



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



DOT HS 812 570

June 2018

**Special Crash Investigations
Remote Non-Traffic
Surveillance Fatal
Hyperthermia Investigation
Vehicle: 2005 Dodge Neon
Location: California
Incident Date: April 2014**

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 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 vehicles or their safety systems.

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

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Technical Report Documentation Page

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15. Supplemental Notes The interest of this Remote Non-Traffic Surveillance Hyperthermia Investigation is the heat-related death of an unattended 5-year-old child who died after occupying a 2005 Dodge Neon.					
16. Abstract This incident occurred in April 2014 at approximately 1717 hours near a private residence in California. At the time of the incident, there was a 42-year-old male, a 36-year-old female, an unknown age adult female, and three male children (age 5, 7, and 3) present in the residence. The three children had just had their hair cut. They were playing and watching cartoons. The 42-year-old male went into the bathroom to get his hair cut and was asked if he knew where the 5-year-old went. The 5-year-old was severely autistic and liked to go on car rides. The 42-year-old male first looked in the back yard and then went to the front yard. He saw the 5-year-old sitting in the second row of a 2005 Dodge Neon. He opened the vehicle and noticed that the child was unresponsive and had shallow breathing. He removed him from the vehicle, took him into the residence, and called 911. The child was transported to a local trauma center by ambulance. As his condition worsened he was transferred to the pediatric intensive care unit of a second hospital. He was hospitalized for three days before being declared brain dead. The cause of death was consistent with heat stroke.					
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Special Crash Investigations
Remote Non-Traffic Surveillance Hyperthermia Investigation
Case Number: DS16023
Vehicle: 2005 Dodge Neon
Location: California
Incident Date: April 2014

BACKGROUND

The interest of this Remote Non-Traffic Surveillance (NTS) Hyperthermia Investigation is the heat-related death of an unattended 5-year-old child who died after occupying a 2005 Dodge Neon (**Figure 1**). The incident was identified during a review of a web page that tracks hyperthermia-related child fatalities. The web page includes incidents where a child enters a vehicle and remains inside the vehicle because the child may not be able to self-extricate. In these incidents the child is alone in the vehicle. The Special Crash Investigations (SCI) team obtained the police report and images for the case and it was initiated by the SCI group of the National Highway Traffic Safety Administration on November 22, 2016.



Figure 1. 2005 Dodge Neon (police photo)

This incident occurred in April 2014 at approximately 1717 hours near a private residence in California. At the time of the incident, there was a 42-year-old male, a 36-year-old female, an adult female of unknown age, and three male children age 3, 5, and 7 present in the residence. The three children had just had their hair cut. They were playing and watching cartoons. The 42-year-old male went into the bathroom to get his hair cut and was asked if he knew where the 5-year-old went. The 5-year-old was severely autistic and liked to go on car rides. The 42-year-old male first looked in the back yard and then went to the front yard. He saw the 5-year-old sitting in the second row of the Dodge. He opened the vehicle and noticed that the child was unresponsive and had shallow breathing. He removed him from the vehicle, took him into the residence, and called 911. The child was transported to a local trauma center by ambulance. As his condition worsened he was transferred to the pediatric intensive care unit of a second hospital. He was hospitalized for three days before being declared brain dead. The cause of death was consistent with heat stroke.

SUMMARY

Incident Site

This incident was reported at 1717 hours and the conditions were clear and dry according to local weather reports. Sunset had occurred at 1647 hours and dusk at 1714. Weather data for the time prior to the reported incident time is presented in the table below.

Time	Temperature		Dew Point		Relative Humidity	Pressure	Heat Index	
	°C	°F	°C	°F			°C	°F
1554	30.0	86.0	1.7	35.1	16	30.05	28	83
1654	30.0	86.0	2.7	37.0	18	30.01	28	83
1754	30.6	87.1	2.2	36.0	16	30.02	29	84

The incident occurred in the driveway of a private residence in an open area without shade, with the vehicle facing east toward the residence. The driveway was located west of the residence. The driveway could be accessed through the front door of the residence and a metal gate. It could also be accessed via a chain link gate adjacent to the attached garage. The Dodge was parked on the left side of the driveway. The child's mother stated that the vehicle was locked but the windows were rolled down. It is not known if the vehicle's second row child safety locks were in use. A Cadillac DeVille of unknown year was parked in the same driveway to the right of the Dodge (**Figure 2**). A schematic of the incident site is provided at the end of this report.



Figure 2. Overview of incident site, looking east (police photo)

Pre-Incident

At the time of the incident, there was a 42-year-old male, a 36-year-old female, an adult female of unknown age, and three male children age 3, 5, and 7 present in the residence. The three children had just had their hair cut. They were playing and watching cartoons. The 42-year-old male went into the bathroom to get his hair cut and was asked if he knew where the 5-year-old went. The 5-year-old was severely autistic and liked to go on car rides. The child knew how to open gates, residence doors, and vehicle doors. The child's mother stated that the child would climb in through the window and sit in his safety seat when he wanted to go for a ride. The adult male indicated that the child probably opened the side gate to access the driveway and vehicle.

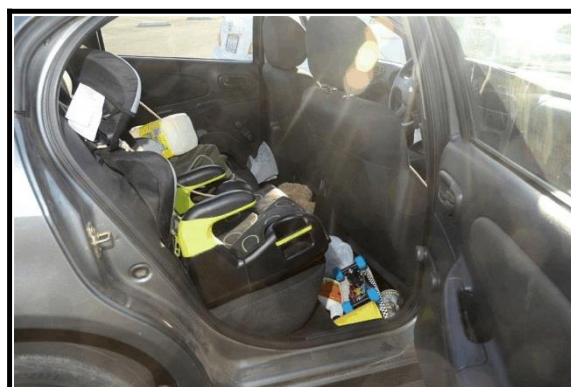


Figure 3. Second row, 2005 Dodge Neon (police photo)

He estimated that the time between he last saw the child until being asked about the child was 5 minutes. It appears that the child climbed in the open window of the locked vehicle.

Incident

The adult male first looked in the back yard and then went to the front yard. He saw the 5-year-old sitting unrestrained in the second row of the Dodge in the right-hand child restraint system (CRS), an Evenflo Big Kid High-Back booster safety seat (**Figure 3**). He opened the vehicle and noticed that the child was unresponsive and had shallow breathing. He estimated that the time between beginning to look for the child and finding him was 5 minutes, and indicated the total amount of time the child had been in the vehicle was 10 minutes.

Post-Incident

The 42-year-old male removed the 5-year-old from the vehicle, took him into the residence, and called 911. The child was transported to a local trauma center by ambulance. He arrived with a core temperature of 42.0 degrees C (107.6 degrees F). A physician reported to the police that the child had swelling throughout his head and possibly had a stroke. There were no skull injuries present. The physician stated the child's condition was consistent with heat stroke. As his condition worsened he was transferred to the pediatric intensive care unit of a second hospital. He was hospitalized for three days before being declared brain dead. The cause of death was consistent with heat stroke.

Vehicle Data

The 2005 Dodge Neon 4-door sedan was identified by the Vehicle Identification Number 1B3ES56C35Dxxxxxx. The Dodge was equipped with a 4-cylinder 2.0-liter gasoline engine and front-wheel drive. The vehicle's exterior was gray in color and the vehicle was not configured with a sun roof. It does not appear that any of the glazing was tinted. The doors were locked and the windows were fully open during the duration of the incident. It is not known if the vehicle's second row child safety locks were in use. The interior was dark gray. Two forward facing CRSs were installed in the second row (**Figure 4**).

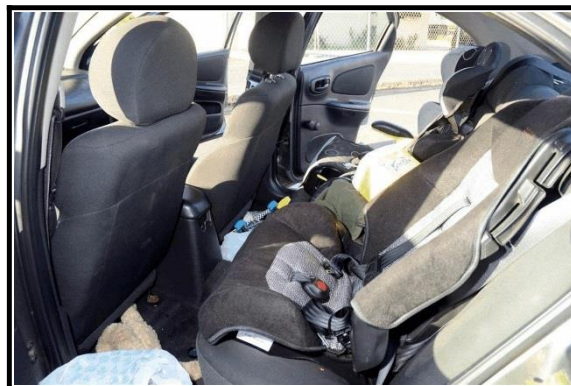


Figure 4. Second row, 2005 Dodge Neon (police photo)

During the police inspection efforts were made to obtain interior temperatures at approximately the same time of day as the incident. The temperatures were taken while the vehicle was parked in a hospital lot. The doors and windows of the vehicle were closed prior to the temperature being taken, then the rear doors were opened and the temperatures taken. It is unclear if the police knew the windows were down at the time of the incident. The police used a General Model IRT206 infrared thermometer and took the temperatures at a distance of 60.9 cm (24.0 in) from each of the second row CRSs. The CRS on the left measured 63 °C (145 °F) and right measured 49 °C (120 °F).

Hyperthermia Discussion

Hyperthermia is defined as an increase in body temperature. A child’s thermoregulatory system is not as efficient as an adult’s and a child’s body warms at a rate 3 to 5 times faster than an adult’s.¹ Heat stroke occurs when a person’s temperature reaches 40 °C (104 °F) and the thermoregulatory system is overwhelmed. Heat stroke symptoms include dizziness, disorientation, agitation, confusion, sluggishness, seizure, hot dry skin that is flushed but not sweating, loss of consciousness, rapid heartbeat, and hallucinations.

Non-Motorist Data

The 5-year-old male (107 cm/42 in, 18 kg/39 lbs) was the nephew of the adult that found him in the vehicle. He was located unrestrained in the CRS located in the second row of the vehicle. The child was transported to a local trauma center by ambulance. He arrived in critical condition and presented with a non-traumatic cerebral infarction consistent with heat stroke. His condition continued to deteriorate and he was placed on ventilation therapy. Three days later the first of two brain-death pronouncements was made. The following day the second brain-death pronouncement was made. He remained on a ventilator pending organ procurement. After the child died, an autopsy was conducted and indicated that the cause of death was hyperpyrexia.

Non-Motorist Injuries

Inj. No.	Injury	Injury Severity AIS 2015	Involved Physical Component	Confidence Level
1	Hyperpyrexia ≥ 41 °C (105 °F)	010206.5	NA/Hyperthermia	Certain

Source: Autopsy report

¹Null, J. (n.a.). Hyperthermia Deaths of Children in Vehicles (Web page of NoHeatStroke.org, Department of Meteorology & Climate Science). San Jose, CA: San Jose State University Retrieved from <http://noheatstroke.org/>

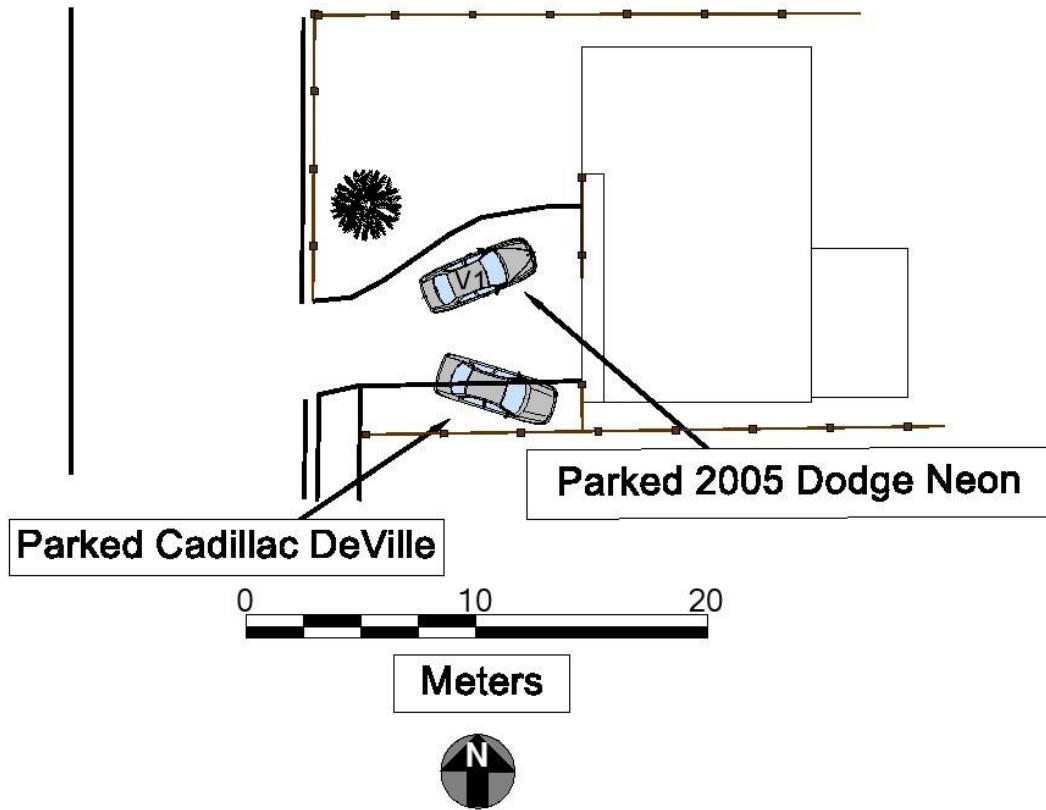
Incident Site Schematic

**Remote Non-Traffic Surveillance (NTS)
Hyperthermia Investigation**

California

May 2014

V1: 2005 Dodge Neon



	 www.nhtsa.gov
Case Number:	DS16023

Satellite View of Incident Site



APPENDIX: NTS Data Forms



Not Applicable

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

Reset Values

Print Forms

SCENE FORM

Special Crash Investigations
Non-Traffic Surveillance

<p>1. Case Number</p> <p style="text-align: center;"> <input type="text" value="D"/> <input type="text" value="S"/> <input type="text" value="1"/> <input type="text" value="6"/> <input type="text" value="0"/> <input type="text" value="2"/> <input type="text" value="3"/> </p> <p style="text-align: center;">IDENTIFICATION</p> <p>2. Date of Crash <input type="text" value="0"/> <input type="text" value="4"/> / <input type="text" value="x"/> <input type="text" value="x"/> / <input type="text" value="1"/> <input type="text" value="4"/></p> <p>3. Time of Crash <input type="text" value="1"/> <input type="text" value="7"/> <input type="text" value="1"/> <input type="text" value="7"/></p> <p style="text-align: center;">Code reported military time of crash.</p> <p style="text-align: center;">NOTE: Midnight = 2400 Unknown = 9999</p> <p style="text-align: center;">AMBIENT CONDITIONS</p> <p>4. Light Conditions</p> <p> <input type="checkbox"/> Daylight <input type="checkbox"/> Dark <input type="checkbox"/> Dark but lighted <input type="checkbox"/> Dawn <input checked="" type="checkbox"/> Dusk <input type="checkbox"/> Unknown </p> <p>5. Atmospheric Conditions (Select all that apply)</p> <p> <input checked="" type="checkbox"/> Clear-No adverse conditions <input type="checkbox"/> Cloudy <input type="checkbox"/> Rain <input type="checkbox"/> Snow <input type="checkbox"/> Fog, Smog, Smoke <input type="checkbox"/> Sleet, Hail (freezing rain or drizzle) <input type="checkbox"/> Blowing Snow <input type="checkbox"/> Severe Crosswinds <input type="checkbox"/> Blowing Sand, Soil, Dirt <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Unknown </p> <p>6. Temperature</p> <p> <input type="checkbox"/> Below 0 degrees Celsius (Below 32 F) <input type="checkbox"/> 1-10 degrees Celsius (33-50 F) <input type="checkbox"/> >10-24 degrees Celsius (51-75 F) <input checked="" type="checkbox"/> Over 24 degrees Celsius (Over 75 F) <input type="checkbox"/> Unknown </p>	<p style="text-align: center;">SCENE INFORMATION</p> <p>7. Type of area in which crash occurred (Select all that apply)</p> <p> <input checked="" type="checkbox"/> Single family residential <input type="checkbox"/> Row houses/townhouses <input type="checkbox"/> Multi family housing <input type="checkbox"/> Commercial <input type="checkbox"/> Industrial <input type="checkbox"/> Rural <input type="checkbox"/> Unknown </p> <p>8. Driver exterior sightline obstructions (Select all that apply)</p> <p> <input type="checkbox"/> None <input type="checkbox"/> Other vehicles <input type="checkbox"/> Building <input type="checkbox"/> Trees <input type="checkbox"/> Shrubbery <input type="checkbox"/> Other (specify) _____ </p> <p> <input type="checkbox"/> Utility poles <input type="checkbox"/> Signs <input type="checkbox"/> Glare <input type="checkbox"/> Unknown <input checked="" type="checkbox"/> No driver present </p> <p>9. Crash location</p> <p> <input checked="" type="checkbox"/> Driveway <input type="checkbox"/> Parking Lot <input type="checkbox"/> Sidewalk <input type="checkbox"/> Alley <input type="checkbox"/> Intersection of driveway and sidewalk </p> <p> <input type="checkbox"/> Road / street <input type="checkbox"/> Roadside / shoulder <input type="checkbox"/> Other (specify) _____ <input type="checkbox"/> Unknown </p> <p>10. Non motorist sightline obstructions (Select all that apply)</p> <p> <input checked="" type="checkbox"/> None <input type="checkbox"/> Other vehicles <input type="checkbox"/> Building <input type="checkbox"/> Trees <input type="checkbox"/> Shrubbery <input type="checkbox"/> Utility poles <input type="checkbox"/> Signs <input type="checkbox"/> Glare <input type="checkbox"/> Other (specify) _____ <input type="checkbox"/> Unknown </p> <p>11. Grade at parked position <input type="text" value="9"/> <input type="text" value="9"/> %</p> <p>12. Estimated distance from parked position to impact</p> <p style="text-align: center;"><input type="text" value="9"/> <input type="text" value="9"/> <input type="text" value="9"/> . <input type="text" value="9"/> m</p> <p>13. Estimated speed at impact <input type="text" value="9"/> <input type="text" value="9"/> <input type="text" value="9"/> kmph</p> <p style="text-align: center;">+ / -</p> <p>14. Grade at impact <input type="text" value="9"/> <input type="text" value="9"/> %</p> <p>15. Estimated distance from impact to vehicle final rest</p> <p style="text-align: center;"><input type="text" value="9"/> <input type="text" value="9"/> <input type="text" value="9"/> . <input type="text" value="9"/> m</p> <p style="text-align: right; font-size: small;">Unknown = 999 Reference Items 11,12, 13, 14, 15</p>
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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 D S 1 6 0 2 3

VEHICLE IDENTIFICATION

2. VIN 1 B 3 E S 5 6 C 3 5 D x x x x x x

3. Model Year 2 0 0 5

4. Vehicle Make (specify): DODGE

5. Vehicle Model (specify): NEON

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 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 type="checkbox"/> Closed / <input checked="" 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"/>	
RF	<input checked="" type="checkbox"/>	<input type="checkbox"/> Fixed / <input type="checkbox"/> Closed / <input checked="" 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"/>	
2 nd Left	<input checked="" type="checkbox"/>	<input type="checkbox"/> Fixed / <input type="checkbox"/> Closed / <input checked="" 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"/>	
2 nd Right	<input checked="" type="checkbox"/>	<input type="checkbox"/> Fixed / <input type="checkbox"/> Closed / <input checked="" 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 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 type="checkbox"/> Clear / <input type="checkbox"/> Hazy / <input type="checkbox"/> Very Dirty / <input type="checkbox"/> Unknown	<input 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 P185/60R15

7. LF Tire Size Unknown

9. RF Tire Size Unknown

8. LR Tire Size Unknown

10. RR Tire Size Unknown

Revised January 2018

Seats / Head Restraint Data

Seat Position	Seat Type (Select from below)	Head Restraint (Check if available)	Head Restraint Adjustment (select)	NOTES:
Front Left	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> <input 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	5	<input checked="" type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Full Down / Mid / Full Up	
2 nd Middle	5	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Full Down / Mid / Full Up	
2 nd Right	5	<input checked="" 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	NA	
Top of trunk/tailgate	NA	
Bottom of bumper	NA	
Trailer hitch (if applicable)	NA	
Undercarriage		
Sway bar	NA	
Axle	NA	
Differential	NA	
Other (specify):	NA	
Sensor Height (if equipped)	NA	
Camera Height (if equipped)	NA	

Back Up / Parking Aid Form

<p>1. Case Number</p> <p style="text-align: center;"> <input type="text" value="D"/> <input type="text" value="S"/> <input type="text" value="1"/> <input type="text" value="6"/> <input type="text" value="0"/> <input type="text" value="2"/> <input type="text" value="3"/> </p> <p style="text-align: center;">PARKING AID PRESENCE</p> <p>2. Type of backing/parking aid present</p> <p> <input type="checkbox"/> OEM camera <input type="checkbox"/> OEM ultrasonic/radar sensor <input type="checkbox"/> OEM combination camera-ultrasonic/radar sensor <input type="checkbox"/> OEM Fresnel lens <input type="checkbox"/> OEM interior mirrors <input type="checkbox"/> Aftermarket camera <input type="checkbox"/> Aftermarket ultrasonic/radar sensor <input type="checkbox"/> Aftermarket combination camera-ultrasonic radar sensor <input type="checkbox"/> Aftermarket Fresnel lens <input type="checkbox"/> Aftermarket interior mirrors <input type="checkbox"/> Other (specify): _____ </p> <p style="text-align: center;">CAMERA INFORMATION</p> <p><i>Specify field of view measurements on diagram</i></p> <p>3. System make/model _____</p> <p>4. Video monitor type</p> <p> <input type="checkbox"/> None present <input type="checkbox"/> LCD (color) <input type="checkbox"/> CRT (black & white) <input type="checkbox"/> Unknown </p> <p>5. Video display size _____ cm <i>(Diagonal)</i></p> <p>6. Camera location</p> <p> <input type="checkbox"/> None present <input type="checkbox"/> Bumper <input type="checkbox"/> License plate <input type="checkbox"/> Tailgate/Hatch/Trunk <input type="checkbox"/> Other (specify): _____ </p>	<p>7. Video image quality under scene lighting conditions</p> <p> <input type="checkbox"/> None present <input type="checkbox"/> Good <input type="checkbox"/> Average <input type="checkbox"/> Poor (specify): _____ <input type="checkbox"/> Unknown </p> <p>8. Was the camera functioning properly</p> <p> <input type="checkbox"/> None present <input type="checkbox"/> Yes <input type="checkbox"/> No, poor image quality due to glare <input type="checkbox"/> No, poor image quality due to atmospheric conditions <input type="checkbox"/> No, camera turned off <input type="checkbox"/> No, camera inoperable <input type="checkbox"/> Unknown </p> <p style="text-align: center;">ULTRASONIC/RADAR SENSOR</p> <p><i>Specify object detection range on diagram</i></p> <p>9. System make/model _____</p> <p>10. Auditory warning illumination</p> <p> <input type="checkbox"/> No sensor present <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown </p> <p>11. Number of sensors _____</p> <p>12. Sensor locations <i>(Select all that apply)</i></p> <p> <input type="checkbox"/> No sensor present <input type="checkbox"/> Left bumper <input type="checkbox"/> Center bumper <input type="checkbox"/> Right bumper <input type="checkbox"/> License plate area <input type="checkbox"/> Tailgate/Hatch/Trunk </p> <p>13. Was warning system functioning properly</p> <p> <input type="checkbox"/> No sensor present <input type="checkbox"/> Yes, system alerted driver <input type="checkbox"/> No, system did not alert driver <input type="checkbox"/> No, system turned off <input type="checkbox"/> No, system inoperable <input type="checkbox"/> Unknown </p>
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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

No Driver Present



Undo Not Applicable

Reset Values

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

DRIVER FORM

Special Crash Investigations
Non-Traffic Surveillance

1. Case Number
D S 1 6 0 2 3

DRIVER PROFILE

2. Driver's Age _____
99 = Unknown

3. Driver's Sex Male
 Female
 Unknown

4. Driver's Height _____ cm
999 = Unknown

5. Driver's Weight _____ kg
999 = Unknown

6. Driver eyewear worn
(Select all that apply)
 None
 Eyeglasses
 Sunglasses
 Contacts
 Unknown

7. Driver vision deficiency condition
(Select all that apply)
 None
 Near sighted
 Far sighted
 Astigmatism
 Other (specify): _____
 Unknown

8. Non motorist's relationship to driver
 No relationship
 Child
 Grandchild
 Sibling
 Neighbor
 Friend
 Other (specify): _____
 Unknown

DRIVER ACTIONS

9. Driver approach to vehicle for entry
 From left front
 From left
 From left rear
 From right rear
 From right front
 Circled vehicle
 Return trip (backing into driveway/lot)
 Other (specify): _____
 N/A
 Unknown

10. Driver entry interruption
(Select all that apply)

- Direct trip from building to vehicle
- Loaded items into vehicle
- Spoke with family
- Spoke with neighbors
- Spoke with contacted nonmotorist
- Return trip (backing into driveway/lot)
- Other (specify): _____
- N/A
- Unknown

11. Purpose of backing

- Leaving parking space in parking lot
- Backing onto roadway from driveway
- Entering parking space in parking lot
- Backing into driveway from roadway
- Other (specify): _____
- N/A
- Unknown

12. Where was driver going
Description:

13. Driver in a hurry

- Yes N/A
- No Unknown

14. How did driver check behind (rear area of vehicle)
after vehicle entry
(Select all that apply)

- Did not look
- Checked mirrors
- Turned right and looked back
- Turned left and looked back
- Viewed Camera
- Listened for auditory/visual warning from system
- Other (specify): _____
- N/A Unknown

15. Estimated time between vehicle entry and start
of backing

- 0-10 Seconds Over 60 Seconds
- 11-30 Seconds N/A
- 31-60 Seconds Unknown

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

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
- Headrest
- Cargo
- Other occupant
- Other (specify) _____
- 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

Not Applicable



Not Applicable

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

Non Motorist Form

Reset Values

Special Crash Investigations
Non-Traffic Surveillance

1. Case Number
D S 1 6 0 2 3

NON-MOTORIST PROFILE

2. Non-motorist's Age 0 5 Months
99 = Unknown Years

3. Non-motorist's Sex Male
 Female
 Unknown

4. Non-motorist's Height 1 0 7 cm
999 = Unknown

5. Non-motorist's Weight 0 1 8 kg
999 = Unknown

6. Medical outcome

- Not injured
- ER only
- Hospitalized 1-4 days
- Hospitalized 5 days or more
- Treatment later
- Fatal
- Unknown

7. Source of most severe injury

- Bumper
- Tire
- Undercarriage
- Other Specify: Hyperthermia
- Ground
- N/A
- Unknown

8. Non-motorist impairment

(Select all that apply)

- No drugs or alcohol present
- Positive for alcohol (specify BAC): _____
- Positive for drugs (specify): _____
- Unknown

9. Source of alcohol/drug results

- Police reported
- Medical Report
- Other (specify) _____
- Not Tested
- Unknown if tested

NON-MOTORIST ACTIONS

10. Non-motorist attitude

- Standing
- Bending at waist
- Sitting
- Crouching
- Kneeling
- On skates/skateboard
- On bike/scooter
- Other (specify) _____
- Unknown

11. Non-motorist motion

- Not moving
- Walking slowly
- Walking rapidly
- Running or jogging
- Skipping/Hopping/Jumping
- Falling/Stumbling/Rising
- On skates/skateboard
- On bike/scooter
- Other (specify): _____
- Unknown

12. Non-motorist approach relative to rear of vehicle

- Stationary
- From left
- From right
- From behind
- Other (specify): In vehicle
- Unknown

13. Non-motorist first avoidance action

- No avoidance actions
- Stopped
- Accelerated pace
- Ran away (along vehicle path)
- Jumped
- Turned away from vehicle
- Turned toward vehicle and braced
- Dove or fell away from vehicle
- Other (specify): _____
- Unknown

14. Non-motorist primary focus of attention

- Striking vehicle
- Play object
- Person
- Surrounding traffic
- Animal
- Handheld electronic (phone, MP3 player, etc.)
- Other Object (specify) _____
- Unknown

15. Were any other Non-motorists present?

(Select all that apply)

- Alone
- One adult present
- One other child present
- Multiple adults present
- Multiple children present
- Unknown

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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	Unknown	Unknown	Unknown	Unknown
U P P E R B O D Y	Short Sleeve				
	Long Sleeve				
	Light Jacket				
	Heavy Jacket				
	Other (Specify): _____				
	Unknown	Unknown	Unknown	Unknown	Unknown
L O W E R B O D Y	Shorts				
	Pants				
	Shoes				
	Other (specify): _____				
	Unknown	Unknown	Unknown	Unknown	Unknown

DOT HS 812 570

June 2018



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



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