



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

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

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*** *** ***



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**TRANSPORTATION SCIENCES CENTER
ACCIDENT RESEARCH GROUP**

Division of Calspan Corporation
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SAN IT.

[REDACTED] 1995

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CALSPAN REMOTE AIR BAG DEPLOYMENT INVESTIGATION

CALSPAN CASE NO. 94-6

VEHICLE: 1993 BUICK CENTURY

LOCATION: [REDACTED], FL

CRASH DATE: [REDACTED], 1993

Contract No. DTNH22-94-A-07047

Prepared for:

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

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

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

TECHNICAL REPORT STANDARD TITLE PAGE

1. Report No. 94-6	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle Calspan Remote Air Bag Deployment Investigation Vehicle - 1993 Buick Century Location - ██████████ FL		5. Report Date: ██████ 1995	
		6. Performing Organization Code	
7. Author(s) Accident Research Group		8. Performing Organization Report No.	
9. Performing Organization Name and Address Transportation Sciences Center Accident Research Group Division of Calspan Corporation ██████████		10. Work Unit No. ██████████	
		11. Contract or Grant No. DTNH22-94-A-07047	
12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Washington, D.C. 20590		13. Type of Report and Period Covered Technical Report Accident Date ██████ 93	
		14. Sponsoring Agency Code	
15. Supplementary Notes Remote investigation of an air bag deployment crash that resulted in a fatal head injury to the 72 year old male driver.			
16. Abstract <p>This remote investigation focused on a 1993 Buick Century that was equipped with a Supplemental Inflatable Restraint (SIR) driver's side air bag system. The SIR deployed as a result of a center front impact sequence with a palm tree. The driver of the vehicle was a 72 year old male with a reported height of 183 cm and weight of 81 kg. He was departing from a drive-in bank window when he alleged to have experienced sudden acceleration which contributed to the vehicle impacting the tree.</p> <p>The 12 o'clock direction of force impact produced approximately 33-38 cm (13-15") of bumper crush located near the centerline of the vehicle. An estimated crush profile yielded a velocity change of 26 km/h (16 mph) which deployed the SIR. The driver sustained an impact to the superior aspect of his scalp and refused treatment at the scene. He later complained of headaches and consented to hospitalization three days post-crash. The driver was diagnosed with a subdural hematoma and expired approximately 87 hours after the crash.</p> <p>The vehicle was repaired prior to Calspan's notification of the crash, therefore vehicle data was limited to photographs and a repair estimate that was provided by the insurance carrier. The specific mechanism that caused the head injury was unknown, however, possible sources included the left A-pillar, windshield header, and the center instrument panel.</p>			
17. Key Words Remote Investigation Supplemental Inflatable Restraint (SIR) 12 o'clock impact force Subdural hematoma		18. Distribution Statement General Public	
19. Security Classif. (of this report) Unclassified	20. Security Classif. (of this page) Unclassified	21. No. of Pages	22. Price

CALSPAN REMOTE AIR BAG DEPLOYMENT INVESTIGATION**CALSPAN CASE NO. 94-6****VEHICLE: 1993 BUICK CENTURY****LOCATION: [REDACTED], FL****TECHNICAL SUMMARY**

This remote investigation focused on a single vehicle crash with a palm tree that resulted in deployment of the vehicle's driver's side air bag system. The driver of the vehicle sustained an impact to the top of his head which resulted in a small laceration. He refused treatment at the scene and was transported to his residence where his condition deteriorated over a 72 hour period. The driver was subsequently transported to a local hospital where he was diagnosed with a subdural hematoma and expired approximately 87 hours after the crash.

The crash occurred in a parking lot during daylight hours on [REDACTED], 1993, as the driver was attempting to exit a bank drive-in teller window. The involved vehicle was a 1993 Buick Century, 4 dr. sedan, that was equipped with automatic door-mounted, 3-point lap and shoulder belts in the front outboard seated positions and a Supplemental Inflatable Restraint (SIR) driver's side air bag system. The vehicle was recently purchased by the driver and had an odometer reading of 2,871 km/h (1,783 miles). The Buick Century was identified by the following vehicle identification number (VIN): [REDACTED]

The driver of the Buick was a 72 year old male with a height of 183 cm (72") and weight of 81 kg (180 lbs.). He was reportedly wearing the automatic 3-point lap and shoulder belt system. The driver stated to his wife that as he began to exit the drive-in bank window, the vehicle experienced sudden acceleration and went "like a bat out of hell". The investigating officer's schematic of the crash scene indicated that as the driver exited the drive-in window, he steered in a counterclockwise direction (shallow left turn) then continued on a straight line trajectory into a landscaped area. The frontal area of the Buick reportedly impacted two guy wires for a utility pole, however, the insurance company photographs of the vehicle did not show evidence of a guy wire impact. The center frontal area of the vehicle subsequently impacted a palm tree resulting in a 12 o'clock impact force. Based on the attached photographs from the insurance company, the vehicle sustained approximately 33-38 cm (13-15") of front bumper crush. This estimated crush depth resulted in a computed velocity change of approximately 26 km/h (16 mph) which was sufficient to deploy the driver's side SIR air bag system. The investigating police officer noted on his report that the impact sheared the tree at its base as it toppled in a longitudinal direction away from the vehicle. The police report indicated that the Buick Century came to rest at or near the impact location with the tree.

The at-impact position of the driver within the vehicle was unknown. The PAR listed the driver as restrained by the automatic door mounted belt system. The driver's wife also noted that he was restrained, however, since he was alone in the vehicle and there were no witnesses to the crash,

accurate assessment of belt usage could not be made. The driver apparently exited the vehicle unassisted and waited for police personnel to arrive on-scene.

The driver sustained a small laceration to the superior aspect of his scalp from contact with an unknown object within the vehicle. He was examined at the scene by the paramedics and refused additional treatment. The driver was subsequently transported by a private vehicle to his residence. His wife stated that he applied a band-aid to the superficial laceration. On the following day, the driver began to complain of headache-like symptoms, however, he refused to seek medical treatment and advised his wife that if it persists, he would call on [REDACTED] for an appointment. On [REDACTED] approximately 48 hours after the crash, the driver's condition declined and he consented to visit to local hospital emergency room. A neighbor transported him to the hospital where he was diagnosed with a subdural hematoma. He expired on [REDACTED] 1993, approximately 87 hours after the crash.

The insurance company did not photograph the interior of the vehicle and there were no interior components replaced or repaired other than the driver's side air bag module assembly. Based on the nature of the injury to the scalp and underlying tissue, the driver probably sustained the injury from one of three possible mechanisms. These injury mechanisms are as follows:

- the driver was out of position to his left and moved forward outside the range of the air bag and impacted the left A-pillar with the superior aspect of his scalp
- the driver was out of position to his right and initiated a forward trajectory, impacting his head on the center instrument panel or rear view mirror/windshield area
- the driver was in a normal seated position behind the steering wheel within a close proximity to the air bag. As the bag deployed and expanded against the driver, he was accelerated upward into the headliner and roof, impacting his head.

The superior scalp laceration and the subdural hematoma supports an impact to the top of the scalp. There was insufficient data to clearly identify the mechanism of injury and to reconstruct the kinematic pattern of the driver. The vehicle had been repaired prior to Calspan's notification of the crash, therefore damaged components were noted from the repair estimate that was provided by the insurance company. The repair estimate is included as Attachment E of this Technical Summary.

ATTACHMENT A

Vehicle Photographs



1. Frontal damage to the Buick Century.



2. Right front three-quarter view showing the extent of frontal crush.

ATTACHMENT B

Police Accident Report

FLORIDA TRAFFIC CRASH REPORT

MAIL TO: DEPT. OF HIGHWAY SAFETY & MOTOR VEHICLES
TRAFFIC CRASH RECORDS

DO NOT WRITE IN THIS SPACE

DATE OF CRASH [REDACTED] 93		TIME OF CRASH 1742 [] AM [] PM		TIME OFFICER NOTIFIED 1750 [] AM [X] PM		TIME OFFICER ARRIVED 1800 [] AM [] PM		INVEST. AGENCY REPORT NUMBER [REDACTED]		HSMV CRASH REPORT NUMBER [REDACTED]			
COUNTY / CITY CODE [REDACTED]		Feet or Miles 5 [] Feet [X] Miles		N S E W [] [] [] [X] of [REDACTED]		CITY OR TOWN [REDACTED]		(Check if in City or Town) COUNTY [REDACTED]					
AT NODE NO. or [REDACTED]		FEET / MILES FROM NODE NO. [REDACTED]		NEXT NODE NO. [REDACTED]		NO. OF LANES [REDACTED]		ON STREET, ROAD OR HIGHWAY [REDACTED] SR [REDACTED] Parking lot					
AT INTERSECTION OF [REDACTED]		or 50		FEET / MILES [REDACTED]		N S E W [] [] [] [X] of [REDACTED]		OF INTERSECTION OF [REDACTED] Rd					
DRIVER ACTION 1 Phantom 2 Hit & Run 3 N/A		YEAR 93	MAKE Buick	TYPE 01	USE 01	VEH. LICENSE NUMBER [REDACTED]	STATE FL	VEHICLE IDENTIFICATION NUMBER 364AG55N6P3		POINT OF IMPACT CIRCLE AREA OF DAMAGE [REDACTED]			
TRAILER OR TOWED VEHICLE INFORMATION		TRAILER TYPE		TRAILER TYPE		TRAILER TYPE		TRAILER TYPE		TRAILER TYPE			
VEHICLE TRAVELING N S E W [] [X] [] []		ON SR		At [REDACTED]		Est. MPH 40	Posted Speed 15	EST. VEHICLE DAMAGE 1 Disabling 2 Functional 3 No Damage \$2,500.00		EST. TRAILER DAMAGE 1 \$ 2 \$ 3 \$			
INSURANCE COMPANY (LIABILITY OR PIP) [REDACTED] Insurance		POLICY NUMBER [REDACTED]		VEHICLE REMOVED BY: [REDACTED]		1 Tow Rotation List 2 Tow Owner's Request 3 Driver 4 Other		[REDACTED]		[REDACTED]			
OWNER'S FULL NAME (Check if Driver) [REDACTED]		CURRENT ADDRESS (Number and Street) [REDACTED]		CITY AND STATE [REDACTED]		ZIP CODE [REDACTED]		[REDACTED]		[REDACTED]			
OWNER'S FULL NAME (Trailer or Towed Vehicle) [REDACTED]		CURRENT ADDRESS (Number and Street) [REDACTED]		CITY AND STATE [REDACTED]		ZIP CODE [REDACTED]		[REDACTED]		[REDACTED]			
DRIVER (Exactly as on Driver License) / Pedestrian [REDACTED]		CURRENT ADDRESS (Number and Street) [REDACTED]		CITY & STATE / ZIP CODE [REDACTED]		DATE OF BIRTH [REDACTED]		[REDACTED]		[REDACTED]			
DRIVER LICENSE NUMBER [REDACTED]		STATE FL	DL TYPE 5	REQ. END. 2	BAC TEST 3 Urine 1 Blood 4 Refused 2 Breath 5 None	RESULTS [REDACTED]	AL/DRUG [REDACTED]	PHYS. DEF. [REDACTED]	RES [REDACTED]	RACE [REDACTED]	SEX [REDACTED]		
HAZARDOUS MATERIALS BEING TRANSPORTED 1 Yes 2 No [] [X]		PLACARDED 1 Yes 2 No [] [X]		RECOMMEND RE-EXAM 1 Yes 2 No [] [X]		If YES, Explain in Narrative [REDACTED]		DRIVER'S PHONE NO. [REDACTED]		[REDACTED]			
PASSENGER'S NAME (Additional on Continuation Page) [REDACTED]		CURRENT ADDRESS [REDACTED]		CITY & STATE / ZIP [REDACTED]		AGE [REDACTED]		LOC. [REDACTED]		INJ. [REDACTED]			
DRIVER ACTION 1 Phantom 2 Hit & Run 3 N/A		YEAR [REDACTED]	MAKE [REDACTED]	TYPE [REDACTED]	USE [REDACTED]	VEH. LICENSE NUMBER [REDACTED]	STATE [REDACTED]	VEHICLE IDENTIFICATION NUMBER [REDACTED]		POINT OF IMPACT CIRCLE AREA OF DAMAGE [REDACTED]			
TRAILER OR TOWED VEHICLE INFORMATION		TRAILER TYPE		TRAILER TYPE		TRAILER TYPE		TRAILER TYPE		TRAILER TYPE			
VEHICLE TRAVELING N S E W [] [] [] []		ON [REDACTED]		At [REDACTED]		Est. MPH [REDACTED]	Posted Speed [REDACTED]	EST. VEHICLE DAMAGE 1 Disabling 2 Functional 3 No Damage \$		EST. TRAILER DAMAGE 1 \$ 2 \$ 3 \$			
INSURANCE COMPANY (LIABILITY OR PIP) [REDACTED]		POLICY NUMBER [REDACTED]		VEHICLE REMOVED BY: [REDACTED]		1 Tow Rotation List 2 Tow Owner's Request 3 Driver 4 Other		[REDACTED]		[REDACTED]			
OWNER'S FULL NAME (Check if Driver) [REDACTED]		CURRENT ADDRESS (Number and Street) [REDACTED]		CITY AND STATE [REDACTED]		ZIP CODE [REDACTED]		[REDACTED]		[REDACTED]			
OWNER'S FULL NAME (Trailer or Towed Vehicle) [REDACTED]		CURRENT ADDRESS (Number and Street) [REDACTED]		CITY AND STATE [REDACTED]		ZIP CODE [REDACTED]		[REDACTED]		[REDACTED]			
DRIVER (Exactly as on Driver License) / Pedestrian [REDACTED]		CURRENT ADDRESS (Number and Street) [REDACTED]		CITY & STATE / ZIP CODE [REDACTED]		DATE OF BIRTH [REDACTED]		[REDACTED]		[REDACTED]			
DRIVER LICENSE NUMBER [REDACTED]		STATE [REDACTED]	DL TYPE [REDACTED]	REQ. END. [REDACTED]	BAC TEST 3 Urine 1 Blood 4 Refused 2 Breath 5 None	RESULTS [REDACTED]	AL/DRUG [REDACTED]	PHYS. DEF. [REDACTED]	RES [REDACTED]	RACE [REDACTED]	SEX [REDACTED]		
HAZARDOUS MATERIALS BEING TRANSPORTED 1 Yes 2 No [] []		PLACARDED 1 Yes 2 No [] []		RECOMMEND RE-EXAM 1 Yes 2 No [] []		If YES, Explain in Narrative [REDACTED]		DRIVER'S PHONE NO. [REDACTED]		[REDACTED]			
PASSENGER'S NAME (Additional on Continuation Page) [REDACTED]		CURRENT ADDRESS [REDACTED]		CITY & STATE / ZIP [REDACTED]		AGE [REDACTED]		LOC. [REDACTED]		INJ. [REDACTED]			
VEHICLE TYPE 01 Automobile 02 Passenger Van 03 Pickup/Light Truck (2 rear tires) 04 Medium Truck (4 rear tires) 05 Heavy Truck (2 or more rear axles) 06 Truck Tractor (Cab) 07 Motor Home (RV) 08 Bus 09 Bicycle 10 Motorcycle 11 Moped 12 All Terrain Vehicle 13 Train 77 Other		VEHICLE USE 01 Private Transportation 02 Commercial Passengers 03 Commercial Cargo 04 Public Transportation 05 Public School Bus 06 Private School Bus 07 Ambulance 08 Law Enforcement 09 Fire/Rescue 10 Military 11 Other Government 77 Other		TRAILER TYPE 01 Single Semi Trailer 02 Tandem Semi Trailer(s) 03 Tank Trailer 04 Saddle Mount / Flatbed 05 Boat Trailer 06 Utility Trailer 07 House Trailer 08 Pole Trailer 09 Towed Vehicle 77 Other		RESIDENCE (Driver Only) 1 County of Crash 2 Elsewhere in State 3 Non-Resident of State 4 Foreign 5 Unknown DL TYPE 1 A 2 B 3 C 4 D / Chauffeur 5 E / Operator 6 E / Oper-Rest 7 None RACE 1 White 2 Black 3 Hispanic 4 Other REQUIRED ENDORSEMENTS 1 Yes 2 No		PHYSICAL DEFECTS 1 No Defects Known 2 Eyesight Defect 3 Fatigue / Asleep 4 Hearing Defect 5 Illness 6 Seizure, Epilepsy, Blackout 7 Other Physical Defect INJURY SEVERITY 1 None 2 Possible 3 Non-Incapacitating 4 Incapacitating 5 Fatal (Within 90 Days) 6 Non-Traffic Fatality		ALCOHOL / DRUG USE 1 Not Drinking or Using Drugs 2 Alcohol - Under Influence 3 Drugs - Under Influence 4 Alcohol & Drugs - Under Influence 5 Had Been Drinking 6 Pending BAC Test Result SAFETY EQUIPMENT IN USE 1 Not In Use 2 Seat Belt / Shoulder Harness 3 Child Restraint 4 Air Bag 5 Safety Helmet 6 Eye Protection		LOCATION (In Vehicle) 1 Front Left 2 Front Center 3 Front Right 4 Rear Left 5 Rear Center 6 Rear Right 7 In Body of Truck 8 Bus Passenger 9 Other EJECTED 1 No 2 Yes 3 Partial	

DRIVER ACTION		YEAR	MAKE	USE	VEH. LICENSE NUMBER	STATE	VEHICLE IDENTIFICATION NUMBER	POINT OF IMPACT									
1 Phantom 2 Hit & Run 3 N/A								CIRCLE AREA OF DAMAGE 18 Undercarriage 19 Overturn 20 Windshield 21 Fire 22 Trailer									
TRAILER OR TOWED VEHICLE INFORMATION		TRAILER TYPE		EST. MPH		Posted Speed	EST. VEHICLE DAMAGE	EST. TRAILER DAMAGE									
N S E W		ON At					1 Disabling 2 Functional 3 No Damage										
INSURANCE COMPANY (LIABILITY OR PIP)		POLICY NUMBER		VEHICLE REMOVED BY:		1 Tow Rotation List 2 Tow Owner's Request 3 Driver 4 Other											
OWNER'S FULL NAME (Check if Driver)		CURRENT ADDRESS (Number and Street)		CITY AND STATE		ZIP CODE											
OWNER'S FULL NAME (Trailer or Towed Vehicle)		CURRENT ADDRESS (Number and Street)		CITY AND STATE		ZIP CODE											
DRIVER (Exactly as on Driver License) / Pedestrian		CURRENT ADDRESS (Number and Street)		CITY & STATE / ZIP CODE		DATE OF BIRTH											
DRIVER LICENSE NUMBER		STATE	DL TYPE	REQ. END.	BAC TEST	3 Urine 1 Blood 2 Breath 4 Refused 5 None	RESULTS	AL/DRUG	PHYS. DEF.	RES	RACE	SEX	INJ.	S. EQUIP.	EJECT.		
HAZARDOUS MATERIALS BEING TRANSPORTED		1 Yes 2 No	PLACARDED	1 Yes 2 No	RECOMMEND RE-EXAM	1 Yes 2 No	If YES, Explain in Narrative	DRIVER'S PHONE NO.									
PASSENGER'S NAME (Additional on Continuation Page)		CURRENT ADDRESS		CITY & STATE / ZIP		AGE		LOC.	INJ.	S. EQUIP.	EJECT.						
PROPERTY DAMAGED - OTHER THAN VEHICLES		EST. AMOUNT		OWNER'S NAME		ADDRESS		CITY		STATE		ZIP					
PROPERTY DAMAGED - OTHER THAN VEHICLES		EST. AMOUNT		OWNER'S NAME		ADDRESS		CITY		STATE		ZIP					
CONTRIBUTING CAUSES - DRIVER/PED.		VEHICLE DEFECT		VEHICLE MOVEMENT		VEHICLE SPECIAL FUNCTIONS											
01 No Improper Driving / Action 02 Careless Driving 03 Failed to Yield Right-of-Way 04 Improper Backing 05 Improper Lane Change 06 Improper Turn 07 Alcohol-Under Influence 08 Drugs-Under Influence 09 Alcohol & Drugs-Under Influence 10 Followed Too Closely 11 Disregarded Traffic Signal 12 Exceeded Safe Speed Limit 13 Disregarded Stop Sign 14 Failed to Maintain Equip. / Vehicle 15 Improper Passing 16 Drove Left of Center 17 Exceeded Stated Speed Limit 18 Obstructing Traffic		01 No Defects 02 Def. Brakes 03 Worn / Smooth Tires 04 Defective / Improper Lights 05 Puncture / Blowout 06 Steering Mech. 07 Windshield Wipers 08 Equipment / Vehicle Defect 77 All Other (Explain in Narrative)		01 Straight Ahead 02 Slowing / Stopped / Stalled 03 Making Left Turn 04 Backing 05 Making Right Turn 06 Changing Lanes 07 Entering/Leaving Parking Space 08 Properly Parked 09 Improperly Parked 10 Making U-Turn		11 Passing 12 Driverless or Runaway Veh. 77 All Other (Explain in Narrative)		1 None 2 Farm 3 Police Pursuit 4 Recreational 5 Emergency Operation 6 Construction / Maintenance									
19 Improper Load 20 Disregarded Other Traffic Control 21 Driving Wrong Side / Way 22 Fleeing Police 23 Vehicle Modified 77 All Other (Explain)		LOCATION ON ROADWAY		PEDESTRIAN ACTION		LOCATION TYPE											
		1 On Road 2 Not On Road 3 Shoulder 4 Median 5 Turn Lane / Safety Zone		01 Crossing Not at Intersection 02 Crossing at Mid-block Crosswalk 03 Crossing at Intersection 04 Walking Along Road With Traffic 05 Walking Along Road Against Traffic 06 Working on Vehicle in Road 07 Other Working in Road 08 Standing/Playing in Road 09 Standing in Pedestrian Island 77 All Other (Explain) 88 Unknown		1 Primarily Business 2 Primarily Residential 3 Open Country											
FIRST / SUBSEQUENT HARMFUL EVENT		ROAD SYSTEM IDENTIFIER		LIGHTING CONDITION													
01 Collision With MV in Transport (Rear-end) 02 Collision With MV in Transport (Head-on) 03 Collision With MV in Transport (Angle) 04 Collision With MV in Transport (Left Turn) 05 Collision With MV in Transport (Right Turn) 06 Collision With MV in Transport (Sideswipe) 07 Collision With MV in Transport (Backed Into) 08 Collision With Parked Car 09 Collision With MV on Other Roadway 10 Collision With Pedestrian 11 Collision With Bicycle 12 Collision With Bicycle (Bike Lane) 13 Collision With Moped 14 Collision With Train 15 Collision With Animal 16 MV Hit Sign/Sign Post 17 MV Hit Utility Pole/Light Pole 18 MV Hit Guardrail 19 MV Hit Fence 20 MV Hit Concrete Barrier Wall 21 MV Hit Bridge/Pier/Abutment/Rail 22 MV Hit Tree/Shrubbery 23 Collision With Construction Barricade/Sign 24 Collision With Traffic Gate 25 Collision With Crash Attenuators 26 Collision With Fixed Object Above Road 27 MV Hit Other Fixed Object 28 Collision With Moveable Object On Road 29 MV Ran Into Ditch/Culvert 30 Ran Off Road Into Water 31 Overturned 32 Occupant Fell From Vehicle 33 Tractor/Trailer Jackknifed 34 Fire 35 Explosion 77 All Other (Explain)		01 Interstate 02 U.S. 03 State 04 County 05 Local 06 Turnpike / Toll 07 Forest Road 77 All Other		01 Daylight 02 Dusk 03 Dawn 04 Dark (Street Light) 05 Dark (No Street Light) 88 Unknown													
		ROAD SURFACE / CONDITION		WEATHER													
		01 Dry 02 Wet 03 Slippery 04 Icy 77 All Other (Explain)		01 Clear 02 Cloudy 03 Rain 04 Fog 77 All Other (Explain)													
CONTRIBUTING CAUSES - ROAD		CONTRIBUTING CAUSES - ENVIRONMENT		TRAFFIC CONTROL		SITE LOCATION		TRAFFICWAY CHARACTER									
01 No Defects 02 Obstruction With / Without Warning 03 Road Under Repair / Construction 04 Loose Surface Materials 05 Shoulders - Soft / Low / High 06 Holes / Ruts / Unsafe Paved Edge 07 Standing Water 08 Worn / Polished Road Surface 77 All Other (Explain)		01 Vision Not Obscured 02 Inclement Weather 03 Parked / Stopped Vehicle 04 Trees / Crops / Bushes 05 Load on Vehicle 06 Building / Fixed Object 07 Signs / Billboards 08 Fog 09 Smoke 10 Glare 77 All Other (Explain)		01 No Control 02 Special Speed Zone 03 Traffic Signal 04 Stop Sign 05 Yield Sign 06 Flashing Light 07 Railroad Signal 08 Officer / Guard / Flagman 09 Posted No U-Turn 10 School Zone 77 All Other (Explain)		01 Not At Intersection / RR X'ing / Bridge 02 At Intersection 03 Influenced By Intersection 04 Driveway Access 05 Railroad Crossing 06 Bridge 07 Entrance Ramp 08 Exit Ramp 09 Parking Lot - Public 10 Parking Lot - Private 11 Private Property 77 All Other (Explain)		1 Straight-Level 2 Straight-Upgrade / Downgrade 3 Curve-Level 4 Curve-Upgrade / Downgrade TYPE SHOULDER 1 Paved 2 Unpaved 3 Curb									
VIOLATOR		FL STATUTE NUMBER		NAME		CHARGE		CITATION #									
DU1						Careless Driving											

FLORIDA TRAFFIC CRASH REPORT

NARRATIVE / DIAGRAM

MAIL TO: DEPT. OF HIGHWAY SAFETY & MOT. / VEHICLES
TRAFFIC CRASH RECORDS

DO NOT WRITE IN THIS SPACE

EMS INFO FATALS ONLY	TIME EMS NOTIFIED	AM <input type="checkbox"/> PM <input type="checkbox"/>	TIME EMS ARRIVED	AM <input type="checkbox"/> PM <input type="checkbox"/>	COUNTY / CITY CODE 06/00	DATE OF CRASH [REDACTED] 93	INVEST. AGENCY REPORT NUMBER [REDACTED]	HSMV CRASH REPORT NUMBER [REDACTED]
----------------------------	----------------------	---	---------------------	---	-----------------------------	--------------------------------	--	--

V₁ was southbound thru the parking lot at [REDACTED] SR [REDACTED].
Du₁ lost control of his vehicle and ran off the pavement
and struck a [REDACTED] Palm tree.

The front bumper of V₁ struck the palm tree which caused
the tree to break in half at its base and fall to the ground.

V₁ also struck [REDACTED] guide wires to an
electric pole causing them to break.

Du₁ did receive a small cut on top of his head but
refused medical treatment.

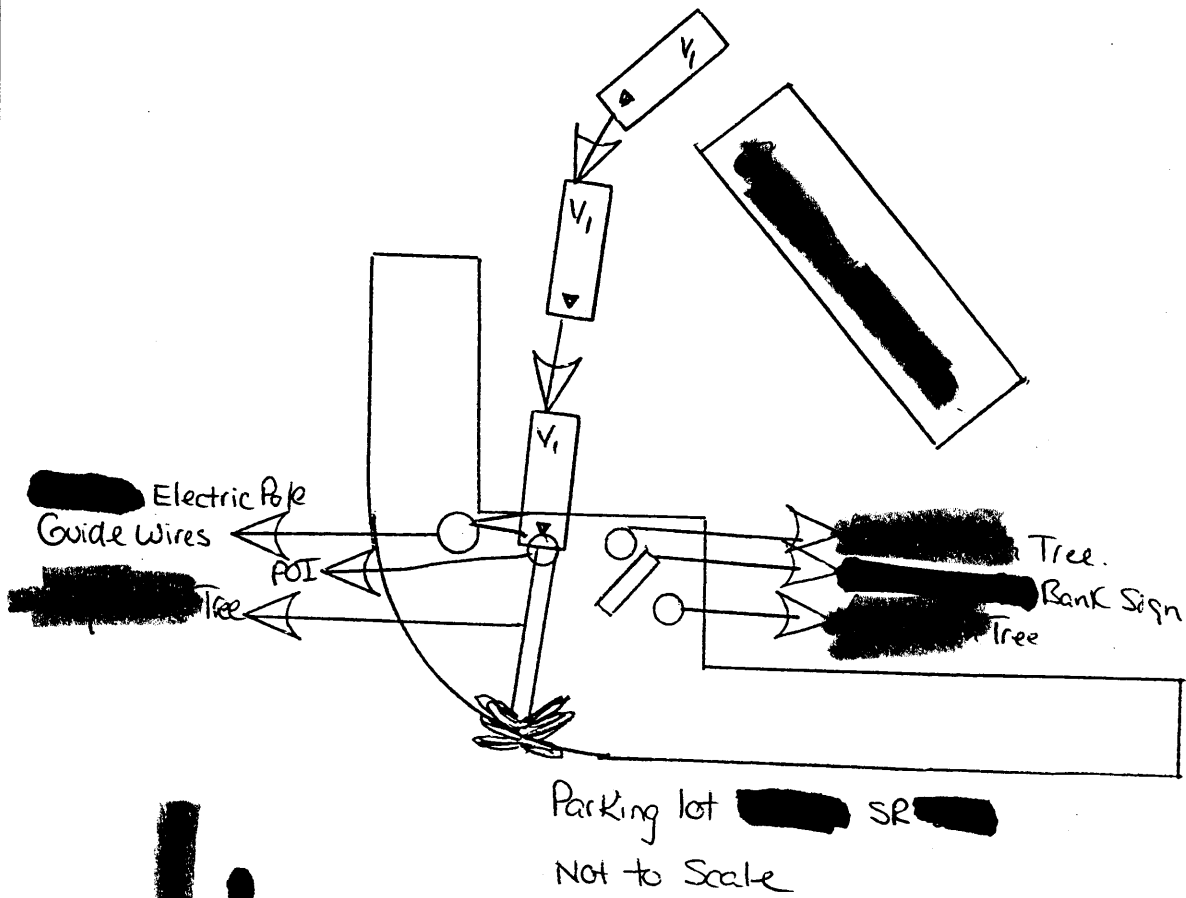
Du₁ was cited for careless driving, citation number [REDACTED]

WITNESS - NAME 1		ADDRESS		CITY & STATE		ZIP	
WITNESS - NAME 2		ADDRESS		CITY & STATE		ZIP	
FIRST AID GIVEN BY - NAME:		1 Physician or Nurse 4 Certified 1st Aider 2 Paramedic or EMT 5 Other		INJURED TAKEN TO:		BY - NAME:	
WAS INVESTIGATION MADE AT SCENE? 1 YES 2 NO WHERE?		IS INVESTIGATION COMPLETE? 1 YES 2 NO WHY?		DATE OF REPORT		PHOTOS TAKEN? 1 YES 2 NO	
INVESTIGATOR - RANK & SIGNATURE Ptlm [REDACTED]		ID / BADGE NUMBER [REDACTED]		DEPARTMENT [REDACTED]		3 INVEST. AGENCY 4 OTHER FHP SO CPD OTHER	

DIAGRAM



INDICATE NORTH
WITH ARROW



ATTACHMENT C

**CRASHPC Output
(Damage Algorithm)**

SUMMARY OF CRASHPC RESULTS USING DAMAGE

CRASH3 RECONSTRUCTION

SPEED CHANGE (DAMAGE)

VEHICLE #1

TOTAL 26 KPH (16 MPH)
 LONGITUDINAL -26 KPH (-16 MPH)
 LATITUDINAL 0 KPH (0 MPH)
 PDOF ANGLE 0 DEGREES
 ENERGY DISSIPATED = 38452 JOULES (28357 FT-LB)

VEHICLE #2

TOTAL 0 KPH (0 MPH)
 LONGITUDINAL 0 KPH (0 MPH)
 LATITUDINAL 0 KPH (0 MPH)
 PDOF ANGLE 0 DEGREES
 ENERGY DISSIPATED = 0 JOULES (0 FT-LB)

DAMAGE DATA

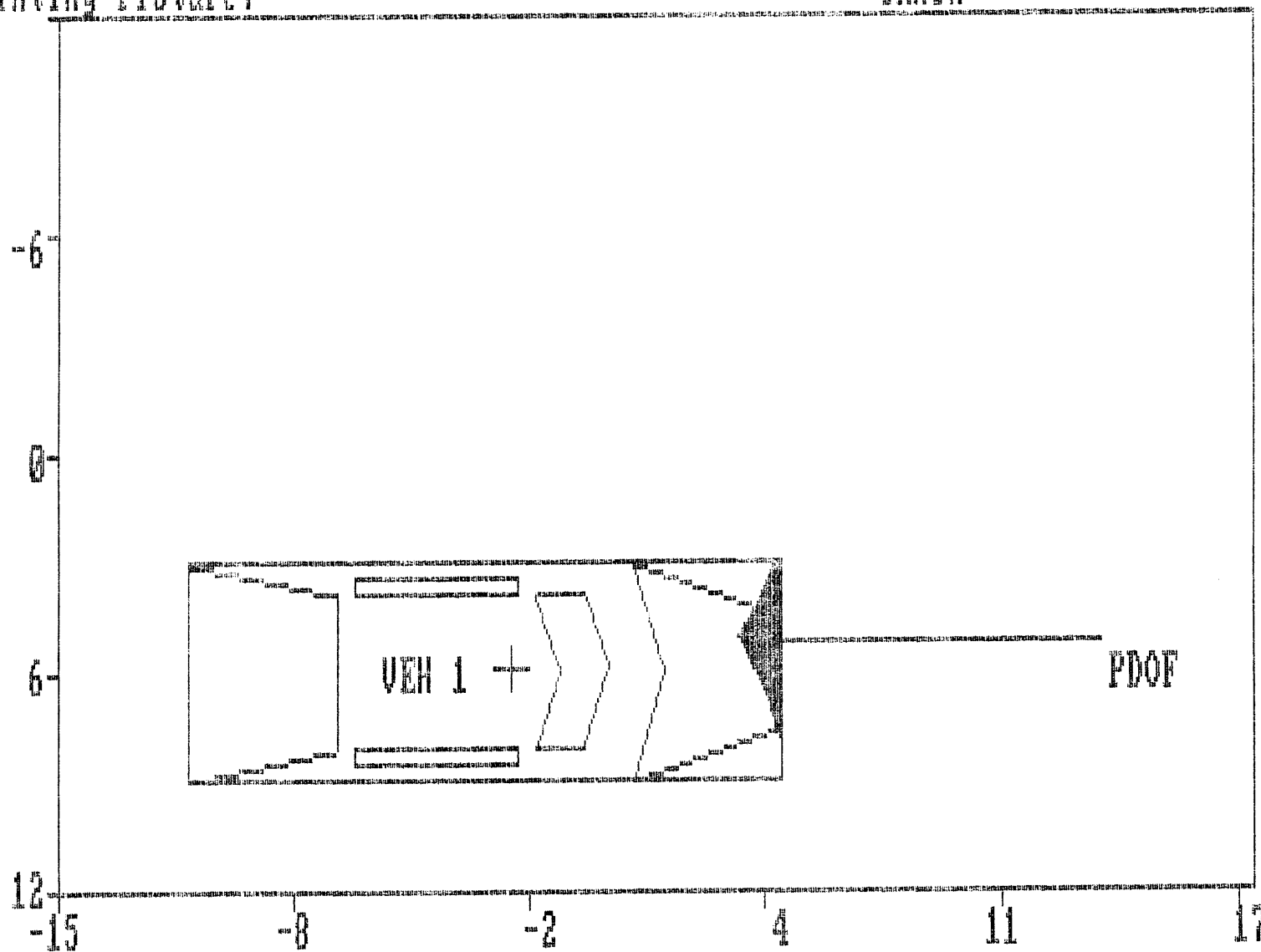
VEHICLE #1

VEHICLE #2

SIZE CATEGORY	3	11
STIFFNESS CATEGORY	9	0
VEHICLE WEIGHT	1419 KGS (3129 LBS)	453600 KGS (1000000 LBS) *
CDC	12FCEN2	BARRIER
PD0F ANGLE	0 DEGREES	0 DEGREES *
CRUSH LENGTH	152 CM. (60 IN.)	0 CM. (0 IN.) *
C1	5 CM. (2 IN.)	0 CM. (0 IN.) *
C2	18 CM. (7 IN.)	0 CM. (0 IN.) *
C3	36 CM. (14 IN.)	0 CM. (0 IN.) *
C4	23 CM. (9 IN.)	0 CM. (0 IN.) *
C5	10 CM. (4 IN.)	0 CM. (0 IN.) *
C6	0 CM. (0 IN.)	0 CM. (0 IN.) *
D	-15 CM. (-6 IN.)	0 CM. (0 IN.) *
D'	-23 CM. (-9 IN.)	0 CM. (0 IN.) *

(* INDICATES DEFAULT VALUE)

REPORT

[illegible]

ATTACHMENT D

Vehicle Repair Estimate

BEEPER-VOICEMAIL#

Damage Assessed By: Pay Code: 02

Condition Code: Good Type of Loss: Collision

Date of Loss: 93

Policy Number:

Deductible: 100.00

Insured:

Address:

Telephone: Work Phone: (000) 000-0000 ext: 0000 Home Phone:

Service:

Description: 1993 BUICK CEN SPEC 4D SEDAN

VIN: JG4AG55N6P9

License: FL

Mileage: 1,783

OEM/ALT: A

Search Code:

Color: WHITE

Line Entry	Labor	Line Item	Part Type/	Dollar	Labor
Item Number	Type Operation	Description	Part Number	Amount	Unit
1	300650 BODY	REMOVE/REPLACE INFORMATION LABEL FAN CAUTION	ORDER FROM DEALER	7.50	
2	300660 BODY	REMOVE/REPLACE INFORMATION LABEL BELT ROUTING	ORDER FROM DEALER	7.50	
3	300720 BODY	REMOVE/REPLACE INFORMATION LABEL EMISSION CONTROL	ORDER FROM DEALER	7.50	
4	AUTO BODY	OVERHAUL FRT COVER ASSY			2.0
5	301030 BODY	REMOVE/REPLACE FRT BUMPER COVER	25524613 GM PART	104.00	INCL
6	AUTO REFIN	REFINISH FRT COVER			C 2.1
7	301230 BODY	REMOVE/REPLACE FRT BUMPER IMPACT STRIP	10103270 GM PART	15.00	INCL
8	301320 BODY	REMOVE/REPLACE R FRT BUMPER GUARD	25527132 GM PART	13.95	INCL
9	301330 BODY	REMOVE/REPLACE L FRT BUMPER GUARD	25527133 GM PART	13.95	INCL
10	301500 BODY	REMOVE/REPLACE FRT BUMPER REINFORCEMENT	10108803 GM PART	103.00	INCL
11	301600 BODY	REMOVE/REPLACE FRT BUMPER REINFORCEMENT	10122968 GM PART	15.00	INCL
12	301670 BODY	REMOVE/REPLACE R FRT BUMPER IMPACT ABSORBER	22054784 GM PART	33.22	INCL
13	301680 BODY	REMOVE/REPLACE L FRT BUMPER IMPACT ABSORBER	22054784 GM PART	33.22	INCL
14	301750 BODY	REMOVE/REPLACE FRT BUMPER LICENSE BRACKET	10024283 GM PART	10.15	INCL
15	302000 BODY	REMOVE/REPLACE GRILLE	10205024 GM PART	101.00	INCL
16	302100 BODY	REMOVE/REPLACE GRILLE HEADER PANEL	10161178 GM PART	331.00	3.5
17	AUTO REFIN	REFINISH HEADER PANEL			C 1.8
18	AUTO REFIN	REFINISH PANEL EDGE			0.5
19	AUTO BODY	CHECK/ADJUST HEADLAMPS			0.4
20	302260 BODY	REMOVE/REPLACE GRILLE PANEL ORNAMENT	10103240 GM PART	24.65	INCL
21	302320 BODY	REMOVE/REPLACE GRILLE VERTICAL SUPPORT	10207522 GM PART	14.53	INCL
22	303370 BODY	REMOVE/REPLACE R H/LAMP ASSEMBLY	16505640 GM PART	240.00	INCL
23	303380 BODY	REMOVE/REPLACE L H/LAMP ASSEMBLY	16505647 GM PART	240.00	INCL
24	304440 BODY	REMOVE/REPLACE LWR COOLING AIR DEFLECTOR	25512235 GM PART	44.00	
25	304480 BODY	REMOVE/REPLACE COOLING RADIATOR	52452923 GM PART	310.00	INCL
26	304750 BODY	REMOVE/REPLACE COOLING FAN BLADE	ORDER FROM DEALER	39.50	0.9

ESTIMATE RECALL NUMBER:

Data Version: N

27	304980	BODY	REMOVE/REPLACE	COOLING RADIATOR SHROUD	ORDER FROM DEALER	44.50	INCL
28	305060	BODY	REMOVE/REPLACE	UPR COOLING MOUNTING PANEL	ORDER FROM DEALER	14.75	INCL
29	310370	BODY	REMOVE/REPLACE	ENG SUPT STRUT BRACKET	14094488	GM PART	14.24 0.2
30	311660	BODY	REMOVE/REPLACE	AIR CLEANER ASSEMBLY	25098172	GM PART	169.00 0.4
31	313050	MECH	REMOVE/REPLACE	EVACUATE & RECHARGE AIR CONDITIONING	-M		1.4
32	313110	MECH	REMOVE/REPLACE	AIR COND CONDENSER	-M	52461084	GM PART 210.99 1.1
33	314610	BODY	REMOVE/REPLACE	HOOD PANEL	10206606	GM PART	202.67 1.4
34	AUTO	REFIN	REFINISH	HOOD OUTSIDE		C	2.4
35	AUTO	REFIN	REFINISH	HOOD UNDERSIDE			1.4
36	314710	BODY	REMOVE/REPLACE	HOOD PRIMARY LATCH	22569852	GM PART	14.90 0.3
37	314720	BODY	REMOVE/REPLACE	HOOD STRIKER PLATE	10051008	GM PART	13.27 0.2
38	314730	BODY	REMOVE/REPLACE	HOOD SECONDARY CATCH	25523735	GM PART	13.01 INCL
39	315410	BODY	REMOVE/INSTALL	R FENDER ASSY			2.1
40	315420	BODY	REMOVE/INSTALL	L FENDER ASSY			1.2
41	315630	BODY	REPAIR	*R FENDER PANEL			2.0*
42	AUTO	REFIN	REFINISH	R FENDER OUTSIDE		C	1.9
43	315640	BODY	REPAIR	*L FENDER PANEL			2.0*
44	AUTO	REFIN	REFINISH	L FENDER OUTSIDE		C	1.9
45	317300	BODY	REMOVE/REPLACE	FRONT BODY RADIATOR SUPPORT	-S	10222428	GM PART 130.00 7.0
46	AUTO	REFIN	REFINISH	RADIATOR SUPPORT COMPLETE			1.5
47	317350	BODY	REMOVE/REPLACE	LWR FRONT BODY TIE BAR	-S	10215552	GM PART 86.25 INCL
48	317410	BODY	REMOVE/REPLACE	R LWR FRONT BODY TIE BAR REINF		20284347	GM PART 14.63 INCL
49	317420	BODY	REMOVE/REPLACE	L LWR FRONT BODY TIE BAR REINF		20284348	GM PART 14.63 INCL
50	317510	BODY	REMOVE/REPLACE	R FRONT BODY BRACE		19179048	GM PART 15.28 INCL
51	317520	BODY	REMOVE/REPLACE	L FRONT BODY BRACE		19179049	GM PART 15.28 INCL
52	317990	BODY	REPAIR	*R FRONT BODY APRON ASSY	-S		4.0*
53	AUTO	REFIN	REFINISH	R APRON			1.0
54	318000	BODY	REPAIR	*L FRONT BODY APRON ASSY	-S		3.0*
55	AUTO	REFIN	REFINISH	L APRON			1.0
56	318550	MECH	REMOVE/REPLACE	FRAME SUSP SUBFRAME	-M	ORDER FROM DEALER	369.00 4.5
57	324250	MECH	REMOVE/REPLACE	STEERING FLUID RESERVOIR	-M	ORDER FROM DEALER	84.00 0.7
58	931090	BODY	*ALIGN	*UNIBODY STRUCTURE			9.0*
59	931010	BODY	*ALIGN	*FRONT SUSPENSION			49.95*
60	324760	MECH	REMOVE/REPLACE	STEERING AIR BAG MODULE	-M	ORDER FROM DEALER	540.00 0.3
61	324780	MECH	REMOVE/REPLACE	STEERING PAD EMBLEM	-M	25510039	GM PART 22.50 INCL
62	327640	BODY	REMOVE/REPLACE	COWL/DASH TOP PANEL		10074285	GM PART 192.00 INCL
63	AUTO	REFIN	REFINISH	COWL TOP PANEL		C	0.8
64	AUTO	REFIN	ADD'L LABOR OPR	CLEAR COAT			2.5*
65	933812	REFIN	ADD'L LABOR OPR	STRIPE			35.00*
66	936000		ADD'L COST	FREON & OIL			38.00*
67	936003		ADD'L COST	COOLANT			18.00*
68	936013		ADD'L COST	SPCL PAINT MATERIALS			0.00*
69	AUTO		ADD'L COST	PAINT MATERIALS			166.60*

* Judgement Item

C Included in Clear Coat Calc

Prior Damage

NONE

ESTIMATE RECALL NUMBER: [REDACTED]

Data Version: [REDACTED] N

International

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Estimate
Committed
Profile ID: CUSTOMIZED

I. Labor Subtotals	Units	Rate	Totals
Body	39.6	26.00	1,029.60
Refinish	18.8	26.00	488.80
Mechanical	8.0	42.00	336.00
Additional Labor			35.00
Labor Subtotal			1,889.40
Labor Tax @ 6.00%			113.36
Labor Summary Totals	66.4		2,002.76

II. Part Replacement Summary	Amount
Taxable Parts	3,977.61
Parts Adjustment 10.00%	397.76
Sales Tax @ 6.00%	215.09
Total Replacement Parts Amount:	3,799.93

III. Additional Costs	Amount
Taxable Costs	230.60
Sales Tax @ 6.00%	13.84
Total Additional Costs:	244.44

I. Total Labor:	2,002.76
II. Total Replacement Parts:	3,799.93
III. Total Additional Costs:	244.44

Gross Total: 6,047.13

Customer Allowance: 0.00
Point of Impact: 12 FRONT CENTERCustomer Responsibility: 100.00-
Inspection Site: [REDACTED]

Net Total: 5,947.13

REGISTRATION #
LKQ PARTS LISTED
A/M PARTS ---
DEPRECIATION NONE
DAYS TO REPAIR 25
OLD DAMAGE LISTED

DRAFT # [REDACTED]
COMPANY CODE 13
DI CODE ---
DAMAGE CODE ABOVE
SEATBELT OK
POLICY NUMBER [REDACTED]
DRIVER'S LICENSE NOT VER

DATE ASSIGNED	DATE CONTACTED	DATE INSPECTED
[REDACTED]	[REDACTED]	[REDACTED]

NO SUPPLEMENT WILL BE HONORED UNLESS AUTHORIZED BY [REDACTED]

NOTICE: NEW HIGH STRENGTH STEELS MAY REQUIRE USE OF A MIG WELDER FOR PROPER REPAIRS. NEW DESIGNS REQUIRE MEASUREMENT TO PROPERLY ALIGN THE VEHICLE. MAKE SURE YOUR SHOP HAS THE RIGHT EQUIPMENT TO REPAIR YOUR VEHICLE.

ESTIMATE RECALL NUMBER: [REDACTED]

Mitchell Data Version: 000000 N

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ATTACHMENT E

NASS Occupant Forms



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

OCCUPANT ASSESSMENT FORM

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

NATIONAL ACCIDENT SAMPLING SYSTEM
CRASHWORTHINESS DATA SYSTEM

OCCUPANT'S SEATING

1. ~~Primary Sampling Unit Number~~ _____

2. Case Number - Stratum 94-06

3. Vehicle Number 01

4. Occupant Number 01

OCCUPANT'S CHARACTERISTICS

5. Occupant's Age 72

Code actual age at time of accident.

(00) Less than one year old (specify by month): _____

(97) 97 years and older _____

(99) Unknown

6. Occupant's Sex 1

(1) Male

(2) Female

(9) Unknown

7. Occupant's Height 183

Code actual height to the nearest centimeter.

(999) Unknown

72 inches X 2.54 = 183 centimeters

8. Occupant's Weight 081

Code actual weight to the nearest kilogram.

(999) Unknown

180 pounds X .4536 = 081 kilograms

9. Occupant's Role 1

(1) Driver

(2) Passenger

(9) Unknown

10. Occupant's Seat Position 11

Front Seat

(11) Left side

(12) Middle

(13) Right side

(14) Other (specify): _____

(15) On or in the lap of another occupant

Second Seat

(21) Left side

(22) Middle

(23) Right side

(24) Other (specify): _____

(25) On or in the lap of another occupant

Third Seat

(31) Left side

(32) Middle

(33) Right side

(34) Other (specify): _____

(35) On or in the lap of another occupant

Fourth Seat

(41) Left side

(42) Middle

(43) Right side

(44) Other (specify): _____

(45) On or in the lap of another occupant

(97) In or on unenclosed area

(98) Other seat (specify): _____

(99) Unknown

11. Occupant's Posture 0

(0) Normal posture

Abnormal posture

(1) Kneeling or standing on seat

(2) Lying on or across seat

(3) Kneeling, standing or sitting in front of seat

(4) Sitting sideways or turned to talk with another occupant or to look out a rear window

(5) Sitting on a console

(6) Lying back in a reclined seat position

(7) Bracing with feet or hands on a surface in front of seat

(8) Other abnormal posture (specify): _____

(9) Unknown

EJECTION/ENTRAPMENT

12. Ejection 0

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

13. Ejection Area 0

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

14. Ejection Medium 0

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

15. Medium Status (Immediately Prior To Impact) 0

- (0) No ejection
- (1) Open
- (2) Closed
- (3) Integral structure
- (9) Unknown

16. Entrapment 0

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

National Accident Sampling System-Crashworthiness Data System: Occupant Assessment Form

Page 3

RESTRAINT SYSTEM EVALUATION

17. Manual (Active) Belt System Availability 0

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

Integral Belt Partially Destroyed

- (6) Shoulder belt (lap belt destroyed/removed)
- (7) Lap belt (shoulder belt destroyed/removed)

(8) Other belt (specify): _____

(9) Unknown _____

18. Manual (Active) Belt System Use 0 0

- (00) None used, not available, or belt removed/destroyed
- (01) Inoperative (specify): _____

- (02) Shoulder belt
- (03) Lap belt
- (04) Lap and shoulder belt
- (05) Belt used—type unknown
- (08) Other belt used (specify): _____

- (12) Shoulder belt used with child safety seat
- (13) Lap belt used with child safety seat
- (14) Lap and shoulder belt used with child safety seat
- (15) Belt used with child safety seat—type unknown
- (18) Other belt used with child safety seat (specify): _____
- (99) Unknown if belt used

19. Proper Use of Manual (Active) Belts 0

- (0) None used or not available
- (1) Belt used properly
- (2) Belt used properly with child safety seat

Belt Used Improperly

- (3) Shoulder belt worn under arm
- (4) Shoulder belt worn behind back or seat
- (5) Belt worn around more than one person
- (6) Lap belt worn on abdomen
- (7) Lap belt or lap and shoulder belt used improperly with child safety seat (specify): _____

(8) Other improper use of manual belt system (specify): _____

(9) Unknown _____

20. Manual (Active) Belt Failure Modes During Accident 0

- (0) No manual belt used
- (1) No manual belt failure(s)
- (2) Torn webbing (stretched webbing not included)
- (3) Broken buckle or latchplate
- (4) Upper anchorage separated
- (5) Other anchorage separated (specify): _____

- (6) Broken retractor
- (7) Combination of above (specify): _____

(8) Other manual belt failure (specify): _____

(9) Unknown _____

21. Air Bag System Availability/Function 1

- (0) Not equipped/not available
- (1) Air bag

Non-functional

(2) Air bag disconnected (specify): _____

(3) Air bag not reinstalled _____

(9) Unknown _____

22. Air Bag System Deployment 1

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

23. Are There Indications of Air Bag System Failure? 1

- (0) Not equipped/not available
- (1) No
- (2) Yes (specify): _____

(9) Unknown _____

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

24. Police Reported Restraint Use 7

- (0) None used
- (1) Police did not indicate restraint use
- (2) Shoulder belt
- (3) Lap belt
- (4) Lap and shoulder belt
- (5) Belt used, type not specified
- (6) Child safety seat
- (7) Other or automatic restraint (specify): _____

4 T AIR BAG

(8) Restrained, type unknown

(9) Police indicated "unknown"

HEAD RESTRAINT AND SEAT EVALUATION

25. Head Restraint Type/Damage by Occupant
at This Occupant Position3

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

26. Seat Type (this Occupant Position)

06

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

27. Seat Performance (this Occupant Position)

1

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

CHILD SAFETY SEAT

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

(998) Unknown make/model
 (999) Unknown if child safety seat used

29. Type of Child Safety Seat 0
 (0) No child safety seat
 (1) Infant seat
 (2) Toddler seat
 (3) Convertible seat
 (4) Booster seat
 (7) Other type child safety seat (specify):

(8) Unknown child safety seat type
 (9) Unknown if child safety seat used

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

Designed for Rear Facing for This Age/Weight

(01) Rear facing
 (02) Forward facing
 (08) Other orientation (specify):

(09) Unknown orientation

Designed For Forward Facing for This Age/Weight

(11) Rear facing
 (12) Forward facing
 (18) Other orientation (specify):

(19) Unknown orientation

Unknown Design or Orientation For This Age/Weight, or Unknown Age/Weight

(21) Rear facing
 (22) Forward facing
 (28) Other orientation (specify):

(29) Unknown orientation

(99) Unknown if child safety seat used

31. Child Safety Seat Harness Usage 0 0

32. Child Safety Seat Shield Usage 0 0

33. Child Safety Seat Tether Usage 0 0

Note: Options below applicable to
 Variables OA31-OA33.

(00) No child safety seat

Not Designed With Harness/Shield/Tether

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

Designed With Harness/Shield/Tether

(11) Harness/shield/tether not used
 (12) Harness/shield/tether used
 (19) Unknown if harness/shield/tether used

Unknown If Designed With Harness/Shield/Tether

(21) Harness/shield/tether not used
 (22) Harness/shield/tether used
 (29) Unknown if harness/shield/tether used

(99) Unknown if child safety seat used

National Accident Sampling System-Crashworthiness Data System: Occupant Assessment Form

Page 6

INJURY CONSEQUENCES

34. Injury Severity (Police Rating) 1

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

35. Treatment - Mortality 6

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

Nonfatal

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

(9) Unknown

36. Type Of Medical Facility (for Initial Treatment) 0

- (0) Not treated at a medical facility
- (1) Trauma center
- (2) Hospital
- (3) Medical clinic
- (4) Physician's office
- (5) Treatment later at medical facility
- (8) Other (specify):

(9) Unknown

37. Hospital Stay 01

- (00) Not Hospitalized

Code the number of days (up through 60) that the occupant stayed in hospital.

- (61) 61 days or more
- (99) Unknown

38. Working Days Lost 00

- Code the number of days (up through 60) that the occupant lost from work due to the accident
- (00) No working days lost
 - (61) 61 days or more
 - (62) Fatally injured
 - (97) Not working prior to accident
 - (99) Unknown

STOP - GO TO VARIABLE 44 ON PAGE 7**VARIABLES 39 THROUGH 43 ARE COMPLETED BY THE ZONE CENTER**39. Time to Death 34

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

40. 1st Medically Reported Cause of Death 0141. 2nd Medically Reported Cause of Death 0042. 3rd Medically Reported Cause of Death 00

- Code the Occupant Injury from line number(s) for the medically reported injury(s) which reportedly contributed to this occupant's death
- (00) Not fatal or no additional causes
 - (96) Mode of death given but specific injuries are not linked to cause of death. (specify):

- (97) Other result (includes fatal ruled disease) (specify):

(99) Unknown

43. Number of Recorded Injuries for This Occupant 02

- Code the actual number of injuries recorded for this occupant.
- (00) No recorded injuries
 - (97) Injured, details unknown
 - (99) Unknown if injured

STOP - VARIABLES 50 THROUGH 53 ARE COMPLETED BY THE ZONE CENTER

TRAUMA DATA

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

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

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

BELT USE DETERMINATION

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



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

OCCUPANT INJURY FORM

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

1. Primary Sampling Unit Number _____	3. Vehicle Number <u>01</u>
2. Case Number - Stratum <u>94-06</u>	4. Occupant Number <u>01</u>

INJURY DATA

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

	Source of Injury Data	Body Region	Type of Anatomic Structure	Specific Anatomic Structure	Level of Injury	A.I.S. Severity	Aspect	Injury Source	Injury Source Confidence Level	Direct/ Indirect Injury	Occupant Area Intrusion Number
1st	5. <u>2</u>	6. <u>1</u>	7. <u>4</u>	8. <u>06</u>	9. <u>50</u>	10. <u>4</u>	11. <u>9</u>	12. <u>97</u>	13. <u>9</u>	14. <u>1</u>	15. <u>00</u>
2nd	16. <u>2</u>	17. <u>1</u>	18. <u>9</u>	19. <u>06</u>	20. <u>02</u>	21. <u>1</u>	22. <u>5</u>	23. <u>97</u>	24. <u>9</u>	25. <u>1</u>	26. <u>00</u>
3rd	27. ____	28. ____	29. ____	30. ____	31. ____	32. ____	33. ____	34. ____	35. ____	36. ____	37. ____
4th	38. ____	39. ____	40. ____	41. ____	42. ____	43. ____	44. ____	45. ____	46. ____	47. ____	48. ____
5th	49. ____	50. ____	51. ____	52. ____	53. ____	54. ____	55. ____	56. ____	57. ____	58. ____	59. ____
6th	60. ____	61. ____	62. ____	63. ____	64. ____	65. ____	66. ____	67. ____	68. ____	69. ____	70. ____
7th	71. ____	72. ____	73. ____	74. ____	75. ____	76. ____	77. ____	78. ____	79. ____	80. ____	81. ____
8th	82. ____	83. ____	84. ____	85. ____	86. ____	87. ____	88. ____	89. ____	90. ____	91. ____	92. ____
9th	93. ____	94. ____	95. ____	96. ____	97. ____	98. ____	99. ____	100. ____	101. ____	102. ____	103. ____
10th	104. ____	105. ____	106. ____	107. ____	108. ____	109. ____	110. ____	111. ____	112. ____	113. ____	114. ____

SOURCE OF INJURY DATA

OFFICIAL

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

UNOFFICIAL

- (5) Lay coroner report
- (6) E.M.S. personnel
- (7) Interviewee
- (8) Other source (specify): _____
- (9) Police

INJURY SOURCE

FRONT

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

LEFT SIDE

- (20) Left side interior surface, excluding hardware or armrests
- (21) Left side hardware or armrest
- (22) Left A (A1/A2)-pillar
- (23) Left B-pillar
- (24) Other left pillar (specify): _____

- (25) Left side window glass or frame
- (26) Left side window glass including one or more of the following: frame, window sill, A (A1/A2)-pillar, B-pillar, or roof side rail.
- (27) Other left side object (specify): _____
- (28) Left side window sill

RIGHT SIDE

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

INTERIOR

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

ROOF

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

FLOOR

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

REAR

- (60) Backlight (rear window)

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

EXTERIOR OF OCCUPANT'S VEHICLE

- (65) Hood
- (66) Outside hardware (e.g., outside mirror, antenna)
- (67) Other exterior surface or tires (specify): _____
- (68) Unknown exterior objects

EXTERIOR OF OTHER MOTOR VEHICLE

- (70) Front bumper
- (71) Hood edge
- (72) Other front of vehicle (specify): _____

- (73) Hood
- (74) Hood ornament
- (75) Windshield, roof rail, A-pillar
- (76) Side surface
- (77) Side mirrors
- (78) Other side protrusions (specify): _____

- (79) Rear surface
- (80) Undercarriage
- (81) Tires and wheels
- (82) Other exterior of other motor vehicle (specify): _____

- (83) Unknown exterior of other motor vehicle

OTHER VEHICLE OR OBJECT IN THE ENVIRONMENT

- (84) Ground
- (85) Other vehicle or object (specify): _____
- (86) Unknown vehicle or object

NONCONTACT INJURY

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

INJURY SOURCE CONFIDENCE LEVEL

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

DIRECT/INDIRECT INJURY

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

OCCUPANT INJURY CLASSIFICATION

Body Region

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

Type of Anatomic Structure

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

Specific Anatomic Structure

Whole Area

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

Head - LOC

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

Spine

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

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

Level of Injury

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

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

Abbreviated Injury Scale

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

Aspect

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