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U.S. Department
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**National Highway
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CALSPAN ON-SITE AIR BAG DEPLOYMENT INVESTIGATION
CALSPAN CASE NO. 94-30
VEHICLE: 1991 MERCURY GRAND MARQUIS
LOCATION: [redacted], FL
DATE: [redacted] 1994

Contract No. DTNH22-94-D-07058

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.* 94-30	2. *Government Accession No.*	3. *Recipient's Catalog No.*
4. *Title and Subtitle* Calspan On-Site Air Bag Deployment Investigation Vehicle - 1991 Mercury Grand Marquis Location - [redacted], FL		5. *Report Date:* [redacted] 1994 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 Calspan Corporation P.O. Box 400 Buffalo, New York 14225		10. *Work Unit No.* 1115 (0220-0229) 11. *Contract or Grant No.* DTNH22-94-D-07058
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 Crash Date [redacted]/94 14. *Sponsoring Agency Code*
15. *Supplementary Notes* On-site investigation of an air bag deployment crash that resulted in a fracture and dislocation of the driver's right forearm.		

16. *Abstract*

This on-site investigation focused on a 1991 Mercury Grand Marquis that was involved in a front-to-side crash with a 1986 Honda Accord. The Mercury was equipped with a driver's side air bag Supplemental Restraint System (SRS) which deployed as a result of the crash.

The driver of the Mercury was a 53 year old female. She was wearing the manual 3-point lap and shoulder belt system and was driving the vehicle with the seat track adjusted to a forward position. Immediately prior to impact, the driver braked and initiated a probable counterclockwise (CCW) steering input in an attempt to avoid the crash. The full frontal area of the Marquis impacted the left passenger side area of the Honda in a 12 o'clock/9 o'clock impact configuration. As a result of the crash, the Mercury's driver's side air bag deployed.

At impact, the driver's right forearm was probably positioned across the air bag module as she applied the CCW steering input. The right lower corner of the asymmetrical air bag module cover flap contacted the anterior aspect of her right forearm resulting in a comminuted/displaced *Monteggia* fracture of the right ulna and a dislocation of the radial head. In addition, the driver sustained a radial nerve injury that affected the movement of her right hand and fingers.

17. *Key Words* Supplemental Restraint System (SRS) Frontal impact Asymmetrical module cover flap AIS-3 level injuries	18. *Distribution Statement* General Public		
19. *Security Classif. (of this report)* Unclassified	20. *Security Classif. (of this page)* Unclassified	21. *No. of Pages*	22. *Price*

TABLE OF CONTENTS

CALSPAN ON-SITE AIR BAG DEPLOYMENT INVESTIGATION
CALSPAN CASE NO. 94-30
VEHICLE: 1991 MERCURY GRAND MARQUIS LS
LOCATION: [redacted], FL

SUMMARY

This on-site investigation focused on a 53 year-old female driver who sustained a comminuted and displaced fracture of the right proximal ulna with a dislocation of the radial head (*Monteggia* fracture) from her involvement with the deploying air bag upper module cover flap in a 1991 Mercury Grand Marquis. Air bag deployment resulted from a moderate severity front-to-side impact sequence with a stopped 1986 Honda Accord at a three-leg intersection. The driver of the Mercury was admitted to a local hospital for surgical repair of the fractures. In addition to the skeletal injuries, she sustained a right radial nerve injury which affected the movement of her fingers and hand.

This crash occurred at a three-leg intersection of a U.S. Route and a local collector in [redacted] FL, on [redacted] 1994 during daylight hours. The U.S. Route was a four-lane divided roadway that curved to the left (relative to the Grand Marquis' path of travel) and was level. The asphalt road surface was dry with a posted speed limit of 72 km/h (45 mph). There was no physical evidence related to this crash at the scene at the time of our inspection.

This air bag equipped 1991 Mercury Grand Marquis LS, 4 dr. sedan, was equipped with a tilt steering wheel, six-way power 50/50 front seats, power door locks, power windows, steering wheel mounted cruise control, and manual 3-point lap and shoulder belts in the four outboard seated positions. The vehicle had an odometer reading of 48,770 km (30,292 miles) and was identified by the following vehicle number (VIN): 2MECM75F6MX.

The Grand Marquis was traveling in an easterly direction on the inboard travel lane of the divided U.S. Route at a driver estimated speed that was less than the 72 km/h (45 mph) speed limit as she approached the 3-leg intersection. She stated that a truck was traveling adjacent to her on the outboard lane of the U.S. Route. As she approached the intersection, the driver of the 1986 Honda Accord apparently failed to detect the eastbound vehicles and accelerated across the outboard lane and stopped near the median crossover, partially obstructing the inboard travel lane. The driver of the Grand Marquis braked with a moderate pedal force, but did not lock the wheels and steered in a counterclockwise direction in an attempt to avoid the Honda. The truck traveling to her right on the U.S. Route blocked an escape route toward the inboard lane. The Grand Marquis continued in a tracking mode to impact.

The frontal area of the Grand Marquis impacted the left passenger side area of the stopped Honda. Resultant directions of force were 12 o'clock for the Grand Marquis and 9 o'clock for the Accord. Direct contact damage on the Mercury began 48.9 cm (19.25") left of center and extended 136.5 cm (53.75") to the right front corner. The direct contact damage consisted of abrasions to the bumper rub strip and paint transfers on the header panel. Residual crush was minimal, measured at

1.5 cm (0.6") at the right corner of the front bumper. Both front bumper energy absorbers compressed 5.4 cm (2.1") and returned to the original pre-crash length of 6.6 cm (2.6"). Damaged components included the front bumper, the license plate and frame assembly, grille, header panel, and the right front fender. There was no damage to the glazing or to the interior components, and no passenger compartment intrusion.

The 1986 Honda Accord sustained moderate left side damage which involved the front fender, door, and the quarter panel. Direct contact damage began 95.9 cm (37.75") forward of the right rear axle and extended 115.6 cm (45.5") to a point that was 7.6 cm (3") forward of the left A-pillar on the left front fender. The combined induced and direct contact damage (Field L) was 261.6 cm (103") which extended between the front and rear wheel openings. Crush values at the lower door level were as follows: $C_1 = 0$ cm, $C_2 = 6.4$ cm (2.5"), $C_3 = 19.1$ cm (7.5"), $C_4 = 18.4$ cm (7.25"), $C_5 = 10.8$ cm (4.25"), $C_6 = 0$ cm. Maximum crush was 20.3 cm (8.0") located on the lower door panel 151.1 cm (59.5") forward of the left rear axle.

The front-to-side impact resulted in velocity changes of 14 km/h (9 mph) for the Mercury Grand Marquis and 21 km/h (13.5 mph) for the Honda Accord. As a result of the impact induced deceleration, the Mercury's driver's side supplemental air bag system deployed. The driver of the Grand Marquis was a 53 year old female with a stated height of 153.5 cm (60.5") and weight of 62.1 kg (138 lbs.). She stated that she typically drove the Grand Marquis with the power seat adjusted to a forward track position and the seat back set to an upright position. Although the manual 3-point lap and shoulder belt system did not yield evidence of usage during the crash, the driver stated that she was wearing the belt system. In an attempt to avoid the collision, the driver braked and steered to the left. She noted that in her normal driving position, her hands are placed at the 7-8 and 2-3 o'clock positions. During the avoidance maneuver, the driver applied a counterclockwise steering input which probably placed her right hand at the 11-12 o'clock position as the air bag deployed which exposed the lateral-anterior aspect of her right forearm to the module assembly.

The air bag module cover opened at the designated tear points in an asymmetrical H-configuration. The large upper flap measured 20.3 cm (8.0") horizontally and 12.4 cm (4.875") vertically while the lower flap had respective measurements of 20.3 cm (8.0") X 3.5 cm (1.375"). The right lower corner area of the upper air bag module cover flap contacted the lateral-anterior aspect of the driver's right forearm which resulted in a *Monteggia* fracture. This fracture type involved a comminuted and displaced fracture of the proximal ulna (AIS-3) and a dislocation of the right radial head (AIS-1) at the elbow. In addition to the skeletal injuries, the driver sustained right radial nerve palsy (AIS-1) which affected the range of motion of her right fingers. There was no soft tissue injury overlying the fracture site. The driver was wearing a long-sleeved light weight blouse with the sleeves folded up to the elbows. Due to her forward driving position and subsequent forward trajectory in response to the impact, the driver's face contacted the deploying air bag. Her facial contact was evidenced by lipstick and makeup transfers. The lipstick transfer was located 24.3-29.0 cm (9.6-11.4") left of the centerline of the bag and 0-2.9 cm (0-1.1") below the horizontal centerline. No injury resulted from the facial contacts.

The driver stated that she was wearing eyeglasses that were attached to a strap around her neck with the glasses resting on her chest. The deploying air bag probably compressed the glasses against her chest which deformed the right side arm of the plastic and metal framed eyeglasses. During the inspection of the vehicle, a 156.5 cm (6.5") X 6.1 cm (2.4") T-shaped tear was noted to the bottom surface of the bag located between the peripheral seam and the gas generator. Several of the frayed edges along the tear appeared to be singed due to the heat generated by the inflator during deployment of the SRS.

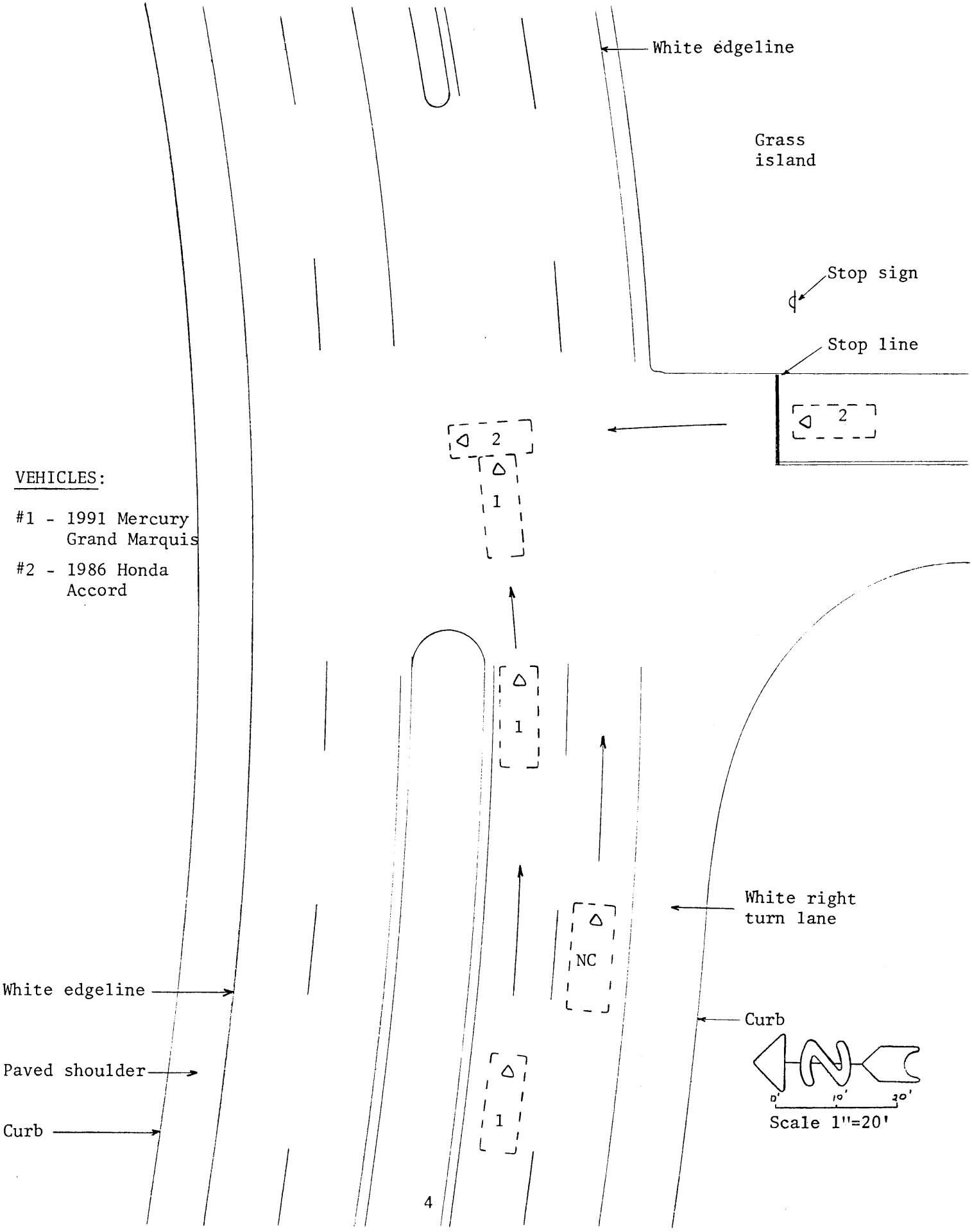
The driver of the Grand Marquis stated that her vehicle came to rest engaged against the left side of the struck Honda. She detected a smoke and dust-like substance within the vehicle which she associated with air bag deployment. The driver felt pain in her right forearm and observed a deformity which she assumed to be a fracture. The driver immediately exited the vehicle and held her right arm. A passing motorist stopped at the crash site and reached in the Grand Marquis to turn off the ignition as the engine remained running with the transmission in the drive mode. The driver subsequently returned to the vehicle where she waited for emergency personnel to arrive on-scene. She stated that due to the forward seat track position, she could not re-enter the vehicle in a side-sitting position, therefore the power seat had to be moved rearward to facilitate her seated position.

The driver of the Grand Marquis was subsequently transported by ambulance to a local hospital where she was examined for injury. The radiologist report identified the Monteggia fracture and the attending physician noted the radial nerve injury. Surgical repair of the fracture was recommended, however, the driver preferred to have the surgery at a hospital within a close proximity to her residence. The arm was placed in a long arm posterior splint and the driver was transported by her husband in a private vehicle to a hospital within the county in which she resides.

Upon arrival at the hospital, the fractures were confirmed by the orthopedic surgeon and the driver was admitted for repair of the Monteggia fracture on Saturday, September 10. The surgical procedures included a reduction of the right radial head dislocation and an open reduction of the comminuted and displaced ulna fracture. The fracture required the application of a seven slot titanium plate with three 3.5 cortical screws placed above and below the fracture site. A coralline hydroxyapatite bone graft material was used to fill the comminuted fracture. A long posterior fiberglass splint was applied to the arm and the driver was discharged from the facility three days following the crash.

The 1991 Grand Marquis was towed from the scene to an automotive body repair shop. The repair estimated was $3221.57 which included replacement of the driver's side air bag module. The driver and the three occupants of the Honda were not injured. The investigating officer issued the driver of the Honda a traffic citation for a failure to yield violation.

CRASH SCHEMATIC
CALSPAN CASE NO. 94-30



VEHICLES:

#1 - 1991 Mercury Grand Marquis

#2 - 1986 Honda Accord

CALPSAN ON-SITE AIR BAG DEPLOYMENT INVESTIGATION
CALSPAN CASE NO. 94-30
VEHICLE: 1991 MERCURY GRAND MARQUIS
LOCATION: [redacted], FL

CRASH DATA

City/Township:	[redacted], FL
Area/Type:	Rural/Commercial
Crash Date/Time:	[redacted], 1994
Investigating Police Agency:	[redacted] Police Department
Crash Type:	Car/Car, front-to-side configuration
Air Bag Driver Injury Severity:	Serious (AIS-3)

AMBIENCE

Viewing Conditions:	Daylight
Weather:	Clear
Precipitation:	None
Road Surface:	Dry

HIGHWAY

	Air Bag Vehicle	Vehicle #2
Type:	U.S. Route	Local street
Number of Lanes:	5, divided, inclusive of right turn lane	2
Width:	10.8 m (35.5'), eastbound lanes	9.4 m (30.8')
Surface:	Asphalt	Asphalt

HIGHWAY (Cont'd)

	Air Bag Vehicle	Vehicle #2
Median:	Curbed grass median	None
Edge:	South edge- 0.6 m (2') paved shoulder	East edge- Grass shoulder
	North edge- 0.5 m (1.5') paved median shoulder	West edge- grass shoulder
Vertical Alignment:	Level	Level
Horizontal Alignment:	Left Curve	Straight
Estimated Coefficient of Friction:	.75	.75
Traffic Density:	Light	Light

TRAFFIC CONTROLS

Signals:	None	None
Signs:	None pertinent	Stop sign
Markings:	Solid white outboard edgeline, solid white right turn lane line, broken white lane lines, solid yellow inboard edgeline	Double yellow centerlines, solid white stop line
Speed Limit:	72 km/h (45 mph)	56 km/h (35 mph)

VEHICLES

	Air Bag Vehicle	Vehicle #2
Description:	1991 Mercury Grand Marquis LS, 4 door sedan	1986 Honda Accord, 3 door hatchback
V.I.N.:	2MECM75F6MX (production number deleted)	JHMBA5348GC (production number deleted)

VEHICLES (CONT'D)	Air Bag Vehicle	Vehicle #2
Date of Manufacture:	11/90	Unknown
Color:	White	White
Odometer:	48,770 km (30,292 miles)	224,486 km (139,432 miles)
Engine:	V-8, 5.0 liter	4 cylinder
Transmission:	4-speed automatic overdrive, column mounted transmission selector lever	5-speed manual
Steering:	Power-assisted	Power-assisted rack-and-pinion
Brakes:	Power-assisted front disc/rear drum	Power-assisted front disc/rear drum
Padding:	Upper, mid, and lower instrument panel, soft edged steering wheel rim and air bag module cover, knee bolster, adjustable head restraints, door panels	Upper, mid, and lower instrument panel, adjustable head restraints, door panels
Manual Restraints:	3-point lap and shoulder belts in the four outboard seated positions, center front and center rear lap belts	3-point lap and shoulder belts in the left front and right front positions, 3 rear seat lap belts
Automatic Restraints:	Driver's side air bag Supplemental Restraint System (SRS) which deployed as a result of the frontal impact with vehicle #2	None
Tow Status:	Towed, not due to damage	Towed due to damage

VEHICLE DAMAGE

Exterior:

Air Bag Vehicle

The 1991 Mercury Grand Marquis sustained minor frontal damage from its impact sequence with Honda Accord. Direct contact damage began 48.90 cm (19.25") left of center on the rub strip and extended136.53 cm (53.75") to the right front corner. There was minimal residual crush at bumper level, however, the energy absorbing devices compressed 5.3 cm (2.1") and returned to the original pre-crash length of 6.6 cm(2.6"). Maximum residual bumper crush was 1.5 cm (0.6") located at the right corner. The crush profile at bumper level was as follows: C_1 = 0.3 cm (0.1"), C_2 = 0.3 cm (0.1"), C_3 = 0.3 cm (0.1"), C_4 = 0.3 cm (0.1"), C_5 = 0.6 cm (0.25"), C_6 = 1.5 cm (0.6").

Damaged components included a dented bumper, an abraded bumper rub strip, deformed license plate, cracked plastic grille, fractured header panel, fractured right parking light lens, and a small diameter dent on top of the right front fender at the leading edge. There was no door or glazing damage.

CDC: 12-FDEW-1

Repair Cost: $3221.57

Vehicle #2

The 1986 Honda Accord sustained moderate left side damage. Maximum crush was 18.4 cm (7.25") located on the left door below the rub strip 180.6 cm (71.1") forward of the rear axle. Direct contact damage began 95.89 cm (37.75") forward of the rear axle and extended 115.6 cm (45.5") forward to the left A-pillar. The combined induced and direct contact damage began 24.77 cm (9.75") forward of the rear axle and extended 261.6 cm (103.0") forward to the leading edge of the left front wheel opening. Crush values at the lower door level were as follows: C_1 = 0 cm, C_2 = 6.4 cm (2.5"), C_3 = 19.1 cm (7.5"), C_4 = 18.4 cm (7.25"), C_5 = 10.8 cm (4.25"), C_6 = 0 cm.

The left side impact produced damage to the door, front fender , A-pillar, sill, quarter panel, and the door glazing.

09-LYEW-2

$4000.00 (estimated)

AUTOMATIC RESTRAINT SYSTEM

The 1991 Mercury Grand Marquis was equipped with a driver's side air bag Supplemental Restraint System (SRS) that deployed as a result of the vehicle's frontal impact sequence with the side of the Honda Accord. The SRS consisted of three front mounted crash sensors, a safing sensor and diagnostic monitor, a knee bolster, an air bag indicator lamp, and the steering wheel mounted clock spring and driver's side air bag module.

The crash sensors were mounted to the radiator support panel. Two of the sensors were mounted to the outboard aspect of the support panel behind the headlamp assemblies. The third crash sensor was mounted to the top of the radiator support panel forward of the hood latch assembly and directly behind the header panel. All three sensors remained intact and were not displaced or damaged by the crash. The safing sensor and the diagnostic monitor were mounted under the instrument panel and the unit was not damaged. The SRS indicator lamp was field tested during the inspection of the Grand Marquis. With the ignition switch turned to the run-position, the indicator lamp glowed for a 6 second period then flashed continuously.

The steering wheel mounted air bag module trim cover opened at the designated tear points in an asymmetrical H-configuration. The cover flaps were hinged at the 12 and 6 o'clock positions. The large upper module cover flap measured 20.3 cm (8.0") in width, 12.4 cm (4.875") in height, and 7.9 mm (5/16") in thickness. The lower cover flap had respective measurements of 20.3 cm (8.0") and 3.5 cm (1.375"). There was no damage or occupant contact evidence to the module cover flaps.

The air bag was constructed of a woven nylon fabric with a neoprene liner. In its deflated state, the bag was approximately 61 cm (24") in diameter and was tethered by four internal tether straps. The tethers extended from a 17.8 cm (7") center reinforcement that was sewn to the center of the bag with three rows of stitching. The bag was vented by two 2.5 cm (1.0") diameter ports located at the 2 and 8 o'clock positions. A lipstick transfer was located on the face of the bag at the lower left quadrant. This transfer was positioned 24.3-29.0 cm (9.6-11.4") left of center and 0-2.9 cm (0-1.1") below the horizontal centerline. Located inboard of the lipstick transfer was a flesh-tone makeup transfer that was approximately 5 cm (2") in diameter. The makeup transfer was positioned on the horizontal centerline and was located 17.8 cm(7.0") left of the vertical centerline.

The air bag fabric was torn on the on the forward surface of the fabric from the peripheral seam at the 6 o'clock position (bottom) of the bag. The tear was T-shaped with a horizontal length of 16.5 cm (6.5") and a vertical length of 6.1 cm (2.375"). The intercept point was located 4.45 cm (1.75") inboard of the right edge of the horizontal tear and 17.1 cm (6.75") from the peripheral seam. The left edge of the horizontal tear was located 7.9 cm (3.125) right of the left vent port. Several of the frayed edges along the tear point appeared to be singed due to the heat generated by the inflator during deployment. There was no evidence of snagging of the bag fabric on the module cover flaps or the bracket which retains the module to the steering assembly.

The air bag module was identified by two bar-coded labels that were affixed to the stamped backing plate. The labels yielded the following identification numbers:

VEHICLE VELOCITY ESTIMATES

	Air Bag Vehicle	Vehicle #2
Travel Speed:	<72 km/h (driver estimate)	Unknown
Impact Speed:	29 km/h (18 mph)	0 km/h
Total Delta V:	14 km/h (9 mph)	21 km/h (13.5 mph)
Longitudinal Delta V:	-14 km/h (9 mph)	0 km/h
Lateral Delta V:	0 km/h	-21 km/h (13.5 mph)
Energy Absorption:	21,032 joules (15510 ft-lb)	18339 joules (13524 ft-lb)

COLLISION SEQUENCE

Pre-Crash: The 1991 Mercury Grand Marquis was traveling in an easterly direction on the inboard travel lane of the divided U.S. Route as she approached the three-leg T intersection. The driver estimated her speed at less than the 72 km/h (45 mph). She stated that as she approached the three-leg intersection, a truck was traveling adjacent to her on the outboard travel lane at a comparable speed. There were no traffic controls for east/westbound traffic flow through the intersection.

Vehicle #2, the 1986 Honda Accord, was traveling in a northerly direction on an approach to the intersection. The driver was probably decelerating the vehicle as she approached the stop sign which regulated northbound traffic turning left onto the U.S. Route. She reportedly stopped at the mouth of the intersection, however, due to a previous injury and the use of a cervical collar, the driver was unable to rotate her head sufficiently to her left to check for approaching traffic. The driver accelerated her vehicle into the eastbound lanes and stopped at the median crossover, partially obstructing the inboard lane to check for approaching westbound traffic prior to turning left to proceed west.

The driver of the Grand Marquis observed the Honda emerge from the intersection. She stated that she initially braked with moderate force (no lock-up) and applied a counterclockwise steering input, however, the Honda continued across the eastbound lanes and stopped. She maintained the braking force as her vehicle continued forward to impact.

Crash: The frontal area of the Mercury Grand Marquis impact the left passenger compartment area of the stopped Honda Accord at the junction of the inboard travel lane and the median crossover. The Grand Marquis' impact speed was computed by the CRASHPC program at 29 km/h (18 mph). Resultant directions of force were 12 o'clock for the Mercury and 9 o'clock for the struck Honda

COLLISION SEQUENCE (CONT'D)

Crash (Cont'd):
Accord. As a result of the impact, the Grand Marquis underwent a velocity change of 14 km/h (9mph) while the Accord underwent a barrier equivalent velcity change of 21 km/h (13.5 mph). Vehicle changes were computed by the damage and trajectory alghorithm of the CRASHPC program.

Post-Crash: There was no physical evidence at the crash site to support the impact and final rest positions of the involved vehicles. The police report and driver statements concurred that the vehicles came to rest engaged near the point of impact. The Mercury Grand Marquis came to rest against the left passenger compartment area of the struck Honda Accord in the inboard eastbound travel lane at the median crossover. At rest, the vehicle was facing in a an easterly direction. The Honda Accord came to rest perpendicular to the eastbound travel lanes and was straddling the inboard lane and the median crossover, facing in a northerly direction.

The driver of the Mercury Grand Marquis stated that immediately following the carsh, she noted a smoke-like or dust material in the vehicle, however, she was not concerned by its presence. She felt pain in her right arm and noted that the arm appeared to be fractured. The driver stated that her right hand remained on the steering wheel after the crash and the deployment of the supplemental driver's side air bag. While in the vehicle, the driver had difficulty in moving her or lifting her right fingers. She reported that the vehicle's engine continued to run and that a passing moptorist stoped at the crash scene and reached in the vehicle and turned the ingnition switch to the off-position.

The driver of the Mercury Grand Marquis unbuckled the manual belt system with her left hand and exited the vehicle unassisted. She retrieved her purse from the vehicle and moved the seat rearward and sat back in the vehicle and waited for emergency personnel to arrive on-scene. The driver stated that she did not notice the air bag extending out of the steering assembly at all during her post-crash activities.

HUMAN FACTORS/OCCUPANT DATA

Air Bag Vehicle

Driver:	53 year old female
Height:	153.7 cm (60.5")
Weight:	62 kg (138 lbs.)
Posture:	Normal driving posture with seat adjusted to a forward track position
Manual Restraint System Usage:	3-point lap and shoulder belt system

HUMAN FACTORS/OCCUPANT DATA (CONT'D)

Usage Source:	Driver interview, vehicle inspection
Eyeware:	None, prescription (reading) eyeglasses hanging from neck strap
Vehicle Familiarity:	3 years
Route Familiarity:	Infrequent usage
Trip Plan:	Returning to residence
Mode of Transport From Scene:	Ambulance
Medical Treatment:	Initially treated and diagnosed at a local hospital for right forearm fracture. Transferred by private vehicle to another hospital (closer to residence) where she was admitted for surgical repair of the fractures.
Hospitalization:	3 days

DRIVER INJURIES

Injury	Severity (OIC/AIS)	Injury Mechcanism
Comminuted, displaced *Monteggia* fracture of the right proximal ulna	Serious (753204.31)	Upper air bag module cover flap
Dislocation of the right radial head	Minor (750630.11)	Upper air bag module cover flap
Right radial nerve palsy	Minor (730499.11)	Upper air bag module cover flap

DRIVER KINEMATICS

The driver of 1991 Mercury Grand Marquis was in a normal driving posture at impact with the six-way power seat adjusted to a forward track position. She stated that she was properly wearing the manual 3-point lap and shoulder belt system. There were faint abrasive type routine wear marks on the latchplate, however, there was no evidence of belt loading due to the driver's forward position, air bag deployment and subsequent loading, and the low-speed decelerative pulse that the vehicle sustained from the crash. The driver was wearing a long sleeve blouse with the sleeves folded up to the elbows and had her reading eyeglasses hanging from a strap around her neck with the glasses resting on her chest. She was not wearing jewelry such as a watch, braclet, or necklace.

On the approach to the intersection, the driver stated that she had both hands positioned on the steering wheel with the left hand at the 7-8 o'clock position and the right hand at the 2-3 o'clock position. The driver noted that she typically operated the Grand Marquis with the tilt steering column adjusted to a lower position. Immediately prior to impact, the driver braked and applied a counterclockwise steering input which would have resulted in the right forearm crossing over the right side of the air bag module cover.

At impact the driver's side air bag deployed. The driver reported hearing a "bang" within the vehicle and felt an impact to the right forearm. Although unconfirmed by contact evidence, the right corner of the upper asymmetrical module cover flap contacted the anterior aspect of the driver's right forearm which resulted in a comminuted, displaced *Monteggia* fracture of the right ulna and a dislocation of the radial head. In addition, the driver sustained a right radial nerve injury. She stated that there no contusion or abrasion to the tissue on the right forearm. Her face subsequently contacted the deployed air bag left of center, depositing a makeup and lipstick transfer which evidenced the contact area. There was no facial injury from the latter contact sequence.

MEDICAL TREATMENT

Immediately following the crash, the driver noted a deformity in her right forearm. She unbuckled the manual belt system with her left hand and exited the vehicle unassisted and waited for emergency personel to arrive on-scene. She was subsequently transported by ambulance to a local hospital where she was diagnosed with the right forearm *Monteggia* fracture of the ulna, the dislocation of the radial head and the radial nerve injury. She was administered Nubain 5 mg. and Phenergan 12.5 mg through an IV. The fracture site was splinted and the driver was referred to another physician at a hospital within a close proximity to her residence. She was discharged following 4 hours of emergency room care.

The driver was transported by her husband in his private vehicle to a hospital near their residence. The injuries were confirmed and the driver was scheduled for open reduction surgery of the displaced right ulna fracture and closed reduction of the right radial head on [redacted] the day following the crash. The surgical procedure involved a 10 cm incision over the ulna fracture site. Multiple bone fragments were salvaged and the fracture was reduced in good alignment and a seven slot

MEDICAL TREATMENT (CONT'D)

titanium DCP plate was applied to the fracture site with six 3.5 cortical screws above and below the fracture. The physician applied a Coralline hydroxyapatite bone filler over the comminuted fracture.

The driver's husband reported on [redacted] that his wife had been experiencing significant weakness and loss of sensitivity in the right hand as a result of the fracture and the radial nerve injury. She had undergone extensive physical therapy without benefit. In addition, he reported that the ulna fracture site had been repaired which elongated the ulna, therefore the radial head frequently dislocated from the joint. The driver had an additional surgery to remove a segment of the ulna to ensure retension of the radial head. She continued with the physical therapy and a follow-up examination with a hand reconstruction specialist.

SELECTED PRINTS
CASE NO. 94-30
[redacted], FL

1. & 2. Pre-crash trajectory of the 1991 Mercury Grand Marquis.

3. Area of impact.

4. Lookback view of the Grand Marquis' path of travel.

5. & 6. Pre-crash trajectory of the 1986 Honda Accord.

7. Honda's trajectory at impact.

8. Lookback view of the Honda's path of travel.

9. & 10. Minor impact damage to the frontal area of the Grand Marquis.

11. Left front three-quarter view.

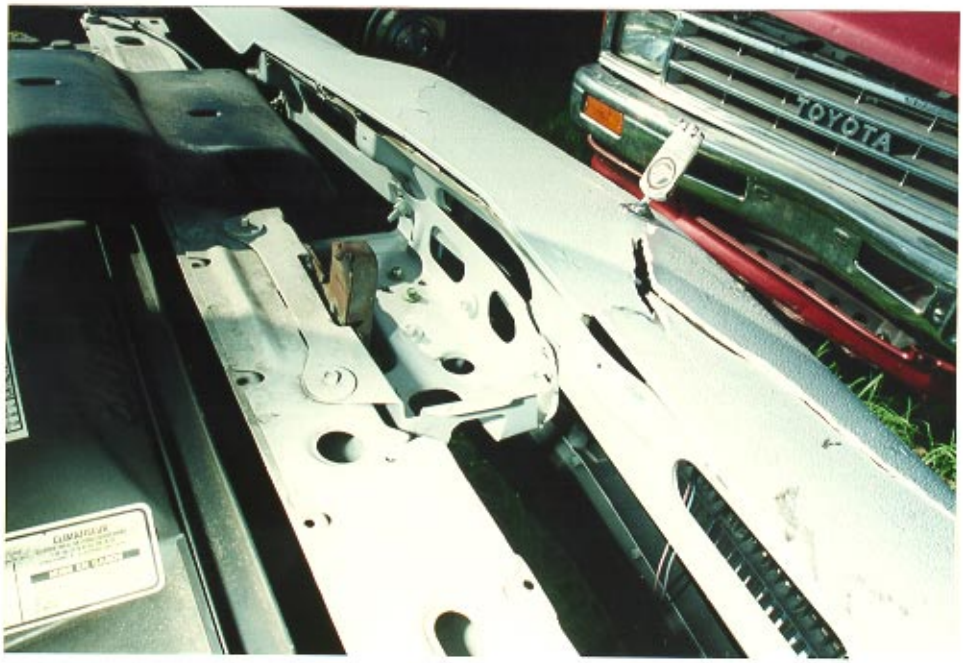
12. Left rear three-quarter view.

13. & 14. Profile views of the frontal area showing the minor severity impact damage.

15. Compression of the left front bumper energy absorbing device.

16. Compression of the right front bumper energy absorbing device.

17. Overall view of the engine compartment and profile view of the upper radiator support panel.



18. Center mounted crash sensor located forward of hood latch.

19. Right front crash sensor mounted adjacent to the right frame rail.

20. Overall interior view and the deployed driver's side air bag.

21. Driver's seat track adjustment and the 3-point lap and shoulder belt system.

22. Close proximity of the driver's seat to the knee bolster.

23. Overall view of the deployed driver's side air bag.

24. Driver lipstick transfer to the lower left quadrant of the air bag.

25. Asymmetrical upper air bag module cover flap.

26. Probable area of contact with the driver's right forearm.

27. Perpendicular view of the upper module cover flap.

28. Right side view of the upper flap.

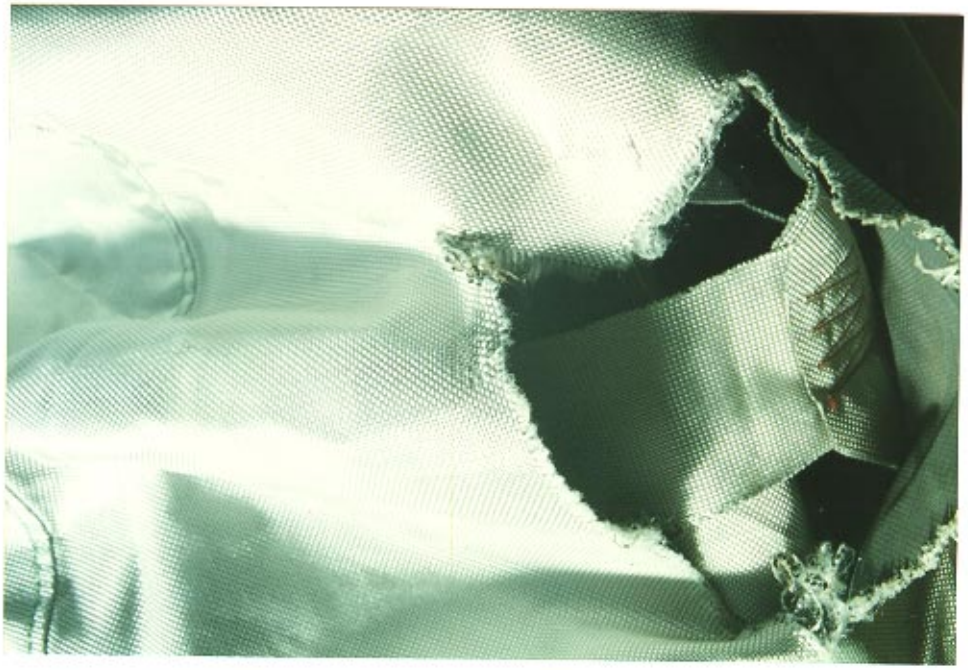
29. Fragment of a bar coded label which adhered to the left upper quadrant of the bag.

30. Tear of the air bag membrane at the 6 o'clock position of the air bag.

31. Close-up view of the membrane tear.

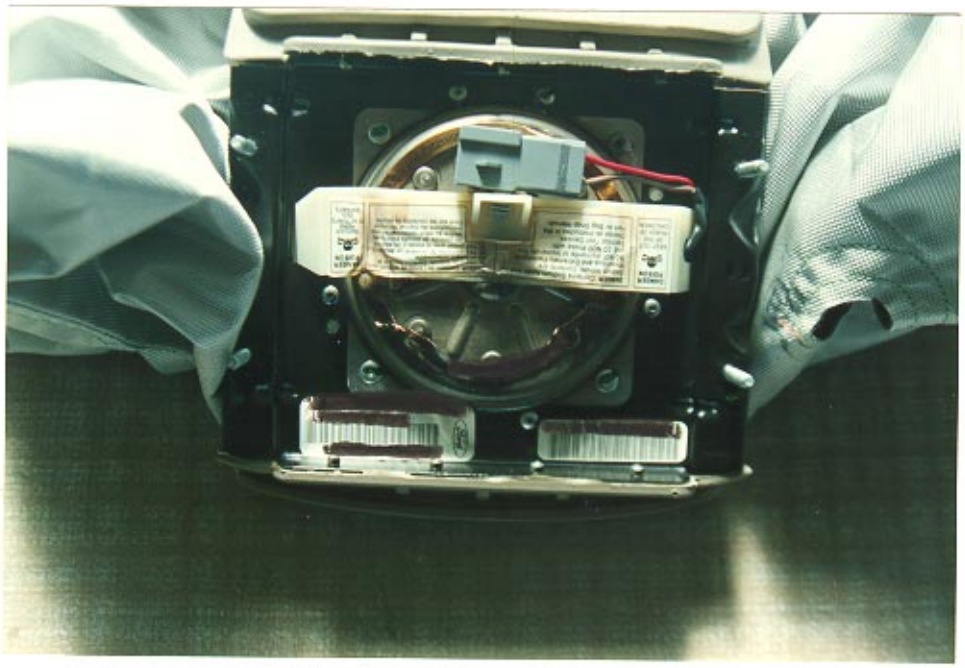
32. T-shaped tear pattern.

33. Close-up view of the tear at the left edge.



34. Close-up view of the tear at the right edge.

35. Close-up view of the edges of the tear.



36. Labeling/identification on the backer plate of the module assembly.

37. Overall interior view from the right door area.

38. Forward view from the rear seat area.

39. Exposed driver's side seat track into the left rear area with the seat adjusted to a forward track position.

40. Longitudinal distance between the seat back and the steering wheel/air bag module with the driver's seat adjusted to a forward track position.

41. X-ray of the driver's Monteggia fracture of the right forearm.

42. Impact damage to the left side area of the struck Honda Accord.

43. Longitudinal view documenting the extent of side crush.

44. Rear view documenting the extent of left side crush.

45. Left rear three quarter view.

ATTACHMENT B

Police Accident Report

[redacted] FLORIDA TRAFFIC CRASH REPORT

MAIL TO: DEPT. OF HIGHWAY SAFETY & MOTOR VEHICLES
TRAFFIC CRASH RECORDS
[redacted] FLORIDA [redacted]

DO NOT WRITE IN THIS SPACE

Time & Location

DATE OF CRASH	TIME OF CRASH	TIME OFFICER NOTIFIED	TIME OFFICER ARRIVED	INVEST. AGENCY REPORT NUMBER	HSMV CRASH REPORT NUMBER
[redacted] 94	[redacted] AM [X] PM	[redacted] AM [X] PM	[redacted] AM [X] PM	[redacted]	[redacted]

COUNTY / CITY CODE	Feet or Miles	N S E W of	CITY OR TOWN (Check if in City or Town)	COUNTY
14/40			[redacted] [X]	[redacted]

AT NODE NO. or	FEET / MILES FROM NODE NO.	NEXT NODE NO.	NO. OF LANES	DIVIDED / UNDIVIDED	ON STREET, ROAD OR HIGHWAY
	1 [ ] 2 [ ]		4	1 DIVIDED 2 UNDIVIDED	SR [redacted] (U.S. [redacted])

AT INTERSECTION OF NW [redacted] AVE. or FEET / MILES 1 [ ] 2 [ ] N S E W OF INTERSECTION OF

Section 1 — Vehicle

DRIVER ACTION (1 Phantom, 2 Hit & Run, 3 N/A)	YEAR	MAKE	TYPE	USE	VEH. LICENSE NUMBER	STATE	VEHICLE IDENTIFICATION NUMBER
3	91	MERC	01	01	[redacted]	FL	2MECM75F6MXG[redacted]

TRAILER OR TOWED VEHICLE INFORMATION — TRAILER TYPE

POINT OF IMPACT CIRCLE AREA OF DAMAGE: 2 (18 Undercarriage, 19 Overturn, 20 Windshield, 21 Fire, 22 Trailer)

VEHICLE TRAVELING N S E W	ON	At	Est. MPH	Posted Speed	EST. VEHICLE DAMAGE	EST. TRAILER DAMAGE
[X] [ ] [ ] [X] [ ]	SR [redacted]		40	45	$ 1000 (1 Disabling, 2 Functional, 3 No Damage) 2	$

INSURANCE COMPANY (LIABILITY OR PIP)	POLICY NUMBER	VEHICLE REMOVED BY: (1 Tow Rotation List, 2 Tow Owner's Request, 3 Driver, 4 Other)
[redacted] INS.	[redacted]	[redacted] 1

OWNER'S FULL NAME (Check if Driver) [X] — CURRENT ADDRESS (Number and Street) — CITY AND STATE — ZIP CODE

OWNER'S FULL NAME (Trailer or Towed Vehicle) — CURRENT ADDRESS (Number and Street) — CITY AND STATE — ZIP CODE

Pedestrian

DRIVER (Exactly as on Driver License) / Pedestrian [redacted] — CURRENT ADDRESS (Number and Street) [redacted] — CITY & STATE / ZIP CODE [redacted] — DATE OF BIRTH [redacted] 41

DRIVER LICENSE NUMBER	STATE	DL TYPE	REQ. END	BAC TEST (3 Urine, 1 Blood, 4 Refused, 2 Breath, 5 None)	RESULTS %	AL / DRUG	PHYS. DEF.	RES	RACE	SEX	INJ.	S. EQUIP	EJEC
[redacted]	FL	5	1	5		1	1	2	1	2	4	2	4	1

HAZARDOUS MATERIALS BEING TRANSPORTED (1 Yes 2 No)	PLACARDED (1 Yes 2 No)	RECOMMEND RE-EXAM (1 Yes 2 No)	If YES, Explain in Narrative	DRIVER'S PHONE NO.
[ ] [X]	[ ] [X]	[ ] [X]		[redacted]

PASSENGER'S NAME (Additional on Continuation Page) — CURRENT ADDRESS — CITY & STATE / ZIP — AGE — LOC. — INJ. — S. EQUIP — EJEC

Section 2 — Vehicle

DRIVER ACTION (1 Phantom, 2 Hit & Run, 3 N/A)	YEAR	MAKE	TYPE	USE	VEH. LICENSE NUMBER	STATE	VEHICLE IDENTIFICATION NUMBER
3	86	HONDA	01	01	[redacted]	GA	JHMBA5348GC[redacted]

TRAILER OR TOWED VEHICLE INFORMATION — TRAILER TYPE

POINT OF IMPACT CIRCLE AREA OF DAMAGE: 12 (18 Undercarriage, 19 Overturn, 20 Windshield, 21 Fire, 22 Trailer)

VEHICLE TRAVELING N S E W	ON	At	Est. MPH	Posted Speed	EST. VEHICLE DAMAGE	EST. TRAILER DAMAGE
[X] [ ] [ ] [ ] [ ]	NW [redacted]		10	35	$ 2000 (1 Disabling, 2 Functional, 3 No Damage) 2	$

INSURANCE COMPANY (LIABILITY OR PIP)	POLICY NUMBER	VEHICLE REMOVED BY: (1 Tow Rotation List, 2 Tow Owner's Request, 3 Driver, 4 Other)
UNKNOWN	[redacted]	1

OWNER'S FULL NAME (Check if Driver) [X] — CURRENT ADDRESS (Number and Street) — CITY AND STATE — ZIP CODE

OWNER'S FULL NAME (Trailer or Towed Vehicle) — CURRENT ADDRESS (Number and Street) — CITY AND STATE — ZIP CODE

Pedestrian

DRIVER (Exactly as on Driver License) / Pedestrian [redacted] — CURRENT ADDRESS (Number and Street) [redacted] — CITY & STATE / ZIP CODE OCALA, FL 34475 — DATE OF BIRTH [redacted]

DRIVER LICENSE NUMBER	STATE	DL TYPE	REQ. END	BAC TEST (3 Urine, 1 Blood, 4 Refused, 2 Breath, 5 None)	RESULTS %	AL / DRUG	PHYS. DEF.	RES	RACE	SEX	INJ.	S. EQUIP	EJEC
[redacted]	GA	5	1	5		1	1	1	1	2	1	2	1

HAZARDOUS MATERIALS BEING TRANSPORTED (1 Yes 2 No)	PLACARDED (1 Yes 2 No)	RECOMMEND RE-EXAM (1 Yes 2 No)	If YES, Explain in Narrative	DRIVER'S PHONE NO.
[ ] [X]	[ ] [X]	[ ] [X]		[redacted]

PASSENGER'S NAME (Additional on Continuation Page) [redacted] — CURRENT ADDRESS [redacted] — CITY & STATE / ZIP [redacted] — AGE 13 — LOC. 3 — INJ. 1 — S. EQUIP 2 — EJE 1

Code Information

VEHICLE TYPE
01 Automobile
02 Passenger Van
03 Pickup/Light Truck (2 rear tires)
04 Medium Truck (4 rear tires)
05 Heavy Truck (2 or more rear axles)
06 Truck Tractor (Cab)
07 Motor Home (RV)
08 Bus
09 Bicycle
10 Motorcycle
11 Moped
12 All Terrain Vehicle
13 Train
77 Other

VEHICLE USE
01 Private Transportation
02 Commercial Passengers
03 Commercial Cargo
04 Public Transportation
05 Public School Bus
06 Private School Bus
07 Ambulance
08 Law Enforcement
09 Fire/Rescue
10 Military
11 Other Government
77 Other

TRAILER TYPE
01 Single Semi Trailer
02 Tandem Semi Trailer(s)
03 Tank Trailer
04 Saddle Mount / Flatbed
05 Boat Trailer
06 Utility Trailer
07 House Trailer
08 Pole Trailer
09 Towed Vehicle
77 Other

RESIDENCE (Driver Only)
1 County of Crash
2 Elsewhere in State
3 Non-Resident of State
4 Foreign
5 Unknown

DL TYPE
1 A 2 B 3 C 4 D / Chauffeur 5 E / Operator 6 E / Oper-Rest 7 None

REQUIRED ENDORSEMENTS
1 Yes 2 No

RACE
1 White
2 Black
3 Hispanic
4 Other

SEX
1 Male
2 Female

PHYSICAL DEFECTS
1 No Defects Known
2 Eyesight Defect
3 Fatigue / Asleep
4 Hearing Defect
5 Illness
6 Seizure, Epilepsy, Blackout
7 Other Physical Defect

INJURY SEVERITY
1 None
2 Possible
3 Non-Incapacitating
4 Incapacitating
5 Fatal (Within 90 Days)
6 Non-Traffic Fatality

ALCOHOL / DRUG USE
1 Not Drinking or Using Drugs
2 Alcohol - Under Influence
3 Drugs - Under Influence
4 Alcohol & Drugs - Under Influence
5 Had Been Drinking
6 Pending BAC Test Result

SAFETY EQUIPMENT IN USE
1 Not In Use
2 Seat Belt / Shoulder Harness
3 Child Restraint
4 Air Bag
5 Safety Helmet
6 Eye Protection

LOCATION (In Vehicle)
1 Front Left
2 Front Center
3 Front Right
4 Rear Left
5 Rear Center
6 Rear Right
7 In Body of Truck
8 Bus Passenger
9 Other

EJECTED
1 No
2 Yes
3 Partial

HSMV 90003 (Rev. 11/92)

Section 3

Vehicle

DRIVER ACTION: 1 Phantom 2 Hit & Run 3 N/A

YEAR	MAKE	TYPE	USE	VEH. LICENSE NUMBER	STATE	VEHICLE IDENTIFICATION NUMBER
TRAILER OR TOWED VEHICLE INFORMATION		TRAILER TYPE				

POINT OF IMPACT CIRCLE AREA OF DAMAGE

18 Undercarr
19 Overturn
20 Windshie
21 Fire
22 Trailer

VEHICLE TRAVELING N S E W | ON | At | Est. MPH | Posted Speed | EST. VEHICLE DAMAGE $ (1 Disabling 2 Functional 3 No Damage) | EST. TRAILER DAMAGE $

INSURANCE COMPANY (LIABILITY OR PIP) | POLICY NUMBER | VEHICLE REMOVED BY: (1 Tow Rotation List 2 Tow Owner's Request 3 Driver 4 Other)

OWNER'S FULL NAME (Check if Driver) | CURRENT ADDRESS (Number and Street) | CITY AND STATE | ZIP CODE

OWNER'S FULL NAME (Trailer or Towed Vehicle) | CURRENT ADDRESS (Number and Street) | CITY AND STATE | ZIP CODE

Pedestrian

DRIVER (Exactly as on Driver License) / Pedestrian | CURRENT ADDRESS (Number and Street) | CITY & STATE / ZIP CODE | DATE OF BIRTH

DRIVER LICENSE NUMBER	STATE	DL TYPE	REQ. END.	BAC TEST (1 Blood 2 Breath 3 Urine 4 Refused 5 None)	RESULTS %	AL / DRUG	PHYS. DEF.	RES	RACE	SEX	INJ.	S. EQUIP.	EJE

HAZARDOUS MATERIALS BEING TRANSPORTED (1 Yes 2 No) | PLACARDED (1 Yes 2 No) | RECOMMEND RE-EXAM (1 Yes 2 No) | If YES, Explain in Narrative | DRIVER'S PHONE NO. ( )

PASSENGER'S NAME (Additional on Continuation Page) | CURRENT ADDRESS | CITY & STATE / ZIP | AGE | LOC. | INJ. | S. EQUIP | EJE

#	PROPERTY DAMAGED - OTHER THAN VEHICLES	EST. AMOUNT	OWNER'S NAME	ADDRESS	CITY	STATE	ZIP
1		$					
2		$					

CONTRIBUTING CAUSES - DRIVER / PED.

01 No Improper Driving / Action
02 Careless Driving
03 Failed to Yield Right-of-Way
04 Improper Backing
05 Improper Lane Change
06 Improper Turn
07 Alcohol-Under Influence
08 Drugs-Under Influence
09 Alcohol & Drugs-Under Influence
10 Followed Too Closely
11 Disregarded Traffic Signal
12 Exceeded Safe Speed Limit
13 Disregarded Stop Sign
14 Failed to Maintain Equip. / Vehicle
15 Improper Passing
16 Drove Left of Center
17 Exceeded Stated Speed Limit
18 Obstructing Traffic
19 Improper Load
20 Disregarded Other Traffic Control
21 Driving Wrong Side / Way
22 Fleeing Police
23 Vehicle Modified
77 All Other (Explain)

1	2	3
01	03	

VEHICLE DEFECT

01 No Defects
02 Def. Brakes
03 Worn / Smooth Tires
04 Defective / Improper Lights
05 Puncture / Blowout
06 Steering Mech.
07 Windshield Wipers
08 Equipment / Vehicle Defect
77 All Other (Explain in Narrative)

1	2	3
01	01	

VEHICLE MOVEMENT

01 Straight Ahead
02 Slowing / Stopped / Stalled
03 Making Left Turn
04 Backing
05 Making Right Turn
06 Changing Lanes
07 Entering / Leaving Parking Space
08 Properly Parked
09 Improperly Parked
10 Making U-Turn
11 Passing
12 Driverless or Runaway Veh.
77 All Other (Explain in Narrative)

1	2	3
01	03	

VEHICLE SPECIAL FUNCTIONS

1 None
2 Farm
3 Police Pursuit
4 Recreational
5 Emergency Operation
6 Construction / Maintenance

1	2	3
1	1	

LOCATION ON ROADWAY

1 On Road
2 Not On Road
3 Shoulder
4 Median
5 Turn Lane / Safety Zone

1	2	3
1	1	

PEDESTRIAN ACTION

01 Crossing Not at Intersection
02 Crossing at Mid-block Crosswalk
03 Crossing at Intersection
04 Walking Along Road With Traffic
05 Walking Along Road Against Traffic
06 Working on Vehicle in Road
07 Other Working in Road
08 Standing/Playing in Road
09 Standing in Pedestrian Island
77 All Other (Explain)
88 Unknown

1	2	3

LOCATION TYPE

1 Primarily Business
2 Primarily Residential
3 Open Country

1

FIRST / SUBSEQUENT HARMFUL EVENT

01 Collision With MV in Transport (Rear-end)
02 Collision With MV in Transport (Head-on)
03 Collision With MV in Transport (Angle)
04 Collision With MV in Transport (Left Turn)
05 Collision With MV in Transport (Right Turn)
06 Collision With MV in Transport (Sideswipe)
07 Collision With MV in Transport (Backed Into)
08 Collision With Parked Car
09 Collision With MV on Other Roadway
10 Collision With Pedestrian
11 Collision With Bicycle
12 Collision With Bicycle (Bike Lane)
13 Collision With Moped
14 Collision With Train
15 Collision With Animal
16 MV Hit Sign/Sign Post
17 MV Hit Utility Pole/Light Pole
18 MV Hit Guardrail
19 MV Hit Fence
20 MV Hit Concrete Barrier Wall
21 MV Hit Bridge/Pier/Abutment/Rail
22 MV Hit Tree/Shrubbery
23 Collision With Construction Barricade/Sign
24 Collision With Traffic Gate
25 Collision With Crash Attenuators
26 Collision With Fixed Object Above Road
27 MV Hit Other Fixed Object
28 Collision With Moveable Object On Road
29 MV Ran Into Ditch/Culvert
30 Ran Off Road Into Water
31 Overturned
32 Occupant Fell From Vehicle
33 Tractor/Trailer Jackknifed
34 Fire
35 Explosion
77 All Other (Explain)

F	S
03	

ROAD SYSTEM IDENTIFIER

01 Interstate
02 U.S.
03 State
04 County
05 Local
06 Turnpike / Toll
07 Forest Road
77 All Other

03

LIGHTING CONDITION

01 Daylight
02 Dusk
03 Dawn
04 Dark (Street Light)
05 Dark (No Street Light)
88 Unknown

01

ROAD SURFACE / CONDITION

01 Dry
02 Wet
03 Slippery
04 Icy
77 All Other (Explain)

01

WEATHER

01 Clear
02 Cloudy
03 Rain
04 Fog
77 All Other (Explain)

01

ROAD SURFACE TYPE

01 Slag / Gravel / Stone
02 Blacktop
03 Brick / Block
04 Concrete
05 Dirt
77 All Other (Expl

02

CONTRIBUTING CAUSES - ROAD

01 No Defects
02 Obstruction With / Without Warning
03 Road Under Repair / Construction
04 Loose Surface Materials
05 Shoulders - Soft / Low / High
06 Holes / Ruts / Unsafe Paved Edge
07 Standing Water
08 Worn / Polished Road Surface
77 All Other (Explain)

01

CONTRIBUTING CAUSES - ENVIRONMENT

01 Vision Not Obscured
02 Inclement Weather
03 Parked / Stopped Vehicle
04 Trees / Crops / Bushes
05 Load on Vehicle
06 Building / Fixed Object
07 Signs / Billboards
08 Fog
09 Smoke
10 Glare
77 All Other (Explain)

77

TRAFFIC CONTROL

01 No Control
02 Special Speed Zone
03 Traffic Signal
04 Stop Sign
05 Yield Sign
06 Flashing Light
07 Railroad Signal
08 Officer / Guard / Flagman
09 Posted No U-Turn
10 School Zone
77 All Other (Explain)

04

SITE LOCATION

01 Not At Intersection / RR X'ing / Bridge
02 At Intersection
03 Influenced By Intersection
04 Driveway Access
05 Railroad Crossing
06 Bridge
07 Entrance Ramp
08 Exit Ramp
09 Parking Lot - Public
10 Parking Lot - Private
11 Private Property
77 All Other (Explain)

02

TRAFFICWAY CHARACTER

1 Straight-Level
2 Straight-Upgrade / Downgrade
3 Curve-Level
4 Curve-Upgrade / Downgrade

3

TYPE SHOULDER

1 Paved
2 Unpaved
3 Curb

3

VIOLATOR	FL STATUTE NUMBER	NAME	CHARGE	CITATION #
2	316.121	[redacted]	VIOL. RT-WAY	[redacted]

FLORIDA TRAFFIC CRASH REPORT

☐ UPDATE ☒ CONTINUATION

MAIL TO: DEPT. OF HIGHWAY SAFETY & MOTOR VEHICLES
TRAFFIC CRASH RECORDS
[redacted] FLORIDA [redacted]

DO NOT WRITE IN THIS SPACE

COUNTY/CITY CODE	DATE OF CRASH	INVEST. AGENCY REPORT NUMBER	HSMV CRASH REPORT NUMBER
[redacted]	[redacted] /94	[redacted]	[redacted]

Section

DRIVER ACTION 1 Phantom 2 Hit & Run 3 N/A	YEAR	MAKE	TYPE	USE	VEH. LICENSE NUMBER	STATE	VEHICLE IDENTIFICATION NUMBER	POINT OF IMPAC CIRCLE AREA OF DAMAGE
TRAILER OR TOWED VEHICLE INFORMATION			TRAILER TYPE					

2 3 4 5 6 7 / 1 15 16 17 8 / 14 13 12 11 10 9

18 Undercarri
19 Overturn
20 Windshield
21 Fire
22 Trailer

VEHICLE TRAVELING N S E W	ON	At	Est. MPH	Posted Speed	EST. VEHICLE DAMAGE 1 Disabling 2 Functional 3 No Damage $	EST. TRAILER DAMAGE $

INSURANCE COMPANY (LIABILITY OR PIP)	POLICY NUMBER	VEHICLE REMOVED BY: 1 Tow Rotation List 2 Tow Owner's Request 3 Driver 4 Other

OWNER'S FULL NAME (Check if Driver)	CURRENT ADDRESS (Number and Street)	CITY AND STATE	ZIP CODE
OWNER'S FULL NAME (Trailer or Towed Vehicle)	CURRENT ADDRESS (Number and Street)	CITY AND STATE	ZIP CODE

DRIVER (Exactly as on Driver License) / Pedestrian	CURRENT ADDRESS (Number and Street)	CITY & STATE / ZIP CODE	DATE OF BIRTH

DRIVER LICENSE NUMBER	STATE	DL TYPE	REQ END	BAC TEST 3 Urine 1 Blood 4 Refused 2 Breath 5 None	RESULTS . %	AL / DRUG	PHYS. DEF.	RES	RACE	SEX	INJ.	S. EQUIP.	EJEC

HAZARDOUS MATERIALS BEING TRANSPORTED 1 Yes 2 No	PLACARDED 1 Yes 2 No	RECOMMEND RE-EXAM 1 Yes 2 No	If YES, Explain in Narrative	DRIVER'S PHONE NO. ( )

PASSENGER'S NAME (Additional on Continuation Page)	CURRENT ADDRESS	CITY & STATE / ZIP	AGE	LOC.	INJ.	S. EQUIP	EJEC

Section

DRIVER ACTION 1 Phantom 2 Hit & Run 3 N/A	YEAR	MAKE	TYPE	USE	VEH. LICENSE NUMBER	STATE	VEHICLE IDENTIFICATION NUMBER	POINT OF IMPAC CIRCLE AREA OF DAMAGE
TRAILER OR TOWED VEHICLE INFORMATION			TRAILER TYPE					

2 3 4 5 6 7 / 1 15 16 17 8 / 14 13 12 11 10 9

18 Undercarri
19 Overturn
20 Windshield
21 Fire
22 Trailer

VEHICLE TRAVELING N S E W	ON	At	Est. MPH	Posted Speed	EST. VEHICLE DAMAGE 1 Disabling 2 Functional 3 No Damage $	EST. TRAILER DAMAGE $

INSURANCE COMPANY (LIABILITY OR PIP)	POLICY NUMBER	VEHICLE REMOVED BY: 1 Tow Rotation List 2 Tow Owner's Request 3 Driver 4 Other

OWNER'S FULL NAME (Check if Driver)	CURRENT ADDRESS (Number and Street)	CITY AND STATE	ZIP CODE
OWNER'S FULL NAME (Trailer or Towed Vehicle)	CURRENT ADDRESS (Number and Street)	CITY AND STATE	ZIP CODE

DRIVER (Exactly as on Driver License) / Pedestrian	CURRENT ADDRESS (Number and Street)	CITY & STATE / ZIP CODE	DATE OF BIRTH

DRIVER LICENSE NUMBER	STATE	DL TYPE	REQ END	BAC TEST 3 Urine 1 Blood 4 Refused 2 Breath 5 None	RESULTS . %	AL / DRUG	PHYS. DEF.	RES	RACE	SEX	INJ.	S. EQUIP	EJEC

HAZARDOUS MATERIALS BEING TRANSPORTED 1 Yes 2 No	PLACARDED 1 Yes 2 No	RECOMMEND RE-EXAM 1 Yes 2 No	If YES, Explain in Narrative	DRIVER'S PHONE NO. ( )

PASSENGER'S NAME (Additional on Continuation Page)	CURRENT ADDRESS	CITY & STATE / ZIP	AGE	LOC.	INJ.	S. EQUIP	EJEC

INVESTIGATOR - RANK CPL [redacted]	ID / BADGE NUMBER [redacted]	DEPARTMENT [redacted]	FHP ☐	SO ☐	CPD ☒	OTHER ☐

HSMV 90004 (Rev. 11/92) S

PROPERTY DAMAGED - OTHER THAN VEHICLES	EST. AMOUNT	OWNER'S NAME	ADDRESS	CITY	STATE	ZIP
# 1	$					
# 2	$					
# 3	$					
# 4	$					

CONTRIBUTING CAUSES - DRIVER / PED.

01 No Improper Driving / Action
02 Careless Driving
03 Failed to Yield Right-of-Way
04 Improper Backing
05 Improper Lane Change
06 Improper Turn
07 Alcohol-Under Influence
08 Drugs-Under Influence
09 Alcohol & Drugs-Under Influence
10 Followed Too Closely
11 Disregarded Traffic Signal
12 Exceeded Safe Speed Limit
13 Disregarded Stop Sign
14 Failed to Maintain Equip. / Vehicle
15 Improper Passing
16 Drove Left of Center
17 Exceeded Stated Speed Limit
18 Obstructing Traffic
19 Improper Load
20 Disregarded Other Traffic Control
21 Driving Wrong Side / Way
22 Fleeing Police
23 Vehicle Modified
77 All Other (Explain)

VEHICLE DEFECT

01 No Defects
02 Def. Brakes
03 Worn / Smooth Tires
04 Defective / Improper Lights
05 Puncture / Blowout
06 Steering Mech.
07 Windshield Wipers
08 Equipment / Vehicle Defect
77 All Other (Explain in Narrative)

VEHICLE MOVEMENT

01 Straight Ahead
02 Slowing / Stopped / Stalled
03 Making Left Turn
04 Backing
05 Making Right Turn
06 Changing Lanes
07 Entering/Leaving Parking Space
08 Properly Parked
09 Improperly Parked
10 Making U-Turn
11 Passing
12 Driverless or Runaway Veh.
77 All Other (Explain in Narrative)

VEHICLE SPECIAL FUNCTIONS

1 None
2 Farm
3 Police Pursuit
4 Recreational
5 Emergency Operation
6 Construction / Maintenance

LOCATION ON ROADWAY

1 On Road
2 Not On Road
3 Shoulder
4 Median
5 Turn Lane / Safety Zone

PEDESTRIAN ACTION

01 Crossing Not at Intersection
02 Crossing at Mid-block Crosswalk
03 Crossing at Intersection
04 Walking Along Road With Traffic
05 Walking Along Road Against Traffic
06 Working on Vehicle in Road
07 Other Working in Road
08 Standing/Playing in Road
09 Standing in Pedestrian Island
77 All Other (Explain)
88 Unknown

Additional Passengers./ Narrative

SEC. #	PASS. #	PASSENGER NAME	ADDRESS	CITY & STATE	ZIP	Age	Loc.	Inj.	Safety Equip.	Eje
2	2	[redacted]	[redacted] RD.	[redacted] FL.		27	6	1	21	1
2	3	[redacted]	[redacted] RD.	[redacted] FL.		2	6	1	24	1

WITNESS - NAME | ADDRESS | CITY & STATE | ZIP

WAS INVESTIGATION MADE AT SCENE? 1 Yes 2 No - Where?	IS INVESTIGATION COMPLETE? 1 Yes 2 No - Why?	DATE OF REPORT	PHOTOS TAKEN? 1 - Yes 2 - No 3 - Investigating Agency 4 Oth
[X]	[X]	[redacted]94	[X]

VIOLATOR	FL STATUTE NUMBER	NAME	CHARGE	CITATION #

FLORIDA TRAFFIC CRASH REPORT

NARRATIVE / DIAGRAM

MAIL TO: DEPT. OF HIGHWAY SAFETY & MOTOR VEHICLES
TRAFFIC CRASH RECORDS
[redacted] LORIDA [redacted]

DO NOT WRITE IN THIS SPACE

EMS INFO FATALS ONLY	TIME EMS NOTIFIED AM PM	TIME EMS ARRIVED AM PM	COUNTY / CITY CODE	DATE OF CRASH	INVEST. AGENCY REPORT NUMBER	HSMV CRASH REPORT NUMBER
			[redacted]	[redacted] 94	[redacted]	[redacted]

V1 WAS EB SR [redacted] IN OUTSIDE LN., V2 NB NW [redacted] AV. STOPPED FOR STOP SIGN AT SR [redacted]. V2 FAILED TO SEE V1 APPROACHING DUE TO BEING UNABLE TO TURN HER HEAD ENOUGH DUE TO A NECK BRACE AND PROCEEDED ACROSS THE EB LANES OF SR [redacted] TO MAKE A LEFT TURN AND GO WB ON SR [redacted]. V1 ATTEMPTED TO AVOID V2 BY MOVING INTO THE INSIDE LN. SR [redacted] BUT V2 KEPT COMING. V1'S FRONT STRUCK V2'S LEFT SIDE CAUSING V1'S AIRBAG TO DEPLOY.

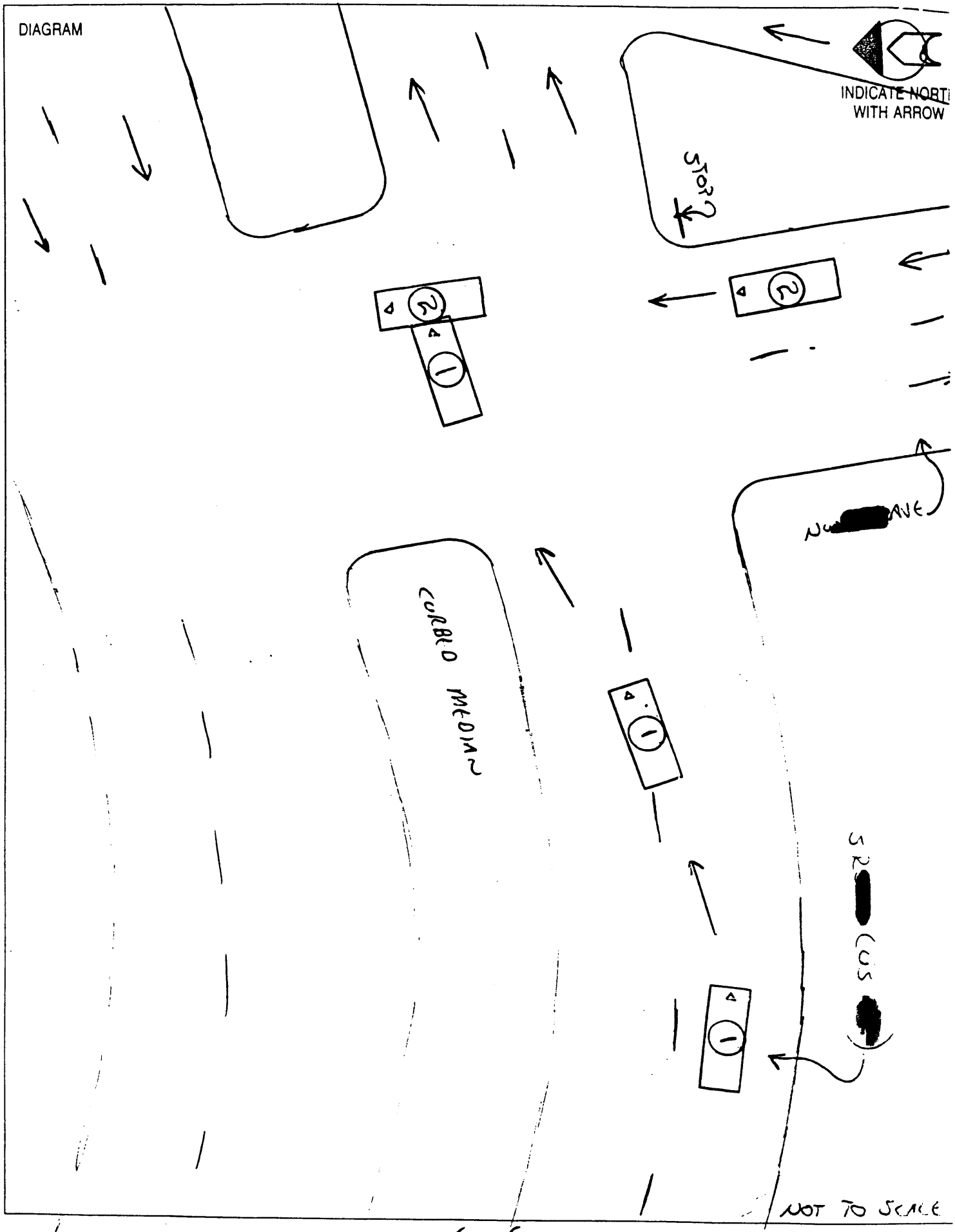
WITNESS - NAME	ADDRESS	CITY & STATE	ZIP
1 [redacted]	[redacted]	[redacted], FL.	[redacted]
WITNESS - NAME	ADDRESS	CITY & STATE	ZIP
2			

FIRST AID GIVEN BY - NAME:	1 Physician or Nurse 2 Paramedic or EMT 3 Police Officer 4 Certified 1st Aider 5 Other	INJURED TAKEN TO:	BY - NAME:
[redacted]	2	[redacted] ER	EMS

WAS INVESTIGATION MADE AT SCENE?	WHERE?	IS INVESTIGATION COMPLETE?	DATE OF REPORT	PHOTOS TAKEN?
1 YES [X] 2 NO [ ]		1 YES [X] 2 NO [ ] WHY?	[redacted] 1914	1 YES 2 NO [X] 3 INVEST. AGENCY [ ] 4 OTHER [ ]

INVESTIGATOR - RANK	ID / BADGE NUMBER	DEPARTMENT	
CPL [redacted]	[redacted]	[redacted]	FHP [ ] SO [ ] CPD [X] OTH [ ]

DIAGRAM



ATTACHMENT C

Air Bag Supplement

Dup. Cols. 1-8 from prior card | Module A B | Format Q 1 | AIRBAG SUPPLEMENT | AB-1

ACCIDENT SUMMARY

ACCIDENT DATE [redacted] /94

POLICE INVESTIGATED (1,2,9)* — 1

[redacted] POLICE DEPARTMENT

City [redacted] County [redacted]

GENERAL LOCALITY — 3
(1) Freeway, Limited Access
(2) Urban (City)
(3) Urban-Rural (mixed)
(4) Rural, Fields

CONFIGURATION (First Harm) — 4

(0) Struck Object or Pedestrian
(1) Rear-End
(2) Head-On
(3) Rear-to-Rear
(4) Angle
(5) Sideswipe-Same Direction
(6) Sideswipe-Opposite Direct.
(7) NonColl:eg Fell from Veh
(8) NonImpact Deployment
(9) Unknown

FIRE INVOLVED (0) None — 0
(1) AirBag Vehicle
(2) Other Vehicle
(3) Both Vehicles
(9) Unknown

NUMBER: VEHICLES INVOLVED (8)=8 or more — 2
PERSONS INVOLVED — 4
INJURED PERSONS — 1

MAXIMUM AIS IN ACCIDENT — 3

OTHER VEHICLE: MAXIMUM AIS — 0

PRIME/DEPLOY IMPACT w AB VEH: EVENT NUMBER — 1

CDC 09-LYEW-2

TOTAL DELTA-V — 13 MPH

Model Year, Make, Model, Body Type:

1986 HONDA ACCORD

AIRBAG VEHICLE INSPECTION

DATE VEH. INSPECTED [redacted] /94

REASON VEHICLE NOT INSPECTED — 1

(0) Not Required
(1) Inspection Completed
(2) Cannot be Located**
(3) Repaired or Destroyed**
(5) Refual or Impounded**
(7) Other*
**Specify: _____

IMPACT DATA OBTAINED — 4

(0) No Data Obtained
(1) CDC Only
(2) Crush Profile Only
(3) Trajectory Data Only
(4) CDC and Crush Profile
(5) CDC and Trajectory
(6) Crush and Trajectory
(7) CDC, Crush & Trajectory

BASIS OF DELTA-V — 2

(0) Not Computed (Unknown Why)
(1) CRASH - Damage Only
(2) CRASH - Damage+Trajectory
(3) Missing Vehicle Algorithm
(4) Yielding Object Algorithm
(5) Unknown Basis
(6) One Vehicle Beyond Scope
(7) Collision Beyond Scope
(8) Insufficient Data

VEHICLE HISTORY

HAS AIRBAG VEHICLE BEEN IN ANY PRIOR IMPACTS (1,2,9)* — 2

HAS ANY PRIOR MAINTENANCE/SERVICE BEEN PERFORMED ON SYSTEM(1,2,9)* — 2

*Describe: _____

AIRBAG VEHICLE: FLEET PRIVATE

VIN 2MECM75E6MX_____

MILEAGE 48,770 km (30,292 miles)

* (1)=Yes, (2)=No, (9)=Unknown

DRAFT - 09/04/85

SYSTEM READINESS LAMP
(In Instrument Cluster)

PRE-IMPACT LAMP CONDITION

(1) Functioning/ProvedOut
(2) Inoperative
(9) Unknown

1

DRIVER'S REPORT OF PRE-IMPACT FLASHING

(00) No Flashing Reported
(01) Continuous Flashing
(02)
-- >Number of Flashes
(11)
(12) Constant Light
(19) Flashing, Unkn Number
(88) Not App (system removed)
(99) Unknown

00

PERIOD OF PRE-IMPACT FLASHING

(0) No Flashing
(1) Same Day as Impact
(2) Prior Day
(3) Prior Two Days
(4) Prior Week
(5) Prior Month
(6) Over One Month
(9) Unknown

0

POST-IMPACT LAMP CONDITION

(1) Functioning/ProvedOut
(2) Inoperative
(9) Unknown

1

POST-IMPACT FLASHING

(00) No Flashing
(01) Continuous Flashing
(02)
-- >Number of Flashes
(11)
(12) Constant Light
(19) Flashing, Unkn Number
(88) Not Appl (removed)
(99) Unknown

01

AIRBAG VEHICLE FIRST HARMFUL EVENT 13

(01) Fire or explosion
(02) Immersion
(03) Gas Inhalation
(04) Fell from vehicle
(05) Injured in vehicle
(06) Other noncollision (specify):
(07) Overturn
(08) Jackknife with intraunit damage
Collision With:
(09) Pedestrian
(10) Pedalcyclist
(11) Railway train
(12) Animal
(13) Motor vehicle in transport (same roadway)
(14) Motor vehicle in transport (other roadway)
(15) Parked motor vehicle
(16) Other type nonmotorist (specify):
(17) Thrown or falling object
(18) Boulder
Collision with Fixed Object:
(20) Building
(21) Impact attenuator/Crash Cushion
(22) Bridge pier or abutment
(23) Bridge parapet end
(24) Bridge rail
(25) Guardrail
(26) Concrete traffic barrier
(27) Median barrier
(28) Other longitudinal barrier (specify):
(29) Highway/Traffic sign post
(30) Overhead sign support
(31) Luminaire/Light support
(32) Utility pole
(33) Other post, pole, or support (specify):
(34) Culvert
(35) Curb
(36) Ditch
(37) Embankment-earth
(38) Embankment-rock, stone or concrete
(39) Fence (wooden, wire, chain link, etc.)
(40) Wall (stone, rock, metal, etc.)
(41) Fire hydrant
(42) Shrubbery
(43) Tree
(44) Other fixed object (specify):
(45) Pavement surface irregularity (pothole, grooved, grates)
(99) Unknown

AIRBAG VEHICLE IMPACT SUMMARY

VEHICLE ROLE: 1

(0) Non-collision
(1) Striking Unit
(2) Struck Unit
(3) Both Striking and Struck
(9) Unknown

MANNER OF LEAVING SCENE: 3

(1) Driven
(2) Towed-due to damage
(3) Towed - not for damage
(4) Towed - details unknown
(5) Abandoned
(9) Unknown

NUMBER OF IMPACT EVENTS: 1
(8) 8 or more, (9) Unknown

ROLLOVER: 0
(0) No Rollover
(1) First Event
(2) Subsequent Event
(3) Yes, Unknown Event
(9) Unknown

OVERRIDE/UNDERRIDE: 1

(1) No over/underride
(1) Override - 1st CDC
(3) - Other CDC
(4) Underride - 1st CDC
(6) - Other CDC
(9) Unknown

AIRBAG VEHICLE DAMAGE

CODES: (1) Yes, DAMAGED
(2) No Damage
(9) Unknown

LEFT FRONT FENDER DAMAGE: 2

RIGHT FRONT FENDER DAMAGE: 1

CENTER TOP OF GRILLE DAMAGE: 1

FRONT BUMPER E.A. STATUS: Left: 3 Right: 3

(1) Normal
(2) Extended
(3) Partial Compression
(4) Complete Compression
(5) Not Applicable
(9) Unknown

FIRST AIRBAG VEHICLE IMPACT:

CONFIGURATION: 4

(0) Struck Object or Pedestrian
(1) Rear-End
(2) Head-On
(3) Rear-to-Rear
(4) Angle
(5) Sideswipe - Same Direction
(6) Sideswipe-Opposite Direct.
(7) NonColl:eg Fell from Veh
(8) NonImpact Deployment
(9) Unknown

CDC 12-FDEW-1

OBJECT CONTACTED: 1986 HONDA ACCORD

PRIMARY/DEPLOYMENT IMPACT:

EVENT NUMBER: 1

TOTAL DELTA-V: 09

LONGITUDINAL DELTA-V: 09

CONFIGURATION: 4

(0) Struck Object or Pedestrian
(1) Rear-End
(2) Head-On
(3) Rear-to-Rear
(4) Angle
(5) Sideswipe - Same Direction
(6) Sideswipe-Opposite Direct.
(7) NonColl:eg Fell from Veh
(8) NonImpact Deployment
(9) Unkonwn

CDC 12-FDEW-1

OBJECT CONTACTED: 86 HONDA ACCORD

NOTES:

AIRBAG SYSTEM DAMAGE	
CODES: (1) Yes, Damaged* (2) No, Intact (8) Not App.(Removed) (9) Unknown	
AIRBAG MODULE NORMAL DEPLOYMENT	1
SENSORS: Left Front	2
Center Front	2
Right Front	2
Rear, Cowl	2
DIAGNOSTIC MODULE	2
WIRING	2
KNEE DIVERTER	2
INDICATION OF DISCONNECTED OR LOOSE ELECTRICAL CONNECTORS	2

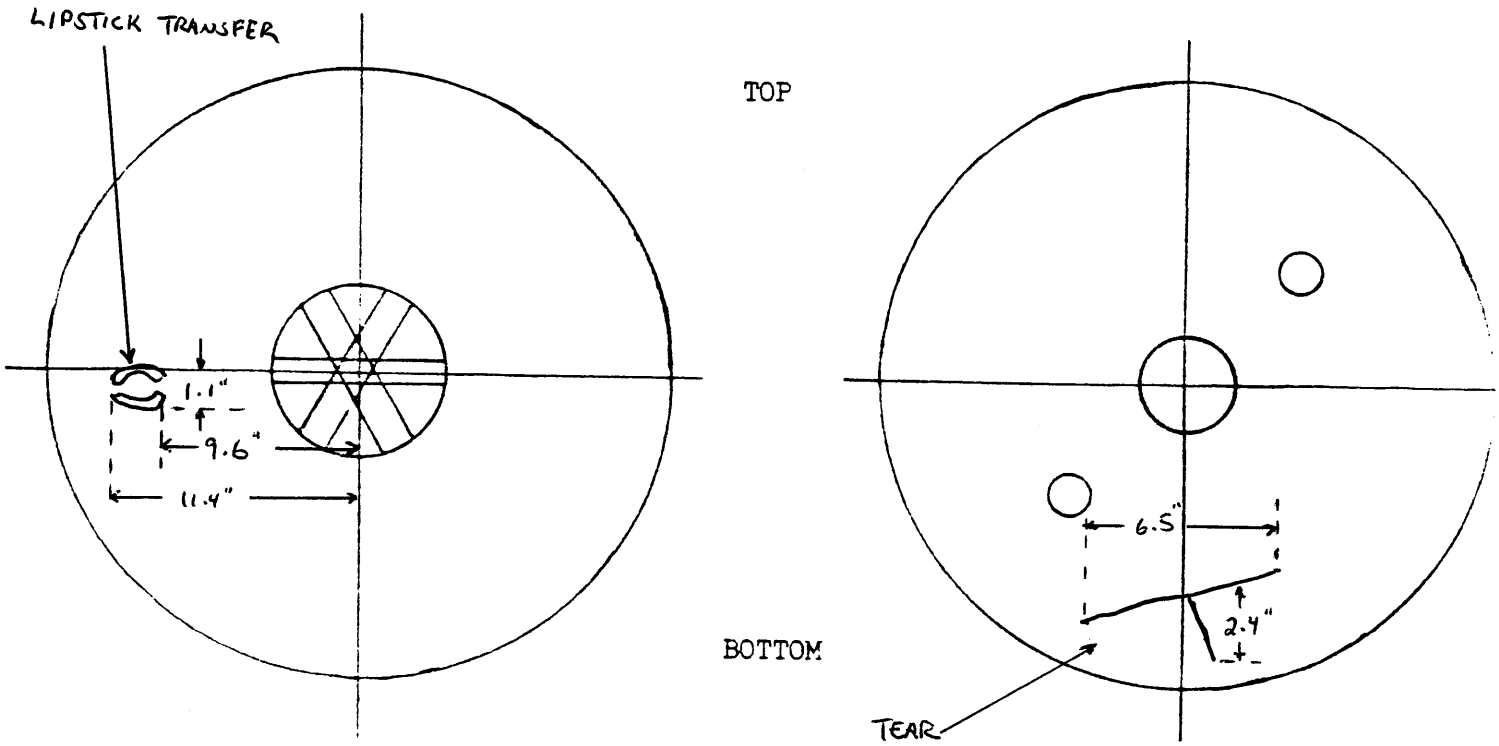
CONDITION OF DEPLOYED BAG 2

(1) Bag Intact
(2) Split or Torn*
(3) Cut by Object In Impact*
(4) Cut after Accident*
(5) Other (e.g., burned)*
(8) N/A (not deployed)
(9) Unknown

*DESCRIBE System and Bag Damage:

T-shaped tear, see below

NOTE DAMAGE AND CONTACT MARKS ON AIRBAG DIAGRAMS BELOW:



OCCUPANTS of AIRBAG CAR

NUMBER OF OCCUPANTS IN VEHICLE (8) 8 or more	1
NUMBER OF INJURED PERSONS	1
MAXIMUM AIS IN AIRBAG VEHICLE (0) No Injury (1-6) AIS Severity (7) Injured, Unknown Severity (9) Unknown	3

DRIVER AGE 53 SEX F

NUMBER OF DRIVER INJURIES	3
SOURCE OF BEST INJURY DATA	2

(0) Not Injured
(1) Autopsy w/wo med. records
(2) Hospital Medical Records
(3) Emergency Room only
(4) Private physician, Clinic
(5) Lay Coroner Report
(6) EMS Personnel
(7) Intervlewee
(8) Police
(9) Unknown

MAXIMUM AIS BY BODY REGION

REGION	MAX AIS	CONTACT
Head/Neck/Face	-	- -
Chest	-	- -
Abdomen	-	- -
Leg/Hips	-	- -
Other (Arms)	3	1 6
DRIVER MAXIMUM	3	1 6

EJECTION: Extent NONE

Portal

NOTES:

DRIVER-PASSENGER AIRBAG SUPPLEMENT AB-6

DRIVER BELT USAGE: (1) Used (2) Not Used (9) Unknown 1

Evidence: DRIVER STATEMENT

DRIVER POSTURE: Any Comments Recorded (1) Yes, (2) No 1

Describe driver's posture and position on seat including specific comments on head, torso, buttocks, legs and feet. Also note hand and arm position. Did driver brace before crash? Describe:

FORWARD DRIVING POSITION, BOTH HANDS ON WHEEL AT 2-3 / 7-8 O'CLOCK

DRIVER FOREIGN OBJECTS: Comments Recorded (1) Yes, (2) No 1

Was driver wearing contact lenses or eyeglasses? Or holding any foreign object at the time of the impact (packages on lap, pipe, food, bottle, cigarette, etc.)? Did any lenses, objects, or jewelry play any role?:

EYEGLASSES ON STRAP AROUND NECK

DRIVER COMMENTS: Comments Recorded (1) Yes, (2) No 1

Was the driver aware that the vehicle was equipped with a supplemental restraint system? Did driver offer any comments on smoke, noise, etc.? Did the driver comment on the airbag as a restraint system? Describe:

HEARD "BANG",

PASSENGER-AIRBAG CONTACT (1) Yes, (2) No, (9) Unknown 2

Describe: NO PASSENGER

airbag.supp/jcm 9/4/85

ATTACHMENT D

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~~ 94-30
3. Vehicle Number ____

VEHICLE IDENTIFICATION

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

5. Vehicle Make (specify): 14
   MERCURY
   Applicable codes are found in your NASS Data Collection, Coding and Editing Manual.
   (99) Unknown

6. Vehicle Model (specify): 006
   GRAND MARQUIS LS
   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

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
2	M	E	C	M	2	5	F	6	M	X						

   Left justify; Slash zeros and letter Z (Ø and Ƶ)
   No VIN—Code all zeros
   Unknown—Code all nines

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: 064
    Code to the nearest kph (NOTE: 000 means less than 0.5 kph)
    (160) 159.5 kph and above
    (999) Unknown

    40 mph X 1.6093 = 064 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: PAR

ACCIDENT RELATED

13. Speed Limit: 072
    (000) No statutory limit
    Code posted or statutory speed limit in kph
    (999) Unknown

    45 mph X 1.6093 = 072 kph

14. Attempted Avoidance Maneuver: 08
    (01) No avoidance actions
    (02) Braking (no lockup)
    (03) Braking (lockup)
    (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: 83
    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

U-2-82

****** 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 1,740
____Code weight to nearest 10 kilograms.
(045) Less than 450 kilograms
(610) 6,100 kilograms or more
(999) Unknown

3,836 lbs X .4536 = 1,740 kgs

Source: [redacted]

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

___,___ 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 0
(0) No
(1) Yes

23. Post Collision Condition of Tree or Pole (For Highest Delta V) 0
(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):

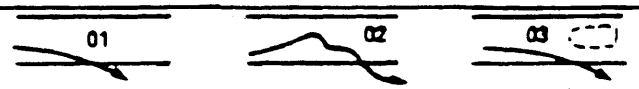
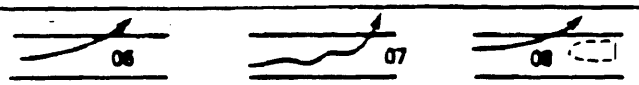
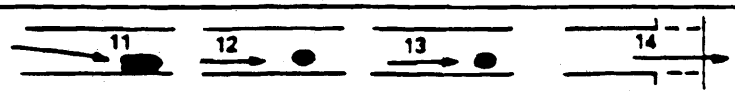
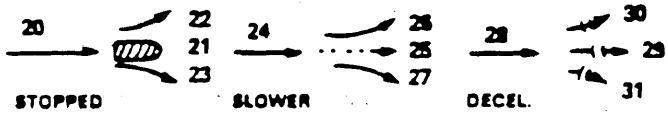
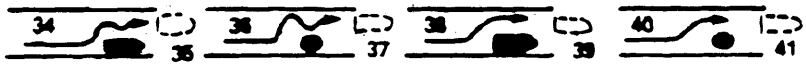
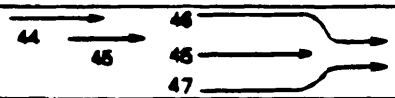
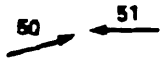
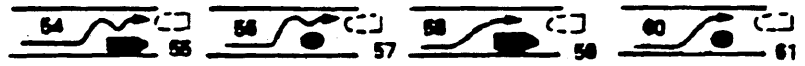
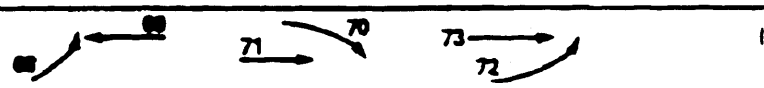
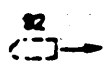
(7) Medium/heavy truck or bus override
(9) Unknown

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 ___

Category	Configuration	ACCIDENT TYPES (Includes Intent)
I Single Driver	A Right Roadside Departure	
	B Left Roadside Departure	
	C Forward Impact	
II Same Trafficway Same Direction	D Rear-End	
	E Forward Impact	
	F Sideswipe Angle	
III Same Trafficway Opposite Direction	G Head-On	
	H Forward Impact	
	I Sideswipe Angle	
IV Change Trafficway Vehicle Turning	J. Turn Across Path	
	K. Turn Into Path	
V Intersecting Paths (Vehicle Damage)	L. Straight Paths	
VI Miscellaneous	M. Backing Etc	 98 Other Accident Type 99 Unknown Accident Type 00 No Impact

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

Highest

30. Total Delta V 009

_____ Nearest kph (highest)

_____ Nearest kph (secondary)

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

31. Longitudinal Component of Delta V +009

_____ Nearest kph (highest)

_____ Nearest kph (secondary)

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

Highest

32. Lateral Component of Delta V +000

_____ Nearest kph (highest)

_____ Nearest kph (secondary)

(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 21,000

21032 Nearest 100 joules (highest)

_____ Nearest 100 joules (secondary)

(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? 1
(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 drug(s) present
(1) Yes [other drug(s) 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) 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) 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) 13
(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

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
(79) Object fell from vehicle 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 67

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~~ 94-30

3. Vehicle Number 01

VEHICLE IDENTIFICATION

VIN 2MECM75F6MX_____ Model Year 91

Vehicle Make (specify): MERCURY

Vehicle Model (specify): GRAND MARQUIS LS

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 STARTS 19.25" (L)	FULL FRONTAL WIDTH 69.5"
	OF CENTER EXTENDS 53.75" TO	
	(RF) CORNER	

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 Width (CDC)	Direct Damage Max Crush	Field L	C_1	C_2	C_3	C_4	C_5	C_6	±D
1	BUMPER	53.75	0.5"	69.5"	0.1	0.1	0.1	0.1	0.25	0.6	7.6"
		136.5cm	1.2cm	176.5cm	0.3	0.3	0.3	0.3	0.6cm	1.5cm	19.3cm
	EAD STROKE	L= 2.125"	cm	5.4cm							
		R= 2.125"	cm	5.4cm							

HS Form 435A (Rev. 1/94)

ORIGINAL SPECIFICATIONS WORK SHEET

Wheelbase	114.3	inches	x 2.54	=	290	cm
Overall Length	213.6	inches	x 2.54	=	543	cm
Maximum Width	72.5	inches	x 2.54	=	197	cm
Curb Weight	3,836	pounds	x .4536	=	1,740	kg
Average Track	62.8	inches	x 2.54	=	160	cm
Front Overhang	___	inches	x 2.54	=	___	cm
Rear Overhang	___	inches	x 2.54	=	___	cm
Undeformed End Width	69.5	inches	x 2.54	=	177	cm
Engine Size: cyl./displ.	____	cc	x .001	=	___	L
	___	CID	x .0164	=	___	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

ORIGINAL SPECIFICATIONS

Wheelbase	290	cm
Overall Length	543	cm
Maximum Width	197	cm
Curb Weight	1740	kg
Average Track	160	cm
Front Overhang		cm
Rear Overhang		cm
Undeformed End Width	177	cm
Engine Size: cyl./displ.		L

WHEEL STEER ANGLES

(For locked front wheels or displaced rear axles only)

RF ± ___ ___ o
LF ± ___ ___ o
RR ± ___ ___ o
LR ± ___ ___ o

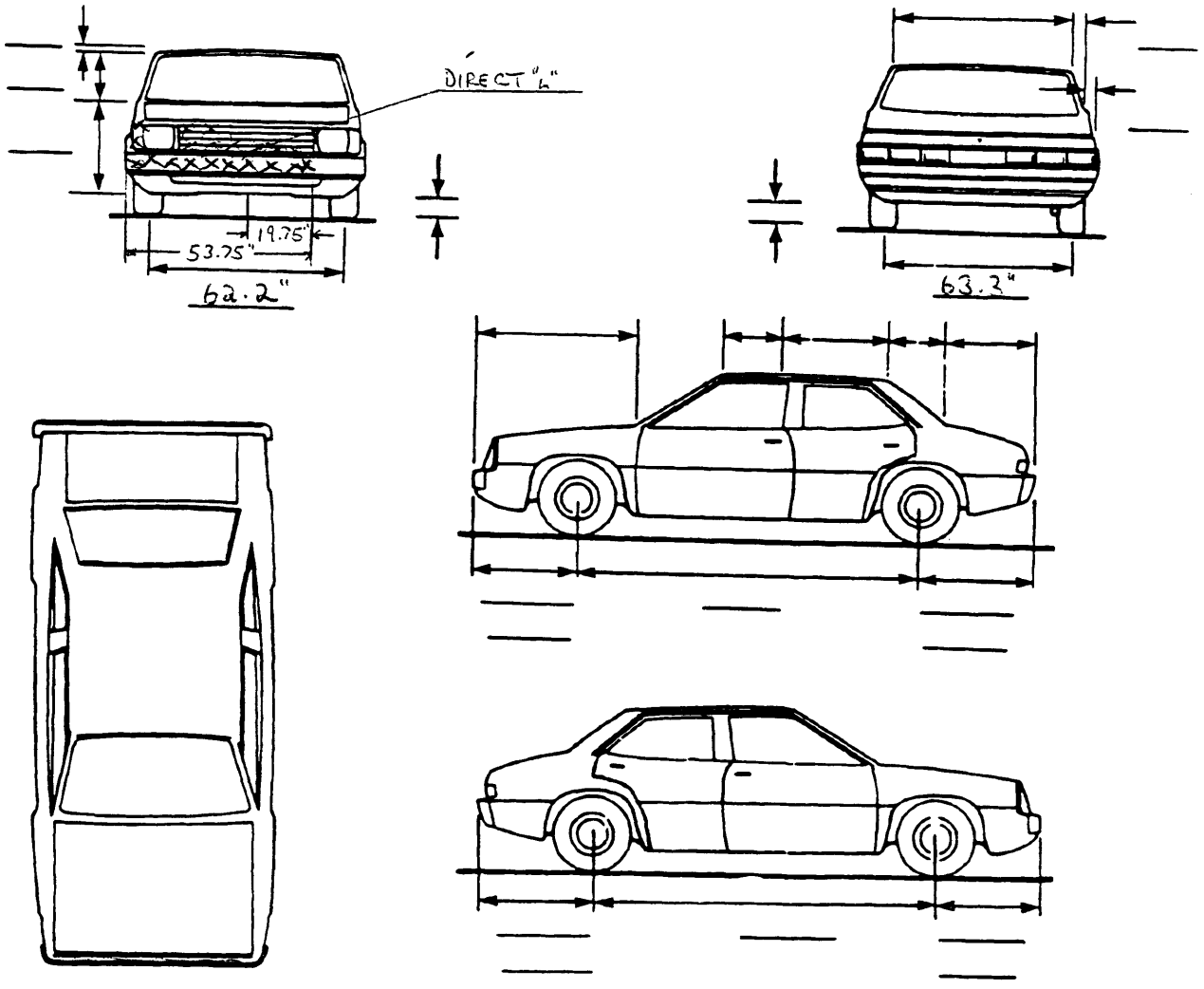
Within ± 5 degrees

DRIVE WHEELS

☐ FWD ☒ RWD ☐ 4WD

Approximate Cargo Weight _____ 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
- (79) Object fell from vehicle 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	000	00	F	D	E	W	01

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. 01	5. 02	6. 12	7. F	8. D	9. E	10. W	11. 01

Second Highest Delta "V"

12.	13.	14.	15.	16.	17.	18.	19.

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
137	000	000	000	000	001	002	+ 019

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 290
114.3 Code to the nearest centimeter
(999) Unknown

____.__ inches X 2.54 = ___ 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 1

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

34. Fuel Tank-1 Location 1

35. Fuel Tank-2 Location 0
(0) No fuel tank
(1) Aft of center of the rear wheels (rear axle) centered
(2) Aft of center of the rear wheels (rear axle) left side
(3) Aft of center of the rear wheels (rear axle) right side
(4) Forward of center of the rear wheels (rear axle) centered
(5) Forward of center of the rear wheels (rear axle) left side
(6) Forward of center of the rear wheels (rear axle) right side
(7) Over center of the rear wheels (rear axle)
(8) Other (specify):
_____
(9) Unknown

36. Fuel Tank-1 Filler Cap Location 2

37. Fuel Tank-2 Filler Cap Location 0
(0) No fuel tank
(1) On back plane
(2) Aft of center of the rear wheels (rear axle) on left side plane
(3) Aft of center of the rear wheels (rear axle) on right side plane
(4) Forward of center of the rear wheels (rear axle) on left side plane
(5) Forward of center of the rear wheels (rear axle) on right side plane
(6) Over the center of the rear wheels (rear axle) on left side plane
(7) Over the center of the rear wheels (rear axle) on right side plane
(8) Other (specify):_____
(9) Unknown

38. Fuel Tank-1 Damage 1

39. Fuel Tank-2 Damage 0
(0) No fuel tank
(1) No damage to fuel tank
(2) Deformed, no seam failure
(3) Deformed, with a seam failure
(4) Punctured
(5) Lacerated (ripped)
(6) Abraded (scraped)
(7) Filler neck separation from the fuel tank
(8) Other damage (specify):
_____
(9) Unknown

40. Location of Fuel System-1 Leakage 1

41. Location of Fuel System-2 Leakage 0
(0) No fuel tank
(1) No fuel leakage

Primary Area Of Leakage
(2) Tank
(3) Filler neck
(4) Cap
(5) Lines/pump/filter
(6) Vent/emission recovery
(8) Other (specify): _____
(9) Unknown

42. Fuel Type-1 01

43. Fuel Type-2 00

Single Fuel Type
(00) No fuel tank
(01) Gasoline
(02) Diesel
(03) CNG (Compressed Natural Gas)
(04) LPG (Liquid Petroleum Gas) also known as Propane
(05) LNG (Liquid Natural Gas)
(06) Methanol (M100 or M85)
(07) Ethanol (E100 or E85)
(08) Other (Hydrogen or others) (specify): _____

Electric Powered or Electric/Solar Powered Vehicles
(10) Lead Acid Battery
(11) Nickel-Iron Battery
(12) Nickel-Cadmium Battery
(13) Sodium Metal Chloride Battery
(14) Sodium Sulfur Battery
(18) Other (Specify): _____

(98) Other Hybrid (specify): _____

(99) Unknown fuel type

44. Is This Vehicle Equipped With More Than Two Fuel Tanks? 0
(0) No (one or two tanks only)

Yes - More Than Two Tanks
(1) Yes -- no damage to any tank or filler cap and no fuel system leakage
(2) Yes -- no damage to any tank or filler cap but there is fuel system leakage (specify leakage location): _____
(3) Yes -- damage to an additional tank or filler cap and there is fuel system leakage (specify the following):
Type of tank _____
Tank location _____
Filler cap location _____
Tank damage _____
Location of leakage _____
Type of fuel _____
(9) Unknown if more than two tanks

COMMENTS

*** 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~~ 94-30
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 1 11. RF 1 12. LR 1 13. RR 1 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 0 32. LF 0 33. RF 0 34. LR 0 35. RR 0
36. BL 0 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

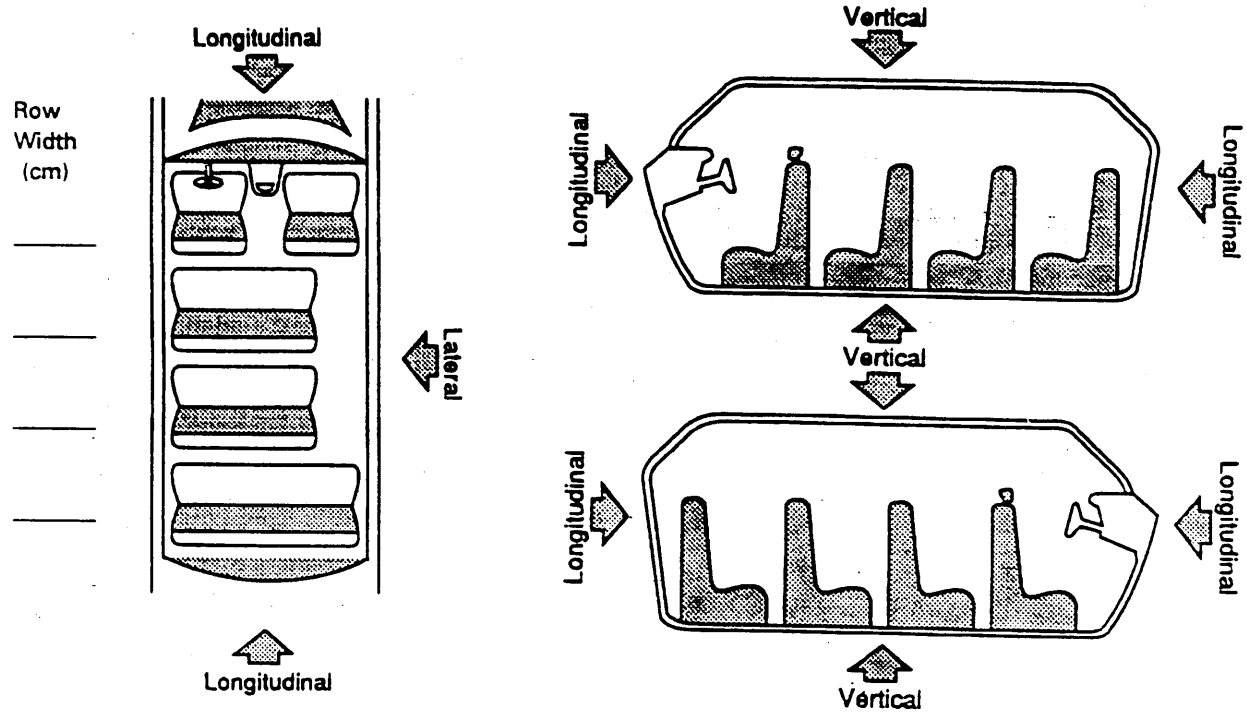
Window Precrash Glazing Status

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

INTRUSION WORKSHEET

Note: Sketch intruded areas



LOCATION OF INTRUSION	INTRUDED COMPONENT	(All Measurements Are In Centimeters) COMPARISON VALUE	—	INTRUDED VALUE	=	INTRUSION	DOMINANT CRUSH DIRECTION
			—		=		
			—		=		
			—		=		
			—		=		
			—		=		
			—		=		
			—		=		
			—		=		
			—		=		
			—		=		
			—		=		
			—		=		
			—		=		
			—		=		
			—		=		

Document no more than the 15 most severe intrusions

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
- (09) D-pillar NO INTRUSION
- (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 RIM/SPOKE DEFORMATION

(All Measurements Are in Centimeters)

COMPARISON VALUE	—	DAMAGE VALUE	=	DEFORMATION
	—		=	
	—		=	
	—		=	
	—		=	

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 1988-94 CDS.

89. Blank — X X X
(This variable is left blank so that numbering consistency can be maintained with the 1988-94 CDS.

90. Blank — X X X
(This variable is left blank so that numbering consistency can be maintained with the 1988-94 CDS.

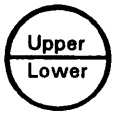
91. Blank — X X X
(This variable is left blank so that numbering consistency can be maintained with the 1988-94 CDS.

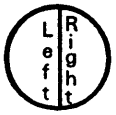
92. Steering Rim/Spoke Deformation — 0 0
_____Code actual measured deformation to the nearest centimeter
(00) No steering rim deformation
(01-14) Actual measured value in centimeters
(15) 15 centimeters or more
(98) Observed deformation cannot be measured
(99) Unknown

93. Location of Steering Rim/Spoke Deformation — 0 0
(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 — 0 4 9 ,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

30,292 miles X 1.6093 = 48,720 kilometers

Source: _____

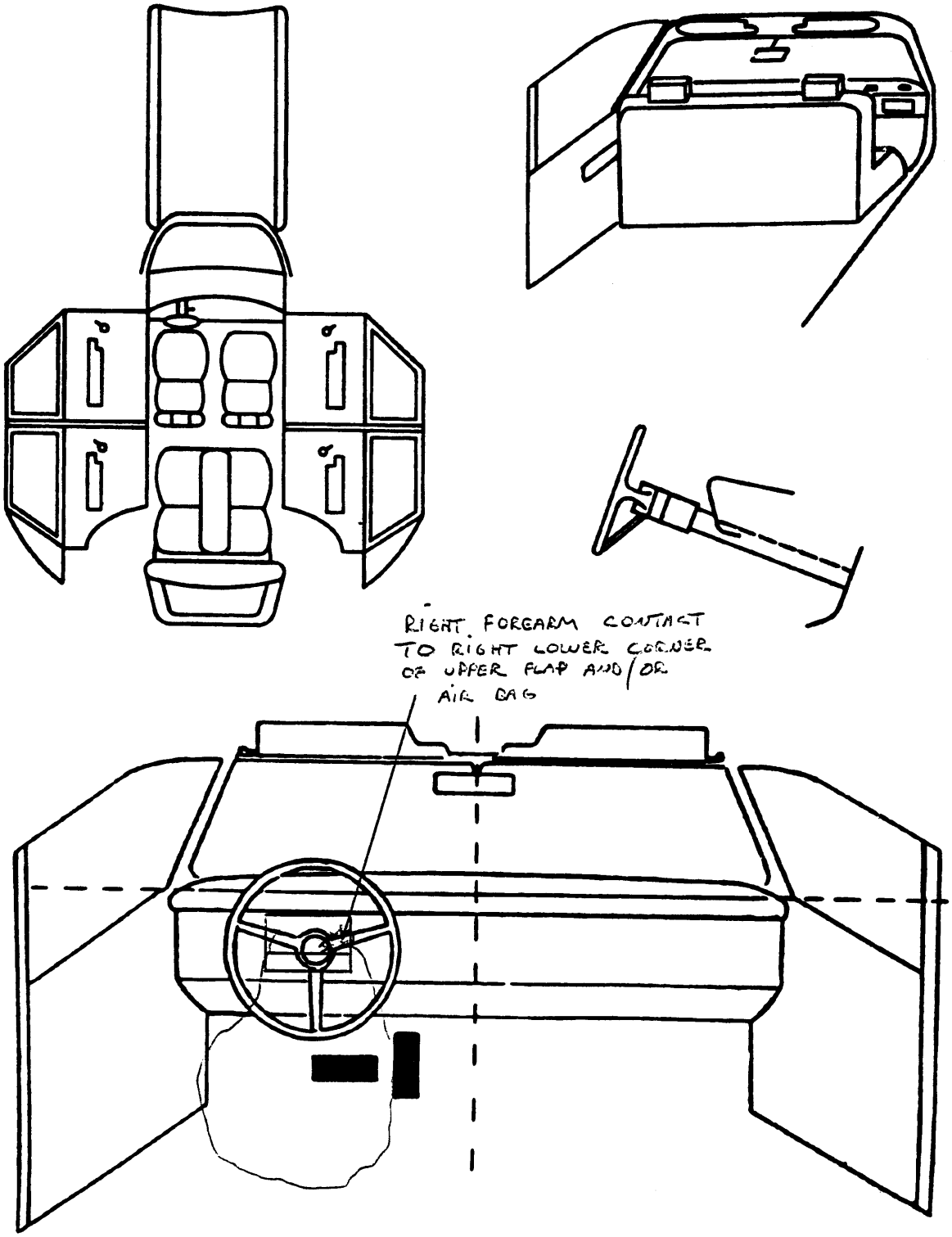
95. Instrument Panel Damage from Occupant Contact? — 0
(0) No
(1) Yes
(9) Unknown

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	16	1	(R) FOREARM	NONE; FRACTURED ULNA	1
B	45	1	(R) FOREARM, FACE	NONE; FRACTURED ULNA	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	1	0
	Failure	2	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

Are There Indications of Air Bag System Failure?
(0) Not equipped/not available
(1) No
(2) Yes (specify): TEAR
(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
	Evidence of usage	04	-	-
	Used in this crash?	04	-	-
	Proper Use	1	-	-
	Failure Modes	1	-	-
SECOND	Availability	4	3	4
	Evidence of usage	-	-	-
	Used in this crash?	-	-	-
	Proper Use	-	-	-
	Failure Modes	-	-	-
OTHER	Availability			
	Evidence of usage			
	Used in this crash?			
	Proper 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

Proper Use of Manual (Active) Belts
(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

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 Usage						
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	0	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 Occupant 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
(2) 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 E

NASS Occupant Forms

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~~	
2. Case Number - ~~Stratum~~ 94-30	4. Occupant Number 01
	3. Vehicle 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	A.I.S. - 90 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. 2	6. 7	7. 5	8. 32	9. 04	10. 3	11. 1	12. 16	13. 1	14. 1	15. 00
2nd	16. 2	17. 7	18. 5	19. 06	20. 30	21. 1	22. 1	23. 16	24. 1	25. 1	26. 00
3rd	27. 2	28. 7	29. 3	30. 04	31. 99	32. 1	33. 1	34. 16	35. 1	36. 1	37. 00
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 (1/94)

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

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~~ ____ ____ ____ ____
3. Vehicle Number 01
4. Occupant Number 01

OCCUPANT'S CHARACTERISTICS

5. Occupant's Age 53
   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 2
   (1) Male
   (2) Female
   (9) Unknown

7. Occupant's Height 154
   Code actual height to the nearest centimeter.
   (999) Unknown
   60.5 inches X 2.54 = ___ centimeters

8. Occupant's Weight 063
   Code actual weight to the nearest kilogram.
   (999)Unknown
   138 pounds X .4536 = ___ 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 — 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. Are There Indications of Air Bag System Failure? — 2
(0) Not equipped/not available
(1) No
(2) Yes (specify): TEAR IN FABRIC
(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): LAP + SHOULDER AND AIR BAG
(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 (specify): _____
    (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) 3

(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 (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 03
(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 97
____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
(96) Mode of death given but specific injuries are not linked to cause of death. (specify):

_____
(97) Other result (includes fatal ruled disease) (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

Check the Primary Source Used In Determining Belt Use.

[ ] Not equipped/not available/destroyed or rendered inoperative
[ ] Vehicle inspection
[ ] Official injury data
[✓] Driver/occupant interview
[ ] Other (specify):
[ ] Unknown if belt used

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

UPDATE CANDIDATE? NO [ ] YES [ ]

STOP - VARIABLES 50 THROUGH 53 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

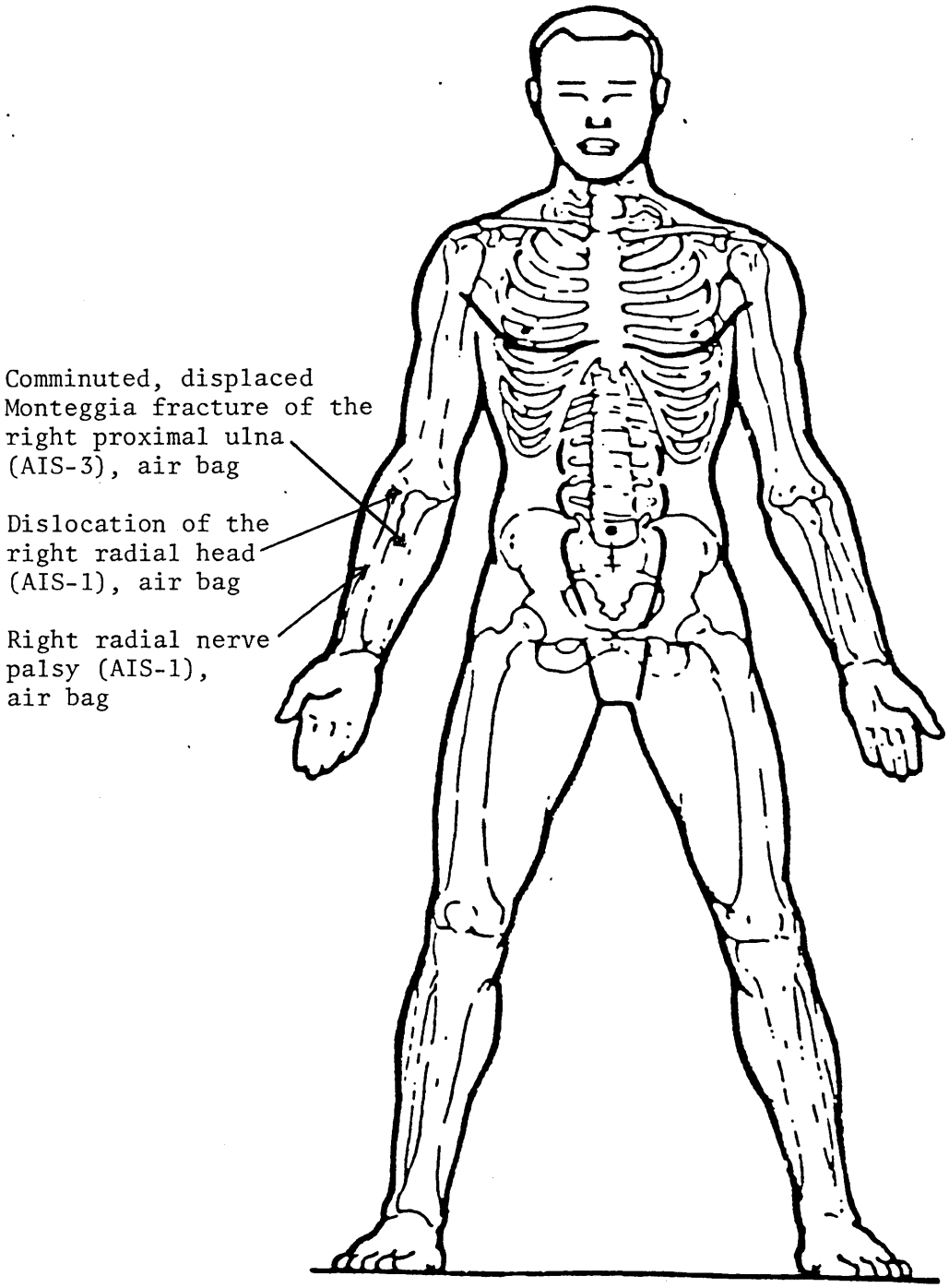
51. Was the Occupant Given Blood? 1
    (1) No - blood not given
    (2) Yes - blood given
    (specify units):_____
    (9) Unknown if blood given

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

BELT USE DETERMINATION

53. Primary Source of Belt Use Determination 3
    (0) Not equipped/not available/destroyed or rendered inoperative
    (1) Vehicle inspection
    (2) Official injury data
    (3) Driver/occupant interview
    (8) Other (specify):_____
    (9) Unknown if belt used

AGE 53
SEX Female
WT. 62.1 kg (138 lbs.)
HT. 153.5 cm (60.5")



ATTACHMENT F

CRASHPC Output

SUMMARY OF CRASHPC RESULTS USING DAMAGE

94-30

	SPEED CHANGE (DAMAGE)	SPEED CHANGE (LINEAR MOMENTUM AND SPINOUT)	IMPACT SPEED (LINEAR MOMENTUM AND SPINOUT)
VEHICLE #1			
TOTAL	15 KPH (9 MPH)	14 KPH (9 MPH)	29 KPH (18 MPH)
LONGITUDINAL	-15 KPH (-9 MPH)	-14 KPH (-9 MPH)	29 KPH (18 MPH)
LATITUDINAL	0 KPH (0 MPH)	0 KPH (0 MPH)	0 KPH (0 MPH)
PDOF ANGLE	2 DEGREES	0 DEGREES	
ENERGY DISSIPATED =	21032 JOULES (15510 FT-LB)		
VEHICLE #2			
TOTAL	22 KPH (14 MPH)	20 KPH (13 MPH)	0 KPH (0 MPH)
LONGITUDINAL	1 KPH (0 MPH)	1 KPH (1 MPH)	0 KPH (0 MPH)
LATITUDINAL	22 KPH (14 MPH)	20 KPH (13 MPH)	0 KPH (0 MPH)
PDOF ANGLE	-92 DEGREES	-93 DEGREES	
ENERGY DISSIPATED =	18339 JOULES (13524 FT-LB)		

SCENE INFORMATION

	VEHICLE #1	VEHICLE #2
IMPACT X-POSITION	2.4 M. (8.0 FT.)	6.1 M. (20.0 FT.)
IMPACT Y-POSITION	1.2 M. (4.1 FT.)	1.3 M. (4.3 FT.)
IMPACT HEADING ANGLE	-3 DEGREES	-90 DEGREES
REST X-POSITION	5.2 M. (17.0 FT.)	8.5 M. (28.0 FT.)
REST Y-POSITION	1.1 M. (3.6 FT.)	1.2 M. (3.9 FT.)
REST HEADING ANGLE	-3 DEGREES	-90 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	2.4 M. (8.0 FT.)	6.1 M. (20.0 FT.)
IMPACT Y-POSITION	1.2 M. (4.1 FT.)	1.3 M. (4.3 FT.)
IMPACT HEADING ANGLE	-3 DEGREES	-90 DEGREES
SEPARATION (USING SPINOUT)		
US	15 KPH (10 MPH)	1 KPH (1 MPH)
VS	0 KPH (0 MPH)	20 KPH (13 MPH)
PSISD	0 DEG/SEC	0 DEG/SEC
RELATIVE VELOCITY (LINEAR MOMENTUM)		
SPEED ALONG LINE THROUGH CG	29 KPH (18 MPH)	0 KPH (0 MPH)
SPEED ORTHOGONAL TO CG LINE	-2 KPH (-1 MPH)	0 KPH (0 MPH)

CLOSING VELOCITY (LINEAR MOMENTUM) = 29 KPH (18 MPH)

DAMAGE DATA

	VEHICLE #1	VEHICLE #2
SIZE CATEGORY	4	2
STIFFNESS CATEGORY	4	2
VEHICLE WEIGHT	1802 KGS (3972 LBS)	1232 KGS (2716 LBS)
CDC	12FDEW1	09LYEW2
PDOF ANGLE	2 DEGREES	-92 DEGREES
CRUSH LENGTH	175 CM. (69 IN.)	262 CM. (103 IN.)
C1	5 CM. (2 IN.)	0 CM. (0 IN.)
C2	5 CM. (2 IN.)	6 CM. (3 IN.)
C3	0 CM. (0 IN.)	19 CM. (8 IN.)
C4	0 CM. (0 IN.)	18 CM. (7 IN.)
C5	0 CM. (0 IN.)	11 CM. (4 IN.)
C6	0 CM. (0 IN.)	0 CM. (0 IN.)
D	0 CM. (0 IN.)	26 CM. (10 IN.)
D'	0 CM. (0 IN.)	32 CM. (12 IN.)

(* INDICATES DEFAULT VALUE)

DIMENSIONS AND INERTIAL PROPERTIES

	VEHICLE #1	VEHICLE #2
CG TO FRONT AXLE	139 CM. (55 IN.)	118 CM. (46 IN.)
CG TO REAR AXLE	150 CM. (59 IN.)	127 CM. (50 IN.)
TRACK	157 CM. (62 IN.)	139 CM. (55 IN.)
CG TO FRONT OF VEH	251 CM. (99 IN.)	212 CM. (83 IN.)
CG TO REAR OF VEH	-290 CM. (-114 IN.)	-233 CM. (-92 IN.)
CG TO SIDE OF VEH	98 CM. (39 IN.)	85 CM. (34 IN.)
MOMENT OF INERTIA	17525 KGS (38636 LBS)	9453 KGS (20840 LBS)
VEHICLE MASS	5 KGS (10 LBS)	3 KGS (7 LBS)

ROLLING RESISTANCE		
LEFT FRONT WHEEL	.50	1.00
RIGHT FRONT WHEEL	.50	1.00
LEFT REAR WHEEL	.25	1.00
RIGHT REAR WHEEL	.25	1.00

COEFFICIENT OF FRICTION = .78