

Remote Investigation / Vehicle to Vehicle  
Dynamic Science, Inc. / Case Number: DS98013  
1994 Toyota Corolla 4-door  
Texas  
June 1997

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

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**Technical Report Documentation Page**

1. Report No. DS98013		2. Government Accession No.		3. Recipient Catalog No.	
4. Title and Subtitle In-Depth Accident Investigation				5. Report Date	
				6. Performing Organization Report No.	
7. Author(s) Dynamic Science, Inc.				8. Performing Organization Report No.	
9. Performing Organization name and Address Dynamic Science, Inc. 530 College Parkway, Ste. K Annapolis, MD 21401				10. Work Unit No. (TRAVIS)	
				11. Contract or Grant no. DTNH22-94-D-27058	
12. Sponsoring Agency Name and Address U.S. Dept. of Transportation (NRD-32) National Highway Traffic Safety Administration 400 7th Street, SW Washington, DC 20590				13. Type of report and period Covered [Report Month, Year]	
				14. Sponsoring Agency Code	
15. Supplemental Notes					
16. Abstract  <p>This collision occurred in Texas in June 1997 at 1230 hours. The collision occurred on a dry, smooth, asphalt roadway. The weather was clear and the roadway was dry. There were no viewing obstructions or unusual conditions noted. The speed limit is 56 km/h (35 mph). Vehicle 1, a 1994 Toyota Corolla 4-door was being driven westbound by a 52-year-old female (155 cm-61 in / 50 kg.-111 lbs). The driver of Vehicle 1 was not wearing the available lap and shoulder belts and was apparently talking on a cellular telephone at the moment of impact. Pieces of the cellular phone were found on the roadway to the left of where Vehicle 1 collided with Vehicle 2, and the driver's side window was down. Vehicle 2, a 1983 Cadillac Deville 4-door was driven westbound by a restrained 19-year-old male. Vehicle 2 was stopped waiting for a red light, directly in front of Vehicle 1. As Vehicle 2 was stopped, Vehicle 1 rear-ended Vehicle 2. On impact, both air bags in Vehicle 1 deployed. After impact, Vehicle 1 veered to the right continued moving forward, struck a concrete curb and came to final rest on a driveway embankment facing north-west.</p> <p>The photographs provided of the front end damage to Vehicle 1 indicate minor damage. The damage was assigned a CDC of 12FDLW1 (PDOF =0E). Vehicle 1 sustained a total delta V of 21.6 km/h (13.4 mph), a longitudinal delta V of -21.6 km/h (-13.4 mph). This is a borderline reconstruction but the results appear reasonable. Vehicle 1 was towed from the scene, but not due to damage. Vehicles 2 was driven from the scene.</p> <p>Internal examination of the head of the driver of Vehicle 1 revealed that the cranium was fractured (AIS-3) from the right lateral middle cranial fossa through the base of the skull, anterior to the foramen magnum, and through the left mastoid air cells. The source of the cranium fractures were not ascertained. The cervical cord was transected and fractured at the level of C4-C5 (AIS-5); the source of this injury was the driver's air bag as the driver's head was accelerated rapidly rearward. The internal examination of the thorax revealed two, irregular lacerations were present in the atrial septum of the heart (AIS-6). A horizontal tear was present at the base of the aorta (AIS-5). The right upper lobe of the lung had contusions.</p> <p>Emergency rescue personnel were notified at 1232 hours and arrived at the scene at 1240 hours. They pronounced the driver of Vehicle 1 dead at the scene, and the time of death was annotated as 1230 hours. The body was then taken to the medical examiner's office from the scene. The medical examiner rule the cause of death as a broken neck, crushed head and chest.</p>					
17. Key Words Air bag, deployment, injury, accident, fatality, passenger, child			18. Distribution Statement		
19. Security Classif. (of this report)		20. Security Classif. (of this page)		21. No of pages	22. Price

Form DOT F 1700.7 (8-72)      Reproduction of this form and completed page is authorized

**Dynamic Science, Inc.**  
**Accident Investigation**  
**Case Number: DS98013**

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**BACKGROUND:**

Description: This case was initiated in response to a report of fatal injuries sustained by the driver as a result of the deployment of the driver's air bag. The case was conducted as a remote investigation. The National Highway Traffic Safety Administration (NHTSA) was notified by the son-in-law of the driver who also provided seven photographs of the case vehicle. DSI was notified on April 2, 1998 at 1638 hours via fax. The following information was obtained from the police report, and the autopsy report.

Investigation Type: Remote

Crash Location: Texas

Crash Date: June, 1997

Notification Date: April 2, 1998

Field Work Completed: NA

**SUMMARY:**

This collision occurred in Texas in June 1997 at 1230 hours. The collision occurred on a dry, smooth, asphalt roadway. The weather was clear and the roadway was dry. There were no viewing obstructions or unusual conditions noted. The speed limit is 56 km/h (35 mph).

Vehicle 1, a 1994<sup>1</sup> Toyota Corolla 4-door was being driven westbound by a 52-year-old female (155 cm-61 in / 50 kg.-111 lbs). The driver of Vehicle 1 was not wearing the available lap and shoulder belts and was apparently talking on a cellular telephone at the moment of impact. Pieces of the cellular phone were found on the roadway to the left of where Vehicle 1 collided with Vehicle 2. The driver's side window was down. The driver's seat track position is unknown since Vehicle 1 was not inspected.

Vehicle 2, a 1983 Cadillac Deville 4-door was driven westbound by a restrained 19-year-old male. Vehicle 2 was stopped waiting for a red light, directly in front of Vehicle 1. As Vehicle 2 was stopped, Vehicle 1 rear-ended Vehicle 2. On impact, both air bags in Vehicle 1 deployed. After impact, Vehicle 1 was redirected to the right, continued moving forward, struck a concrete curb and came to final rest on a driveway embankment facing north-west.

Emergency rescue personnel were notified at 1232 hours and arrived at the scene at 1240 hours. They pronounced the driver of Vehicle 1 dead at the scene, and the time of death was annotated as 1230 hours. The body was then taken to the medical examiner's office from the scene.

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<sup>1</sup> The police report indicates a vehicle identification number (vin) that is one character too long. The tenth character of the vin indicates a 1994 year model and not a 1993.

The photographs provided of the front end damage to Vehicle 1 indicate minor damage (see Figure 1).

The damage was assigned a CDC of 12FDLW1 (PDOF =0 degrees). Vehicle 1 sustained a total delta V of 21.6 km/h (13.4 mph), a longitudinal delta V of -21.6 km/h (-13.4 mph)<sup>2</sup>. This is a borderline reconstruction but the results appear reasonable. Vehicle 1 was towed from the scene, but not due to damage. Vehicle 2 was driven from the scene.



**Figure 1.** Exterior damage to left-front.

An invasive autopsy was performed one day after the crash on the driver of Vehicle 1. The following injuries are indicated on the autopsy report, and appear to be consistent with air bag contact.

Internal examination of the head revealed that the cranium was fractured (AIS-3) from the right lateral middle cranial fossa through the base of the skull, anterior to the foramen magnum, and through the left mastoid air cells. The source of the cranium fractures were not ascertained. The cervical cord was transected and fractured at the level of C4-C5 (AIS-5); the source of this injury was the driver's air bag as the driver's head was accelerated rapidly rearward.

The internal examination of the thorax revealed two, irregular lacerations in the atrial septum of the heart (AIS-6) measuring 1.5 cm (0.6 in) and 1.7 cm (0.7 in) in length and 0.1 cm (0.04 in) and 2 cm (0.8 in) in width, respectively. These extended through the atria and the foramen ovale, and were located below the remaining endocardium. A horizontal tear was present at the base of the aorta (AIS-5), just above the coronary ostia, and it measured 1.7 cm (0.7 in). The right upper lobe of the lung had contusions on the anterior and anterolateral right upper lobe (AIS-3) that measured 6.4 cm (2.5 in) by 0.6 cm (0.25 in). The sternum contained a transverse fracture (AIS-2) at the base of the manubrium. The left clavicle was fractured (AIS-2) at the midportion. There were numerous bilateral rib fractures (AIS-2); the left 1st through 2nd ribs were fractured posteriorly, and the left 3rd rib was fractured anteriorly. The right 2nd through 4th ribs were fractured anteriorly and the right 2nd ribs were fractured posteriorly. The thyroid cartilage was fractured (AIS-2) on the left, anteriorly; there was bloody mucus present in the larynx and trachea. All of the injuries to the thorax were attributed to the air bag.

Externally there were numerous contusion (AIS-1) and abrasions (AIS-1) about the body. An irregular abrasion extended from the mid neck anteriorly toward the face and from behind the left ear to the right side and measured 19 cm (7.5 in) in length and 5 to 9 cm (2 to 3.5 in) in diameter. This area also contained contusions. Two irregular abrasions along the anterior lower neck measured 19 cm (7.5 in) in length and 0.32 cm (0.125 in) in diameter. A 5 cm (2 in) by 5 cm (2 in) contusion was present over the

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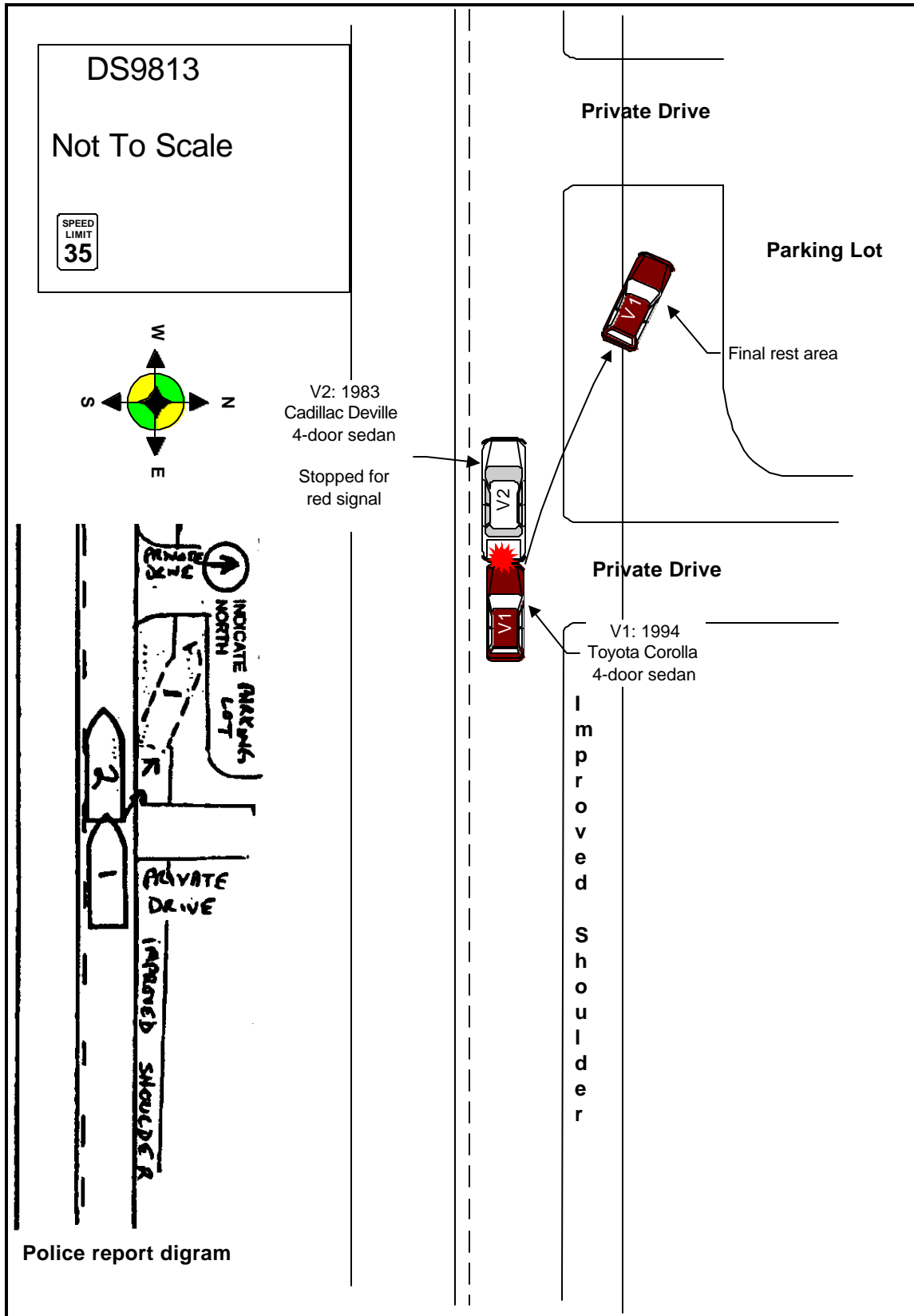
<sup>2</sup>Computed using WinSmash with the Missing Vehicle Option with C<sub>1</sub> and C<sub>2</sub> crush estimated. D<sub>1</sub> and D<sub>0</sub> were calculated for Vehicle 1 from NCAP Test No. 1771.

anterior left shoulder and a 10.2 cm (4 in) by 5 cm (2 in) contusion was present over the right anterior shoulder. A 5 cm (2 in) by 2.5 cm (1 in) contusion was present in the upper inner quadrant of the right breast and a 2.5 cm (1 in) by 1.3 cm (0.5 in) contusion was present in the lower inner quadrant of the right breast. A 2.5 cm (1 in) by 1.3 cm (0.5 in) contusion was present on the anterior lateral right upper arm. A 3.8 cm (1.5 in) by 2.5 cm (1 in.) contusion was present in the lateral right wrist. Two, 3.8 cm (1.5 in) by 1.3 cm (0.5 in) contusions were present on the dorsum of the right hand. A curvilinear 1.3 cm (0.5 in) by 0.32 cm (0.125 in) abrasion was present posteriorly at the base of the right index finger. Two, 0.32 cm (0.125 in) abrasions were present in the dorsomedial surface of the right hand. A 0.64 cm (0.25 in) by 2.5 cm (1 in) abrasion was present on the dorsum right wrist. A 11.4 cm (4.5 in) by 0.16 cm (0.06 in) linear scabbed abrasion was present in the anterior lateral left upper arm. Two, 0.32 cm (0.125 in) abrasions were present on the posterior left wrist. A 4.5 cm (1.75 in) by 2.5 cm (1 in) area of contusion-abrasion covering was found on the dorsum of the left hand. Two, 0.32 cm (0.125 in) abrasions were present posteriorly at the base of the left index and left middle finger. A 0.64 cm (0.250 in) laceration was present on the medial side of the left hand. All of these external injuries were attributed to the air bag.

The lower extremities sustained a 3.2 cm (1.125 in) 2.5 cm (1 in) contusion (AIS-1) to the mid anterolateral right thigh, and a 0.64 cm (0.25 in) by 0.32 cm (0.125 in) scabbed abrasion (AIS-1) to the posterior lateral left ankle. The source of these two injuries were not ascertained

The medical examiner rule the cause of death as a broken neck, crushed head and chest.

Scene Diagram





**DETAILED INFORMATION**

**Vehicles**

Vehicle 1

Description: 1994 Toyota Corolla 4-door Sedan

VIN: 1NXAE04B1RZXXXXXXXX (18 characters)

Odometer: Unknown

Engine: 1.6 L V4

Reported Defects: NHTSA CAMPAIGN ID Numbers: 94E021001, 94V220000, 96V107000<sup>3</sup>; these recalls did not play a role in this collision.

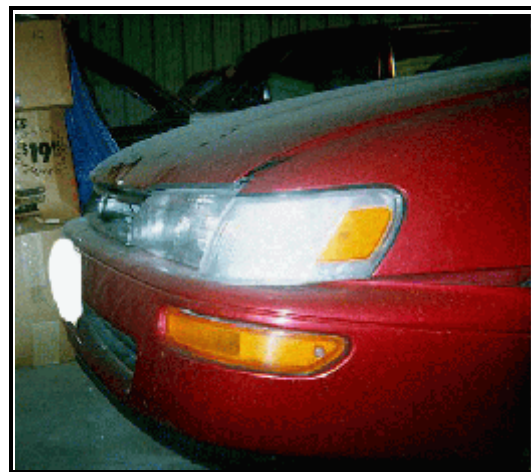
Cargo: Unknown, none visible in photographs

Damage Description: Minor rearward front bumper, hood and grille crush.

CDC: 12FDLW1 - CDC estimated from photographs

Delta V:

Total	21.6 km/h ( 13.4 mph)
Longitudinal	-21.6 km/h (-13.4 mph)
Latitudinal	0 km/h ( 0 mph)
Energy	8,567 joules ( 6,321 ft-lbs)



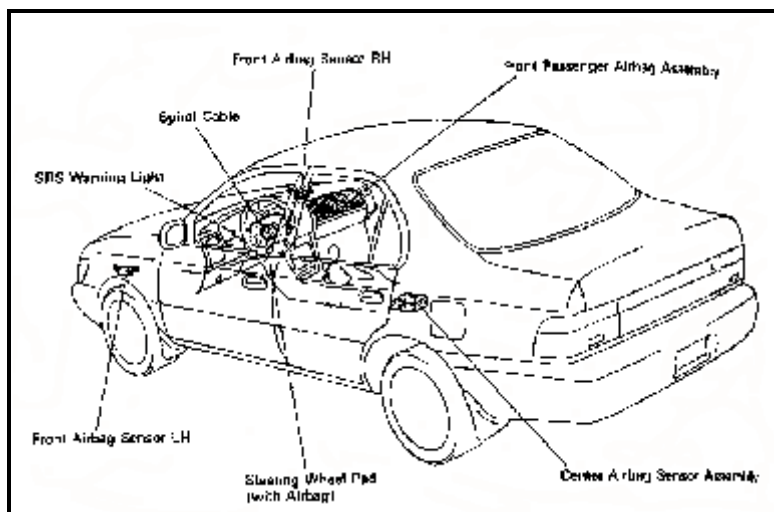
**Figure 3.** Exterior damage Vehicle 1.

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<sup>3</sup> See Attachment A

Vehicle 1 was equipped with a circular driver's steering wheel hub air bag and a mid-mount front right passenger air bag. Its dimensions, number of tethers and vent ports are unknown.

The front right passenger's air bag is rectangular in shape and its dimensions, number of tethers and vent ports are unknown. The single module cover is rectangular in shape and do not appear damaged.



**Figure 4.** Air bag components.

Blood was splattered about the driver's air bag, and about the lower front quadrant of the passenger's air bag.

Vehicle 2

Description:	1983 Cadillac Deville 4-door sedan	
VIN:	Unknown	
Odometer:	Unknown	
Engine:	Unknown	
Reported Defects:	None noted on police report	
Cargo:	Unknown	
Damage Description:	Unknown damage to back of vehicle	
CDC:	Unknown	
Delta V:	Total	12.7 km/h (7.9 mph)
	Longitudinal	12.7 km/h (7.9 mph)
	Latitudinal	0 km/h (0 mph)
	Energy	23,029 joules (16,993 ft-lbs)

**Occupants**

<u>Vehicle 1</u>	Occupant 1
Age/Sex:	52/Female
Seated Position:	Left front
Seat Type:	Cloth covered bucket seat
Height:	155 cm (61 in)
Weight:	50 kg (111 lbs)
Occupation:	Unknown
Pre-existing Medical Condition:	None noted
Alcohol/Drug Involvement:	None
Driving Experience:	Unknown
Body Posture:	Assumed normal, upright.
Hand Position:	Police report indicates she was talking on a cell phone. From hand-finger injuries it appears she was holding the cell phone with both of her hands; possibly dialing.
Foot Position:	Unknown
Restraint Usage:	Lap and shoulder <b>not used</b> per police report
Air bag:	Driver's and front right passenger's air bags deployed as a result of impact

<u>Vehicle 2</u>	Occupant 1
Age/Sex:	19/Male
Seated Position:	Front left
Seat Type:	Unknown
Height:	Unknown
Weight:	Unknown
Occupation:	Laborer
Pre-existing Medical Condition:	None noted
Alcohol/Drug Involvement:	None
Driving Experience:	Unknown
Body Posture:	Probably normal, upright
Hand Position:	Unknown
Foot Position:	Unknown
Restraint Usage:	Lap and shoulder belts used—per police report
Air bag:	NA

**Injuries and Injury Mechanisms****Vehicle 1**

	<u>INJURY</u>	<u>OIC CODE</u>	<u>ICD-9</u>	<u>SOURCE</u>
Driver:	Two irregular lacerations to atrial septum measuring 1.5 cm (0.6 in) and 1.7 cm (0.7 in) in length and 0.1 cm (0.04 in) and 2 cm (0.8 in) in width, respectively	441016.6, 4	745.5	Air bag
	A horizontal tear at the base of the aorta measuring 1.7 cm (0.7 in) just above the coronary ostia. With hemorrhaging surrounding the base of the aorta	420216.5, 4	901.0	Air bag
	Cervical vertebra transected and fractured at C4-C5	640246.5, 6	806.06	Air bag
	Skull fracture from right lateral middle cranial fossa through the base of the skull, anterior to the foramen magnum, and through the left mastoid air cells. Blood was draining from the right ear.	150200.3, 8	801.20	Unknown
	Tear just below the origin of the left subclavian artery measuring 1 cm	421604.3, 4	901.1	Air bag
	Contusions measuring 6.4 cm (2.5 in) x 0.6 cm (0.25 in) on anterior and anterolateral right upper lung lobe with 60 milliliters of serous fluid in each pleural cavity	441406.3, 1	861.21	Air bag
	Left 1 <sup>st</sup> -2nd ribs posteriorly fractured and left 3 <sup>rd</sup> rib anteriorly. The right 2nd-4th anterior ribs fractured and 2 <sup>nd</sup> right rib posteriorly	450220.2, 3	807.04	Air bag
	Fracture of left anterior thyroid cartilage (coded as laceration).	340204.2, 5	807.54	Air bag
	Traverse sternum fracture at the base of the manubrium	450804.2, 4	807.24	Air bag
	Fracture of left clavicle at midportion	752200.2, 2	810.00	Air bag

Irregular abrasion and contusions from midneck anteriorly toward face and from behind left ear to the right side measuring 17.8 cm (7 in) in length and 5-8.9 cm (2-3.5 in) in diameter	390202.1, 0	910.0	Air bag
	390402.1, 0	910.0	
Two irregular abrasions along anterior lower neck measuring 19 cm (7.5 in) in length and 0.3 cm (0.125 in) in diameter	390202.1, 0	910.0	Air bag
Contusion over anterior left shoulder measuring 5 cm (2 in) x 5 cm (2 in)	790402.1, 2	923.00	Air bag
Contusion to upper inner quadrant of right breast measuring 5 cm (2 in) x 2.5 cm (1 in)	490402.1, 0	922.0	Air bag
Contusion to lower inner quadrant of right breast measuring 2.5 cm (1 in) x 1.3 cm (0.5 in)	490402.1, 0	922.0	Air bag
Contusion to anterior lateral right upper arm measuring 2.5 cm (1 in) x 1.3 cm (0.5 in)	790402.1, 1	923.03	Air bag
Two contusions to dorsum of right hand measuring 3.8 cm (1.5 in) x 1.3 cm (0.5 in)	790402.1, 1	923.20	Air bag
	790402.1, 1	923.20	
Two abrasions dorsomedial surface of right hand	790202.1, 1	914.0	Air bag
	790202.1, 1	914.0	
Curvilinear abrasion posteriorly at base of right index finger measuring 1.3 cm (0.5 in) x 0.3 cm (0.125 in)	790202.1, 1	915.0	Air bag
Abrasions to dorsum of right wrist measuring 0.6 cm (0.25 in) x 2.5 cm (1 in)	790202.1, 1	913.0	Air bag
Linear scabbed abrasion to anterior lateral left upper arm measuring 11.4 cm (4.5 in) x 0.2 cm (0.6 in)	790202.1, 2	912.0	Air bag
Two abrasions to posterior left wrist measuring 0.3 cm (0.125 in) x 2.5 cm (1 in)	790202.1, 2	913.0	Air bag

Contusion an abrasion to dorsum of left hand measuring 4.4 cm (1.75 in) x 2.5 cm (1 in)	790402.1, 2 790202.1, 2	923.20 914.0	Air bag
Two 0.3 cm (1.25 in) abrasions to posterior base of the left index finger	790202.1, 2 790202.1, 2	915.0 915.0	Air bag
Laceration to medial side of left hand measuring 0.6 cm (0.25 in)	790602.1, 1	882.0	Unknown
Contusion to left chest measuring 6.4 cm (2.5 in) x 1.3 cm (0.5 in)	490402.1, 2	922.1	Air bag
Contusion to left lateral chest measuring 2.5 cm (1 in)	490402.1, 2	922.1	Air bag
Contusion right anterior chest measuring 1.3 cm (0.5 in)	490402.1, 1	922.1	Air bag
Scabbed abrasion to posterior lateral left ankle measuring 0.6 cm (0.25 in) x 0.3 cm (0.125 in)	890202.1, 2	916.0	Unknown
Contusion to mid anterolateral right thigh measuring 3.2 cm (1.25 in) x 2.5 cm (1 in)	890402.1, 1	924.00	Unknown

**Vehicle 2**

	<u>INJURY</u>	<u>OIC CODE</u>	<u>ICD-9</u>	<u>SOURCE</u>
Driver:	Not injured	NA		



## Occupant Kinematics

Vehicle 1 was traveling westbound. The driver of Vehicle 1 was fully conscious, seated upright, and was not wearing the available lap and shoulder belts prior to the crash. Given her small stature, she was probably seated in close proximity to the steering wheel hub. Air bag injuries, abrasions and contusions, to the dorsum of both her hands and index fingers indicate that she was probably holding the cell phone with both of her hands and possibly dialing a number. This may explain why she did not see traffic stopped in front of her, and did not take any evasive maneuvers. At impact with the rear end of Vehicle 2, the driver of Vehicle 1 went forward and up, engaging the deploying air bag with the anterior part of her neck and upper body. There were abrasions and contusions to the anterior area of her neck indicating that the air bag was engaged at some point. As the air bag continued its unfolding pattern, the driver's head was rapidly accelerated rearward causing the laceration and fracture of the cervical spine. There were also critical injuries to her thorax region which are also attributed to the air bag. She also sustained skull fractures, but it is not clear what caused them. After impact with Vehicle 2, Vehicle 1 veered to the right and continued moving forward and struck a concrete curb. It came to final rest on a driveway embankment facing northwest. It appears that the driver came to rest on the front right seat and in contact with the front right passenger's air bag. There was a considerable amount of blood on the front right passenger's air bag and front right seat (see Figure 5).



**Figure 5.** Interior of vehicle.

**Attachment A**

Report Date: March 19, 2001 04:34:37 PM

NHTSA CAMPAIGN ID Number: 94E021001  
Component: INTERIOR SYSTEMS:ACTIVE SEAT AND SHOULDER BELTS  
AND BELT ANCHOR  
Manufacturer: TOYOTA MOTOR CO., LTD.  
Potential Number of Units Affected: 68725

Year: 1994  
Make: TOYOTA  
Model: COROLLA  
Manufactured From: NOV 1993 To: JAN 1994  
Year of Recall: '94  
Type of Report: Equipment  
Summary:

THE ANCHOR STRAPS INSTALLED IN THE BELT ASSEMBLIES (FRONT INNER, LEFT AND RIGHT HAND SIDES) WERE IMPROPERLY HEAT TREATED AND CAN BREAK, WHICH WILL NOT SUFFICIENTLY RESTRAIN SEAT OCCUPANTS IN THE EVENT OF A SUDDEN STOP OR ACCIDENT. THIS DOES NOT COMPLY WITH FMVSS NO. 209, "SEAT BELT ASSEMBLIES."

THE MANUFACTURER WILL PROVIDE REPLACEMENT SAFETY BELT ANCHOR STRAPS.

**SYSTEM: SAFETY BELT ASSEMBLIES.**

EQUIPMENT DESCRIPTION: SAFETY BELT ASSEMBLIES USED ON 1994 TOYOTA COROLLAS AND GEO PRISMS.

CONSEQUENCE OF NONCOMPLIANCE: INSUFFICIENT RESTRAINTS FOR SEAT OCCUPANTS INCREASES THE RISK OF INJURY IN THE EVENT OF AN ACCIDENT.

NOTE: IF YOUR VEHICLE IS PRESENTED TO AN AUTHORIZED DEALER ON AN AGREED UPON SERVICE DATE AND THE REMEDY IS NOT PROVIDED FREE OF CHARGE WITHIN A REASONABLE TIME OR THE REMEDY DOES NOT CORRECT THE NONCOMPLIANCE, PLEASE CONTACT TOYOTA AT 1-800-331-4331. ALSO, CONTACT THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION'S AUTO SAFETY HOTLINE AT 1-800-424-9393.

NHTSA CAMPAIGN ID Number: 94V220000  
Component: ELECTRICAL SYSTEM:WIRING  
Manufacturer: TOYOTA MOTOR CO., LTD.  
Potential Number of Units Affected: 16497

Year: 1994  
Make: TOYOTA  
Model: COROLLA  
Manufactured From: SEP 1992 To: JUL 1994  
Year of Recall: '94  
Type of Report: Vehicle  
Summary:

AN UNUSED HARNESS CONNECTOR FOR POWER WINDOWS, POWER DOOR LOCKS AND SUNROOF WAS IMPROPERLY ROUTED UNDER THE FLOOR CARPET IN THE LEFT KICK PANEL. IF THE VEHICLE IS OPERATED IN COLD WEATHER CONDITIONS WHERE LARGE AMOUNTS OF ROAD SALTS ARE USED, THE SALT WATER OR SNOW CARRIED INTO THE VEHICLE BY THE DRIVER'S SHOES CAN PENETRATE THE CARPET AND DRIP ONTO THE CONNECTOR RESULTING IN THE FORMATION OF A SALT BRIDGE BETWEEN THE TERMINALS.

THIS CAUSES AN ELECTRICAL SHORT INSIDE THE HARNESS, AND CAN RESULT IN A VEHICLE FIRE.

DEALERS WILL REMOVE THE UNUSED HARNESS CONNECTOR.

**SYSTEM: ELECTRICAL SYSTEM: WIRING.**

VEHICLE DESCRIPTION: COROLLA PASSENGER VEHICLES BUILT IN JAPAN OR CANADA NOT EQUIPPED WITH POWER WINDOWS, POWER DOOR LOCKS AND SUNROOF, REGISTERED IN THE FOLLOWING STATES: CT, IL, IN, ME, MA, MI, NH, NJ, NY, OH, PA, RI,VT, AND WI.

NOTE: IF YOUR VEHICLE IS PRESENTED TO AN AUTHORIZED DEALER ON AN AGREED UPON SERVICE DATE AND THE REMEDY IS NOT PROVIDED FREE OF CHARGE WITHIN A REASONABLE TIME, PLEASE CONTACT TOYOTA AT 1-800-331-4331. ALSO CONTACT THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION'S AUTO SAFETY HOTLINE AT 1-800-424-9393.

NHTSA CAMPAIGN ID Number: 96V107000  
Component: INTERIOR SYSTEMS:PASSIVE RESTRAINT:AIR BAG  
IMPACT SENSOR  
Manufacturer: TOYOTA MOTOR CO., LTD.  
Potential Number of Units Affected: 627858

Year: 1994  
Make: TOYOTA  
Model: COROLLA  
Manufactured From: JUN 1992 To: JAN 1995  
Year of Recall: '96  
Type of Report: Vehicle  
Summary:

IF LIQUID IS SPILLED IN THE CONSOLE BOX AREA, THE AIR BAG WARNING LIGHT CAN ILLUMINATE AND STAY "ON" DURING NORMAL DRIVING CONDITIONS.

THIS LEAKAGE CONDITION COULD CAUSE THE AIR BAG TO INADVERTENTLY DEPLOY.

DEALERS WILL INSTALL A PROTECTIVE COVER OVER THE AIR BAG SENSOR TO PREVENT POSSIBLE MALFUNCTION CAUSED BY THE SPILLING OF LIQUID SUBSTANCES ON THE SENSOR. AIR BAG SENSORS DAMAGED BY PREVIOUS LIQUID SPILLAGE WILL BE REPLACED.

**SYSTEM: INTERIOR; PASSIVE RESTRAINT; AIR BAG IMPACT SENSOR.**

VEHICLE DESCRIPTION: PASSENGER VEHICLES.

OWNER NOTIFICATION: OWNERS HAVE ALREADY BEEN NOTIFIED OF THIS CAMPAIGN.

NOTE: OWNERS WHO TAKE THEIR VEHICLES TO AN AUTHORIZED DEALER ON AN AGREED UPON SERVICE DATE AND DO NOT RECEIVE THE FREE REMEDY WITHIN A REASONABLE TIME SHOULD CONTACT TOYOTA AT 1-800-331-4331. ALSO CONTACT THE NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION'S AUTO SAFETY HOTLINE AT 1-800-424-9393.