Crash Reports

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1 Case 2003-3-73

Summary:

V1, a 1992 Acura Vigor was traveling eastbound on a two-lane urban roadway, on approach to a 4-leg intersection. V2 was traveling northbound on a one-way roadway, on approach to the same intersection. V3 was stopped and V4 was parked both facing west in the west sector of the intersection. The roadways were bituminous, straight, level and dry. As V1 and V2 entered the intersection, the frontal area of V2 impacted the right side surface of V1, resulting in moderate damage. At this point, V1 was re-directed in a clockwise rotation into the west sector of the intersection as the left front side surface was struck by the frontal area of V3. This secondary impact continued the clockwise rotation as the left rear side surface impacted the frontal area of V4 (parked). All vehicles came to rest in close proximity to the final point of impact. V1 was towed due to disabling damage. The two occupants of V1 sustained "A" injuries. They were transported for treatment and admitted. V2 was also towed due to disabling damage. The driver sustained "C" injuries and was transported to the hospital for treatment. V3 was driven from the scene as the driver was not reportedly injured, however, the two passengers sustained "C" injuries and were transported to the hospital for treatment. V4 was not towed, and was legally parked (with no occupants).)

No picture available

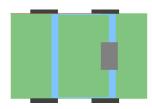
Vehicle	e Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	4-DR SEDAN/HDTOP	Acura	Vigor	1992	1	28	MALE	4=Severe
1	4-DR SEDAN/HDTOP	Acura	Vigor	1992	2	31	MALE	4=Severe
2	LARGE UTILITY	Cadillac	Escalade	2002	1	37	MALE	7=Unk. sev.

Occupant: 2003-3-73-1-1



Fire Information

- Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location Fuel Cap Location Fuel Tank Damage Fuel Type
- No fire No fire Unknown Unknown type Unknown Left side, behind rear axle Unknown Gasoline



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence number	MODERATE 1
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	2 R Y A W 3 0 0 0 0 0 0 0 0 0 VEHICLE NO. 2 VEHICLE NO. 3

NASS Weighting Factor

Weighting factor

25.148

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 18 BAC 0.xx)

Not DIVIDED TWO STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Acura Vigor 1992 PASSENGER CAR 4-DR SEDAN/HDTOP 143

Pre-Crash Driver Data

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

Age	28	Height	999	Weight	999
Gender		MALE			
Ejectio	n		No EJE	CTION	
Ejectio	n Area		No EJE	CTION	
Entrap	ment		9		

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

Occupant	2003-3-73-1-1
MAIS	4=Severe
Seat Position	Front left side

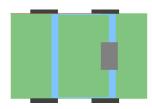
AIS Level	Injury Description	Contacts
4=Severe	Lung contusion, bilat- eral	Seat, back
2=Moderate	Awake on admission, prior unconscious, length NFS	Other noncontact

Occupant: 2003-3-73-1-2



Fire Information

- Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location Fuel Cap Location Fuel Tank Damage Fuel Type
- No fire No fire Unknown Unknown type Unknown Left side, behind rear axle Unknown Gasoline



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence number	MODERATE 1
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	2 R Y A W 3 0 0 0 0 0 0 0 0 0 VEHICLE NO. 2 VEHICLE NO. 3

NASS Weighting Factor

Weighting factor

25.148

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions **Atmospheric Conditions** Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 18 BAC 0.xx)

Not DIVIDED TWO STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Acura Vigor 1992 PASSENGER CAR 4-DR SEDAN/HDTOP 143

Pre-Crash Driver Data

Accident Type87Pre-event MovementGOING STRAIGHTCritical Pre-crash EventCROSS OVER INTERAttempted Avoidance Maneu-99verPre-impact StabilityPre-impact LocationSTAYED IN LANE

PASSENGER Factors

Age	31	Height	999	Weight	999
Gende	r		MALE		
Ejectio	n		No EJE	CTION	
Ejectio	n Area		No EJE	CTION	
Entrap	ment		9		

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

Occupant	2003-3-73-1-2
MAIS	4=Severe
Seat Position	Front right side

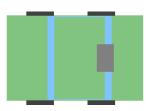
AIS Level	Injury Description	Contacts
4=Severe	Unconscious on admission, moves appropriately only to pain	Right B pillar
2=Moderate	C-spine dislocation no bone or cord involve- ment NFS	Other noncontact
1=Minor	Scalp contusion	Unknown SOURCE
1=Minor	Upper extremity skin contusion	Right interior
1=Minor	Upper extremity skin laceration, minor	Right interior
1=Minor	Facial skin abrasion	Right B pillar
1=Minor	Facial skin laceration, minor	Right B pillar

Occupant: 2003-3-73-2-1



Fire Information

Fire Occurence	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 Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence num-	9 99
ber	
CDC	No data No data No data No
	data No data No data
Damage (C1-C6)	No data No data 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

25.148

Rollover Characteristics

Number of Events3Rollover Initiation TypeNo rollover				
Location of Rollover Initiation	No rollover			
Rollover Initiation Object	No rollover			
Contacted				
Location on Vehicle where	No rollover			
Principal Tripping Force was				
Applied				
Direction of Initial Roll	No rollover			

Pre-Crash Environment

Traffic Flow	ONE WAY		
Number of Travel Lanes	ONE		
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	No ALCOHOL		
Presence			
Alcohol Test (< 95 indicates	96		
BAC 0.xx)			

Vehicle Factors

Make-Model Year Class Body Type Weight Cadillac Escalade 2002 TRUCK LARGE UTILITY 264

Pre-Crash Driver Data

Accident Type Pre-event Movement Critical Pre-crash Event Attempted Avoidance Maneuver Pre-impact Stability Pre-impact Location

86 GOING STRAIGHT XING ST-X PATH 99

TRACKING STAYED IN LANE

DRIVER Factors

Age	37	Height	999	Weight	999
Gender			MALE		
Ejection			No EJE	ECTION	
Ejection A	Area		No EJE	ECTION	
Entrapme	nt		9		

Restraint Factors

Restrain	99
AOPS	VIN DET AIR BAG
Airbag Deployment	9
Airbag Deployment - 1 st Seat	9
Airbag Deployment - Oth	9
Seat	

Injuries

Occupant	2003-3-73-2-1
MAIS	7=Unk. sev.
Seat Position	Front left side

AIS Level Injury Description Contacts

2 Case 2003-9-35

Summary:

V1 was traveling east in lane two of a four-lane, divided roadway, approaching an intersection. V2 was traveling west in lane four of a four-lane divided roadway attempting to turn left at the intersection. As both vehicles entered the intersection the front of V1 contacted the right side of V2. Both vehicles were towed from the scene. V2 sustained severe right plane damage; it was equipped with a driver's frontal airbag, which deployed. The driver of V1 was uninjured and not transported to a medical facility. The driver of V2 was transported (ambulance) to the hospital for reported incapacitating injuries; the driver was hospitalized.)

No picture available

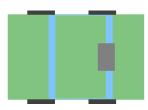
VehicleBody type		Make	Model	Year	Occ.#	[±] Age	Occupant's sex	Maximum known occupant ais
1	LARGE PICKUP	Chevrolet	Unk It Truck	1977	1	25	MALE	0=None
2	4-DR SEDAN/HDTOP	Toyota	Corolla	1993	1	41	MALE	4=Severe

Occupant: 2003-9-35-1-1



Fire Information

Fire Occurence	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 Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence num-	9 99
ber	
CDC	No data No data No data No
	data No data No data
Damage (C1-C6)	No data No data 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

61.893

Rollover Characteristics

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

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	DRY	
Light Conditions	DARK/LIGHTED	
Atmospheric Conditions	No ADVERSE COND	
Relation to Intersection	INTERSECTION REL	
Traffic Control Device		
Police Reported Alcohol	No ALCOHOL	
Presence		
Alcohol Test (< 95 indicates	96	
BAC 0.xx)		

Vehicle Factors

Make-Model Year Class Body Type Weight Chevrolet Unk It Truck 1977 PASSENGER CAR LARGE PICKUP 999

Pre-Crash Driver Data

Accident Type Pre-event Movement Critical Pre-crash Event Attempted Avoidance Maneuver Pre-impact Stability Pre-impact Location

69 GOING STRAIGHT CROSS OVER INTER No AVOIDANCE

TRACKING STAYED IN LANE

DRIVER Factors

Age	25	Height	183	Weight	82
Gende	r		MALE		
Ejectio	n		No EJE	CTION	
Ejectio	Ejection Area No EJECTION				
Entrapi	ment		Not EN	TRAPPED	

Restraint Factors

Restrain	Lap and shoulder
AOPS	NÔ
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 st Seat	Not EQUIP/AVAIL
Airbag Deployment - Oth	Not EQUIP W/ OTH
Seat	

Injuries

Occupant	2003-9-35-1-1
MAIS	0=None
Seat Position	Front left side

AIS Level Injury Description Contacts

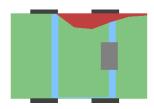
Occupant: 2003-9-35-2-1



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location Fuel Cap Location Fuel Tank Damage Fuel Type

No fire No fire No fuel leakage Metallic Forward of rear axle, left side Left side, behind rear axle No damage Gasoline



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence number	DELTA V CODED 1
CDC	2 R Z A W 3
Damage (C1-C6)	4 8 24 44 39 0
Crush (L and D)	284 -49
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	0

NASS Weighting Factor

Weighting factor

61.893

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	No rollover		
Principal Tripping Force was			
Applied			
Direction of Initial Roll	No rollover		

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions **Atmospheric Conditions** Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

DVDED/NO BARRIER FOUR STRAIGHT LEVEL ASPHALT DRY DARK/LIGHTED No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight

Toyota Corolla 1993 PASSENGER CAR 4-DR SEDAN/HDTOP 109

Pre-Crash Driver Data

Accident Type	68
Pre-event Movement	TURNING LEFT
Critical Pre-crash Event	OPP DIR-OVR RGHT
Attempted Avoidance Maneu-	99
ver	
Pre-impact Stability	9
Pre-impact Location	STAYED IN LANE

Age	41	Height	999	Weight	999
Gender MALE					
Ejection	ction No EJECTION				
Ejection Area No EJECTION					
Entrapn	ment Not ENTRAPPED				

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

Occupant	2003-9-35-2-1
MAIS	4=Severe
Seat Position	Front left side

AIS Level	Injury Description	Contacts
4=Severe	Intracerebral hematoma, small (<30ccs)	Right interior
1=Minor	Scalp laceration, mi- nor	Right interior
3=Serious	Lung contusion, unilat- eral	Right interior

Case 2003-9-154 3

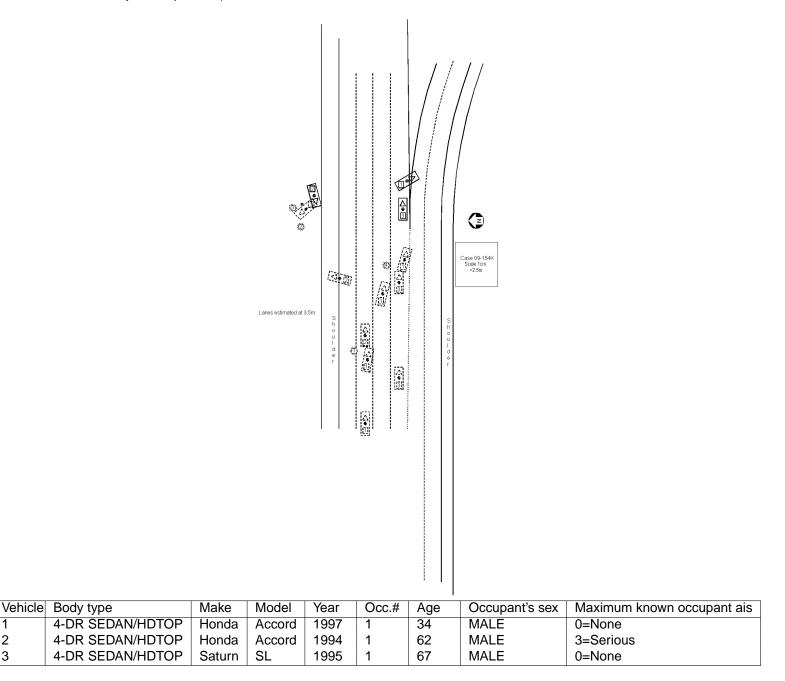
Summary:

1

2

3

V1 (in lane 5), V2 (in lane 5) and V3 (in lane 3) were headed eastbound on a 6-lane highway. V1 approached V2 from behind; V1 veered to the right and struck V2 (EVENT 1 - V1's front strikes V2's rear). The force of this impact sent V2 off to the roadway to the left, where it struck an embankment (EVENT 2 - right plane) and a tree (EVENT 3 - right plane). (Scene inspection did not reveal this area of impact.) After Event 1, V1 continued forward and to the right, entering lane 3. It collided with V3 (EVENT 4 - V3's front strikes V1's rear). All vehicles were towed due to damage. The driver of V2 was reported transported and hospitalized for 4 days. There were no other injuries reported.)



Occupant: 2003-9-154-1-1



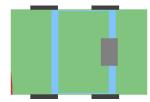
Fire Information

No fire

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

Fuel Cap Location Fuel Tank Damage Fuel Type

No fire No fuel leakage Non-metallic Forward of rear axle, centered Left side, behind rear axle No damage Gasoline



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 14 -14 < 0.5 KMPH
Est. δV with sequence number	DELTA V CODED 1
CDC	12 F Y E W 2
Damage (C1-C6)	540000
Crush (L and D)	157 -46
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	VEHICLE NO. 3

NASS Weighting Factor

Weighting factor

23.791

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions **Atmospheric Conditions** Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

ONE WAY SIX **CURVE LEFT** LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND INTERCHANGE REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight

Honda Accord 1997 PASSENGER CAR 4-DR SEDAN/HDTOP 130

Pre-Crash Driver Data

Accident Type 24 Pre-event Movement NEGOTIATE CURVE Critical Pre-crash Event Same DIR-LOSPEED Attempted Avoidance Maneu-99 ver Pre-impact Stability TRACKING Pre-impact Location STAYED IN LANE

Age	34	Height	999	Weight	999
Gender MALE					
Ejectio	n		No EJE	CTION	
Ejectio	n Area		No EJE	CTION	
Entrap	ntrapment Not ENTRAPPED				

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

Injuries

Occupant	2003-9-154-1-1
MAIS	0=None
Seat Position	Front left side

AIS Level Injury Description Contacts

Occupant: 2003-9-154-2-1



Fire Information

No fire

No fire

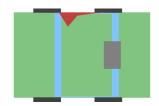
Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

Fuel Cap Location

Fuel Tank Damage

Fuel Type

e No fuel leakage Metallic Forward of rear axle, centered Left side, behind rear axle No damage Gasoline



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 22 -4 -22
Est. δV with sequence number	DELTA V CODED 3
CDC	3 R P A W 3
Damage (C1-C6)	0 1 4 8 41 0
Crush (L and D)	178 43
Object Contacted 1	LARGE TREE
Object Contacted 2	VEHICLE NO. 1

NASS Weighting Factor

Weighting factor

23.791

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

ONE WAY SIX CURVE LEFT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND INTERCHANGE REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Honda Accord 1994 PASSENGER CAR 4-DR SEDAN/HDTOP 127

Pre-Crash Driver Data

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

Age	62	Height	163	Weight	63
Gender	•		MALE		
Ejectio	า		No EJE	CTION	
Ejectio	n Area		No EJE	CTION	
Entrapr	nent		Not EN	TRAPPED	

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

Occupant	2003-9-154-2-1
MAIS	3=Serious
Seat Position	Front left side

AIS Level	Injury Description	Contacts
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3=Serious	Single rib fracture with	Steering comb		
	hemo-/pneumothorax			

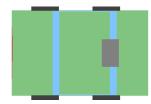
Occupant: 2003-9-154-3-1



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral	No rollover 998 13 -13 -2		
δV			
Est. δV with sequence num-	DELTA V CODED 4		
ber			
CDC	12 F D E W 2		
Damage (C1-C6)	012310		
Crush (L and D)	132 0		
Object Contacted 1	VEHICLE NO. 1		
Object Contacted 2	0		

NASS Weighting Factor

Weighting factor

23.791

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

ONE WAY SIX CURVE LEFT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND INTERCHANGE REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Saturn SL 1995 PASSENGER CAR 4-DR SEDAN/HDTOP 105

Pre-Crash Driver Data

Accident Type	98
Pre-event Movement	NEGOTIATE CURVE
Critical Pre-crash Event	Same DIR-OV LEFT
Attempted Avoidance Maneu-	BRAKE W/ LOCKUP
ver	
Pre-impact Stability	LONGITUDINAL SKID
Pre-impact Location	STAYED IN LANE

Age	67	Height	180	Weight	88
Gende	r		MALE		
Ejectio	n		No EJE	CTION	
Ejectio	n Area		No EJE	CTION	
Entrap	ment		Not EN	TRAPPED	

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

Injuries

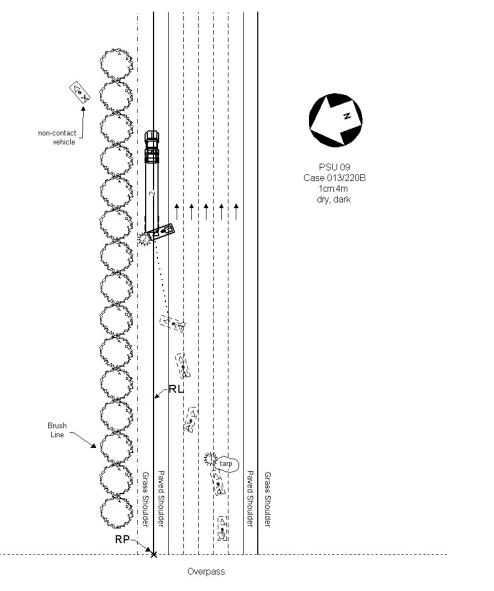
Occupant	2003-9-154-3-1
MAIS	0=None
Seat Position	Front left side

AIS Level Injury Description Contacts

4 Case 2003-9-220

Summary:

Vehicle one is a '97 Nissan Altima driven by a 26-year-old male. Vehicle two is a '99 International 9100 series 3-axle tractor carrying an empty '93 Trailmobile refrigerated trailer. V2 is driven by a 53-year-old male. V1, V2, and a non-contact vehicle were all traveling east on a dry, 55mph, five lane, interstate roadway with a 2



Vehicle	Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	4-DR SEDAN/HDTOP	Nissan	Altima	1997	1	26	MALE	4=Severe

Occupant: 2003-9-220-1-1



Fire Information

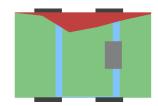
Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

Fuel Cap Location

Fuel Tank Damage

Fuel Type

No fire No fire No fuel leakage Non-metallic Forward of rear axle, centered Left side, behind rear axle No damage Gasoline



Crash Severity

Nr. Quarter Turns Impact Speed	No rollover 999
Total, Longitudal, and Lateral	999 999 999
δV	
Est. δV with sequence num-	SEVERE 2
ber	
CDC	2 R D A W 5
Damage (C1-C6)	3 21 42 57 8 0
Crush (L and D)	340 50
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	OBJ FELL FRM VEH

NASS Weighting Factor

Weighting factor

26.744

Rollover Characteristics

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

Pre-Crash Environment

Traffic FlowONumber of Travel LanesFlRoadway AlignmentSiRoadway ProfileLlRoadway Surface TypeARoadway Surface ConditionDLight ConditionsDLight ConditionsNRelation to IntersectionNTraffic Control DevicePolicePoliceReportedAlcohol Test (< 95 indicates</td>0BAC 0.xx)0

ONE WAY FIVE STRAIGHT LEVEL ASPHALT DRY DARK No ADVERSE COND NONINTER/NONJUNC

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Nissan Altima 1997 PASSENGER CAR 4-DR SEDAN/HDTOP 129

Pre-Crash Driver Data

Accident Type	98
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	OBJECT IN ROAD
Attempted Avoidance Maneu-	99
ver	
Pre-impact Stability	LAT SKID-CTR CLK
Pre-impact Location	Left TRAVEL LANE

Age	26	Height	180	Weight	66
Gender MALE					
Ejectio	n		No EJECTION		
Ejection Area No EJECTION					
Entrap	ment		ENTRAPPED		

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

Occupant	2003-9-220-1-1
MAIS	4=Severe
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor	Facial skin abrasion	Right B pillar
1=Minor	Facial skin abrasion	Right wind frame
1=Minor	Facial skin abrasion	Right wind frame
1=Minor	297402	Right wind frame
2=Moderate	Maxillary fracture, closed	Right B pillar
1=Minor	Mandible fracture, closed, location NFS	Right B pillar
4=Severe	Basilar skull fracture, open, with brain tis- sue loss.	Right B pillar
3=Serious	Pituitary injury, NFS	Right B pillar
3=Serious	Cerebral subarach- noid hemorrhage	Right B pillar
1=Minor	Upper extremity skin abrasion	Belt webb/buckle
1=Minor	690202	Seat, back
2=Moderate	Clavicle fracture	Right B pillar
3=Serious	Lung contusion, uni- lateral	Right B pillar
3=Serious	Single rib fracture with hemo-/pneumothorax	Right B pillar

5 Case 2003-9-239

Summary:

V1 was traveling north on a two lane, two way road under rainy, daylight conditions. V2 was traveling south on the same roadway. V1 lost control and entered the southbound lane. The front of V2 hit the right side of V1 (event 1). This impact caused the right of V1 to sideslap the left of V2 (event 2). V1 was towed due to damage and was equiped with two frontal airbags (nondeployed) and three point restraints (in use) in all occupied positions. V2 was also towed due to damage and was equiped with three point restraints in all occupied positions. The driver of V1 was transported to a treatment by ambulance for reported fatal injuries. The passenger in V1 was taken to the medical examiner's office with fatal injuries. The driver of V2 was transported to the medical examiner's office with fatal injuries.

-		9 82:	
	T.		

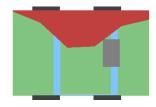
Ve	ehBodely type	Make	Model	Yeaoca∰occupant's sex	Maximum known occupant ais
1	LARGE PICKUP	Chevrolet	C,K,R,V-series Pickup	20011 25 MALE	4=Severe
1	LARGE PICKUP	Chevrolet	C,K,R,V-series Pickup	2002 24 MALE	4=Severe
2	COMPACT UTILITY	Chevrolet	S-10 Blazer	1989 42 FEMALE-NOT PREG	6=Maximum

Occupant: 2003-9-239-1-1



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 43 22 -37
Est. δV with sequence number	DELTA V CODED 1
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1	64 R D A W 6 26 45 104 108 34 2 318 -136 VEHICLE NO. 2
Object Contacted 2	0

NASS Weighting Factor

Weighting factor

22.768

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes TWO Roadway Alignment **Roadway Profile** LEVEL Roadway Surface Type Roadway Surface Condition WET Light Conditions **Atmospheric Conditions** RAIN Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

Not DIVIDED TWO CURVE LEFT LEVEL ASPHALT WET DAYLIGHT RAIN NONINTER/NONJUNC ALCOHOL PRESENT

Vehicle Factors

Make-Model

Year Class Body Type Weight Chevrolet C,K,R,V-series Pickup 2001 TRUCK LARGE PICKUP 202

Pre-Crash Driver Data

Accident Type66Pre-event MovementNEGOTIATE CURVECritical Pre-crash EventOVER LINE-LEFTAttempted Avoidance Maneu-99verPre-impact StabilityPre-impact LocationLAT SKID-CTR CLKLeft TRAVEL LANE

Age	25	Height	168	Weight	68
Gender MALE					
Ejectio	n No EJECTION				
Ejection Area No EJECTION					
Entrap	oment		JAMMED DOOR/FIRE		

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

Occupant	2003-9-239-1-1
MAIS	4=Severe
Seat Position	Front left side

AIS Level	Injury Description	Contacts	
1=Minor	Scalp contusion	Other occupants	
4=Severe	Cerebral subdural hematoma, NFS	Other occupants	
3=Serious	Cerebral subarach- noid hemorrhage	Other occupants	
3=Serious	Cerebral subarach- noid hemorrhage	Other occupants	
2=Moderate	Skull fracture, vault, closed (simple, undis- placed)	Other occupants	
3=Serious	Dislocation of atlanto- axial joint (odontoid)	Other occupants	
3=Serious	Lung laceration, uni- lateral NFS	Other occupants	
3=Serious	>3 rib fractures oneside & <3 other side,with stable chest	Other occupants	
1=Minor	Abdominal skin abra- sion	Belt webb/buckle	
2=Moderate	Hepatic laceration NFS	Belt webb/buckle	

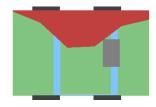
Occupant: 2003-9-239-1-2



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location Fuel Cap Location Fuel Tank Damage Fuel Type

No fire No fire No fuel leakage Non-metallic Forward of rear axle, left side Left side, forward rear axle No damage Gasoline



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 43 22 -37	
Est. δV with sequence number	DELTA V CODED 1	
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	64 R D A W 6 26 45 104 108 34 2 318 -136 VEHICLE NO. 2 0	

NASS Weighting Factor

Weighting factor

22.768

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	No rollover	
Principal Tripping Force was		
Applied		
Direction of Initial Roll	No rollover	

Pre-Crash Environment

Traffic Flow Not DIVIDED Number of Travel Lanes TWO Roadway Alignment **Roadway Profile** LEVEL Roadway Surface Type Roadway Surface Condition WET **Light Conditions Atmospheric Conditions** RAIN Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

CURVE LEFT ASPHALT DAYLIGHT NONINTER/NONJUNC ALCOHOL PRESENT

Vehicle Factors

Make-Model

Year Class Body Type Weight

Chevrolet C,K,R,V-series Pickup 2001 TRUCK LARGE PICKUP 202

Pre-Crash Driver Data

Accident Type 66 Pre-event Movement NEGOTIATE CURVE Critical Pre-crash Event **OVER LINE-LEFT** Attempted Avoidance Maneu-99 ver Pre-impact Stability LAT SKID-CTR CLK Pre-impact Location Left TRAVEL LANE

PASSENGER Factors

Age 24 Height 170 Weight 78 Gender MALE Ejection No EJECTION Ejection Area No EJECTION Entrapment JAMMED DOOR/FIRE

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

Occupant	2003-9-239-1-2
MAIS	4=Severe
Seat Position	Front right side

AIS Level	Injury Description	Contacts	
1=Minor 1=Minor 1=Minor 1=Minor	Facial skin abrasion Facial skin abrasion Facial skin abrasion Facial skin laceration,	Flying glass Flying glass Flying glass Right window+oth	
1=Minor 3=Serious	minor Neck skin abrasion Cerebral subarach- noid hemorrhage	Belt webb/buckle Roof	
3=Serious	Cerebral subarach- noid hemorrhage	Roof	
2=Moderate	Cervical fracture with- out cord injury +/- dis- location NFS	Roof	
2=Moderate	Clavicle fracture	Belt webb/buckle	
4=Severe	>3 rib fxs on one side& <3 other side &hemo-/pneumothorax	Right B pillar	
4=Severe	Thoracic aortic lacer- ation NFS	Right B pillar	
4=Severe	Lung contusion, bilat- eral	Right B pillar	
1=Minor	Abdominal skin abra- sion	Belt webb/buckle	
2=Moderate	Hepatic laceration NFS	Right B pillar	
2=Moderate	Kidney laceration	Right B pillar	
2=Moderate	Splenic laceration	Belt webb/buckle	
2=Moderate 2=Moderate	Pelvic fracture NFS Radial fracture NFS (+/- styloid process,	Belt webb/buckle Right interior	
2=Moderate 1=Minor	including Colles) Ulnar fracture NFS Upper extremity skin abrasion	Right interior Other occupants	

Occupant: 2003-9-239-2-1

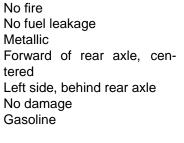


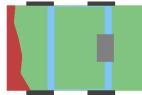
Fire Information

No fire

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

Fuel Cap Location Fuel Tank Damage Fuel Type





Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral	No rollover 998 62 -61 11	
δV Est. δV with sequence num-	DELTA V CODED 1	
ber		
CDC	12 F D E W 3	
Damage (C1-C6)	70 41 45 35 20 26	
Crush (L and D)	149 0	
Object Contacted 1	VEHICLE NO. 1	
Object Contacted 2	0	

NASS Weighting Factor

Weighting factor

22.768

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	No rollover	
Principal Tripping Force was		
Applied		
Direction of Initial Roll	No rollover	

Pre-Crash Environment

Traffic FlowNNumber of Travel LanesTRoadway AlignmentCRoadway ProfileLiRoadway Surface TypeARoadway Surface ConditionWLight ConditionsDAtmospheric ConditionsRRelation to IntersectionNTraffic Control DevicePolicePoliceReportedAlcohol Test (< 95 indicates</td>0BAC 0.xx)D

Not DIVIDED TWO CURVE RIGHT LEVEL ASPHALT WET DAYLIGHT RAIN NONINTER/NONJUNC No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Chevrolet S-10 Blazer 1989 TRUCK COMPACT UTILITY 151

Pre-Crash Driver Data

Accident Type	66	
Pre-event Movement	NEGOTIATE CURVE	
Critical Pre-crash Event	OPP DIR-OVR LEFT	
Attempted Avoidance Maneu-	99	
ver		
Pre-impact Stability	9	
Pre-impact Location	STAYED IN LANE	

Age	42	Height	183	Weight	108
Gender	r	FEMALE-NOT PREG			
Ejectio	n		No EJECTION		
Ejectio	n Area		No EJECTION		
Entrapr	ment		JAMMED DOOR/FIRE		

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

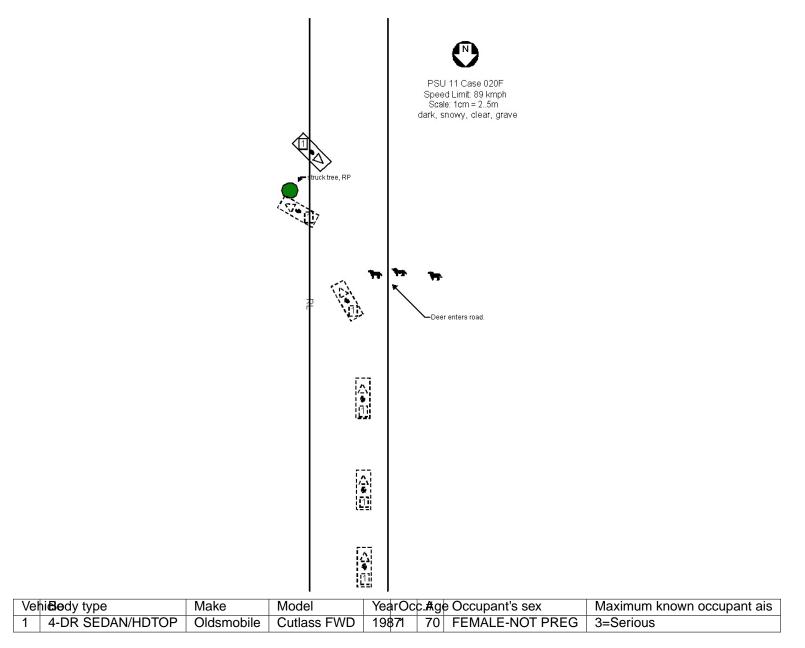
Occupant	2003-9-239-2-1
MAIS	6=Maximum
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor	297602	Steering rim
3=Serious	Cerebral subarach- noid hemorrhage	Steering rim
3=Serious	Cerebral contusions, multiple, unilateral but NFS	Steering rim
6=Maximum	Brain stem laceration	Steering rim
5=Critical	Brainstem contusion	Steering rim
3=Serious	Cervical odontoid (dens) fracture, no cord injury	Steering rim
1=Minor	Thoracic skin contu-	Belt webb/buckle
1=Minor	Thoracic skin lacera- tion, minor	Belt webb/buckle
1=Minor	690402	Seat, back
2=Moderate	Spleniclaceration,minor(tear<3cms)	Belt webb/buckle
	vessel)	Daltwahh/hualda
4=Severe	Lung contusion, bilat- eral	Belt webb/buckle
1=Minor	Myocardial contusion, minor	Belt webb/buckle
1=Minor	Upper extremity skin laceration, minor	Center panel
1=Minor	Upper extremity skin abrasion	Left apnel
1=Minor	Upper extremity skin	Left apnel
1=Minor	laceration, minor Leg skin laceration,	Left apnel
1=Minor	minor Leg skin laceration, minor	Left apnel

6 Case 2003-11-20

Summary:

V1 was traveling southbound on a two-lane, two-way snowy roadway. The driver swerved to avoid a deer in the road, lost control on the snowy road and departed the left side of the roadway. V1 rotated CCW and contacted a tree with its right side. V1 was towed due to damage. The driver of V1 was transported and hospitalized due to injuries.)



Occupant: 2003-11-20-1-1



Fire Information

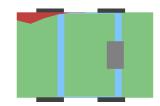
Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

Fuel Cap Location

Fuel Tank Damage

Fuel Type

No fire No fire No fuel leakage Metallic Forward of rear axle, centered Left side, behind rear axle No damage Gasoline



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 15 -8 -13
Est. δV with sequence number	DELTA V CODED 1
CDC	82 R F E N 3
Damage (C1-C6)	0 0 5 16 32 22
Crush (L and D)	120 189
Object Contacted 1	LARGE TREE
Object Contacted 2	0

NASS Weighting Factor

Weighting factor

238.986

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	No rollover	
Principal Tripping Force was		
Applied		
Direction of Initial Roll	No rollover	

Pre-Crash Environment

Traffic FlowNNumber of Travel LanesTRoadway AlignmentSRoadway ProfileLIRoadway Surface TypeARoadway Surface ConditionSLight ConditionsDAtmospheric ConditionsNRelation to IntersectionNTraffic Control DevicePolicePoliceReportedAlcohol Test (< 95 indicates</td>0BAC 0.xx)D

Not DIVIDED TWO STRAIGHT LEVEL ASPHALT SNOW OR SLUSH DARK No ADVERSE COND NONINTER/NONJUNC

ALCOHOL PRESENT

Vehicle Factors

Make-Model Year Class Body Type Weight Oldsmobile Cutlass FWD 1987 PASSENGER CAR 4-DR SEDAN/HDTOP 123

Pre-Crash Driver Data

Accident Type	8
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	ANIMAL APP ROAD
Attempted Avoidance Maneu-	BRAKE+STEER LEFT
ver	
Pre-impact Stability	LAT SKID-CTR CLK
Pre-impact Location	DEPARTED ROADWAY

Age	70	Height	165	Weight	73
Gende	er	FEMALE-NOT PREG			
Ejectic	n		No EJECTION		
Ejectic	Ejection Area No EJECTION				
Entrapment Not ENTRAPPED		TRAPPED			

Restrain	Lap and shoulder
AOPS	NÔ
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 st Seat	Not EQUIP/AVAIL
Airbag Deployment - Oth	Not EQUIP W/ OTH
Seat	

Occupant	2003-11-20-1-1
MAIS	3=Serious
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor	Abdominal skin contu- sion	Belt webb/buckle
3=Serious	Retroperitoneal hem- orrhage of hematoma	Belt webb/buckle

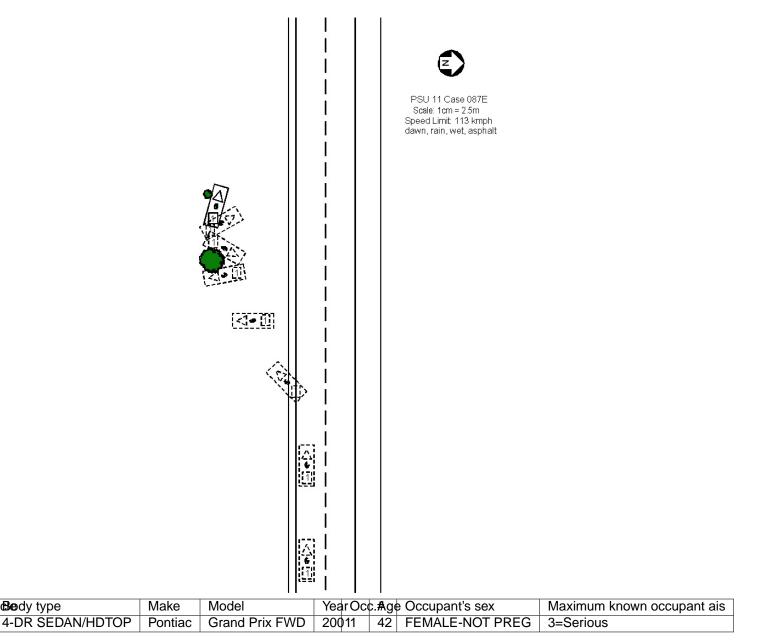
7 Case 2003-11-87

Summary:

Vehiceedy type

1

V1, a 2001 Pontiac Grand Prix was traveling westbound at dawn on a two lane, divided with positive barrier wet asphalt roadway. The conditions were rainy. The driver of V1 lost control in a puddle of standing water that had collected on the roadway. V1 began a CCW turn, departed the roadway to the left, and struck a tree with its right side. V1 then continued its CCW turn, and struck another tree with its left side, where it came to rest facing west. V1 was towed due to damage. The driver of V1 was using the 3-point safety belt, and the front air bags deployed. The driver was transported and released due to injuries.)



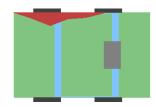
Occupant: 2003-11-87-1-1



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral	No rollover 998 26 -13 -23
δV Est. δV with sequence num-	DELTA V CODED 1
ber	DEEIX V GODED I
CDC	2 R Y E W 3
Damage (C1-C6)	1 15 18 38 17 0
Crush (L and D)	231 121
Object Contacted 1	LARGE TREE
Object Contacted 2	LARGE TREE

NASS Weighting Factor

Weighting factor

252.800

Rollover Characteristics

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

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

DVDED/W/BARRIER TWO STRAIGHT UPHILL GRADE ASPHALT WET DAWN RAIN NONINTER/NONJUNC No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Pontiac Grand Prix FWD 2001 PASSENGER CAR 4-DR SEDAN/HDTOP 154

Pre-Crash Driver Data

Accident Type	7
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	POOR ROAD CONDIT
Attempted Avoidance Maneu-	BRAKE+STEER RT
ver	
Pre-impact Stability	LAT SKID-CTR CLK
Pre-impact Location	DEPARTED ROADWAY

Age	42	Height	163	Weight	61
Gende	ender FEMALE-NOT PREG				G
Ejectio	n		No EJECTION		
Ejection Area No EJECTION					
Entrap	Entrapment Not ENTRAPPED				

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

Occupant	2003-11-87-1-1
MAIS	3=Serious
Seat Position	Front left side

AIS Level	Injury Description	Contacts
3=Serious	Cervical pedicle frac- ture, no cord injury	Other noncontact
1=Minor	Upper extremity skin abrasion	Air bag-DR side
1=Minor	Upper extremity skin contusion	Air bag-DR side
1=Minor	Abdominal skin contu- sion	Belt webb/buckle
1=Minor	Leg skin contusion (hematoma)	Knee bolster
3=Serious	Cervical lamina frac- ture, no cord injury	Other noncontact

8 Case 2003-12-27

Summary:

Vehicle 1 was headed south and turning left at the intersection in lane 3 of a 5 lane, dry, asphalt roadway after dark but with artificial lighting. Vehicle 2 was traveling north in lane 1 of the same roadway as vehicle 1. As vehicle 1 began a left turn the front of vehicle 2 contacted the right of vehicle 1. Vehicle 2 began a clockwise spin in the air above the ground while vehicle 1 began a violent counterclockwise spin as the right rear of vehicle 1 contacted the left rear of vehicle 2. During the spinning of the vehicles occupant 2 in vehicle 1 was completely ejected through the right front window, hit the pavement and slid on the pavement worsening her already serious injuries. Vehicle 2 mounted the east curb creating an impact to the right front wheel and then an impact to the left front wheel prior to final rest. Vehicle 1 came to rest in the roadway north of the intersection. Both vehicles were towed due to extensive damage sustained in the crash. All occupants of both vehicles were transported for medical attention. The frontal air bags in both vehicles deployed and all occupants except occupant 2 of vehicle 1 were wearing their lap and shoulder belts.)

No picture available

Ve	hi Ble dy type	Make	Model	YearOo	c##g	eOccupant's sex	Maximum known occupant ais
1	4-DR SEDAN/HDTOP	Oldsmobile	Alero	2002	59	MALE	3=Serious
1	4-DR SEDAN/HDTOP	Oldsmobile	Alero	20022	58	FEMALE-NOT PREG	4=Severe
2	4-DR SEDAN/HDTOP	Ford	Crown Victoria	2002	46	MALE	2=Moderate

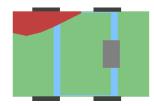
Occupant: 2003-12-27-1-1



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 45 -23 -39
Est. δV with sequence number	DELTA V CODED 1
CDC	82 R F E W 4
Damage (C1-C6)	5 25 45 61 71 62
Crush (L and D)	119 154
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	VEHICLE NO. 2

NASS Weighting Factor

Weighting factor

30.110

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic FlowNNumber of Travel LanesFlRoadway AlignmentSiRoadway ProfileLlRoadway Surface TypeARoadway Surface ConditionDLight ConditionsDLight ConditionsNRelation to IntersectionINTraffic Control DevicePolicePoliceReportedAlcoholTessenceAlcoholTest (< 95 indicates</td>BAC 0.xx)D

Not DIVIDED FIVE STRAIGHT LEVEL ASPHALT DRY DARK/LIGHTED No ADVERSE COND INTERSECTION REL

ALCOHOL PRESENT

Vehicle Factors

Make-Model Year Class Body Type Weight Oldsmobile Alero 2002 PASSENGER CAR 4-DR SEDAN/HDTOP 137

Pre-Crash Driver Data

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

Age	59	Height	183	Weight	88
Gende	r		MALE		
Ejectio	n		No EJE	CTION	
Ejectio	n Area		No EJE	CTION	
Entrap	ment		Not EN	TRAPPED	

Lap and shoulder
YES-RES DET
BAG DEPLOYED
DR
Not EQUIP W/ OTH

Occupant	2003-12-27-1-1
MAIS	3=Serious
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor	Upper extremity skin abrasion	Belt webb/buckle
1=Minor	Leg skin abrasion	Belt webb/buckle
1=Minor	Leg skin laceration, minor	Center panel
1=Minor	690402	Seat, back
1=Minor	Thoracic spine strain, acute without fracture or dislocation	Seat, back
3=Serious	Lung contusion, uni- lateral	Seat, back
1=Minor	Upper extremity skin contusion	Belt webb/buckle
1=Minor	Leg skin contusion (hematoma)	Floor
2=Moderate	Cervical vertebral body fracture, no cord injury, <202=Moder- ate	Cervical spinous pro- cess fx, no cord injury, +/- dislocation
Seat, back		
2=Moderate	Metatarsal or tarsal fracture	Floor
1=Minor	Abdominal skin contu- sion	Belt webb/buckle
1=Minor	Abdominal skin lacer- ation, minor	Belt webb/buckle
2=Moderate	Metatarsal or tarsal fracture	Floor

Occupant: 2003-12-27-1-2



Fire Information

No fire

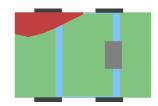
Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

Fuel Cap Location

Fuel Tank Damage

Fuel Type

No fire No fuel leakage Non-metallic Forward of rear axle, centered Left side, behind rear axle No damage Gasoline



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 45 -23 -39
Est. δV with sequence number	DELTA V CODED 1
CDC	82 R F E W 4
Damage (C1-C6)	5 25 45 61 71 62
Crush (L and D)	119 154
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	VEHICLE NO. 2

NASS Weighting Factor

Weighting factor

30.110

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic FlowNNumber of Travel LanesFlRoadway AlignmentSiRoadway ProfileLlRoadway Surface TypeARoadway Surface ConditionDLight ConditionsDLight ConditionsNRelation to IntersectionINTraffic Control DevicePolicePoliceReportedAlcoholTessenceAlcoholTest (< 95 indicates</td>BAC 0.xx)D

Not DIVIDED FIVE STRAIGHT LEVEL ASPHALT DRY DARK/LIGHTED No ADVERSE COND INTERSECTION REL

ALCOHOL PRESENT

Vehicle Factors

Make-Model Year Class Body Type Weight Oldsmobile Alero 2002 PASSENGER CAR 4-DR SEDAN/HDTOP 137

Pre-Crash Driver Data

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

PASSENGER Factors

Age	58	Height	173	Weight	84
Gende	er		FEMALE-NOT PREG		
Ejectic	n		COMPLETE EJECT		
Ejectic	n Area		Right FRONT		
Entrap	ment		Not ENTRAPPED		

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

Occupant	2003-12-27-1-2
MAIS	4=Severe
Seat Position	Front right side

AIS Level	Injury Description	Contacts
3=Serious	Cerebral subarach- noid hemorrhage	Ground
3=Serious	Cerebral subarach- noid hemorrhage	Ground
4=Severe	Cerebral subdural hematoma, small (<50ccs)	Ground
4=Severe	Cerebral intraventric- ular hemorrhage	Ground
2=Moderate	Pelvic fracture, closed	Ground
3=Serious	Humeral fracture, open/displaced/commin	Ground uted
1=Minor	Scalp avulsion, super- ficial (<100 cms2)	Ground
4=Severe	Flail chest, with lung contusion	Ground
1=Minor	Leg skin contusion (hematoma)	Ground
1=Minor	Leg skin abrasion	Ground
1=Minor	Facial skin laceration, minor	Ground
3=Serious	Radial fracture, open/displaced/commin	Ground uted
2=Moderate	Ulnar fracture, closed	Ground
2=Moderate	Maxillary fracture, closed	Ground
1=Minor	Nose fracture, closed	Ground
4=Severe	Cerebellar hematoma, NFS	Ground

Occupant: 2003-12-27-2-1

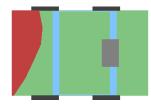


Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

Fuel Cap Location Fuel Tank Damage Fuel Type

No fire No fire No fuel leakage Metallic Forward of rear axle, centered Left side, behind rear axle No damage Gasoline



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 32 -32 6
Est. δV with sequence number	DELTA V CODED 1
CDC	12 F D E W 3
Damage (C1-C6)	6 39 63 86 90 80
Crush (L and D)	103 0
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	VEHICLE NO. 1

NASS Weighting Factor

Weighting factor

30.110

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 99 BAC 0.xx)

Not DIVIDED FIVE STRAIGHT LEVEL ASPHALT DRY DARK/LIGHTED No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight

Ford Crown Victoria 2002 PASSENGER CAR 4-DR SEDAN/HDTOP 179

Pre-Crash Driver Data

Accident Type	69
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	OPP DIR-OVR LEFT
Attempted Avoidance Maneu-	STEERING RIGHT
ver	
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

Age	46	Height	175	Weight	105
Gender	ſ		MALE		
Ejectio	า		No EJECTION		
Ejectio	n Area		No EJECTION		
Entrapr	ment		Not ENTRAPPED		

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

Occupant	2003-12-27-2-1
MAIS	2=Moderate
Seat Position	Front left side

AIS Level	Injury Description	Contacts
2=Moderate	Metatarsal or tarsal fracture	Foot controls
1=Minor	Metatarsal, pha- langeal or inter- phalangeal joint dislocation	Foot controls
1=Minor	Neck skin contusion (hematoma)	Belt webb/buckle
1=Minor	Leg skin contusion (hematoma)	Knee bolster
1=Minor	Upper extremity skin laceration NFS	Left apnel
1=Minor	Leg skin contusion (hematoma)	Seat, back

9 Case 2003-12-91

Summary:

Vehicle 1 was headed west in lane 1 of a 3 lane, dry, asphalt roadway while vehicle 2 was headed east and turning left in lane 3 of a 3 lane, dry, asphalt roadway during daylight hours. As vehicle 2 began a left turn the front of vehicle 1 contacted the right front of vehicle 2. All 3 occupants of both vehicles were wearing their safety belts and the driver of vehicle 1 was seated in front of a driver's side airbag which deployed upon impact. All 3 occupants of both vehicles were transported to medical attention and both vehicles were towed.)

No picture available

Vehi	cleody type	Make	Model	Year	Occ	.#Age	Occupant's sex	Maximum known occupant ais
1	LARGE PICKUP	Dodge	D,W-series Pickup	1995	51	18	MALE	1=Minor
1	LARGE PICKUP	Dodge	D,W-series Pickup	1995	2	19	MALE	1=Minor
2	LARGE PICKUP	Chevrolet	C,K,R,V-series Pickup	1991	1	45	MALE	3=Serious

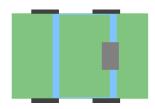
Occupant: 2003-12-91-1-1



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location Fuel Cap Location Fuel Tank Damage Fuel Type

No fire No fire No fuel leakage Non-metallic Forward of rear axle, left side Left side, forward rear axle No damage Gasoline



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 16 -15 6
Est. δV with sequence number	DELTA V CODED 1
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	11 F 9 9 9 99 0 0 0 0 0 0 0 0 VEHICLE NO. 2 VEHICLE NO. 2

NASS Weighting Factor

Weighting factor

22.802

Rollover Characteristics

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

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 99 BAC 0.xx)

Not DIVIDED THREE STRAIGHT DOWNHILL GRADE ASPHALT DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight

Dodge D,W-series Pickup 1995 TRUCK LARGE PICKUP 191

Pre-Crash Driver Data

Accident Type	69
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	OPP DIR-OVR LEFT
Attempted Avoidance Maneu-	No AVOIDANCE
ver	
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

Age	18	Height	185	Weight	77
Gende	r		MALE		
Ejectio	n		No EJECTION		
Ejectio	n Area		No EJECTION		
Entrap	ment		Not ENTRAPPED		

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

Occupant	2003-12-91-1-1
MAIS	1=Minor
Seat Position	Front left side

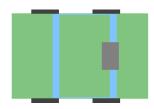
AIS Level	Injury Description	Contacts
1=Minor	Upper extremity skin abrasion	Air bag-DR side
1=Minor	Leg skin abrasion	Belt webb/buckle
1=Minor	Leg skin contusion (hematoma)	Belt webb/buckle
1=Minor	Upper extremity skin contusion	Air bag-DR side

Occupant: 2003-12-91-1-2



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 16 -15 6	
Est. δV with sequence number	DELTA V CODED 1	
CDC	11 F 9 9 9 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

22.802

Rollover Characteristics

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

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 99 BAC 0.xx)

Not DIVIDED THREE STRAIGHT DOWNHILL GRADE ASPHALT DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Dodge D,W-series Pickup 1995 TRUCK LARGE PICKUP 191

Pre-Crash Driver Data

Accident Type69Pre-event MovementGOING STRAIGHTCritical Pre-crash EventOPP DIR-OVR LEFTAttempted Avoidance Maneu-
verNo AVOIDANCEPre-impact StabilityTRACKINGPre-impact LocationSTAYED IN LANE

PASSENGER Factors

Age	19	Height	183	Weight	84
Gender MALE					
Ejectio	n		No EJECTION		
Ejection	n Area		No EJECTION		
Entrapi	ment		Not ENTRAPPED		

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

Occupant	2003-12-91-1-2
MAIS	1=Minor
Seat Position	Front right side

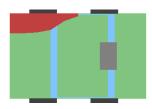
AIS Level	Injury Description	Contacts
1=Minor	Neck skin abrasion	Belt webb/buckle

Occupant: 2003-12-91-2-1



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 16 -12 -10	
Est. δV with sequence number	DELTA V CODED 1	
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	1 R F E W 4 7 21 47 54 57 57 85 185 VEHICLE NO. 1 VEHICLE NO. 1	

NASS Weighting Factor

Weighting factor

22.802

Rollover Characteristics

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

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition **Light Conditions** Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 0 BAC 0.xx)

Not DIVIDED THREE STRAIGHT UPHILL GRADE ASPHALT DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model

Year Class Body Type Weight Chevrolet C,K,R,V-series Pickup 1991 TRUCK LARGE PICKUP 203

Pre-Crash Driver Data

Accident Type68Pre-event MovementTURNING LEFTCritical Pre-crash EventTURN LEFT-INTERSAttempted Avoidance Maneu-No AVOIDANCEverVerPre-impact StabilityTRACKINGPre-impact LocationSTAYED IN LANE

DRIVER Factors

Age45Height178Weight109GenderMALEEjectionNo EJECTIONEjection AreaNo EJECTIONEntrapmentJAMMED DOOR/FIRE

Restrain	Lap and shoulder
AOPS	NÔ
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 st Seat	Not EQUIP/AVAIL
Airbag Deployment - Oth	Not EQUIP W/ OTH
Seat	

Occupant	2003-12-91-2-1
MAIS	3=Serious
Seat Position	Front left side

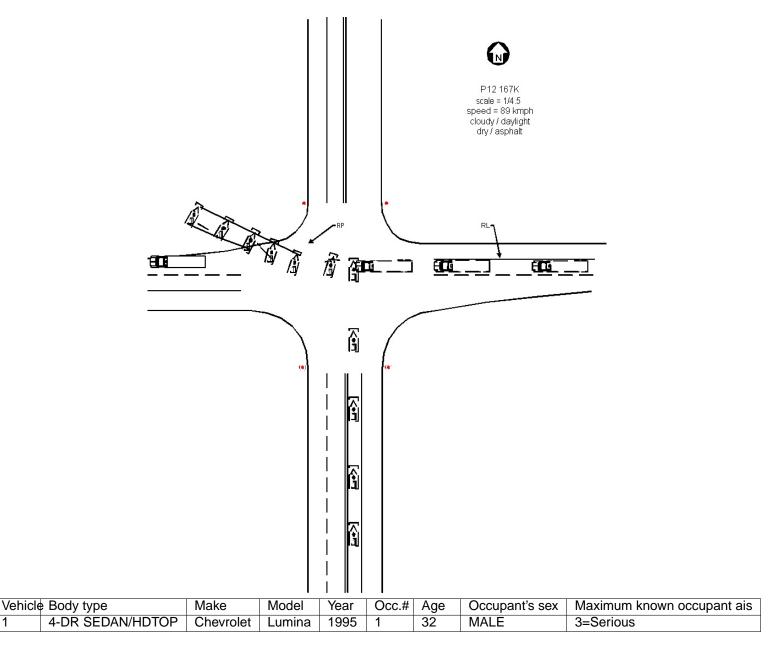
AIS Level	Injury Description	Contacts
3=Serious 2=Moderate	Femoral shaft fracture Calcaneus fracture	Steering rim
1=Minor	297602	Mirror
1=Minor	Facial skin laceration, minor	Mirror
1=Minor	Leg skin contusion (hematoma)	Left apnel
1=Minor	Leg skin abrasion	Left apnel
1=Minor	Leg skin laceration, minor	Foot controls
2=Moderate	Ankle collateral or cruciate ligament laceration	Foot controls
2=Moderate	Tibial fracture me- dial malleolus, open/displaced/commin	Foot controls uted

10Case 2003-12-167

Summary:

1

Vehicle 1 was heading north in the 2nd lane of a 3 lane, 2 way, dry, asphalt roadway, during dry, daylight conditions. Vehicle 2 was heading west in the 2nd lane of a 3 lane, 2 way, asphalt roadway during the same conditions as vehicle 1. As vehicle 1 entered the intersection the right side of the vehicle was contacted by the front of vehicle 2 causing vehicle 1 to go off road on the north west side of the intersection and come to rest. Vehicle 2 came to rest on the roadway facing west. Vehicle 1 was towed from the scene of the crash due to severe damage to the right side. Vehicle 2 was driven from the scene. The occupant of vehicle 1 was wearing his lap shouder belt. The frontal airbags in vehicle 1 did not deploy. The occupant of vehicle 1 was transported to a local trauma center where he was hospitilized for his injuries. There were no injuries reported to the occupant of vehicle 2.)



Occupant: 2003-12-167-1-1



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

Fuel Cap Location Fuel Tank Damage Fuel Type No fire No fire No fuel leakage Metallic Forward of rear axle, centered Left side, behind rear axle Deformed Gasoline

1



Crash Severity

Nr. Quarter Turns Impact Speed	No rollover 999
Total, Longitudal, and Lateral δV	999 999 999
Est. δV with sequence num-	DELTA V CODED
ber	
CDC	63 R D A W 4
Damage (C1-C6)	5 43 66 62 33 0
Crush (L and D)	303 19
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	0

NASS Weighting Factor

Weighting factor

22.802

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	No rollover				
Principal Tripping Force was					
Applied					
Direction of Initial Roll	No rollover				

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment Roadway Profile Roadway Surface Type Roadway Surface Condition **Light Conditions Atmospheric Conditions** Relation to Intersection **Traffic Control Device** Police Reported Alcohol Presence Alcohol Test (< 95 indicates BAC 0.xx)

Not DIVIDED TWO STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

Not REPORTED

tes 99

Vehicle Factors

Make-Model Year Class Body Type Weight Chevrolet Lumina 1995 PASSENGER CAR 4-DR SEDAN/HDTOP 151

Pre-Crash Driver Data

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

DRIVER Factors

Age	32	Height	175	Weight	86
Gende	r		MALE		
Ejectio	n		No EJE	CTION	
Ejectio	n Area		No EJE	CTION	
Entrap	ment		Not EN	TRAPPED	

Restraint Factors

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

Occupant	2003-12-167-1-1
MAIS	3=Serious
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor	Upper extremity skin contusion	Right B pillar
1=Minor	Leg skin abrasion	Knee bolster
2=Moderate	Scapular fracture	Right B pillar
2=Moderate	Acromioclavicular joint dislocation	Right B pillar
3=Serious	Lung contusion, uni- lateral	Oth interior obj
3=Serious	450211	Oth interior obj
2=Moderate	Cervical transverse process fracture, no cord injury	Right B pillar
2=Moderate	Hepatic laceration NFS	Oth interior obj
2=Moderate	Awake on admission, prior unconscious, length NFS	Right B pillar
1=Minor	Scalp contusion	Unknown SOURCE

11 Case 2003-12-172

Summary:

Both vehicles were involved in the crash on a 3 lane, wet, asphalt roadway after dark and with little or no artificial lighting. Vehicle 1 had been involved in a prior crash and was stopped in the roadway in the center lane headed north west while vehicle 2 was in lane 2 headed south. The front of vehicle 2 contacted the right of vehicle 1. Vehicle 1 then rotated counterclockwise and the right of vehicle again struck vehicle 2 but on the left in a sideslap motion. Vehicle 1 kept spinning until the rear contacted the cement center wall. Both drivers were transported to medical attention and both vehicles were towed. The Airbags in vehicle 2 deployed while the airbag in vehicle 1 had already deployed in the prior accident and was unavailable for use in this crash.)

No picture available

Vehi	cleBody type	Make	Model	Year	Occ.	# Age	Occupant's sex	Maximum known occupant ais
1	2DR SEDAN/HT/CPE	Ford	Thunderbird	1994	1	20	MALE	3=Serious
2	4-DR SEDAN/HDTOP	Ford	Taurus	1999	1	61	FEMALE-NOT PREG	2=Moderate

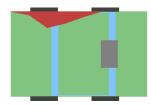
Occupant: 2003-12-172-1-1



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed	No rollover 998
Total, Longitudal, and Lateral δV	17 11 -13
Est. δV with sequence num-	DELTA V CODED 1
ber	
CDC	44 R Y E W 3
Damage (C1-C6)	0 16 35 47 10 0
Crush (L and D)	202 42
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	CONCRETE BARRIER

NASS Weighting Factor

Weighting factor

44.235

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 99 BAC 0.xx)

DVDED/W/BARRIER THREE STRAIGHT LEVEL ASPHALT WET DARK No ADVERSE COND INTERCHANGE REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight

Ford Thunderbird 1994 PASSENGER CAR 2DR SEDAN/HT/CPE 356

Pre-Crash Driver Data

Accident Type	98
Pre-event Movement	STOPPED IN LANE
Critical Pre-crash Event	Same DIR-HISPEED
Attempted Avoidance Maneu-	No AVOIDANCE
ver	
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

Age	20	Height	173	Weight	73
Gende	r		MALE		
Ejectio	n		No EJE	CTION	
Ejectio	n Area		No EJE	CTION	
Entrap	ment		JAMME	D DOOR/FI	RE

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

Occupant	2003-12-172-1-1
MAIS	3=Serious
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor	Upper extremity skin laceration, minor	Flying glass
3=Serious	Unconsciousness <1 hour & neuro deficit	Other noncontact
1=Minor	Upper extremity skin contusion	Seat, back
1=Minor	Thoracic skin lacera- tion, minor	Flying glass

Occupant: 2003-12-172-2-1

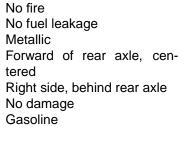


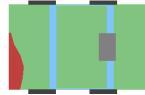
Fire Information

No fire

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

Fuel Cap Location Fuel Tank Damage Fuel Type





Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral	No rollover 998 38 -38 < 0.5 KMPH
δV	
Est. δV with sequence num-	DELTA V CODED 1
ber	
CDC	12 F Y E W 2
Damage (C1-C6)	33 40 44 34 15 7
Crush (L and D)	145 -25
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	VEHICLE NO. 1

NASS Weighting Factor

Weighting factor

44.235

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic FlowDNumber of Travel LanesTIRoadway AlignmentSiRoadway ProfileLIRoadway Surface TypeARoadway Surface ConditionWLight ConditionsDAtmospheric ConditionsNRelation to IntersectionINTraffic Control DevicePolicePoliceReportedAlcohol Test (< 95 indicates</td>0BAC 0.xx)D

DVDED/W/BARRIER THREE STRAIGHT LEVEL ASPHALT WET DARK No ADVERSE COND INTERCHANGE REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Ford Taurus 1999 PASSENGER CAR 4-DR SEDAN/HDTOP 151

Pre-Crash Driver Data

Accident Type	98
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	STOPPED
Attempted Avoidance Maneu-	No AVOIDANCE
ver	
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

Age	61	Height	157	Weight	113
Gende	r	FEMALE-NOT PREG			
Ejectio	n		No EJECTION		
Ejectio	ection Area No EJECTION				
Entrap	ment		Not ENTRAPPED		

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

Occupant	2003-12-172-2-1
MAIS	2=Moderate
Seat Position	Front left side

AIS Level	Injury Description	Contacts
2=Moderate	Radial fracture, closed	Transmiss lever
1=Minor	Neck skin contusion (hematoma)	Belt webb/buckle
1=Minor	Upper extremity skin contusion	Belt webb/buckle
1=Minor	Thoracic skin contu- sion	Belt webb/buckle
1=Minor	Abdominal skin contu- sion	Belt webb/buckle
1=Minor	Ankle joint sprain	Foot controls

12Case 2003-12-186

Summary:

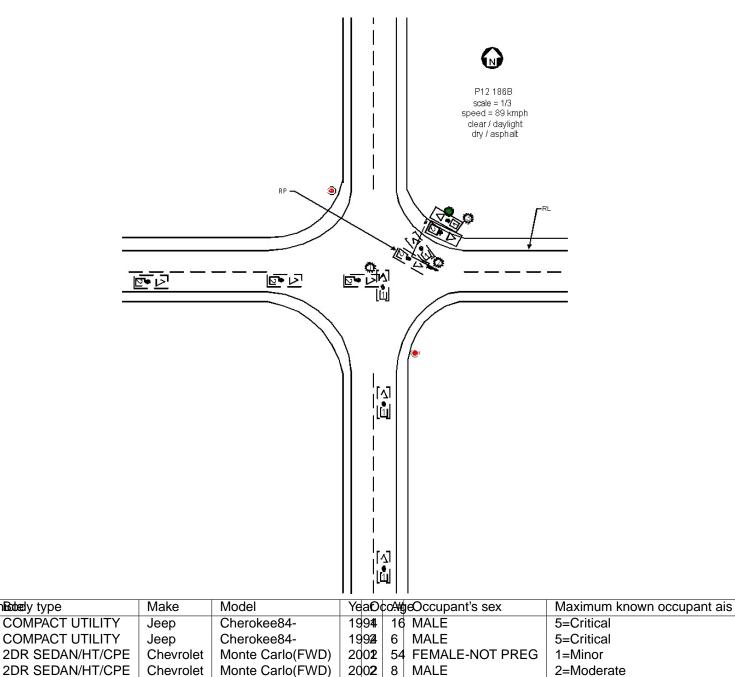
Veh Bobely type

1

1 2

2

Vehicle 1, a 1994 Jeep Grand Cherokee, was heading north on a 2 lane, 2 way, dry, asphalt, roadway during clear, daylight conditions. Vehicle 2, a 2002 Chevrolet Monte Carlo, was heading east on a 2 lane, 2 way, dry, asphalt roadway under the same conditions as vehicle 1. As vehicle 1 proceeded through the intersection its left side was contacted by the front of vehicle 2. This impact caused both vehicles to rotate slightly and contact again, with the left rear of vehicle 1 contacting the left front of vehicle 2. Vehicle 1 was then pushed off road on the north east corner of the intersection where the right side contacted a large tree and then came to rest against the tree. Vehicle 2 came to rest in the same area as vehicle 1 with its left front side almost resting against the left rear of vehicle 1. Both vehicles were towed due to damage, vehicle 1 due to severe damage. All four occupants involved in this crash were front seat occupants and they all had their lap shoulder belts on. The driver's airbag in vehicle 1 and both frontal airbags in vehicle 2 did deploy. The occupants of vehicle 1 were extricated from the vehicle transported to a local trauma center where they were hospitilized. The driver of vehicle 1 was hospitalized for 7 days before he passed away. The occupant of vehicle 1 is still hospitalized after 26 days in the hospital, he is a 6 year old child. The occupants of vehicle 2 were also transported to a local trauma center where occupant 1 was treated released for her injuries, but occupant 2 was hospitalized for 5 days.)



Occupant: 2003-12-186-1-1



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 57 -20 -54
Est. δV with sequence number	DELTA V CODED 3
CDC	62 R Y A W 4
Damage (C1-C6)	15 61 70 55 13 0
Crush (L and D)	264 1
Object Contacted 1	LARGE TREE
Object Contacted 2	VEHICLE NO. 2

NASS Weighting Factor

Weighting factor

28.099

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment Roadway Profile Roadway Surface Type Roadway Surface Condition **Light Conditions Atmospheric Conditions** Relation to Intersection **Traffic Control Device** Police Reported Alcohol Presence Alcohol Test (< 95 indicates 0 BAC 0.xx)

Not DIVIDED TWO STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Jeep Cherokee84-1994 TRUCK COMPACT UTILITY 161

Pre-Crash Driver Data

Accident Type	89
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	CROSS OVER INTER
Attempted Avoidance Maneu-	No AVOIDANCE
ver	
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

DRIVER Factors

Age	16	Height	168	Weight	70
Gende	r		MALE		
Ejectio	n		No EJE	CTION	
Ejectio	n Area		No EJE	CTION	
Entrapr	ment		ENTRA	PPED	

Restraint Factors

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

Injuries

Occupant MAIS Seat Position

2003-12-186-1-1 5=Critical Front left side

AIS Level	Injury Description	Contacts
1=Minor 2=Moderate	690202 Hepatic laceration, minor (<3cms deep, EBL<202=Moderate	Left interior Splenic laceration, minor (tear<3cms deep, no major vessel)
Left interior		
1=Minor	Scalp abrasion	Head restraint
1=Minor	Abdominal skin abra- sion	Seat, back
1=Minor	Leg skin contusion (hematoma)	Left hardware
1=Minor	Scalp laceration, mi- nor	Head restraint
1=Minor	Leg skin contusion (hematoma)	Floor
4=Severe	Cerebral subdural hematoma, small (<50ccs)	Head restraint
4=Severe	Bladder laceration with perforation (full thickness)	Left hardware
4=Severe	Cerebral intraventric- ular hemorrhage	Head restraint
2=Moderate	Thoracic vertebral body fracture, minor (<203=Serious	Cerebral contusion, single, NFS
Head restraint	.	
3=Serious	Cerebral subarach- noid hemorrhage	Head restraint
3=Serious	Pelvic fracture, open/displaced/comm	Left interior inuted
3=Serious	Pelvic fracture, open/displaced/comm	Left hardware inuted
2=Moderate	Pelvic fracture, closed	
5=Critical	Cerebral diffuse ax- onal injury	Head restraint
3=Serious	Lung contusion NFS	Left interior
1=Minor	Scalp laceration, mi- nor	Head restraint

Occupant: 2003-12-186-1-2



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 57 -20 -54
Est. δV with sequence number	DELTA V CODED 3
CDC	62 R Y A W 4
Damage (C1-C6)	15 61 70 55 13 0
Crush (L and D)	264 1
Object Contacted 1	LARGE TREE
Object Contacted 2	VEHICLE NO. 2

NASS Weighting Factor

Weighting factor

28.099

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment Roadway Profile Roadway Surface Type Roadway Surface Condition **Light Conditions Atmospheric Conditions** Relation to Intersection **Traffic Control Device** Police Reported Alcohol Presence Alcohol Test (< 95 indicates 0 BAC 0.xx)

Not DIVIDED TWO STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Jeep Cherokee84-1994 TRUCK COMPACT UTILITY 161

Pre-Crash Driver Data

Accident Type	89
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	CROSS OVER INTER
Attempted Avoidance Maneu-	No AVOIDANCE
ver	
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

PASSENGER Factors

Age	6	Height	112	Weight	23
Gender			MALE		
Ejection	1		No EJI	ECTION	
Ejection	Area		No EJI	ECTION	
Entrapm	nent		JAMM	ED DOOR/FIF	RE

Restraint Factors

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

Injuries

Occupant MAIS Seat Position 2003-12-186-1-2 5=Critical Front right side

AIS Level	Injury Description	Contacts
5=Critical	Cerebral diffuse ax- onal injury	Right B pillar
4=Severe	Lung contusion, bilat- eral	Right B pillar
1=Minor	Facial skin contusion	Right interior
1=Minor	Leg skin contusion (hematoma)	Right hardware
2=Moderate	Pancreatic laceration, minor (no duct in- volvement)	Right B pillar
1=Minor	Conjunctiva injury	Right interior
1=Minor	297602	Right interior
5=Critical	Intracerebral hematoma, small, bilateral	Right B pillar
2=Moderate	Pelvic fracture, closed	Right B pillar
3=Serious	Orbit fracture,	Right interior
	open/displaced/commir	nuted
2=Moderate	Orbit fracture, closed	Other occupants
3=Serious	Basilar skull fracture, NFS	Other occupants
3=Serious	Cerebral contusions, multiple, bilateral but NFS	Right B pillar
1=Minor	Facial skin laceration NFS	Right interior

Occupant: 2003-12-186-2-1



Fire Information

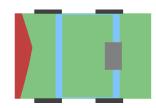
Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

Fuel Cap Location

Fuel Tank Damage

Fuel Type

Minor fire 9 No fuel leakage Non-metallic Forward of rear axle, centered Left side, behind rear axle No damage Gasoline



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 33 -31 -11
Est. δV with sequence number	DELTA V CODED 1
CDC	81 F D E W 3
Damage (C1-C6)	15 29 42 52 37 21
Crush (L and D)	160 0
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	VEHICLE NO. 1

NASS Weighting Factor

Weighting factor

28.099

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic FlowNNumber of Travel LanesTRoadway AlignmentSRoadway ProfileLiRoadway Surface TypeARoadway Surface ConditionDLight ConditionsDAtmospheric ConditionsNRelation to IntersectionINTraffic Control DevicePolicePoliceReportedAlcohol Test (< 95 indicates</td>0BAC 0.xx)D

Not DIVIDED TWO STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Chevrolet Monte Carlo(FWD) 2002 PASSENGER CAR 2DR SEDAN/HT/CPE 152

Pre-Crash Driver Data

Accident Type	88
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	XING ST-X PATH
Attempted Avoidance Maneu-	No AVOIDANCE
ver	
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

Age	54	Height	152	Weight	91
Gender	-		FEMAL	E-NOT PRE	G
Ejectior	า		No EJECTION		
Ejectior	Ejection Area No EJECTION				
Entrapr	nent		Not ENTRAPPED		

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

Occupant	2003-12-186-2-1
MAIS	1=Minor
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor	Neck skin abrasion	Belt webb/buckle
1=Minor	Neck skin contusion (hematoma)	Belt webb/buckle
1=Minor	Abdominal skin contu-	Belt webb/buckle
1=Minor	Upper extremity skin contusion	Other occupants
1=Minor	Upper extremity skin laceration, minor	Other occupants
1=Minor	Thoracic skin contu- sion	Belt webb/buckle
1=Minor	Leg skin contusion (hematoma)	Knee bolster
1=Minor	Upper extremity skin abrasion	Air bag-DR side

Occupant: 2003-12-186-2-2



Fire Information

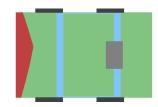
Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

Fuel Cap Location

Fuel Tank Damage

Fuel Type

Minor fire 9 No fuel leakage Non-metallic Forward of rear axle, centered Left side, behind rear axle No damage Gasoline



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 33 -31 -11
Est. δV with sequence number	DELTA V CODED 1
CDC	81 F D E W 3
Damage (C1-C6)	15 29 42 52 37 21
Crush (L and D)	160 0
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	VEHICLE NO. 1

NASS Weighting Factor

Weighting factor

28.099

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic FlowNNumber of Travel LanesTRoadway AlignmentSRoadway ProfileLiRoadway Surface TypeARoadway Surface ConditionDLight ConditionsDAtmospheric ConditionsNRelation to IntersectionINTraffic Control DevicePolicePoliceReportedAlcohol Test (< 95 indicates</td>0BAC 0.xx)D

Not DIVIDED TWO STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Chevrolet Monte Carlo(FWD) 2002 PASSENGER CAR 2DR SEDAN/HT/CPE 152

Pre-Crash Driver Data

Accident Type88Pre-event MovementGOING STRAIGHTCritical Pre-crash EventXING ST-X PATHAttempted Avoidance Maneu-No AVOIDANCEverPre-impact StabilityTRACKINGPre-impact LocationSTAYED IN LANE

PASSENGER Factors

Age	8	Height	127	Weight	36
Gende	r		MALE		
Ejectio	n		No EJE	ECTION	
Ejectio	n Area		No EJE	ECTION	
Entrap	Entrapment Not ENTRAPPED				

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

Occupant	2003-12-186-2-2
MAIS	2=Moderate
Seat Position	Front right side

AIS Level	Injury Description	Contacts
1=Minor	Abdominal skin abra- sion	Belt webb/buckle
2=Moderate	Nose fracture, open/displaced/commin	Other occupants outed
2=Moderate	Alveolar ridge fracture +/- tooth injury	Other occupants
1=Minor	Leg skin laceration, minor	Transmiss lever
1=Minor	297402	Other occupants
1=Minor	Leg skin abrasion	Transmiss lever
1=Minor	Facial skin laceration	Other occupants
1=Minor	Abdominal skin contu- sion	Belt webb/buckle

13 Case 2003-13-75

Summary:

V1 was traveling westbound on a dry, 2-lane, 2-way road. V1 passed a vehicle ahead and lost control. V1 spun 100 degrees counterclockwise into the path of V2, which was traveling eastbound on the same road. The front of V2 impacted the right side of V1. Both vehicles were towed from the scene with moderate damage. The driver of V1 was hospitalized with critical head injuries. The driver of V2 was treated and released from the ER with minor injuries.

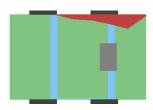
Veh	cBody type	Make	Model	Year Occ	.#Age	Occupant's sex	Maximum known occupant ais
1	3DR/2DR HATCHBAK	Ford	Mustang/Mustang II	19921	18	MALE	5=Critical
2	4-DR SEDAN/HDTOP	Pontiac	Grand AM	19921	20	MALE	1=Minor

Occupant: 2003-13-75-1-1



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 38 7 -37
Est. δV with sequence number	DELTA V CODED 1
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	63 R Z E W 3 3 41 27 16 13 0 275 -92 VEHICLE NO. 2 0

NASS Weighting Factor

Weighting factor

91.106

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment Roadway Profile Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates BAC 0.xx)

Not DIVIDED TWO STRAIGHT DOWNHILL GRADE ASPHALT DRY DAYLIGHT No ADVERSE COND NONINTER/NONJUNC

No ALCOHOL

es 99

Vehicle Factors

Make-Model Year Class Body Type Weight Ford Mustang/Mustang II 1992 PASSENGER CAR 3DR/2DR HATCHBAK 129

Pre-Crash Driver Data

Accident Type68Pre-event MovementGOING STRAIGHTCritical Pre-crash EventOVER LINE-LEFTAttempted Avoidance Maneu-99verPre-impact StabilityPre-impact LocationLAT SKID-CTR CLKLeft TRAVEL LANE

Age	18	Height	185	Weight	68
Gender			MALE		
Ejectior	า		No EJE	CTION	
Ejectior	n Area		No EJE	CTION	
Entrapr	nent		Not EN	TRAPPED	

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

Occupant	2003-13-75-1-1
MAIS	5=Critical
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor 1=Minor 1=Minor	297202 Leg skin abrasion Facial skin contusion	Right interior Left apnel Right interior
3=Serious	Lung contusion, unilat- eral	Transmiss lever
1=Minor 5=Critical	Scalp contusion Intracerebral hematoma, small, bilateral	Right interior Right interior

Occupant: 2003-13-75-2-1

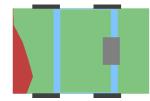


Fire Information

No fire

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral	No rollover 998 37 -36 6
δV	
Est. δV with sequence number	DELTA V CODED 1
CDC	12 F D E W 3
Damage (C1-C6)	41 59 46 29 3 0
Crush (L and D)	155 0
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	0

NASS Weighting Factor

Weighting factor

91.106

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	No rollover		
Principal Tripping Force was			
Applied			
Direction of Initial Roll	No rollover		

Pre-Crash Environment

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

No ALCOHOL

Vehicle Factors

96

Make-Model Year Class Body Type Weight Pontiac Grand AM 1992 PASSENGER CAR 4-DR SEDAN/HDTOP 131

Pre-Crash Driver Data

Accident Type	69
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	OPP DIR-OVR LEFT
Attempted Avoidance Maneu-	BRAKE+STEER RT
ver	
Pre-impact Stability	LONGITUDINAL SKID
Pre-impact Location	STAYED IN LANE

Age	20	Height	170	Weight	73
Gender	•		MALE		
Ejectior	า		No EJE	CTION	
Ejectior	n Area		No EJE	CTION	
Entrapr	nent		Not EN	TRAPPED	

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

Occupant	2003-13-75-2-1
MAIS	1=Minor
Seat Position	Front left side

AIS Level	Injury Description	Contacts	
1=Minor 1=Minor	Facial skin contusion Leg skin contusion	Steering rim Floor	
	(hematoma)	1.001	
1=Minor	Leg skin abrasion	Left apnel	

14 Case 2003-41-125

Summary:

V1, a 2002 Ford Focus, was traveling northbound in lane two of a dry, bitumious, level roadway. V2, a 1983 Pontiac Bonneville, was traveling southbound in lane three of a dry, bitumious divided roadway in the opposite direction - same roadway. V3, an unknown truck, was northbound in the inside lane three traveling next to V1. A curbed median separated the directions of travel. As V3 was passing V1 in its correct lane, V1 drifted to the left and V3 sideswiped V1 right-to-left. V3 fled the scene. After the intial impact, V1 began to rotate counterclockwise and travel towards the center median. The right front and right rear wheels of V1 came in contact with the curbed median. The vehicle continued traveling across the median in a westerly direction. As V1 exited the west side of the median, the front of V2 came in contact with the right side of V1. Both drivers were transported to a trauma center with incapacitating injures. The driver of V1 was expired prior to admission. V1 and V2 were towed; V3 was not identified.)

No picture available

Ve	hiBdeedy type	Make	Model	YearOo	c#geOccupant's sex	Maximum known occupant ais
1	3DR/2DR HATCHBAK	Ford	Focus	2002	25 FEMALE-NOT PREG	6=Maximum
2	4-DR SEDAN/HDTOP	Pontiac	Bonneville/Catalina	198 3	45 FEMALE-NOT PREG	3=Serious

Occupant: 2003-41-125-1-1

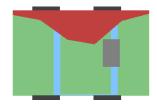


Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

Fuel Cap Location Fuel Tank Damage Fuel Type

No fire No fire No fuel leakage Non-metallic Forward of rear axle, right side Right side, behind rear axle No damage Gasoline



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence number	SEVERE 4
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1	2 R D A W 6 8 29 98 85 27 12 340 8 VEHICLE NO. 2
Object Contacted 2	CURB

NASS Weighting Factor

Weighting factor

20.087

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	No rollover		
Principal Tripping Force was			
Applied			
Direction of Initial Roll	No rollover		

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 97 BAC 0.xx)

DVDED/NO BARRIER THREE STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND NONINTER/NONJUNC

Vehicle Factors

9

Make-Model Year Class Body Type Weight

Ford Focus 2002 PASSENGER CAR 3DR/2DR HATCHBAK 116

Pre-Crash Driver Data

Accident Type	47
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	OVER LINE-LEFT
Attempted Avoidance Maneu-	99
ver	
Pre-impact Stability	TRACKING
Pre-impact Location	Left TRAVEL LANE

Age	25	Height	168	Weight	67
Gender FEMALE-NOT PREG				G	
Ejectio	n		No EJECTION		
Ejection Area			No EJECTION		
Entrap	Itrapment Not ENTRAPPED				

Lap and shoulder
YES-RES DET
BAG DEPLOYED
DR
Not EQUIP W/ OTH

Injuries

Occupant MAIS Seat Position 2003-41-125-1-1 6=Maximum Front left side

AIS Level	Injury Description	Contacts
1=Minor	Facial skin laceration, minor	Flying glass
1=Minor 1=Minor 1=Minor 1=Minor 6=Maximum	297202 Scalp abrasion Facial skin abrasion Facial skin abrasion Cord laceration, com- plete, C3 or above, with dislocation	Head restraint Head restraint Seat, back Seat, back Other noncontact
3=Serious	Cervical odontoid (dens) fracture, no cord injury	Other noncontact
1=Minor	Abdominal skin lacer- ation	Transmiss lever
1=Minor	Abdominal skin abra- sion	Transmiss lever
1=Minor	Abdominal skin con- tusion	Belt webb/buckle
5=Critical	>3 rib fxs on each side, stable chest & hemo-/pneumothorax	Seat, back
2=Moderate 6=Maximum	Pleural laceration Thoracic aortic lacer- ation, and extramedi- astinal bleeding	Seat, back Seat, back
3=Serious 3=Serious	Sacroilium fracture Symphysis pubis sep- aration or fracture	Transmiss lever Transmiss lever
1=Minor	Upper extremity skin abrasion	Seat, back
1=Minor	Upper extremity skin contusion	Seat, back
1=Minor	Upper extremity skin abrasion	Air bag-DR side
1=Minor	Leg skin abrasion	Seat, back
1=Minor	Leg skin contusion (hematoma)	Transmiss lever
1=Minor	Leg skin contusion (hematoma)	Knee bolster
1=Minor 1=Minor	Leg skin abrasion Upper extremity skin laceration NFS	Knee bolster Left interior
2=Moderate 1=Minor	Pelvic fracture NFS Leg skin contusion (hematoma)	Transmiss lever Foot controls
1=Minor 1=Minor	Leg skin abrasion Leg skin abrasion	Foot controls Center panel

Occupant: 2003-41-125-2-1



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence number	SEVERE 4
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	11 F D E W 3 42 50 59 68 79 92 170 0 VEHICLE NO. 1 0

NASS Weighting Factor

Weighting factor

20.087

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment Roadway Profile Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates BAC 0.xx)

DVDED/NO BARRIER THREE STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND NONINTER/NONJUNC

Vehicle Factors

9

96

Make-Model Year Class Body Type Weight Pontiac Bonneville/Catalina 1983 PASSENGER CAR 4-DR SEDAN/HDTOP 144

Pre-Crash Driver Data

Accident Type	98
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	OPP DIR-OVR LEFT
Attempted Avoidance Maneu-	BRAKE UNK LOCKUP
ver	
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

Age	45	Height	165	Weight	63
Gende	r	FEMALE-NOT PREG			
Ejectio	n		No EJECTION		
Ejectio	ction Area No EJECTION				
Entrap	ment	Not ENTRAPPED			

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

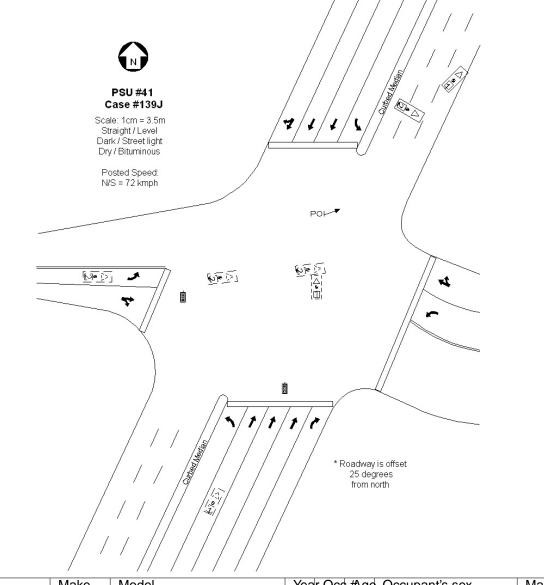
Occupant	2003-41-125-2-1
MAIS	3=Serious
Seat Position	Front left side

AIS Level	Injury Description	Contacts
2=Moderate 3=Serious	Orbit fracture NFS Thoracic cavity injury NFS, with hemo-	Steering rim Sterring hub
1=Minor	/pneumothorax Multiple hand tendons lacera- tion/rupture/tear NFS	Left apnel
1=Minor	Mandible fracture NFS	Steering rim
1=Minor	Thoracic skin contu- sion	Sterring hub
1=Minor	Facial skin laceration, minor	Steering rim

15 Case 2003-41-139

Summary:

V1, a passenger car with one occupant, was traveling northbound in lane three of a two-way, seven-lane, divided roadway without positive barrier. V2, a passenger car with one occupant, was traveling eastbound in lane two of a two-way, three-lane, undivided roadway. V1 was passing through the intersection, as V2 was attempting to make a left turn. The front of V1 made contact with the right side of V2. Both vehicles were towed due to damage. The driver and passenger air bags for both vehicles deployed during the crash as a result of impact forces. The driver of V1 was transported with nonincapacitating injuries. The driver of V2 was transported with incapacitating injuries. There were no adverse environmental or mechanical conditions relating to the crash.)



Veh	id Beody type	Make	Model	Year Oco	.#Age	Occupant's sex	Maximum known occupa
1	2DR SEDAN/HT/CPE	Pontiac	J-2000/2000/Sunbird (84+)	20031	44	FEMALE-NOT PREG	7=Unk. sev.
2	4-DR SEDAN/HDTOP	Nissan	Altima	20021	23	FEMALE-NOT PREG	3=Serious

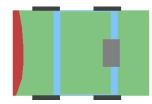
Occupant: 2003-41-139-1-1



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed	No rollover 998
Total, Longitudal, and Lateral	65 -61 22
δV	
Est. δV with sequence num-	DELTA V CODED 1
ber	
CDC	71 F D E W 2
Damage (C1-C6)	9 27 32 31 27 18
Crush (L and D)	136 0
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	0

NASS Weighting Factor

Weighting factor

17.944

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

DVDED/NO BARRIER FOUR STRAIGHT LEVEL ASPHALT DRY DARK/LIGHTED No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model

Year Class Body Type Weight Pontiac J-2000/2000/Sunbird (84+) 2003 PASSENGER CAR 2DR SEDAN/HT/CPE 118

Pre-Crash Driver Data

Accident Type77Pre-event MovementGOING STRAIGHTCritical Pre-crash EventCROSS OVER INTERAttempted Avoidance Maneu-99verPre-impact StabilityPre-impact LocationSTAYED IN LANE

Age	44	Height	999	Weight	999	
Gender			FEMAL	E-NOT PRE	G	
Ejection			No EJECTION			
Ejection Area			No EJECTION			
Entrapr	nent		Not EN	ITRAPPED		

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

Injuries

Occupant	2003-41-139-1-1
MAIS	7=Unk. sev.
Seat Position	Front left side

AIS Level Injury Description Contacts

Occupant: 2003-41-139-2-1

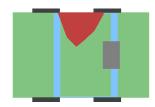


Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

Fuel Cap Location Fuel Tank Damage Fuel Type

No fire No fire No fuel leakage Non-metallic Forward of rear axle, centered Left side, behind rear axle Deformed Gasoline



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 57 -19 -54
Est. δV with sequence number	DELTA V CODED 1
CDC	2 R P E W 7
Damage (C1-C6)	5 52 78 100 72 2
Crush (L and D)	250 -6
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	0

NASS Weighting Factor

Weighting factor

17.944

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

Not DIVIDED THREE STRAIGHT LEVEL ASPHALT DRY DARK/LIGHTED No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight

Nissan Altima 2002 PASSENGER CAR 4-DR SEDAN/HDTOP 136

Pre-Crash Driver Data

Accident Type 76 Pre-event Movement TURNING LEFT Critical Pre-crash Event XING ST-X PATH Attempted Avoidance Maneu-99 ver Pre-impact Stability 9 Pre-impact Location STAYED IN LANE

Age	23	Height	999	Weight	999
Gende	r		FEMAL	E-NOT PRE	G
Ejectio	n		No EJECTION		
Ejection Area			No EJECTION		
Entrap	ment		9		

Lap and shoulder
YES-RES DET
BAG DEPLOYED
DR
Not EQUIP W/ OTH

Occupant	2003-41-139-2-1
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	Right interior
1=Minor	Leg skin contusion (hematoma)	Right interior
1=Minor	Thoracic spine strain, acute without fracture or dislocation	Right interior
1=Minor	Leg skin abrasion	Right interior
1=Minor	Leg skin abrasion	Floor
1=Minor	Leg skin laceration NFS	Floor
1=Minor	Facial skin abrasion	Right interior
1=Minor	Thoracic skin contu- sion	Right interior
1=Minor	Abdominal skin contu- sion	Right interior
2=Moderate	Kidney laceration NFS	Right interior
2=Moderate	Splenic injury NFS	Left hardware

16 Case 2003-41-156

Summary:

V1, a passenger car with one occupant, was traveling eastbound in lane one of a two-way, two-lane, undivided roadway. V2, a compact pickup truck with one occupant, was traveling northbound in lane one of a two-way, two-lane, undivided roadway. Both vehicles were approaching the same intersection. As the two vehicles entered the intersection, the right side of V1 made contact with the front of V2. both vehicles were towed due to damage. V1 and V2's driver and passenger air bags deployed as a result of impact forces. The driver of V1 was transported and hospitalized with incapacitating injuries. The driver of V2 was transported and released. There were no adverse environmental or mechanical conditions relating to the crash.)

No picture available

Vehicle	Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	4-DR SEDAN/HDTOP	Chevrolet	Malibu	1998	1	19	MALE	3=Serious
2	COMPACT PICKUP	Dodge	Dakota	2002	1	26	MALE	2=Moderate

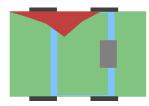
Occupant: 2003-41-156-1-1



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed	No rollover 998
Total, Longitudal, and Lateral	49 -25 -42
δV	
Est. δV with sequence num-	DELTA V CODED 1
ber	
CDC	62 R Y A W 5
Damage (C1-C6)	0 28 73 35 16 0
Crush (L and D)	284 45
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	WALL

NASS Weighting Factor

Weighting factor

30.113

Rollover Characteristics

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

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

Not DIVIDED TWO STRAIGHT LEVEL ASPHALT DRY DARK/LIGHTED No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Chevrolet Malibu 1998 PASSENGER CAR 4-DR SEDAN/HDTOP 141

Pre-Crash Driver Data

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

Age	19	Height	170	Weight	64
Gender	•		MALE		
Ejectior	า		No EJE	CTION	
Ejectior	n Area		No EJE	CTION	
Entrapr	nent		ENTRA	PPED	

Lap and shoulder YES-RES DET
BAG DEPLOYED
DR
Not EQUIP W/ OTH

Occupant	2003-41-156-1-1
MAIS	3=Serious
Seat Position	Front left side

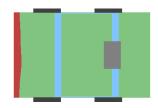
AIS Level	Injury Description	Contacts
2=Moderate	Mesenteric laceration, minor	Transmiss lever
2=Moderate	Pancreatic contusion	Transmiss lever
1=Minor	Facial skin laceration	Center panel
1=Minor	Scalp contusion	Center panel
3=Serious	Cerebral contusion, NFS	Center panel
3=Serious	Unconscious on ad- mission, length NFS	Center panel

Occupant: 2003-41-156-2-1



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 16 -14 8
Est. δV with sequence number	DELTA V CODED 1
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	11 F D E W 1 16 18 23 21 19 17 160 0 VEHICLE NO. 1 0

NASS Weighting Factor

Weighting factor

30.113

Rollover Characteristics

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

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

Not DIVIDED TWO STRAIGHT LEVEL ASPHALT DRY DARK/LIGHTED No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Dodge Dakota 2002 TRUCK COMPACT PICKUP 425

Pre-Crash Driver Data

Accident Type86Pre-event MovementGOING STRAIGHTCritical Pre-crash EventXING ST-X PATHAttempted Avoidance Maneu-No AVOIDANCEverPre-impact StabilityTRACKINGPre-impact LocationSTAYED IN LANE

Age	26	Height	183	Weight	127
Gende	r		MALE		
Ejectio	n		No EJE	CTION	
Ejectio	n Area		No EJE	CTION	
Entrap	ment		Not EN	TRAPPED	

None used/avail
YES-RES DET
BAG DEPLOYED
DR
Not EQUIP W/ OTH

Occupant	2003-41-156-2-1
MAIS	2=Moderate
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor	Acute cervical spine strain without fracture or dislocation	Roof left rail
2=Moderate 1=Minor 1=Minor	Knee sprain Scalp contusion Leg skin contusion (hematoma)	Knee bolster Roof left rail Knee bolster

17 Case 2003-42-50

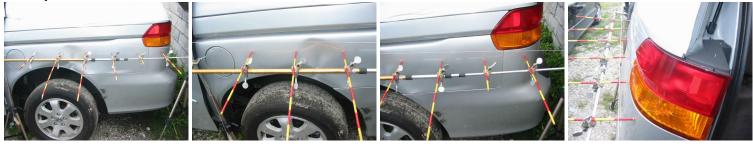
Summary:

V1 and V2 were traveling in the northbound lanes of a seven lane/two-way highway. V1 was traveling in the third lane and V2 was traveling in the fourth lane. V3 was traveling in the southbound lanes in the fourth lane. V1 changed lanes from the third to the fourth lane in front of V2 and its left side collided with V2's right. After the impact with V2, V1 crossed over into the southbound lanes were its right side front was struck by the front of V3. The right side of V1 the side slapped the left side of V3. There were four occupants in V1, two in V2 and only the driver in V3. V1's driver and the rear left child occupant sustained "B" type injuries. The rear right and third row left occupants in V1 sustained "C" type injuries. The driver of V3 sustained "B" type injuries. The driver's of V1 and V3 and the three occupants of V1 were transported to a local hospital for treatment. The driver of V2 was not injured in the crash. V1 and V3 were towed due to damage. V2 was driven from the scene. V3 - The weight of the cargo reinforcing the seatback contributed to the forward motion of the driver resulting in loading through the airbag. The driver's stature was also a contributing factor for loading through the airbag.)

No picture available

Vehi	cleBody type	Make	Model	Year	Occ.	# Age	Occupant's sex	Maximum known occupant ais
1	MINIVAN	Honda	Odyssey	2003	1	40	FEMALE-NOT PREG	3=Serious
1	MINIVAN	Honda	Odyssey	2003	2	5	MALE	1=Minor
1	MINIVAN	Honda	Odyssey	2003	3	4	MALE	7=Unk. sev.
1	MINIVAN	Honda	Odyssey	2003	4	9	MALE	9
3	COMPACT UTILITY	Jeep	Cherokee84-	2000	1	54	MALE	3=Serious

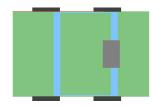
Occupant: 2003-42-50-1-1



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 32 -16 -28
Est. δV with sequence number	DELTA V CODED 2
CDC	2 R Y E W 4
Damage (C1-C6)	000000
Crush (L and D)	0 0
Object Contacted 1	VEHICLE NO. 3
Object Contacted 2	VEHICLE NO. 3

NASS Weighting Factor

Weighting factor

18.025

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

DVDED/NO BARRIER FOUR STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND NONINTER/NONJUNC

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Honda Odyssey 2003 TRUCK MINIVAN 198

Pre-Crash Driver Data

Accident Type47Pre-event MovementCHANGING LANESCritical Pre-crash EventOVER LINE-LEFTAttempted Avoidance Maneu-
ver99VerTRACKINGPre-impact StabilityTRACKING
Left TRAVEL LANE

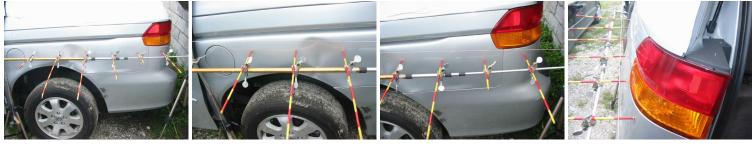
Age	40	Height	999	Weight	999
Gender	ſ	FEMALE-NOT PREG			
Ejectior	า		No EJECTION		
Ejectior	n Area		No EJECTION		
Entrapr	ment		Not ENTRAPPED		

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

Occupant	2003-42-50-1-1
MAIS	3=Serious
Seat Position	Front left side

AIS Level	Injury tion	Descrip-	Contacts
2=Moderate	Hepatic ation, (<3cms EBL<202	lacer- minor deep, =Moderate	Clavicle fracture
Belt webb/buckle			
1=Minor	Abdomina abrasion	al skin	Belt webb/buckle
1=Minor	Upper skin contu	extremity usion	Belt webb/buckle
1=Minor	Leg skin (hematom	contusion na)	Oth interior obj
1=Minor	Thoracic tusion	skin con-	Belt webb/buckle
1=Minor	Abdomina contusion	al skin	Oth interior obj
3=Serious	Lung unilateral	contusion,	575
3=Serious		odontoid acture, no y	Other noncontact

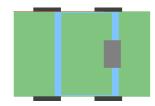
Occupant: 2003-42-50-1-2



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 32 -16 -28
Est. δV with sequence number	DELTA V CODED 2
CDC	2 R Y E W 4
Damage (C1-C6)	000000
Crush (L and D)	0 0
Object Contacted 1	VEHICLE NO. 3
Object Contacted 2	VEHICLE NO. 3

NASS Weighting Factor

Weighting factor

18.025

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition **Light Conditions** Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

DVDED/NO BARRIER FOUR STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND NONINTER/NONJUNC

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Honda Odyssey 2003 TRUCK MINIVAN 198

Pre-Crash Driver Data

Accident Type47Pre-event MovementCHANGING LANESCritical Pre-crash EventOVER LINE-LEFTAttempted Avoidance Maneu-99verPre-impact StabilityTRACKINGPre-impact LocationLeft TRAVEL LANE

PASSENGER Factors

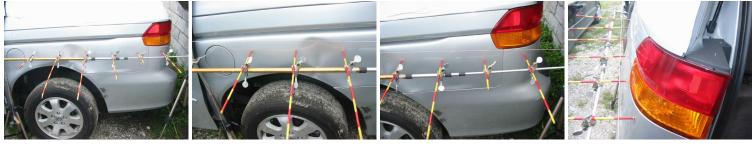
Age	5	Height	999	Weight	26
Gender			MALE		
Ejection	า		No EJE	ECTION	
Ejection	n Area		No EJE	ECTION	
Entrapn	nent		Not EN	ITRAPPED	

Restrain	Lap+sh w/ch seat
AOPS	YES-RES DET
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 st Seat	ONLY DR BAG DEPL
Airbag Deployment - Oth	BAG DEPLOYED
Seat	

Occupant	2003-42-50-1-2
MAIS	1=Minor
Seat Position	Second left

AIS Level	Injury Description	Contacts
1=Minor	Neck skin contusion (hematoma)	Belt webb/buckle
1=Minor	Neck skin abrasion	Belt webb/buckle
1=Minor	Abdominal skin abra- sion	Belt webb/buckle
1=Minor	Abdominal skin contu- sion	Belt webb/buckle
1=Minor	Leg skin abrasion	Belt webb/buckle
1=Minor	Upper extremity skin abrasion	Belt webb/buckle

Occupant: 2003-42-50-1-3

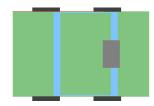


Fire Information

No fire

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 32 -16 -28
Est. δV with sequence num-	DELTA V CODED 2
ber CDC	2 R Y E W 4
Damage (C1-C6)	000000
Crush (L and D)	0 0
Object Contacted 1	VEHICLE NO. 3
Object Contacted 2	VEHICLE NO. 3

NASS Weighting Factor

Weighting factor

18.025

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition **Light Conditions** Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

DVDED/NO BARRIER FOUR STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND NONINTER/NONJUNC

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight

Honda Odyssey 2003 TRUCK MINIVAN 198

Pre-Crash Driver Data

Accident Type47Pre-event MovementCHANGING LANESCritical Pre-crash EventOVER LINE-LEFTAttempted Avoidance Maneu-99verPre-impact StabilityTRACKINGPre-impact LocationLeft TRAVEL LANE

PASSENGER Factors

Age	4	Height	999	Weight	999
Gender MALE					
Ejection No EJECTION					
Ejection Area No EJECTION					
Entrapr	Entrapment Not ENTRAPPED				

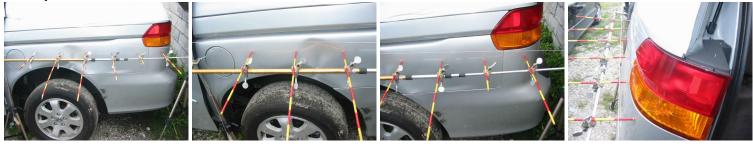
Restrain	Lap+sh w/ch seat
AOPS	YES-RES DET
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 st Seat	ONLY DR BAG DEPL
Airbag Deployment - Oth	BAG DEPLOYED
Seat	

Injuries

Occupant	2003-42-50-1-3
MAIS	7=Unk. sev.
Seat Position	Second right

AIS Level Injury Description Contacts

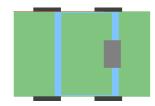
Occupant: 2003-42-50-1-4



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 32 -16 -28
Est. δV with sequence number	DELTA V CODED 2
CDC	2 R Y E W 4
Damage (C1-C6)	000000
Crush (L and D)	0 0
Object Contacted 1	VEHICLE NO. 3
Object Contacted 2	VEHICLE NO. 3

NASS Weighting Factor

Weighting factor

18.025

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition **Light Conditions** Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

DVDED/NO BARRIER FOUR STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND NONINTER/NONJUNC

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Honda Odyssey 2003 TRUCK MINIVAN 198

Pre-Crash Driver Data

Accident Type47Pre-event MovementCHANGING LANESCritical Pre-crash EventOVER LINE-LEFTAttempted Avoidance Maneu-99verPre-impact StabilityPre-impact LocationTRACKINGLeft TRAVEL LANE

PASSENGER Factors

Age	9	Height	999	Weight	999
Gender MALE					
Ejection No EJECTION					
Ejection Area No EJECTION					
Entrapment Not ENTRAPPED					

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 st Seat	ONLY DR BAG DEPL
Airbag Deployment - Oth	BAG DEPLOYED
Seat	

Injuries

Occupant	2003-42-50-1-4
MAIS	9
Seat Position	Third left

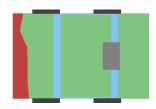
AIS Level Injury Description Contacts

Occupant: 2003-42-50-3-1



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 36 -34 12
Est. δV with sequence number	DELTA V CODED 2
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	71 F D E W 2 48 43 44 42 21 30 160 0 VEHICLE NO. 1 VEHICLE NO. 1

NASS Weighting Factor

Weighting factor

18.025

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 0 BAC 0.xx)

DVDED/NO BARRIER FOUR STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND NONINTER/NONJUNC

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Jeep Cherokee84-2000 TRUCK COMPACT UTILITY 180

Pre-Crash Driver Data

Accident Type98Pre-event MovementGOING STRAIGHTCritical Pre-crash EventOPP DIR-OVR LEFTAttempted Avoidance Maneu-
ver99VerTRACKINGPre-impact StabilityTRACKINGPre-impact LocationSTAYED IN LANE

Age	54	Height	999	Weight	120
Gender MALE					
Ejection No EJECTION					
Ejection Area No EJECTION					
Entrapment Not ENTRAPPED					

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

Occupant	2003-42-50-3-1
MAIS	3=Serious
Seat Position	Front left side

AIS Level	Injury Description	Contacts
2=Moderate	Thoracic transverse process fracture without cord injury	Seat, back
3=Serious	Thoracic lamina frac- ture without cord in- jury	Seat, back
3=Serious	>3 rib fractures one side & <3 other side, with stable chest	Steering comb
2=Moderate	Scapular fracture	Int loose obj
1=Minor	Upper extremity skin laceration, minor	Int loose obj
2=Moderate	Talus fracture	Foot controls
2=Moderate	Metatarsal or tarsal fracture	Foot controls
2=Moderate	Metatarsal or tarsal fracture	Foot controls
1=Minor	Toe fracture	Foot controls
2=Moderate	Ankle joint dislocation NFS	Foot controls
1=Minor	851203	Foot controls
2=Moderate	Knee laceration into joint	Knee bolster
2=Moderate	Patellar fracture	Knee bolster

$\mathbf{18}$ Case 2003-43-183

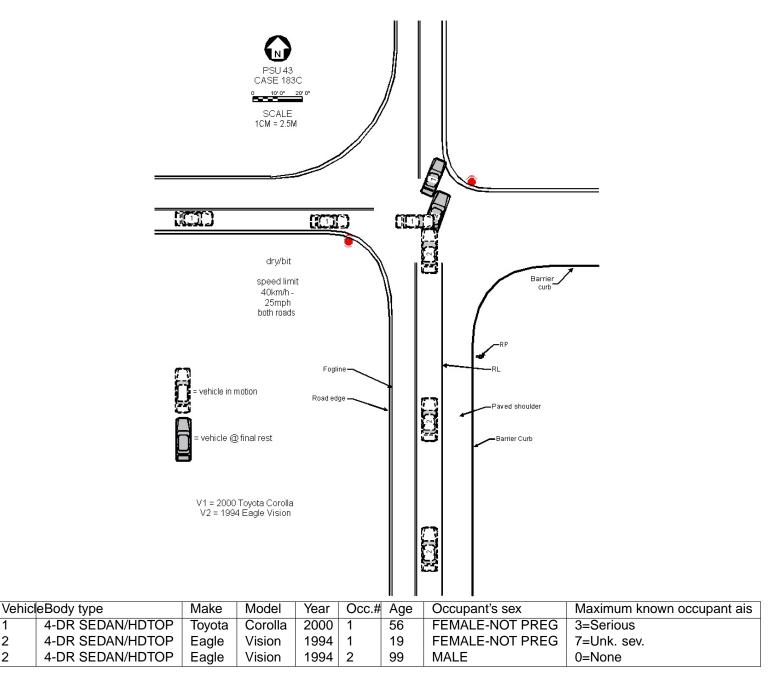
Summary:

1

2

2

V1, a 2000 Toyota Corolla, was traveling east towards an intersection on a dry, bituminous, two-lane roadway. V2, a 1994 Eagle Vision, was traveling north towards the same intersection on a dry, bituminous, two-lane roadway. Weather was clear and lighting condition was daylight. Both vehicles entered the intersection. The front of V2 contacted the right side of V1. Both vehicles were towed due to damage. The driver of V1 sustained "A" injuries and was transported and released from a hospital. The driver of V2 sustained "B" injuries. The RF passenger of V2 reported no injuries at the time. V1 was equipped with driver and passenger frontal airbags, none of which deployed. V2 was equipped with driver and passenger frontal airbags, which deployed due to impact forces.)



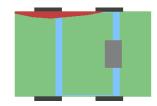
Occupant: 2003-43-183-1-1



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 17 -6 -16
Est. δV with sequence number	DELTA V CODED 1
CDC	2 R Y E W 2
Damage (C1-C6)	0 10 15 19 16 4
Crush (L and D)	133 128
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	0

NASS Weighting Factor

Weighting factor

117.627

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

Not DIVIDED TWO STRAIGHT UPHILL GRADE ASPHALT DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight

Toyota Corolla 2000 PASSENGER CAR 4-DR SEDAN/HDTOP 110

Pre-Crash Driver Data

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

Age	56	Height	160	Weight	68
Gender FEMALE-NOT PREG			G		
Ejection No EJECTION					
Ejection Area No EJECTION		ECTION			
Entrapr	Intrapment Not ENTRAPPED				

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

Injuries

Occupant	2003-43-183-1-1
MAIS	3=Serious
Seat Position	Front left side

AIS Level Injury Description Contacts

3=Serious		Steering rim
	open/displaced/comminu	Jtea
1=Minor	Upper extremity skin	Steering rim
	contusion	5
1=Minor	Upper extremity skin	Left interior
	contusion	
1=Minor	Leg skin contusion	Transmiss lever
	(hematoma)	
1=Minor	Leg skin contusion	Knee bolster
	(hematoma)	

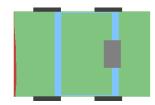
Occupant: 2003-43-183-2-1



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral	No rollover 998 12 -10 6
δV Est. δV with sequence num-	DELTA V CODED 1
ber	
CDC	11 F D E W 1
Damage (C1-C6)	487521
Crush (L and D)	152 0
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	0

NASS Weighting Factor

Weighting factor

117.627

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	No rollover		
Principal Tripping Force was			
Applied			
Direction of Initial Roll	No rollover		

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

Not DIVIDED TWO STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Eagle Vision 1994 PASSENGER CAR 4-DR SEDAN/HDTOP 153

Pre-Crash Driver Data

Accident Type86Pre-event MovementGOING STRAIGHTCritical Pre-crash EventXING ST-X PATHAttempted Avoidance Maneu-99verPre-impact StabilityPre-impact LocationSTAYED IN LANE

Age	19	Height	999	Weight	999
Gender			FEMALE-NOT PREG		
Ejectio	Ejection No EJECTION				
Ejection Area			No EJECTION		
Entrapment		Not ENTRAPPED			

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

Injuries

Occupant	2003-43-183-2-1
MAIS	7=Unk. sev.
Seat Position	Front left side

AIS Level Injury Description Contacts

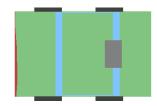
Occupant: 2003-43-183-2-2



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 12 -10 6
Est. δV with sequence number	DELTA V CODED 1
CDC	11 F D E W 1
Damage (C1-C6)	487521
Crush (L and D)	152 0
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	0

NASS Weighting Factor

Weighting factor

117.627

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	No rollover		
Principal Tripping Force was			
Applied			
Direction of Initial Roll	No rollover		

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

Not DIVIDED TWO STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Eagle Vision 1994 PASSENGER CAR 4-DR SEDAN/HDTOP 153

Pre-Crash Driver Data

Accident Type86Pre-event MovementGOING STRAIGHTCritical Pre-crash EventXING ST-X PATHAttempted Avoidance Maneu-99verPre-impact StabilityPre-impact LocationSTAYED IN LANE

PASSENGER Factors

Age	99	Height	999	Weight	999
Gender MALE					
Ejectio	Ejection No EJECTION				
Ejection Area No EJE			CTION		
Entrapment		Not ENTRAPPED			

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

Injuries

Occupant	2003-43-183-2-2
MAIS	0=None
Seat Position	Front right side

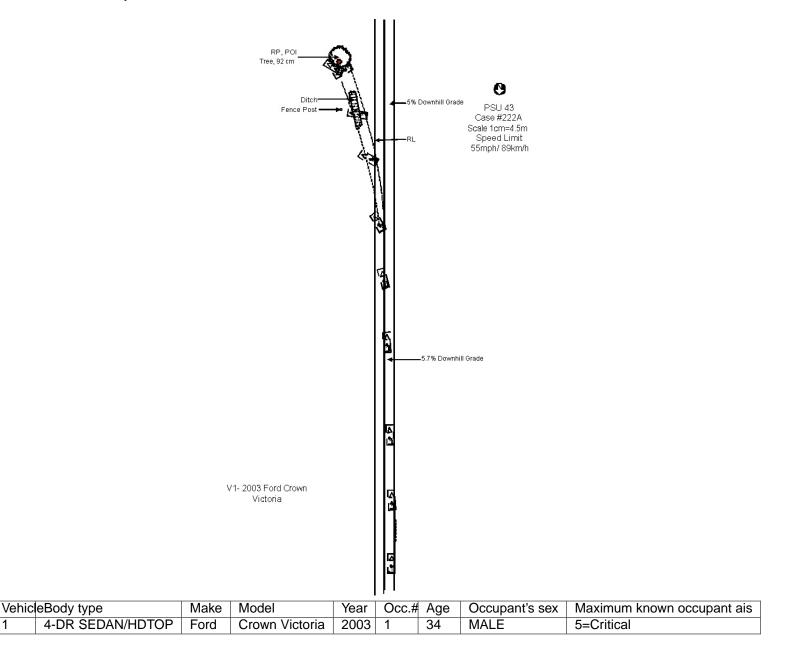
AIS Level Injury Description Contacts

Case 2003-43-222 19

Summary:

1

V1 (2003 Ford Crown Victoria) was traveling South in lane 1 of a 2-lane bituminous asphalt roadway. The weather was clear and it was dark. The roadway had a 5.7

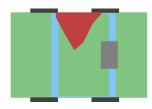


Occupant: 2003-43-222-1-1



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 70 < 0.5 KMPH -70
Est. δV with sequence number	DELTA V CODED 1
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	3 R P A W 5 2 32 87 109 63 13 266 -31 LARGE TREE 0

NASS Weighting Factor

Weighting factor

41.835

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic FlowNNumber of Travel LanesTRoadway AlignmentSRoadway ProfileDRoadway Surface TypeARoadway Surface ConditionDLight ConditionsDAtmospheric ConditionsNRelation to IntersectionNTraffic Control DevicePolicePoliceReportedAlcohol Test (< 95 indicates</td>0BAC 0.xx)D

Not DIVIDED TWO STRAIGHT DOWNHILL GRADE ASPHALT DRY DARK No ADVERSE COND NONINTER/NONJUNC

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Ford Crown Victoria 2003 PASSENGER CAR 4-DR SEDAN/HDTOP 184

Pre-Crash Driver Data

Accident Type	1
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	Unk CONTROL LOSS
Attempted Avoidance Maneu-	99
ver	
Pre-impact Stability	LAT SKID-CTR CLK
Pre-impact Location	DEPARTED ROADWAY

Age	34	Height	178	Weight	109
Gende	r		MALE		
Ejectio	n		No EJECTION		
Ejectio	n Area		No EJECTION		
Entrap	ment		JAMMED DOOR/FIRE		

Restrain AOPS Airbag Deployment Airbag Deployment - 1st SeatNONDEPLOYEDAirbag Deployment - OthNot EQUIP W/ OTH Seat

Lap and shoulder YES-RES DET NONDEPLOYED

Injuries

Occupant MAIS Seat Position

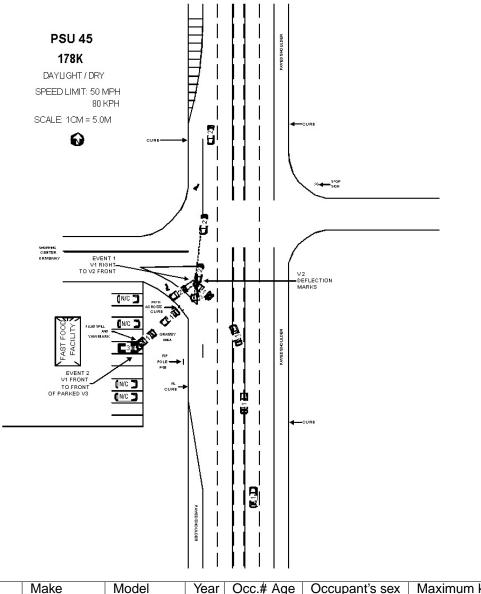
2003-43-222-1-1 5=Critical Front left side

AIS Level	Injury Descrip- tion	Contacts
1=Minor	Facial skin abra- sion	Roof
1=Minor	Upper extremity skin contusion	Right interior
1=Minor	Leg skin abrasion	Seat, back
1=Minor	Upper extremity skin abrasion	Right interior
2=Moderate	751900	Right interior
1=Minor	Mandible fracture NFS	Roof
4=Severe	Basilar skull frac- ture, open, with brain tissue loss.	Roof
3=Serious	Cerebral sub- arachnoid hemor- rhage	Roof
2=Moderate	Cervical vertebral body fracture, no cord injury NFS	Roof
2=Moderate	Clavicle fracture	Right B pillar
2=Moderate	Clavicle fracture	Right B pillar
5=Critical	>3 rib fxs on each side, stable chest & hemo- /pneumothorax	Right B pillar
2=Moderate	Pericardial lacera- tion (puncture)	Right B pillar
5=Critical	Myocardial lacera- tion with perfora- tion (+/- tampon- ade)	Right B pillar
4=Severe	Vena cava lacera- tion, major (com- plete transect or EBL>204=Severe	Hepatic lacer- ation, major (<502=Moderate
Pelvic fracture NFS	Right B pillar	
4=Severe	Lung contusion, bilateral	Right B pillar
2=Moderate	Skull fracture, vault, NFS	Roof

20 Case 2003-45-178

Summary:

V1 a 1985 Oldsmobile Cutlass was traveling north on a five lane non-physically divided asphalt highway with a center two way left turn lane in daylight and dry conditions. V2 a 2002 Chrysler PT Cruiser was traveling south in the right lane. The driver of V1 attempted to turn left into a shopping center. As V1 was crossing the soutbound lanes, the right of V1 and front of V2 contacted. V1 rotated counter-clockwise traveling southwest across the curb, and down a grassy hill before it's front contacted the front of V3, a parked 1994 Chevrolet Astro van, where V1 came to rest. V2 traveled southwest coming to rest facing southwest near the curb at the southwest corner of the intersection. The belted driver of V1 was hospitalized, while the non-belted airbag deployed V2 driver was transported and released from the hospital. The disabled V1 and V2 were towed from the crash, while parked V3 was driven from the scene.)



Ve	hicleBody type	Make	Model	Year	Occ.#	‡ Age	Occupant's sex	Maximum known occupant ais
1	4-DR SEDAN/HDTOP	Oldsmobile	Ciera	1985	1	53	MALE	4=Severe
2	5DR/4DR HATCHBAK	Chrysler	PT Cruiser	2002	1	19	MALE	2=Moderate

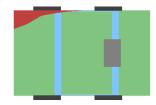
Occupant: 2003-45-178-1-1



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed	No rollover 998
Total, Longitudal, and Lateral	20 -10 -17
δV	
Est. δV with sequence num-	DELTA V CODED 1
ber	
CDC	2 R F E E 4
Damage (C1-C6)	0 2 7 15 38 53
Crush (L and D)	119 191
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	Not IN TRAN LGTVEH

NASS Weighting Factor

Weighting factor

69.163

Rollover Characteristics

Number of Events	2
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object	No rollover
Contacted	
Location on Vehicle where	No rollover
Principal Tripping Force was	
Applied	
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 INTERSECTION REL Traffic Control Device Police Reported Alcohol ALCOHOL PRESENT Presence Alcohol Test (< 95 indicates 95 BAC 0.xx)

Vehicle Factors

Make-Model Year Class Body Type Weight Oldsmobile Ciera 1985 PASSENGER CAR 4-DR SEDAN/HDTOP 125

Pre-Crash Driver Data

Accident Type	68
Pre-event Movement	TURNING LEFT
Critical Pre-crash Event	TRAVEL OPP DIR
Attempted Avoidance Maneu-	No AVOIDANCE
ver	
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

Age	53	Height	183	Weight	86
Gender	Gender MALE				
Ejectior	n No EJECTION				
Ejectior	jection Area No EJECTION				
Entrapr	nent		Not ENTRAPPED		

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

Occupant	2003-45-178-1-1
MAIS	4=Severe
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor	Upper extremity skin contusion	Belt webb/buckle
1=Minor	Thoracic skin contu- sion	Belt webb/buckle
1=Minor	Abdominal skin contu- sion	Belt webb/buckle
4=Severe	Colonic laceration massive (tissue loss, gross contamination	Belt webb/buckle
2=Moderate	Colonic contusion (hematoma)	Belt webb/buckle

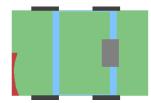
Occupant: 2003-45-178-2-1



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 18 -16 9
Est. δV with sequence num-	DELTA V CODED 1
ber	
CDC	11 F L E E 5
Damage (C1-C6)	20 12 8 5 9 17
Crush (L and D)	150 -58
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	0

NASS Weighting Factor

Weighting factor

69.163

Rollover Characteristics

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

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

Not DIVIDED FIVE STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Chrysler PT Cruiser 2002 TRUCK 5DR/4DR HATCHBAK 141

Pre-Crash Driver Data

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

Age	19	Height	178	Weight	75
Gende	r		MALE		
Ejectio	n		No EJE	CTION	
Ejectio	n Area		No EJE	CTION	
Entrap	ment		Not EN	TRAPPED	

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

Occupant	2003-45-178-2-1
MAIS	2=Moderate
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor	Acute cervical spine strain without fracture or dislocation	Other noncontact
1=Minor	Lumbar spine acute strain without fracture or dislocation	Seat, back
1=Minor	Leg skin abrasion	Knee bolster
2=Moderate	C-spine dislocation no bone or cord involve- ment NFS	Other noncontact
1=Minor	Upper extremity skin abrasion	Air bag-DR side

$\mathbf{21}$ Case 2003-45-203

Summary:

1

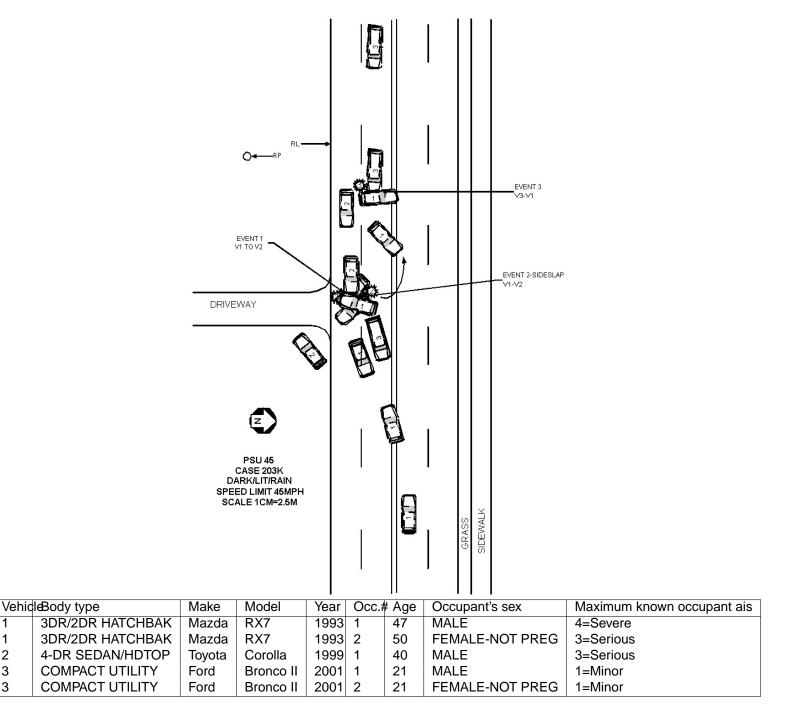
1

2

3

3

V1 was westbound in the inside lane of a four lane urban road under dark/lit/rain conditions with a speed limit of 45 MPH. V2 was eastbound in the outside lane and V3 was eastbound in the inside lane. V1 crossed over the center line, and V1 right front impacted V2 front. V1 and V2 then sideslapped with V1 right to V2 left. V1 continued to spin counterclockwise, and V3 front impacted V1 left side. Belted driver and belted RF occupant of V1 were transported and admitted for treatment. Belted driver of V2 was also transported and was admitted for 7 days. Belted driver and belted RF occupant of V3 were transported and released from medical facility. All three vehicles were towed from the scene.)



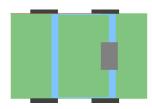
Occupant: 2003-45-203-1-1



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location Fuel Cap Location Fuel Tank Damage Fuel Type

No fire No fire No fuel leakage Metallic Behind rear axle, centered Left side, behind rear axle No damage Gasoline



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 34 -17 -29
Est. δV with sequence number	DELTA V CODED 1
CDC	2 R Y E W 4
Damage (C1-C6) Crush (L and D)	0 0 0 0 0 0 0 0
Object Contacted 1 Object Contacted 2	VEHICLE NO. 2 VEHICLE NO. 3

NASS Weighting Factor

Weighting factor

50.218

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	No rollover		
Principal Tripping Force was			
Applied			
Direction of Initial Roll	No rollover		

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 97 BAC 0.xx)

Not DIVIDED FOUR STRAIGHT UPHILL GRADE ASPHALT WET DARK/LIGHTED RAIN NONINTER/NONJUNC

Vehicle Factors

9

Make-Model Year Class Body Type Weight

Mazda RX7 1993 PASSENGER CAR 3DR/2DR HATCHBAK 127

Pre-Crash Driver Data

Accident Type	64
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	OVER LINE-LEFT
Attempted Avoidance Maneu-	99
ver	
Pre-impact Stability	LAT SKID-CTR CLK
Pre-impact Location	Left TRAVEL LANE

Age	47	Height	999	Weight	999
Gender			MALE		
Ejection			No EJE	ECTION	
Ejection	Area		No EJE	ECTION	
Entrapm	ent		ENTRA	APPED	

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

Injuries

Occupant	2003-45-203-1-1
MAIS	4=Severe
Seat Position	Front left side

AIS Level	Injury Description	Contacts
3=Serious	Humeral fracture, open/displaced/commin	Left interior
4=Severe	Bladder laceration with perforation (full thickness)	
3=Serious	Sacroilium fracture	Seat, back
3=Serious	Pelvic fracture, open/displaced/commin	Left interior outed
2=Moderate	Pelvic fracture, closed	Left interior
2=Moderate	2-3 rib fractures with stable chest	Left interior
4=Severe	Cerebral subdural hematoma, small (<50ccs)	Left interior
3=Serious	Cerebral subarach- noid hemorrhage	Left interior

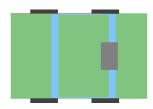
Occupant: 2003-45-203-1-2



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location Fuel Cap Location Fuel Tank Damage Fuel Type

No fire No fire No fuel leakage Metallic Behind rear axle, centered Left side, behind rear axle No damage Gasoline



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 34 -17 -29
Est. δV with sequence number	DELTA V CODED 1
CDC	2 R Y E W 4
Damage (C1-C6) Crush (L and D)	0 0 0 0 0 0 0 0
Object Contacted 1 Object Contacted 2	VEHICLE NO. 2 VEHICLE NO. 3

NASS Weighting Factor

Weighting factor

50.218

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 97 BAC 0.xx)

Not DIVIDED FOUR STRAIGHT UPHILL GRADE ASPHALT WET DARK/LIGHTED RAIN NONINTER/NONJUNC

Vehicle Factors

9

Make-Model Year Class Body Type Weight

Mazda RX7 1993 PASSENGER CAR 3DR/2DR HATCHBAK 127

Pre-Crash Driver Data

Accident Type	64
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	OVER LINE-LEFT
Attempted Avoidance Maneu-	99
ver	
Pre-impact Stability	LAT SKID-CTR CLK
Pre-impact Location	Left TRAVEL LANE

PASSENGER Factors

Age	50	Height	999	Weight	999
Gender			FEMALE-NOT PREG		
Ejectior	า		No EJECTION		
Ejectior	n Area		No EJECTION		
Entrapr	nent		ENTRAPPED		

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

Occupant	2003-45-203-1-2
MAIS	3=Serious
Seat Position	Front right side

AIS Level	Injury Description	Contacts
2=Moderate	Scalp laceration, ma- jor (>10 cms and into sub-Q)	Right A pillar
1=Minor	Toe fracture	Floor
1=Minor	Leg skin abrasion	Floor
1=Minor	Leg skin abrasion	Glove door
1=Minor	Leg skin contusion (hematoma)	Floor
3=Serious	Cervical odontoid (dens) fracture, no cord injury	Right A pillar
2=Moderate	Cervical vertebral body fracture, no cord injury, <202=Moder- ate	Cervical transverse process fracture, no cord injury
Right panel		
1=Minor	Single rib fracture	Right interior
2=Moderate	Pelvic fracture, closed	Right interior
2=Moderate	Pelvic fracture, closed	Right interior
2=Moderate	Tibial fracture of the medial malleolus	Floor
1=Minor	Awake on admission, NFS	Right A pillar
2=Moderate	Scalp laceration, ma- jor (>10 cms and into sub-Q)	Right panel

Occupant: 2003-45-203-2-1



Fire Information

No fire

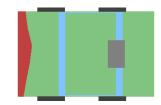
Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

Fuel Cap Location

Fuel Tank Damage

Fuel Type

No fire No fuel leakage Metallic Forward of rear axle, centered Left side, behind rear axle No damage Gasoline



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 40 -39 7
Est. δV with sequence num-	DELTA V CODED 1
ber	12 F D E W 3
CDC	
Damage (C1-C6)	17 25 35 42 29 23
Crush (L and D)	140 0
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	VEHICLE NO. 1

NASS Weighting Factor

Weighting factor

50.218

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 97 BAC 0.xx)

Not DIVIDED FOUR STRAIGHT DOWNHILL GRADE ASPHALT WET DARK/LIGHTED RAIN NONINTER/NONJUNC

Vehicle Factors

9

Make-Model Year Class Body Type Weight

Toyota Corolla 1999 PASSENGER CAR 4-DR SEDAN/HDTOP 115

Pre-Crash Driver Data

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

Age	40	Height	178	Weight	64
Gender MALE					
Ejection	jection No EJECTION				
Ejection Area No EJECTION					
Entrapm	Intrapment Not ENTRAPPED				

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

Occupant	2003-45-203-2-1
MAIS	3=Serious
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor	Leg skin contusion (hematoma)	Steering column
1=Minor	Leg skin abrasion	Steering column
3=Serious	Lung contusion, unilat- eral	Belt webb/buckle
1=Minor	Thoracic skin contu- sion	Belt webb/buckle
1=Minor	Leg skin abrasion	Knee bolster

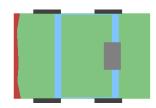
Occupant: 2003-45-203-3-1



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location Fuel Cap Location Fuel Tank Damage Fuel Type

No fire No fire No fuel leakage Metallic Forward of rear axle, left side Left side, behind rear axle No damage Gasoline



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 17 -17 -3
Est. δV with sequence number	DELTA V CODED 3
CDC	12 F D E W 1
Damage (C1-C6)	20 10 14 12 9 18
Crush (L and D)	156 0
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	0

NASS Weighting Factor

Weighting factor

50.218

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 97 BAC 0.xx)

Not DIVIDED FOUR STRAIGHT DOWNHILL GRADE ASPHALT WET DARK/LIGHTED RAIN NONINTER/NONJUNC

Vehicle Factors

9

Make-Model Year Class Body Type Weight

Ford Bronco II 2001 TRUCK COMPACT UTILITY 187

Pre-Crash Driver Data

Accident Type	98
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	OPP DIR-OVR LEFT
Attempted Avoidance Maneu-	BRAKE W/O LOCKUP
ver	
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

Age	21	Height	185	Weight	79
Gender MALE					
Ejectio	n		No EJECTION		
Ejection Area No EJECTION					
Entrap	ment		Not ENTRAPPED		

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

Occupant	2003-45-203-3-1
MAIS	1=Minor
Seat Position	Front left side

1=Minor	Thoracic	skin	contu-	Belt webb/buckle
	sion			

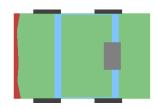
Occupant: 2003-45-203-3-2



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location Fuel Cap Location Fuel Tank Damage Fuel Type

No fire No fire No fuel leakage Metallic Forward of rear axle, left side Left side, behind rear axle No damage Gasoline



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 17 -17 -3
Est. δV with sequence number	DELTA V CODED 3
CDC	12 F D E W 1
Damage (C1-C6)	20 10 14 12 9 18
Crush (L and D)	156 0
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	0

NASS Weighting Factor

Weighting factor

50.218

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	No rollover		
Principal Tripping Force was			
Applied			
Direction of Initial Roll	No rollover		

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 97 BAC 0.xx)

Not DIVIDED FOUR STRAIGHT DOWNHILL GRADE ASPHALT WET DARK/LIGHTED RAIN NONINTER/NONJUNC

Vehicle Factors

9

Make-Model Year Class Body Type Weight

Ford Bronco II 2001 TRUCK COMPACT UTILITY 187

Pre-Crash Driver Data

Accident Type	98
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	OPP DIR-OVR LEFT
Attempted Avoidance Maneu-	BRAKE W/O LOCKUP
ver	
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

PASSENGER Factors

Age	21	Height	170	Weight	84
Gender FEMALE-NOT PREG				G	
Ejectic	n		No EJECTION		
Ejection Area No EJECTION					
Entrap	ment		Not ENTRAPPED		

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

Occupant	2003-45-203-3-2
MAIS	1=Minor
Seat Position	Front right side

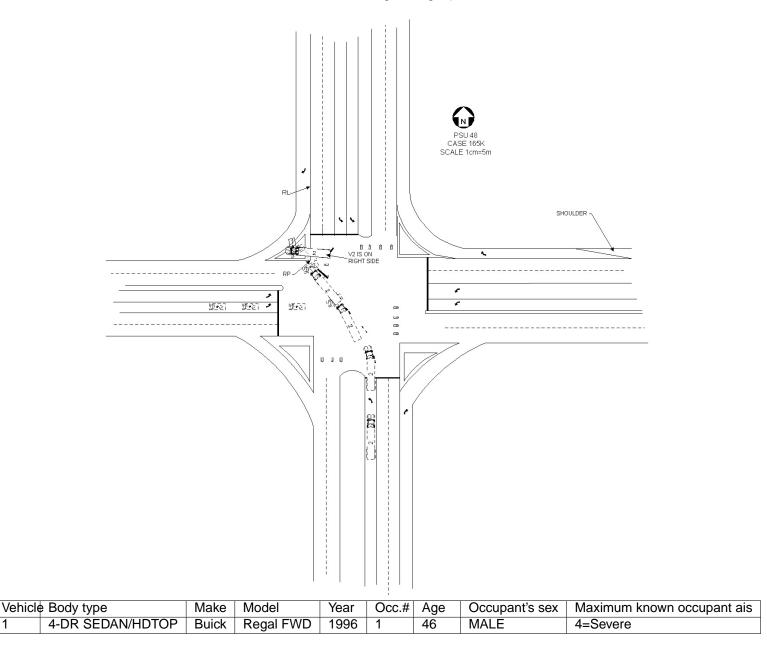
AIS Level	Injury Description	Contacts
1=Minor	Thoracic skin contu- sion	Belt webb/buckle
1=Minor	Abdominal skin contu- sion	Belt webb/buckle
1=Minor	Leg skin contusion (hematoma)	Glove door

22Case 2003-48-165

Summary:

1

Vehicle one, a 1996 Buick Regal was traveling east on a five-lane, median divided, asphalt roadway, in lane two of the left turn lanes. Vehicle one was turning left at an intersection controlled by a traffic light. Vehicle two, a 1995 Freightliner semi-truck with a single trailer traveling north on a four-lane, median divided, asphalt roadway turning left at the same intersection. As the vehicles turned, the front of Vehicle two struck the right side of Vehicle one. Vehicle one was pushed to the northwest by Vehicle two until the left side tires contacted a curb, then the left plane of the Vehicle one struck a light pole. Vehicle one then rotated clockwise and came to final rest headed south, with Vehicle two on top of it. Vehicle two rolled onto its right side when Vehicle one struck the light pole. Vehicle two came to final rest with its right plane in contact with Vehicle one. The trailer of Vehicle two was also on its right plane blocking the southbound lanes. The un-restrained driver of Vehicle one was hospitalized with rib and neck fractures as well as brain injuries. Both front air bags deployed in Vehicle one. The restrained driver of Vehicle two was transported to a local trauma center for treatment also. Both vehicles were towed due to disabling damage.)



Occupant: 2003-48-165-1-1

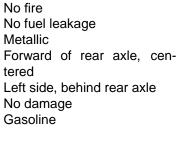


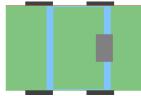
Fire Information

No fire

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

Fuel Cap Location Fuel Tank Damage Fuel Type





Crash Severity

No rollover 999 999 999 999
SEVERE 1
3 R D A W 5
000000
0 0
VEHICLE NO. 2
VEHICLE NO. 2

NASS Weighting Factor

Weighting factor

241.801

Rollover Characteristics

Number of Events	6			
Rollover Initiation Type	No rollover			
Location of Rollover Initiation	No rollover			
Rollover Initiation Object	No rollover			
Contacted				
Location on Vehicle where	No rollover			
Principal Tripping Force was				
Applied				
Direction of Initial Roll	No rollover			

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 0 BAC 0.xx)

DVDED/NO BARRIER FOUR STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

Vehicle Factors

9

Make-Model Year Class Body Type Weight

Buick Regal FWD 1996 PASSENGER CAR 4-DR SEDAN/HDTOP 151

Pre-Crash Driver Data

Accident Type	74
Pre-event Movement	TURNING LEFT
Critical Pre-crash Event	XING ST-OPP DIR
Attempted Avoidance Maneu-	99
ver	
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

Age	46	Height	183	Weight	104
Gende	r		MALE		
Ejection No EJECTION					
Ejection Area			No EJECTION		
Entrap	ment		ENTRA	PPED	

Lap and shoulder
YES-RES DET
BAG DEPLOYED
DR
Not EQUIP W/ OTH

Occupant	2003-48-165-1-1
MAIS	4=Severe
Seat Position	Front left side

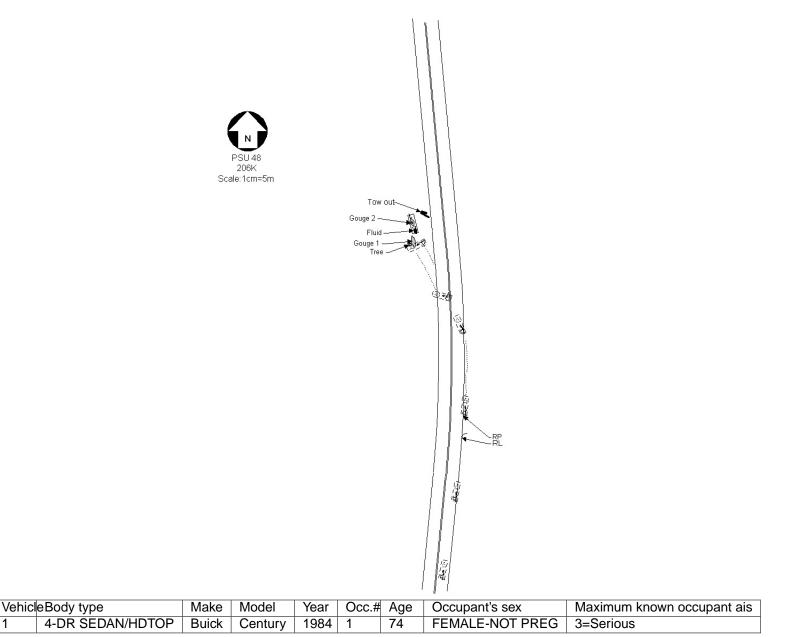
AIS Level	Injury Description	Contacts
4=Severe	Cerebral intraventric- ular hemorrhage	Right interior
4=Severe	Cerebral intraventric- ular hemorrhage	Right interior
3=Serious	Cerebral subarach- noid hemorrhage	Right interior
3=Serious	Cerebral subarach- noid hemorrhage	Right interior
4=Severe	 >3 rib fxs on one side & <3 other side & hemo-/pneumothorax 	Right interior
2=Moderate	Cervical transverse process fracture, no cord injury	Right interior
2=Moderate	Cervical transverse process fracture, no cord injury	Right interior
2=Moderate 1=Minor	Clavicle fracture Upper extremity skin	Right interior Right interior
	laceration, minor	5
2=Moderate	Lethargic on admis- sion, never uncon- scious	Right interior

Case 2003-48-206 $\mathbf{23}$

Summary:

1

Vehicle one, a 1984 Buick Century, was northbound on two-lane, dry, asphalt, level roadway negotiating a left hand curve. Vehicle one right side wheels departed the east road edge. The driver over-corrected to the left and the vehicle rotated counter-clockwise as it returned to the road. Vehicle one then departed the west road edge leading with the right side. Vehicle one right side struck a tree. The vehicle rotated around the tree counter-clockwise, rolled backward and came to final rest facing south. Vehicle one was towed due to disabling damage. The restrained driver was hospitalized with pelvic fractures.)



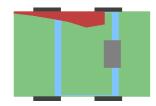
Occupant: 2003-48-206-1-1



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral	No rollover 998 23 -8 -22
δV	DELTA V CODED 1
Est. δV with sequence number	DELIA V CODED I
CDC	2 R Y E N 3
Damage (C1-C6)	37 46 30 19 11 4
Crush (L and D)	91 107
Object Contacted 1	LARGE TREE
Object Contacted 2	0

NASS Weighting Factor

Weighting factor

482.514

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

Not DIVIDED TWO CURVE LEFT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND NONINTER/NONJUNC

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Buick Century 1984 PASSENGER CAR 4-DR SEDAN/HDTOP 128

Pre-Crash Driver Data

Accident Type	7
Pre-event Movement	NEGOTIATE CURVE
Critical Pre-crash Event	OVER LINE-RIGHT
Attempted Avoidance Maneu-	BRAKE+STEER LEFT
ver	
Pre-impact Stability	LAT SKID-CTR CLK
Pre-impact Location	DEPARTED ROADWAY

Age	74	Height	165	Weight	48	
Gende	er		FEMALE-NOT PREG			
Ejectio	n		No EJECTION			
Ejection Area No EJECTION						
Entrap	Entrapment Not ENTRAPPED					

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

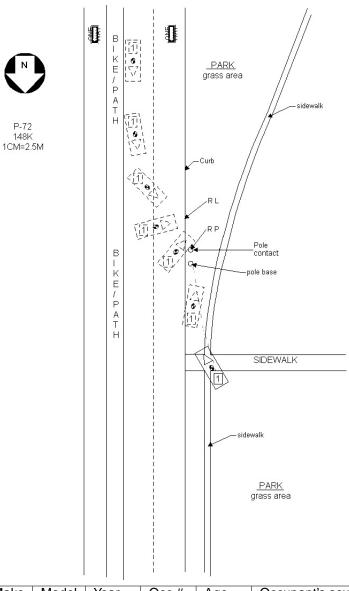
Occupant	2003-48-206-1-1
MAIS	3=Serious
Seat Position	Front left side

AIS Level	Injury Description	Contacts
3=Serious	Symphysis pubis sep- aration or fracture	Belt webb/buckle
2=Moderate	Pelvic fracture, closed	Belt webb/buckle
2=Moderate	Pelvic fracture, closed	Belt webb/buckle
2=Moderate	Diaphragm contusion	Belt webb/buckle
2=Moderate	Esophageal contu- sion or hematoma	Belt webb/buckle
3=Serious	Thoracic cavity injury NFS, with hemo- /pneumothorax	Belt webb/buckle
1=Minor	Toe fracture	Floor
1=Minor	Acute cervical spine strain without fracture or dislocation	Belt webb/buckle
1=Minor	Neck skin contusion (hematoma)	Belt webb/buckle
1=Minor	Leg skin contusion (hematoma)	Floor
2=Moderate	Awake on admission, unconscious <1 hour	Left B pillar
1=Minor	Skin abrasion (body region unknown)	Unknown SOURCE
1=Minor	Skin contusion (body region unknown)	Unknown SOURCE

24 Case 2003-72-148

Summary:

Vehicle one was traveling northbound in the second lane of a two-lane, one-way, undivided roadway. Vehicle one traveled off the left side of the roadway. Vehicle one right struck the curb and then a utility pole. Vehicle one came to rest off the roadway. Vehicle one was towed due to damage. The restrained driver was hospitalized with both bone lower leg fractures. Unrestrained passenger 4 was treated and released with minor leg abrasion and contusion. Unrestrained passenger 2 was transported with unspecified injury. Unrestrained passenger 3 was hospitalized with a brain hemorrhage.)



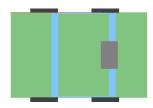
Vehicle	Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	2DR SEDAN/HT/CPE	Buick	Regal	1981	1	21	MALE	3=Serious
1	2DR SEDAN/HT/CPE	Buick	Regal	1981	2	23	MALE	7=Unk. sev.
1	2DR SEDAN/HT/CPE	Buick	Regal	1981	3	22	MALE	3=Serious
1	2DR SEDAN/HT/CPE	Buick	Regal	1981	4	20	MALE	1=Minor

Occupant: 2003-72-148-1-1



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence number	SEVERE 2
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	99 R Y E N 99 0 0 0 0 0 0 0 0 0 MEDIUM POLE CURB

NASS Weighting Factor

Weighting factor

13.900

Rollover Characteristics

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

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 0 BAC 0.xx)

ONE WAY TWO STRAIGHT LEVEL ASPHALT WET DARK RAIN NONINTER/NONJUNC

Vehicle Factors

9

Make-Model Year Class Body Type Weight

Buick Regal 1981 PASSENGER CAR 2DR SEDAN/HT/CPE 149

Pre-Crash Driver Data

Accident Type	7
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	Unk CONTROL LOSS
Attempted Avoidance Maneu-	99
ver	
Pre-impact Stability	LAT SKID-CTR CLK
Pre-impact Location	DEPARTED ROADWAY

Age	21	Height	173	Weight	85
Gender		MALE			
Ejection		No EJECTION			
Ejection Area		No EJECTION			
Entrapment JAMMED DOOR/FI		RE			

Restrain	Lap and shoulder
AOPS	NÓ
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 st Seat	Not EQUIP/AVAIL
Airbag Deployment - Oth	Not EQUIP W/ OTH
Seat	

Occupant	2003-72-148-1-1
MAIS	3=Serious
Seat Position	Front left side

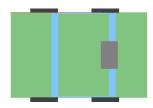
AIS Level	Injury Description	Contacts
3=Serious	Tibial shaft fracture, open/displaced/commin	
2=Moderate	Fibular head, neck, or shaft fracture	Left apnel
2=Moderate	Awake on admission, unconscious <1 hour	Steering comb

Occupant: 2003-72-148-1-2



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence number	SEVERE 2
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	99 R Y E N 99 0 0 0 0 0 0 0 0 0 MEDIUM POLE CURB

NASS Weighting Factor

Weighting factor

13.900

Rollover Characteristics

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

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 0 BAC 0.xx)

ONE WAY TWO STRAIGHT LEVEL ASPHALT WET DARK RAIN NONINTER/NONJUNC

Vehicle Factors

9

Make-Model Year Class Body Type Weight

Buick Regal 1981 PASSENGER CAR 2DR SEDAN/HT/CPE 149

Pre-Crash Driver Data

Accident Type	7
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	Unk CONTROL LOSS
Attempted Avoidance Maneu-	99
ver	
Pre-impact Stability	LAT SKID-CTR CLK
Pre-impact Location	DEPARTED ROADWAY

PASSENGER Factors

Age	23	Height	999	Weight	999
Gender	ſ		MALE		
Ejection COMPLETE EJECT			-		
Ejection Area 9					
Entrapment		Not ENTRAPPED			

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

Injuries

Occupant	2003-72-148-1-2
MAIS	7=Unk. sev.
Seat Position	Front right side

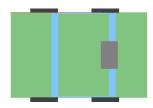
AIS Level Injury Description Contacts

Occupant: 2003-72-148-1-3



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence number	SEVERE 2
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	99 R Y E N 99 0 0 0 0 0 0 0 0 0 MEDIUM POLE CURB

NASS Weighting Factor

Weighting factor

13.900

Rollover Characteristics

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

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 0 BAC 0.xx)

ONE WAY TWO STRAIGHT LEVEL ASPHALT WET DARK RAIN NONINTER/NONJUNC

Vehicle Factors

9

Make-Model Year Class Body Type Weight

Buick Regal 1981 PASSENGER CAR 2DR SEDAN/HT/CPE 149

Pre-Crash Driver Data

Accident Type	7
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	Unk CONTROL LOSS
Attempted Avoidance Maneu-	99
ver	
Pre-impact Stability	LAT SKID-CTR CLK
Pre-impact Location	DEPARTED ROADWAY

PASSENGER Factors

Age	22	Height	999	Weight	999
Gender			MALE		
Ejection	n		9		
Ejection	n Area		9		
Entrapn	nent		9		

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

Occupant	2003-72-148-1-3
MAIS	3=Serious
Seat Position	Second left

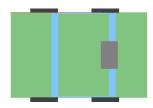
AIS Level	Injury Description	Contacts
3=Serious	Cerebral subarach- noid hemorrhage	Unknown SOURCE
2=Moderate	Awake on admission, unconscious <1 hour	Unknown SOURCE
3=Serious	Cerebral contusion, single, small (<30ccs)	Unknown SOURCE
1=Minor	Upper extremity skin abrasion	Unknown SOURCE

Occupant: 2003-72-148-1-4



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence number	SEVERE 2
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	99 R Y E N 99 0 0 0 0 0 0 0 0 0 MEDIUM POLE CURB

NASS Weighting Factor

Weighting factor

13.900

Rollover Characteristics

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

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 0 BAC 0.xx)

ONE WAY TWO STRAIGHT LEVEL ASPHALT WET DARK RAIN NONINTER/NONJUNC

Vehicle Factors

9

Make-Model Year Class Body Type Weight

Buick Regal 1981 PASSENGER CAR 2DR SEDAN/HT/CPE 149

Pre-Crash Driver Data

Accident Type	7
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	Unk CONTROL LOSS
Attempted Avoidance Maneu-	99
ver	
Pre-impact Stability	LAT SKID-CTR CLK
Pre-impact Location	DEPARTED ROADWAY

PASSENGER Factors

Age	20	Height	999	Weight	999
Gender			MALE		
Ejectior	า		COMP	LETE EJECT	
Ejectior	n Area		9		
Entrapr	nent		Not EN	ITRAPPED	

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

Occupant	2003-72-148-1-4
MAIS	1=Minor
Seat Position	Second right

AIS Level	Injury Description	Contacts
-----------	--------------------	----------

1=Minor	Leg skin abrasion		Ground	
1=Minor	Leg	skin	contusion	Ground
	(hematoma)			

25Case 2003-73-20

Summary:

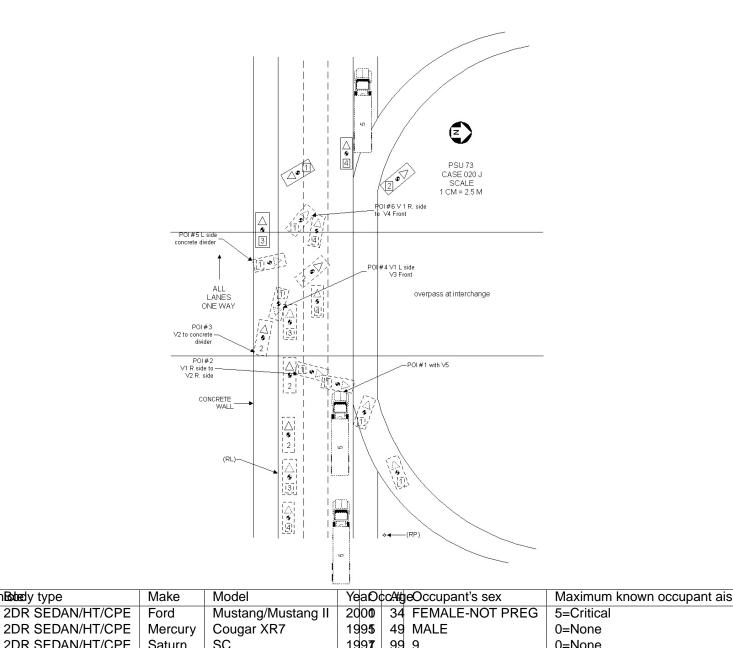
Veh Bobedy type

1

2

4

Vehicle 1, a 2000 Ford Mustang, was westbound on an interstate highway entrance ramp, attempting to merge into lane 1 of the three-lane divided interstate highway. Vehicle 2, a 1995 Mercury Cougar, was westbound in lane 3 approaching the interchange area. Vehicle 3, a 1999 Ford F-250 pickup truck, was westbound in lane 3 behind V2. Vehicle 4, a 1997 Saturn SC1, was westbound in lane 3 behind V3. Vehicle 5, a 2001 Kenworth tractor-trailer, was westbound in lane 1 approaching the interchange area. As V1 merged onto the highway it began a clockwise rotation causing it to be positioned across lane 1 directly in front of V5. The front of V5 impacted the right side of V1. V5 then came to a controlled stop on the outer berm of the roadway. V1 continued moving south across lane 2 and into lane 3. The right rear corner of V1 impacted the right side of V2. The right back corner snagged the RR wheel of V2 and caused V2 to rotate clockwise and depart the road and impact the center median wall with the left rear bumper corner. V2 then lost control and crossed all the westbound lanes and came to rest on the outer berm of the roadway. V3 steered left to avoid V1 but the front of V3 impacted the left side of V1 causing V1 to impact the center concrete dividing wall. V3 then came to a controlled stop on the inner berm of the roadway. V1 came off the center wall, crossed lane 3 and entered lane 2. V4, having already entered lane 2 in an attempt to avoid the collision, steered right in a further attempt to avoid V1 but the front of V4 struck the right front of V1. V4 then came to rest in lane 2. V1 came to final rest in lane 2. All vehicles were occupied by the driver only. The driver of V1 was hospitalized with multiple brain and chest injuries. The other drivers were not reported injured. V1, V2, V4 were reported towed from the scene due to damage. V3 and V5 were driven from the scene. The roadway was reported dry at the time of the crash.)



Occupant: 2003-73-20-1-1

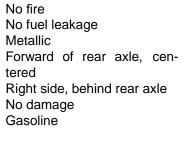


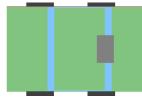
Fire Information

No fire

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

Fuel Cap Location Fuel Tank Damage Fuel Type





Crash Severity

No rollover 999 999 999 999
SEVERE 1
2 R D A W 4
0 0 0 0 0 0 0 0
VEHICLE NO. 5 VEHICLE NO. 2

NASS Weighting Factor

Weighting factor

26.229

Rollover Characteristics

Number of Events	6		
Rollover Initiation Type	No rollover		
Location of Rollover Initiation	No rollover		
Rollover Initiation Object	No rollover		
Contacted			
Location on Vehicle where	No rollover		
Principal Tripping Force was			
Applied			
Direction of Initial Roll	No rollover		

Pre-Crash Environment

Traffic FlowONumber of Travel LanesORoadway AlignmentCRoadway ProfileLiRoadway Surface TypeCRoadway Surface ConditionDLight ConditionsDAtmospheric ConditionsNRelation to IntersectionINTraffic Control DevicePolicePoliceReportedAlcohol Test (< 95 indicates</td>0BAC 0.xx)D

ONE WAY ONE CURVE RIGHT LEVEL CONCRETE DRY DAYLIGHT No ADVERSE COND INTERCHANGE REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Ford Mustang/Mustang II 2000 PASSENGER CAR 2DR SEDAN/HT/CPE 139

Pre-Crash Driver Data

Accident Type	47
Pre-event Movement	MERGING
Critical Pre-crash Event	TRAVEL TOO FAST
Attempted Avoidance Maneu-	99
ver	
Pre-impact Stability	LATERAL SKID-CLK
Pre-impact Location	Left TRAVEL LANE

Age	34	Height	173	Weight	77
Gender			FEMALE-NOT PREG		
Ejectio	on		No EJECTION		
Ejectio	on Area	No EJECTION			
Entrapment JAMMED DOOF			ED DOOR/FI	RE	

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

Occupant	2003-73-20-1-1
MAIS	5=Critical
Seat Position	Front left side

AIS Level	Injury Description	Contacts
3=Serious	2-3 rib fractures with stable chest and hemo-/pneumothorax	Right hardware
2=Moderate	Sternal fracture	Right hardware
2=Moderate	Clavicle fracture	Belt webb/buckle
1=Minor	Thoracic skin contu- sion	Belt webb/buckle
1=Minor	Leg skin contusion (hematoma)	Belt webb/buckle
5=Critical	Brainstem contusion	Right interior
3=Serious	Cerebellar contusion, small or superficial (<15 ccs)	Right interior
3=Serious	Cerebral contusion, single, small (<30ccs)	Right interior
3=Serious	Cerebral brain swelling, mild	Right interior
3=Serious	Cerebral subarach- noid hemorrhage	Right interior
3=Serious	Cerebral subarach- noid hemorrhage	Right interior
2=Moderate	Oculomotor nerve in- jury, NFS	Right interior
4=Severe	Lung contusion, bilat- eral	Right hardware
1=Minor	297402	Right interior
1=Minor	Facial skin abrasion	Right interior
1=Minor	Facial skin contusion	Right interior
1=Minor	Facial skin laceration, minor	Flying glass
1=Minor	Upper extremity skin contusion	Belt webb/buckle
5=Critical	Unconscious on admission, inappro- priate movements	Right interior

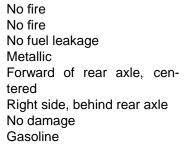
Occupant: 2003-73-20-2-1

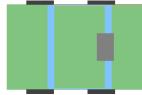


Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

Fuel Cap Location Fuel Tank Damage Fuel Type





Crash Severity

Nr. Quarter Turns Impact Speed	No rollover 999	
Total, Longitudal, and Lateral δV	999 999 999	
Est. δV with sequence number	MODERATE 2	
CDC	1 R Z E W 2	
Damage (C1-C6)	000000	
Crush (L and D)	0 0	
Object Contacted 1	VEHICLE NO. 1	
Object Contacted 2	CONCRETE BARRIER	

NASS Weighting Factor

Weighting factor

26.229

Rollover Characteristics

Number of Events	6
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object	No rollover
Contacted	
Location on Vehicle where	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions **Atmospheric Conditions** Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

DVDED/W/BARRIER THREE STRAIGHT LEVEL CONCRETE DRY DAYLIGHT No ADVERSE COND INTERCHANGE REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Mercury Cougar XR7 1995 PASSENGER CAR 2DR SEDAN/HT/CPE 160

Pre-Crash Driver Data

Accident Type	98
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	Same DIR-OV RGHT
Attempted Avoidance Maneu-	STEERING LEFT
ver	
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

Age	49	Height	175	Weight	77
Gender			MALE		
Ejection			No EJE	ECTION	
Ejection	Area		No EJE	ECTION	
Entrapm	ent		Not EN	ITRAPPED	

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

Injuries

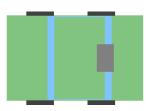
Occupant	2003-73-20-2-1
MAIS	0=None
Seat Position	Front left side

Occupant: 2003-73-20-4-1



Fire Information

Fire Occurence	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 Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence num-	9 99
ber	
CDC	No data
Damage (C1-C6)	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

26.229

Rollover Characteristics

Number of Events	6
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object	No rollover
Contacted	
Location on Vehicle where	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

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

Vehicle Factors

Make-Model Year Class Body Type Weight Saturn SC 1997 Unknown 2DR SEDAN/HT/CPE 105

Pre-Crash Driver Data

Accident TypeSPre-event MovementCCritical Pre-crash EventSAttempted Avoidance Maneu-SverPre-impact StabilityPre-impact LocationL

98 GOING STRAIGHT Same DIR-OV LEFT STEERING RIGHT

TRACKING Left TRAVEL LANE

DRIVER Factors

Age	99	Height	999	Weight	999
Gender			9		
Ejection			No EJE	ECTION	
Ejection A	rea		No EJE	ECTION	
Entrapme	nt		9		

Restraint Factors

Restrain	99
AOPS	YES-RES DET
Airbag Deployment	NONDEPLOYED
Airbag Deployment - 1 st Seat	NONDEPLOYED
Airbag Deployment - Oth	Not EQUIP W/ OTH
Seat	

Injuries

Occupant	2003-73-20-4-1
MAIS	0=None
Seat Position	Front left side

$\mathbf{26}$ Case 2003-73-77

Summary:

Vehicleody type

MINIVAN

MINIVAN

MINIVAN

MINIVAN

1

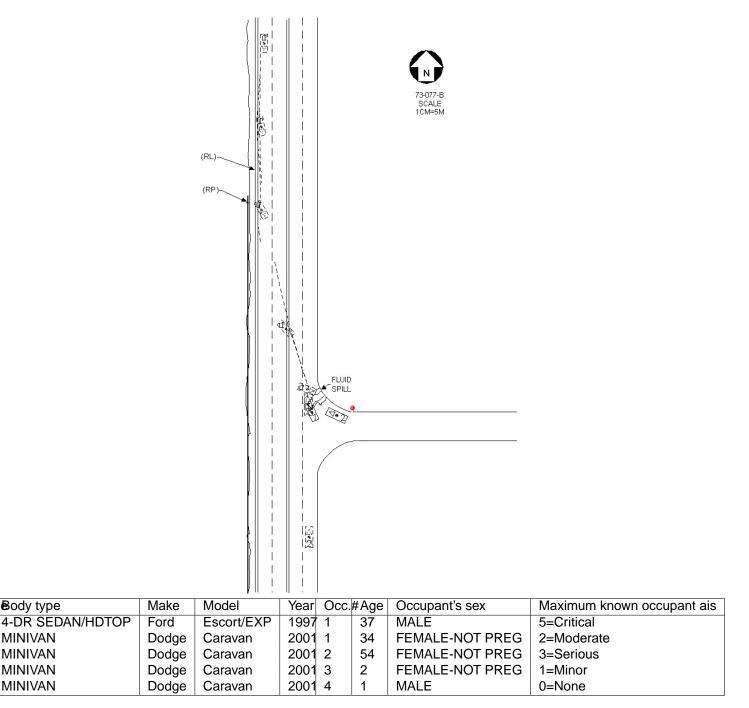
2

2

2

2

Vehicle 1, a 1997 Ford Escort, was traveling south on a two way, four lane roadway in the southbound lanes. V1 partially exited the roadway right and came back on crossing the centerline in a yaw. V1 entered the oncoming lanes of traffic and struck V2. Vehicle 2 a 2001 Dodge Caravan was traveling north in the first northbound lane of the same roadway. V1 struck V2 on the front left corner with the passenger side. Both vehicles came to final rest in the nortbound lanes of the roadway. V1driver died prior to admission with multiple brain injury and lung contusion. V2 was occupied by the driver and three passengers. Two of the passengers were children seated in child restraints. All four occupants in V2 were transported to a medical facility for treatment. Both vehicles were towed from the crash scene due to impact damage. Both vehicles were equipped with dual frontal air bags. The air bags in both vehicles deployed from the impact.)



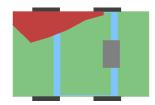
Occupant: 2003-73-77-1-1



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral	No rollover 998 74 -37 -64
δV Est. δV with sequence num-	DELTA V CODED 1
ber	
CDC	2 R Y E W 6
Damage (C1-C6)	10 25 53 74 91 38
Crush (L and D)	229 94
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	0

NASS Weighting Factor

Weighting factor

24.477

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

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

Not REPORTED

Vehicle Factors

17

Make-Model Year Class Body Type Weight Ford Escort/EXP 1997 PASSENGER CAR 4-DR SEDAN/HDTOP 111

Pre-Crash Driver Data

Accident Type	98
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	OFF EDGE-RIGHT
Attempted Avoidance Maneu-	STEERING LEFT
ver	
Pre-impact Stability	LAT SKID-CTR CLK
Pre-impact Location	Left TRAVEL LANE

Age	37	Height	191	Weight	97
Gende	er		MALE		
Ejectio	n		PARTIA	L EJECTION	N
Ejectio	n Area		Right R	EAR	
Entrap	ment		JAMME	D DOOR/FII	RE

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

Occupant	2003-73-77-1-1
MAIS	5=Critical
Seat Position	Front left side

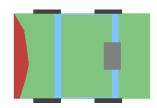
AIS Level	Injury Description	Contacts
5=Critical	Cerebral subdural hematoma, small (<50ccs), bilateral	Right interior
3=Serious	140611	Right interior
3=Serious	Cerebral subarach- noid hemorrhage	Right interior
4=Severe	Lung contusion, bilat- eral	Right interior
1=Minor	Facial skin abrasion	Right interior
1=Minor	Facial skin laceration, minor	Right interior
1=Minor	Scalp contusion	Right interior
1=Minor	Upper extremity skin abrasion	Flying glass
1=Minor	Upper extremity skin laceration, minor	Flying glass
1=Minor	Leg skin abrasion	Center panel
1=Minor	Leg skin abrasion	Floor
1=Minor	Leg skin abrasion	Steering rim

Occupant: 2003-73-77-2-1



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 43 -42 7
Est. δV with sequence number	DELTA V CODED 1
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	12 F D E W 3 17 33 44 38 31 0 162 -16 VEHICLE NO. 1 0

NASS Weighting Factor

Weighting factor

24.477

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions **Atmospheric Conditions** Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

Not DIVIDED FOUR STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND NONINTER/NONJUNC

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Dodge Caravan 2001 TRUCK MINIVAN 190

Pre-Crash Driver Data

Accident Type	98
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	OPP DIR-OVR LEFT
Attempted Avoidance Maneu-	BRAKE UNK LOCKUP
ver	
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

Age	34	Height	165	Weight	82
Gender FEMALE-NOT PREG				G	
Ejectio	on		No EJECTION		
Ejection Area		No EJECTION			
Entrapment Not ENTRAPPED					

None used/avail
YES-RES DET
BAG DEPLOYED
DR
Not EQUIP W/ OTH

Occupant	2003-73-77-2-1
MAIS	2=Moderate
Seat Position	Front left side

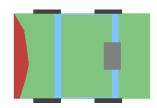
AIS Level	Injury Description	Contacts
2=Moderate	Talus fracture	Floor
1=Minor	Upper extremity skin abrasion	Left apnel
1=Minor	Upper extremity skin laceration, minor	Left apnel
1=Minor	Leg skin abrasion	Knee bolster
1=Minor	Leg skin contusion (hematoma)	Knee bolster

Occupant: 2003-73-77-2-2



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 43 -42 7
Est. δV with sequence number	DELTA V CODED 1
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	12 F D E W 3 17 33 44 38 31 0 162 -16 VEHICLE NO. 1 0

NASS Weighting Factor

Weighting factor

24.477

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions **Atmospheric Conditions** Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

Not DIVIDED FOUR STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND NONINTER/NONJUNC

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Dodge Caravan 2001 TRUCK MINIVAN 190

Pre-Crash Driver Data

Accident Type	98
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	OPP DIR-OVR LEFT
Attempted Avoidance Maneu-	BRAKE UNK LOCKUP
ver	
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

PASSENGER Factors

Age	54	Height	152	Weight	66
Gende	r	FEMALE-NOT PREG			
Ejectio	n		No EJECTION		
Ejectio	n Area		No EJECTION		
Entrap	ment		Not ENTRAPPED		

None used/avail
YES-RES DET
BAG DEPLOYED
DR
Not EQUIP W/ OTH

Injuries

Occupant	2003-73-77-2-2
MAIS	3=Serious
Seat Position	Front right side

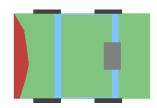
3=Serious	Radial fracture,	Left apnel	
	open/displaced/comminuted		
1=Minor	Upper extremity skin	Air bag-PS side	
	abrasion		
1=Minor	Upper extremity skin	Air bag-PS side	
	laceration, minor		
1=Minor	Leg skin abrasion	Knee bolster	
1=Minor	Leg skin contusion	Knee bolster	
	(hematoma)		

Occupant: 2003-73-77-2-3



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 43 -42 7
Est. δV with sequence number	DELTA V CODED 1
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	12 F D E W 3 17 33 44 38 31 0 162 -16 VEHICLE NO. 1 0

NASS Weighting Factor

Weighting factor

24.477

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions **Atmospheric Conditions** Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

Not DIVIDED FOUR STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND NONINTER/NONJUNC

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Dodge Caravan 2001 TRUCK MINIVAN 190

Pre-Crash Driver Data

Accident Type98Pre-event MovementGOING STRAIGHTCritical Pre-crash EventOPP DIR-OVR LEFTAttempted Avoidance ManeuverBRAKE UNK LOCKUPVerTRACKINGPre-impact StabilityTRACKINGPre-impact LocationSTAYED IN LANE

PASSENGER Factors

Age	2	Height	999	Weight	17
Gende	er		FEMALE-NOT PREG		
Ejectio	on		No EJECTION		
Ejectio	on Area		No EJECTION		
Entrap	oment		Not ENTRAPPED		

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

Occupant	2003-73-77-2-3
MAIS	1=Minor
Seat Position	Second left

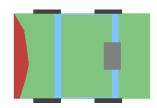
AIS Level	Injury Description	Contacts
1=Minor	Thoracic skin abrasion	Belt webb/buckle

Occupant: 2003-73-77-2-4



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 43 -42 7
Est. δV with sequence number	DELTA V CODED 1
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	12 F D E W 3 17 33 44 38 31 0 162 -16 VEHICLE NO. 1 0

NASS Weighting Factor

Weighting factor

24.477

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions **Atmospheric Conditions** Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

Not DIVIDED FOUR STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND NONINTER/NONJUNC

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Dodge Caravan 2001 TRUCK MINIVAN 190

Pre-Crash Driver Data

Accident Type	98
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	OPP DIR-OVR LEFT
Attempted Avoidance Maneu-	BRAKE UNK LOCKUP
ver	
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

PASSENGER Factors

Age	1	Height	999	Weight	12
Gender			MALE		
Ejection			No EJI	ECTION	
Ejection	Area		No EJI	ECTION	
Entrapm	ent		Not EN	NTRAPPED	

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

Injuries

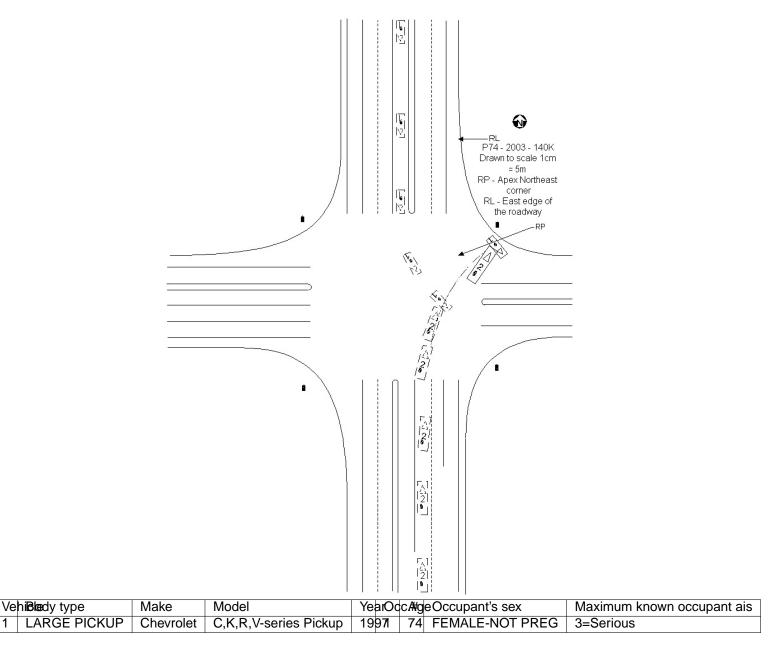
Occupant	2003-73-77-2-4
MAIS	0=None
Seat Position	Third right

27Case 2003-74-140

Summary:

1

Vehicle 1 (1997 Chevrolet K-1500) was traveling south on a six lane, median divided, concrete roadway in lane four, attempting to turn left at the intersection. Vehicle 2 (1999 International 4700 Straight Truck) was traveling north on the same roadway in lane three, attempting to pass through the intersection. The roadway was dry and there were no adverse weather conditions. At the intersection, vehicle 1 turned left. Vehicle 2 attempted to avoid vehicle 1 by braking and steering right. In the intersection, the front of vehicle 2 contacted the right side of vehicle 1. Both vehicles came to final rest on the northeast corner of the intersection. Vehicle 1 was towed due to damages. No air bags deployed in either vehicle. The restrained driver of vehicle 1 was hospitalized with upper arm and hip fracture.)

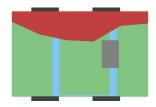


Occupant: 2003-74-140-1-1



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence number	DELTA V CODED 1
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	2 R D A W 5 34 41 87 83 66 29 245 7 VEHICLE NO. 2 0

NASS Weighting Factor

Weighting factor

9.648

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	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition DRY **Light Conditions Atmospheric Conditions** Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

DVDED/NO BARRIER FOUR STRAIGHT LEVEL CONCRETE DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model

Year Class Body Type Weight Chevrolet C,K,R,V-series Pickup 1997 TRUCK LARGE PICKUP 208

Pre-Crash Driver Data

Accident Type68Pre-event MovementTURNING LEFTCritical Pre-crash EventTURN LEFT-INTERSAttempted Avoidance Maneu-99verPre-impact StabilityPre-impact LocationSTAYED IN LANE

DRIVER Factors

Age74Height163Weight50GenderFEMALE-NOT PREGEjectionNo EJECTIONEjection AreaNo EJECTIONEntrapmentNot ENTRAPPED

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

Injuries

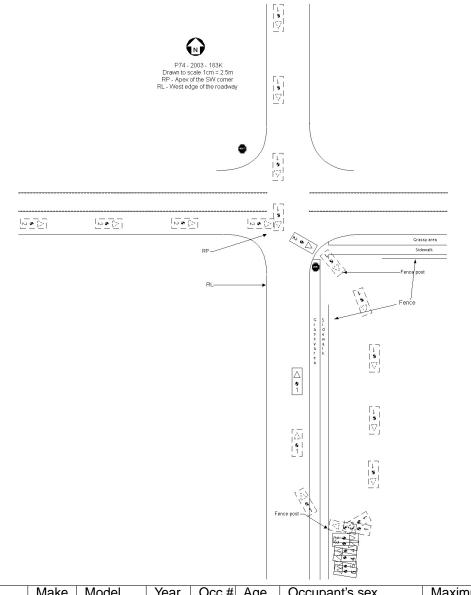
Occupant	2003-74-140-1-1
MAIS	3=Serious
Seat Position	Front left side

3=Serious	Humeral fracture, open/displaced/commin	Steering rim
2=Moderate	Acromion fracture	
3=Serious	Pelvic fracture,	Seat, back
	open/displaced/commin	uted
3=Serious	Lumbar fracture of	Seat, back
	facet without cord	
	injury	
1=Minor	Upper extremity skin abrasion	Belt webb/buckle
1=Minor	Upper extremity skin	Belt webb/buckle
	contusion	
1=Minor	Thoracic skin contu- sion	Belt webb/buckle

28 Case 2003-74-183

Summary:

V1 (1989 Ford Taurus Wagon) was traveling south on a two lane, non-divided, level, concrete roadway in lane one, approaching an intersection. V2 (1991 Ford Explorer) was traveling east on a three lane, non-divided, level, concrete roadway in lane one, approaching the same intersection. The north-south roadway is governed by stop signs in both directions, east and westbound traffic has no regulatory signs. There were no adverse weather conditions and the roadway was dry. It was late afternoon, approximately 4:42pm. At the intersection the front of V2 impacted the right side of V1. V2 final rested on the southeast corner. After the first impact, V1 continued onto the southeast corner and struck a metal fence pole and fence that surrounded a private parking lot. V1 continued south through the parking lot, and, while turning to the right, struck V3 (1992 Ford Tempo), which was parked facing east, in the left side with it's front, then, in the front with it's left side. The impact(s) pushed V3 into another parked vehicle. V1 then another metal fence pole and fence with its left side and continued through the fence, re-entered the roadway facing north, and came to final rest facing generally north. All three vehicles were towed from the scene due to damage. None of the vehicles was equipped with an air bag. The restrained V1 driver was hospitalized with rib fractures and a lung contusion. The restrained V2 driver was not injured and the restrained V2 right front seat passenger received a minor contusion, but was not treated. V3 was unoccupied and legally parked in a private lot at the time of the crash.)



Vehicl	e Body type	Make	Model	Year	Occ.#	Age	Occupant's sex	Maximum known occupant ais
1	STATION WAGON	Ford	Taurus	1989	1	83	FEMALE-NOT PREG	4=Severe
2	COMPACT UTILITY	Ford	Bronco II	1991	1	55	MALE	0=None
2	COMPACT UTILITY	Ford	Bronco II	1991	2	45	FEMALE-NOT PREG	1=Minor

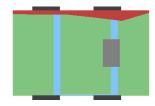
Occupant: 2003-74-183-1-1



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed	No rollover 998
Total, Longitudal, and Lateral δV	20 -7 -19
Est. δV with sequence number	DELTA V CODED 1
CDC	2 R D A W 2
Damage (C1-C6)	6 29 20 11 11 9
Crush (L and D)	178 -12
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	Not IN TRAN LGTVEH

NASS Weighting Factor

Weighting factor

16.408

Rollover Characteristics

Number of Events	5
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object	No rollover
Contacted	
Location on Vehicle where	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions **Atmospheric Conditions** Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

Not DIVIDED TWO STRAIGHT LEVEL CONCRETE DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Ford Taurus 1989 PASSENGER CAR STATION WAGON 144

Pre-Crash Driver Data

Accident Type87Pre-event MovementGOING STRAIGHTCritical Pre-crash EventCROSS OVER INTERAttempted Avoidance Maneu-99verPre-impact StabilityPre-impact LocationSTAYED IN LANE

Age	83	Height	155	Weight	73
Gende	r	FEMALE-NOT PREG			G
Ejectio	n	No EJECTION			
Ejectio	n Area	No EJECTION			
Entrap	ment	Not ENTRAPPED			

Restrain	Lap and shoulder
AOPS	NÔ
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 st Seat	Not EQUIP/AVAIL
Airbag Deployment - Oth	Not EQUIP W/ OTH
Seat	

Occupant	2003-74-183-1-1
MAIS	4=Severe
Seat Position	Front left side

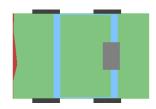
AIS Level	Injury Description	Contacts
4=Severe	 >3 rib fxs on one side & <3 other side & hemo-/pneumothorax 	Unknown SOURCE
3=Serious	Lung contusion, unilat- eral	Unknown SOURCE
1=Minor	Leg skin contusion (hematoma)	Center panel

Occupant: 2003-74-183-2-1



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 16 -15 5
Est. δV with sequence number	DELTA V CODED 1
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	11 F D E W 1 2 0 13 8 2 4 160 0 VEHICLE NO. 1 0

NASS Weighting Factor

Weighting factor

16.408

Rollover Characteristics

Number of Events	5
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object	No rollover
Contacted	
Location on Vehicle where	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions **Atmospheric Conditions** Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

Not DIVIDED THREE STRAIGHT DOWNHILL GRADE CONCRETE DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Ford Bronco II 1991 TRUCK COMPACT UTILITY 174

Pre-Crash Driver Data

Accident Type86Pre-event MovementGOING STRAIGHTCritical Pre-crash EventXING ST-X PATHAttempted Avoidance Maneu-
verBRAKE W/O LOCKUPPre-impact StabilityTRACKINGPre-impact LocationSTAYED IN LANE

Age	55	Height	183	Weight	109
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			Not ENTRAPPED		

Restrain	Lap and shoulder
AOPS	NÔ
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 st Seat	Not EQUIP/AVAIL
Airbag Deployment - Oth	Not EQUIP W/ OTH
Seat	

Injuries

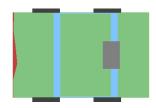
Occupant	2003-74-183-2-1
MAIS	0=None
Seat Position	Front left side

Occupant: 2003-74-183-2-2



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 16 -15 5
Est. δV with sequence number	DELTA V CODED 1
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	11 F D E W 1 2 0 13 8 2 4 160 0 VEHICLE NO. 1 0

NASS Weighting Factor

Weighting factor

16.408

Rollover Characteristics

Number of Events	5
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object	No rollover
Contacted	
Location on Vehicle where	No rollover
Principal Tripping Force was	
Applied	
Direction of Initial Roll	No rollover

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions **Atmospheric Conditions** Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

Not DIVIDED THREE STRAIGHT DOWNHILL GRADE CONCRETE DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Ford Bronco II 1991 TRUCK COMPACT UTILITY 174

Pre-Crash Driver Data

Accident Type86Pre-event MovementGOING STRAIGHTCritical Pre-crash EventXING ST-X PATHAttempted Avoidance Maneu-
verBRAKE W/O LOCKUPPre-impact StabilityTRACKINGPre-impact LocationSTAYED IN LANE

PASSENGER Factors

Age	45	Height	170	Weight	76	
Gende	r		FEMAL	E-NOT PRE	G	
Ejectio	n		No EJECTION			
Ejection Area			No EJECTION			
Entrapi	ment		Not ENTRAPPED			

Restrain	Lap and shoulder
AOPS	NÔ
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 st Seat	Not EQUIP/AVAIL
Airbag Deployment - Oth	Not EQUIP W/ OTH
Seat	

Occupant	2003-74-183-2-2
MAIS	1=Minor
Seat Position	Front right side

AIS Level	Injury Description	Contacts
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1=Minor	Upper	extremity	skin	Other occupants
	contusi	ion		

Case 2003-74-233 $\mathbf{29}$

Summary:

Vehicle 1 (2000 Jeep Grand Cherokee) was headed west on a five lane undivided street. Vehicle 2 (1998 Toyota Avalon) was headed north on a four lane undivided street. As vehicle 2 entered into the intersection, the right side was contacted by the front of vehicle 1. This impact caused vehicle 2 to go off the right road edge and contact a wooden fence with the front bumper. Vehicle 1 was equipped with frontal airbags that did not deploy. Vehicle 2 was equipped with frontal and side airbags. Only the right passenger side bag deployed due to the accident. Both vehicles were towed due to damage. The driver of V1 was not injured. The driver of V2 was hospitalized with a rib fracture. The hood edge of V1 intruded into the right front passenger/seating compartment of V 2 during the crash. The RF passenger of V 2 was hospitalized with brain hemorrhage, right hip fracture and facial laceration.)

5

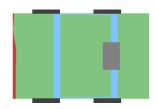
		PSI DR#	UJ74 CASE 233K DIAGRAM WN TO SCALE 10M=2.5M		j		EDGE OF ROADWAY IS REFERENCE LINE TRAFFIC SIGNAL ON CORNER IS REFERENCE POINT	
			ġ			ф ф		
	cl B ody type	Make	Model	Yea	r Occ	#Age	Occupant's sex	Maximum known occupant ais
1 2 2	COMPACT UTILITY 4-DR SEDAN/HDTOP 4-DR SEDAN/HDTOP	Jeep Toyota Toyota	Cherokee84- Avalon Avalon	200 199 199	81	22 70 72	FEMALE-NOT PREG FEMALE-NOT PREG MALE	0=None 3=Serious 4=Severe

Occupant: 2003-74-233-1-1



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 17 -6 16
Est. δV with sequence number	DELTA V CODED 1
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	70 F D E W 1 9 8 9 9 0 4 162 -5 VEHICLE NO. 2 0

NASS Weighting Factor

Weighting factor

9.648

Rollover Characteristics

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

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

Not DIVIDED FIVE STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Jeep Cherokee84-2000 TRUCK COMPACT UTILITY 187

Pre-Crash Driver Data

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

Age	22	Height	168	Weight	61
Gender FEMALE-NOT PR		E-NOT PRE	G		
Ejectio	on		No EJECTION		
Ejection Area No EJECTION					
Entrap	ntrapment Not ENTRAPPED				

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

Injuries

Occupant	2003-74-233-1-1
MAIS	0=None
Seat Position	Front left side

Occupant: 2003-74-233-2-1



Fire Information

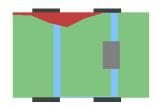
Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

Fuel Cap Location

Fuel Tank Damage

Fuel Type

No fire No fire No fuel leakage Non-metallic Forward of rear axle, centered Left side, behind rear axle No damage Gasoline



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral	No rollover 998 20 -20 -4
δV	20 20 4
Est. δV with sequence num-	DELTA V CODED 1
ber	
CDC	12 R Y E W 3
Damage (C1-C6)	0 16 42 30 7 6
Crush (L and D)	306 69
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	FENCE

NASS Weighting Factor

Weighting factor

9.648

Rollover Characteristics

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

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions **Atmospheric Conditions** Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

Not DIVIDED FOUR STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Toyota Avalon 1998 PASSENGER CAR 4-DR SEDAN/HDTOP 152

Pre-Crash Driver Data

Accident Type87Pre-event MovementGOING STRAIGHTCritical Pre-crash EventXING ST-X PATHAttempted Avoidance Maneu-No AVOIDANCEverPre-impact StabilityTRACKINGPre-impact LocationSTAYED IN LANE

Age	70	Height	165	Weight	64
Gender FEMALE-NOT PRE		G			
Ejectior	n	No EJECTION			
Ejection Area No EJECTION					
Entrapr	ntrapment Not ENTRAPPED				

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	NONDEPLOYED
Airbag Deployment - 1 st Seat	NONDEPLOYED
Airbag Deployment - Oth	BAG DEPLOYED
Seat	

Occupant	2003-74-233-2-1
MAIS	3=Serious
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor	Abdominal skin contu- sion	Transmiss lever
1=Minor	Upper extremity skin abrasion	Belt webb/buckle
1=Minor	Upper extremity skin contusion	Belt webb/buckle
3=Serious	Single rib fracture with hemo-/pneumothorax	Transmiss lever

Occupant: 2003-74-233-2-2



Fire Information

No fire

No fire

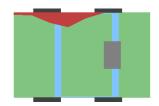
Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

Fuel Cap Location

Fuel Tank Damage

Fuel Type

No fuel leakage Non-metallic Forward of rear axle, centered Left side, behind rear axle No damage Gasoline



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral	No rollover 998 20 -20 -4
δV	20 20 4
Est. δV with sequence num-	DELTA V CODED 1
ber	
CDC	12 R Y E W 3
Damage (C1-C6)	0 16 42 30 7 6
Crush (L and D)	306 69
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	FENCE

NASS Weighting Factor

Weighting factor

9.648

Rollover Characteristics

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

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions **Atmospheric Conditions** Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

Not DIVIDED FOUR STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight

Toyota Avalon 1998 PASSENGER CAR 4-DR SEDAN/HDTOP 152

Pre-Crash Driver Data

Accident Type87Pre-event MovementGOING STRAIGHTCritical Pre-crash EventXING ST-X PATHAttempted Avoidance Maneu-No AVOIDANCEverPre-impact StabilityTRACKINGPre-impact LocationSTAYED IN LANE

PASSENGER Factors

Age	72	Height	165	Weight	65
Gender			MALE		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment		Not ENTRAPPED			

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	NONDEPLOYED
Airbag Deployment - 1 st Seat	NONDEPLOYED
Airbag Deployment - Oth	BAG DEPLOYED
Seat	

Occupant	2003-74-233-2-2
MAIS	4=Severe
Seat Position	Front right side

AIS Level	Injury Description	Contacts
3=Serious	Intertrochanteric femoral fracture	Right interior
3=Serious	Cerebral subarach- noid hemorrhage	OMV hood edge
4=Severe	Cerebral intraventric- ular hemorrhage	OMV hood edge
2=Moderate	Lethargic on admis- sion, unconscious <1 hour	OMV hood edge
1=Minor	Facial skin laceration, minor	OMV hood edge
1=Minor	Leg skin contusion (hematoma)	Right interior

30 Case 2003-75-29

Summary:

Vehicle 1 was heading westbound in lane two, of a five-lane roadway that is physically divided. At this point, the road consists of two eastbound through lanes, a raised center median, two westbound through lanes and a westbound turn lane. Vehicle 1 was negotiating a right curve and was approaching an intersection. The intersection is at a hillcrest. Vehicle 2 was traveling eastbound in lane two, of a four-lane roadway that is not physically divided. The road consists of two eastbound lanes, a painted median and two westbound lanes. Vehicle 3 was traveling eastbound in lane one. Vehicle 1 traveled through the intersection and began to rotate clockwise. The vehicle then entered into the center median where it began to rotate counterclockwise from driver input. Vehicle 1 continued across the median into the eastbound lanes. The front of Vehicle 2 and the right of Vehicle 1 made contact. Vehicle 2 rotated clockwise and was impacted on the left side by Vehicle 3. Vehicle 2 came to rest easterly in across the two eastbound lane lines. V1 came to rest near the point of impact facing southeast. V3 continued forward as it rotated counterclockwise. V3 came to rest on the center lane line for the eastbound lanes. The vehicle was facing southwest. All three vehicles were towed due to damage. V1 was equipped with dual frontal airbags, which did deploy. The vehicle was also equipped with a driver's side air bag in the seat cushion, this airbag did not deploy. V2 was equipped with dual frontal airbags that did deploy. V3 was equipped with dual frontal airbags that did not deploy. V1 had eight occupants. The driver was hospitalized with brain and chest trauma. The front middle seat passenger was hospialized with multiple fractures. The front right seat passenger died from unspecified head and neck injuries. The left rear seat passenger was hospitalized for obervation and released with lacerations. The center rear seat passenger was fatal with unspecified head injury. The other center seat passenger was hospitalized with brain injury. The third center rear seat passenger was hospitalized overnight for observation and released with minor abrasion and contusion. The right rear seat passenger died of multiple skull fractures and brain laceration. All three occupants in V2 were injured. The driver was treated for a chipped foot bone and released. Occupant #2 was hospitalized for a concussion. Occupant #3 was hospitalized for a broken collarbone. V3 had two occupants. The driver was not injured. Occupant #2 was transported for a sore lower back and released.)

Vel	ni Be dy type	Make	Model	YearOc	c. # ge	e Occupant's sex	Maximum known occupant ais
1	4-DR SEDAN/HDTOP	Chevrolet	Caprice/Impala	20001	16	FEMALE-NOT PREG	5=Critical
1	4-DR SEDAN/HDTOP	Chevrolet	Caprice/Impala	20002	14	FEMALE-NOT PREG	4=Severe
1	4-DR SEDAN/HDTOP	Chevrolet	Caprice/Impala	20003	15	FEMALE-NOT PREG	7=Unk. sev.
1	4-DR SEDAN/HDTOP	Chevrolet	Caprice/Impala	20004	16	MALE	2=Moderate
1	4-DR SEDAN/HDTOP	Chevrolet	Caprice/Impala	20005	14	MALE	2=Moderate
1	4-DR SEDAN/HDTOP	Chevrolet	Caprice/Impala	20006	15	MALE	4=Severe
1	4-DR SEDAN/HDTOP	Chevrolet	Caprice/Impala	20007	14	MALE	1=Minor
1	4-DR SEDAN/HDTOP	Chevrolet	Caprice/Impala	20008	15	MALE	4=Severe
2	MINIVAN	Dodge	Caravan	19991	39	FEMALE-NOT PREG	2=Moderate
2	MINIVAN	Dodge	Caravan	19992	3	MALE	3=Serious
2	MINIVAN	Dodge	Caravan	19993	6	FEMALE-NOT PREG	2=Moderate
3	4-DR SEDAN/HDTOP	Honda	Accord	19951	47	MALE	0=None
3	4-DR SEDAN/HDTOP	Honda	Accord	19952	50	FEMALE-NOT PREG	1=Minor

Occupant: 2003-75-29-1-1

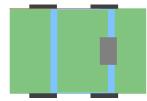


Fire Information

No fire

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence num-	SEVERE 1
ber	
CDC	1 R Y A W 4
Damage (C1-C6)	000000
Crush (L and D)	0 0
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	0

NASS Weighting Factor

Weighting factor

34.661

Rollover Characteristics

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

Pre-Crash Environment

Traffic FlowDNumber of Travel LanesTIRoadway AlignmentCRoadway ProfileHRoadway Surface TypeARoadway Surface ConditionDLight ConditionsDAtmospheric ConditionsNRelation to IntersectionNTraffic Control DevicePolicePoliceReportedAlcohol Test (< 95 indicates</td>0BAC 0.xx)D

DVDED/NO BARRIER THREE CURVE RIGHT HILL CREST ASPHALT Other DARK/LIGHTED No ADVERSE COND NONINTER/NONJUNC

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Chevrolet Caprice/Impala 2000 PASSENGER CAR 4-DR SEDAN/HDTOP 154

Pre-Crash Driver Data

Accident Type	64
Pre-event Movement	NEGOTIATE CURVE
Critical Pre-crash Event	Unk CONTROL LOSS
Attempted Avoidance Maneu-	99
ver	
Pre-impact Stability	LAT SKID-CTR CLK
Pre-impact Location	Left TRAVEL LANE

Age	16	Height	163	Weight	52
Gender			FEMALE-NOT PREG		
Ejection			No EJECTION		
Ejection Area			No EJECTION		
Entrapment			9		

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

Occupant	2003-75-29-1-1
MAIS	5=Critical
Seat Position	Front left side

AIS Level	Injury Descrip- tion	Contacts
5=Critical	Cerebral diffuse ax- onal injury	Unknown SOURCE
4=Severe	Cerebral intraven- tricular hemorrhage	Unknown SOURCE
4=Severe	Cerebral intraven- tricular hemorrhage	Unknown SOURCE
3=Serious	Unconscious on admission, length <1 hour	Unknown SOURCE
4=Severe	Lung contusion, bi- lateral	Seat, back
3=Serious	>3 rib fractures one side & <3 other side, with stable chest	Seat, back
2=Moderate	Hepatic lacer- ation, minor (<3cms deep, EBL<201=Minor	
Belt webb/buckle		
1=Minor	690202	Belt webb/buckle
1=Minor	Leg skin abrasion	Center panel

Occupant: 2003-75-29-1-2

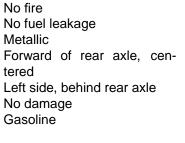


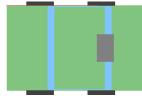
Fire Information

No fire

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

Fuel Cap Location Fuel Tank Damage Fuel Type





Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence num-	SEVERE 1
ber CDC	1 R Y A W 4
Damage (C1-C6)	000000
Crush (L and D)	0 0
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	0

NASS Weighting Factor

Weighting factor

34.661

Rollover Characteristics

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

Pre-Crash Environment

Traffic FlowDNumber of Travel LanesTIRoadway AlignmentCRoadway ProfileHRoadway Surface TypeARoadway Surface ConditionDLight ConditionsDAtmospheric ConditionsNRelation to IntersectionNTraffic Control DevicePolicePoliceReportedAlcohol Test (< 95 indicates</td>0BAC 0.xx)D

DVDED/NO BARRIER THREE CURVE RIGHT HILL CREST ASPHALT Other DARK/LIGHTED No ADVERSE COND NONINTER/NONJUNC

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Chevrolet Caprice/Impala 2000 PASSENGER CAR 4-DR SEDAN/HDTOP 154

Pre-Crash Driver Data

Accident Type64Pre-event MovementNEGOTIATE CURVECritical Pre-crash EventUnk CONTROL LOSSAttempted Avoidance Maneu-99verPre-impact StabilityPre-impact LocationLAT SKID-CTR CLKLeft TRAVEL LANE

Age	14	Height	999	Weight	999
Gender	ſ		FEMAI	_E-NOT PRE	G
Ejectior	า		No EJE	ECTION	
Ejection	n Area		No EJE	ECTION	
Entrapr	ment		9		

Restrain	None used/avail
AOPS	YES-RES DET
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 st Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth	NONDEPLOYED
Seat	

Injuries

Occupant MAIS Seat Position 2003-75-29-1-2 4=Severe Front other

AIS Level	Injury Description	Contacts
4=Severe	Lung contusion, bilat- eral	Center panel
3=Serious	Internal carotid artery traumatic aneurysm	Center panel
2=Moderate	Lethargic on admis- sion, never uncon- scious	Center panel
3=Serious	2-3 rib fractures with stable chest and hemo-/pneumothorax	Center panel
2=Moderate	Thoracic transverse process fracture without cord injury	Center panel
2=Moderate	Lumbar fracture of transverse process without cord injury	Center panel
3=Serious	Femoral shaft frac- ture	Center panel
3=Serious	Radial fracture, open/displaced/commin	Center panel nuted
3=Serious	Ulnar fracture, open/displaced/commi	Center panel
2=Moderate	Humeral fracture, closed	Center panel
2=Moderate	Tibial fracture of the medial malleolus	Floor
2=Moderate	Fibular lateral malleo- lus fracture	Floor
2=Moderate	Pelvic fracture, closed	Center panel
3=Serious 2=Moderate	Sacroilium fracture Hepatic laceration, minor (<3cms deep, EBL<202=Moderate	Center panel Splenic laceration, minor (tear<3cms deep, no major vessel)
Center panel 2=Moderate	Small bowel contu-	Center panel
1=Minor	sion (hematoma) Facial skin laceration, minor	Center panel
1=Minor	Abdominal skin con- tusion	Center panel
1=Minor	Upper extremity skin abrasion	Center panel
1=Minor	Leg skin abrasion	Center panel

Occupant: 2003-75-29-1-3

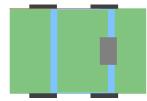


Fire Information

No fire

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence num-	SEVERE 1
ber CDC	1 R Y A W 4
Damage (C1-C6)	000000
Crush (L and D) Object Contacted 1	0 0 VEHICLE NO. 2
Object Contacted 2	0

NASS Weighting Factor

Weighting factor

34.661

Rollover Characteristics

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

Pre-Crash Environment

Traffic FlowDNumber of Travel LanesTIRoadway AlignmentCRoadway ProfileHRoadway Surface TypeARoadway Surface ConditionDLight ConditionsDAtmospheric ConditionsNRelation to IntersectionNTraffic Control DevicePolicePoliceReportedAlcohol Test (< 95 indicates</td>0BAC 0.xx)D

DVDED/NO BARRIER THREE CURVE RIGHT HILL CREST ASPHALT Other DARK/LIGHTED No ADVERSE COND NONINTER/NONJUNC

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Chevrolet Caprice/Impala 2000 PASSENGER CAR 4-DR SEDAN/HDTOP 154

Pre-Crash Driver Data

Accident Type64Pre-event MovementNEGOTIATE CURVECritical Pre-crash EventUnk CONTROL LOSSAttempted Avoidance Maneu-99verPre-impact StabilityPre-impact LocationLAT SKID-CTR CLKLeft TRAVEL LANE

Age	15	Height	999	Weight	999
Gender	-		FEMAI	E-NOT PRE	G
Ejectior	า		No EJE	ECTION	
Ejectior	n Area		No EJE	ECTION	
Entrapr	nent		9		

Restrain	99
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOYED
Airbag Deployment - 1 st Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth	NONDEPLOYED
Seat	

Occupant	2003-75-29-1-3
MAIS	7=Unk. sev.
Seat Position	Front right side

AIS Level	Injury Description	Contacts
7=Unk. sev.	Head injury, closed, NFS	Unknown SOURCE
7=Unk. sev.		Unknown SOURCE

Occupant: 2003-75-29-1-4

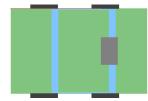


Fire Information

No fire

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence num-	SEVERE 1
ber	
CDC	1 R Y A W 4
Damage (C1-C6)	000000
Crush (L and D)	0 0
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	0

NASS Weighting Factor

Weighting factor

34.661

Rollover Characteristics

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

Pre-Crash Environment

Traffic FlowDNumber of Travel LanesTIRoadway AlignmentCRoadway ProfileHRoadway Surface TypeARoadway Surface ConditionDLight ConditionsDAtmospheric ConditionsNRelation to IntersectionNTraffic Control DevicePolicePoliceReportedAlcohol Test (< 95 indicates</td>0BAC 0.xx)D

DVDED/NO BARRIER THREE CURVE RIGHT HILL CREST ASPHALT Other DARK/LIGHTED No ADVERSE COND NONINTER/NONJUNC

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Chevrolet Caprice/Impala 2000 PASSENGER CAR 4-DR SEDAN/HDTOP 154

Pre-Crash Driver Data

Accident Type64Pre-event MovementNEGOTIATE CURVECritical Pre-crash EventUnk CONTROL LOSSAttempted Avoidance Maneu-99verPre-impact StabilityPre-impact LocationLAT SKID-CTR CLKLeft TRAVEL LANE

Age	16	Height	999	Weight	999
Gender			MALE		
Ejection			No EJE	ECTION	
Ejection	Area		No EJE	ECTION	
Entrapm	nent		9		

Restrain	99
AOPS	YES-RES DET
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 st Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth	NONDEPLOYED
Seat	

Occupant	2003-75-29-1-4
MAIS	2=Moderate
Seat Position	Second left

AIS Level	Injury Description	Contacts
7=Unk. sev.	Abdominal injury, blunt	Unknown SOURCE
2=Moderate	Awake on admission, unconscious <1 hour	Unknown SOURCE
1=Minor	Scalp laceration, mi-	Unknown SOURCE
1=Minor	Leg skin laceration, minor	Unknown SOURCE

Occupant: 2003-75-29-1-5

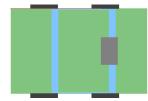


Fire Information

No fire

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence num-	SEVERE 1
ber CDC	1 R Y A W 4
Damage (C1-C6)	000000
Crush (L and D) Object Contacted 1	0 0 VEHICLE NO. 2
Object Contacted 2	0

NASS Weighting Factor

Weighting factor

34.661

Rollover Characteristics

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

Pre-Crash Environment

Traffic FlowDNumber of Travel LanesTIRoadway AlignmentCRoadway ProfileHRoadway Surface TypeARoadway Surface ConditionDLight ConditionsDAtmospheric ConditionsNRelation to IntersectionNTraffic Control DevicePolicePoliceReportedAlcohol Test (< 95 indicates</td>0BAC 0.xx)D

DVDED/NO BARRIER THREE CURVE RIGHT HILL CREST ASPHALT Other DARK/LIGHTED No ADVERSE COND NONINTER/NONJUNC

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Chevrolet Caprice/Impala 2000 PASSENGER CAR 4-DR SEDAN/HDTOP 154

Pre-Crash Driver Data

Accident Type64Pre-event MovementNEGOTIATE CURVECritical Pre-crash EventUnk CONTROL LOSSAttempted Avoidance Maneu-99verPre-impact StabilityPre-impact LocationLAT SKID-CTR CLKLeft TRAVEL LANE

Age	14	Height	999	Weight	999
Gender	r		MALE		
Ejection	n		No EJE	CTION	
Ejection	n Area		No EJE	CTION	
Entrapr	ment		9		

Restrain	99
AOPS	YES-RES DET
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 st Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth	NONDEPLOYED
Seat	

Occupant	2003-75-29-1-5
MAIS	2=Moderate
Seat Position	Second other

AIS Level	Injury Description	Contacts
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2=Moderate	Skull	fracture,	vault,	Unknown SOURCE
	NFS			

Occupant: 2003-75-29-1-6

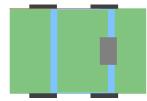


Fire Information

No fire

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence num-	SEVERE 1
ber	
CDC	1 R Y A W 4
Damage (C1-C6)	000000
Crush (L and D)	0 0
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	0

NASS Weighting Factor

Weighting factor

34.661

Rollover Characteristics

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

Pre-Crash Environment

Traffic FlowDNumber of Travel LanesTIRoadway AlignmentCRoadway ProfileHRoadway Surface TypeARoadway Surface ConditionDLight ConditionsDAtmospheric ConditionsNRelation to IntersectionNTraffic Control DevicePolicePoliceReportedAlcohol Test (< 95 indicates</td>0BAC 0.xx)D

DVDED/NO BARRIER THREE CURVE RIGHT HILL CREST ASPHALT Other DARK/LIGHTED No ADVERSE COND NONINTER/NONJUNC

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Chevrolet Caprice/Impala 2000 PASSENGER CAR 4-DR SEDAN/HDTOP 154

Pre-Crash Driver Data

Accident Type64Pre-event MovementNEGOTIATE CURVECritical Pre-crash EventUnk CONTROL LOSSAttempted Avoidance Maneu-99verPre-impact StabilityPre-impact LocationLAT SKID-CTR CLKLeft TRAVEL LANE

Age	15	Height	999	Weight	999
Gender			MALE		
Ejection		No EJECTION			
Ejection Area		No EJECTION			
Entrapment		9			

Restrain	99
AOPS	YES-RES DET
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 st Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth	NONDEPLOYED
Seat	

Occupant	2003-75-29-1-6
MAIS	4=Severe
Seat Position	Second middle

AIS Level	Injury Description	Contacts
4=Severe	Intracerebral hematoma, small subcortical	Unknown SOURCE
4=Severe	Cerebellar hematoma, intrac- erebellar, small (<15ccs)	Unknown SOURCE
2=Moderate	Lethargic on admis- sion, unconscious <1 hour	Unknown SOURCE
1=Minor 1=Minor	Facial skin abrasion Scalp contusion	Unknown SOURCE Unknown SOURCE

Occupant: 2003-75-29-1-7

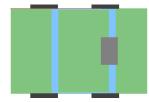


Fire Information

No fire

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence num-	SEVERE 1
ber CDC	1 R Y A W 4
Damage (C1-C6)	000000
Crush (L and D) Object Contacted 1	0 0 VEHICLE NO. 2
Object Contacted 2	0

NASS Weighting Factor

Weighting factor

34.661

Rollover Characteristics

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

Pre-Crash Environment

Traffic FlowDNumber of Travel LanesTIRoadway AlignmentCRoadway ProfileHRoadway Surface TypeARoadway Surface ConditionDLight ConditionsDAtmospheric ConditionsNRelation to IntersectionNTraffic Control DevicePolicePoliceReportedAlcohol Test (< 95 indicates</td>0BAC 0.xx)D

DVDED/NO BARRIER THREE CURVE RIGHT HILL CREST ASPHALT Other DARK/LIGHTED No ADVERSE COND NONINTER/NONJUNC

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Chevrolet Caprice/Impala 2000 PASSENGER CAR 4-DR SEDAN/HDTOP 154

Pre-Crash Driver Data

Accident Type64Pre-event MovementNEGOTIATE CURVECritical Pre-crash EventUnk CONTROL LOSSAttempted Avoidance Maneu-99verPre-impact StabilityPre-impact LocationLAT SKID-CTR CLKLeft TRAVEL LANE

Age	14	Height	999	Weight	999
Gende	r		MALE		
Ejection		No EJECTION			
Ejectio	n Area		No EJE	CTION	
Entrapment		9			

Restrain	99
AOPS	YES-RES DET
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 st Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth	NONDEPLOYED
Seat	

Occupant	2003-75-29-1-7
MAIS	1=Minor
Seat Position	Second other

AIS Level	Injury Description	Contacts
-----------	--------------------	----------

1=Minor	Leg skin abrasion			Seat, back
1=Minor	Leg	skin	contusion	Seat, back
	(hematoma)			

Occupant: 2003-75-29-1-8

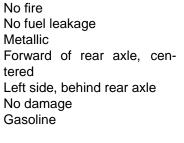


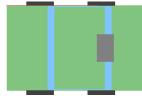
Fire Information

No fire

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

Fuel Cap Location Fuel Tank Damage Fuel Type





Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence num-	SEVERE 1
ber CDC	1 R Y A W 4
Damage (C1-C6)	000000
Crush (L and D)	0 0
Object Contacted 1	VEHICLE NO. 2
Object Contacted 2	0

NASS Weighting Factor

Weighting factor

34.661

Rollover Characteristics

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

Pre-Crash Environment

Traffic FlowDNumber of Travel LanesTIRoadway AlignmentCRoadway ProfileHRoadway Surface TypeARoadway Surface ConditionDLight ConditionsDAtmospheric ConditionsNRelation to IntersectionNTraffic Control DevicePolicePoliceReportedAlcohol Test (< 95 indicates</td>0BAC 0.xx)D

DVDED/NO BARRIER THREE CURVE RIGHT HILL CREST ASPHALT Other DARK/LIGHTED No ADVERSE COND NONINTER/NONJUNC

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Chevrolet Caprice/Impala 2000 PASSENGER CAR 4-DR SEDAN/HDTOP 154

Pre-Crash Driver Data

Accident Type64Pre-event MovementNEGOTIATE CURVECritical Pre-crash EventUnk CONTROL LOSSAttempted Avoidance Maneu-99verPre-impact StabilityPre-impact LocationLAT SKID-CTR CLKLeft TRAVEL LANE

Age	15	Height	999	Weight	999
Gende	r		MALE		
Ejectio	n		No EJE	CTION	
Ejection	n Area		No EJE	CTION	
Entrap	ment		9		

Restrain	99
AOPS	YES-RES DET
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 st Seat	DR
PAS BAG DEPLY	
Airbag Deployment - Oth	NONDEPLOYED
Seat	

Occupant	2003-75-29-1-8
MAIS	4=Severe
Seat Position	Second right

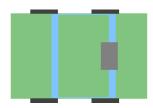
AIS Level	Injury Description	Contacts
4=Severe 3=Serious	Cerebral laceration Basilar skull fracture, NFS	Unknown SOURCE Unknown SOURCE
3=Serious 2=Moderate 1=Minor	Lung laceration NFS Rib cage fracture NFS Facial bone fracture NFS	Unknown SOURCE Unknown SOURCE Unknown SOURCE

Occupant: 2003-75-29-2-1



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence number	MODERATE 1
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	12 F D E W 99 0 0 0 0 0 0 0 0 0 VEHICLE NO. 1 VEHICLE NO. 3

NASS Weighting Factor

Weighting factor

34.661

Rollover Characteristics

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

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

Not DIVIDED FOUR STRAIGHT UPHILL GRADE ASPHALT DRY DARK/LIGHTED No ADVERSE COND NONINTER/NONJUNC

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Dodge Caravan 1999 TRUCK MINIVAN 196

Pre-Crash Driver Data

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

DRIVER Factors

Age	39	Height	155	Weight	53
Gender		FEMALE-NOT PREG			
Ejectio	Ejection No EJECTION				
Ejection Area		No EJECTION			
Entrapment Not ENTRAPPED					

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

Occupant	2003-75-29-2-1
MAIS	2=Moderate
Seat Position	Front left side

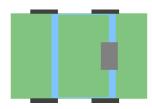
AIS Level	Injury Description	Contacts
2=Moderate 1=Minor	Foot fracture NFS Leg skin contusion (hematoma)	Floor Knee bolster
1=Minor	Upper extremity skin contusion	Air bag-DR side
1=Minor	Acute cervical spine strain without fracture or dislocation	Belt webb/buckle
1=Minor	Shoulder sprain (glenohumeral joint)	Steering rim

Occupant: 2003-75-29-2-2



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence number	MODERATE 1
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	12 F D E W 99 0 0 0 0 0 0 0 0 0 VEHICLE NO. 1 VEHICLE NO. 3

NASS Weighting Factor

Weighting factor

34.661

Rollover Characteristics

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

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

Not DIVIDED FOUR STRAIGHT UPHILL GRADE ASPHALT DRY DARK/LIGHTED No ADVERSE COND NONINTER/NONJUNC

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Dodge Caravan 1999 TRUCK MINIVAN 196

Pre-Crash Driver Data

Accident Type65Pre-event MovementGOING STRAIGHTCritical Pre-crash EventOPP DIR-OVR LEFTAttempted Avoidance Maneu-
verNo AVOIDANCEPre-impact StabilityTRACKINGPre-impact LocationSTAYED IN LANE

Age	3	Height	999	Weight	16
Gender			MALE		
Ejection			No EJE	ECTION	
Ejection Area		No EJECTION			
Entrapment		Not ENTRAPPED			

None used/avail
YES-RES DET
Not EQUIP/AVAIL
DR
Not EQUIP W/ OTH

Occupant	2003-75-29-2-2
MAIS	3=Serious
Seat Position	Second left

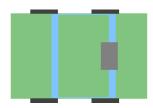
AIS Level	Injury Description	Contacts
1=Minor	Leg skin contusion (hematoma)	Unknown SOURCE
2=Moderate	Lethargic on admis- sion, never uncon- scious	Seat, back
3=Serious	Lung contusion, uni- lateral	Seat, back
1=Minor	Abdominal skin abra- sion	Belt webb/buckle
1=Minor	Abdominal skin contu- sion	Belt webb/buckle

Occupant: 2003-75-29-2-3



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence number	MODERATE 1
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	12 F D E W 99 0 0 0 0 0 0 0 0 0 VEHICLE NO. 1 VEHICLE NO. 3

NASS Weighting Factor

Weighting factor

34.661

Rollover Characteristics

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

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 96 BAC 0.xx)

Not DIVIDED FOUR STRAIGHT UPHILL GRADE ASPHALT DRY DARK/LIGHTED No ADVERSE COND NONINTER/NONJUNC

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Dodge Caravan 1999 TRUCK MINIVAN 196

Pre-Crash Driver Data

Accident Type65Pre-event MovementGOING STRAIGHTCritical Pre-crash EventOPP DIR-OVR LEFTAttempted Avoidance Maneu-
verNo AVOIDANCEPre-impact StabilityTRACKINGPre-impact LocationSTAYED IN LANE

Age	6	Height	999	Weight	20
Gende	r		FEMAI	_E-NOT PRE	G
Ejectio	n	No EJECTION			
Ejection Area No EJECTION					
Entrap	ment	nt Not ENTRAPPED			

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

Occupant	2003-75-29-2-3
MAIS	2=Moderate
Seat Position	Second middle

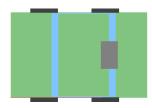
AIS Level	Injury Description	Contacts
2=Moderate	Clavicle fracture	Belt webb/buckle

Occupant: 2003-75-29-3-1



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence number	MINOR 2
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	12 L Y A S 9 0 0 0 0 0 0 0 0 0 VEHICLE NO. 2 0

NASS Weighting Factor

Weighting factor

34.661

Rollover Characteristics

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

Pre-Crash Environment

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

No ALCOHOL

Vehicle Factors

96

Make-Model Year Class Body Type Weight Honda Accord 1995 PASSENGER CAR 4-DR SEDAN/HDTOP 127

Pre-Crash Driver Data

Accident Type	98
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	Same DIR-OV LEFT
Attempted Avoidance Maneu-	No AVOIDANCE
ver	
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

DRIVER Factors

Age	47	Height	178	Weight	75
Gender			MALE		
Ejectior	n		No EJE	ECTION	
Ejectior	n Area		No EJE	ECTION	
Entrapn	nent		Not EN	ITRAPPED	

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

Injuries

Occupant	2003-75-29-3-1
MAIS	0=None
Seat Position	Front left side

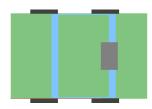
AIS Level Injury Description Contacts

Occupant: 2003-75-29-3-2



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence number	MINOR 2
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	12 L Y A S 9 0 0 0 0 0 0 0 0 VEHICLE NO. 2 0

NASS Weighting Factor

Weighting factor

34.661

Rollover Characteristics

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

Pre-Crash Environment

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

No ALCOHOL

Vehicle Factors

96

Make-Model Year Class Body Type Weight Honda Accord 1995 PASSENGER CAR 4-DR SEDAN/HDTOP 127

Pre-Crash Driver Data

Accident Type	98
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	Same DIR-OV LEFT
Attempted Avoidance Maneu-	No AVOIDANCE
ver	
Pre-impact Stability	TRACKING
Pre-impact Location	STAYED IN LANE

Age	50	Height	160	Weight	70
Gender FEMALE-NOT PREG			G		
Ejectio	n		No EJECTION		
Ejection Area No EJECTION					
Entrapment Not ENTRAPPED					

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

Occupant	2003-75-29-3-2
MAIS	1=Minor
Seat Position	Front right side

AIS Level	Injury Description	Contacts
-----------	--------------------	----------

1=Minor	Lumbar spine acute	Seat, back
	strain without fracture	
	or dislocation	
1=Minor	Skin contusion (body region unknown)	Unknown SOURCE

31Case 2003-79-179

Summary:

1

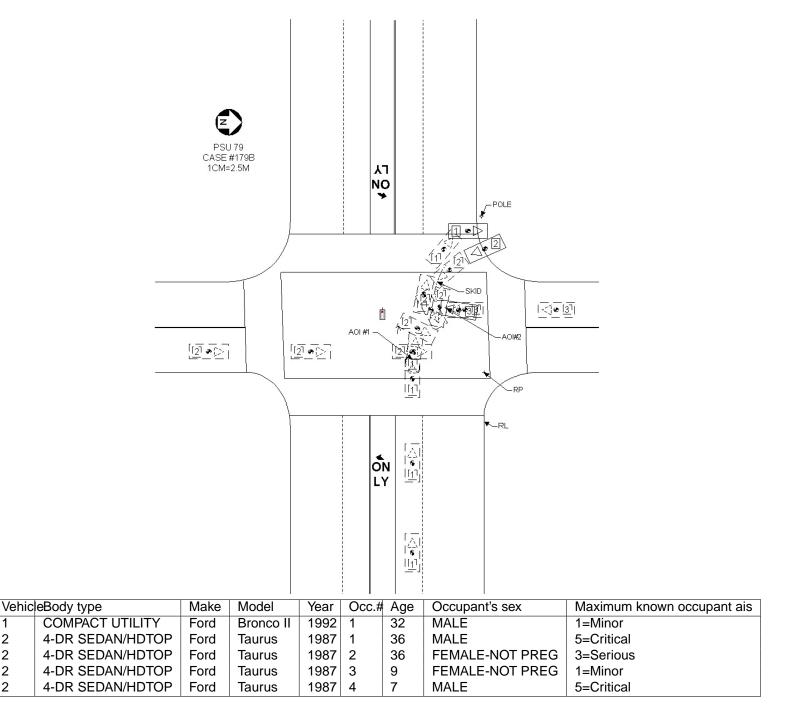
2

2

2

2

Vehicle one, a 1992 Ford Explorer with manual lap and shoulder belts was traveling west in the number two lane of a five lane not physically divided, level, dry, asphalt, roadway with a left turn lane. Vehicle two, a 1987 Ford Taurus with manual lap and shoulder belts was traveling north in the number one lane of a two lane, not physically divided, level, dry, asphalt roadway. Vehicle three, a 1989 Ford Aerostar was traveling south in the number one lane of a two lane not physically divided, level, dry, asphalt, roadway. Vehicle one was towed with moderate damage. Vehicle two was towed with major damage. Vehicle three was driven from scene with minor damage. Driver of vehicle one was transported and released with a scalp laceration. Driver of vehicle two was hospitalized with brain injury. The front seat passenger was hospitalized with multiple fractures. The left rear seat passenger was hospitalized with a brain injury. The right rear seat passenger was dead on arrival in ER with several skull fracture. Driver of vehicle three was not reported as injured.)

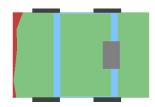


Occupant: 2003-79-179-1-1



Fire Information

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 998 43 -40 15
Est. δV with sequence number	DELTA V CODED 1
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	11 F D E W 2 11 2 8 13 10 29 160 0 VEHICLE NO. 2 0

NASS Weighting Factor

Weighting factor

6.810

Rollover Characteristics

Number of Events	2
Rollover Initiation Type	No rollover
Location of Rollover Initiation	No rollover
Rollover Initiation Object	No rollover
Contacted	
Location on Vehicle where	No rollover
Principal Tripping Force was	
Applied	
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 INTERSECTION REL Traffic Control Device Police Reported Alcohol ALCOHOL PRESENT Presence Alcohol Test (< 95 indicates 34 BAC 0.xx)

Vehicle Factors

Make-Model Year Class Body Type Weight Ford Bronco II 1992 TRUCK COMPACT UTILITY 179

Pre-Crash Driver Data

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

DRIVER Factors

Age	32	Height	175	Weight	77
Gender			MALE		
Ejection	n		No EJE	CTION	
Ejection	n Area		No EJE	ECTION	
Entrapn	nent		Not EN	TRAPPED	

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

Occupant	2003-79-179-1-1
MAIS	1=Minor
Seat Position	Front left side

AIS Level	Injury Description	Contacts
1=Minor	Scalp laceration, mi- nor	Windshield
1=Minor	Awake on admission, never unconscious	Windshield

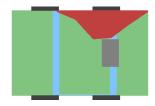
Occupant: 2003-79-179-2-1



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed	No rollover 998
Total, Longitudal, and Lateral δV	52 -26 -45
Est. δV with sequence number	DELTA V CODED 1
CDC	2 R Z A W 5
Damage (C1-C6)	3 40 80 83 26 3
Crush (L and D)	323 -38
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	VEHICLE NO. 3

NASS Weighting Factor

Weighting factor

6.810

Rollover Characteristics

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

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 99 BAC 0.xx)

Not DIVIDED TWO STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Ford Taurus 1987 PASSENGER CAR 4-DR SEDAN/HDTOP 130

Pre-Crash Driver Data

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

DRIVER Factors

Age	36	Height	999	Weight	999
Gender MALE					
Ejection			No EJECTION		
Ejection Area No EJECTION					
Entrapm	nent		JAMMED DOOR/FIRE		

Restrain	Lap and shoulder
AOPS	NÔ
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 st Seat	Not EQUIP/AVAIL
Airbag Deployment - Oth	Not EQUIP W/ OTH
Seat	

Occupant	2003-79-179-2-1
MAIS	5=Critical
Seat Position	Front left side

AIS Level	Injury Description	Contacts
5=Critical	Cerebral diffuse ax- onal injury	Other occupants
4=Severe	Unconscious on ad- mission, length <1 hour & neuro deficit	Other occupants
1=Minor	Myocardial contusion, minor	Left interior

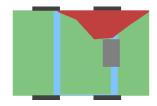
Occupant: 2003-79-179-2-2



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral	No rollover 998 52 -26 -45
δV	52 20 45
Est. δV with sequence num-	DELTA V CODED 1
ber	
CDC	2 R Z A W 5
Damage (C1-C6)	3 40 80 83 26 3
Crush (L and D)	323 -38
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	VEHICLE NO. 3

NASS Weighting Factor

Weighting factor

6.810

Rollover Characteristics

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

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 99 BAC 0.xx)

Not DIVIDED TWO STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Ford Taurus 1987 PASSENGER CAR 4-DR SEDAN/HDTOP 130

Pre-Crash Driver Data

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

Age	36	Height	999	Weight	999
Gender FEMALE-NOT PREG			G		
Ejectio	n		No EJECTION		
Ejection Area No EJECTION					
Entrap	ment		JAMMED DOOR/FIRE		

Restrain	Lap and shoulder
AOPS	NÓ
Airbag Deployment	Not EQUIP/AVAIL
Airbag Deployment - 1 st Seat	Not EQUIP/AVAIL
Airbag Deployment - Oth	Not EQUIP W/ OTH
Seat	

Occupant	2003-79-179-2-2
MAIS	3=Serious
Seat Position	Front right side

AIS Level	Injury Description	Contacts
2=Moderate 3=Serious	Rib cage fracture NFS Lung contusion, uni- lateral	Right interior Right interior
2=Moderate 2=Moderate 2=Moderate 2=Moderate 2=Moderate	Hepatic injury NFS Scapular fracture Scapular fracture Pelvic fracture NFS Arm, forearm, hand fracture NFS	Right interior Right B pillar Right B pillar Right interior Right interior

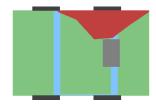
Occupant: 2003-79-179-2-3



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed	No rollover 998
Total, Longitudal, and Lateral δV	52 -26 -45
Est. δV with sequence num-	DELTA V CODED 1
ber	
CDC	2 R Z A W 5
Damage (C1-C6)	3 40 80 83 26 3
Crush (L and D)	323 -38
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	VEHICLE NO. 3

NASS Weighting Factor

Weighting factor

6.810

Rollover Characteristics

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

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 99 BAC 0.xx)

Not DIVIDED TWO STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Ford Taurus 1987 PASSENGER CAR 4-DR SEDAN/HDTOP 130

Pre-Crash Driver Data

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

Age	9	Height	999	Weight	999
Gende	Gender FEMALE-NOT PREG				G
Ejectio	ction No EJECTION				
Ejection Area No EJECTION					
Entrap	ment		JAMMI	ED DOOR/FI	RE

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

Injuries

Occupant	2003-79-179-2-3
MAIS	1=Minor
Seat Position	Second left

AIS Level Injury Description Contacts

1=Minor	Scalp abrasion	Unknown SOURCE
1=Minor	Neck skin abrasion	Unknown SOURCE

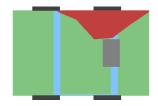
Occupant: 2003-79-179-2-4



Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location

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



Crash Severity

Nr. Quarter Turns Impact Speed	No rollover 998
Total, Longitudal, and Lateral δV	52 -26 -45
Est. δV with sequence num-	DELTA V CODED 1
ber	
CDC	2 R Z A W 5
Damage (C1-C6)	3 40 80 83 26 3
Crush (L and D)	323 -38
Object Contacted 1	VEHICLE NO. 1
Object Contacted 2	VEHICLE NO. 3

NASS Weighting Factor

Weighting factor

6.810

Rollover Characteristics

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

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment **Roadway Profile** Roadway Surface Type Roadway Surface Condition Light Conditions Atmospheric Conditions Relation to Intersection Traffic Control Device Police Reported Alcohol Presence Alcohol Test (< 95 indicates 99 BAC 0.xx)

Not DIVIDED TWO STRAIGHT LEVEL ASPHALT DRY DAYLIGHT No ADVERSE COND INTERSECTION REL

No ALCOHOL

Vehicle Factors

Make-Model Year Class Body Type Weight Ford Taurus 1987 PASSENGER CAR 4-DR SEDAN/HDTOP 130

Pre-Crash Driver Data

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

Age	7	Height	117	Weight	57
Gender			MALE		
Ejectior	า		No EJE	CTION	
Ejection Area No EJECTION					
Entraph	nent		JAMME	ED DOOR/FII	RE

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

Occupant	2003-79-179-2-4
MAIS	5=Critical
Seat Position	Second right

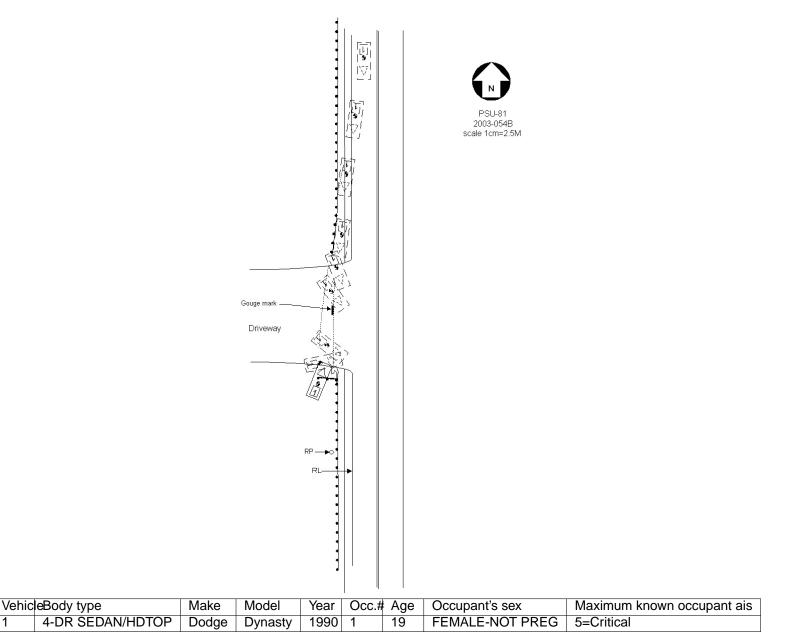
AIS Level	Injury Description	Contacts
4=Severe	Basilar skull fracture, open, with brain tis- sue loss.	Right interior
5=Critical	Brain stem hemor- rhage	Right interior
3=Serious	Femur fracture NFS	Right interior
2=Moderate	Clavicle fracture	Right interior
1=Minor	Neck skin contusion (hematoma)	Right interior
1=Minor	Upper extremity skin abrasion	Right interior
1=Minor	Upper extremity skin contusion	Right interior
1=Minor	Leg skin abrasion	Right interior
1=Minor	Leg skin contusion (hematoma)	Right interior

Case 2003-81-54 32

Summary:

1

Vehicle #1 a 1990 Dodge Dynasty was traveling southbound on a two-way two lane undivided rural roadway. For unknown reasons vehicle crossed right fog line and impacted a section of guardrail with the right front corner of the vehicle, upon separation from the first section of guardrail the vehicle rotated counter clockwise and crossed a private driveway. The vehicle then impacted a second section of guardrail with the passenger side of the vehicle and the guardrail severely intruded into the vehicle and impacted the driver. The vehicle was towed due to damage. The driver died several hours later with brain hemorrhages and multiple hip and leg trauma.)



Occupant: 2003-81-54-1-1

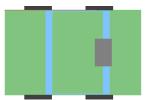




Fire Information

Fire Occurence Fire Origin Location of Fuel Leakage Type of Fuel Tank Fuel Tank Location **Fuel Cap Location** Fuel Tank Damage Fuel Type

No fire No fire No fuel leakage Metallic Behind rear axle, centered Right side, behind rear axle No damage Gasoline



Crash Severity

Nr. Quarter Turns Impact Speed Total, Longitudal, and Lateral δV	No rollover 999 999 999 999
Est. δV with sequence number	SEVERE 2
CDC Damage (C1-C6) Crush (L and D) Object Contacted 1 Object Contacted 2	1 R Y A W 8 0 0 0 0 0 0 0 0 0 Other BARRIER Other BARRIER

NASS Weighting Factor

Weighting factor

21.714

Rollover Characteristics

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

Pre-Crash Environment

Traffic Flow Number of Travel Lanes Roadway Alignment Roadway Profile Roadway Surface Type Roadway Surface Condition Light Conditions **Atmospheric Conditions** Relation to Intersection **Traffic Control Device** Police Reported Alcohol Presence Alcohol Test (< 95 indicates 0 BAC 0.xx)

Not DIVIDED TWO STRAIGHT **UPHILL GRADE** ASPHALT WET DAWN No ADVERSE COND NONINTER/NONJUNC

9

Vehicle Factors

Make-Model Year Class Body Type Weight

Dodge Dynasty 1990 PASSENGER CAR 4-DR SEDAN/HDTOP 136

Pre-Crash Driver Data

Accident Type	1
Pre-event Movement	GOING STRAIGHT
Critical Pre-crash Event	OFF EDGE-RIGHT
Attempted Avoidance Maneu-	99
ver Pre-impact Stability Pre-impact Location	9 DEPARTED ROADWAY

DRIVER Factors

Age	19	Height	170	Weight	134
Gende	r		FEMALE-NOT PREG		
Ejectio	n		No EJECTION		
Ejectio	n Area		No EJECTION		
Entrap	ment		Not ENTRAPPED		

Restraint Factors

Restrain	Lap and shoulder
AOPS	YES-RES DET
Airbag Deployment	BAG DEPLOY UNDET
Airbag Deployment - 1 st Seat	BAG DEP DET UNK
Airbag Deployment - Oth	Not EQUIP W/ OTH
Seat	

Injuries

Occupant MAIS Seat Position

2003-81-54-1-1 5=Critical Front left side

AIS Level	Injury Description	Contacts
5=Critical	Cerebral diffuse ax- onal injury	Right interior
5=Critical	Brain stem hemor- rhage	Right interior
4=Severe	Cerebral subdural hematoma, small (<50ccs)	Right interior
3=Serious	Cerebral subarach- noid hemorrhage	Right interior
3=Serious	Cerebral subarach- noid hemorrhage	Right interior
4=Severe	Lung contusion, bilat- eral	Right interior
3=Serious	 >3 rib fractures one side & <3 other side, with stable chest 	Right interior
3=Serious	Bladder laceration without perforation (partial thickness)	Right interior
3=Serious	Pelvic fracture, open/displaced/commir	Right interior
3=Serious	Sacroilium fracture	Right interior
2=Moderate	Pelvic fracture, closed	Right interior
1=Minor		0
-	Myocardial contusion, minor	Right interior
3=Serious	Femoral shaft fracture	Right interior
4=Severe	Traumatic leg ampu- tation above the knee	Right interior
1=Minor	Scalp contusion	Right interior
1=Minor	297402	Right interior
1=Minor	297202	Right interior
1=Minor	297602	Right interior
1=Minor	Facial skin abrasion	Right interior
1=Minor	Facial skin laceration, minor	Right interior
1=Minor	Facial skin contusion	Right interior
1=Minor	Upper extremity skin contusion	Belt webb/buckle
1=Minor	Upper extremity skin contusion	Right interior
1=Minor	Thoracic skin contu- sion	Right interior
1=Minor	Thoracic skin abra- sion	Right interior
1=Minor	Abdominal skin abra- sion	Right interior
1=Minor	Upper extremity skin contusion	Air bag-DR side
1=Minor	Upper extremity skin abrasion	Air bag-DR side
1=Minor	Upper extremity skin abrasion	Right interior
1=Minor	Upper extremity skin laceration, minor	Right interior
1=Minor	Leg skin abrasion	Floor
1=Minor	Leg skin contusion	Floor
	(hematoma)	
4 14		