



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



DOT HS 812 543

May 2018

**Special Crash
Investigations
Remote Non-Traffic
Surveillance
Hyperthermia Investigation
Vehicle: 2004 Dodge Ram
1500
Location: Louisiana
Incident Date: June 2016**

DISCLAIMER

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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.

This report and associated case data are based on information available to the Special Crash Investigation team on the date the report was published.

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Technical Report Documentation Page

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15. Supplementary Notes Remote Non-Traffic Surveillance Hyperthermia investigation involving a 2004 Dodge Ram 1500 and a 3-year-old female and a 3-year-old male child.					
16. Abstract The interest of this investigation is the heat-stroke death of a 3-year-old female and a 3-year-old male who entered a parked, unoccupied 2004 Dodge Ram 1500 and were unable to exit the vehicle. This incident occurred in a suburban, residential area in a driveway that was located in front of the children's residence. The Dodge was parked in the driveway of the residence with the windows closed and the doors reportedly locked. The mother and two children were watching television in the living room of the residence and the mother fell asleep. At some point as the mother slept, the two children exited the residence and entered the Dodge. The mother awoke from an approximate two hour sleep and proceeded to search for the children. She found them deceased in the vehicle. It is not known specifically how the children entered the vehicle.					
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INDIANA UNIVERSITY
Transportation Research Center
Remote Non-Traffic Surveillance Hyperthermia Investigation
Case Number: In16035
Location: Louisiana
Vehicle: 2004 Dodge Ram
Incident Date: June 2016

Background

The interest of this investigation is the heat stroke deaths of a 3-year-old female and a 3-year-old male in a parked, unoccupied, 2004 Dodge Ram 1500 (**Figure 1**). This incident investigation was initiated by the National Highway Traffic Safety Administration on September 28, 2016. The qualifying criteria for a hyperthermia case of interest is that the child was not in a child restraint system (CRS) and that the child either entered an unattended vehicle or was left in an unattended vehicle and succumbed to heat stroke. This investigation was assigned on December 6, 2016, following preliminary investigation by the Special Crash Investigation (SCI) Team at the Indiana University Transportation Research Center in



Figure 1: Police photo of the Dodge at the incident location, view northwest

which the police incident report was obtained and one of the investigating police officers was interviewed. The police photographs of the incident scene were obtained July 28, 2017. This incident occurred in June 2016 between approximately 1230 and 1430 hours in Louisiana and was investigated by the local police agency.

This incident occurred in a suburban, residential area in a driveway located in front of the children's residence. The Dodge was parked in the driveway of the residence with the windows closed and the doors reportedly locked. The mother and two children were watching television in the living room of the residence and the mother fell asleep. At some point as the mother slept, the two children exited the residence and entered the Dodge. The mother awoke from an approximate 2-hour sleep and proceeded to search for the children. She found them deceased in the vehicle. It is not known specifically how the children entered the vehicle.

Incident Summary

Incident Site

This incident occurred in a suburban, residential area in a driveway (**Figure 2**) located in front of the children's residence. The weather conditions during the time that the incident likely occurred were clear to scattered thunderstorms with 16 kilometers (10 miles) visibility and variable winds at 6 to 11 km/h (4 to 7 mph).

A temperature range was 31.7 to 33.9 °C (89 to 93 °F) with a heat index of 38.9 to 42.8 °C (102 to 109 °F), humidity of 63 to 65 percent, and a dew point of 24.4 to 25.6 (76 to 78), according to local weather reports.

The Dodge was parked facing northwest in the driveway of the residence immediately in front of the front porch and near the front door. The windows were closed and the doors reportedly locked. Two CRSs were secured in the second row in the left and right seating positions and a booster seat was located between them. The front row right seat position, floor, and second row floor of the vehicle were cluttered with an assortment of trash and items. The vehicle was equipped with second row child safety door locks and the lock on the left rear door was engaged according to the police incident report. The Incident Diagram is included at the end of this report on page 5. The Not-In-Traffic Surveillance data forms are attached to the end of this report as Appendix A.



Figure 2: Incident location and Dodge, police photo, view northeast

Pre-Incident

The family consisted of a 30-year-old mother, 33-year-old father, twin 3-year-old male and female children, and their 8-year-old brother. The police incident report indicated that the mother was unemployed and stayed at home with the children. The incident report described an extremely unkempt home where the two children were sometimes not properly supervised. On the morning of the incident, the husband left for work between approximately 0930 and 1000 hours in his employer-provided vehicle. The mother and two children were asleep when he left. The 8-year-old male sibling was staying with his grandparents. The activities at the residence following the husband’s departure for work are not known, but police interviews with a neighbor indicated that the mother and the two children probably did not leave the residence in the Dodge prior to the incident. The mother told police that she and the two children were watching television in the living room of the residence and that she fell asleep. No specific time for this occurrence was reported, but information contained in the police incident report suggested it was approximately 1230 hours.

Incident

The mother stated that she awoke after being asleep for perhaps two hours and the two children were not in the residence and the front door was open. She went next door to inquire if the children may be there, then proceeded to search outside the residence with the assistance of a neighbor. The mother told police that she noticed a small stool next to the passenger side of the Dodge (**Figure 3**). She stated she went to the vehicle and saw the female child laying on the driver’s seat. She stated that she then went to the driver’s door and found it locked with the vehicle’s key partially in the door lock. She stated she pushed the remote on the key to unlock the door and then took the child out of the vehicle. The neighbor then observed the male child in the second row between the two CRSs. His position was described as hanging off the edge of the seat with one of his feet stuck between the



Figure 3: Police photo showing small plastic stool found on right side of Dodge

booster seat and one of the CRSs. The mother also removed him from the vehicle. Cardiopulmonary resuscitation was attempted on both children by the mother and neighbor, but both children were deceased.

It is not known specifically how the children entered the vehicle. However, they were capable of entering the vehicle without assistance since they had been seen doing so by a neighbor on at least one prior occasion based on the SCI interview with one of the investigating police officers. One possible scenario as to how the incident occurred as suggested by the available information is as follows: The children may have desired to enter the vehicle to retrieve toys and/or candy. The police photographs of the vehicle showed a box of Lincoln Logs in the front row (**Figure 4**) and a small bag of M&Ms on the second row left CRS. The children obtained the key to the vehicle from inside the residence and exited the residence through the front door. One of the children then unlocked the driver's door of the Dodge and they entered the vehicle. It is possible that one or both of the children exited and re-entered the vehicle through the left front door after finding the M&Ms since a large and a small M&M bag were found on the ground next to the vehicle's left front door by police (**Figure 5**). It is possible that the children also accessed the vehicle at some point through one of the right side doors since a small plastic stool and a bag of candy were found on the ground next to the right side of the vehicle. (**Figure 3**). At some point both children were inside the vehicle with the doors closed, and one of the children may have inadvertently locked the vehicle, perhaps during attempts to exit the vehicle. The children were unable to exit the vehicle and succumbed to heat stroke.



Figure 4: Box of Lincoln Logs in front row of Dodge



Figure 5: Two bags of M&Ms next to Dodge's left front door

Post-Incident

Police were notified of the incident at 1514 hours when a second neighbor called 9-1-1. The children were transported to a hospital where they were pronounced deceased. Louisiana Department of Child and Family Services subsequently placed the 8-year-old sibling in the care of his grandparents. Investigation into the deaths of the two children was closed by the district attorney in July 2016 and no charges were filed against the mother.

2004 Dodge Ram 1500 Description

The Dodge was a rear-wheel drive, five-passenger, four-door pickup truck (VIN: 1D7HA18D24SExxxxxx) equipped with a 5.7-liter V-8 engine and an automatic transmission. The vehicle was also equipped with frontal air bags and rear door child safety locks.

Female Non-Motorist Demographics

The 3-year-old female non-motorist’s height and weight were 97 cm (38 in) and 16 kg (35 lbs).

Female Non-Motorist Injuries

Injury No.	Injury	AIS 2015	Involved Physical Components (IPC)	IPC Confidence
1	Hyperthermia, environmental; rectal body temperature was 42.9 °C (109.2 °F) with vitreous chemical dehydration pattern	010206.5	Heat casualty	Certain
	Edema, cerebral, determined from histology	Not coded	Anoxia related to heat casualty	Certain
2	Abrasion, 0.64 cm (0.25 in) on right lower quadrant of abdomen, not further specified	510202.1	Unknown physical component	Unknown
3	Abrasion, 0.64 cm (0.25 in) below left elbow, not further specified	710202.1	Unknown physical component	Unknown

Sources: Emergency room records, autopsy records, medical examiner report of investigation, and death certificate. Injury numbers 2 and 3 came only from autopsy records. Injury number 1 came from a combination of emergency room and autopsy records.

Male Non-Motorist Demographics

The 3-year-old male Non-Motorist height and weight were 98 cm (39 in) and 15 kg (33 lbs).

Male Non-Motorist Injuries

Injury No.	Injury	AIS 2015	Involved Physical Components (IPC)	IPC Confidence
1	Hyperthermia, environmental; rectal body temperature was 42.9 °C (109.2 °F) with vitreous chemical dehydration pattern	010206.5	Heat casualty	Certain
	Edema, diffuse, bilateral cerebral hemispheres with congestion	Not coded	Anoxia related to heat casualty	Certain
2	Contusion, 1.3 cm (0.5 in) on anterior right leg, not further specified	810402.1	Unknown physical component	Unknown

Sources: Emergency room records, autopsy records, medical examiner report of investigation, and death certificate. Injury Number 2 came only from autopsy records. Injury Number 1 came from a combination of emergency room and autopsy records.

Incident Diagram

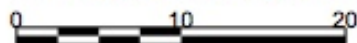


Clear to Scattered Thunderstorms

Temperature Range = 31.7 - 33.9 °C (89 - 93 °F)

Heat Index = 38.9 - 42.8 °C (102 - 109 °F)

1 = 2004 Dodge Ram 1500



Meters



Case Number: IN16035

Appendix: Non-Traffic Surveillance Data Forms



Not Applicable

Reset Values

Print Forms

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

SCENE FORM

Special Crash Investigations
Non-Traffic Surveillance

1. Case Number

I N 1 6 0 3 5

IDENTIFICATION

2. Date of Crash / /
0 6 / x x / 1 6

3. Time of Crash
9 9 9 9

Code reported military time of crash.

NOTE: Midnight = 2400
Unknown = 9999

AMBIENT CONDITIONS

4. Light Conditions

- Daylight
- Dark
- Dark but lighted
- Dawn
- Dusk
- Unknown

5. Atmospheric Conditions
(Select all that apply)

- Clear-No adverse conditions
- Cloudy
- Rain
- Snow
- Fog, Smog, Smoke
- Sleet, Hail (freezing rain or drizzle)
- Blowing Snow
- Severe Crosswinds
- Blowing Sand, Soil, Dirt
- Other (specify): _____
- Unknown

6. Temperature

- Below 0 degrees Celsius (Below 32 F)
- 1-10 degrees Celsius (33-50 F)
- >10-24 degrees Celsius (51-75 F)
- Over 24 degrees Celsius (Over 75 F)
- Unknown

SCENE INFORMATION

7. Type of area in which crash occurred
(Select all that apply)

- Single family residential
- Row houses/townhouses
- Multi family housing
- Commercial
- Industrial
- Rural
- Unknown

8. Driver exterior sightline obstructions
(Select all that apply)

- None
- Other vehicles
- Building
- Trees
- Shrubby
- Other (specify) _____
- Utility poles
- Signs
- Glare
- Unknown
- No driver present

9. Crash location

- Driveway
- Parking Lot
- Sidewalk
- Alley
- Intersection of driveway and sidewalk
- Road / street
- Roadside / shoulder
- Other (specify) _____
- Unknown

10. Non motorist sightline obstructions
(Select all that apply)

- None
- Other vehicles
- Building
- Trees
- Shrubby
- Utility poles
- Signs
- Glare
- Other (specify) _____
- Unknown

11. Grade at parked position $\frac{+}{-}$ %
9 9 9

12. Estimated distance from parked position to impact

 m
9 9 9 9

13. Estimated speed at impact kmph

$\frac{+}{-}$

14. Grade at impact %
9 9 9

15. Estimated distance from impact to vehicle final rest

 m
9 9 9 9

Unknown = 999 Reference Items 11,12, 13, 14, 15

Revised January 2018

Not Applicable

Reset Values



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

VEHICLE FORM

Special Crash Investigations
Non-Traffic Surveillance

1. Case Number 1 N 1 6 0 3 5

VEHICLE IDENTIFICATION

2. VIN 1 D 7 H A 1 8 D 2 4 S X X X X X

3. Model Year 2 0 0 4

4. Vehicle Make (specify): Dodge

5. Vehicle Model (specify): 1500 4-Door Pickup Truck

GLAZING

Location	Presence (check)	Status (select)	Clarity (select)	Tint (check)	Glazing Obstructions (specify if present)
Windshield	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Fixed / <input type="checkbox"/> Closed / <input type="checkbox"/> Open / <input type="checkbox"/> Partially Open / <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> Clear / <input type="checkbox"/> Hazy / <input type="checkbox"/> Very Dirty / <input type="checkbox"/> Unknown	<input type="checkbox"/>	
LF	<input checked="" type="checkbox"/>	<input type="checkbox"/> Fixed / <input checked="" type="checkbox"/> Closed / <input type="checkbox"/> Open / <input type="checkbox"/> Partially Open / <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> Clear / <input type="checkbox"/> Hazy / <input type="checkbox"/> Very Dirty / <input type="checkbox"/> Unknown	<input type="checkbox"/>	
RF	<input checked="" type="checkbox"/>	<input type="checkbox"/> Fixed / <input checked="" type="checkbox"/> Closed / <input type="checkbox"/> Open / <input type="checkbox"/> Partially Open / <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> Clear / <input type="checkbox"/> Hazy / <input type="checkbox"/> Very Dirty / <input type="checkbox"/> Unknown	<input type="checkbox"/>	
2 nd Left	<input checked="" type="checkbox"/>	<input type="checkbox"/> Fixed / <input checked="" type="checkbox"/> Closed / <input type="checkbox"/> Open / <input type="checkbox"/> Partially Open / <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> Clear / <input type="checkbox"/> Hazy / <input type="checkbox"/> Very Dirty / <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/>	
2 nd Right	<input checked="" type="checkbox"/>	<input type="checkbox"/> Fixed / <input checked="" type="checkbox"/> Closed / <input type="checkbox"/> Open / <input type="checkbox"/> Partially Open / <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> Clear / <input type="checkbox"/> Hazy / <input type="checkbox"/> Very Dirty / <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/>	
3 rd Left	<input type="checkbox"/>	<input type="checkbox"/> Fixed / <input type="checkbox"/> Closed / <input type="checkbox"/> Open / <input type="checkbox"/> Partially Open / <input type="checkbox"/> Unknown	<input type="checkbox"/> Clear / <input type="checkbox"/> Hazy / <input type="checkbox"/> Very Dirty / <input type="checkbox"/> Unknown	<input type="checkbox"/>	
3 rd Right	<input type="checkbox"/>	<input type="checkbox"/> Fixed / <input type="checkbox"/> Closed / <input type="checkbox"/> Open / <input type="checkbox"/> Partially Open / <input type="checkbox"/> Unknown	<input type="checkbox"/> Clear / <input type="checkbox"/> Hazy / <input type="checkbox"/> Very Dirty / <input type="checkbox"/> Unknown	<input type="checkbox"/>	
Backlight	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Fixed / <input type="checkbox"/> Closed / <input type="checkbox"/> Open / <input type="checkbox"/> Partially Open / <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/> Clear / <input type="checkbox"/> Hazy / <input type="checkbox"/> Very Dirty / <input type="checkbox"/> Unknown	<input checked="" type="checkbox"/>	
Left Backlight	<input type="checkbox"/>	<input type="checkbox"/> Fixed / <input type="checkbox"/> Closed / <input type="checkbox"/> Open / <input type="checkbox"/> Partially Open / <input type="checkbox"/> Unknown	<input type="checkbox"/> Clear / <input type="checkbox"/> Hazy / <input type="checkbox"/> Very Dirty / <input type="checkbox"/> Unknown	<input type="checkbox"/>	
Right Backlight	<input type="checkbox"/>	<input type="checkbox"/> Fixed / <input type="checkbox"/> Closed / <input type="checkbox"/> Open / <input type="checkbox"/> Partially Open / <input type="checkbox"/> Unknown	<input type="checkbox"/> Clear / <input type="checkbox"/> Hazy / <input type="checkbox"/> Very Dirty / <input type="checkbox"/> Unknown	<input type="checkbox"/>	
Roof	<input type="checkbox"/>	<input type="checkbox"/> Fixed / <input type="checkbox"/> Closed / <input type="checkbox"/> Open / <input type="checkbox"/> Partially Open / <input type="checkbox"/> Unknown	<input type="checkbox"/> Clear / <input type="checkbox"/> Hazy / <input type="checkbox"/> Very Dirty / <input type="checkbox"/> Unknown	<input type="checkbox"/>	
Other (specify)	<input type="checkbox"/>	<input type="checkbox"/> Fixed / <input type="checkbox"/> Closed / <input type="checkbox"/> Open / <input type="checkbox"/> Partially Open / <input type="checkbox"/> Unknown	<input type="checkbox"/> Clear / <input type="checkbox"/> Hazy / <input type="checkbox"/> Very Dirty / <input type="checkbox"/> Unknown	<input type="checkbox"/>	

TIRE DATA

6. Vehicle Manufacturer Recommended Tire Size R265/70R17

7. LF Tire Size Unknown

9. RF Tire Size Unknown

8. LR Tire Size Unknown

10. RR Tire Size Unknown

Seats / Head Restraint Data				NOTES:
Seat Position	Seat Type (Select from below)	Head Restraint (Check if available)	Head Restraint Adjustment (select)	
Front Left	1	<input checked="" type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Full Down / Mid / Full Up	
Front Middle	0	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Full Down / Mid / Full Up	
Front Right	1	<input checked="" type="checkbox"/>	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> Full Down / Mid / Full Up	
2 nd Left	99	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Full Down / Mid / Full Up	
2 nd Middle	99	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Full Down / Mid / Full Up	
2 nd Right	99	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Full Down / Mid / Full Up	
3 rd Left	0	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Full Down / Mid / Full Up	
3 rd Middle	0	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Full Down / Mid / Full Up	
3 rd Right	0	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Full Down / Mid / Full Up	

Seat Type codes:

- | | |
|---|--------------------------------------|
| 0 = No seat or seat folded down | 8 = Pedestal (i.e. column supported) |
| 1 = Bucket | 9 = Box mounted (i.e. van type) |
| 2 = Bucket w/ folding back | 10= Other seat type (specify) |
| 3 = Bench | 99= Unknown seat type |
| 4 = Bench with folding back cushions | |
| 5 = Bench w/ folding back | |
| 6 = Split bench w/ separate back cushions | |
| 7 = Split bench w/ separate folding back | |

VEHICLE MEASUREMENTS

Clearance Heights	Measurements (all from ground, and in centimeters)	NOTES
Beltline	N/A	
Top of trunk/tailgate	N/A	
Bottom of bumper	N/A	
Trailer hitch (if applicable)	N/A	
Undercarriage		
Sway bar	N/A	
Axle	N/A	
Differential	N/A	
Other (specify):	N/A	
Sensor Height (if equipped)	N/A	
Camera Height (if equipped)	N/A	



Not Applicable

Undo Not Applicable

Reset Values

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

Back Up / Parking Aid Form

Special Crash Investigations
Non-Traffic Surveillance

1. Case Number
I N 1 6 0 3 5

PARKING AID PRESENCE

2. Type of backing/parking aid present

- OEM camera
- OEM ultrasonic/radar sensor
- OEM combination camera-ultrasonic/radar sensor
- OEM Fresnel lens
- OEM interior mirrors
- Aftermarket camera
- Aftermarket ultrasonic/radar sensor
- Aftermarket combination camera-ultrasonic radar sensor
- Aftermarket Fresnel lens
- Aftermarket interior mirrors
- Other (specify): _____

CAMERA INFORMATION

Specify field of view measurements on diagram

3. System make/model

4. Video monitor type

- None present
- LCD (color)
- CRT (black & white)
- Unknown

5. Video display size _____ cm
(Diagonal)

6. Camera location

- None present
- Bumper
- License plate
- Tailgate/Hatch/Trunk
- Other (specify): _____

7. Video image quality under scene lighting conditions

- None present
- Good
- Average
- Poor (specify): _____
- Unknown

8. Was the camera functioning properly

- None present
- Yes
- No, poor image quality due to glare
- No, poor image quality due to atmospheric conditions
- No, camera turned off
- No, camera inoperable
- Unknown

ULTRASONIC/RADAR SENSOR

Specify object detection range on diagram

9. System make/model

10. Auditory warning illumination

- No sensor present
- Yes
- No
- Unknown

11. Number of sensors _____

12. Sensor locations
(Select all that apply)

- No sensor present
- Left bumper
- Center bumper
- Right bumper
- License plate area
- Tailgate/Hatch/Trunk

13. Was warning system functioning properly

- No sensor present
- Yes, system alerted driver
- No, system did not alert driver
- No, system turned off
- No, system inoperable
- Unknown

Not Applicable

14. Did driver react to warning

- No sensor present
- Yes
- No
- Unknown
- Sensor present, did not sound

15. Did driver report common false warnings

- No sensor present
- Yes
- No
- Unknown

Not Applicable

DRIVER FORM

<p>1. Case Number I N 1 6 0 3 5</p> <p style="text-align: center;">DRIVER PROFILE</p> <p>2. Driver's Age _____ 99 = Unknown</p> <p>3. Driver's Sex <input type="checkbox"/> Male <input type="checkbox"/> Female <input type="checkbox"/> Unknown</p> <p>4. Driver's Height _____ cm 999 = Unknown</p> <p>5. Driver's Weight _____ kg 999 = Unknown</p> <p>6. Driver eyewear worn (Select all that apply) <input type="checkbox"/> None <input type="checkbox"/> Eyeglasses <input type="checkbox"/> Sunglasses <input type="checkbox"/> Contacts <input type="checkbox"/> Unknown</p> <p>7. Driver vision deficiency condition (Select all that apply) <input type="checkbox"/> None <input type="checkbox"/> Near sighted <input type="checkbox"/> Far sighted <input type="checkbox"/> Astigmatism <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Unknown</p> <p>8. Non motorist's relationship to driver <input type="checkbox"/> No relationship <input type="checkbox"/> Child <input type="checkbox"/> Grandchild <input type="checkbox"/> Sibling <input type="checkbox"/> Neighbor <input type="checkbox"/> Friend <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Unknown</p> <p style="text-align: center;">DRIVER ACTIONS</p> <p>9. Driver approach to vehicle for entry <input type="checkbox"/> From left front <input type="checkbox"/> From left <input type="checkbox"/> From left rear <input type="checkbox"/> From right rear <input type="checkbox"/> From right front <input type="checkbox"/> Circled vehicle <input type="checkbox"/> Return trip (backing into driveway/lot) <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> N/A <input type="checkbox"/> Unknown</p>	<p>10. Driver entry interruption (Select all that apply) <input type="checkbox"/> Direct trip from building to vehicle <input type="checkbox"/> Loaded items into vehicle <input type="checkbox"/> Spoke with family <input type="checkbox"/> Spoke with neighbors <input type="checkbox"/> Spoke with contacted nonmotorist <input type="checkbox"/> Return trip (backing into driveway/lot) <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> N/A <input type="checkbox"/> Unknown</p> <p>11. Purpose of backing <input type="checkbox"/> Leaving parking space in parking lot <input type="checkbox"/> Backing onto roadway from driveway <input type="checkbox"/> Entering parking space in parking lot <input type="checkbox"/> Backing into driveway from roadway <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> N/A <input type="checkbox"/> Unknown</p> <p>12. Where was driver going Description: _____ _____</p> <p>13. Driver in a hurry <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Unknown</p> <p>14. How did driver check behind (rear area of vehicle) after vehicle entry (Select all that apply) <input type="checkbox"/> Did not look <input type="checkbox"/> Checked mirrors <input type="checkbox"/> Turned right and looked back <input type="checkbox"/> Turned left and looked back <input type="checkbox"/> Viewed Camera <input type="checkbox"/> Listened for auditory/visual warning from system <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> N/A <input type="checkbox"/> Unknown</p> <p>15. Estimated time between vehicle entry and start of backing <input type="checkbox"/> 0-10 Seconds <input type="checkbox"/> Over 60 Seconds <input type="checkbox"/> 11-30 Seconds <input type="checkbox"/> N/A <input type="checkbox"/> 31-60 Seconds <input type="checkbox"/> Unknown</p>
---	---

Not Applicable

16. What direction was the driver looking during backing maneuver
(Select all that apply)
- Straight ahead
 - Right
 - Left
 - Rearward
 - At object inside the car
 - At mirrors
 - Other (specify): _____
 - N/A
 - Unknown
17. Was the driver distracted during back up maneuver
(Select all that apply)
- No non-driving activities
- External**
- Looking at other vehicles
 - Looking at other non motorist
 - Looking at intended turn destination
 - External focus, not specified
 - Other external focus (specify): _____
- Internal**
- Looking at other occupant
 - Talking to passenger
 - Dialing phone
 - Talking on phone
 - Listening to radio and/portable playback device
 - Adjusting radio/cd player
 - Adjusting climate controls
 - Using a device/controls integral to vehicle (specify): _____
 - Reading/adjusting navigation system
 - Eating or drinking
 - Smoking related
 - Retrieving fallen object (specify): _____
 - Internal focus, not specified
 - Focused on other internal object (specify): _____
 - N/A
 - Unknown
18. Driver avoidance actions prior to impact
(Select all that apply)
- None
 - Braking
 - Steering left
 - Steering right
 - Accelerating
 - Other (specify): _____
 - N/A
 - Unknown

Not Applicable

19. Did driver see struck non motorist prior to impact
(Select all that apply)
- No, never saw non motorist
 - Saw non motorist prior to entering vehicle
 - Saw non motorist after entering vehicle
 - Other (specify): _____
 - N/A Unknown
20. Est time between start of backing and impact
- <2 or = 1 second
 - 2-5 seconds
 - 6-10 seconds
 - > 10 seconds
 - N/A Unknown
21. Driver interior sightline obstructions
(Select all that apply)
- Pillar Other occupant
 - Headrest Other (specify) _____
 - Cargo Unknown
 - None
22. Recent experience driving this vehicle
- More than 10 times the last three months
 - 6-10 times the last three months
 - 2-5 times the last three months
 - Less than 2 times the last three months
 - First time driving this vehicle
 - N/A
 - Unknown
23. Frequency of driving in this parking lot/driveway
- Daily
 - Weekly
 - Several times a month
 - Monthly
 - Rarely
 - First time in lot/driveway
 - N/A Unknown
24. Driver Impairment
(Select all that apply)
- No drugs or alcohol present
 - Alcohol present (specify BAC): _____
 - Drugs present (specify): _____
 - Unknown
25. Source of alcohol/drug results
- Police reported
 - Medical record
 - Other (specify) _____
 - Not Tested
 - Unknown if tested

NON MOTORIST CLOTHING

NOTES:

- Specify Color, Fabric and Texture/Weight for outermost layer only
- Indicate "NONE" if applicable
- Available codes:

<u>Colors</u>		<u>Fabrics</u>	<u>Textures</u>	<u>Weights</u>
Black	Charcoal gray	Natural	Soft	Heavy
Lt gray/silver	Brown	Synthetic	Slick	Medium
Gold/tan	Purple	Blend	Coarse	Light
Dark blue	Light blue			
Dark green	Light green			
Maroon	Red			
Orange	Yellow			
White	Other (specify)			
Pink				

	Clothing	Color	Fabric	Texture	Weight
H E A D W E A R	Hat				
	Helmet				
	Hood				
	Other (specify): _____				
	Unknown				
U P P E R B O D Y	Short Sleeve				
	Long Sleeve				
	Light Jacket				
	Heavy Jacket				
	Other (Specify): _____				
	Unknown				
L O W E R B O D Y	Shorts				
	Pants				
	Shoes				
	Other (specify): Diaper	Unknown	Unknown	Unknown	Unknown
	Unknown				

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U.S. Department
of Transportation
**National Highway
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Administration**

