

INDIANA UNIVERSITY

TRANSPORTATION RESEARCH CENTER

School of Public and Environmental Affairs

501 South Morton Street Suite 105

Bloomington, Indiana 47403-2452

(812) 855-3908 Fax: (812) 855-3537

ON-SITE CHILD SAFETY SEAT INVESTIGATION

CASE NUMBER - IN09018

LOCATION - WISCONSIN

VEHICLE - 1996 LEXUS LS 400

CRASH DATE - April 2009

Submitted:

November 12, 2009



Contract Number: DTNH22-07-C-00044

Prepared for:

U.S. Department of Transportation
National Highway Traffic Safety Administration
National Center for Statistics and Analysis
Washington, D.C. 20590-0003

DISCLAIMERS

This document is disseminated under the sponsorship of the Department of Transportation in the interest of information exchange. The United States Government assumes no responsibility for the contents or use thereof.

The opinions, findings, and conclusions expressed in this publication are those of the authors and not necessarily those of the National Highway Traffic Safety Administration.

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.

Technical Report Documentation Page

| | | | | | |
|--|--|--|--|---|------------------|
| 1. <i>Report No.</i> IN09018 | | 2. <i>Government Accession No.</i> | | 3. <i>Recipient's Catalog No.</i> | |
| 4. <i>Title and Subtitle</i> On-Site Child Safety Seat Investigation Vehicle - 1996 Lexus LS400 Location - Wisconsin | | 5. <i>Report Date:</i> November 12, 2009 | | 6. <i>Performing Organization Code</i> | |
| | | 8. <i>Performing Organization Report No.</i> | | 10. <i>Work Unit No. (TRAIS)</i> | |
| 7. <i>Author(s)</i> Special Crash Investigations Team #2 | | 9. <i>Performing Organization Name and Address</i> Transportation Research Center Indiana University 501 South Madison Street, Suite 105 Bloomington, Indiana 47403-2452 | | 11. <i>Contract or Grant No.</i> DTNH22-07-C-00044 | |
| 12. <i>Sponsoring Agency Name and Address</i> U.S. Department of Transportation (NVS-411) National Highway Traffic Safety Administration National Center for Statistics and Analysis Washington, D.C. 20590-0003 | | 13. <i>Type of Report and Period Covered</i> Technical Report Crash Date: April 2009 | | 14. <i>Sponsoring Agency Code</i> | |
| | | 15. <i>Supplementary Notes</i> On-site Child Safety Seat (CSS) investigation involving a 1996 Lexus LS400. | | | |
| 16. <i>Abstract</i> <p>This on-site investigation focused on the second row right passenger (23-month-old, male), of a 1996 Lexus LS400 and the Evenflo Chase DLX Booster Forward Facing Child Safety Seat (FSS) in which he was seated. The Lexus was occupied by an unrestrained 27-year-old male driver, an unrestrained 27-year-old female front passenger, a restrained 6-year-old male second row left passenger, and the 23-month-old male second row right passenger. The driver was traveling north in the inside lane of a divided interstate highway and was passing several vehicles. The tread of the left rear tire of the Lexus separated from the tire carcass. The vehicle rotated clockwise and departed the east side of the roadway and rolled over 16 quarter turns. During the rollover, all of the side window glazing disintegrated and the right front door was torn off the vehicle. The driver was ejected through the left front window opening. The front passenger was ejected through the right front door opening. The FSS was not secured in the vehicle and the second row right passenger and the FSS were ejected through the right rear window opening. The front passenger and second row right passenger sustained fatal injuries. The driver and second row left passenger were transported to a hospital and admitted.</p> | | | | | |
| 17. <i>Key Words</i> Child Safety Seat Ejection | | Motor Vehicle Traffic Crash Injury Severity | | 18. <i>Distribution Statement</i> General Public | |
| 19. <i>Security Classif. (of this report)</i> Unclassified | | 20. <i>Security Classif. (of this page)</i> Unclassified | | 21. <i>No. of Pages</i> 11 | 22. <i>Price</i> |

TABLE OF CONTENTS

IN09018

Page No.

BACKGROUND 1

CRASH CIRCUMSTANCES 1

ROLLOVER DISCUSSION 3

CASE VEHICLE: 1996 LEXUS LS400 3

 CASE VEHICLE DAMAGE 3

 AUTOMATIC RESTRAINT SYSTEM 6

 MANUAL RESTRAINT SYSTEM 6

 CHILD SAFETY SEAT 7

 CASE VEHICLE DRIVER KINEMATICS 8

 CASE VEHICLE DRIVER INJURIES 8

 CASE VEHICLE FRONT ROW PASSENGER KINEMATICS 9

 CASE VEHICLE FRONT ROW PASSENGER INJURIES 9

 CASE VEHICLE SECOND ROW LEFT PASSENGER KINEMATICS 9

 CASE VEHICLE SECOND ROW LEFT PASSENGER INJURIES 10

 CASE VEHICLE SECOND ROW RIGHT PASSENGER INJURIES 10

 CASE VEHICLE SECOND ROW RIGHT PASSENGER INJURIES 10

CRASH DIAGRAM 11

This on-site investigation focused on the second row right passenger (23-month-old, male), of a 1996 Lexus LS400 (**Figure 1**) and the Evenflo Chase DLX Booster Forward Facing Child Safety Seat (FSS) in which he was seated. The child and FSS were ejected from the vehicle when it rolled over. This crash was brought to the attention of the National Highway Traffic Safety Administration (NHTSA) on April 14, 2009 by a newspaper article. This investigation was assigned on May 15, 2009. The crash occurred in April 2009, at 1455 hours in Wisconsin and was investigated by the county sheriff's department. The Lexus, crash scene, and the FSS were inspected on May 20, 2009. No interview was conducted since the driver could not be located. This report is based on the police crash report, crash scene and vehicle inspections, occupant kinematic principles, and evaluation of the evidence.



Figure 1: The damaged 1996 Lexus LS400

CRASH CIRCUMSTANCES

Crash Environment: The trafficway on which the Lexus was traveling on was a 4-lane, divided, interstate highway that traversed in a north-south direction. The trafficway had two travel lanes in each direction and was bordered by bituminous shoulders. Each travel lane was 3.5 m (11.5 ft) in width. The outside shoulder was 3.2 m (10.5 ft) in width, while the median shoulder was 1.8 m (5.9 ft) in width. The trafficway was divided by a grass median that was approximately 14 m (45.9 ft) in width. The roadway pavement markings consisted of solid white outside edge lines, broken white lane lines, and solid yellow median edge lines. At the time of the crash, the light condition was daylight and the atmospheric condition was clear. The roadway pavement was dry, level, concrete. The site of the crash was rural and the traffic density was moderate. The Crash Diagram can be seen on page 11 of this report.

Pre-Crash: The Lexus was occupied by an unrestrained 27-year-old male driver, an unrestrained 27-year-old female front passenger, a restrained 6-year-old male second row left passenger, and a 23-month-old male second row right passenger. The second row right passenger was seated in the FSS, but the FSS was not secured in the vehicle. The driver was traveling north in the inside lane (**Figure 2**) passing several vehicles when the tread of the left rear tire separated from the tire carcass (**Figure 3**). The vehicle began to rotate clockwise (**Figure 4**) and



Figure 2: Police on-scene photo showing the travel lane of the Lexus and the beginning of tire marks from the left rear tire

departed the east side of the roadway where the rollover occurred. It is not known if the driver attempted any avoidance maneuvers.

Crash: The Lexus departed the east shoulder (Figure 5) and continued to rotate clockwise across the grass and rolled over, left side leading. During the rollover, all the side window glassing disintegrated and the right front door was torn off the vehicle. The driver was ejected through the left front window opening. The front passenger was ejected through the right front door opening. The second row right passenger and the FSS were ejected through the second row right window opening. The Lexus came to final rest on its wheels heading northeast (Figure 5). Based on the police measurements, the vehicle traversed a total distance of 249 m (817 ft) from the area on the roadway where the tread of the left rear tire began to separate to the final rest position of the vehicle.

Post-Crash: The police were notified of the crash at 1458 hours and arrived on scene at 1504 hours. Emergency responders attempted to resuscitate the front passenger, but the efforts were unsuccessful and she was pronounced deceased at the scene. The driver of the Lexus was transported by helicopter to an urban medical center and admitted for treatment of his injuries. The second row right passenger was transported by helicopter to a children's hospital where he was pronounced deceased six hours post-crash. The second row left passenger was extricated from the vehicle and transported by ambulance to a local hospital. He was later transferred to a children's hospital. The Lexus was towed from the scene due to damage.



Figure 3: The tread separated from the left rear tire

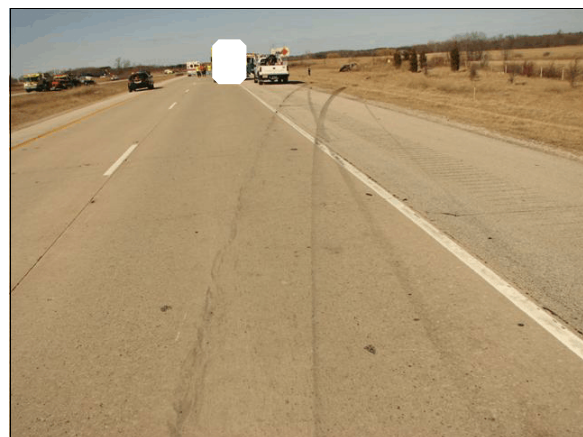


Figure 4: Police on-scene photo showing yaw marks from the Lexus as it approaches the departure point from the road; yaw marks from left to right are: left rear, left front, right rear, and right front



Figure 5: Police on-scene photo showing area of rollover initiation; furrow on left is from the left rear wheel; furrow on right is from the left front wheel; arrow shows the final rest position of the Lexus

The Lexus was equipped with no rollover mitigation features. No rollover test rating was available for this vehicle¹.

The Lexus was in a clockwise rotation as it departed the east shoulder. The vehicle traveled 20 m (65.6 ft) on dry grass down a negative 10% grade to the point of rollover initiation. The vehicle had rotated 95 degrees clockwise from its initial northerly heading on the roadway when the left side wheels furrowed into the ground and the vehicle tripped and rolled over left side leading. The damage on the vehicle indicated that the end planes and both side planes impacted the ground during the rollover. The vehicle traversed a distance of 73 m (239.4 ft) from the area of rollover initiation to the final rest position. Based on the distance traversed during the rollover and the damage to the vehicle, it was estimated that the Lexus rolled over 16 quarter turns. The vehicle came to final rest on its wheels heading northeast and was located 28 m (91.8 ft) east of the outside edge of the east shoulder.

CASE VEHICLE

The 1996 Lexus LS400 was a rear-wheel drive, 4-door sedan (VIN: JT8BH22F8T0-----) equipped with a 4.0-L, V8 engine, an automatic transmission, and 4-wheel anti-lock brakes. The front row was equipped with bucket seats, adjustable head restraints, lap-and-shoulder safety belts, driver frontal air bag, and front passenger frontal air bag. The second row was equipped with a bench seat, adjustable head restraints in the outboard seating positions, and lap and shoulder safety belts in all three seat positions. The vehicle was not equipped with Lower Anchors and Tethers for Children (LATCH). Traction control was an option but this model was not so equipped.

CASE VEHICLE DAMAGE

Exterior Damage: The damage from the rollover involved the entire vehicle (Figures 6 and 7). The maximum vertical crush was 11 cm (4.3 in) and occurred on the backlight header adjacent to the right C-pillar (Figure 8). The maximum lateral crush was 12 cm (4.7 in) and occurred on the right C-pillar. Both positions were located 16 cm (6.3 in) forward of the right rear axle. The direct damage width on the top plane was 117 cm (46.1 in), which involved the full width of the top plane. The right side wheelbase was reduced 2 cm (0.8 in), while the left side wheelbase was reduced 3 cm (1.2 in).



Figure 6: Front right view of the damage on Lexus

Damage Classification: The Collision Deformation Classification was **00-TDDO-3**. The WinSMASH program could not be used on this crash since rollovers are out of scope for the

¹ www.safercar.gov, 11/09/09

program. Based on the extent of the crush on the roof, the severity of damage from the rollover was moderate.



Figure 7: Back left view of the damage on the Lexus



Figure 8: The maximum vertical crush occurred adjacent to the right C-pillar; the maximum lateral crush occurred on the right C-pillar

The manufacturer’s recommended tire size was P225/60R16. The Lexus was equipped with the recommended size tires. The vehicle’s tire data are shown in the table below.

| Tire | Measured Pressure | | Vehicle Manufacturer’s Recommended Cold Tire Pressure | | Tread Depth | | Damage | Restricted | Deflated |
|------|-------------------|------|---|-----|--------------|-----------------------------|----------------------------|------------|----------|
| | kPa | psi | kPa | psi | milli-meters | 32 nd of an inch | | | |
| LF | Flat | Flat | 207 | 30 | 5 | 6 | None | No | Yes |
| LR | Flat | Flat | 207 | 30 | 3 | 4 | Tread separation from tire | No | Yes |
| RR | Flat | Flat | 303 | 30 | 2 | 3 | None | No | Yes |
| RF | Flat | Flat | 207 | 30 | 5 | 6 | None | No | Yes |

Left Rear Tire Failure Discussion: The left rear tire was a Michelin Destiny (**Figure 9**) size P225/60R16. The Tire Identification Number (TIN) was M33V F7LX 2403. The left rear wheel had been removed from the vehicle by the police and they also removed the tire from the rim. The inspection of the tire revealed that the entire tread had separated from the carcass and was separated into numerous pieces. There was also a 4 cm (1.5 in) by 8 cm (3.1 in) hole in the tire carcass (**Figure 10**) located adjacent to the sidewall on the inboard side of the tire between the 12 and 3 o’clock positions. The clock positions 12, 3, 6, and 9 were written on each side of the tire as reference locations with the 12 o’clock position corresponding to the TIN (**Figure 9**). The sidewall of the tire was very weathered and cracked as were the side walls of the other tires on the vehicle. The police crash report contained information indicating that the tire may have become overheated. The police interviewed numerous witnesses who had been passed by the Lexus prior

to the crash. The witnesses gave a range of speed estimates from 132 km/h (90 mph) to in excess of 147 km/h (100 mph). Two of the witnesses indicated that they had been passed by the vehicle approximately 10 minutes prior to the crash. The last witness saw the crash occur immediately after the Lexus passed his vehicle and estimated the speed of the Lexus as in excess of 147 km/h (100 mph).

Vehicle Interior: The interior inspection revealed evidence of multiple occupant contacts in the front and second row. The left front door was slightly deformed at the beltline (**Figure 11**) and a scuff was found on the roof above the driver's seat. Scratches and scuff marks were present on the right A-pillar, the right front door just below the beltline (**Figure 12**), the right B-pillar, and the roof over the front passenger seat. Scratches were present on the window frame and the roof panel was deformed and scuffed in the second row right passenger area (**Figure 13**). Scuff marks were also present on the seat that were probably related to contact by the FSS (**Figure 14**). Scuff marks were also present on the door and roof in the second row left passenger area.

The left front door remained closed and operational. The left rear and right rear doors were jammed closed and pried open by rescue personnel. The right front door was torn off the vehicle during the rollover. The pre-crash status of all the window glazing was either fixed or closed. The windshield was in place and cracked from impact forces, while all the side window and backlight glazings were disintegrated due to impact forces. The sunroof glazing and frame separated from the vehicle during the crash, but the glazing was not damaged.

The passenger compartment sustained 10 intrusions due to the rollover. The most severe of these involved the right C-pillar, which intruded laterally 18 cm (7.1 in). The backlight header and roof at the second row right seating position both intruded vertically 12 cm (4.7 in) and 9 cm (11 in), respectively).



Figure 9: The left rear tire, a Michelin Destiny



Figure 10: A hole in the tire carcass adjacent to the inside sidewall



Figure 11: Area of slight deformation on the left front door

The Lexus was equipped with driver and front passenger frontal air bags. The driver’s air bag was located within the steering wheel hub and the front passenger air bag was located within the top of the right instrument panel. Neither air bag deployed as a result of the crash.

MANUAL RESTRAINT SYSTEM

The Lexus was equipped with lap-and-shoulder safety belts for all the front and second row seating positions. The driver’s safety belt consisted of continuous loop belt webbing, an Emergency Locking Retractor (ELR), a locking latch plate, and an adjustable upper anchor that was in the middle position. The front passenger safety belt was equipped with a switchable ELR/Automatic Locking Retractor (ALR), locking latch plate, and adjustable upper anchor that was located in the middle position. The front row safety belts were not equipped with pretensioners. The second row lap-and-shoulder safety belts were equipped with continuous loop belt webbing, sliding latch plates, and switchable ELR/ALR retractors. The second row seat positions were not equipped with top tether anchors.

The inspection of the driver and front passenger safety belt assemblies revealed no evidence of loading. The driver of the vehicle told police that he and the front passenger were not restrained at the time of the crash.

The inspection of the second row left safety belt assembly revealed that it was jammed in an extended position consistent with usage. There was no evidence of loading on the safety belt assembly. The police crash report indicated that the second row left passenger was observed in the vehicle with the safety belt on following the crash.

The inspection of the second row right seat belt assembly revealed usage scratches on the belt webbing, but no evidence of loading. The belt was jammed in the retracted position. The



Figure 12: Yellow tape outlines scuff marks on the right front door from contact by the front passenger



Figure 13: Scuff marks and damage on the roof at the second row right seat position



Figure 14: Arrow shows area of scuff marks on the second row right seat that were probably caused by contact with the FSS

evidence indicated that the seat belt was not in use during the crash. The second row center seat was unoccupied.

CHILD SAFETY SEAT

The second row right passenger [23-month-old, male (unknown height and weight)] was seated in an Evenflo Chase DLX Booster FSS that was equipped with a 5-point harness (**Figure 15**). The child's height and weight could not be determined since access to the child's medical records was denied and no autopsy was performed. The FSS was manufactured on April 22, 2008 and the model number was 3291620 L2. When the FSS was used with the 5-point harness, it was designed for children who weighed 9-18 kg (20-40 lb) and were 74-109 cm (29-43 in) in height. When used without the 5-point harness (as a belt positioning booster seat), the FSS was designed for children who weighed 13.6-45.3 kg (30-100 pounds) and who were 137 cm (54 in) or less in height and whose ears were below the top of the FSS.

The FSS consisted of a one-piece plastic shell and was equipped with a 1 cm (0.4 in) thick fabric cover and a 2 cm (0.8 in) thick styrofoam back insert, the left portion of which was broken. The back was designed with a shoulder belt guide (designed for use as a belt positioning booster) on each side and arm rests. The harness buckle strap could be routed through two slots in the seat bottom and it was routed through the rear slot. The harness shoulder straps could be routed through three sets of slots in the seat back, and it was routed through the lowest set of slots. According to the police crash report, the top of the child's head extended 2.5-5 cm (1-2 in) above the top of the FSS, which indicated that the child was too tall for the harness system. The FSS was designed for use with a lap-and-shoulder safety belt and was also equipped with LATCH straps and buckles.

Inspection of the FSS revealed a 9 cm (3.5 in) long crack on the front (**Figure 16**). It was located 10 cm (3.9 in) to the right of the center of the FSS. A 3 cm (1.2 in) long crack was also located on the front at 10 cm (3.9 in) to the left of the center of the FSS. Load marks where the plastic had been bent were present on the seat bottom. A 6 cm (2.4 in) long crack was also



Figure 15: The Evenflo Chase DLX Booster FSS

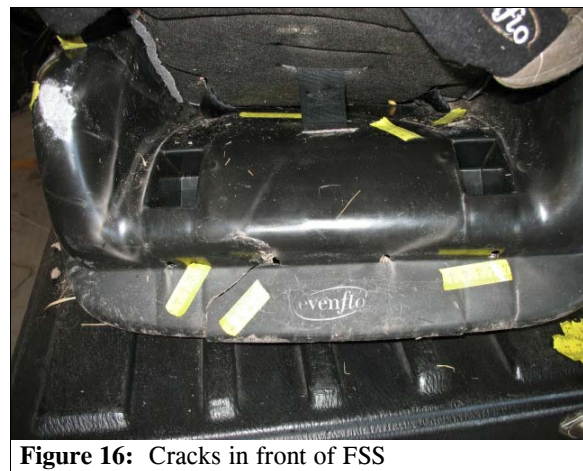


Figure 16: Cracks in front of FSS

present on the seat bottom located 9 cm (3.5 in) left of the center. A 9 cm (3.5 in) long crack was present on the right arm rest (**Figure 17**). On the back side of the FSS, there was a 16 cm (6.3 in) crack on the right side, behind the seat belt guide (**Figure 18**). A small abrasion was present on the left armrest. The damage on the FSS was the result of loading that occurred during the ejection of the seat and child from the vehicle. There was no evidence that the FSS had been secured by the safety belt of the Lexus.



Figure 17: Cracks in the plastic on the right arm rest

CASE VEHICLE DRIVER KINEMATICS

The driver [27-year-old, male; 183 cm (72 in) and 82 kg (180 in)] was seated in an unknown posture. At the time of the vehicle inspection, the seat track was adjusted between the middle and rear positions. The pre-crash adjustment of the tilt/telescoping steering column could not be determined. The driver's seat back position at the time of inspection was slightly reclined. The driver was unrestrained. Based on the medical records, the driver did not wear glasses or contact lenses.

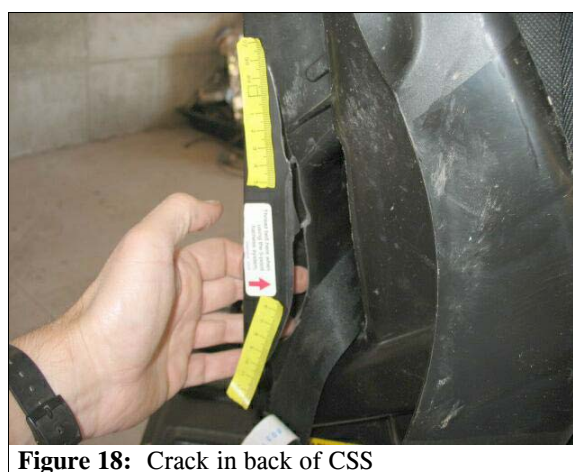


Figure 18: Crack in back of CSS

As the Lexus rotated clockwise prior to the rollover, the driver was probably displaced to the left against the left front door due to the vehicle's deceleration. As the vehicle rolled over, left side leading the driver was redirected toward the roof. During the rollover the left front window glazing disintegrated and the driver was ejected through the left front window opening. He came to final rest approximately 30 m (98 ft) south of the vehicle's final rest position. The driver sustained a nonanatomic brain injury with loss of consciousness, a left pneumothorax, and displaced fractures of the spinous processes of T₂, T₃, T₅, and T₈. The sources of these injuries were probably related to contacting the ground. The driver was transported by helicopter to an urban medical center.

CASE VEHICLE DRIVER INJURIES

The driver was hospitalized for two days. The table below shows the driver's injuries and injury sources.

| Injury Number | Injury Description (including Aspect) | NASS Injury Code & AIS 90 | Injury Source | Source Confidence | Source of Injury Data |
|------------------|---|--|---------------|-------------------|-------------------------|
| 1 | Nonanatomic brain injury with loss of consciousness of unknown duration, lethargic on initial evaluation, amnesia to event | moderate 160606.2,0 | Ground | Probable | Hospitalization records |
| 2 | Pneumothorax, small, left apical portion of pleural cavity | serious 442202.3,2 | Ground | Probable | Hospitalization records |
| 3 4 5 6 | Fractures, displaced, of spinous processes at T ₂ , T ₃ , T ₅ , and T ₈ —distal fracture fragments rotated to right | moderate 650418.2,7 650418.2,7 650418.2,7 650418.2,7 | Ground | Probable | Hospitalization records |

CASE VEHICLE FRONT ROW PASSENGER KINEMATICS

The front passenger [27-year-old, female; 165 cm (65 in) and 113 kg (250 lbs)] was seated in an unknown posture. At the time of the vehicle inspection, the seat track was adjusted between the middle and rear positions. The passenger was unrestrained. It is not known if she was wearing glasses or contact lenses at the time of the crash.

As the Lexus rotated clockwise prior to the rollover, the passenger was probably displaced to the left due to the vehicle's deceleration. As the vehicle rolled over, the passenger was redirected toward the roof. The occupant contact evidence within the vehicle indicated that at some point during the rollover the passenger contacted the right front door. The right front door was also torn off the vehicle during the rollover and the passenger was ejected through door opening. The passenger came to final rest near the final rest position of the vehicle. She was pronounced deceased at the crash scene.

CASE VEHICLE FRONT ROW PASSENGER INJURIES

There was no official medical description of the injuries sustained by the front passenger. No autopsy or post-mortem examination was performed.

CASE VEHICLE SECOND ROW LEFT PASSENGER KINEMATICS

The second row left passenger [6-year-old, male; unknown height and 44 kg (97 lbs)] was seated in an unknown posture. He was restrained by the lap-and-shoulder safety belt.

The second row left passenger remained restrained in his seat position throughout the rollover. He sustained an abrasion on the left wrist and a contusion on the left arm, which were

probably due to contacting the upper rear quadrant of the left rear door. The left rear door was jammed closed and forced open by rescue personnel to remove the passenger. The passenger was transported by ambulance to a hospital.

CASE VEHICLE SECOND ROW LEFT PASSENGER INJURIES

The second row left passenger was transported by ambulance to a local hospital and then transferred to an urban children’s hospital where he was admitted. The extent of the passenger’s injuries and number of days he was hospitalized could not be determined since access to his medical records were denied by the admitting facility. The table below shows the passenger’s injuries based on the emergency room records obtained from the initial facility.

| Injury Number | Injury Description (including Aspect) | NASS Injury Code & AIS 90 | Injury Source | Source Confidence | Source of Injury Data |
|---------------|--|---------------------------|---|-------------------|------------------------|
| 1 | Abrasions noted to left wrist, not further specified | minor 790202.1,2 | Left rear door panel, rear upper quadrant | Probable | Emergency room records |
| 2 | Contusion of left arm with swelling; pain proximal to left elbow with limited range of motion of elbow in ER | minor 790402.1,2 | Left rear door panel, rear upper quadrant | Probable | Emergency room records |

CASE VEHICLE SECOND ROW RIGHT PASSENGER KINEMATICS

The second row right passenger (23-month-old, male; unknown height and weight) was seated in the FSS in an unknown posture. He was restrained by the 5-point harness, but the FSS was not secured in the vehicle.

As the Lexus rotated clockwise prior to the rollover, the second row left passenger was probably displaced to the left due to the vehicle’s deceleration. The evidence within the second row seating area (**Figures 13 and 14**) indicated that the FSS probably contacted the roof and second row right seat during the rollover. The right rear window glazing was disintegrated during the rollover and the passenger was ejected through the window opening. He was found by rescue personnel still restrained in the FSS approximately 30 m (98 ft) south of the vehicle’s final rest position. He sustained critical injuries and was transported by helicopter to a children’s hospital where he expired six hours post-crash.

CASE VEHICLE SECOND ROW RIGHT PASSENGER INJURIES

The nature and extent of the injuries sustained by the second row right passenger could not be determined since access to his medical records was denied by the hospital and no autopsy or post-mortem examination was performed.

