEE(S)

Indicate the *Location, Lesion, Detail, and Source* of all injuries. Specify interviewee(s): DRIVER

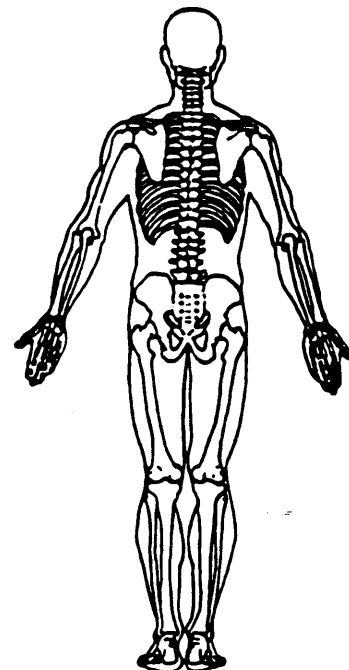
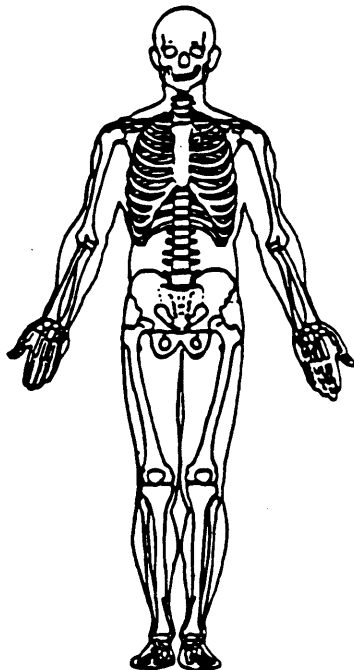
SOFT TISSUE/INTERNAL INJURIES



No
INJURY



SKELETAL INJURIES



NASS CDS Occupant Assessment Form--Case Vehicle Driver



OCCUPANT ASSESSMENT FORM

<p>1. Primary Sampling Unit Number <u>10</u></p> <p>2. Case Number - Stratum <u>9208</u></p> <p>3. Vehicle Number <u>01</u></p> <p>4. Occupant Number <u>01</u></p>	<p>11. Occupant Posture <u>0</u> (0) Normal posture (1) Abnormal posture (specify): _____ (9) Unknown</p>
EJECTION/ENTRAPMENT	
OCCUPANT'S CHARACTERISTICS	
<p>5. Occupant's Age <u>44</u> Code actual age at time of accident. (00) Less than one year old (specify by month): _____ (97) 97 years and older (99) Unknown</p> <p>6. Occupant's Sex <u>1</u> (1) Male (2) Female (9) Unknown</p> <p>7. Occupant's Height <u>68</u> Code actual height to the nearest inch. (99) Unknown</p> <p>8. Occupant's Weight <u>194</u> Code actual weight to the nearest pounds. (999) Unknown</p> <p>9. Occupant's Role <u>1</u> (1) Driver (2) Passenger (9) Unknown</p> <p>10. Occupant's Seat Position <u>11</u> <i>Front Seat</i> (11) Left side (12) Middle (13) Right side (14) Other (specify): _____ (15) On or in the lap of another occupant <i>Second Seat</i> (21) Left side (22) Middle (23) Right side (24) Other (specify): _____ (25) On or in the lap of another occupant <i>Third Seat</i> (31) Left side (32) Middle (33) Right side (34) Other (specify): _____ (35) On or in the lap of another occupant <i>Fourth Seat</i> (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</p>	<p>12. Ejection <u>0</u> (0) No ejection (1) Complete ejection (2) Partial ejection (3) Ejection, unknown degree (9) Unknown</p> <p>13. Ejection Area <u>0</u> (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</p> <p>14. Ejection Medium <u>0</u> (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</p> <p>15. Medium Status (Immediately Prior To Impact) <u>0</u> (0) No ejection (1) Open (2) Closed (3) Integral structure (9) Unknown</p> <p>16. Entrapment <u>0</u> (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</p>

RESTRAINT SYSTEM AND SEAT EVALUATION17. 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 04

- (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 1

- (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 1

- (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 1

- (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. Did Air Bag System Fail? 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 7

- (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): CRASH NOT INVESTIGATED BY POLICE
- (8) Restrained, type unknown
- (9) Police indicated "unknown"

25. Head Restraint Type/Damage by Occupant at This Occupant Position 9

- (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) 9 9
- (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) 9
- (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) 9

- (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 3

- (0) No treatment
- (1) Fatal
- (2) Fatal - ruled disease

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 01

- (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 10

- _____ 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

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 0041. 2nd Medically Reported Cause of Death 0042. 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 (specify): _____
- (99) Unknown

43. Number of Recorded Injuries for This Occupant 03

- _____ 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

TRAUMA DATA

50. Glasgow Coma Scale (GCS) Score 0 2
 (at Medical Facility)
 (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) - HCO₃ 0 1
 (00) Not injured
 (01) Injured, ABGs not measured or reported
 (02-50) Code the actual value of the HCO₃
 (96) ABGs reported, HCO₃ unknown
 (97) Injured, details unknown
 (99) Unknown if injured

UPDATE CANDIDATE? NO [] YES []

OCCUPANT INJURY FORM INCLUDED WITH INITIAL SUBMISSION? NO [] YES []

***** STOP HERE *****
IF THERE ARE NO RECORDED INJURIES
 (I.E., OA43 = 00,97,99)

NASS CDS Occupant Injury Form--Case Vehicle Driver



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

Form Approved
O.M.B. No. 2127-0021

OCCUPANT INJURY FORM

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

1. Primary Sampling Unit Number <u>10</u>	3. Vehicle Number <u> </u> <u> </u> <u> </u>
2. Case Number - Stratum <u>9208</u>	4. Occupant Number <u> </u> <u> </u> <u> </u>

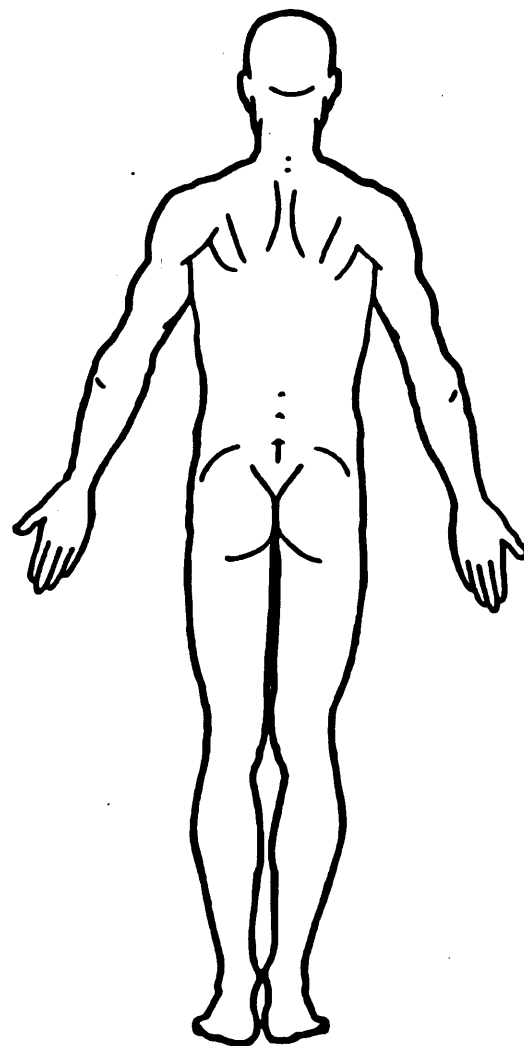
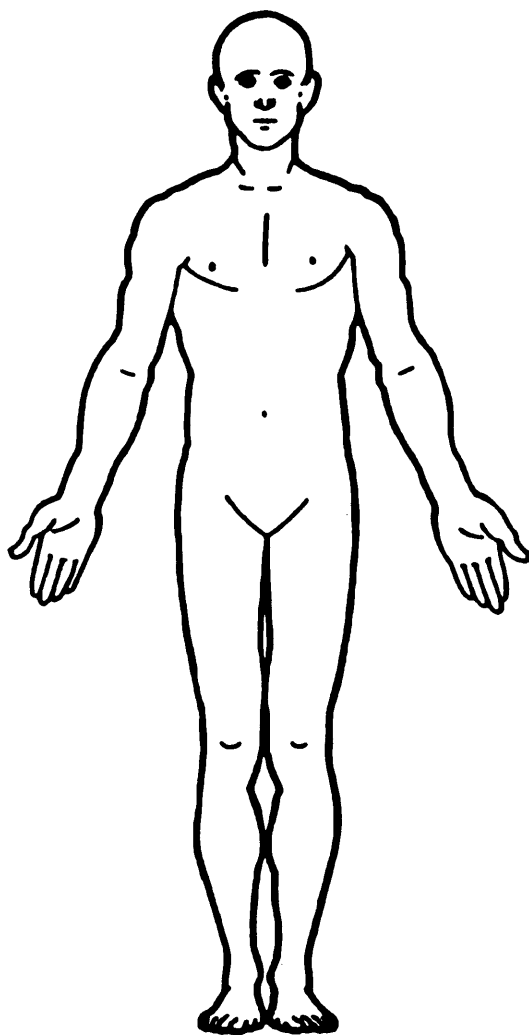
INJURY DATA

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					Injury Source	Injury Source Confidence Level	Direct/Indirect Injury	Occupant Area Intrusion No.
		Body Region	Aspect	Lesion	System Organ	A.I.S. Severity				
1st	5. <u>7</u>	6. <u>F</u>	7. <u>L</u>	8. <u>G</u>	9. <u>0</u>	10. <u>2</u>	11. <u>97</u>	12. <u>9</u>	13. <u>7</u>	14. <u>99</u>
2nd	15. <u>7</u>	16. <u>F</u>	17. <u>L</u>	18. <u>L</u>	19. <u>0</u>	20. <u>1</u>	21. <u>97</u>	22. <u>9</u>	23. <u>7</u>	24. <u>99</u>
3rd	25. <u>7</u>	26. <u>F</u>	27. <u>L</u>	28. <u>U</u>	29. <u>0</u>	30. <u>1</u>	31. <u>97</u>	32. <u>9</u>	33. <u>7</u>	34. <u>99</u>
4th	35. <u> </u>	36. <u> </u>	37. <u> </u>	38. <u> </u>	39. <u> </u>	40. <u> </u>	41. <u> </u>	42. <u> </u>	43. <u> </u>	44. <u> </u>
5th	45. <u> </u>	46. <u> </u>	47. <u> </u>	48. <u> </u>	49. <u> </u>	50. <u> </u>	51. <u> </u>	52. <u> </u>	53. <u> </u>	54. <u> </u>
6th	55. <u> </u>	56. <u> </u>	57. <u> </u>	58. <u> </u>	59. <u> </u>	60. <u> </u>	61. <u> </u>	62. <u> </u>	63. <u> </u>	64. <u> </u>
7th	65. <u> </u>	66. <u> </u>	67. <u> </u>	68. <u> </u>	69. <u> </u>	70. <u> </u>	71. <u> </u>	72. <u> </u>	73. <u> </u>	74. <u> </u>
8th	75. <u> </u>	76. <u> </u>	77. <u> </u>	78. <u> </u>	79. <u> </u>	80. <u> </u>	81. <u> </u>	82. <u> </u>	83. <u> </u>	84. <u> </u>
9th	85. <u> </u>	86. <u> </u>	87. <u> </u>	88. <u> </u>	89. <u> </u>	90. <u> </u>	91. <u> </u>	92. <u> </u>	93. <u> </u>	94. <u> </u>
10th	95. <u> </u>	96. <u> </u>	97. <u> </u>	98. <u> </u>	99. <u> </u>	100. <u> </u>	101. <u> </u>	102. <u> </u>	103. <u> </u>	104. <u> </u>

OFFICIAL INJURY DATA — SOFT TISSUE INJURIES

Indicate the Location, Lesion, 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.)



OFFICIAL INJURY DATA — SKELETAL INJURIES

Restrained?

No

Yes

Blood Alcohol
Level (mg/dl)

BAL = _____

Glasgow Coma
Scale Score

GCSS = _____

Units of Blood
Given

Units = _____

Arterial Blood
Gases

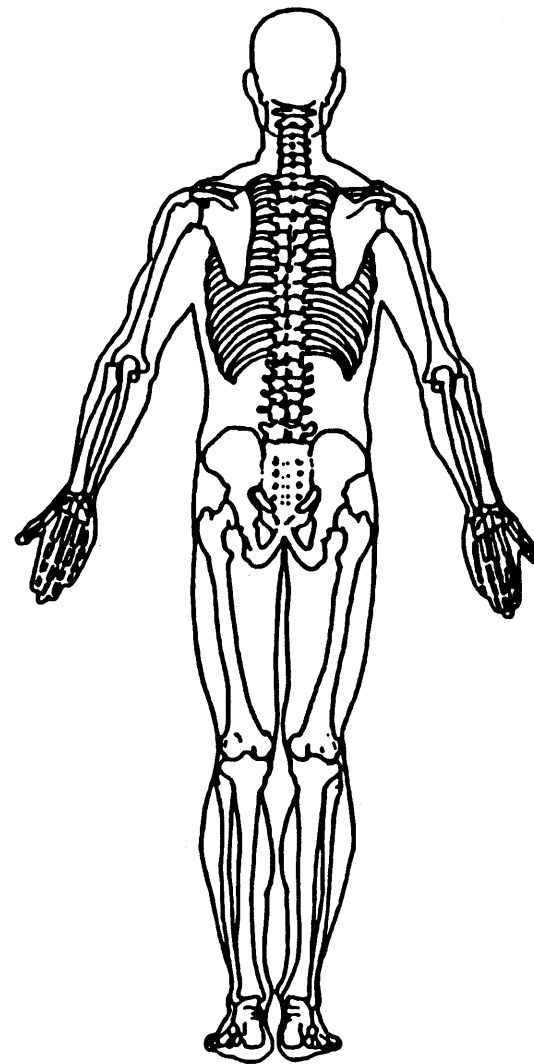
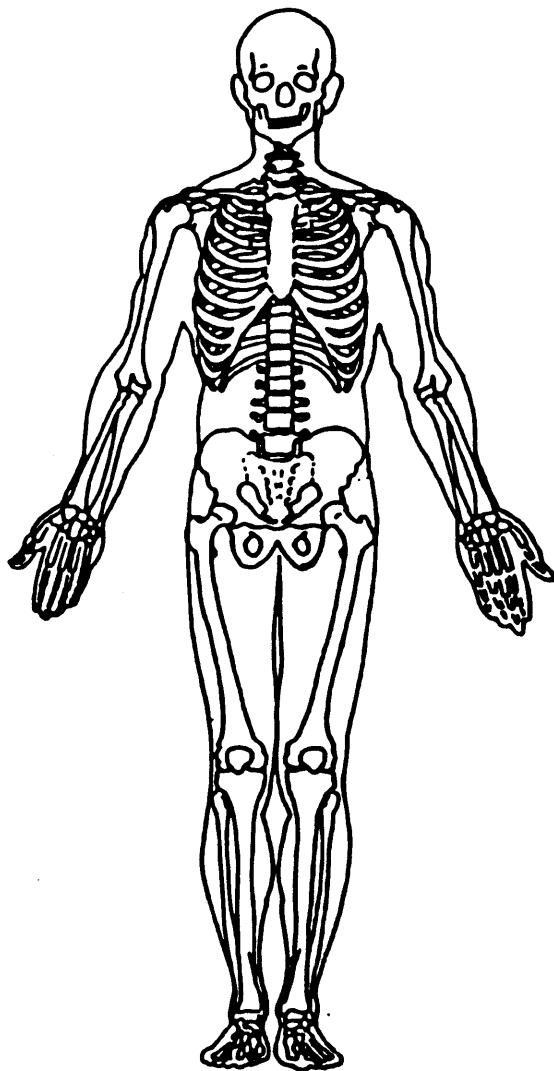
pH = _____

PO₂ = _____

PCO₂ = _____

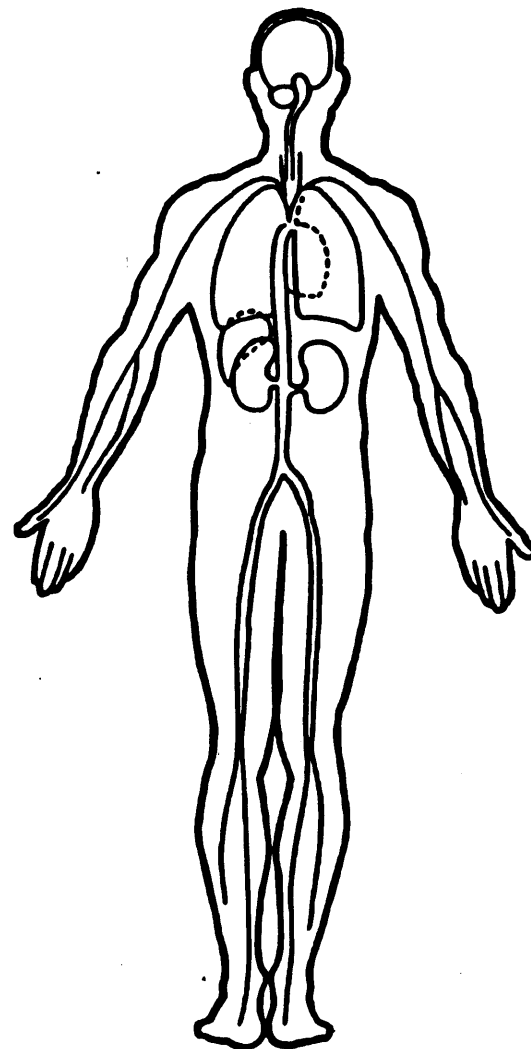
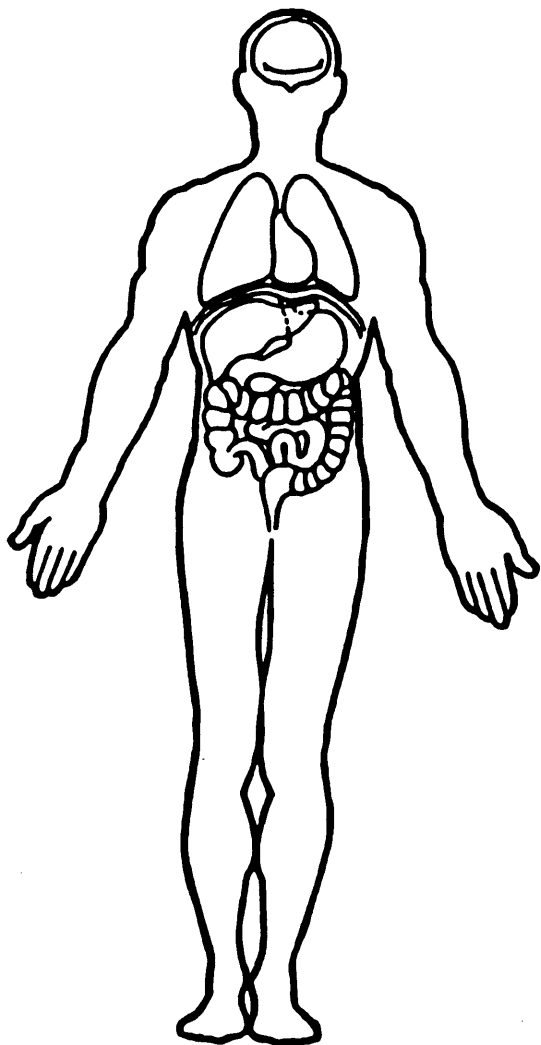
HCO₃ = _____

Indicate the Location, Lesion, 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.)



OFFICIAL INJURY DATA — INTERNAL INJURIES

Indicate the Location, Lesion, 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.)



NASS CDS Occupant Assessment Form--Case Vehicle Passenger



OCCUPANT ASSESSMENT FORM

<p>1. Primary Sampling Unit Number <u>10</u></p> <p>2. Case Number - Stratum <u>9208</u></p> <p>3. Vehicle Number <u>01</u></p> <p>4. Occupant Number <u>02</u></p>	<p>11. Occupant Posture <u>0</u> (0) Normal posture (1) Abnormal posture (specify): _____ (9) Unknown</p>
EJECTION/ENTRAPMENT	
OCCUPANT'S CHARACTERISTICS	
<p>5. Occupant's Age <u>34</u> Code actual age at time of accident. (00) Less than one year old (specify by month): _____ (97) 97 years and older (99) Unknown</p> <p>6. Occupant's Sex <u>2</u> (1) Male (2) Female (9) Unknown</p> <p>7. Occupant's Height <u>99</u> Code actual height to the nearest inch. (99) Unknown</p> <p>8. Occupant's Weight <u>999</u> Code actual weight to the nearest pounds. (999) Unknown</p> <p>9. Occupant's Role <u>2</u> (1) Driver (2) Passenger (9) Unknown</p> <p>10. Occupant's Seat Position <u>13</u> <i>Front Seat</i> (11) Left side (12) Middle (13) Right side (14) Other (specify): _____ (15) On or in the lap of another occupant <i>Second Seat</i> (21) Left side (22) Middle (23) Right side (24) Other (specify): _____ (25) On or in the lap of another occupant <i>Third Seat</i> (31) Left side (32) Middle (33) Right side (34) Other (specify): _____ (35) On or in the lap of another occupant <i>Fourth Seat</i> (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</p>	<p>12. Ejection <u>0</u> (0) No ejection (1) Complete ejection (2) Partial ejection (3) Ejection, unknown degree (9) Unknown</p> <p>13. Ejection Area <u>0</u> (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</p> <p>14. Ejection Medium <u>0</u> (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</p> <p>15. Medium Status (Immediately Prior To Impact) <u>0</u> (0) No ejection (1) Open (2) Closed (3) Integral structure (9) Unknown</p> <p>16. Entrapment <u>0</u> (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</p>

RESTRAINT SYSTEM AND SEAT EVALUATION17. 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 04

(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 1

(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 1

(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 0

(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 0

(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. Did Air Bag System Fail? 0

(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 7

(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):

CRASH NOT INVESTIGATED BY POLICE

(8) Restrained, type unknown

(9) Police indicated "unknown" _____

25. Head Restraint Type/Damage by Occupant at This Occupant Position 9

(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) 9 9
- (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) 9
- (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) 9

- (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 0

- (0) No treatment
- (1) Fatal
- (2) Fatal - ruled disease

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) 0

- (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 0 0

- (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 9 9

- 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

39. Time to Death 0 0

- 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 0 0

41. 2nd Medically Reported Cause of Death 0 0

42. 3rd Medically Reported Cause of Death 0 0

- 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 (specify): _____
 - (99) Unknown

43. Number of Recorded Injuries for This Occupant 0 0

- 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	
<p>44. Automatic (Passive) Belt System Availability/ Function <u>0</u> (0) Not equipped/not available (1) 2 point automatic belts (2) 3 point automatic belts (3) Automatic belts - type unknown</p> <p><i>Non-functional</i> (4) Automatic belts destroyed or rendered inoperative (9) Unknown</p>	<p>48. Automatic (Passive) Belt Failure Modes During Accident <u>0</u> (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</p>
<p>45. Automatic (Passive) Belt System Use <u>0</u> (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</p>	<p>49. Seat Orientation (this Occupant Position) <u>1</u> (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</p>
TRAUMA DATA	
<p>46. Automatic (Passive) Belt System Type <u>0</u> (0) Not equipped/not available (1) Non-motorized system (2) Motorized system (9) Unknown</p> <p>47. Proper Use of Automatic (Passive) Belt System <u>0</u> (0) Not equipped/not available/not used (1) Automatic belt used properly (2) Automatic belt used properly with child safety seat</p> <p><i>Automatic Belt Used Improperly</i> (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</p>	<p>50. Glasgow Coma Scale (GCS) Score (at Medical Facility) <u>0</u> <u>0</u> (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</p> <p>51. Was the Occupant Given Blood? <u>0</u> (1) No - blood not given (2) Yes - blood given (specify units): _____ (9) Unknown if blood given</p> <p>52. Arterial Blood Gases (ABG) - HCO₃ <u>0</u> <u>0</u> (00) Not injured (01) Injured, ABGs not measured or reported (02-50) Code the actual value of the HCO₃ (96) ABGs reported , HCO₃ unknown (97) Injured, details unknown (99) Unknown if injured</p>

UPDATE CANDIDATE? NO [] YES []

OCCUPANT INJURY FORM INCLUDED WITH INITIAL SUBMISSION? NO [] YES []

***** STOP HERE *****
IF THERE ARE NO RECORDED INJURIES
 (I.E., OA43 = 00,97,99)