

# Crash Reports

Prepared by Ken Digges

Mon Jan 16 14:52:09 2006

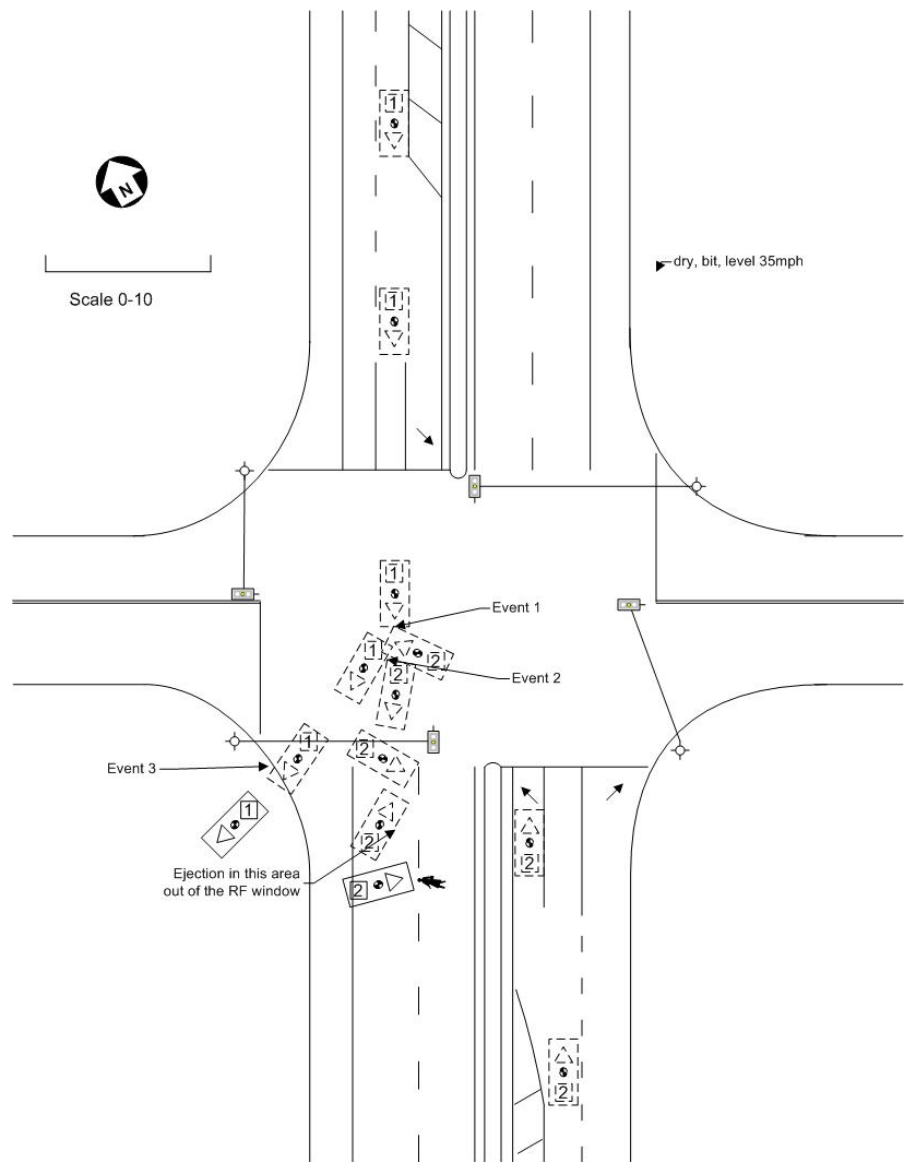
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1 Case 2002-4-70

Summary:

V1 was southbound on a three-lane roadway approaching an intersection controlled by a traffic light intending to continue straight. V2 was northbound on a three-lane contiguous roadway approaching the same intersection intending to turn left. As V1 executed its left turn, the front plane of V1 struck the right front corner of V2 in the northbound lanes of the intersection. After the initial impact, the two vehicles side slapped left-to-back. V1 then continued in a northwest direction and struck a curb before departing the roadway and rolling to final rest on the west roadside. V2 rotated counterclockwise and ejected the RF passenger through the RF side window before coming to a final rest facing southeast on the west shoulder. Both V1 and V2 were towed due to damage; the driver of V1 was transported to a hospital sustaining moderate injuries. The driver and RF passenger of V2 were transported to a trauma center sustaining serious injuries. )



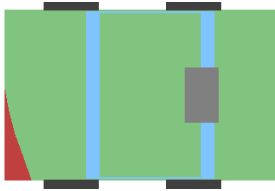
Vehicle	Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	4-DR SEDAN/HDTOP	Ford	Contour	2000	1	18	FEMALE-NOT PREG	7=Unk. sev.
2	STATION WAGON	Hyundai	Elantra	2000	1	83	MALE	3=Serious
2	STATION WAGON	Hyundai	Elantra	2000	2	77	FEMALE-NOT PREG	3=Serious

**Occupant: 2002-4-70-1-1**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Right side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	FOUR
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	Ford Contour
Year	2000
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	126

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	21 -20 7
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	11 F Y E W 2
Damage (C1-C6)	39 28 15 7 0 0
Crush (L and D)	150 -37
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	CURB

### Pre-Crash Driver Data

Accident Type	69
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	CROSS OVER INTER
Attempted Avoidance Manuever	99
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### NASS Weighting Factor

Weighting factor	18.481
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### DRIVER Factors

Age	18	Height	999	Weight	999
Gender					FEMALE-NOT PREG
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					Not ENTRAPPED

### Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover



## Restraint Factors

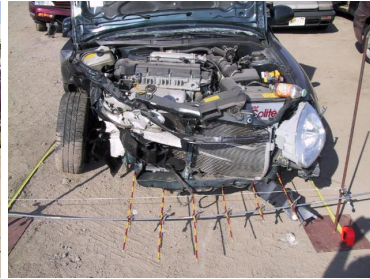
Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-4-70-1-1
MAIS	7=Unk. sev.
Seat Position	Front left side

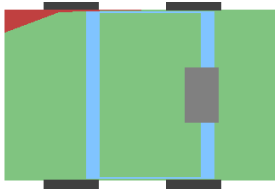
AIS Level	Injury Description	Contacts
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Occupant: 2002-4-70-2-1



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	21 -14 -16
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	2 R F E W 3
Damage (C1-C6)	0 0 1 2 17 32
Crush (L and D)	184 128
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	VEHICLE NO. 1

### NASS Weighting Factor

Weighting factor	18.481
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### Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	FOUR
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	Hyundai Elantra
Year	2000
Class	PASSENGER CAR
Body Type	STATION WAGON
Weight	119

### Pre-Crash Driver Data

Accident Type	68
Pre-event Movement	TURNING LEFT
Critical Pre-crash Event	XING ST-X PATH
Attempted Avoidance Manuever	99
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### DRIVER Factors

Age	83	Height	999	Weight	999
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			Not ENTRAPPED		

## Restraint Factors

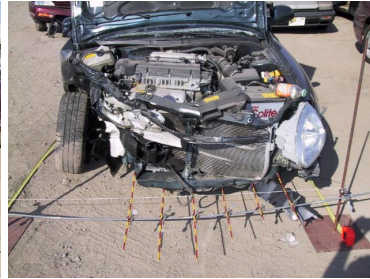
Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-4-70-2-1
MAIS	3=Serious
Seat Position	Front left side

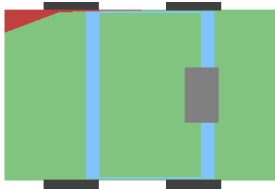
AIS Level	Injury Description	Contacts
2=Moderate	Lumbar fracture of transverse process without cord injury	Left hardware
2=Moderate	Radial fracture, closed	Steering rim
3=Serious	Ulnar fracture, open/displaced/comminuted	Steering rim
1=Minor	Leg skin abrasion	Knee bolster
1=Minor	Thoracic skin contusion	Belt webb/buckle
1=Minor	Leg skin contusion (hematoma)	Belt webb/buckle
1=Minor	Abdominal skin contusion	Belt webb/buckle
2=Moderate	Pelvic fracture, closed	Transmiss lever
2=Moderate	Sternal fracture	Belt webb/buckle
1=Minor	Leg skin laceration, minor	Knee bolster

Occupant: 2002-4-70-2-2



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	FOUR
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	Hyundai Elantra
Year	2000
Class	PASSENGER CAR
Body Type	STATION WAGON
Weight	119

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	21 -14 -16
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	2 R F E W 3
Damage (C1-C6)	0 0 1 2 17 32
Crush (L and D)	184 128
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	VEHICLE NO. 1

### Pre-Crash Driver Data

Accident Type	68
Pre-event Movement	TURNING LEFT
Critical Pre-crash Event	XING ST-X PATH
Attempted Avoidance Manuever	99
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### NASS Weighting Factor

Weighting factor	18.481
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### PASSENGER Factors

Age	77	Height	999	Weight	999
Gender					FEMALE-NOT PREG
Ejection					COMPLETE EJECT
Ejection Area					Right FRONT
Entrapment					Not ENTRAPPED

### Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

## Restraint Factors

Restrain	None used/avail
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

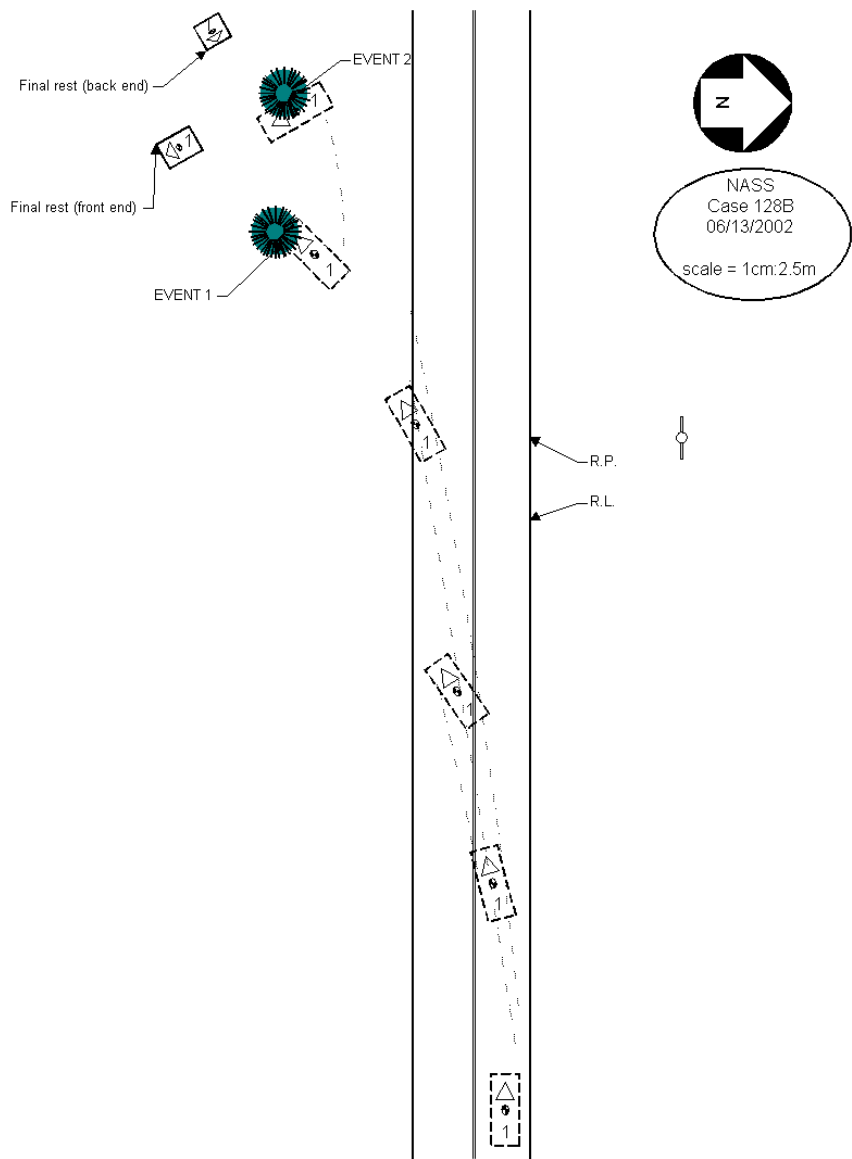
Occupant	2002-4-70-2-2
MAIS	3=Serious
Seat Position	Front right side

AIS Level	Injury Description	Contacts
2=Moderate	Rib cage fracture NFS	Right hardware
2=Moderate	Clavicle fracture	Right interior
3=Serious	Humeral fracture, open/displaced/comminuted	Ground
2=Moderate	Awake on admission, prior unconscious, length NFS	Other noncontact
1=Minor	Upper extremity skin contusion	Right interior
1=Minor	Leg skin contusion (hematoma)	Right wind frame
1=Minor	Thoracic skin contusion	Right hardware

2 Case 2002-9-128

Summary:

Vehicle 1, a 1993 Honda Civic was traveling west on a two-lane two-way roadway when control was lost. V1 departed the roadway to the left and it's front plane struck a 50cm diameter tree. V1 continued west while rotating counter clockwise and struck a second tree (43cm diameter) with it's right side. The car was severed into two pieces rear of the B-pillars from event two and each part came to a rest shortly thereafter. Vehicle 1 was towed from the scene and sustained severe damage to the front and right planes. It was equipped with driver side airbag which deployed. Vehicle 1 contained only a driver, no other occupants. The driver was ejected from the vehicle while wearing his seatbelt. It is believed that this is not a failure but an effect from the severe damage to the passenger compartment. There was significant intrusion from the right side which compressed and reclined the drivers seat, creating slack in the restraint system, allowing the driver to slip out during rotation. The driver sustained fatal injuries and was not transported to the hospital. )



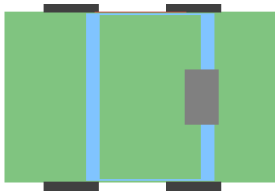
Vehicle	Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	4-DR SEDAN/HDTOP	Honda	Civic/CRX	1993	1	21	MALE	6=Maximum

Occupant: 2002-9-128-1-1



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	TWO
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DARK
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	NONINTER/NONJUNC
Traffic Control Device	
Police Reported Alcohol Presence	ALCOHOL PRESENT
Alcohol Test (< 95 indicates BAC 0.xx)	21

### Vehicle Factors

Make-Model	Honda Civic/CRX
Year	1993
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	103

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	999
Total, Longitudal, and Lateral $\delta V$	999 999 999
Est. $\delta V$ with sequence number	SEVERE 2
CDC	63 R P A W 9
Damage (C1-C6)	0 0 0 0 0 0
Crush (L and D)	0 0
Object Contacted 1	LARGE TREE
Object Contacted 2	LARGE TREE

### Pre-Crash Driver Data

Accident Type	6
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	OFF EDGE-LEFT
Attempted Avoidance Manuever	99
Pre-impact Stability	TRACKING
Pre-impact Location	DEPARTED ROADWAY

### NASS Weighting Factor

Weighting factor	47.068
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### DRIVER Factors

### Rollover Characteristics

Number of Events	2
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

Age	21	Height	185	Weight	64
Gender					MALE
Ejection					COMPLETE EJECT
Ejection Area					Left FRONT
Entrapment					Not ENTRAPPED



## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR BAG DEPLOYED
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-9-128-1-1
MAIS	6=Maximum
Seat Position	Front left side

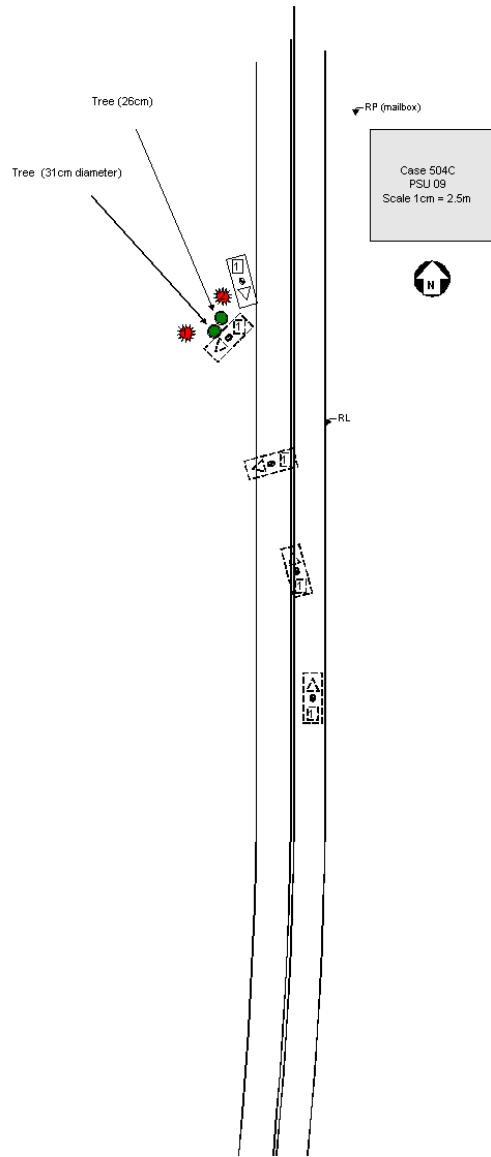
AIS Level	Injury Description	Contacts
1=Minor	Facial skin laceration, minor	Unknown SOURCE
1=Minor	Facial skin laceration, minor	Unknown SOURCE
1=Minor	Facial skin abrasion	Unknown SOURCE
1=Minor	Facial skin contusion	Unknown SOURCE
3=Serious	Basilar skull fracture, NFS	Unknown SOURCE
4=Severe	Cerebellar laceration	Unknown SOURCE
6=Maximum	Brain stem laceration	Unknown SOURCE
3=Serious	Cerebral subarachnoid hemorrhage	Unknown SOURCE
1=Minor	Thoracic skin contusion	Unknown SOURCE
4=Severe	Thoracic aortic laceration, minor (incomplete, EBL<205=Critical	Massive hepatic injury (>502=Moderate
	Pelvic fracture NFS	Unknown SOURCE
1=Minor	Abdominal skin laceration, minor	Belt webb/buckle
1=Minor	Upper extremity skin laceration, minor	Unknown SOURCE
1=Minor	Upper extremity skin abrasion	Unknown SOURCE
1=Minor	Upper extremity skin contusion	Unknown SOURCE
1=Minor	Leg skin contusion (hematoma)	Unknown SOURCE
1=Minor	Leg skin abrasion	Seat, back
1=Minor	Leg skin contusion (hematoma)	Unknown SOURCE
1=Minor	Leg skin abrasion	Unknown SOURCE
2=Moderate	441804	Unknown SOURCE



### 3 Case 2002-9-504

Summary:

V1, a 1999 Saturn SL was traveling northbound on a two-lane, two-way roadway that curved left. The driver of V1 lost control due to icy roadway conditions. V1 began to rotate counterclockwise and departed the roadway to the left. V1 contacted two trees with its right plane. At some point after impact, a fire began, which then engulfed the entire vehicle. V1 was towed due to damage. The driver was transported due to incapacitating injuries, and admitted overnight. A 2 year old right rear occupant was secured in a 5-point, forward facing child safety seat. The child was transported, treated and released. A child seat interview was obtained; however, a seat inspection was not possible as the safety seat was destroyed in the fire. )



Vehicle	Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	4-DR SEDAN/HDTOP	Saturn	SL	1999	1	24	FEMALE-NOT PREG	3=Serious
1	4-DR SEDAN/HDTOP	Saturn	SL	1999	2	2	FEMALE-NOT PREG	1=Minor

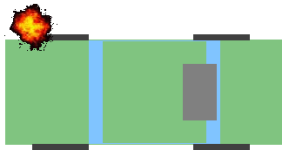
Occupant: 2002-9-504-1-1

No picture available



### Fire Information

Fire Occurrence	Major fire
Fire Origin	9
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Non-metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	TWO
Roadway Alignment	CURVE LEFT
Roadway Profile	DOWNHILL GRADE
Roadway Surface Type	ASPHALT
Roadway Surface Condition	ICE
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	NONINTER/NONJUNC
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	Saturn SL
Year	1999
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	106

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	999
Total, Longitudal, and Lateral $\delta V$	999 999 999
Est. $\delta V$ with sequence number	SEVERE 2
CDC	2 R 9 A 9 3
Damage (C1-C6)	0 0 0 0 0 0
Crush (L and D)	0 0
Object Contacted 1	LARGE TREE
Object Contacted 2	LARGE TREE

### Pre-Crash Driver Data

Accident Type	7
Pre-event Movement	NEGOTIATE CURVE
Critical Pre-crash Event	POOR ROAD CONDIT
Attempted Avoidance Maneuver	STEERING RIGHT
Pre-impact Stability	LAT SKID-CTR CLK
Pre-impact Location	DEPARTED ROADWAY

### NASS Weighting Factor

Weighting factor	0.000
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### DRIVER Factors

### Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

Age	24	Height	170	Weight	66
Gender					FEMALE-NOT PREG
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					Not ENTRAPPED

## Restraint Factors

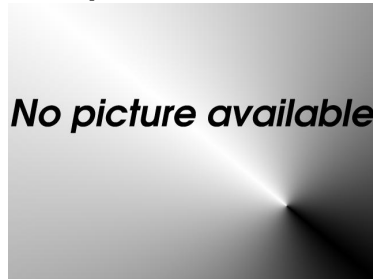
Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	Unk IF DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS UNK DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-9-504-1-1
MAIS	3=Serious
Seat Position	Front left side

AIS Level	Injury Description	Contacts
3=Serious	Radial fracture, open/displaced/comminuted	Unknown SOURCE
1=Minor	Teeth fracture	Unknown SOURCE

Occupant: 2002-9-504-1-2



### Fire Information

Fire Occurrence	Major fire
Fire Origin	9
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Non-metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	TWO
Roadway Alignment	CURVE LEFT
Roadway Profile	DOWNHILL GRADE
Roadway Surface Type	ASPHALT
Roadway Surface Condition	ICE
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	NONINTER/NONJUNC
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	Saturn SL
Year	1999
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	106

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	999
Total, Longitudal, and Lateral $\delta V$	999 999 999
Est. $\delta V$ with sequence number	SEVERE 2
CDC	2 R 9 A 9 3
Damage (C1-C6)	0 0 0 0 0 0
Crush (L and D)	0 0
Object Contacted 1	LARGE TREE
Object Contacted 2	LARGE TREE

### NASS Weighting Factor

Weighting factor	0.000
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### Pre-Crash Driver Data

Accident Type	7
Pre-event Movement	NEGOTIATE CURVE
Critical Pre-crash Event	POOR ROAD CONDIT
Attempted Avoidance Maneuver	STEERING RIGHT
Pre-impact Stability	LAT SKID-CTR CLK
Pre-impact Location	DEPARTED ROADWAY

### Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### PASSENGER Factors

Age	2	Height	99	Weight	12
Gender					FEMALE-NOT PREG
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					Not ENTRAPPED

## Restraint Factors

Restrain	Lap+sh w/ch seat
AOPS	YES-RES DET
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS UNK DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

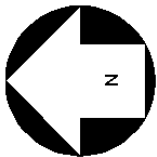
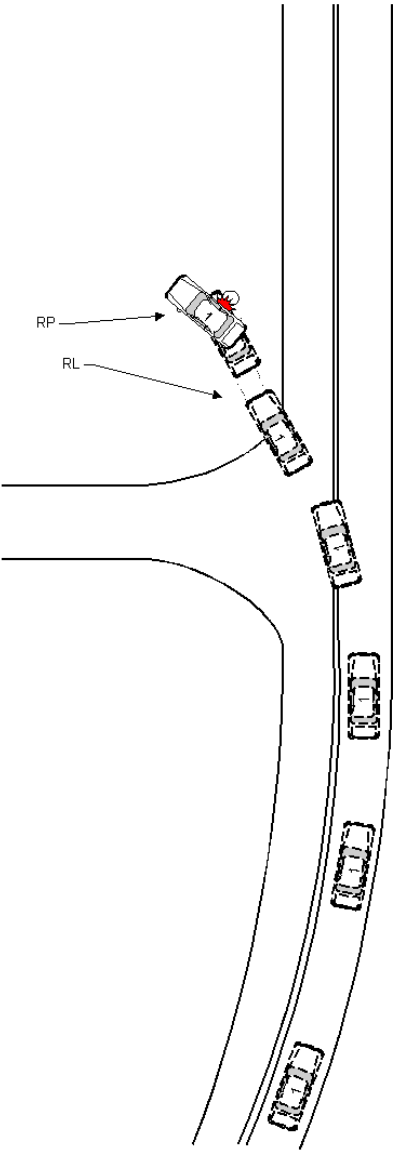
Occupant	2002-9-504-1-2
MAIS	1=Minor
Seat Position	Second right

AIS Level	Injury Description	Contacts
1=Minor	Leg skin contusion (hematoma)	Child seat
1=Minor	Facial skin abrasion	Unknown SOURCE

4 Case 2002-11-53

Summary:

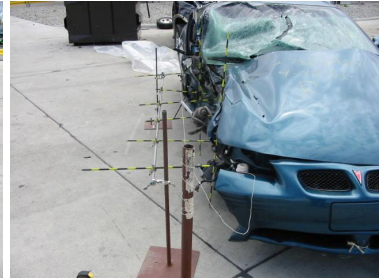
V1, a 2002 Pontiac Grand Prix was traveling east on a two lane, non-physically divided two way, bituminous, highly traveled rural roadway. V1 went off road to the left and contacted a tree with its right side. V1 ran over two smaller trees before coming to final rest. V1 was towed due to disabling damage. The lone occupant of V1 was transported and hospitalized due to injuries received during crash. )



CASE 053E  
PSU 11  
50mph  
1cm=2.5m

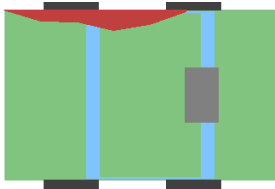
Vehicle #	Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	4-DR SEDAN/HDTOP	Pontiac	Grand Prix FWD	2002	1	24	MALE	4=Severe

**Occupant: 2002-11-53-1-1**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Non-metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	TWO
Roadway Alignment	CURVE LEFT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DARK
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	NONINTER/NONJUNC
Traffic Control Device	
Police Reported Alcohol Presence	ALCOHOL PRESENT
Alcohol Test (< 95 indicates BAC 0.xx)	22

### Vehicle Factors

Make-Model	Pontiac Grand Prix FWD
Year	2002
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	154

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	25 -24 -9
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	1 R Y A W 3
Damage (C1-C6)	2 21 29 17 16 0
Crush (L and D)	230 94
Object Contacted 1	LARGE TREE
Object Contacted 2	LARGE TREE

### Pre-Crash Driver Data

Accident Type	6
Pre-event Movement	NEGOTIATE CURVE
Critical Pre-crash Event	OFF EDGE-LEFT
Attempted Avoidance Manuever	99
Pre-impact Stability	LONGITUDINAL SKID
Pre-impact Location	DEPARTED ROADWAY

### NASS Weighting Factor

Weighting factor	84.735
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### DRIVER Factors

Age	24	Height	188	Weight	86
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			Not ENTRAPPED		

### Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-11-53-1-1
MAIS	4=Severe
Seat Position	Front left side

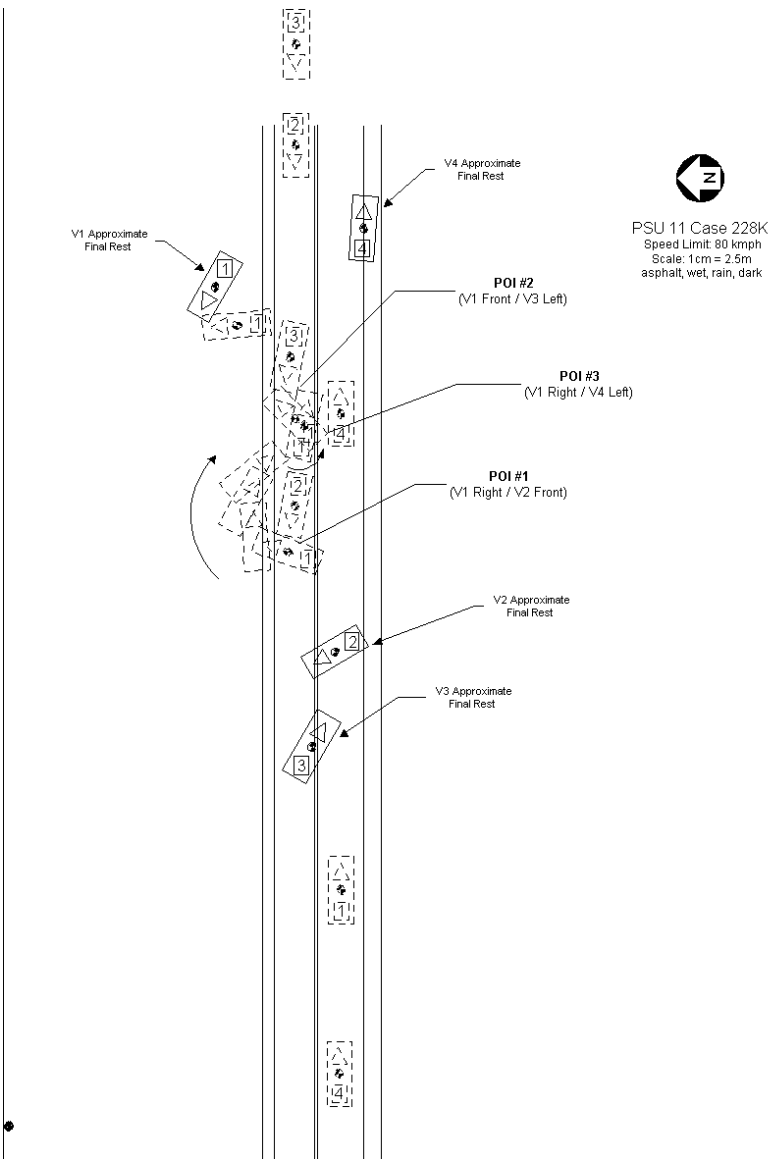
AIS Level	Injury Description	Contacts
1=Minor	Upper extremity skin abrasion	Belt webb/buckle
1=Minor	Upper extremity skin contusion	Belt webb/buckle
1=Minor	Leg skin contusion (hematoma)	Knee bolster
1=Minor	Abdominal skin contusion	Belt webb/buckle
1=Minor	Abdominal skin abrasion	Belt webb/buckle
1=Minor	Leg skin abrasion	Knee bolster
4=Severe	Intracerebral hematoma, small (<30ccs)	Other noncontact
2=Moderate	Cervical transverse process fracture, no cord injury	Other noncontact
3=Serious	Cerebral contusion, single, small (<30ccs)	Other noncontact
3=Serious	Thoracic cavity injury NFS, with hemo-/pneumothorax	Belt webb/buckle
2=Moderate	Splenic contusion, minor (<501=Minor	Facial skin abrasion
Air bag-DR side		
1=Minor	Facial skin contusion	Air bag-DR side



5 Case 2002-11-228

Summary:

V1 and V4 were traveling eastbound on a two lane, two way, undivided roadway. V2 and V3 were traveling westbound on the same roadway. V1 began to rotate CCW and entered the westbound lane, across the path of V2. As V1 entered the westbound lane, the right side surface was impacted by the frontal area of V2, which resulted in severe damage to both vehicles. As a result of the initial impact, V1 was re-directed in a CW rotation, and subsequently across the path of V3. As V1 continued into the westbound lane, the front left area impacted the left side surface of V3, which resulted in moderate damage to both vehicles. At this point, V1 was (again) re-directed in a CCW rotation as the right rear side surface impacted the left side surface of V4, resulting in minor damage to both vehicles. Vehicle 1 came to rest off the north pavement edge facing northwest. Vehicle 2 and vehicle 3 came to rest in the roadway facing northwest and southeast, respectively. Vehicle 4 came to rest off the south pavement edge facing east. Vehicles 1, 2 and 3 were towed due to damage. The occupants of vehicles 1, 2 and 3 were transported due to injuries. V4 was not towed and the driver was not transported. )



Vehicle	Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	2DR SEDAN/HT/CPE	Chevrolet	Cavalier	1995	1	26	MALE	4=Severe
2	3DR/2DR HATCHBAK	Ford	Escort/EXP	1994	1	22	FEMALE-NOT PREG	5=Critical
3	4-DR SEDAN/HDTOP	Dodge	Stratus	1999	1	55	MALE	2=Moderate

Occupant: 2002-11-228-1-1

No picture available



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Right side, behind rear axle
Fuel Tank Damage	Deformed
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	TWO
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	WET
Light Conditions	DARK
Atmospheric Conditions	RAIN
Relation to Intersection	NONINTER/NONJUNC
Traffic Control Device	
Police Reported Alcohol Presence	ALCOHOL PRESENT
Alcohol Test (< 95 indicates BAC 0.xx)	25

### Vehicle Factors

Make-Model	Chevrolet Cavalier
Year	1995
Class	PASSENGER CAR
Body Type	2DR SEDAN/HT/CPE
Weight	119

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	72 -36 -62
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	62 R D E W 5
Damage (C1-C6)	0 38 85 76 34 0
Crush (L and D)	332 0
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	VEHICLE NO. 3

### Pre-Crash Driver Data

Accident Type	64
Pre-event Movement	PASSING/OVERTAKE
Critical Pre-crash Event	OVER LINE-LEFT
Attempted Avoidance Manuever	99
Pre-impact Stability	LAT SKID-CTR CLK
Pre-impact Location	Left TRAVEL LANE

### NASS Weighting Factor

Weighting factor	38.994
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### DRIVER Factors

Age	26	Height	999	Weight	999
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			JAMMED DOOR/FIRE		

### Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

## Restraint Factors

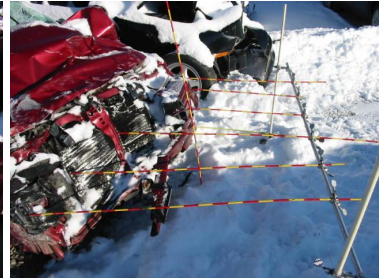
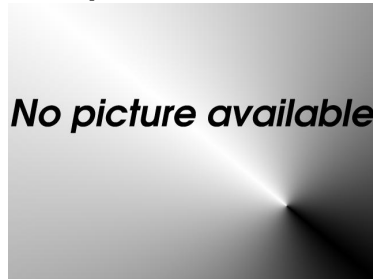
Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-11-228-1-1
MAIS	4=Severe
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor	Scalp abrasion	Head restraint
1=Minor	Upper extremity skin abrasion	Air bag-DR side
1=Minor	Upper extremity skin laceration NFS	Left apnel
1=Minor	Leg skin abrasion	Knee bolster
1=Minor	Upper extremity skin abrasion	Left apnel
4=Severe	Splenic laceration, major (segmental injury, no hilar injury)	Belt webb/buckle
2=Moderate	Humeral fracture NFS	Left interior
3=Serious	450211	Seat, back
4=Severe	Lung contusion, bilateral	Belt webb/buckle

Occupant: 2002-11-228-2-1



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	TWO
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	WET
Light Conditions	DARK
Atmospheric Conditions	RAIN
Relation to Intersection	NONINTER/NONJUNC
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	Ford Escort/EXP
Year	1994
Class	PASSENGER CAR
Body Type	3DR/2DR HATCHBAK
Weight	104

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	74 -70 25
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	11 F D E W 4
Damage (C1-C6)	35 33 36 79 90 91
Crush (L and D)	152 0
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	0

### Pre-Crash Driver Data

Accident Type	65
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	OPP DIR-OVR LEFT
Attempted Avoidance Manuever	BRAKE+STEER RT
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### NASS Weighting Factor

Weighting factor	38.994
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### Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### DRIVER Factors

Age	22	Height	178	Weight	113
Gender					FEMALE-NOT PREG
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					Not ENTRAPPED

## Restraint Factors

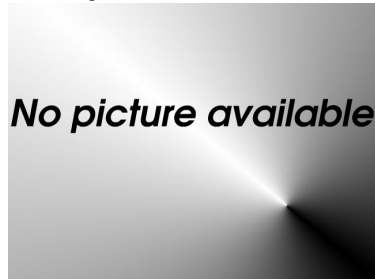
Restrain	Lap belt
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR BAG DEPLOYED
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-11-228-2-1
MAIS	5=Critical
Seat Position	Front left side

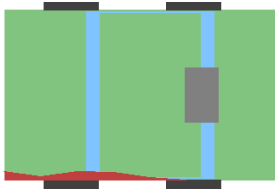
AIS Level	Injury Description	Contacts
1=Minor	Thoracic skin contusion	Belt webb/buckle
1=Minor	Thoracic skin abrasion	Belt webb/buckle
1=Minor	Leg skin laceration NFS	Center panel
2=Moderate	Fibular head, neck, or shaft fracture	Center panel
2=Moderate	Tibial fracture medial malleolus, open/displaced/comminuted	Floor
2=Moderate	Ankle joint dislocation NFS	Floor
2=Moderate	Pelvic fracture, closed	Left apnel
2=Moderate	Sternal fracture	Belt webb/buckle
2=Moderate	Rib cage fracture NFS	Belt webb/buckle
2=Moderate	Splenic laceration, minor (tear<3cms deep, no major vessel)	Belt webb/buckle
5=Critical	Massive hepatic injury (>50	

Occupant: 2002-11-228-3-1



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Non-metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	TWO
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	WET
Light Conditions	DARK
Atmospheric Conditions	RAIN
Relation to Intersection	NONINTER/NONJUNC
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	Dodge Stratus
Year	1999
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	132

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	17 -16 6
Est. $\delta V$ with sequence number	DELTA V CODED 2
CDC	11 L Y E W 2
Damage (C1-C6)	0 4 12 13 6 13
Crush (L and D)	305 76
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	0

### Pre-Crash Driver Data

Accident Type	98
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	OPP DIR-OVR LEFT
Attempted Avoidance Manuever	No AVOIDANCE
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### NASS Weighting Factor

Weighting factor	38.994
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### DRIVER Factors

Age	55	Height	183	Weight	93
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			Not ENTRAPPED		

### Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

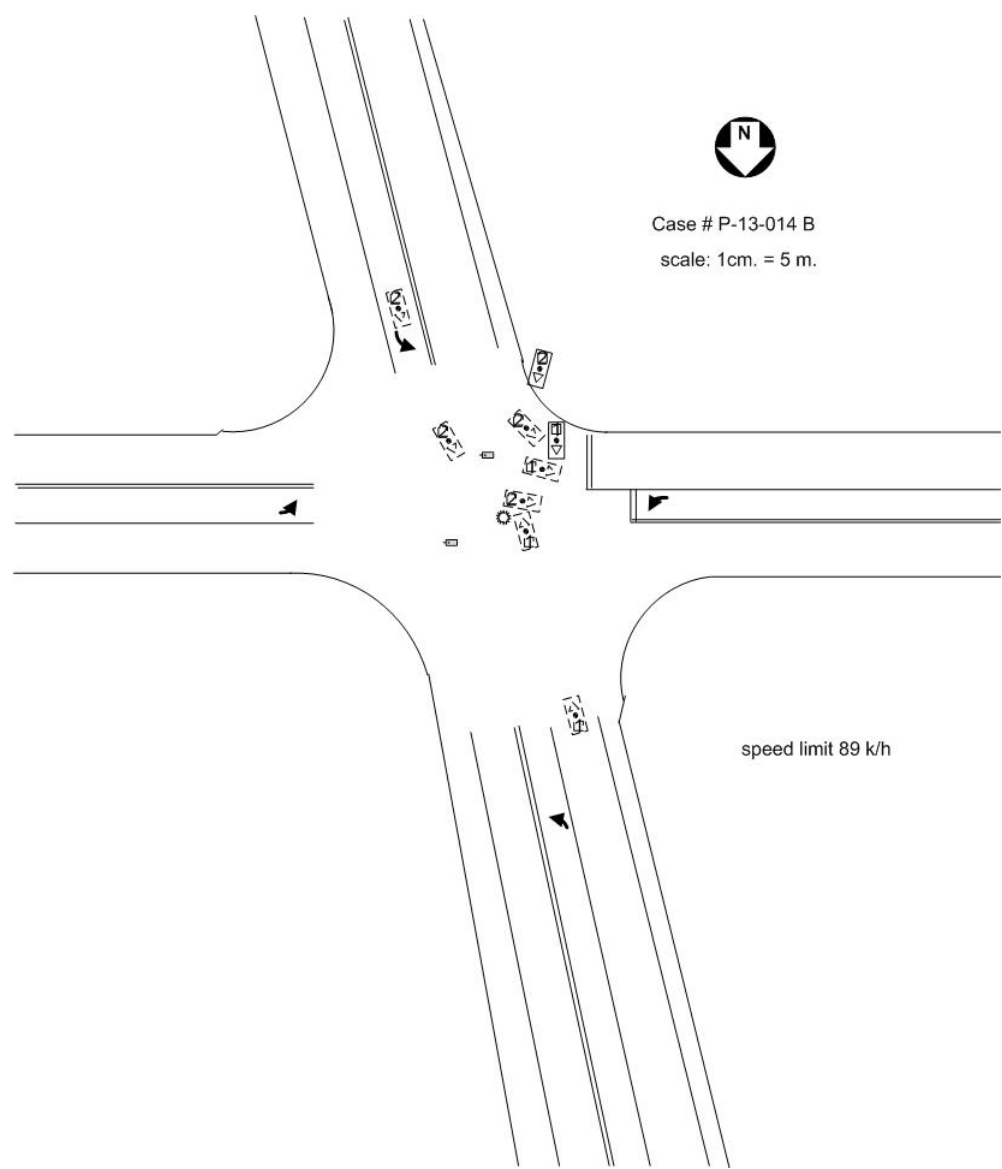
Occupant	2002-11-228-3-1
MAIS	2=Moderate
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor	Facial skin abrasion	Air bag-DR side
1=Minor	Leg skin contusion (hematoma)	Transmiss lever
2=Moderate	Tibial fracture of the medial malleolus	Floor
1=Minor	Leg skin contusion (hematoma)	Transmiss lever

6 Case 2002-13-14

Summary:

Vehicle 1 was SE bound on a 2 lane rural roadway that changes to a 3 lane at the intersection. As vehicle 1 began to cross through the intersection, NW bound vehicle 2 turned left in v-1's path and was struck in the right side . The restrained driver of vehicle 1 was not seriously injured. The restrained driver of vehicle 2 recieved several fractured ribs and his unrestrained passenger was fatally injured most likely from a head injury sustained by the intruding hood of vehicle 1. The RF door of vehicle 2 was torn from its hinges, although the latch remained closed. This resulted in 15 cm of integrity loss at the top of the door. Both vehicles required towing. )



Vehicle	Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	COMPACT UTILITY	Jeep	Cherokee84-	1997	1	31	FEMALE-NOT PREG	1=Minor
2	COMPACT PICKUP	Chevrolet	S-10, T10	1991	1	42	MALE	3=Serious
2	COMPACT PICKUP	Chevrolet	S-10, T10	1991	2	44	MALE	5=Critical

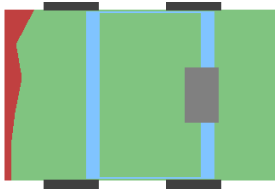


**Occupant: 2002-13-14-1-1**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Behind rear axle, centered
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	THREE
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DARK/LIGHTED
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	30 -26 15
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	11 F D E W 2
Damage (C1-C6)	11 9 16 25 17 43
Crush (L and D)	140 0
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	0

### NASS Weighting Factor

Weighting factor	85.649
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### Rollover Characteristics

Number of Events	1
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Vehicle Factors

Make-Model	Jeep Cherokee84-
Year	1997
Class	TRUCK
Body Type	COMPACT UTILITY
Weight	151

### Pre-Crash Driver Data

Accident Type	69
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	OPP DIR-OVR LEFT
Attempted Avoidance Manuever	BRAKE W/O LOCKUP
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### DRIVER Factors

Age	31	Height	165	Weight	68
Gender					FEMALE-NOT PREG
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					Not ENTRAPPED

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-13-14-1-1
MAIS	1=Minor
Seat Position	Front left side

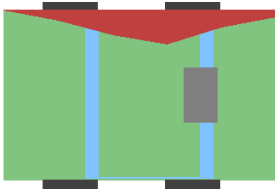
AIS Level	Injury Description	Contacts
1=Minor	Upper extremity skin contusion	Belt webb/buckle
1=Minor	Thoracic skin contusion	Belt webb/buckle

Occupant: 2002-13-14-2-1



**Fire Information**

Fire Occurence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, forward rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



**Crash Severity**

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	35 -27 -23
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	1 R D A W 4
Damage (C1-C6)	9 25 50 36 15 0
Crush (L and D)	324 -4
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	0

**NASS Weighting Factor**

Weighting factor	85.649
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**Rollover Characteristics**

Number of Events	1
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object	No rollover
Contacted	
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

**Pre-Crash Environment**

Traffic Flow	Not DIVIDED
Number of Travel Lanes	THREE
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DARK/LIGHTED
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	ALCOHOL PRESENT
Alcohol Test (< 95 indicates BAC 0.xx)	25

**Vehicle Factors**

Make-Model	Chevrolet S-10, T10
Year	1991
Class	TRUCK
Body Type	COMPACT PICKUP
Weight	124

**Pre-Crash Driver Data**

Accident Type	68
Pre-event Movement	TURNING LEFT
Critical Pre-crash Event	TURN LEFT-INTERS
Attempted Avoidance Manuever	99
Pre-impact Stability	9
Pre-impact Location	STAYED IN LANE

**DRIVER Factors**

Age	42	Height	999	Weight	80
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			Not ENTRAPPED		

## Restraint Factors

Restrain	Lap and shoulder
AOPS	NO
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 <sup>st</sup> Seat	Not EQUIP/AVAIL
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-13-14-2-1
MAIS	3=Serious
Seat Position	Front left side

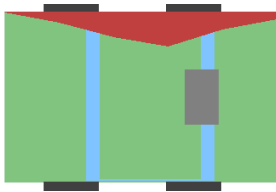
AIS Level	Injury Description	Contacts
3=Serious	Single rib fracture with hemo-/pneumothorax	Other occupants
3=Serious	Lung contusion, unilateral	Other occupants

Occupant: 2002-13-14-2-2



**Fire Information**

Fire Occurence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, forward rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



**Crash Severity**

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	35 -27 -23
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	1 R D A W 4
Damage (C1-C6)	9 25 50 36 15 0
Crush (L and D)	324 -4
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	0

**NASS Weighting Factor**

Weighting factor	85.649
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**Rollover Characteristics**

Number of Events	1
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object	No rollover
Contacted	
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

**Pre-Crash Environment**

Traffic Flow	Not DIVIDED
Number of Travel Lanes	THREE
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DARK/LIGHTED
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	ALCOHOL PRESENT
Alcohol Test (< 95 indicates BAC 0.xx)	25

**Vehicle Factors**

Make-Model	Chevrolet S-10, T10
Year	1991
Class	TRUCK
Body Type	COMPACT PICKUP
Weight	124

**Pre-Crash Driver Data**

Accident Type	68
Pre-event Movement	TURNING LEFT
Critical Pre-crash Event	TURN LEFT-INTERS
Attempted Avoidance Manuever	99
Pre-impact Stability	9
Pre-impact Location	STAYED IN LANE

**PASSENGER Factors**

Age	44	Height	170	Weight	76
Gender					MALE
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					Not ENTRAPPED

## Restraint Factors

Restrain	None used/avail
AOPS	NO
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 <sup>st</sup> Seat	Not EQUIP/AVAIL
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

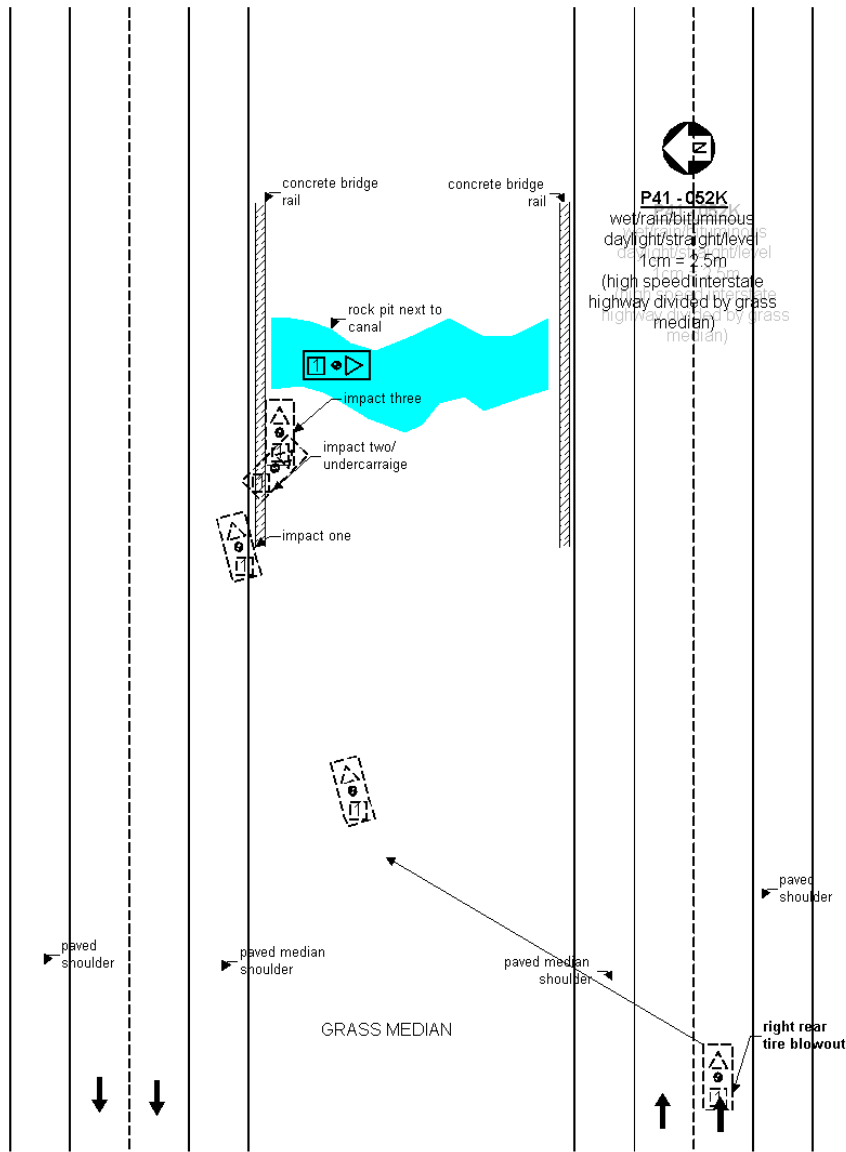
Occupant	2002-13-14-2-2
MAIS	5=Critical
Seat Position	Front right side

AIS Level	Injury Description	Contacts
1=Minor	Facial skin abrasion	Flying glass
1=Minor	Facial skin abrasion	Flying glass
1=Minor	297402	Roof right rail
1=Minor	Facial skin contusion	Sunvisor
1=Minor	Facial skin abrasion	Sunvisor
1=Minor	Scalp abrasion	Roof right rail
5=Critical	Cerebral subdural hematoma, small (<50ccs), bilateral	Roof right rail
3=Serious	Cerebellar subarachnoid hemorrhage	Roof right rail
3=Serious	Cerebral subarachnoid hemorrhage	Roof right rail
3=Serious	Cerebral subarachnoid hemorrhage	Sunvisor
3=Serious	Diaphragm laceration or rupture	Right interior
4=Severe	>3 rib fxs on each side, stable chest	Right interior
5=Critical	Lung laceration, bilateral, with blood loss >204=Severe	Thoracic aortic laceration NFS
Right interior		
3=Serious	Lung contusion, unilateral	Right interior
5=Critical	Myocardial laceration with perforation (+/- tamponade)	Right interior
2=Moderate	Pericardial laceration (puncture)	Right interior
4=Severe	Hepatic laceration, major (<50	

7 Case 2002-41-52

Summary:

Vehicle 1, a 1997 Chevrolet Camaro was traveling east in the right lane of a four-lane divided, wet, bituminous roadway during daylight and rainy conditions. Vehicle 1's right rear tire blew out (per police report) causing vehicle one to travel northeast off the roadway entering the center grass median. Vehicle 1 traveled northeast across the median and its right side impacted a concrete bridge barrier wall. Vehicle 1 traveled over the bridge wall impacting the undercarriage. Vehicle 1's left side impacted the same bridge wall. Vehicle 1 then travelled down a 16 feet embankment and into a rock pit near the canal. Vehicle 1 came to rest facing south on the rock pit. The driver and passenger were air lifted from the crash. The driver sustained incapacitating injuries and the right front passenger moderate injuries. )



Vehicle	Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	3DR/2DR HATCHBAK	Chevrolet	Camaro	1997	1	19	MALE	4=Severe
1	3DR/2DR HATCHBAK	Chevrolet	Camaro	1997	2	21	MALE	1=Minor

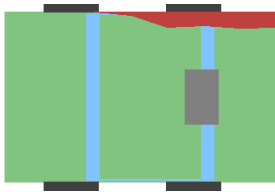


**Occupant: 2002-41-52-1-1**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Behind rear axle, centered
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	16 -15 -6
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	81 R Z E W 2
Damage (C1-C6)	22 23 19 22 5 0
Crush (L and D)	143 -151
Object Contacted 1	BRIDGE
Object Contacted 2	BRIDGE

### NASS Weighting Factor

Weighting factor	19.296
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### Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object	No rollover
Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	DVDED/W/BARRIER
Number of Travel Lanes	TWO
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	Other
Roadway Surface Condition	WET
Light Conditions	DAYLIGHT
Atmospheric Conditions	RAIN
Relation to Intersection	NONINTER/NONJUNC
Traffic Control Device	
Police Reported Alcohol Presence	ALCOHOL PRESENT
Alcohol Test (< 95 indicates BAC 0.xx)	3

### Vehicle Factors

Make-Model	Chevrolet Camaro
Year	1997
Class	PASSENGER CAR
Body Type	3DR/2DR HATCHBAK
Weight	150

### Pre-Crash Driver Data

Accident Type	7
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	BLOWOUT/FLATIRE
Attempted Avoidance Manuever	BRAKE W/ LOCKUP
Pre-impact Stability	LAT SKID-CTR CLK
Pre-impact Location	DEPARTED ROADWAY

### DRIVER Factors

Age	19	Height	173	Weight	82
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			Not ENTRAPPED		



## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	NONDEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	NONDEPLOYED
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-41-52-1-1
MAIS	4=Severe
Seat Position	Front left side

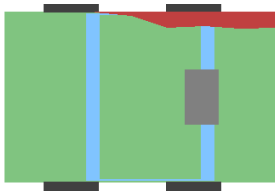
AIS Level	Injury Description	Contacts
1=Minor	Facial skin abrasion	Sunvisor
1=Minor	Scalp contusion	Left A pillar
1=Minor	Upper extremity skin laceration, minor	Transmiss lever
1=Minor	Upper extremity skin abrasion	Left apnel
1=Minor	690202	Seat, back
1=Minor	Thoracic skin abrasion	Transmiss lever
1=Minor	Leg skin abrasion	Center panel
4=Severe	Cerebral intraventricular hemorrhage	Left A pillar
4=Severe	Cerebral intraventricular hemorrhage	Left A pillar

**Occupant: 2002-41-52-1-2**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Behind rear axle, centered
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	16 -15 -6
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	81 R Z E W 2
Damage (C1-C6)	22 23 19 22 5 0
Crush (L and D)	143 -151
Object Contacted 1	BRIDGE
Object Contacted 2	BRIDGE

### NASS Weighting Factor

Weighting factor	19.296
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### Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object	No rollover
Contacted	
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	DVDED/W/BARRIER
Number of Travel Lanes	TWO
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	Other
Roadway Surface Condition	WET
Light Conditions	DAYLIGHT
Atmospheric Conditions	RAIN
Relation to Intersection	NONINTER/NONJUNC
Traffic Control Device	
Police Reported Alcohol Presence	ALCOHOL PRESENT
Alcohol Test (< 95 indicates BAC 0.xx)	3

### Vehicle Factors

Make-Model	Chevrolet Camaro
Year	1997
Class	PASSENGER CAR
Body Type	3DR/2DR HATCHBAK
Weight	150

### Pre-Crash Driver Data

Accident Type	7
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	BLOWOUT/FLATIRE
Attempted Avoidance Manuever	BRAKE W/ LOCKUP
Pre-impact Stability	LAT SKID-CTR CLK
Pre-impact Location	DEPARTED ROADWAY

### PASSENGER Factors

Age	21	Height	168	Weight	73
Gender					MALE
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					Not ENTRAPPED

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	NONDEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	NONDEPLOYED
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

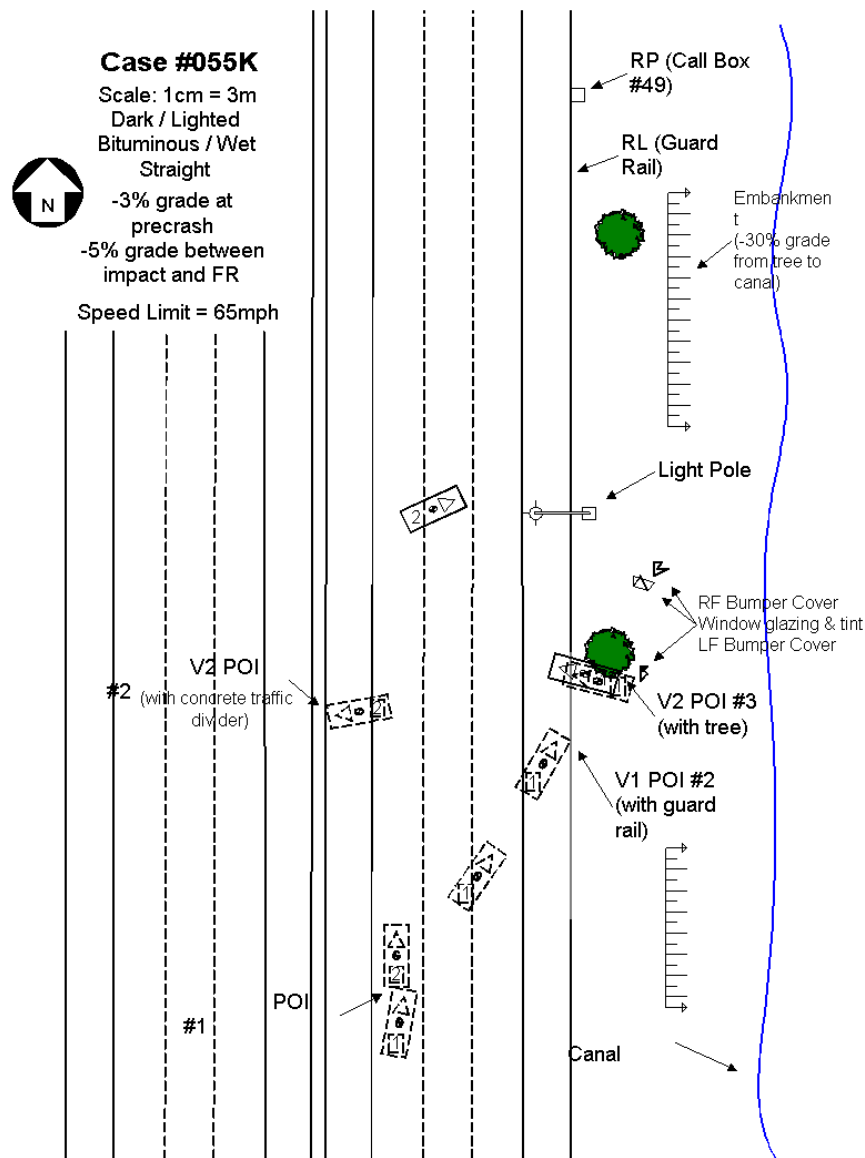
Occupant	2002-41-52-1-2
MAIS	1=Minor
Seat Position	Front right side

AIS Level	Injury Description	Contacts
1=Minor	Scalp laceration, minor	Right B pillar
1=Minor	Upper extremity skin laceration, minor	Transmiss lever
1=Minor	690202	Right interior
1=Minor	Upper extremity skin contusion	Right interior
1=Minor	690402	Seat, back
1=Minor	Upper extremity skin contusion	Center panel
1=Minor	Upper extremity skin contusion	Right hardware

8 Case 2002-41-55

Summary:

V2 was traveling northbound in lane three of a one-way, three-lane, divided roadway with a positive barrier. V1 was also traveling northbound in the same inside lane behind V2. The roadway environment was wet and dark, but lighted. V1 attempted to steer right but its front end struck the back of V2. V2 then rotated CCW and impacted the inside concrete traffic divider with its front end. V2 deflected off the barrier and came to rest in the middle lane on the roadway. After the initial impact, V1 traveled northeast across the roadway and the front right corner of V2 contacted the right guard rail. V2 then traveled in a CCW direction through the guard rail before V2's right side made contact with a tree and came to a final rest. Both vehicles were towed due to damage. The driver of V1 sustained incapacitating injuries and was hospitalized. V1 and V2 were equipped with air bags, which deployed as a result of impact forces. The driver of V1 improperly wore their lap belt across their abdomen. )



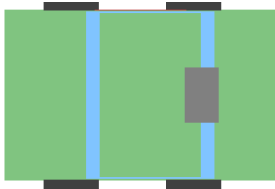
Vehicle	Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	4-DR SEDAN/HDTOP	Mazda	Millenia	1995	1	19	MALE	3=Serious
2	4-DR SEDAN/HDTOP	Toyota	Corolla	1998	1	29	MALE	0=None
2	4-DR SEDAN/HDTOP	Toyota	Corolla	1998	2	29	FEMALE-NOT PREG	0=None

Occupant: 2002-41-55-1-1



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Non-metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	999
Total, Longitudal, and Lateral $\delta V$	999 999 999
Est. $\delta V$ with sequence number	SEVERE 3
CDC	2 R P A W 3
Damage (C1-C6)	0 0 0 0 0 0
Crush (L and D)	0 0
Object Contacted 1	LARGE TREE
Object Contacted 2	VEHICLE NO. 2

### NASS Weighting Factor

Weighting factor	19.521
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### Rollover Characteristics

Number of Events	4
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	DVDED/W/BARRIER
Number of Travel Lanes	THREE
Roadway Alignment	STRAIGHT
Roadway Profile	DOWNHILL GRADE
Roadway Surface Type	ASPHALT
Roadway Surface Condition	WET
Light Conditions	DARK/LIGHTED
Atmospheric Conditions	RAIN
Relation to Intersection	NONINTER/NONJUNC
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	0

### Vehicle Factors

Make-Model	Mazda Millenia
Year	1995
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	146

### Pre-Crash Driver Data

Accident Type	24
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	Same DIR-LOSPEED
Attempted Avoidance Manuever	STEERING RIGHT
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### DRIVER Factors

Age	19	Height	175	Weight	73
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			Not ENTRAPPED		

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-41-55-1-1
MAIS	3=Serious
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor	251090	Air bag-DR side
1=Minor	Thoracic skin abrasion	Belt webb/buckle
1=Minor	Facial skin laceration, minor	Flying glass
1=Minor	Upper extremity skin contusion	Seat, back
3=Serious	Thoracic cord contusion, transient neuro signs&fx&dislocatio	Seat, back
3=Serious	Thoracic facet fracture without cord injury	Seat, back
3=Serious	Thoracic lamina fracture without cord injury	Seat, back

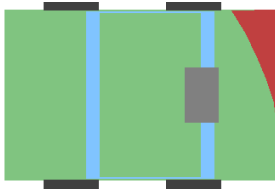


**Occupant: 2002-41-55-2-1**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Non-metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	25 25 4
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	6 B Z E W 5
Damage (C1-C6)	0 4 16 29 46 66
Crush (L and D)	140 34
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	WALL

### NASS Weighting Factor

Weighting factor	19.521
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### Rollover Characteristics

Number of Events	4
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object	No rollover
Contacted	
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	DVDED/W/BARRIER
Number of Travel Lanes	THREE
Roadway Alignment	STRAIGHT
Roadway Profile	DOWNHILL GRADE
Roadway Surface Type	ASPHALT
Roadway Surface Condition	WET
Light Conditions	DARK/LIGHTED
Atmospheric Conditions	RAIN
Relation to Intersection	NONINTER/NONJUNC
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	Toyota Corolla
Year	1998
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	110

### Pre-Crash Driver Data

Accident Type	25
Pre-event Movement	DECELER IN LANE
Critical Pre-crash Event	Same DIR-HISPEED
Attempted Avoidance Manuever	No AVOIDANCE
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### DRIVER Factors

Age	29	Height	180	Weight	91
Gender					MALE
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					Not ENTRAPPED

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

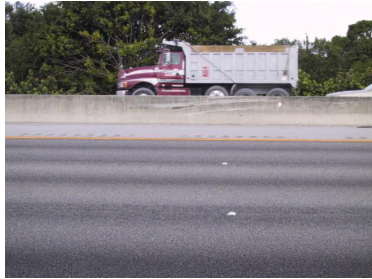
## Injuries

Occupant	2002-41-55-2-1
MAIS	0=None
Seat Position	Front left side

AIS Level	Injury Description	Contacts
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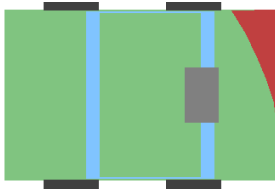


**Occupant: 2002-41-55-2-2**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Non-metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	25 25 4
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	6 B Z E W 5
Damage (C1-C6)	0 4 16 29 46 66
Crush (L and D)	140 34
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	WALL

### NASS Weighting Factor

Weighting factor	19.521
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### Rollover Characteristics

Number of Events	4
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	DVDED/W/BARRIER
Number of Travel Lanes	THREE
Roadway Alignment	STRAIGHT
Roadway Profile	DOWNHILL GRADE
Roadway Surface Type	ASPHALT
Roadway Surface Condition	WET
Light Conditions	DARK/LIGHTED
Atmospheric Conditions	RAIN
Relation to Intersection	NONINTER/NONJUNC
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	Toyota Corolla
Year	1998
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	110

### Pre-Crash Driver Data

Accident Type	25
Pre-event Movement	DECELER IN LANE
Critical Pre-crash Event	Same DIR-HISPEED
Attempted Avoidance Manuever	No AVOIDANCE
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### PASSENGER Factors

Age	29	Height	168	Weight	52
Gender					FEMALE-NOT PREG
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					Not ENTRAPPED

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

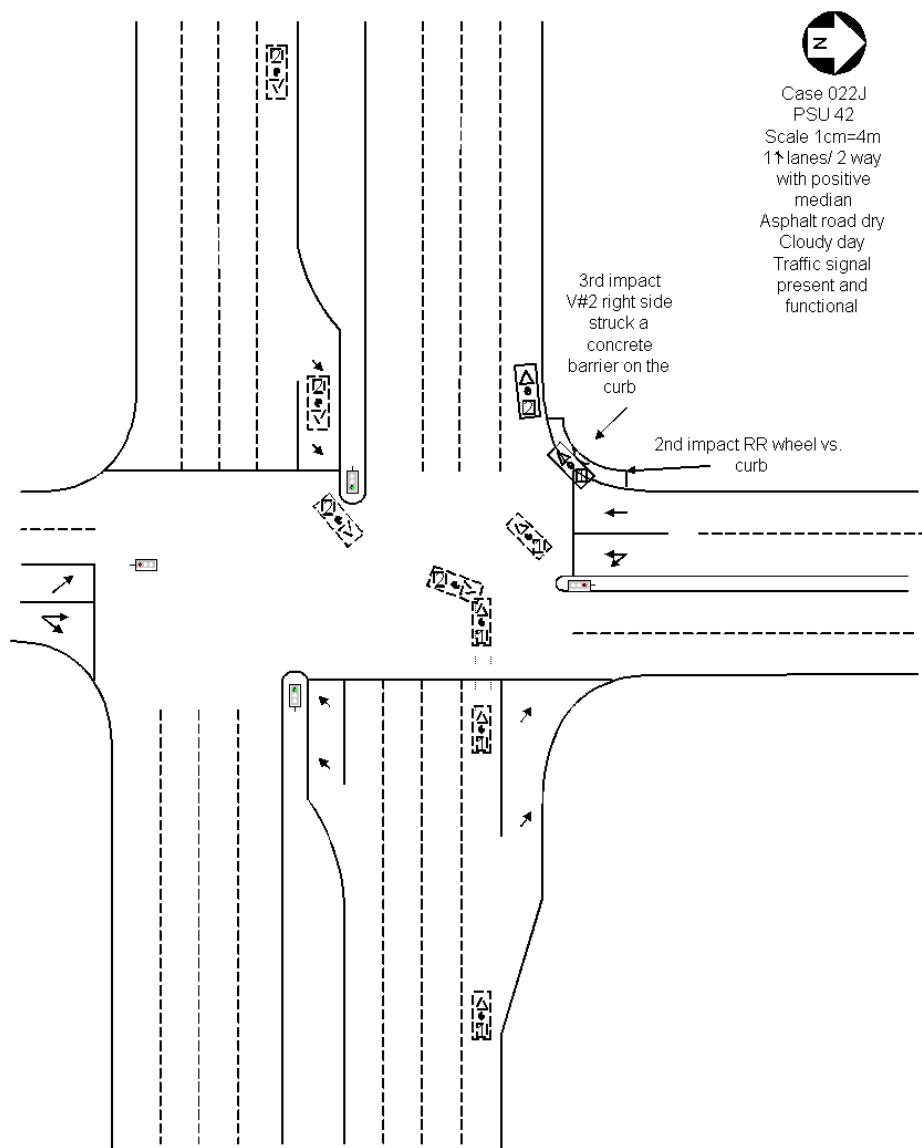
Occupant	2002-41-55-2-2
MAIS	0=None
Seat Position	Front right side

AIS Level	Injury Description	Contacts
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9 Case 2002-42-22

Summary:

Vehicle 1, a 2002 Mercedes Benz 32 AMG Kompressor, was traveling westbound on an eleven-lane highway (six-lanes northbound / five-lanes southbound) in the second northbound lane, approaching an intersection controlled by a traffic light. Vehicle 2, a 1999 Chevrolet Tahoe was traveling eastbound on the same roadway in the inside left turn lane intending to turn left at the intersection. As V2 executed its left turn, the front end of V1 contacted the right side of V2. After the initial impact, V1 yawed counterclockwise and its right side struck a cement barrier on the NW corner of the intersection. This impact resulted in right side damage on V1 and separate RR wheel damage due to striking the lower lip of the cement barrier. The driver of V1 sustained a non-incapacitating injury and was transported to a local hospital. The driver of V2 sustained incapacitating injuries and was transported and admitted to a local hospital. Both vehicles were towed due to damage and were reported with airbag deployment. The left side airbags (LF/LR door mounted side impact air bags and accompanying head curtain) of V1 deployed as a result of the impact with V2 as did the frontal bags in the same event. Both airbags in V2 deployed as a result of the impact with V1. )



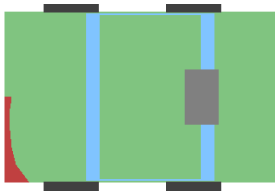
Vehicle	Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant injury
1	4-DR SEDAN/HDTOP	Mercedes	200-300 Sedan/Coupe	2002	1	35	MALE	1=Minor
2	LARGE UTILITY	Chevrolet	Fullsize Blazer	1999	1	49	FEMALE-NOT PREG	3=Serious

Occupant: 2002-42-22-1-1



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Non-metallic
Fuel Tank Location	Behind rear axle, right side
Fuel Cap Location	Right side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	DVDED/W/BARRIER
Number of Travel Lanes	SEVEN OR MORE
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	Other
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	24 -19 16
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	11 F L E W 2
Damage (C1-C6)	36 17 11 8 7 10
Crush (L and D)	160 -30
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	CONCRETE BARRIER

### NASS Weighting Factor

Weighting factor	1.000
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### Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Vehicle Factors

Make-Model	Mercedes	200-300
	Sedan/Coupe	
Year	2002	
Class	PASSENGER CAR	
Body Type	4-DR SEDAN/HDTOP	
Weight	156	

### Pre-Crash Driver Data

Accident Type	69
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	OPP DIR-OVR LEFT
Attempted Avoidance Maneuver	BRAKE W/ LOCKUP
Pre-impact Stability	LONGITUDINAL SKID
Pre-impact Location	STAYED IN LANE

### DRIVER Factors

Age	35	Height	170	Weight	68
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			Not ENTRAPPED		

## Restraint Factors

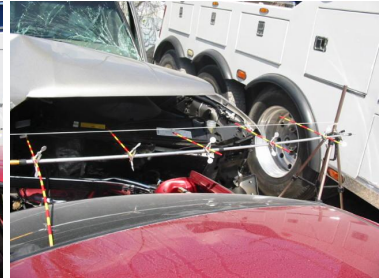
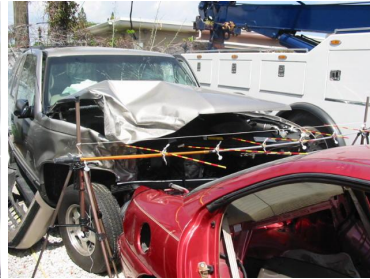
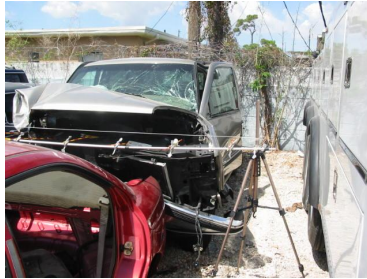
Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	ONLY DR BAG DEPL
Airbag Deployment - Oth Seat	BAG DEPLOYED

## Injuries

Occupant	2002-42-22-1-1
MAIS	1=Minor
Seat Position	Front left side

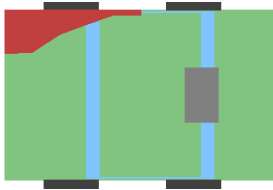
AIS Level	Injury Description	Contacts
1=Minor	Neck skin contusion (hematoma)	Belt webb/buckle
1=Minor	Upper extremity skin contusion	Belt webb/buckle
1=Minor	Neck skin abrasion	Belt webb/buckle
1=Minor	Upper extremity skin abrasion	Belt webb/buckle
1=Minor	Upper extremity skin laceration, minor	Left interior
1=Minor	Upper extremity skin laceration, minor	Windshield
1=Minor	Leg skin laceration, minor	Left hardware
1=Minor	Leg skin avulsion, superficial (<100cms2)	Center panel
1=Minor	Leg skin contusion (hematoma)	Knee bolster
1=Minor	Leg skin contusion (hematoma)	Left hardware

**Occupant: 2002-42-22-2-1**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Non-metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	DVDED/W/BARRIER
Number of Travel Lanes	SEVEN OR MORE
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	Other
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	14 -11 -9
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	1 R F E W 4
Damage (C1-C6)	7 7 21 36 62 63
Crush (L and D)	94 128
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	0

### NASS Weighting Factor

Weighting factor	1.000
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### Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Vehicle Factors

Make-Model	Chevrolet Fullsize Blazer
Year	1999
Class	TRUCK
Body Type	LARGE UTILITY
Weight	286

### Pre-Crash Driver Data

Accident Type	68
Pre-event Movement	TURNING LEFT
Critical Pre-crash Event	TURN LEFT-INTERS
Attempted Avoidance Manuever	99
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### DRIVER Factors

Age	49	Height	163	Weight	104
Gender					FEMALE-NOT PREG
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					Not ENTRAPPED

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-42-22-2-1
MAIS	3=Serious
Seat Position	Front left side

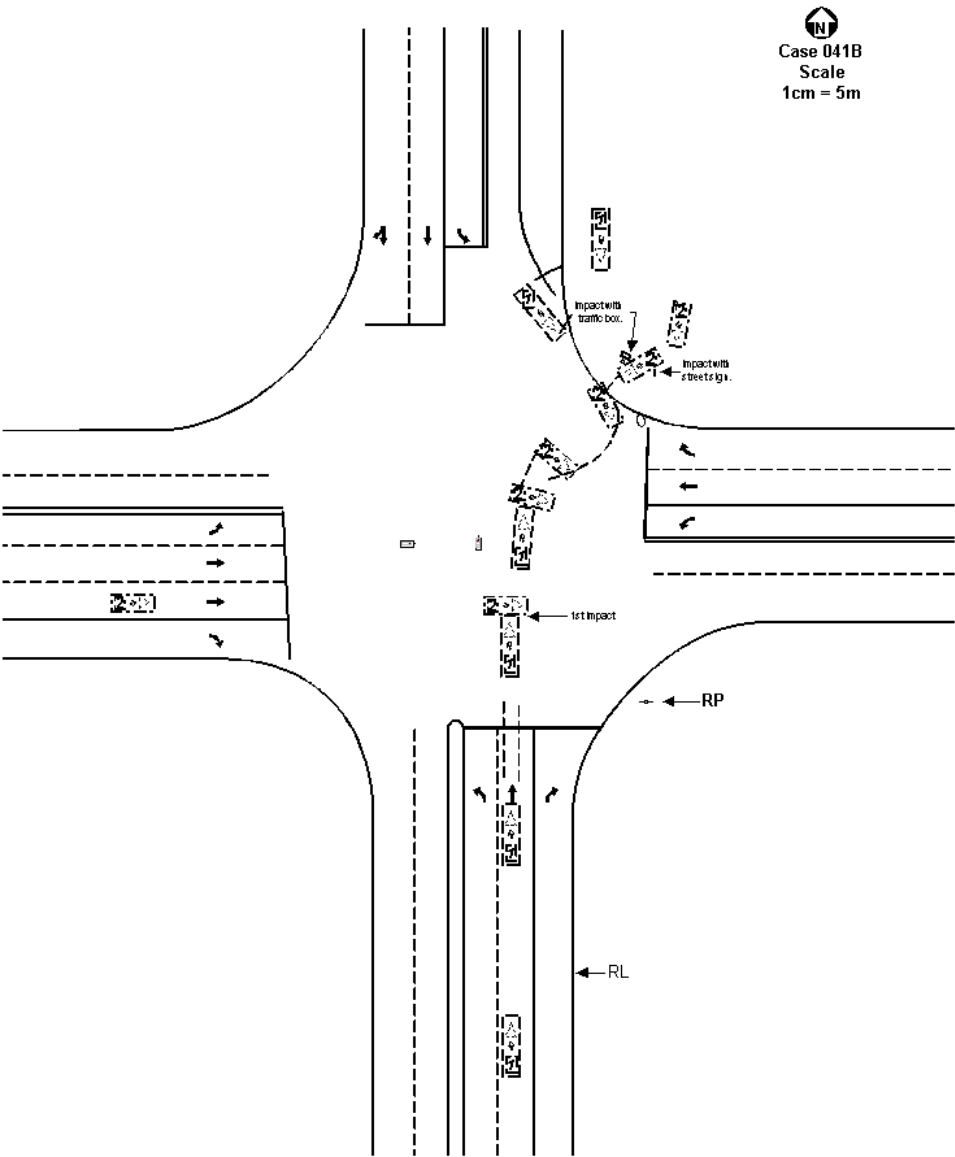
AIS Level	Injury Description	Contacts
1=Minor	Facial skin abrasion	Air bag-DR side
1=Minor	Abdominal skin abrasion	Transmiss lever
1=Minor	Thoracic skin abrasion	Belt webb/buckle
3=Serious	Radial fracture, open/displaced/comminuted	Steering rim
2=Moderate	Ulnar fracture, closed	Steering rim
2=Moderate	Fibular head, neck, or shaft fracture	Knee bolster
2=Moderate	Tibial fracture of the posterior malleolus	Floor
3=Serious	Tibial shaft fracture, open/displaced/comminuted	Floor



10 Case 2002-43-41

Summary:

Vehicle one, a 2001 Ford F-250, was traveling north on a five lane, divided, roadway entering a four-leg intersection. Vehicle two, 1996 Saturn SC2, was traveling east on a 6-lane, undivided road way entering the same intersection. The front plane of V1 impacted the right plane of V2. After the initial impact, V2 struck a sign post with its right plane and a traffic box with its back plane, coming to rest at the NE shoulder facing south. V1 came to rest at the north east shoulder facing south after striking a curb with its left wheels. Both vehicles were towed due to damage. The driver of vehicle one was not injured. The front right occupant of V1 sustained a moderate injury and received treatment later at the ER. The driver of vehicle two sustained an incapacitating injury and was hospitalized for eleven days. The front right passenger of vehicle two sustained fatal injuries. The 8 month old left rear occupant was seated in an unknown model of infant child restraint and sustained an incapacitating injury and was transported and hospitalized for twelve days prior to transfer to another facility for treatment. EMS on scene cut the vehicles safety belt securing the car seat to the vehicle, indicated the seat had incurred no obvious deformation, and transported the child to the hospital in the seat. The seat was not available for inspection. )



Vehicle	Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	LARGE PICKUP	Ford	F-series P/U	2001	1	17	MALE	0=None
1	LARGE PICKUP	Ford	F-series P/U	2001	2	14	MALE	1=Minor
2	2DR SEDAN/HT/CPE	Saturn	SC	1996	1	24	FEMALE-NOT PREG	4=Severe
2	2DR SEDAN/HT/CPE	Saturn	SC	1996	2	18	FEMALE-NOT PREG	2=Moderate
2	2DR SEDAN/HT/CPE	Saturn	SC	1996	3	LESS THAN ONE YR	MALE	5=Critical

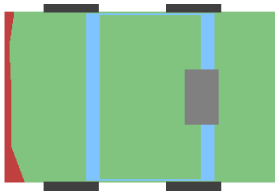


**Occupant: 2002-43-41-1-1**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, forward rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	17 -13 11
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	11 F D E W 2
Damage (C1-C6)	29 11 10 9 7 14
Crush (L and D)	164 0
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	CURB

### NASS Weighting Factor

Weighting factor	38.844
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### Rollover Characteristics

Number of Events	4
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	DVDED/NO BARRIER
Number of Travel Lanes	FIVE
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DARK/LIGHTED
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	Ford F-series P/U
Year	2001
Class	TRUCK
Body Type	LARGE PICKUP
Weight	273

### Pre-Crash Driver Data

Accident Type	86
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	XING ST-X PATH
Attempted Avoidance Manuever	BRAKE W/ LOCKUP
Pre-impact Stability	LONGITUDINAL SKID
Pre-impact Location	STAYED IN LANE

### DRIVER Factors

Age	17	Height	168	Weight	70
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			Not ENTRAPPED		

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	NONDEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	NONDEPLOYED
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-43-41-1-1
MAIS	0=None
Seat Position	Front left side

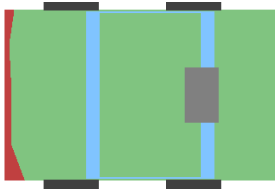
AIS Level	Injury Description	Contacts
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**Occupant: 2002-43-41-1-2**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, forward rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	DVDED/NO BARRIER
Number of Travel Lanes	FIVE
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DARK/LIGHTED
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	17 -13 11
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	11 F D E W 2
Damage (C1-C6)	29 11 10 9 7 14
Crush (L and D)	164 0
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	CURB

### NASS Weighting Factor

Weighting factor	38.844
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### Rollover Characteristics

Number of Events	4
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Vehicle Factors

Make-Model	Ford F-series P/U
Year	2001
Class	TRUCK
Body Type	LARGE PICKUP
Weight	273

### Pre-Crash Driver Data

Accident Type	86
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	XING ST-X PATH
Attempted Avoidance Manuever	BRAKE W/ LOCKUP
Pre-impact Stability	LONGITUDINAL SKID
Pre-impact Location	STAYED IN LANE

### PASSENGER Factors

Age	14	Height	168	Weight	59
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			Not ENTRAPPED		

## Restraint Factors

Restrain	None used/avail
AOPS	YES-RES DET
Airbag Deployment	NONDEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	NONDEPLOYED
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-43-41-1-2
MAIS	1=Minor
Seat Position	Front right side

AIS Level	Injury Description	Contacts
1=Minor	Nose fracture, closed	Right panel
1=Minor	Facial skin abrasion	Right panel
1=Minor	Facial skin contusion	Right panel
1=Minor	Awake on admission, never unconscious	Right panel

**Occupant: 2002-43-41-2-1**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Non-metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	39 -25 -30
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	2 R Z A W 4
Damage (C1-C6)	0 45 60 13 22 0
Crush (L and D)	253 -53
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	Oth FIXED OBJECT

### NASS Weighting Factor

Weighting factor	38.844
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### Rollover Characteristics

Number of Events	4
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object	No rollover
Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	SIX
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DARK/LIGHTED
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	9
Alcohol Test (< 95 indicates BAC 0.xx)	99

### Vehicle Factors

Make-Model	Saturn SC
Year	1996
Class	PASSENGER CAR
Body Type	2DR SEDAN/HT/CPE
Weight	107

### Pre-Crash Driver Data

Accident Type	87
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	CROSS OVER INTER
Attempted Avoidance Manuever	No AVOIDANCE
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### DRIVER Factors

Age	24	Height	165	Weight	54
Gender					FEMALE-NOT PREG
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					Not ENTRAPPED

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-43-41-2-1
MAIS	4=Severe
Seat Position	Front left side

AIS Level	Injury Description	De-	Contacts
2=Moderate	Hepatic laceration, minor (<3cms deep, EBL<202=	Moderate	Hepatic contusion, minor (subcapsular, at 503=
Lung contusion, unilateral	Other occupants		
4=Severe	>3 rib fx on one side & <3 other side & hemo-/pneumothorax		Other occupants
1=Minor	Leg skin contusion (hematoma)		Steering column
1=Minor	Upper extremity skin contusion		Left A pillar

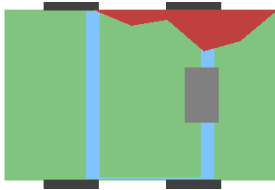


## Occupant: 2002-43-41-2-2



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Non-metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	SIX
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DARK/LIGHTED
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	9
Alcohol Test (< 95 indicates BAC 0.xx)	99

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	39 -25 -30
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	2 R Z A W 4
Damage (C1-C6)	0 45 60 13 22 0
Crush (L and D)	253 -53
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	Oth FIXED OBJECT

### NASS Weighting Factor

Weighting factor	38.844
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### Rollover Characteristics

Number of Events	4
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Vehicle Factors

Make-Model	Saturn SC
Year	1996
Class	PASSENGER CAR
Body Type	2DR SEDAN/HT/CPE
Weight	107

### Pre-Crash Driver Data

Accident Type	87
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	CROSS OVER INTER
Attempted Avoidance Manuever	No AVOIDANCE
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### PASSENGER Factors

Age	18	Height	162	Weight	91
Gender					FEMALE-NOT PREG
Ejection					PARTIAL EJECTION
Ejection Area					Right FRONT
Entrapment					Not ENTRAPPED

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-43-41-2-2
MAIS	2=Moderate
Seat Position	Front right side

AIS Level	Injury Description	Contacts
1=Minor	Mandible fracture NFS	OMV other front
7=Unk. sev.	Head injury, closed, NFS	OMV other front
2=Moderate	Cervical fracture without cord injury +/- dislocation NFS	Other noncontact
2=Moderate	Humeral fracture NFS	Right windowsill
1=Minor	Teeth fracture	OMV other front
1=Minor	Neck skin abrasion	Belt webb/buckle
1=Minor	Upper extremity skin abrasion	Right interior
1=Minor	Upper extremity skin abrasion	Belt webb/buckle
1=Minor	Upper extremity skin laceration, minor	Right interior
1=Minor	Thoracic skin abrasion	Belt webb/buckle
1=Minor	Upper extremity skin abrasion	Belt webb/buckle
1=Minor	Leg skin abrasion	Transmiss lever
1=Minor	Upper extremity skin abrasion	Transmiss lever
1=Minor	Upper extremity skin contusion	Transmiss lever
1=Minor	Abdominal skin abrasion	Belt webb/buckle

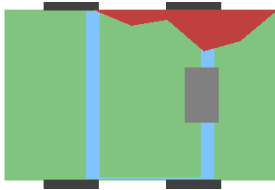


## Occupant: 2002-43-41-2-3



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Non-metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	SIX
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DARK/LIGHTED
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	9
Alcohol Test (< 95 indicates BAC 0.xx)	99

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	39 -25 -30
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	2 R Z A W 4
Damage (C1-C6)	0 45 60 13 22 0
Crush (L and D)	253 -53
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	Oth FIXED OBJECT

### NASS Weighting Factor

Weighting factor	38.844
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### Rollover Characteristics

Number of Events	4
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Vehicle Factors

Make-Model	Saturn SC
Year	1996
Class	PASSENGER CAR
Body Type	2DR SEDAN/HT/CPE
Weight	107

### Pre-Crash Driver Data

Accident Type	87
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	CROSS OVER INTER
Attempted Avoidance Manuever	No AVOIDANCE
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### PASSENGER Factors

Age	LESS THAN ONE YR	Height	999	Weight	10
Gender	MALE	Ejection	No EJECTION	Ejection Area	No EJECTION
Entrapment	Not ENTRAPPED				

## Restraint Factors

Restrain	Lap+sh w/ch seat
AOPS	YES-RES DET
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

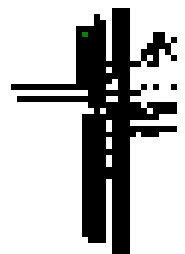
Occupant	2002-43-41-2-3
MAIS	5=Critical
Seat Position	Second left

AIS Level	Injury Description	Contacts
1=Minor	Facial skin abrasion	Right B pillar
1=Minor	Facial skin contusion	Right B pillar
3=Serious	Skull fracture, vault, comminuted (compound, depressed)	Right B pillar
5=Critical	Cerebral diffuse axonal injury	Right B pillar
4=Severe	Cerebral epidural or extradural hematoma, small	Right B pillar
4=Severe	Intracerebral hematoma, NFS	Right B pillar
5=Critical	Cerebral subdural hematoma, small (<50ccs), bilateral	Right B pillar
4=Severe	Cerebellar hematoma, epidural, NFS	Right B pillar
3=Serious	Cerebral brain swelling, mild	Right B pillar

11 Case 2002-43-47

Summary:

V1 (2001 Dodge Dakota) was travelling south on a two-lane, undivided bituminous asphalt roadway. V2 (1997 Honda Accord) was stopped on a bituminous asphalt, PVA roadway. The weather was clear and it was during daylight hours. V1 ran off the road to the left, travelled up a 50



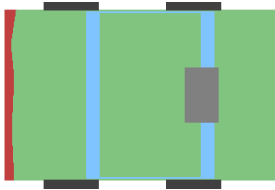
Vehicle	Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	COMPACT PICKUP	Dodge	Dakota	2001	1	63	MALE	3=Serious
2	4-DR SEDAN/HDTOP	Honda	Accord	1997	1	33	FEMALE-NOT PREG	3=Serious
2	4-DR SEDAN/HDTOP	Honda	Accord	1997	2	33	MALE	1=Minor
2	4-DR SEDAN/HDTOP	Honda	Accord	1997	3	2	MALE	1=Minor

**Occupant: 2002-43-47-1-1**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, forward rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	TWO
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	31 -31 -5
Est. $\delta V$ with sequence number	DELTA V CODED 2
CDC	12 F D E W 1
Damage (C1-C6)	14 12 12 14 9 17
Crush (L and D)	156 0
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	LARGE TREE

### NASS Weighting Factor

Weighting factor	38.844
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### Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Vehicle Factors

Make-Model	Dodge Dakota
Year	2001
Class	TRUCK
Body Type	COMPACT PICKUP
Weight	201

### Pre-Crash Driver Data

Accident Type	6
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	Unk CONTROL LOSS
Attempted Avoidance Manuever	99
Pre-impact Stability	TRACKING
Pre-impact Location	DEPARTED ROADWAY

### DRIVER Factors

Age	63	Height	999	Weight	999
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			Not ENTRAPPED		

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-43-47-1-1
MAIS	3=Serious
Seat Position	Front left side

AIS Level	Injury Description	Contacts
3=Serious	Humeral fracture, open/displaced/comminuted	Steering comb
2=Moderate	Shoulder dislocation (glenohumeral joint)	Steering comb

**Occupant: 2002-43-47-2-1**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	TWO
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	42 -7 -41
Est. $\delta V$ with sequence number	DELTA V CODED 2
CDC	3 R P A W 4
Damage (C1-C6)	0 2 50 67 9 0
Crush (L and D)	342 -43
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	0

### NASS Weighting Factor

Weighting factor	38.844
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### Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Vehicle Factors

Make-Model	Honda Accord
Year	1997
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	130

### Pre-Crash Driver Data

Accident Type	98
Pre-event Movement	STOPPED IN LANE
Critical Pre-crash Event	XING ST-X PATH
Attempted Avoidance Manuever	No AVOIDANCE
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### DRIVER Factors

Age	33	Height	165	Weight	75
Gender					FEMALE-NOT PREG
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					Not ENTRAPPED

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	NONDEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	NONDEPLOYED
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-43-47-2-1
MAIS	3=Serious
Seat Position	Front left side

AIS Level	Injury Description	Contacts
3=Serious	Hepatic laceration, moderate (>3cms deep, EBL>201=Minor	Teeth fracture
Other noncontact 1=Minor	Thoracic skin contusion	Transmiss lever
1=Minor	Leg skin contusion (hematoma)	Transmiss lever



**Occupant: 2002-43-47-2-2**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	TWO
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	42 -7 -41
Est. $\delta V$ with sequence number	DELTA V CODED 2
CDC	3 R P A W 4
Damage (C1-C6)	0 2 50 67 9 0
Crush (L and D)	342 -43
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	0

### NASS Weighting Factor

Weighting factor	38.844
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### Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Vehicle Factors

Make-Model	Honda Accord
Year	1997
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	130

### Pre-Crash Driver Data

Accident Type	98
Pre-event Movement	STOPPED IN LANE
Critical Pre-crash Event	XING ST-X PATH
Attempted Avoidance Manuever	No AVOIDANCE
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### PASSENGER Factors

Age	33	Height	180	Weight	88
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			JAMMED DOOR/FIRE		

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	NONDEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	NONDEPLOYED
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-43-47-2-2
MAIS	1=Minor
Seat Position	Front right side

AIS Level	Injury Description	Contacts
1=Minor	Abdominal skin contusion	Right interior
1=Minor	Leg skin contusion (hematoma)	Right interior
1=Minor	Scalp laceration, minor	Right B pillar
1=Minor	Upper extremity skin abrasion	Right interior
1=Minor	Upper extremity skin contusion	Right interior
1=Minor	Upper extremity skin laceration, minor	Right interior

**Occupant: 2002-43-47-2-3**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	TWO
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	42 -7 -41
Est. $\delta V$ with sequence number	DELTA V CODED 2
CDC	3 R P A W 4
Damage (C1-C6)	0 2 50 67 9 0
Crush (L and D)	342 -43
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	0

### NASS Weighting Factor

Weighting factor	38.844
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### Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Vehicle Factors

Make-Model	Honda Accord
Year	1997
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	130

### Pre-Crash Driver Data

Accident Type	98
Pre-event Movement	STOPPED IN LANE
Critical Pre-crash Event	XING ST-X PATH
Attempted Avoidance Manuever	No AVOIDANCE
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### PASSENGER Factors

Age	2	Height	97	Weight	16
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			Not ENTRAPPED		

## Restraint Factors

Restrain	Lap+sh w/ch seat
AOPS	YES-RES DET
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 <sup>st</sup> Seat	NONDEPLOYED
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

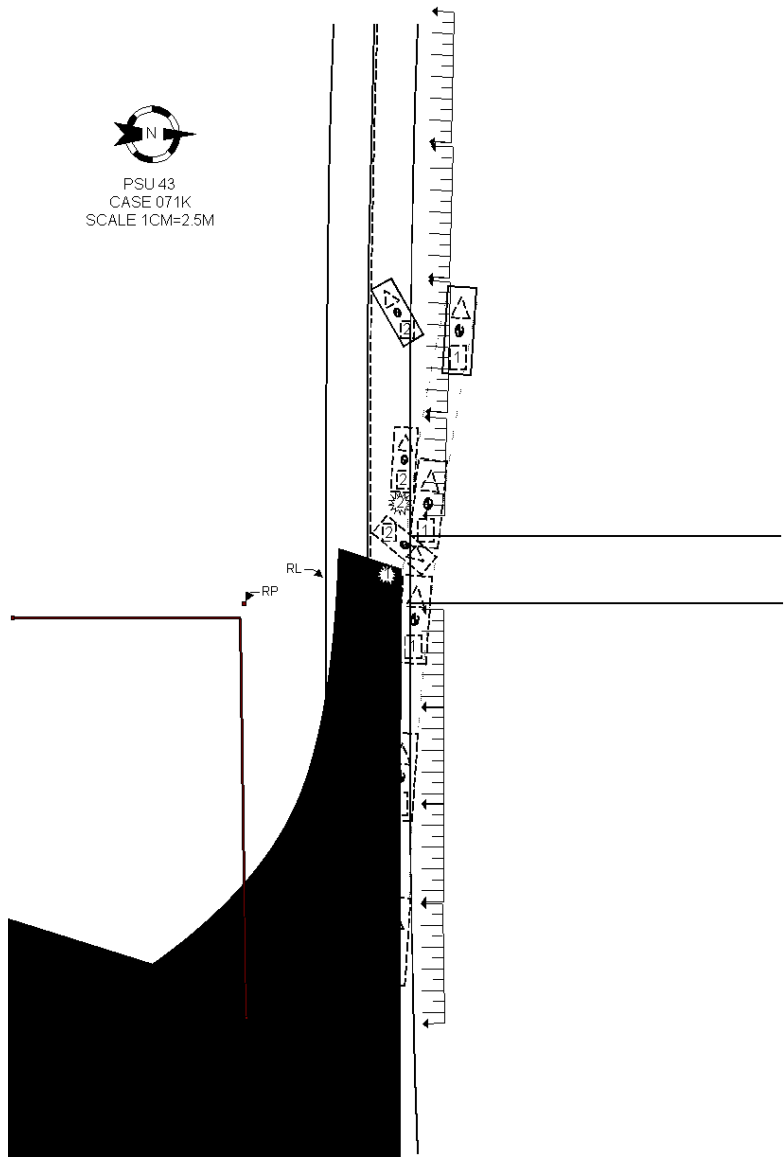
Occupant	2002-43-47-2-3
MAIS	1=Minor
Seat Position	Second left

AIS Level	Injury Description	Contacts
1=Minor	Facial skin laceration, minor	Flying glass
1=Minor	Scalp laceration, minor	Flying glass
1=Minor	Acute cervical spine strain without fracture or dislocation	Other noncontact
1=Minor	Awake on admission, never unconscious	Other noncontact

12 Case 2002-43-71

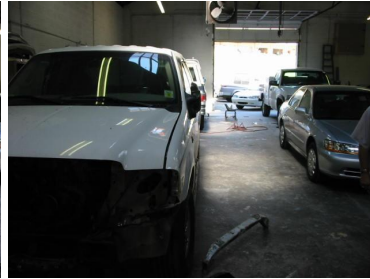
Summary:

Vehicle 1, a 1999 Ford F250 Crew Cap, was traveling west in lane one of a two-lane, bituminous, level roadway. Vehicle 2, a 1988 Pontiac Sunfire, was traveling east in lane one of the same bituminous roadway. There were no adverse weather conditions and it was dark. V2 turned left onto a private drive. The front of V1 contacted the right side of V2. V2 then side slapped V1 on the left side. V1 came to rest in a ditch off the right side of the road. V2 came to rest in the roadway facing west. The driver of V1 was reported to have sustained "C" injuries but was not transported. The driver of V2 was reported to have "A" injuries and was transported and admitted. The occupant of V2 was reported to have "A" injuries and was transported and admitted. )



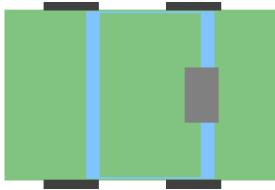
Vehicle	Body type	Make	Model	Year	Occ Age	Occupant's sex	Maximum known occupant ais
1	LARGE PICKUP	Ford	F-series P/U	1999	54	MALE	1=Minor
2	2DR SEDAN/HT/CPE	Pontiac	J-2000/2000/Sunbird (84+)	1988	44	MALE	3=Serious
2	2DR SEDAN/HT/CPE	Pontiac	J-2000/2000/Sunbird (84+)	1988	40	MALE	4=Severe

**Occupant: 2002-43-71-1-1**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Non-metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, forward rear axle
Fuel Tank Damage	No damage
Fuel Type	Diesel



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	10 -9 2
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	12 F D E W 99
Damage (C1-C6)	0 0 0 0 0
Crush (L and D)	0 0
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	VEHICLE NO. 2

### NASS Weighting Factor

Weighting factor	30.060
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### Rollover Characteristics

Number of Events	2
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	TWO
Roadway Alignment	CURVE RIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DARK
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	DRIVEWAY RELATED
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	Ford F-series P/U
Year	1999
Class	TRUCK
Body Type	LARGE PICKUP
Weight	308

### Pre-Crash Driver Data

Accident Type	69
Pre-event Movement	NEGOTIATE CURVE
Critical Pre-crash Event	OPP DIR-OVR LEFT
Attempted Avoidance Manuever	BRAKE+STEER RT
Pre-impact Stability	LONGITUDINAL SKID
Pre-impact Location	Left TRAVEL LANE

### DRIVER Factors

Age	54	Height	183	Weight	107
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			Not ENTRAPPED		

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-43-71-1-1
MAIS	1=Minor
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor	Leg skin abrasion	Knee bolster

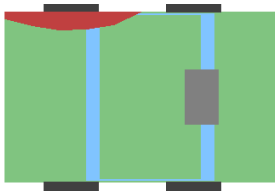


**Occupant: 2002-43-71-2-1**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Right side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	TWO
Roadway Alignment	CURVE LEFT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DARK
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	DRIVEWAY RELATED
Traffic Control Device	
Police Reported Alcohol Presence	9
Alcohol Test (< 95 indicates BAC 0.xx)	24

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	23 -15 -18
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	2 R F E W 3
Damage (C1-C6)	0 18 24 26 20 10
Crush (L and D)	114 129
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	VEHICLE NO. 1

### NASS Weighting Factor

Weighting factor	30.060
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### Rollover Characteristics

Number of Events	2
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Vehicle Factors

Make-Model	Pontiac J-2000/2000/Sunbird (84+)
Year	1988
Class	PASSENGER CAR
Body Type	2DR SEDAN/HT/CPE
Weight	109

### Pre-Crash Driver Data

Accident Type	68
Pre-event Movement	TURNING LEFT
Critical Pre-crash Event	OVER LINE-LEFT
Attempted Avoidance Manuever	99
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### DRIVER Factors

Age	44	Height	999	Weight	999
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			Not ENTRAPPED		

## Restraint Factors

Restrain	Lap and shoulder
AOPS	NO
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 <sup>st</sup> Seat	Not EQUIP/AVAIL
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-43-71-2-1
MAIS	3=Serious
Seat Position	Front left side

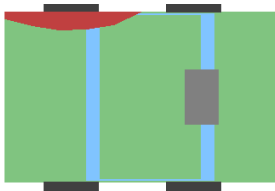
AIS Level	Injury Description	Contacts
3=Serious	Small bowel laceration with perforation (not transection)	Belt webb/buckle
1=Minor	Abdominal skin contusion	Belt webb/buckle
1=Minor	Thoracic skin contusion	Belt webb/buckle
1=Minor	Carpal-metacarpal or MCP joint dislocation	Steering comb

**Occupant: 2002-43-71-2-2**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Right side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	TWO
Roadway Alignment	CURVE LEFT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DARK
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	DRIVEWAY RELATED
Traffic Control Device	
Police Reported Alcohol Presence	9
Alcohol Test (< 95 indicates BAC 0.xx)	24

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	23 -15 -18
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	2 R F E W 3
Damage (C1-C6)	0 18 24 26 20 10
Crush (L and D)	114 129
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	VEHICLE NO. 1

### NASS Weighting Factor

Weighting factor	30.060
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### Rollover Characteristics

Number of Events	2
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Vehicle Factors

Make-Model	Pontiac J-2000/2000/Sunbird (84+)
Year	1988
Class	PASSENGER CAR
Body Type	2DR SEDAN/HT/CPE
Weight	109

### Pre-Crash Driver Data

Accident Type	68
Pre-event Movement	TURNING LEFT
Critical Pre-crash Event	OVER LINE-LEFT
Attempted Avoidance Manuever	99
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### PASSENGER Factors

Age	40	Height	999	Weight	999
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			Not ENTRAPPED		

## Restraint Factors

Restrain	None used/avail
AOPS	NO
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 <sup>st</sup> Seat	Not EQUIP/AVAIL
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

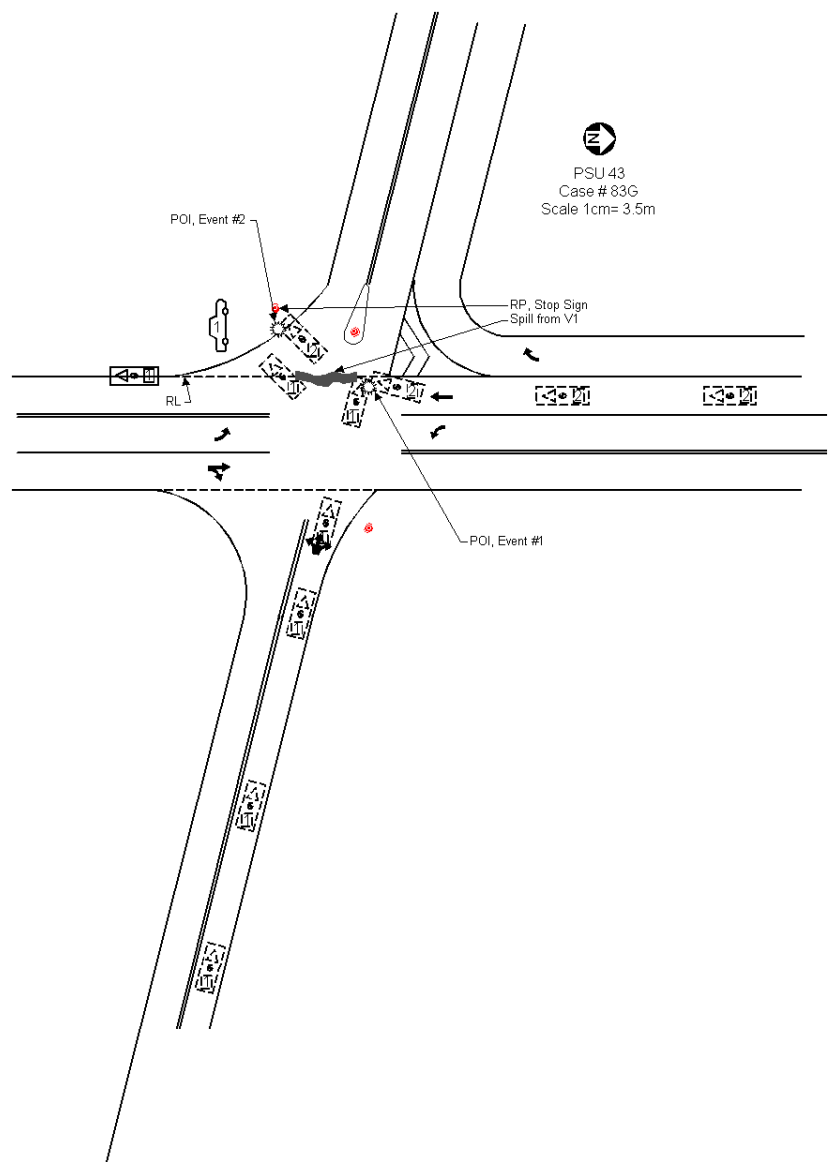
Occupant	2002-43-71-2-2
MAIS	4=Severe
Seat Position	Front right side

AIS Level	Injury Description	Contacts
1=Minor	Scalp contusion	Right panel
2=Moderate	Cervical transverse process fracture, no cord injury	Right panel
1=Minor	Scalp laceration, minor	Right panel
4=Severe	Intracerebral hematoma, small subcortical	Right panel
3=Serious	450211	Right panel

13 Case 2002-43-83

Summary:

Vehicle 1, a 2000 Oldsmobile Alero was travelling west on a two lane, bituminous asphalt roadway. Vehicle 2, a 1999 Ford Ranger was travelling south on a 3 lane bituminous aphalt roadway. The weather was clear and it was during daylight hours. V1 was passing through an intersection and was struck on its right, front side by V2. V2 continued on and struck the raised earth right shoulder of the road with the left front wheel, then rolled over 1 quarter turn to its left and came to rest on the right shoulder. V1 sustained moderate damage to its right, front and was towed from the scene. V2 sustained moderate damage to its front and was towed from the scene. The driver and passenger airbags in V1 deployed. The driver of V1 received "A" type injuries and was transported to a trauma center by EMS and admitted. The driver and passenger airbags in V2 deployed. The driver of V2 received "B" type injuries and was not transported. )



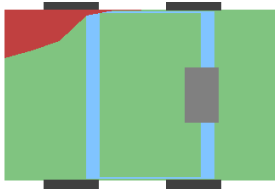
Vehicle	Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	4-DR SEDAN/HDTOP	Oldsmobile	Alero	2000	1	77	FEMALE-NOT PREG	3=Serious
2	COMPACT PICKUP	Ford	Ranger	1999	1	29	MALE	7=Unk. sev.

**Occupant: 2002-43-83-1-1**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Non-metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Right side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	TWO
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	25 -9 -24
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	2 R F E W 4
Damage (C1-C6)	0 0 7 44 58 69
Crush (L and D)	112 151
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	0

### NASS Weighting Factor

Weighting factor	36.032
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### Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Vehicle Factors

Make-Model	Oldsmobile Alero
Year	2000
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	140

### Pre-Crash Driver Data

Accident Type	87
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	CROSS OVER INTER
Attempted Avoidance Manuever	99
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### DRIVER Factors

Age	77	Height	163	Weight	68
Gender					FEMALE-NOT PREG
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					Not ENTRAPPED



## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-43-83-1-1
MAIS	3=Serious
Seat Position	Front left side

AIS Level	Injury Description	Contacts
3=Serious	>3 rib fractures one side & <3 other side, with stable chest	Belt webb/buckle
2=Moderate	752500	Center panel
2=Moderate	Patellar fracture	Knee bolster
1=Minor	Leg skin laceration, minor	Left apnel
1=Minor	Abdominal skin contusion	Belt webb/buckle
1=Minor	Thoracic skin contusion	Belt webb/buckle
1=Minor	Scalp contusion	Mirror
2=Moderate	Small bowel injury NFS	Belt webb/buckle
3=Serious	Lung contusion, uni-lateral	Belt webb/buckle
1=Minor	Neck skin abrasion	Belt webb/buckle
1=Minor	Thoracic skin abrasion	Belt webb/buckle
1=Minor	Leg skin abrasion	Left apnel
1=Minor	Leg skin contusion (hematoma)	Left apnel
1=Minor	Upper extremity skin abrasion	Roof

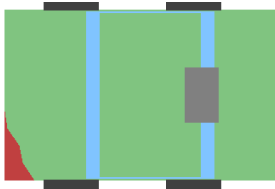


**Occupant: 2002-43-83-2-1**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Non-metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Left side, forward rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	THREE
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	Ford Ranger
Year	1999
Class	TRUCK
Body Type	COMPACT PICKUP
Weight	166

### Crash Severity

Nr. Quarter Turns	1 QUARTER TURN
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	22 -19 11
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	11 F L E E 3
Damage (C1-C6)	43 27 22 4 0 0
Crush (L and D)	119 -51
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	ROLLOVER-OVERTURN

### Pre-Crash Driver Data

Accident Type	86
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	CROSS OVER INTER
Attempted Avoidance Manuever	99
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### NASS Weighting Factor

Weighting factor	36.032
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### DRIVER Factors

<b>Rollover Characteristics</b>	
Number of Events	3
Rollover Initiation Type	TRIP-OVER
Location of Rollover Initiation	ROADSIDE/MEDIAN
Rollover Initiation Object Contacted	GROUND
Location on Vehicle where Principal Tripping Force was Applied	WHEELS/TIRES
Direction of Initial Roll	ROLL LEFT

Age	29	Height	999	Weight	999
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			Not ENTRAPPED		

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

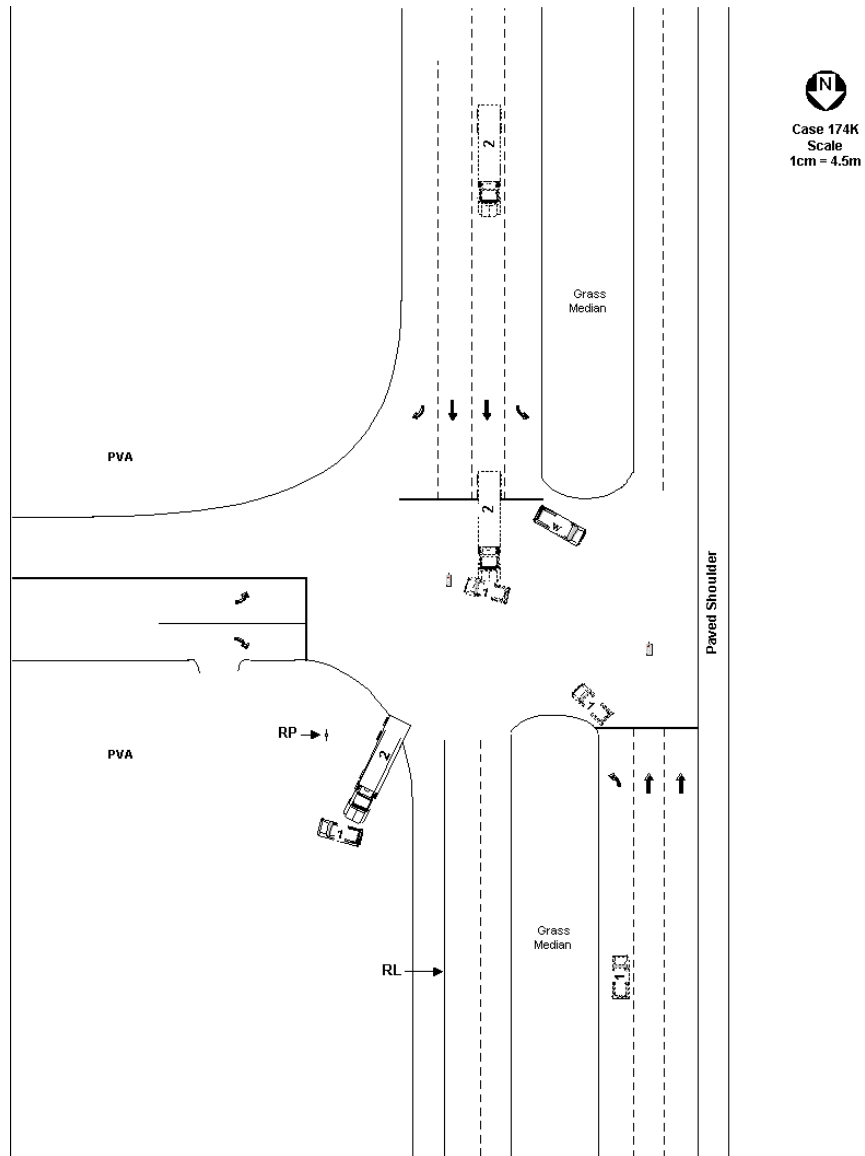
Occupant	2002-43-83-2-1
MAIS	7=Unk. sev.
Seat Position	Front left side

AIS Level	Injury Description	Contacts
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## 14 Case 2002-43-174

### Summary:

Vehicle one, a 1992 Pontiac Trans Sport minivan, was traveling south in the turning lane on a 3-lane divided highway approaching an intersection. Vehicle one was carrying four passengers. Vehicle two, a 1997 Volvo semi tractor trailer, was traveling north in lane three of a 4-lane divided highway. The truck was empty and the driver was its only occupant. The roadway was straight, level and wet. It was 1:30pm on a Thursday afternoon and a rain storm just passed. Visibility of vehicle one for the truck is not an issue as the line of sight was clear, there was still daylight and the truck driver reported having seen the van before the crash. Vehicle one entered the intersection and turned across the path of vehicle two. The truck driver applied the brakes, but struck the right side of the van with its front. There are no skid marks on the scene because the truck had ABS and the road was wet. Following the impact, both vehicles were pushed off the right side of the road and came to rest on the grassy roadside. The driver of vehicle one, a 34-year-old female, was knocked unconscious and was trapped inside her van. She sustained "A" type injuries and was hospitalized for seven days. The left rear occupant of vehicle one, a six-year-old male, sustained "B" injuries and was treated and released from a local trauma center. The middle rear occupant of vehicle one, a four-year old male, was properly sitting in a child seat, sustained "B" injuries and was hospitalized for three days. The right rear occupant of vehicle one, an eight-year-old male, was pinned in the vehicle, sustained "A" injuries and was hospitalized for four days. The 6 and 8-year olds were both improperly restrained using the adult safety belts, which are not designed for their height or weight. The driver of the truck sprained his hand and sought treatment later. A post-crash inspection of the truck did not find any mechanical defects or driver violations. The driver of vehicle one was cited for a failure-to-yield violation. The driver of vehicle one was not available to comment on the crash as she suffered memory loss and is in rehabilitation. Her husband said she was driving home after having lunch with him and the kids. The truck driver reported he saw the minivan enter the intersection and feared she might try to turn in front of him so he applied the brakes before vehicle one turned across his path. The sight line of vehicle one may have been obscured by a witness in the northbound turning lane. The witness reported that he was stopped in his full size van opposite of vehicle one. He reported that vehicle one kept "inching" forward to see around him. The left rear and right rear occupants of V1 were improperly restrained without safety seats. )



Vehicle	Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	MINIVAN	Pontiac	Trans Sport	1992	1	34	FEMALE-NOT PREG	3=Serious
1	MINIVAN	Pontiac	Trans Sport	1992	2	6	MALE	1=Minor
1	MINIVAN	Pontiac	Trans Sport	1992	3	4	MALE	2=Moderate
1	MINIVAN	Pontiac	Trans Sport	1992	4	8	MALE	3=Serious

**Occupant: 2002-43-174-1-1**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Non-metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	999
Total, Longitudal, and Lateral $\delta V$	999 999 999
Est. $\delta V$ with sequence number	SEVERE 1
CDC	82 R D A W 6
Damage (C1-C6)	0 24 127 127 24 0
Crush (L and D)	377 3
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	0

### NASS Weighting Factor

Weighting factor	30.060
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### Rollover Characteristics

Number of Events	1
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	DVDED/NO BARRIER
Number of Travel Lanes	FIVE
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	WET
Light Conditions	DAYLIGHT
Atmospheric Conditions	RAIN
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	Pontiac Trans Sport
Year	1992
Class	TRUCK
Body Type	MINIVAN
Weight	164

### Pre-Crash Driver Data

Accident Type	68
Pre-event Movement	TURNING LEFT
Critical Pre-crash Event	TURN LEFT-INTERS
Attempted Avoidance Manuever	99
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### DRIVER Factors

Age	34	Height	163	Weight	66
Gender					FEMALE-NOT PREG
Ejection					NO EJECTION
Ejection Area					NO EJECTION
Entrapment					ENTRAPPED

## Restraint Factors

Restrain	Lap and shoulder
AOPS	NO
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 <sup>st</sup> Seat	Not EQUIP/AVAIL
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-43-174-1-1
MAIS	3=Serious
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor	Facial skin laceration NFS	Right windowsill
1=Minor	Leg skin laceration NFS	Right interior
1=Minor	Scalp laceration, NFS	Right windowsill
3=Serious	Pelvic fracture, open/displaced/comminuted	Right interior
3=Serious	Sacroiliac fracture	Right interior
2=Moderate	Pelvic fracture, closed	Right interior
2=Moderate	Lumbar fracture of transverse process without cord injury	Right interior
2=Moderate	Fibular head, neck, or shaft fracture	Right interior
3=Serious	853405	Right interior

Occupant: 2002-43-174-1-2



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Non-metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	999
Total, Longitudal, and Lateral $\delta V$	999 999 999
Est. $\delta V$ with sequence number	SEVERE 1
CDC	82 R D A W 6
Damage (C1-C6)	0 24 127 127 24 0
Crush (L and D)	377 3
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	0

### NASS Weighting Factor

Weighting factor	30.060
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### Rollover Characteristics

Number of Events	1
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	DVDED/NO BARRIER
Number of Travel Lanes	FIVE
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	WET
Light Conditions	DAYLIGHT
Atmospheric Conditions	RAIN
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	Pontiac Trans Sport
Year	1992
Class	TRUCK
Body Type	MINIVAN
Weight	164

### Pre-Crash Driver Data

Accident Type	68
Pre-event Movement	TURNING LEFT
Critical Pre-crash Event	TURN LEFT-INTERS
Attempted Avoidance Maneuver	99
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### PASSENGER Factors

Age	6	Height	122	Weight	23
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			ENTRAPPED		



## Restraint Factors

Restrain	Lap and shoulder
AOPS	NO
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 <sup>st</sup> Seat	Not EQUIP/AVAIL
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-43-174-1-2
MAIS	1=Minor
Seat Position	Second left

AIS Level	Injury Description	Contacts
1=Minor	Facial skin laceration, minor	Flying glass
1=Minor	Upper extremity skin contusion	Oth interior obj
1=Minor	Leg skin contusion (hematoma)	Seat, back
1=Minor	Upper extremity skin laceration, minor	Flying glass

Occupant: 2002-43-174-1-3



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Non-metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	999
Total, Longitudal, and Lateral $\delta V$	999 999 999
Est. $\delta V$ with sequence number	SEVERE 1
CDC	82 R D A W 6
Damage (C1-C6)	0 24 127 127 24 0
Crush (L and D)	377 3
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	0

### NASS Weighting Factor

Weighting factor	30.060
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### Rollover Characteristics

Number of Events	1
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object	No rollover
Contacted	
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	DVDED/NO BARRIER
Number of Travel Lanes	FIVE
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	WET
Light Conditions	DAYLIGHT
Atmospheric Conditions	RAIN
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	Pontiac Trans Sport
Year	1992
Class	TRUCK
Body Type	MINIVAN
Weight	164

### Pre-Crash Driver Data

Accident Type	68
Pre-event Movement	TURNING LEFT
Critical Pre-crash Event	TURN LEFT-INTERS
Attempted Avoidance Manuever	99
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### PASSENGER Factors

Age	4	Height	61	Weight	17
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			ENTRAPPED		

## Restraint Factors

Restrain	Lap w/ch/seat
AOPS	NO
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 <sup>st</sup> Seat	Not EQUIP/AVAIL
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-43-174-1-3
MAIS	2=Moderate
Seat Position	Second middle

AIS Level	Injury Description	Contacts
2=Moderate	Radial fracture, closed	Right B pillar
2=Moderate	Ulnar fracture, closed	Right B pillar
1=Minor	Leg skin contusion (hematoma)	Right B pillar
1=Minor	Leg skin abrasion	Right B pillar
1=Minor	Scalp laceration, minor	Right interior
1=Minor	Scalp laceration, minor	Right interior
1=Minor	Awake on admission, NFS	Right interior
1=Minor	Facial skin laceration, minor	Right interior

**Occupant: 2002-43-174-1-4**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Non-metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	999
Total, Longitudal, and Lateral $\delta V$	999 999 999
Est. $\delta V$ with sequence number	SEVERE 1
CDC	82 R D A W 6
Damage (C1-C6)	0 24 127 127 24 0
Crush (L and D)	377 3
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	0

### NASS Weighting Factor

Weighting factor	30.060
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### Rollover Characteristics

Number of Events	1
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	DVDED/NO BARRIER
Number of Travel Lanes	FIVE
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	WET
Light Conditions	DAYLIGHT
Atmospheric Conditions	RAIN
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	Pontiac Trans Sport
Year	1992
Class	TRUCK
Body Type	MINIVAN
Weight	164

### Pre-Crash Driver Data

Accident Type	68
Pre-event Movement	TURNING LEFT
Critical Pre-crash Event	TURN LEFT-INTERS
Attempted Avoidance Manuever	99
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### PASSENGER Factors

Age	8	Height	132	Weight	25
Gender					MALE
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					ENTRAPPED

## Restraint Factors

Restrain	Lap and shoulder
AOPS	NO
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 <sup>st</sup> Seat	Not EQUIP/AVAIL
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

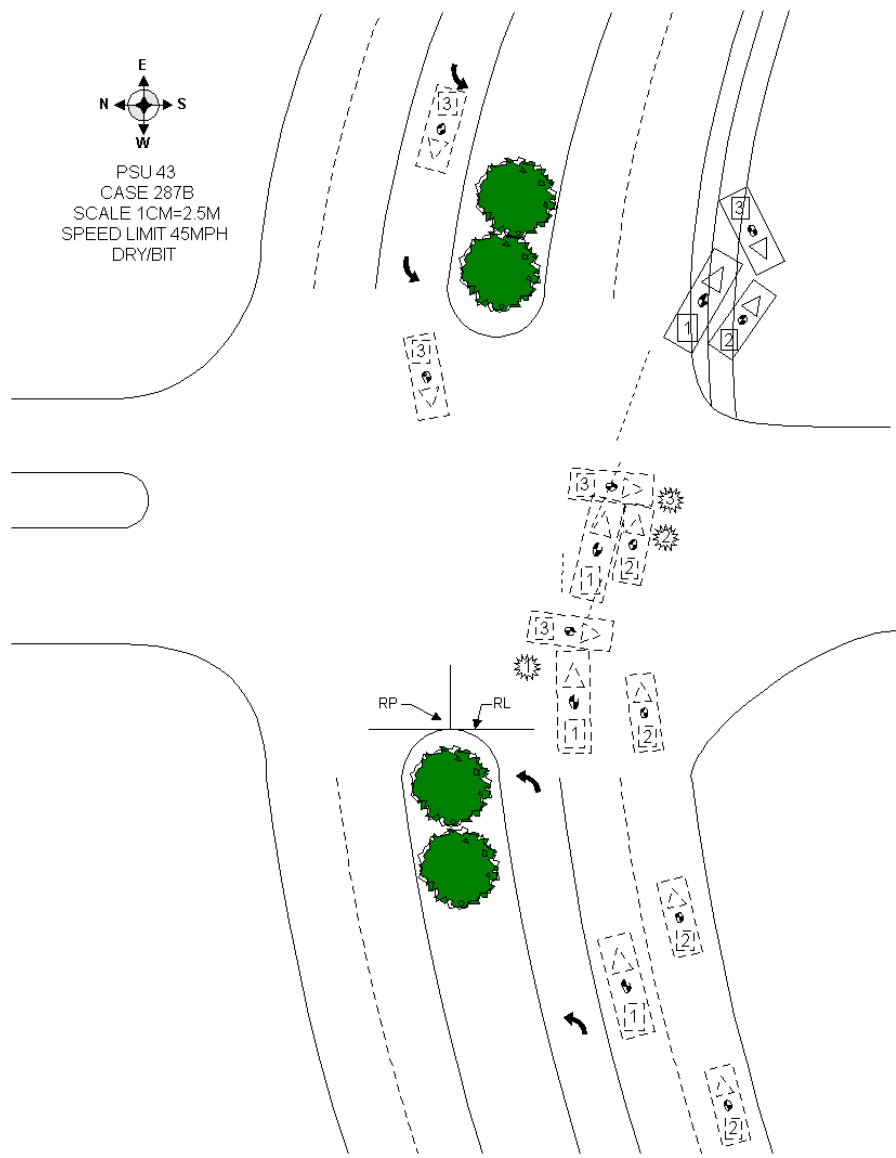
Occupant	2002-43-174-1-4
MAIS	3=Serious
Seat Position	Second right

AIS Level	Injury Description	Contacts
1=Minor	Facial skin laceration, minor	Right interior
1=Minor	Leg skin abrasion	Right interior
1=Minor	Upper extremity skin laceration NFS	Right interior
1=Minor	297602	Right interior
2=Moderate	Tibial fracture medial malleolus, open/displaced/comminuted	Floor
2=Moderate	Fibular head, neck, or shaft fracture	Floor
3=Serious	Lung contusion, unilateral	Right interior
1=Minor	Abdominal skin contusion	Belt webb/buckle

15 Case 2002-43-287

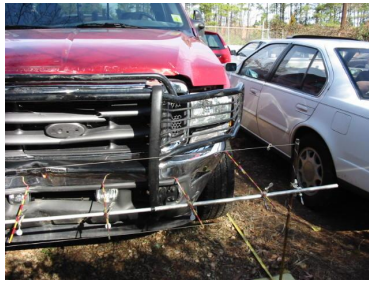
Summary:

V1, a 2002 Ford F-350 4x4, was traveling east in lane 2 of a 5 lane, divided, bituminous roadway that curves to the right. V2, a 1996 Toyota Camry, was traveling east in lane 1 of the same roadway. V3, a 1996 Chrysler Concorde, was traveling west in lane 3 of the same roadway and turning south across the paths of V1 and V2. The front of V1 contacted the right side of V3. The left side of V2 contacted the right side of V1 and the front of V2 contacted right side of V3. V1 and V2 were both towed due to damage. V2 was towed from the scene but not considered towed per this states sampling rules. The driver of V1 was reported not to have any injuries. The driver of V2 was reported to have "C" injuries but was not transported. The driver of V3 was reported to have "A" injuries and was hospitalized for 2 days and died because of his injuries. The airbags in V3 deployed. )



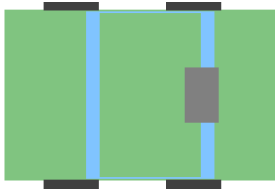
Vehicle	Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	LARGE PICKUP	Ford	F-series P/U	2002	1	31	MALE	0=None
3	4-DR SEDAN/HDTOP	Chrysler	Concorde	1996	1	63	MALE	4=Severe

Occupant: 2002-43-287-1-1



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Non-metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, forward rear axle
Fuel Tank Damage	No damage
Fuel Type	Diesel



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	999
Total, Longitudal, and Lateral $\delta V$	999 999 999
Est. $\delta V$ with sequence number	>24 AND <40 KMPH 1
CDC	12 F D E W 1
Damage (C1-C6)	0 0 0 0 0 0
Crush (L and D)	0 0
Object Contacted 1	VEHICLE NO. 3
Object Contacted 2	VEHICLE NO. 2

### NASS Weighting Factor

Weighting factor	38.844
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### Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	DVDED/NO BARRIER
Number of Travel Lanes	FIVE
Roadway Alignment	CURVE RIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	Ford F-series P/U
Year	2002
Class	TRUCK
Body Type	LARGE PICKUP
Weight	334

### Pre-Crash Driver Data

Accident Type	69
Pre-event Movement	NEGOTIATE CURVE
Critical Pre-crash Event	OPP DIR-OVR LEFT
Attempted Avoidance Manuever	BRAKE W/O LOCKUP
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### DRIVER Factors

Age	31	Height	185	Weight	102
Gender					MALE
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					Not ENTRAPPED



## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	NONDEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	NONDEPLOYED
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-43-287-1-1
MAIS	0=None
Seat Position	Front left side

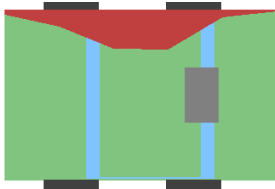
AIS Level	Injury Description	Contacts
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Occupant: 2002-43-287-3-1



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Non-metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Right side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	DVDED/NO BARRIER
Number of Travel Lanes	FIVE
Roadway Alignment	CURVE LEFT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	0

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	999
Total, Longitudal, and Lateral $\delta V$	999 999 999
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	3 R D A W 4
Damage (C1-C6)	1 10 57 56 23 6
Crush (L and D)	432 84
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	VEHICLE NO. 2

### NASS Weighting Factor

Weighting factor	38.844
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### Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Vehicle Factors

Make-Model	Chrysler Concorde
Year	1996
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	158

### Pre-Crash Driver Data

Accident Type	68
Pre-event Movement	TURNING LEFT
Critical Pre-crash Event	TURN LEFT-INTERS
Attempted Avoidance Manuever	99
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### DRIVER Factors

Age	63	Height	168	Weight	64
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			Not ENTRAPPED		

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

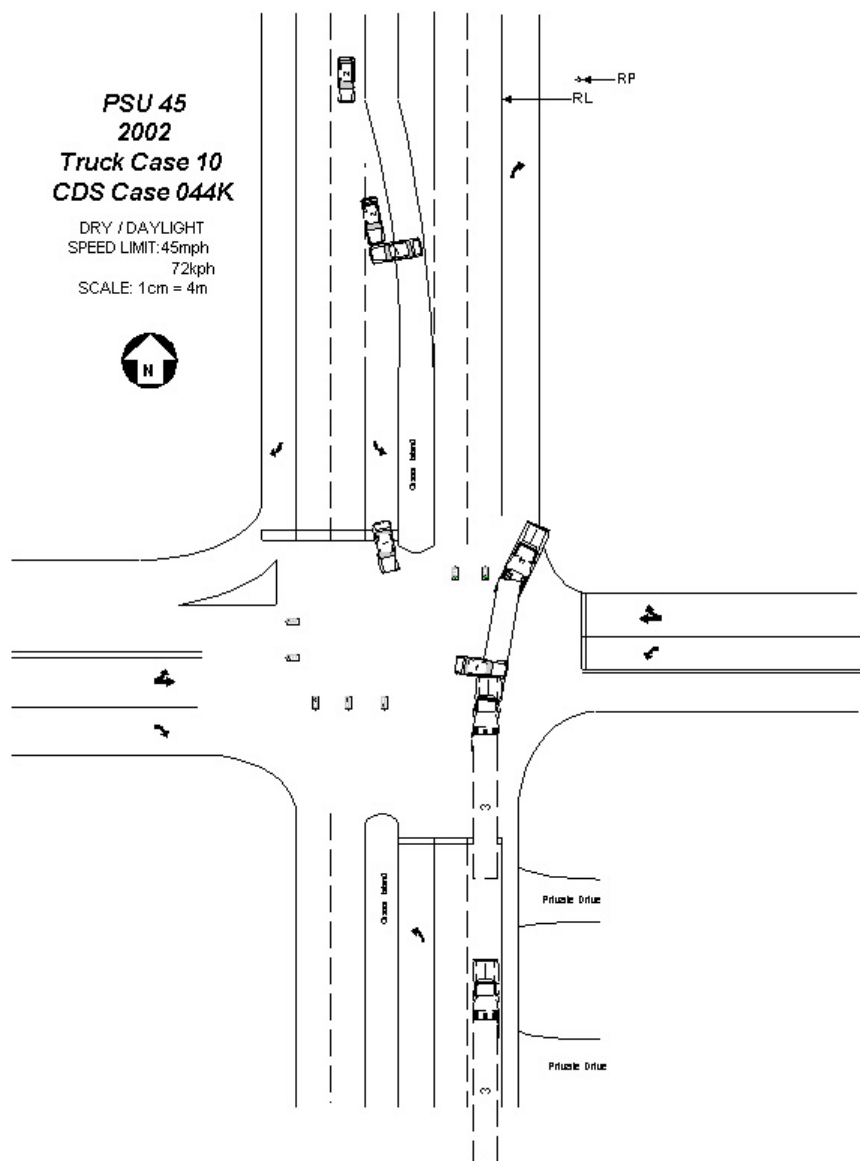
Occupant	2002-43-287-3-1
MAIS	4=Severe
Seat Position	Front left side

AIS Level	Injury Description	Contacts
3=Serious	Skull fracture, vault, comminuted (compound, depressed)	OMV other front
3=Serious	Cerebral contusions, multiple, bilateral but NFS	OMV other front
2=Moderate	Maxillary fracture NFS	OMV other front
3=Serious	Basilar skull fracture, NFS	OMV other front
4=Severe	Cerebral intraventricular hemorrhage	OMV other front
1=Minor	297402	OMV other front
1=Minor	297402	OMV other front
1=Minor	Facial skin abrasion	OMV other front
1=Minor	Upper extremity skin abrasion	Right hardware
1=Minor	Leg skin abrasion	Knee bolster

16 Case 2002-45-44

Summary:

The crash site was an urban four lane north/south median divided highway with left turn lanes. The highway is intersected by a two lane road on the east side and a private drive on the west side. The intersection is controlled by traffic signals. Conditions at the time of the crash were daylight and dry at 2:05pm on a Tuesday afternoon. V1 was a 1997 Pontiac Grand Prix that was stopped southbound in the left turn lane attempting to cross the northbound lanes to go east on the two lane road. V3, a 1998 Volvo conventional tractor with a 48ft semi trailer, was northbound in the right lane. When the traffic light changed from solid green to red V1 attempted to make a left turn and was struck in the right side by V3's front. Although the driver of V1 reports no recollection of the crash it's believed that she assumed traffic traveling northbound encountered a red light at the same time as southbound traffic. The lights are sequenced at the intersection with northbound traffic receiving a green light for 15 seconds longer than southbound traffic. After impact V1 rotated counter clockwise, crossed the grass traffic island and came to final rest 44 meters north of impact in the southbound left turn lane. V1 came to rest facing west with its right side against the front of V2 which was a 1995 Dodge Neon traveling southbound. V3 came to rest facing northeast just north of impact in its original lane. The 30 year old female driver of V1 was belted with non deployed airbags and was hospitalized. She was very familiar with the area and states she has no memory of the crash. V1's driver was charged with failure to yield. Damage to V2 was extremely minor and the driver along with several other witness' agree that V1 turned left on red. V3 was driven by a 35 year old male that was belted and not injured. He reports that he applied his brakes but had minimal time to avoid the crash. The truck was empty at the time of the crash and police inspection of the truck and driver found no violations. )



Vehicle	Body type	Make	Model	Year	Occ. Age	Occupant's sex	Maximum known occupant ais
1	2DR SEDAN/HT/CPE	Pontiac	Grand Prix FWD	1997	30	FEMALE-NOT PREG	3=Serious

Occupant: 2002-45-44-1-1



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	Unknown
Type of Fuel Tank	Unknown type
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Right side, behind rear axle
Fuel Tank Damage	Unknown
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	DVDED/NO BARRIER
Number of Travel Lanes	FOUR
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	WET
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	Pontiac Grand Prix FWD
Year	1997
Class	PASSENGER CAR
Body Type	2DR SEDAN/HT/CPE
Weight	154

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	999
Total, Longitudal, and Lateral $\delta V$	999 999 999
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	3 R Y A W 4
Damage (C1-C6)	0 11 45 46 47 0
Crush (L and D)	340 65
Object Contacted 1	VEHICLE NO. 3
Object Contacted 2	VEHICLE NO. 2

### Pre-Crash Driver Data

Accident Type	68
Pre-event Movement	TURNING LEFT
Critical Pre-crash Event	TURN LEFT-INTERS
Attempted Avoidance Manuever	No AVOIDANCE
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### NASS Weighting Factor

Weighting factor	53.342
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### DRIVER Factors

### Rollover Characteristics

Number of Events	2
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

Age	30	Height	165	Weight	58
Gender					FEMALE-NOT PREG
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					Not ENTRAPPED

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	NONDEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	NONDEPLOYED
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

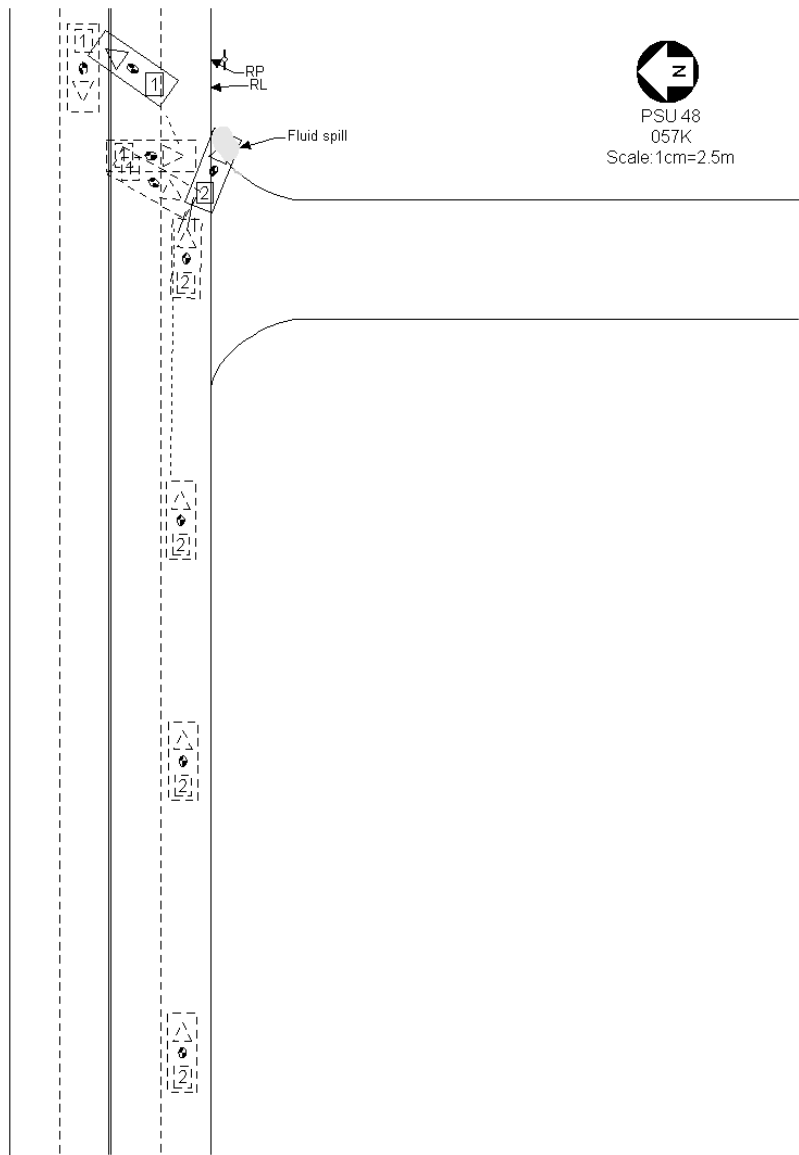
Occupant	2002-45-44-1-1
MAIS	3=Serious
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor	Leg skin abrasion	Knee bolster
1=Minor	Leg skin abrasion	Foot controls
1=Minor	Upper extremity skin abrasion	Right interior
3=Serious	Pelvic fracture, open/displaced/comminuted	Transmiss lever
2=Moderate	Scapular fracture	Right interior
1=Minor	Upper extremity skin contusion	Right interior
1=Minor	Leg skin abrasion	Belt webb/buckle
3=Serious	Thoracic cavity injury NFS, with hemo-/pneumothorax	Right interior
1=Minor	Leg skin laceration, minor	Transmiss lever

17 Case 2002-48-57

Summary:

Vehicle 1 (V1) was west bound on a four lane city street turning left into a private drive. Vehicle 2 (V2) was east bound in lane one of the same city street. The roadway was dry and divided by double solid painted lines. As V1 turned, the front of V2 struck the right side of V1. V1 rotated CCW and came to final rest in lane two of the east bound lanes facing northeast. V2 veered off to the right, went over the curb and came to final rest partially off the roadway facing east. Both vehicles were towed due to disabling damage. The restrained driver of V1 was hospitalized with a fractured sternum, pneumothorax, and minor lacerations, abrasions, and bruising. The restrained passenger of V1 was hospitalized overnight for observation and released with a shoulder contusion. The restrained driver of V2 was hospitalized overnight for observation and released with chest contusion and cervical strain. Both front airbags in V2 deployed. )



Vehicle	Body type	Make	Model	Year	Occ. #	Age	Occupant's sex	Maximum known occupant ais
1	4-DR SEDAN/HDTOP	Chevrolet	Caprice/Impala	1986	1	78	MALE	3=Serious
1	4-DR SEDAN/HDTOP	Chevrolet	Caprice/Impala	1986	2	63	FEMALE-NOT PREG	1=Minor
2	4-DR SEDAN/HDTOP	Toyota	Camry	1998	1	19	FEMALE-NOT PREG	1=Minor

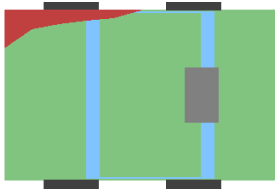


**Occupant: 2002-48-57-1-1**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Over center of the rear wheels
Fuel Cap Location	On back plane
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	FOUR
Roadway Alignment	STRAIGHT
Roadway Profile	DOWNHILL GRADE
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	DRIVEWAY RELATED
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	0

### Vehicle Factors

Make-Model	Chevrolet Caprice/Impala
Year	1986
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	163

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	22 -17 -14
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	81 R F E W 3
Damage (C1-C6)	0 11 14 20 27 55
Crush (L and D)	118 128
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	0

### Pre-Crash Driver Data

Accident Type	68
Pre-event Movement	TURNING LEFT
Critical Pre-crash Event	TURN LEFT-INTERS
Attempted Avoidance Manuever	No AVOIDANCE
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### NASS Weighting Factor

Weighting factor	220.528
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### DRIVER Factors

### Rollover Characteristics

Number of Events	1
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

Age	78	Height	170	Weight	60
Gender					MALE
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					Not ENTRAPPED

## Restraint Factors

Restrain	Lap and shoulder
AOPS	NO
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 <sup>st</sup> Seat	Not EQUIP/AVAIL
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-48-57-1-1
MAIS	3=Serious
Seat Position	Front left side

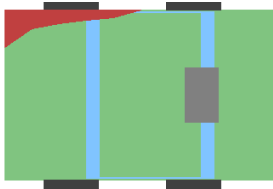
AIS Level	Injury Description	Contacts
2=Moderate	Sternal fracture	Belt webb/buckle
3=Serious	Thoracic cavity injury NFS, with hemo- /pneumothorax	Belt webb/buckle
2=Moderate	Lethargic on admis- sion, never uncon- scious	Steering rim
1=Minor	Facial skin laceration, minor	Steering rim
1=Minor	Facial skin contusion	Steering rim
1=Minor	297402	Steering rim
1=Minor	297602	Steering rim
1=Minor	Thoracic skin contu- sion	Belt webb/buckle
1=Minor	Thoracic skin lacera- tion, minor	Belt webb/buckle
1=Minor	Upper extremity skin laceration, minor	Left apnel
1=Minor	Upper extremity skin contusion	Windshield
1=Minor	Upper extremity skin contusion	Left apnel
1=Minor	Upper extremity skin laceration, minor	Windshield

**Occupant: 2002-48-57-1-2**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Over center of the rear wheels
Fuel Cap Location	On back plane
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	22 -17 -14
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	81 R F E W 3
Damage (C1-C6)	0 11 14 20 27 55
Crush (L and D)	118 128
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	0

### NASS Weighting Factor

Weighting factor	220.528
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### Rollover Characteristics

Number of Events	1
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	FOUR
Roadway Alignment	STRAIGHT
Roadway Profile	DOWNHILL GRADE
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	DRIVEWAY RELATED
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	0

### Vehicle Factors

Make-Model	Chevrolet Caprice/Impala
Year	1986
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	163

### Pre-Crash Driver Data

Accident Type	68
Pre-event Movement	TURNING LEFT
Critical Pre-crash Event	TURN LEFT-INTERS
Attempted Avoidance Manuever	No AVOIDANCE
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### PASSENGER Factors

Age	63	Height	168	Weight	67
Gender					FEMALE-NOT PREG
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					Not ENTRAPPED

## Restraint Factors

Restrain	Lap and shoulder
AOPS	NO
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 <sup>st</sup> Seat	Not EQUIP/AVAIL
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-48-57-1-2
MAIS	1=Minor
Seat Position	Front right side

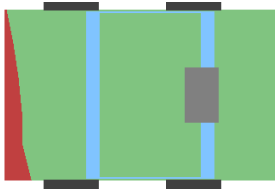
AIS Level	Injury Description	Contacts
1=Minor	Upper extremity skin contusion	Belt webb/buckle

**Occupant: 2002-48-57-2-1**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	27 -25 9
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	11 F D E W 3
Damage (C1-C6)	39 27 25 20 13 3
Crush (L and D)	156 0
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	0

### NASS Weighting Factor

Weighting factor	220.528
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### Rollover Characteristics

Number of Events	1
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	FOUR
Roadway Alignment	STRAIGHT
Roadway Profile	UPHILL GRADE
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	DRIVEWAY RELATED
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	Toyota Camry
Year	1998
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	136

### Pre-Crash Driver Data

Accident Type	69
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	OPP DIR-OVR LEFT
Attempted Avoidance Manuever	BRAKE W/ LOCKUP
Pre-impact Stability	LONGITUDINAL SKID
Pre-impact Location	STAYED IN LANE

### DRIVER Factors

Age	19	Height	163	Weight	61
Gender					FEMALE-NOT PREG
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					Not ENTRAPPED

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

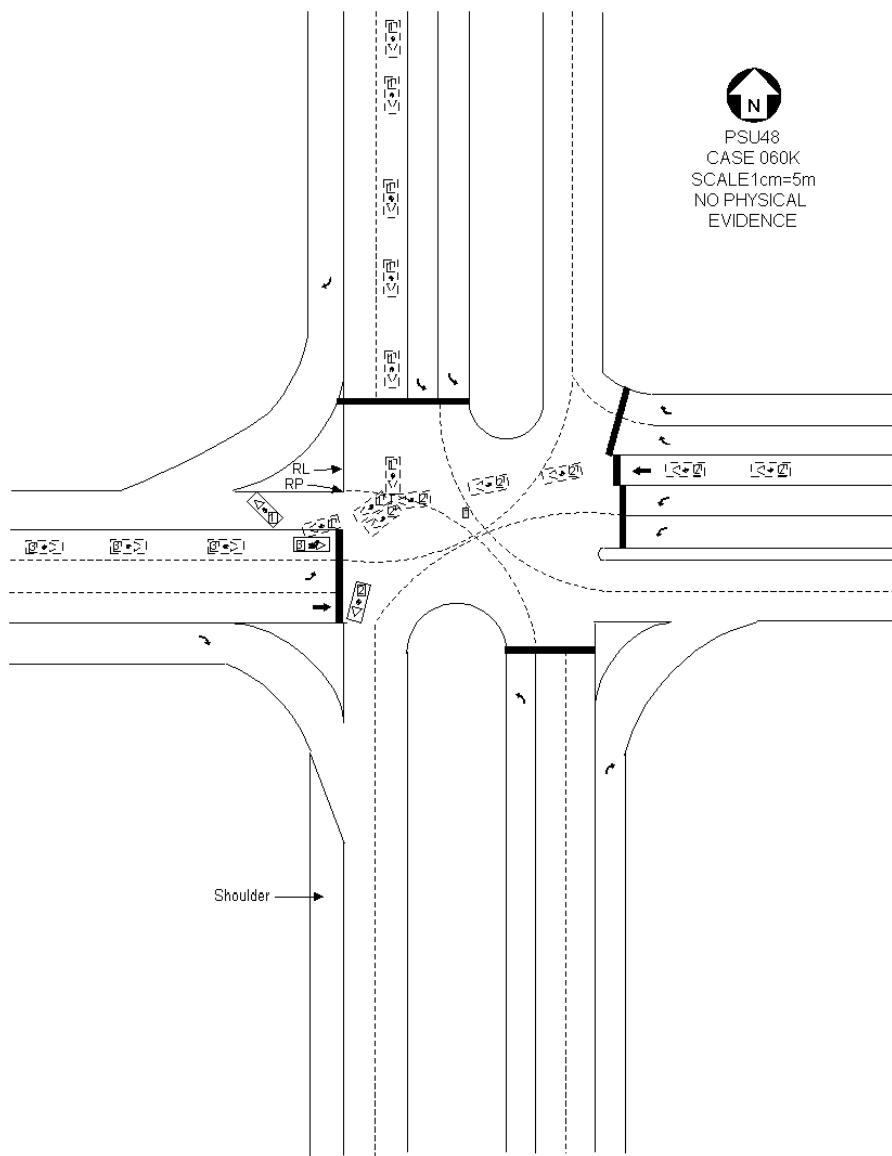
Occupant	2002-48-57-2-1
MAIS	1=Minor
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor	Thoracic skin contusion	Belt webb/buckle
1=Minor	Thoracic skin abrasion	Belt webb/buckle
1=Minor	Leg skin abrasion	Knee bolster
1=Minor	Leg skin contusion (hematoma)	Knee bolster
1=Minor	Upper extremity skin contusion	Left apnel
1=Minor	Acute cervical spine strain without fracture or dislocation	Belt webb/buckle

18 Case 2002-48-60

Summary:

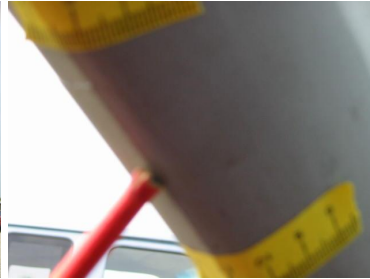
Vehicle 1 (V1) was traveling south on a five lane, dry, level, straight divided roadway. V1 was in lane one approaching an intersection controlled by a 3-way traffic light. Vehicle 2 (V2) was traveling west on a five lane, dry, level, straight, divided roadway. V2 was in lane three approaching the same intersection. Vehicle 3 (V3) was traveling east on an undivided, four lane, dry, level, straight roadway. V3 was in lane four stopped at the same intersection. As V1 and V2 traveled through the intersection, the front of V1 struck the right side of V2. Both vehicles rotated and the left rear side panel of V1 struck the right side of V2. The front of V1 then struck the left side of V3. V1 came to final rest heading N-NW across the westbound lane on the west side of the intersection. V2 rotated CCW. with final rest heading south perpendicular to lane two of the east-bound lanes on the west side of the intersection. V3 did not move at contact and remained heading east in the original travel lane. V1 and V2 were both towed due to disabling damage. V3 was equipped with frontal air bags (non-deployed) and was driven from the scene. The restrained driver of V1 was transported to and released with loss of consciousness with amnesia, a 3.5cm laceration above the left eye-brow and multiple contusions. The restrained driver of V2 was hospitalized with a fractured right iliac wing and abdominal bruising. The driver and two passengers of V3 reported no injuries. PAR indicates the driver and front passenger were restrained; the restraint of the third passenger was reported unknown on the PAR. )



Vehicle	Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	4-DR SEDAN/HDTOP	Pontiac	Grand AM	1991	1	17	FEMALE-NOT PREG	2=Moderate
2	4-DR SEDAN/HDTOP	Chevrolet	Celebrity	1986	1	17	MALE	3=Serious

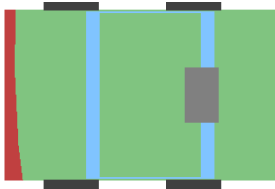


**Occupant: 2002-48-60-1-1**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Right side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	27 -25 9
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	11 F D E W 3
Damage (C1-C6)	27 21 18 16 16 17
Crush (L and D)	150 0
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	VEHICLE NO. 2

### NASS Weighting Factor

Weighting factor	161.677
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### Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	DVDED/NO BARRIER
Number of Travel Lanes	FIVE
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DARK/LIGHTED
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	Pontiac Grand AM
Year	1991
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	118

### Pre-Crash Driver Data

Accident Type	86
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	CROSS OVER INTER
Attempted Avoidance Manuever	99
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### DRIVER Factors

Age	17	Height	163	Weight	89
Gender					FEMALE-NOT PREG
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					Not ENTRAPPED

## Restraint Factors

Restrain	None used/avail
AOPS	YES-RES DET
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 <sup>st</sup> Seat	Not EQUIP/AVAIL
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-48-60-1-1
MAIS	2=Moderate
Seat Position	Front left side

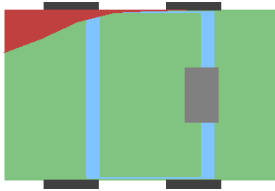
AIS Level	Injury Description	Contacts
2=Moderate	Awake on admission, unconscious <1 hour	Left A pillar
1=Minor	Facial skin laceration, minor	Left A pillar
1=Minor	Upper extremity skin contusion	Steering comb

**Occupant: 2002-48-60-2-1**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	24 -8 -23
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	82 R Y E W 4
Damage (C1-C6)	0 1 3 17 42 62
Crush (L and D)	210 139
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	VEHICLE NO. 1

### NASS Weighting Factor

Weighting factor	161.677
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### Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	DVDED/NO BARRIER
Number of Travel Lanes	FIVE
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DARK/LIGHTED
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	0

### Vehicle Factors

Make-Model	Chevrolet Celebrity
Year	1986
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	141

### Pre-Crash Driver Data

Accident Type	87
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	XING ST-X PATH
Attempted Avoidance Manuever	No AVOIDANCE
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### DRIVER Factors

Age	17	Height	178	Weight	88
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			Not ENTRAPPED		

## Restraint Factors

Restrain	Lap and shoulder
AOPS	NO
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 <sup>st</sup> Seat	Not EQUIP/AVAIL
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

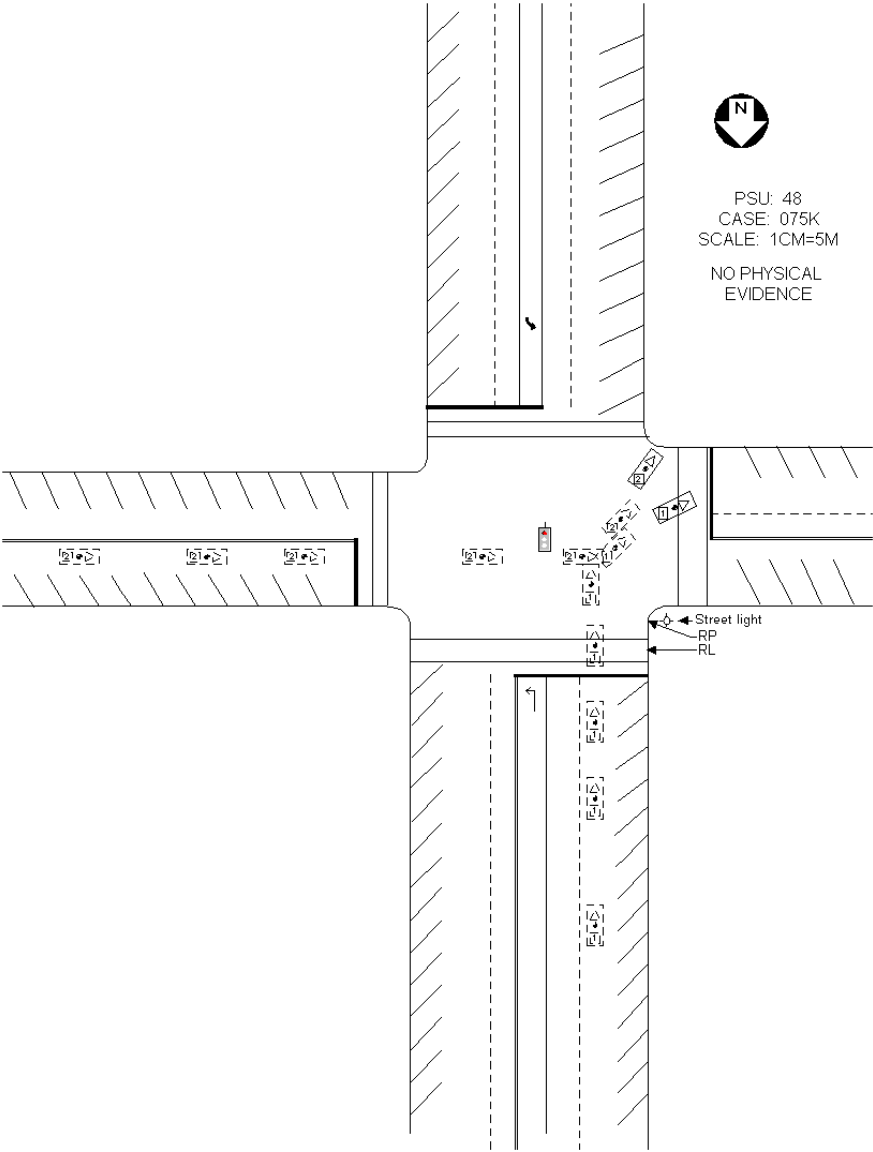
Occupant	2002-48-60-2-1
MAIS	3=Serious
Seat Position	Front left side

AIS Level	Injury Description	Contacts
3=Serious	Pelvic fracture, open/displaced/comminuted	Oth interior obj
1=Minor	Abdominal skin contusion	Oth interior obj

19 Case 2002-48-75

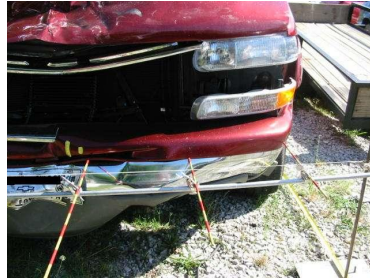
Summary:

Vehicle one was traveling south on a five lane city street approaching an intersection. Vehicle two was traveling west on a two lane city street approaching the same intersection. The asphalt roadway was dry.. The front of vehicle one impacted the right side of vehicle two. Vehicle one rotated counter-clockwise and the left side of vehicle one struck the right side of vehicle two. Both vehicles were equipped with air bags but none deployed. Final rest for vehicle one was facing west at the crosswalk of the intersecting street. Final rest for vehicle two was facing southwest at the south west corner of the intersection. The driver and occupant of vehicle one sustained minor bruises but neither were treated by medical personnel. The driver of vehicle two was hospitalized overnight for observation of multiple rib fractures. Both vehicles were towed due to disabling damage. )



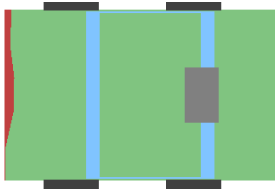
Vehicle #	Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	LARGE UTILITY	Chevrolet	Fullsize Blazer	2002	1	45	MALE	1=Minor
1	LARGE UTILITY	Chevrolet	Fullsize Blazer	2002	2	5	FEMALE-NOT PREG	1=Minor
2	MINIVAN	Plymouth	Voyager Minivan	1994	1	70	MALE	3=Serious

**Occupant: 2002-48-75-1-1**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	FIVE
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	23 -18 15
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	11 F D E W 1
Damage (C1-C6)	0 2 13 14 8 11
Crush (L and D)	180 0
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	VEHICLE NO. 2

### NASS Weighting Factor

Weighting factor	347.337
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### Rollover Characteristics

Number of Events	2
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Vehicle Factors

Make-Model	Chevrolet Fullsize Blazer
Year	2002
Class	TRUCK
Body Type	LARGE UTILITY
Weight	224

### Pre-Crash Driver Data

Accident Type	86
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	CROSS OVER INTER
Attempted Avoidance Manuever	No AVOIDANCE
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### DRIVER Factors

Age	45	Height	180	Weight	86
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			Not ENTRAPPED		

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	NONDEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	NONDEPLOYED
Airbag Deployment - Oth Seat	NONDEPLOYED

## Injuries

Occupant	2002-48-75-1-1
MAIS	1=Minor
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor	Leg skin contusion (hematoma)	Knee bolster

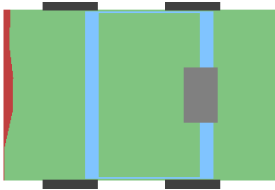


Occupant: 2002-48-75-1-2



**Fire Information**

Fire Occurence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



**Pre-Crash Environment**

Traffic Flow	Not DIVIDED
Number of Travel Lanes	FIVE
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

**Crash Severity**

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	23 -18 15
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	11 F D E W 1
Damage (C1-C6)	0 2 13 14 8 11
Crush (L and D)	180 0
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	VEHICLE NO. 2

**NASS Weighting Factor**

Weighting factor	347.337
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**Rollover Characteristics**

Number of Events	2
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

**Vehicle Factors**

Make-Model	Chevrolet Fullsize Blazer
Year	2002
Class	TRUCK
Body Type	LARGE UTILITY
Weight	224

**Pre-Crash Driver Data**

Accident Type	86
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	CROSS OVER INTER
Attempted Avoidance Manuever	No AVOIDANCE
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

**PASSENGER Factors**

Age	5	Height	91	Weight	25
Gender					FEMALE-NOT PREG
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					Not ENTRAPPED

## Restraint Factors

Restrain	Lap belt
AOPS	YES-RES DET
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 <sup>st</sup> Seat	NONDEPLOYED
Airbag Deployment - Oth Seat	NONDEPLOYED

## Injuries

Occupant	2002-48-75-1-2
MAIS	1=Minor
Seat Position	Second middle

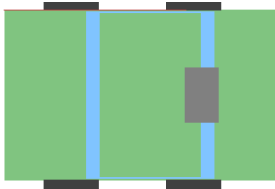
AIS Level	Injury Description	Contacts
1=Minor	Abdominal skin contusion	Belt webb/buckle

Occupant: 2002-48-75-2-1



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Left side, forward rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	29 -19 -22
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	2 R Y E W 3
Damage (C1-C6)	0 0 0 0 0 0
Crush (L and D)	0 0
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	VEHICLE NO. 1

### NASS Weighting Factor

Weighting factor	347.337
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### Rollover Characteristics

Number of Events	2
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	TWO
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	0

### Vehicle Factors

Make-Model	Plymouth Voyager Minivan
Year	1994
Class	TRUCK
Body Type	MINIVAN
Weight	172

### Pre-Crash Driver Data

Accident Type	87
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	XING ST-X PATH
Attempted Avoidance Manuever	No AVOIDANCE
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### DRIVER Factors

Age	70	Height	180	Weight	95
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			Not ENTRAPPED		

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	NONDEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	NONDEPLOYED
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

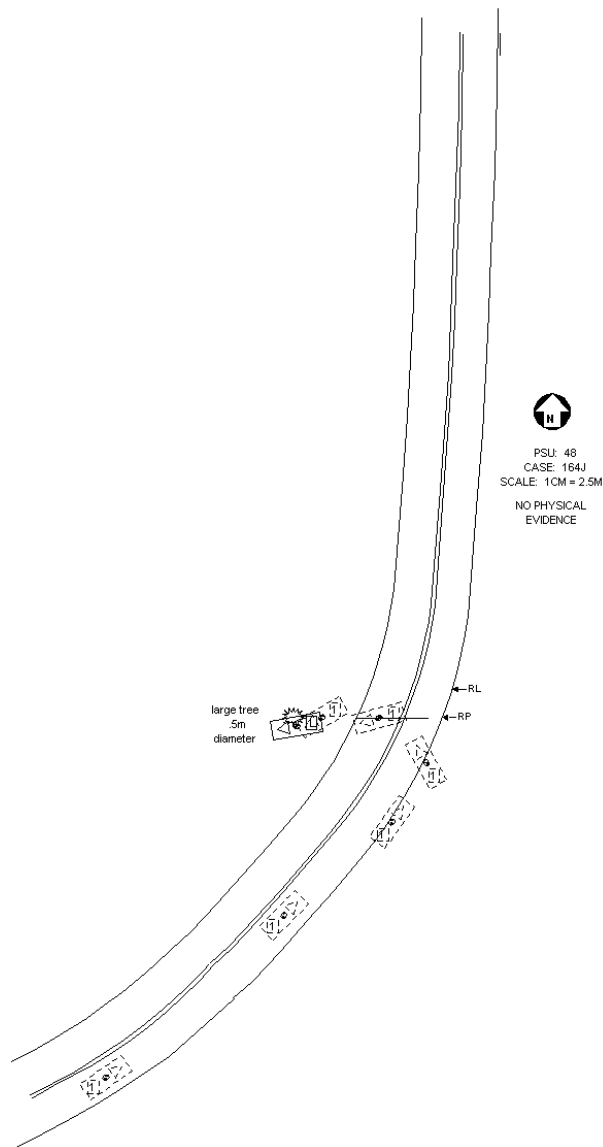
Occupant	2002-48-75-2-1
MAIS	3=Serious
Seat Position	Front left side

AIS Level	Injury Description	Contacts
3=Serious	Rib fractures (=>1 rib), open/displaced/comminuted	Belt webb/buckle
1=Minor	Facial skin abrasion	Flying glass
1=Minor	Thoracic skin contusion	Belt webb/buckle
1=Minor	Leg skin contusion (hematoma)	Left interior

20 Case 2002-48-164

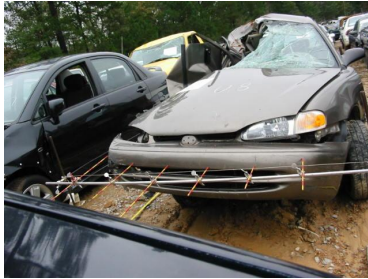
Summary:

Vehicle one was traveling north on a two lane, rural roadway. The asphalt roadway curved sharply to the left and the weather was clear and dry. Vehicle one traveled off the right road edge, over corrected to the left and traveled off the left road side; the right side of the vehicle struck a tree and the front struck an embankment. Both front air bags deployed. Final rest was facing SW. The restrained driver was hospitalized with a right facial fracture, broken ribs, right leg fracture and extensive bruising to the right side. The vehicle was towed due to disabling damage. )



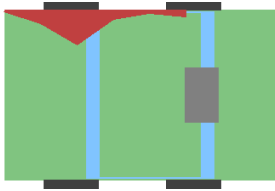
Vehicle	Body type	Make	Model	Year	Occ. Age	Occupant's sex	Maximum known occupant ais
1	4-DR SEDAN/HDTOP	Chevrolet	Nova/Geo Prism	1999	46	FEMALE-NOT PREG	3=Serious

Occupant: 2002-48-164-1-1



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	TWO
Roadway Alignment	CURVE LEFT
Roadway Profile	DOWNHILL GRADE
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	NONINTER/NONJUNC
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	97

### Vehicle Factors

Make-Model	Chevrolet Nova/Geo Prism
Year	1999
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	109

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	999
Total, Longitudal, and Lateral $\delta V$	999 999 999
Est. $\delta V$ with sequence number	SEVERE 1
CDC	0 R Y A W 5
Damage (C1-C6)	9 5 13 51 20 2
Crush (L and D)	350 7
Object Contacted 1	LARGE TREE
Object Contacted 2	EMBANKMENT

### Pre-Crash Driver Data

Accident Type	7
Pre-event Movement	NEGOTIATE CURVE
Critical Pre-crash Event	OFF EDGE-LEFT
Attempted Avoidance Manuever	STEERING LEFT
Pre-impact Stability	9
Pre-impact Location	DEPARTED ROADWAY

### NASS Weighting Factor

Weighting factor	637.419
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### DRIVER Factors

### Rollover Characteristics

Number of Events	2
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

Age	46	Height	168	Weight	48
Gender					FEMALE-NOT PREG
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					Not ENTRAPPED

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-48-164-1-1
MAIS	3=Serious
Seat Position	Front left side

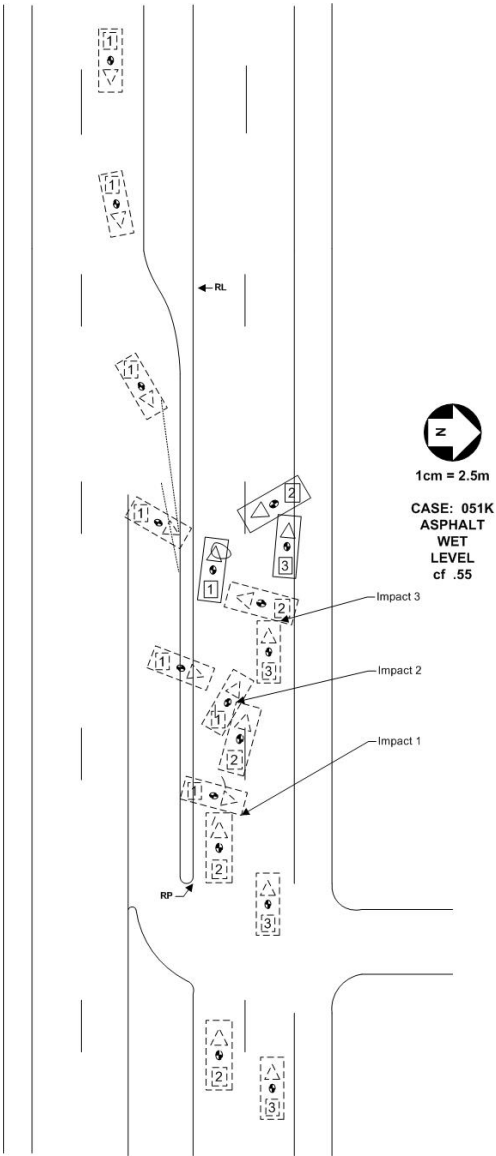
AIS Level	Injury Description	Contacts
3=Serious	Orbit fracture, open/displaced/comminuted	Right interior
3=Serious	>3 rib fractures one side & <3 other side, with stable chest	Right interior
3=Serious	Femur fracture NFS	Center panel
2=Moderate	Cervical fracture with-out cord injury +/- dis-location NFS	Right interior
2=Moderate	Cervical fracture with-out cord injury +/- dis-location NFS	Right interior
2=Moderate	Cervical fracture with-out cord injury +/- dis-location NFS	Right interior
3=Serious	Lung injury NFS	Right interior
1=Minor	Thoracic skin contusion	Right interior
1=Minor	Leg skin contusion (hematoma)	Seat, back



21 Case 2002-49-51

Summary:

VEHICLE 1 WAS TRAVELING EAST ON A TWO LANE, WET, RAINY ROADWAY DIVIDED BY A RAISED CENTER MEDIAN. VEHICLES 2 3 WERE TRAVELING WEST ON THE SAME ROADWAY WITH VEHICLE 2 IN THE LEFT LANE AND VEHICLE 3 IN THE RIGHT LANE. VEHICLE 1 BEGAN TO ROTATE COUNTERCLOCKWISE AND CROSSED THE CENTER MEDIAN. THE RIGHT SIDE OF VEHICLE 1 COLLIDED WITH THE FRONT OF VEHICLE 2. THE RIGHT SIDE OF VEHICLE 1 THEN STRUCK THE LEFT SIDE OF VEHICLE 2 IN A SIDESLAP TYPE IMPACT. VEHICLE 2 ROTATED COUNTERCLOCKWISE AND THE FRONT OF VEHICLE 3 IMPACTED THE LEFT SIDE OF VEHICLE 2. ALL THREE VEHICLES WERE TOWED AND THE DRIVER OF VEHICLE 1 WAS HOSPITALIZED. THE OCCUPANTS OF VEHICLES 2 3 WERE TRANSPORTED AND RELEASED. )



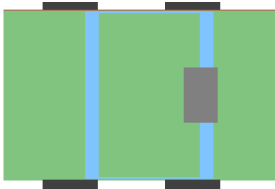
Vehicle	Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	4-DR SEDAN/HDTOP	Ford	Taurus	1992	1	21	MALE	3=Serious
2	LARGE VAN	Ford	E-series Van	2000	1	37	MALE	2=Moderate
3	4-DR SEDAN/HDTOP	Honda	Accord	1998	1	32	FEMALE-NOT PREG	1=Minor
3	4-DR SEDAN/HDTOP	Honda	Accord	1998	2	15	FEMALE-NOT PREG	0=None

Occupant: 2002-49-51-1-1



Fire Information

Fire Occurence	No fire
Fire Origin	No fire
Location of Fuel Leakage	Unknown
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Left side, behind rear axle
Fuel Tank Damage	Punctured
Fuel Type	Gasoline



Pre-Crash Environment

Traffic Flow	DVDED/NO BARRIER
Number of Travel Lanes	THREE
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	WET
Light Conditions	DAYLIGHT
Atmospheric Conditions	RAIN
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	999
Total, Longitudal, and Lateral $\delta V$	999 999 999
Est. $\delta V$ with sequence number	SEVERE 1
CDC	2 R D A W 99
Damage (C1-C6)	0 0 0 0 0 0
Crush (L and D)	0 0
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	VEHICLE NO. 2

NASS Weighting Factor

Weighting factor	12.497
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Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

Vehicle Factors

Make-Model	Ford Taurus
Year	1992
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	142

Pre-Crash Driver Data

Accident Type	64
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	OFF EDGE-LEFT
Attempted Avoidance Manuever	99
Pre-impact Stability	LAT SKID-CTR CLK
Pre-impact Location	Left TRAVEL LANE

DRIVER Factors

Age	21	Height	163	Weight	61
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			9		

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	NONDEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	NONDEPLOYED
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-49-51-1-1
MAIS	3=Serious
Seat Position	Front left side

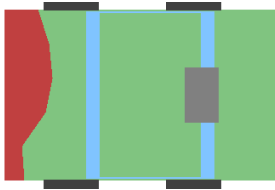
AIS Level	Injury Description	Contacts
3=Serious	Femur fracture NFS	Unknown SOURCE
2=Moderate	852002	Unknown SOURCE
1=Minor	Upper extremity skin laceration, minor	Unknown SOURCE
1=Minor	Facial skin laceration, minor	Unknown SOURCE

**Occupant: 2002-49-51-2-1**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, forward rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	55 -54 10
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	12 F D E W 5
Damage (C1-C6)	29 26 60 71 65 49
Crush (L and D)	176 0
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	VEHICLE NO. 1

### NASS Weighting Factor

Weighting factor	12.497
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### Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	DVDED/NO BARRIER
Number of Travel Lanes	TWO
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	WET
Light Conditions	DAYLIGHT
Atmospheric Conditions	RAIN
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	Ford E-series Van
Year	2000
Class	TRUCK
Body Type	LARGE VAN
Weight	242

### Pre-Crash Driver Data

Accident Type	65
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	OPP DIR-OVR LEFT
Attempted Avoidance Manuever	No AVOIDANCE
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### DRIVER Factors

Age	37	Height	170	Weight	68
Gender					MALE
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					Not ENTRAPPED

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR BAG DEPLOYED
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-49-51-2-1
MAIS	2=Moderate
Seat Position	Front left side

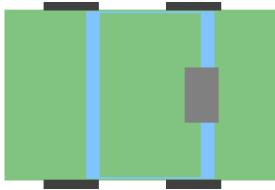
AIS Level	Injury Description	Contacts
2=Moderate	Clavicle fracture	Belt webb/buckle
1=Minor	Facial skin laceration, minor	Air bag-DR side

**Occupant: 2002-49-51-3-1**



### Fire Information

Fire Occurrence	No data
Fire Origin	No data
Location of Fuel Leakage	No data
Type of Fuel Tank	No data
Fuel Tank Location	No data
Fuel Cap Location	No data
Fuel Tank Damage	No data
Fuel Type	No data



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	999
Total, Longitudal, and Lateral $\delta V$	999 999 999
Est. $\delta V$ with sequence number	9 99
CDC	No data No data No data No data
Damage (C1-C6)	No data No data No data No data
Crush (L and D)	No data No data
Object Contacted 1	No data
Object Contacted 2	No data

### NASS Weighting Factor

Weighting factor	12.497
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### Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	DVDED/NO BARRIER
Number of Travel Lanes	TWO
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	WET
Light Conditions	DAYLIGHT
Atmospheric Conditions	RAIN
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	Honda Accord
Year	1998
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	131

### Pre-Crash Driver Data

Accident Type	98
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	Same DIR-OV LEFT
Attempted Avoidance Maneuver	99
Pre-impact Stability	9
Pre-impact Location	9

### DRIVER Factors

Age	32	Height	168	Weight	91
Gender			FEMALE-NOT PREG		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			9		

### Restraint Factors

Restrain	99
AOPS	YES-RES DET
Airbag Deployment	Unk IF DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS UNK DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

### Injuries

Occupant	2002-49-51-3-1
MAIS	1=Minor
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor	Leg skin contusion (hematoma)	Unknown SOURCE

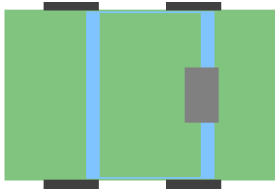


**Occupant: 2002-49-51-3-2**



### Fire Information

Fire Occurrence	No data
Fire Origin	No data
Location of Fuel Leakage	No data
Type of Fuel Tank	No data
Fuel Tank Location	No data
Fuel Cap Location	No data
Fuel Tank Damage	No data
Fuel Type	No data



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	999
Total, Longitudal, and Lateral $\delta V$	999 999 999
Est. $\delta V$ with sequence number	9 99
CDC	No data No data No data No data
Damage (C1-C6)	No data No data No data No data
Crush (L and D)	No data No data
Object Contacted 1	No data
Object Contacted 2	No data

### NASS Weighting Factor

Weighting factor	12.497
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### Rollover Characteristics

Number of Events	3
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	DVDED/NO BARRIER
Number of Travel Lanes	TWO
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	WET
Light Conditions	DAYLIGHT
Atmospheric Conditions	RAIN
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	Honda Accord
Year	1998
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	131

### Pre-Crash Driver Data

Accident Type	98
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	Same DIR-OV LEFT
Attempted Avoidance Maneuver	99
Pre-impact Stability	9
Pre-impact Location	9

### **PASSENGER Factors**

Age	15	Height	999	Weight	999
Gender			FEMALE-NOT PREG		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			9		

### **Restraint Factors**

Restrain		99
AOPS		YES-RES DET
Airbag Deployment		Unk IF DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat		DR
PAS UNK DEPLY		
Airbag Deployment - Oth Seat		Not EQUIP W/ OTH

### **Injuries**

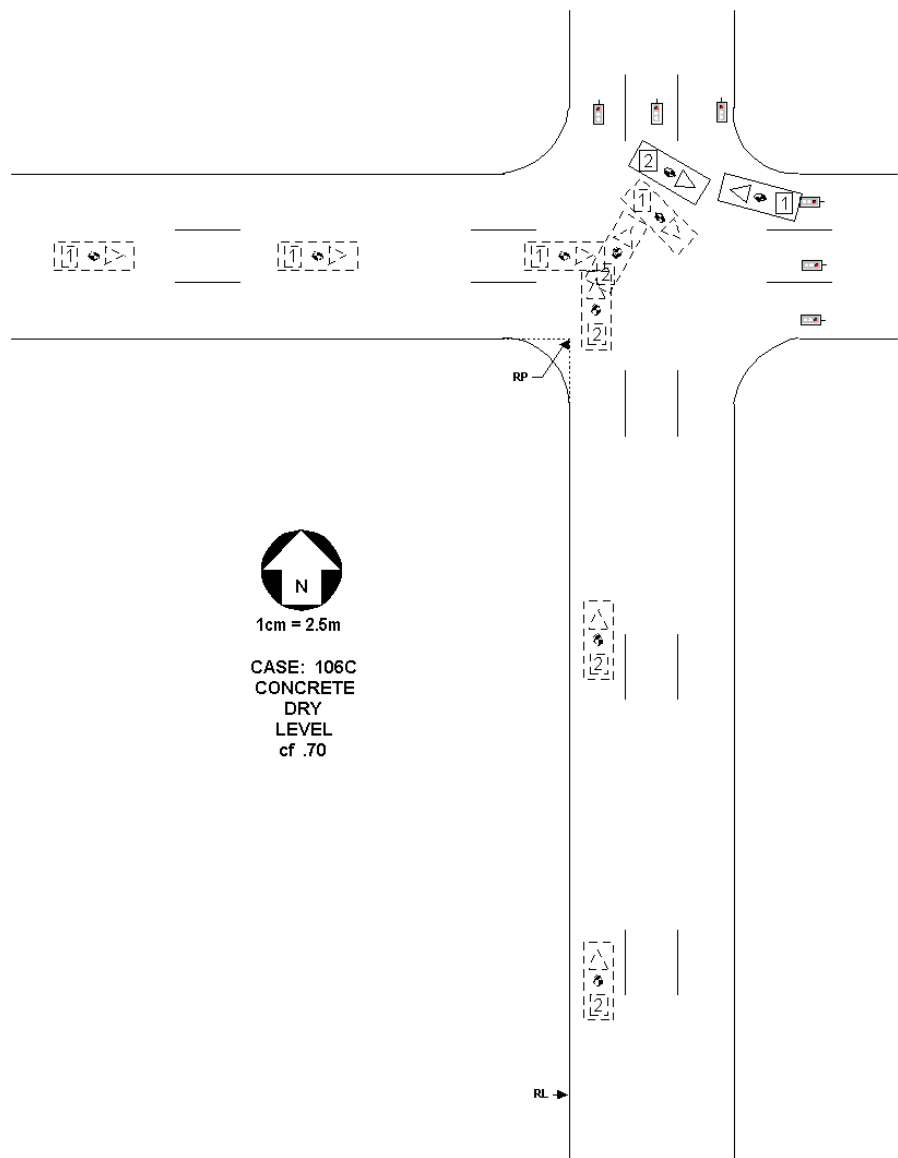
Occupant	2002-49-51-3-2
MAIS	0=None
Seat Position	Front right side

<b>AIS Level</b>	<b>Injury Description</b>	<b>Contacts</b>
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22 Case 2002-49-106

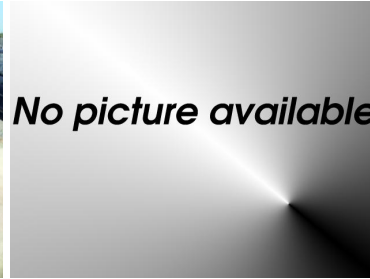
Summary:

VEHICLE 1 WAS TRAVELING EAST IN THE CENTER LANE OF A THREE LANE, ONE-WAY SERVICE ROAD AND APPROACHING AN INTERSECTION. VEHICLE 2 WAS TRAVELING NORTH IN THE LEFT LANE OF THREE LANE, ONE-WAY SERVICE ROAD. THE FRONT OF VEHICLE 2 IMPACTED THE RIGHT SIDE OF VEHICLE 1. BOTH VEHICLES ROTATED CLOCKWISE WITH VEHICLE 1 COMING TO REST FACING WEST AND VEHICLE 2 COMING TO REST FACING EAST. BOTH VEHICLES WERE TOWED. VEHICLE 1 DRIVER WAS TREATED AND RELEASED FOR AN ORBIT FRACTURE AS WELL AS CONTUSIONS AND LACERATIONS. VEHICLE 1 PASSENGER WAS TREATED AND RELEASED FOR A LEG LACERATION AND MULTIPLE CONTUSIONS. THE DRIVER OF VEHICLE 2 WAS TREATED LATER FOR NECK STRAIN AND MINOR CONTUSION. )



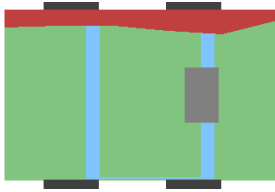
Vehicle	Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	COMPACT PICKUP	GMC	S15/T15/Somona	2000	1	25	MALE	3=Serious
1	COMPACT PICKUP	GMC	S15/T15/Somona	2000	2	22	FEMALE-NOT PREG	1=Minor
2	COMPACT PICKUP	Ford	Ranger	1999	1	29	MALE	1=Minor

Occupant: 2002-49-106-1-1



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Non-metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, forward rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	32 -21 -25
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	2 R D E W 3
Damage (C1-C6)	14 34 30 22 22 25
Crush (L and D)	330 43
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	0

### NASS Weighting Factor

Weighting factor	38.933
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### Rollover Characteristics

Number of Events	1
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	ONE WAY
Number of Travel Lanes	THREE
Roadway Alignment	STRAIGHT
Roadway Profile	HILL CREST
Roadway Surface Type	CONCRETE
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	GMC S15/T15/Somona
Year	2000
Class	TRUCK
Body Type	COMPACT PICKUP
Weight	154

### Pre-Crash Driver Data

Accident Type	87
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	CROSS OVER INTER
Attempted Avoidance Manuever	No AVOIDANCE
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### DRIVER Factors

Age	25	Height	168	Weight	64
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			Not ENTRAPPED		

## Restraint Factors

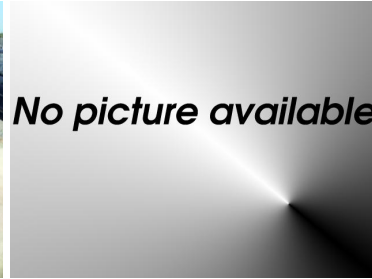
Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	NONDEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	NONDEPLOYED
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-49-106-1-1
MAIS	3=Serious
Seat Position	Front left side

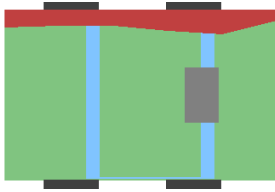
AIS Level	Injury Description	Contacts
3=Serious	Orbit fracture, open/displaced/comminuted	Steering comb
2=Moderate	Awake on admission, unconscious <1 hour	Steering comb
1=Minor	Facial skin laceration, minor	Steering comb
1=Minor	297602	Steering comb
1=Minor	297402	Steering comb
1=Minor	Thoracic skin contusion	Belt webb/buckle
1=Minor	Abdominal skin contusion	Oth interior obj
1=Minor	Leg skin laceration, minor	Knee bolster

Occupant: 2002-49-106-1-2



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Non-metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, forward rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	32 -21 -25
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	2 R D E W 3
Damage (C1-C6)	14 34 30 22 22 25
Crush (L and D)	330 43
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	0

### NASS Weighting Factor

Weighting factor	38.933
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### Rollover Characteristics

Number of Events	1
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	ONE WAY
Number of Travel Lanes	THREE
Roadway Alignment	STRAIGHT
Roadway Profile	HILL CREST
Roadway Surface Type	CONCRETE
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	GMC S15/T15/Somona
Year	2000
Class	TRUCK
Body Type	COMPACT PICKUP
Weight	154

### Pre-Crash Driver Data

Accident Type	87
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	CROSS OVER INTER
Attempted Avoidance Manuever	No AVOIDANCE
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### PASSENGER Factors

Age	22	Height	173	Weight	91
Gender					FEMALE-NOT PREG
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					Not ENTRAPPED

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	NONDEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	NONDEPLOYED
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-49-106-1-2
MAIS	1=Minor
Seat Position	Front right side

AIS Level	Injury Description	Contacts
1=Minor	Leg skin laceration, minor	Glove door
1=Minor	Upper extremity skin contusion	Right interior
1=Minor	Upper extremity skin contusion	Other occupants
1=Minor	Leg skin contusion (hematoma)	Right hardware

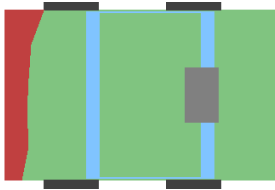


Occupant: 2002-49-106-2-1



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, forward rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	ONE WAY
Number of Travel Lanes	THREE
Roadway Alignment	STRAIGHT
Roadway Profile	HILL CREST
Roadway Surface Type	CONCRETE
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	37 -28 24
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	11 F D E W 3
Damage (C1-C6)	25 35 33 36 39 58
Crush (L and D)	146 0
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	0

### NASS Weighting Factor

Weighting factor	38.933
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### Rollover Characteristics

Number of Events	1
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Vehicle Factors

Make-Model	Ford Ranger
Year	1999
Class	TRUCK
Body Type	COMPACT PICKUP
Weight	141

### Pre-Crash Driver Data

Accident Type	86
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	XING ST-X PATH
Attempted Avoidance Manuever	No AVOIDANCE
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### DRIVER Factors

Age	29	Height	173	Weight	79
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			Not ENTRAPPED		

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

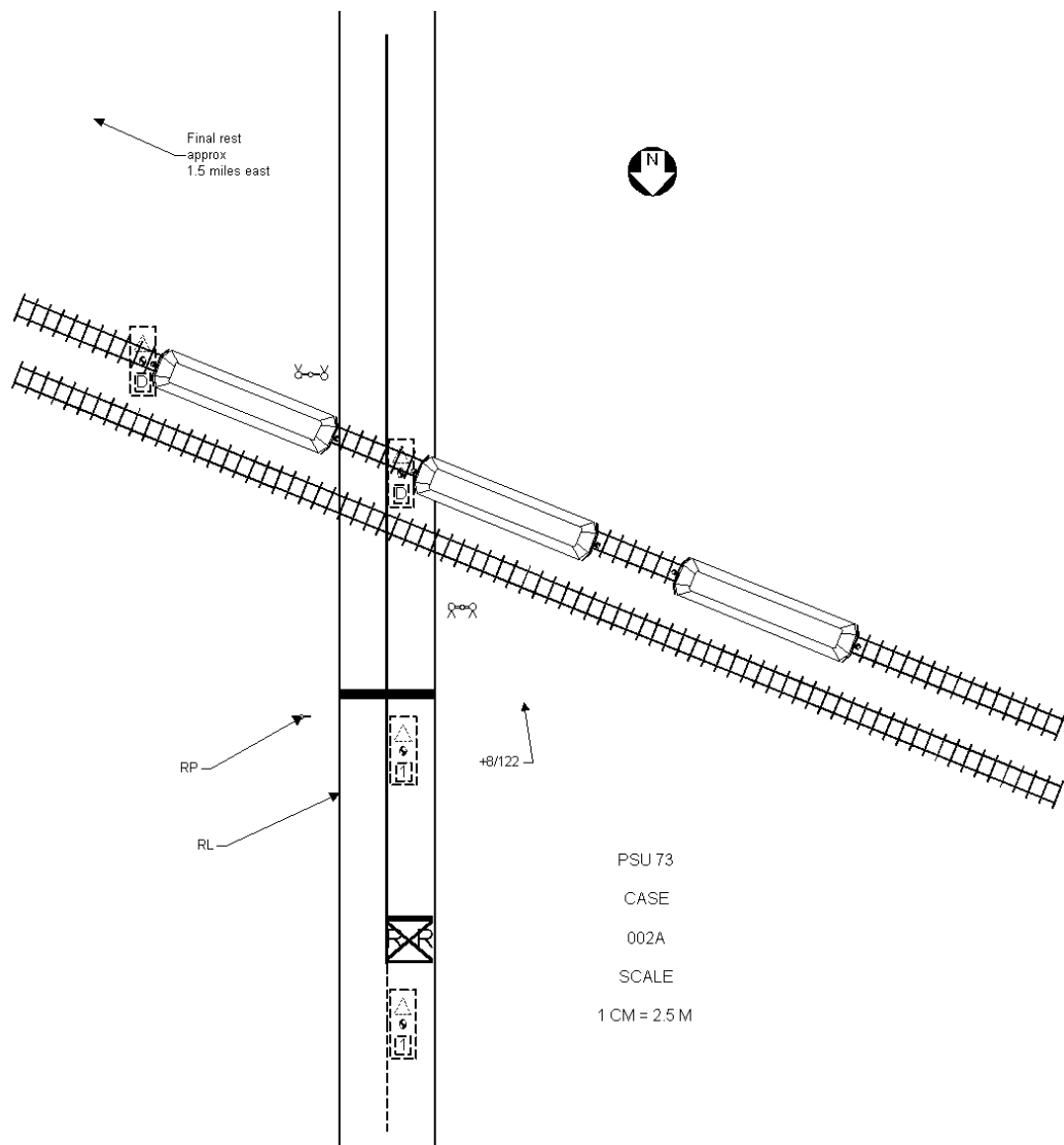
Occupant	2002-49-106-2-1
MAIS	1=Minor
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor	Acute cervical spine strain without fracture or dislocation	Belt webb/buckle
1=Minor	Upper extremity skin contusion	Air bag-DR side
1=Minor	Upper extremity skin abrasion	Air bag-DR side

23 Case 2002-73-2

Summary:

V1 southbound in first lane of two lane, two way roadway approaching flasher controlled junction with two sets of railroad tracks. V1 crosses first set of tracks and proceeds across second set, where it is struck in the right side by front of eastbound railroad train going 79 mph. V1 is pushed east to final rest, approx. 1.5 miles from initial impact. V1 occupied by driver only, who was pronounced dead at the scene with mid spinal cord and aorta transection as well as heart and liver lacerations and multiple rib, skull and arm fractures. V1 towed due to damage. )



Vehicle	Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	4-DR SEDAN/HDTOP	Ford	Focus	2000	1	47	MALE	6=Maximum

Occupant: 2002-73-2-1-1



Fire Information

Fire Occurence	No fire
Fire Origin	No fire
Location of Fuel Leakage	Tank
Type of Fuel Tank	Non-metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Right side, behind rear axle
Fuel Tank Damage	Punctured
Fuel Type	Gasoline



Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	999
Total, Longitudal, and Lateral $\delta V$	999 999 999
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	64 R D A W 6
Damage (C1-C6)	17 95 93 102 57 0
Crush (L and D)	340 0
Object Contacted 1	TRAIN
Object Contacted 2	GROUND

NASS Weighting Factor

Weighting factor	21.293
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Rollover Characteristics

Number of Events	2
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	TWO
Roadway Alignment	STRAIGHT
Roadway Profile	UPHILL GRADE
Roadway Surface Type	ASPHALT
Roadway Surface Condition	SNOW OR SLUSH
Light Conditions	DARK/LIGHTED
Atmospheric Conditions	SNOW
Relation to Intersection	Other JUNCTION
Traffic Control Device	
Police Reported Alcohol Presence	Not REPORTED
Alcohol Test (< 95 indicates BAC 0.xx)	15

Vehicle Factors

Make-Model	Ford Focus
Year	2000
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	116

Pre-Crash Driver Data

Accident Type	98
Pre-event Movement	Other
Critical Pre-crash Event	CROSS OVER INTER
Attempted Avoidance Manuever	No AVOIDANCE
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

DRIVER Factors

Age	47	Height	196	Weight	103
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			ENTRAPPED		

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

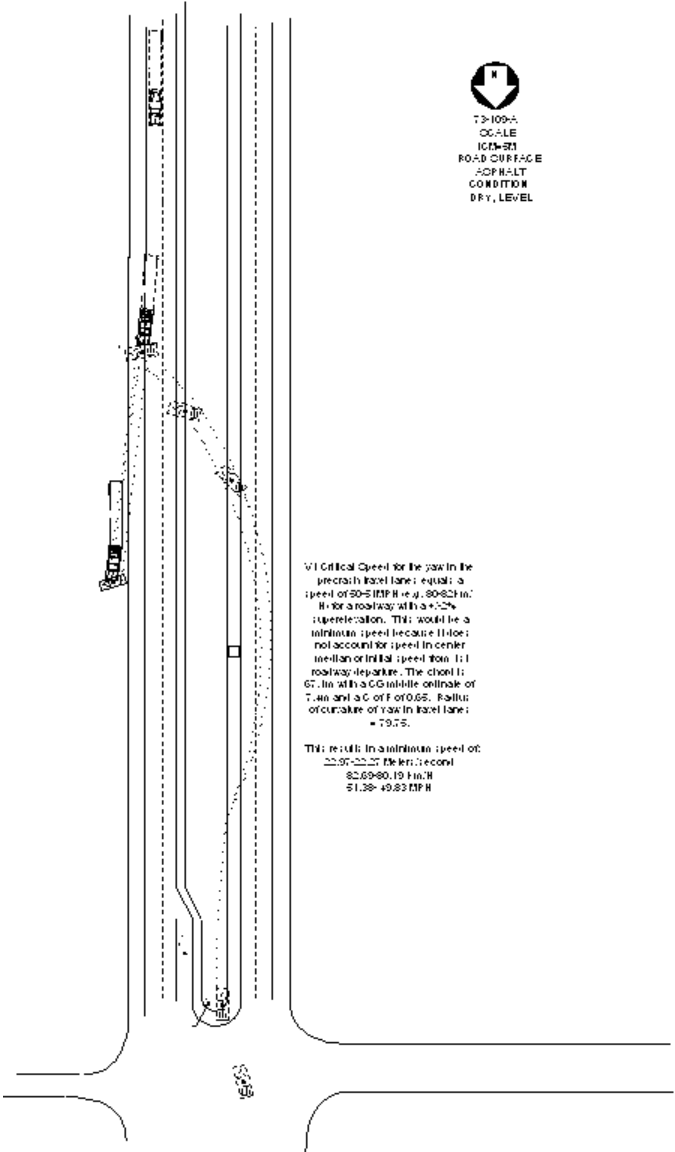
Occupant	2002-73-2-1-1
MAIS	6=Maximum
Seat Position	Front left side

AIS Level	Injury Description	Contacts
5=Critical	Thoracic cord laceration, complete NFS	Right interior
5=Critical	Thoracic aortic laceration, major, & mediastinal bleeding	Right interior
6=Maximum	Hepatic avulsion (total separation of all vasculature)	Right interior
6=Maximum	Myocardial laceration with complex perforation	Right interior
4=Severe	Lung contusion, bilateral	Right interior
4=Severe	Lung laceration, bilateral, with hemomediastinum	Right interior
3=Serious	Rib fractures (=>1 rib), open/displaced/comminuted	Right interior
2=Moderate	Cervical fracture without cord injury +/- dislocation NFS	Right interior
2=Moderate	Humeral fracture, closed	Right interior
2=Moderate	751900	Right interior
2=Moderate	Patellar fracture	Knee bolster
2=Moderate	Skull fracture, vault, NFS	Right interior
3=Serious	Basilar skull fracture, NFS	Right interior
3=Serious	Myocardial contusion NFS	Right interior
3=Serious	Cerebral subarachnoid hemorrhage	Right interior
4=Severe	Cerebral subdural hematoma, NFS	Right interior
4=Severe	Cerebral epidural or extradural hematoma, NFS	Right interior
3=Serious	Cerebral contusion, NFS	Right interior
4=Severe	Cerebral laceration	Right interior
1=Minor	Scalp contusion	Right interior
1=Minor	Facial skin laceration, minor	Right interior

24 Case 2002-73-109

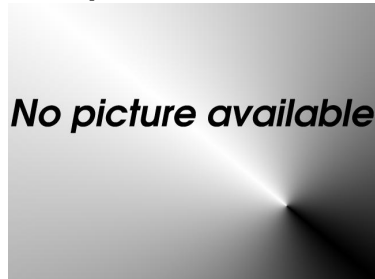
Summary:

This crash occurred in the morning at 0405 hours on a four-lane, divided highway US Highway without a positive barrier with two lanes in each direction. There was a slightly depressed grass median between the two directions of travel. The posted speed limit was 89 KmPH (e.g. 55 MPH) and there were no adverse weather conditions at this time. Vehicle one is a 1999 Dodge Dakota light truck that was traveling south in the 2nd lane occupied by a driver only. After passing an intersecting roadway, vehicle one drove into center median and steered to the right to return to the travel lanes. After he returned to roadway on the southbound lanes, he then overcorrected to the left, which initiated vehicle one to spin into a counterclockwise yaw. The vehicle then re-entered and crossed over the center grass median and onto the northbound lanes at which time the right side was contacted by the front of vehicle two. Vehicle two is a 1999 Freightliner Conventional tractor with a GVWR of 23,587 kgs (e.g. 52,000 lbs.) pulling one Fruehauf van trailer. Vehicle two was traveling north on the same roadway as vehicle one in the first lane, when vehicle one came across the grass median into vehicle two's travel lane. The driver of vehicle two braked and tried to steer right before the front contacted the right side of vehicle one. A level one inspection was performed on vehicle two and a warning was issued one brake out of adjustment. The driver of vehicle one was taken to a trauma center and died a few hours later with a partial transection of the thoracic aorta and pulmonary vein as well as lung contusions and multiple fractures involving the ribs, arms and right leg. The driver of Vehicle 2 was not injured. Both vehicles were towed due to damage. )



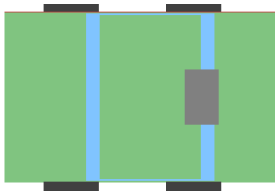
Vehicle	Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	COMPACT PICKUP	Dodge	Dakota	1999	1	23	MALE	5=Critical

Occupant: 2002-73-109-1-1



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Non-metallic
Fuel Tank Location	Forward of rear axle, left side
Fuel Cap Location	Left side, forward rear axle
Fuel Tank Damage	Deformed
Fuel Type	Gasoline



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	999
Total, Longitudal, and Lateral $\delta V$	999 999 999
Est. $\delta V$ with sequence number	SEVERE 1
CDC	64 R D A W 7
Damage (C1-C6)	0 0 0 0 0 0
Crush (L and D)	0 0
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	0

### NASS Weighting Factor

Weighting factor	38.062
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### Rollover Characteristics

Number of Events	1
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	DVDED/NO BARRIER
Number of Travel Lanes	TWO
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DARK
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	NONINTER/NONJUNC
Traffic Control Device	
Police Reported Alcohol Presence	ALCOHOL PRESENT
Alcohol Test (< 95 indicates BAC 0.xx)	24

### Vehicle Factors

Make-Model	Dodge Dakota
Year	1999
Class	TRUCK
Body Type	COMPACT PICKUP
Weight	163

### Pre-Crash Driver Data

Accident Type	64
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	OFF EDGE-LEFT
Attempted Avoidance Manuever	STEERING LEFT
Pre-impact Stability	LAT SKID-CTR CLK
Pre-impact Location	Left TRAVEL LANE

### DRIVER Factors

Age	23	Height	180	Weight	76
Gender					MALE
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					JAMMED DOOR/FIRE



## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

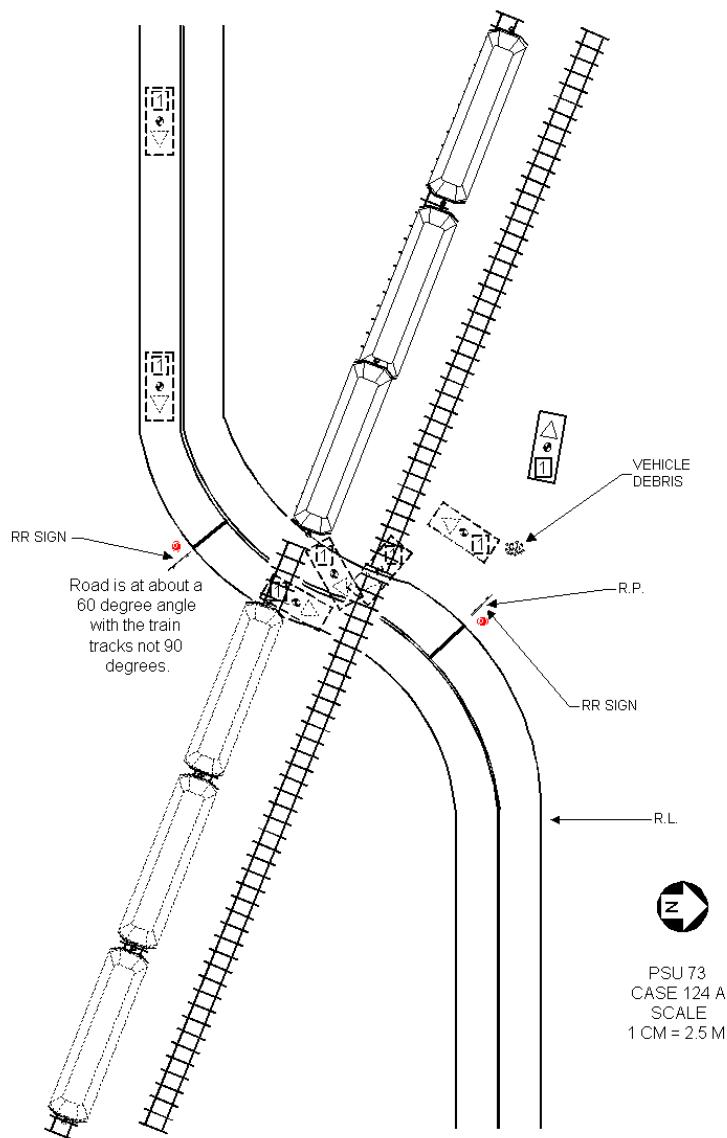
Occupant	2002-73-109-1-1
MAIS	5=Critical
Seat Position	Front left side

AIS Level	Injury Description	Contacts
5=Critical	Thoracic aortic laceration, major, & mediastinal bleeding	Seat, back
3=Serious	Pulmonary vein laceration, minor (incomplete or EBL<204=Severe	Lung contusion, bilateral
Seat, back		
3=Serious	Femoral shaft fracture	Transmiss lever
2=Moderate	2-3 rib fractures with stable chest	Left interior
3=Serious	Humeral fracture, open/displaced/comminuted	Seat, back
2=Moderate	Radial fracture, closed	Steering rim
2=Moderate	Clavicle fracture	Seat, back
1=Minor	Scalp abrasion	Right B pillar
1=Minor	Scalp laceration, minor	Right B pillar
1=Minor	Facial skin abrasion	Right B pillar
1=Minor	Facial skin abrasion	Right B pillar
1=Minor	Neck skin contusion (hematoma)	Seat, back
1=Minor	297402	Right B pillar
1=Minor	Abdominal skin abrasion	Transmiss lever
1=Minor	Abdominal skin contusion	Transmiss lever
1=Minor	Leg skin contusion (hematoma)	Transmiss lever
1=Minor	Upper extremity skin contusion	Seat, back
1=Minor	Upper extremity skin abrasion	Air bag-DR side
1=Minor	Upper extremity skin laceration, minor	Bagcover-DR side

25 Case 2002-73-124

Summary:

Vehicle #1, a 2001 Chrysler PT Cruiser, was traveling eastbound on a local two way two lane roadway through an "S" type curve. A railroad crossing runs East/West through the middle of the "S" type curve. As Vehicle#1 entered the curve left, a westbound train struck the right side of Vehicle #1. The impact knocked Vehicle #1 off of the railroad tracks to the west where the left side of Vehicle #1 impacted a unknown object and came to rest facing west. The driver and right front passenger were both wearing the available lap and shoulder seatbelts. Vehicle #1 was equipped with driver and passenger front air bags which deployed at impact with the train. The vehicle was also equipped with driver and passenger "side" air bags located in the front seat backs; the right front seat mounted air bag deployed at impact. The driver was hospitalized overnight for lung contusions and right side rib fractures. The front right passenger died in the ER from a brain stem laceration, cervical spine fracture with dislocation, and a thoracic cord laceration with spine transection was will as multiple rib fractures and liver and spleen lacerations. Vehicle #1 was towed due to damage. )



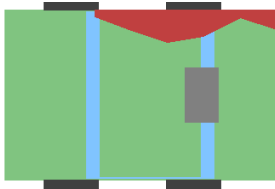
Vehicle	Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	5DR/4DR HATCHBAK	Chrysler	PT Cruiser	2001	1	46	FEMALE-NOT PREG	4=Severe
1	5DR/4DR HATCHBAK	Chrysler	PT Cruiser	2001	2	48	MALE	6=Maximum

**Occupant: 2002-73-124-1-1**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Right side, behind rear axle
Fuel Tank Damage	Deformed
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	TWO
Roadway Alignment	CURVE LEFT
Roadway Profile	UPHILL GRADE
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	Other JUNCTION
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	0

### Vehicle Factors

Make-Model	Chrysler PT Cruiser
Year	2001
Class	TRUCK
Body Type	5DR/4DR HATCHBAK
Weight	143

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	999
Total, Longitudal, and Lateral $\delta V$	999 999 999
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	3 R Z A W 4
Damage (C1-C6)	28 11 38 47 29 9
Crush (L and D)	272 -82
Object Contacted 1	TRAIN
Object Contacted 2	Unk FIXED OBJECT

### Pre-Crash Driver Data

Accident Type	15
Pre-event Movement	NEGOTIATE CURVE
Critical Pre-crash Event	OBJECT APP ROAD
Attempted Avoidance Manuever	99
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### NASS Weighting Factor

Weighting factor	83.893
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### DRIVER Factors

### Rollover Characteristics

Number of Events	2
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

Age	46	Height	165	Weight	84
Gender					FEMALE-NOT PREG
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					JAMMED DOOR/FIRE

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	BAG DEPLOYED

## Injuries

Occupant	2002-73-124-1-1
MAIS	4=Severe
Seat Position	Front left side

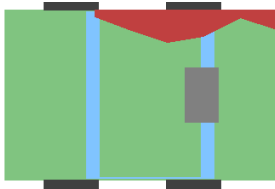
AIS Level	Injury Description	Contacts
4=Severe	Lung contusion, bilateral	Other occupants
2=Moderate	2-3 rib fractures with stable chest	Belt webb/buckle
2=Moderate	Awake on admission, unconscious <1 hour	Other occupants
1=Minor	Acute cervical spine strain without fracture or dislocation	Other occupants
1=Minor	Thoracic spine strain, acute without fracture or dislocation	Other occupants
1=Minor	Lumbar spine acute strain without fracture or dislocation	Seat, back
1=Minor	Upper extremity skin abrasion	Belt webb/buckle
1=Minor	Upper extremity skin contusion	Belt webb/buckle
1=Minor	Thoracic skin abrasion	Belt webb/buckle
1=Minor	Thoracic skin contusion	Belt webb/buckle
1=Minor	Abdominal skin contusion	Belt webb/buckle
1=Minor	Upper extremity skin abrasion	Flying glass
1=Minor	Leg skin abrasion	Knee bolster

**Occupant: 2002-73-124-1-2**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Right side, behind rear axle
Fuel Tank Damage	Deformed
Fuel Type	Gasoline



### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	TWO
Roadway Alignment	CURVE LEFT
Roadway Profile	UPHILL GRADE
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	Other JUNCTION
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	0

### Vehicle Factors

Make-Model	Chrysler PT Cruiser
Year	2001
Class	TRUCK
Body Type	5DR/4DR HATCHBAK
Weight	143

### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	999
Total, Longitudal, and Lateral $\delta V$	999 999 999
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	3 R Z A W 4
Damage (C1-C6)	28 11 38 47 29 9
Crush (L and D)	272 -82
Object Contacted 1	TRAIN
Object Contacted 2	Unk FIXED OBJECT

### Pre-Crash Driver Data

Accident Type	15
Pre-event Movement	NEGOTIATE CURVE
Critical Pre-crash Event	OBJECT APP ROAD
Attempted Avoidance Manuever	99
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### NASS Weighting Factor

Weighting factor	83.893
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### PASSENGER Factors

Age	48	Height	188	Weight	102
Gender					MALE
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					ENTRAPPED

### Rollover Characteristics

Number of Events	2
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	BAG DEPLOYED

## Injuries

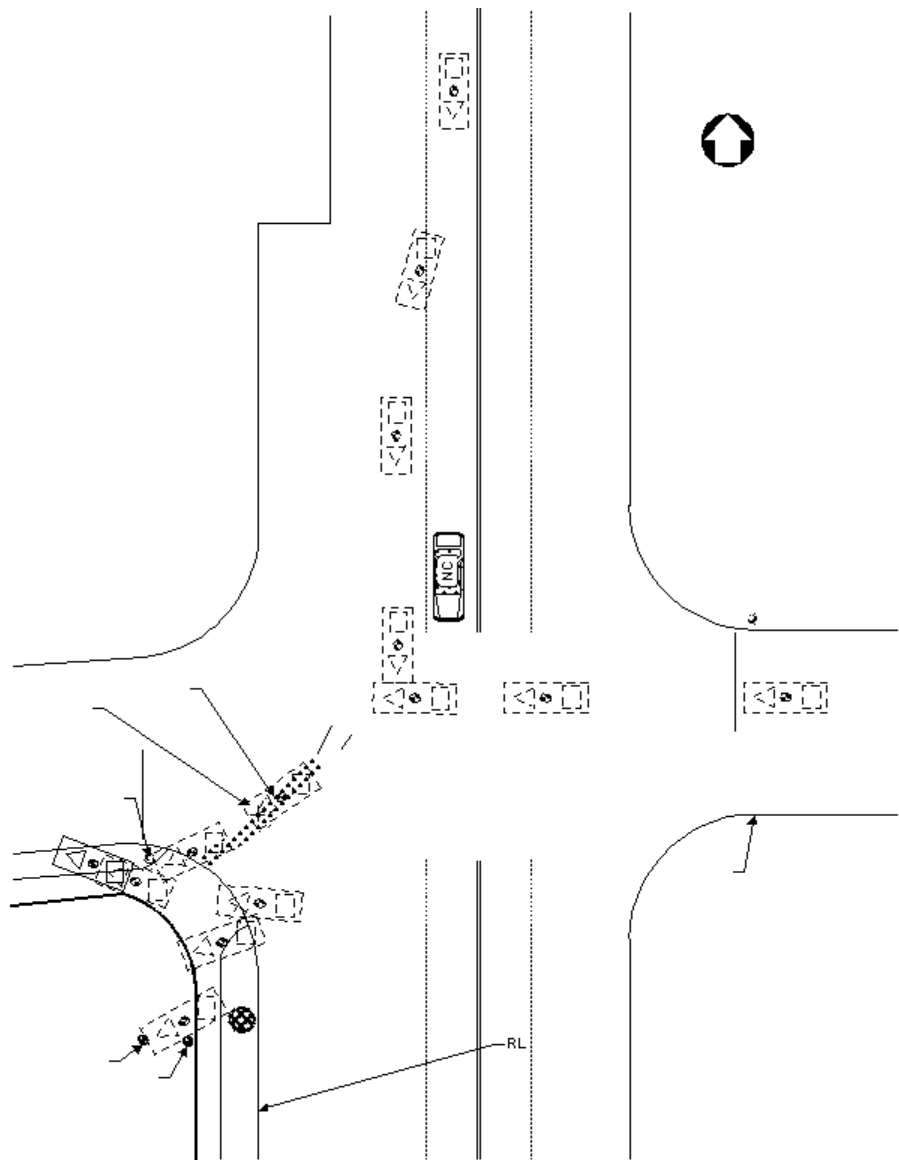
Occupant	2002-73-124-1-2
MAIS	6=Maximum
Seat Position	Front right side

AIS Level	Injury Description	Contacts
6=Maximum	Brain stem laceration	Right interior
2=Moderate	Cervical vertebral body fracture, no cord injury NFS	Right interior
3=Serious	Cerebral contusions, multiple, bilateral but NFS	Right interior
5=Critical	Thoracic cord laceration, complete, with fracture	Right interior
4=Severe	Lung laceration, bilateral, with hemo-mediastinum	Right interior
2=Moderate	Sternal fracture	Right interior
3=Serious	Rib fractures (=>1 rib), open/displaced/comminuted	Right interior
3=Serious	Hepatic laceration, moderate (>3cms deep, EBL>202=	Splenic laceration, minor (tear<3cms deep, no major vessel)
Right hardware		
1=Minor	Neck skin abrasion	Belt webb/buckle
1=Minor	Upper extremity skin abrasion	Belt webb/buckle
1=Minor	Upper extremity skin abrasion	Other occupants
1=Minor	Leg skin abrasion	Knee bolster

26 Case 2002-79-85

Summary:

Vehicle one was traveling west crossing through an intersection. This roadway is a two lane, dry, asphalt, not physically divided two-way roadway with a 3



Vehicle	Body type	Make	Model	Year	Occ. Age	Occupant's sex	Maximum known occupant ais
1	4-DR SEDAN/HDTOP	Oldsmobile	Cutlass RWD	1985	87	MALE	4=Severe
2	2DR SEDAN/HT/CPE	Ford	Mustang/Mustang II	1996	21	MALE	1=Minor



**Occupant: 2002-79-85-1-1**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Behind rear axle, centered
Fuel Cap Location	On back plane
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	52 -26 -45
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	62 R Y A W 5
Damage (C1-C6)	14 39 78 67 60 17
Crush (L and D)	302 25
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	FENCE

### NASS Weighting Factor

Weighting factor	9.822
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### Rollover Characteristics

Number of Events	9
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object	No rollover
Contacted	
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	TWO
Roadway Alignment	STRAIGHT
Roadway Profile	DOWNHILL GRADE
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	9
Alcohol Test (< 95 indicates BAC 0.xx)	99

### Vehicle Factors

Make-Model	Oldsmobile Cutlass RWD
Year	1985
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	156

### Pre-Crash Driver Data

Accident Type	87
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	CROSS OVER INTER
Attempted Avoidance Maneuver	99
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### DRIVER Factors

Age	87	Height	165	Weight	84
Gender					MALE
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					JAMMED DOOR/FIRE

## Restraint Factors

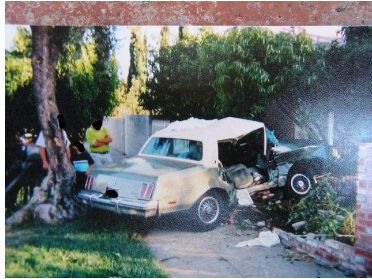
Restrain	Lap and shoulder
AOPS	NO
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 <sup>st</sup> Seat	Not EQUIP/AVAIL
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-79-85-1-1
MAIS	4=Severe
Seat Position	Front left side

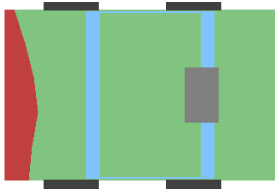
AIS Level	Injury Description	Contacts
4=Severe	Intracerebral hematoma, small petechial hemorrhage	Right A pillar
3=Serious	Cerebral subarachnoid hemorrhage	Right A pillar
2=Moderate	Lumbar fracture of transverse process without cord injury	Seat, back
2=Moderate	Lumbar fracture of transverse process without cord injury	Seat, back
2=Moderate	Acromioclavicular joint dislocation	Right interior
2=Moderate	Pelvic fracture NFS	Seat, back
1=Minor	Scalp contusion	Steering rim
1=Minor	Scalp laceration, minor	Steering rim
1=Minor	Facial skin laceration, minor	Steering rim
1=Minor	Facial skin abrasion	Flying glass
1=Minor	297402	Steering rim
1=Minor	Facial skin laceration, minor	Steering rim
1=Minor	Facial skin laceration, minor	Flying glass
1=Minor	Upper extremity skin contusion	Right interior

**Occupant: 2002-79-85-2-1**



### Fire Information

Fire Occurrence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Behind rear axle, centered
Fuel Cap Location	Right side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



### Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	56 -49 28
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	11 F D E W 2
Damage (C1-C6)	35 40 49 43 30 14
Crush (L and D)	152 0
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	FENCE

### NASS Weighting Factor

Weighting factor	9.822
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### Rollover Characteristics

Number of Events	9
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object	No rollover
Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

### Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	FOUR
Roadway Alignment	STRAIGHT
Roadway Profile	DOWNHILL GRADE
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERSECTION REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

### Vehicle Factors

Make-Model	Ford Mustang/Mustang II
Year	1996
Class	PASSENGER CAR
Body Type	2DR SEDAN/HT/CPE
Weight	139

### Pre-Crash Driver Data

Accident Type	86
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	XING ST-X PATH
Attempted Avoidance Maneuver	STEERING RIGHT
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

### DRIVER Factors

Age	21	Height	183	Weight	109
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			Not ENTRAPPED		

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

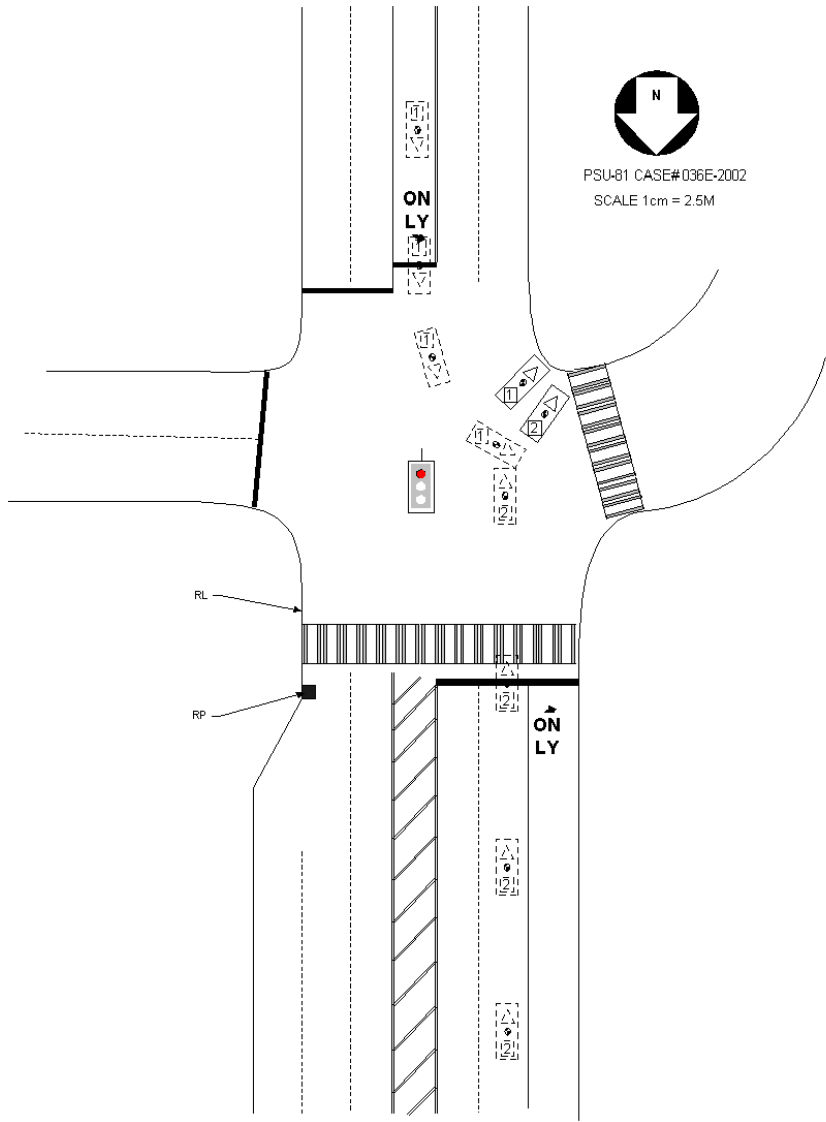
Occupant	2002-79-85-2-1
MAIS	1=Minor
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor	Facial skin contusion	Air bag-DR side
1=Minor	792002	Air bag exh has
1=Minor	Upper extremity skin contusion	Air bag-DR side
1=Minor	Leg skin contusion (hematoma)	Knee bolster

27 Case 2002-81-36

Summary:

Vehicle 1 was northbound in the left turn lane of a 5-lane, 2-way, bituminous roadway, turning left onto the freeway on-ramp. Vehicle 2 was traveling southbound in lane 2 of the same roadway. As vehicle 1 turned left, the front of vehicle 2 struck the right side of vehicle 1. Vehicle 1 rotated counter-clockwise and came to rest in the intersection. Vehicle 2 rotated clockwise and came to rest in the intersection. The driver of vehicle 1 was hospitalized for lower leg fractures. The driver of vehicle 2 went to a private physician later that day and had minor contusions. Both vehicles were towed due to damage. Both vehicles were equipped with front airbags that deployed as a result of the crash. The airbag in vehicle 1 had been cut out of the vehicle before the inspection. )



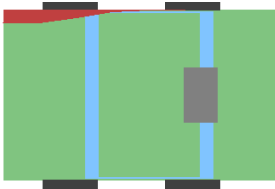
Vehicle #	Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	4-DR SEDAN/HDTOP	Mitsubishi	Mirage	1994	1	69	FEMALE-NOT PREG	3=Serious
2	4-DR SEDAN/HDTOP	Plymouth	Neon	1999	1	50	FEMALE-NOT PREG	1=Minor

Occupant: 2002-81-36-1-1



Fire Information

Fire Occurence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Right side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	25 -19 -16
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	1 R Y E W 2
Damage (C1-C6)	0 0 2 11 18 18
Crush (L and D)	216 123
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	0

NASS Weighting Factor

Weighting factor	102.040
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Rollover Characteristics

Number of Events	1
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	FIVE
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERCHANGE REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

Vehicle Factors

Make-Model	Mitsubishi Mirage
Year	1994
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	100

Pre-Crash Driver Data

Accident Type	68
Pre-event Movement	TURNING LEFT
Critical Pre-crash Event	TURN LEFT-INTERS
Attempted Avoidance Manuever	99
Pre-impact Stability	9
Pre-impact Location	STAYED IN LANE

DRIVER Factors

Age	69	Height	157	Weight	50
Gender					FEMALE-NOT PREG
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					Not ENTRAPPED

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR BAG DEPLOYED
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-81-36-1-1
MAIS	3=Serious
Seat Position	Front left side

AIS Level	Injury Description	Contacts
2=Moderate	Lumbar fracture of spinous process without cord injury	Transmiss lever
2=Moderate	Lumbar fracture of spinous process without cord injury	Transmiss lever
3=Serious	Tibial condylar fracture, open/displaced/comminuted	Knee bolster
2=Moderate	Metatarsal or tarsal fracture	Floor
1=Minor	Facial skin abrasion	Air bag-DR side
1=Minor	Abdominal skin contusion	Belt webb/buckle
1=Minor	Tongue laceration, superficial	Air bag-DR side
1=Minor	Thoracic skin contusion	Belt webb/buckle
1=Minor	Leg skin contusion (hematoma)	Knee bolster

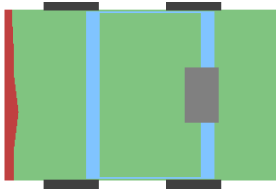


Occupant: 2002-81-36-2-1



Fire Information

Fire Occurence	No fire
Fire Origin	No fire
Location of Fuel Leakage	No fuel leakage
Type of Fuel Tank	Metallic
Fuel Tank Location	Forward of rear axle, centered
Fuel Cap Location	Right side, behind rear axle
Fuel Tank Damage	No damage
Fuel Type	Gasoline



Pre-Crash Environment

Traffic Flow	Not DIVIDED
Number of Travel Lanes	FIVE
Roadway Alignment	STRAIGHT
Roadway Profile	LEVEL
Roadway Surface Type	ASPHALT
Roadway Surface Condition	DRY
Light Conditions	DAYLIGHT
Atmospheric Conditions	No ADVERSE COND
Relation to Intersection	INTERCHANGE REL
Traffic Control Device	
Police Reported Alcohol Presence	No ALCOHOL
Alcohol Test (< 95 indicates BAC 0.xx)	96

Crash Severity

Nr. Quarter Turns	No rollover
Impact Speed	998
Total, Longitudal, and Lateral $\delta V$	21 -20 7
Est. $\delta V$ with sequence number	DELTA V CODED 1
CDC	11 F D E W 1
Damage (C1-C6)	14 14 20 14 13 10
Crush (L and D)	144 0
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	0

NASS Weighting Factor

Weighting factor	102.040
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Rollover Characteristics

Number of Events	1
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object Contacted	No rollover
Location on Vehicle where Principal Tripping Force was Applied	No rollover
Direction of Initial Roll	No rollover

Vehicle Factors

Make-Model	Plymouth Neon
Year	1999
Class	PASSENGER CAR
Body Type	4-DR SEDAN/HDTOP
Weight	114

Pre-Crash Driver Data

Accident Type	69
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	OPP DIR-OVR LEFT
Attempted Avoidance Manuever	BRAKE UNK LOCKUP
Pre-impact Stability	9
Pre-impact Location	STAYED IN LANE

DRIVER Factors

Age	50	Height	160	Weight	98
Gender					FEMALE-NOT PREG
Ejection					No EJECTION
Ejection Area					No EJECTION
Entrapment					Not ENTRAPPED

## Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 <sup>st</sup> Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth Seat	Not EQUIP W/ OTH

## Injuries

Occupant	2002-81-36-2-1
MAIS	1=Minor
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor	Abdominal skin contusion	Belt webb/buckle
1=Minor	Upper extremity skin contusion	Air bag-DR side