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

NHTSA

DOT HS 812 531

May 2018

Special Crash Investigations Remote Non-Traffic Surveillance Hyperthermia Investigation
Vehicle: 2014 Toyota Camry
Location: California
Incident Date: July 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 are coupled with the investigator's expert knowledge and experience of vehicle dynamics and occupant kinematics in order to determine the pre-crash, crash, and post-crash movements of involved vehicles and occupants.

Because each crash is a unique sequence of events, generalized conclusions cannot be made concerning the crashworthiness performance of the involved 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 written and submitted.

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12. Sponsoring Agency Name and Address National Highway Traffic Safety Administration 1200 New Jersey Avenue SE Washington, D.C. 20590		*13. Type of Report and Period Covered* Technical Report Incident Date: July *14. Sponsoring Agency Code*	
15. Supplementary Note The interest in this Remote Non-Traffic Surveillance Hyperthermia Investigation is the heat-related death of an unattended 3-year-old male who died after entering a 2014 Toyota Camry.			
16. Abstract This incident occurred in July 2014 at approximately 1500 hours at a private residence in California. Six family members resided at the home and five were present at the time of the incident including the father, mother, two brothers, and the 3-year-old male involved in the incident. Prior to the incident, the father and the 3-year-old male were in the back yard and the others were inside the home. At some point the child went inside the residence to take a nap with his mother. While his mother slept, the child exited the residence and entered the Toyota Camry, which was unlocked with all the windows closed and parked in the driveway. The outside temperature at the time of the incident was 35 °C (95 °F). He was known by the family to enter and exit the vehicle unassisted, and he sometimes played inside the vehicle. Later in the day, the family members realized the child was missing from the home and began searching for him. The father found the child unresponsive and lying in the front passenger seat of the Toyota. The father removed him from the vehicle, took him inside, and called 911. Responders arrived and transported the child to a local hospital where he arrived not breathing, with no pulse, very warm, and asystolic. Family members indicated the child's whereabouts were unknown for 20 minutes. Fifteen minutes after his arrival at the hospital, his core temperature was 41.9 °C (107.5 °F). The ER physician indicated the elevated temperature came from an external source, which in this case was determined to be environmental. The child was pronounced deceased at 1604 hours.			
17. Key Words Hyperthermia, Child, Unattended, Fatality		*18. Distribution Statement* This document is available to the public through the National Technical Information Service, www.ntis.gov.	
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Remote Non-Traffic Surveillance
Hyperthermia Investigation Case Number: DS17007
Vehicle: 2014 Toyota Camry
Location: California
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BACKGROUND

The interest in this Remote Non-Traffic Surveillance (NTS) Hyperthermia Investigation is the heat-related death of an unattended 3-year-old male who died after entering a 2014 Toyota Camry (**Figure 1**). The incident was identified during a review of a website that tracks hyperthermia-related child fatalities. The website includes incidents where the child enters a vehicle and remains inside the vehicle because the child cannot self-extricate. In these incidents the child is not left alone in a child safety seat in the vehicle by a parent or caregiver. The Special Crash Investigations (SCI) team obtained the police report and images for the incident and the case was initiated by the SCI group of the National Highway Traffic Safety Administration on April 27, 2017.

Figure 1. Incident site looking north, 2014 Toyota Camry and residence (police photo)

This incident occurred in July 2014 at approximately 1500 hours at a private residence in California. Six family members resided at the home and five were present at the time of the incident, including the father, mother, two brothers, and the 3-year-old male involved in the incident. Prior to the incident, the father and the 3-year-old male were in the back yard and the others were inside the home. At some point the child went inside the residence to take a nap with his mother. While his mother slept, the child exited the residence and entered the Toyota Camry, which was unlocked with all the windows closed and parked in the driveway. The outside temperature at the time of the incident was 35 °C (95 °F). He was known by the family to enter and exit the vehicle unassisted, and he sometimes played inside the vehicle. Later in the day, the family members realized the child was missing from the home and began searching for him. The father found the child unresponsive and lying in the front passenger seat of the Toyota. The father removed him from the vehicle, took him inside, and called 911. Responders arrived and transported the child to a local hospital where he arrived not breathing, with no pulse, very warm, and asystolic. Family members indicated the child's whereabouts was unknown for 20 minutes. Fifteen minutes after his arrival at the hospital, his core temperature was 41.9 °C (107.5 °F). The ER physician indicated the elevated temperature came from an external source, which in this case was determined to be environmental. He was pronounced deceased at 1604 hours.

SUMMARY

Incident Site

The incident occurred in the driveway of a private residence located in a mixed-use urban area in California. The residence was located on a corner lot and the driveway curved from the east side of the lot to the south side. The driveway was covered in a combination of asphalt, gravel, and hard packed dirt on level ground. A detached garage was located on the property east of the residence and a guest house was located north of the residence. Another vehicle identified only as a black Toyota Tundra full-size pickup was parked facing north on the south side of the residence and west of the Toyota Camry. A fence 1.5 m (5.0 ft) high encircled the entire property. Gates controlled the two driveway entrances. Mature trees were present on the property but not within close enough proximity to the Toyota Camry to provide midday shade. On-scene police photos indicate no source of shade was likely present at the time of the incident (**Figure 2**). Family members stated to police that it was customary for both Toyota vehicles to be left unlocked while on the property and that sometimes the 3-year-old child played inside the vehicles. He knew how to open the vehicle doors using the outside and inside handles. He also knew how to buckle and unbuckle safety belts.

Figure 2. Incident site looking north, 2014 Toyota Camry and residence (police photo)

The Toyota was parked just south and parallel to the front entrance of the residence with its windows closed. The vehicle was facing west with the right side closest to the house. The child had a clear path from the residence to the vehicle from either the front or rear entrance of the house. The vehicle was visible from the front entrance and several windows on the south side of the residence. At the time of the incident while the child was inside the vehicle, the sun was high above the horizon. According to a solar calculator and based on the date, time and location of the incident, the solar elevation was 58.9 degrees above the horizon.[1] The child was discovered inside the vehicle approximately 2 hours, 8 minutes past solar noon and 5 hours before sunset. The incident ended at approximately 1500 hours when the child was discovered in the vehicle by his father. Weather data for the time prior to the reported incident time are presented in the table below.

Time	Temperature		Dew Point		Relative Humidity	Pressure	Heat Index	
	°C	°F	°C	°F			°C	°F
1147	31.0	87.8	14	57.2	35	30.0	30.2	86.5
1247	32.0	89.6	14	57.2	33	30.0	31.1	88.1
1647	33.0	91.4	13	55.4	29	29.9	31.8	89.4

[1] www.esrl.noaa.gov/gmd/grad/solcalc/azel.html

Pre-Incident

Prior to the incident the father was working in the back yard and monitoring the 3-year-old, while the mother, 23-year-old brother, and 13-year-old brother were taking naps in various rooms inside the house. At approximately 1500 hours, the 3-year-old went inside intending to take a nap with his mother. He was wearing underwear only because of the heat outside. He apparently did not fall asleep and instead left the room while his mother slept. The child then exited the house and entered the parked Toyota. The child's whereabouts were unaccounted for, the family indicated, for 20 minutes. At some point the father entered the house for the purpose of waking up the 13-year-old to prepare for sports practice. While inside the home, the father checked the mother's bedroom and thought he saw the child sleeping with his mother. Apparently that was not the case because some time later the mother exited the bedroom and asked where the child was. The father then awoke the 23-year-old to attempt to locate the child. The mother, father and 23-year-old brother then continued looking for the child.

Incident

The father went outside and looked through the side glass of the Toyota Camry and discovered the child lying in the front row right passenger seat on top of a backpack (**Figure 3**). He opened the right front door, removed the child from the vehicle and carried him inside the house.

Figure 3. Child location, 2014 Toyota Camry (police photo)

Post-Incident

The child's eyes were open, his skin was hot to the touch, and purple and blue in color. Mucus was present around his nose and mouth. The child was not moving and was unresponsive. The family called 911 and attempted to perform cardio-pulmonary resuscitation on the child. Family members indicated the child's whereabouts was unknown for 20 minutes.

EMS received the call for service at 1527 hours and arrived on-scene at 1532 hours. Responders transported the child to a local hospital where he arrived not breathing, with no pulse, very warm, and asystolic. Paramedics informed ER staff that the child had been found inside a vehicle and was deceased on-scene. Fifteen minutes after his arrival at the hospital, his core temperature was 41.9°C (107.5 °F). ER staff attempted life-saving techniques without success and were unable to revive the child. The ER physician indicated the elevated temperature came from an external source, which in this case was determined to be environmental. He was pronounced deceased at 1604 hours. He was transported by ambulance to the county coroner's office.

Vehicle Data

The 2014 Toyota Camry four-door sedan was identified by the police incident report by the Vehicle Identification Number 4T1BF1FK0EUxxxxxx. The date of manufacture and odometer reading were unknown. The vehicle exterior color was black and the interior color was medium gray. The interior was configured with vinyl upholstery seating for five occupants. The front row was configured with bucket seats separated by a center console. The second row was configured with a bench seat.

Police indicated that inspection of the Toyota Camry revealed hand prints on the right front quarter panel and right side doors of the exterior consistent with a small child's hands. Police images indicated all the windows in the vehicle were closed. Police images also show the side glazing to be lightly tinted and the windshield and backlight to be clear. The doors were closed and unlocked when the father discovered the child inside the vehicle.

Hyperthermia Discussion

The term hyperthermia describes a state in which core temperature is increased above normal limits. Two factors make children more prone to hyperthermia than adults. Children have a greater surface area to body mass ratio than adults and a child's thermoregulation is less efficient than an adult's.[2] Consequently, a child's body warms at a rate 3 to 5 times faster than an adult's.[3] Heat stroke occurs when a person's temperature exceeds 41.4 °C (104 °F) and the thermoregulatory system is overwhelmed.[4] Heat stroke symptoms include dizziness, disorientation, agitation, confusion, sluggishness, seizure, hot dry skin that is flushed but not sweaty, loss of consciousness, rapid heart beat, and hallucinations. A core body temperature of 41.7 °C (107 °F) is considered lethal as cells are damaged and internal organs shut down.

The 3-year-old male decedent in this incident had a core temperature of 41.9 °C (107.5 °F) 15 minutes after his arrival at the hospital. The decedent had been given intravenous fluids to cool his body and was packed in ice the decrease his body temperature. The specific method used to measure the child's temperature following the incident is unknown.

The length of time the child spent inside the vehicle on the day of the incident is unknown. Family members indicated that for 20 minutes the child was unaccounted for, but three members of the family were asleep for an unknown length of time and the father was not actively monitoring the child's whereabouts for an unknown length of time. The police report did not indicate whether interior temperature of the vehicle was measured. The vehicle was exposed to

Figure 4. Exterior and interior colors, 2014 Toyota Camry (police photo)

direct sunlight for a prolonged period and the vehicle's exterior (black) and interior (gray) color may have been contributing factors in increased interior temperatures (**Figure 4**). Ambient air temperature as indicated by the nearest recorded time of w15 minutes after his arrival at the hospital.

Non-Motorist Data

The 3-year-old male child was located in the vehicle lying supine on the front row right seat on top of a backpack. He measured 94.0 cm (37.0 in) in height and 16.8 kg (37.0 lb) in weight. The child was pronounced deceased at the hospital ER department approximately one hour and four minutes after being discovered in the vehicle. The police report indicated no apparent visible injuries were present. According to the autopsy, the cause of death was due to the effects of hyperthermia.

Non-Motorist Injuries

Injury No.	Injury	AIS 2015	Involved Physical Components	IPC Confidence
1	Hyperpyrexia ≥41 degrees C (≥105 degrees F)	010206.5	NA/Hyperthermia, Non-contact injury source	Certain

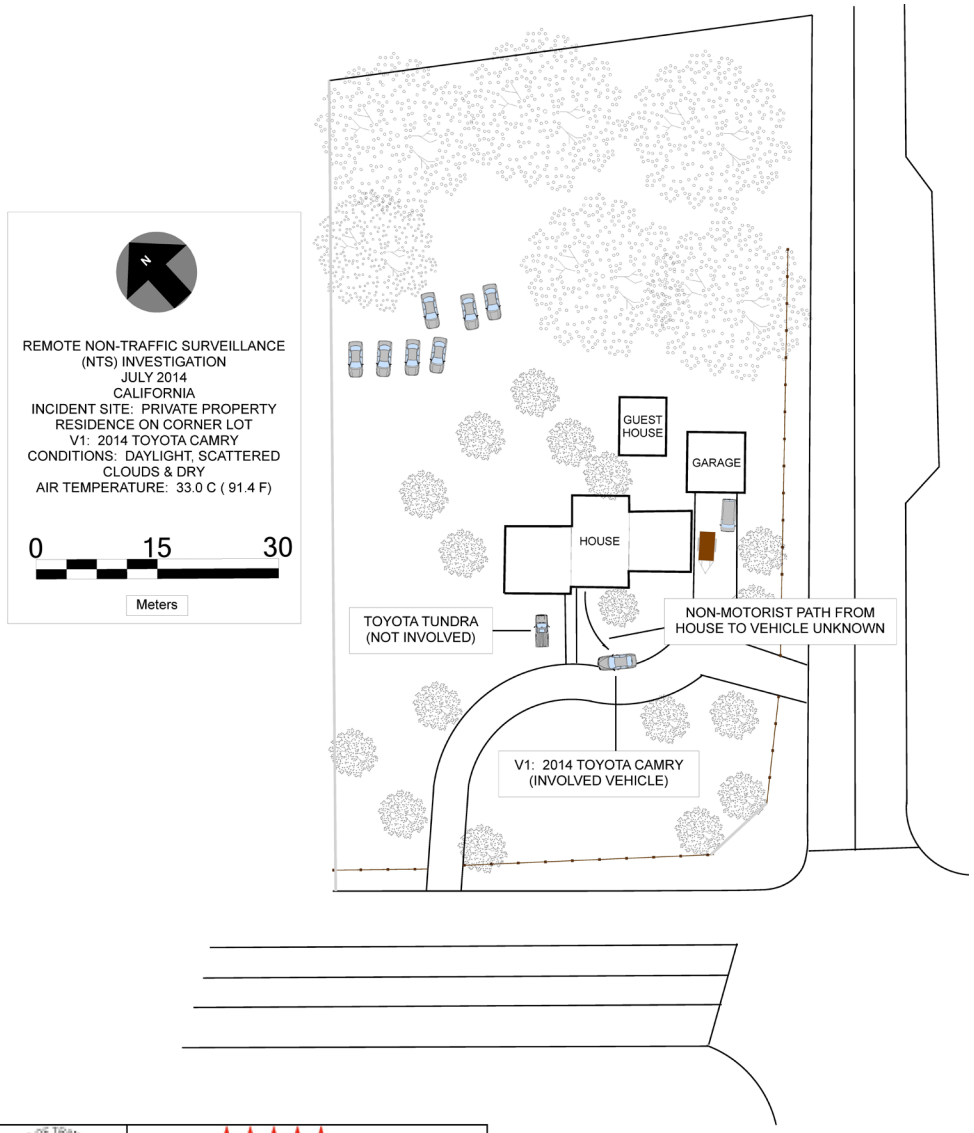
Source: Autopsy report

[2] McLaren, C., Null, J., & Quinn, J. Heat stress from enclosed vehicles: Moderate ambient temperatures cause significant temperature rise in enclosed vehicles. *Pediatrics*, 2005; 116:109.

[3] Null, J. Hyperthermia Deaths of Children in Vehicles. Retrieved from www.noheatstroke.org

[4] Doerr, S. Heat-Related Illness. Retrieved from www.medicinenet.com/hyperthermia/article.htm#1during

Incident Site Diagram



	NHTSA www.nhtsa.gov
Case Number:	DS17007

Incident Site Satellite View

Appendix: NTS 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

D S 1 7 0 0 7

IDENTIFICATION

2. Date of Crash 0 7 / 9 9 / 1 4

3. Time of Crash 1 5 0 0

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): Scattered Clouds
- [ ] 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
- [ ] Shrubbery
- [ ] 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
- [ ] Shrubbery
- [ ] Utility poles
- [ ] Signs
- [ ] Glare
- [ ] Other (specify) _____
- [ ] Unknown

11. Grade at parked position + / - 9 9 %

12. Estimated distance from parked position to impact

0 0 0 . 0 m

13. Estimated speed at impact 0 0 0 kmph

14. Grade at impact +/ - 9 9 %

15. Estimated distance from impact to vehicle final rest

0 0 0 . 0 m

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 D S 1 7 0 0 7

VEHICLE IDENTIFICATION

2. VIN 4 T 1 B F 1 F K 0 E U x x x x x x

3. Model Year 2 0 1 4

4. Vehicle Make (specify): TOYOTA

5. Vehicle Model (specify): CAMRY

GLAZING

Location	Presence (check)	Status (select)	Clarity (select)	Tint (check)	Glazing Obstructions (specify if present)
Windshield	☑	☑ Fixed / ☐ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☑ Clear / ☐ Hazy / ☐ Very Dirty / ☐ Unknown	☐	
LF	☑	☐ Fixed / ☑ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☑ Clear / ☐ Hazy / ☐ Very Dirty / ☐ Unknown	☐	
RF	☑	☐ Fixed / ☑ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☑ Clear / ☐ Hazy / ☐ Very Dirty / ☐ Unknown	☐	
2nd Left	☑	☐ Fixed / ☑ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☑ Clear / ☐ Hazy / ☐ Very Dirty / ☐ Unknown	☐	
2nd Right	☑	☐ Fixed / ☑ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☑ Clear / ☐ Hazy / ☐ Very Dirty / ☐ Unknown	☐	
3rd Left	☐	☐ Fixed / ☐ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☐ Clear / ☐ Hazy / ☐ Very Dirty / ☐ Unknown	☐	
3rd Right	☐	☐ Fixed / ☐ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☐ Clear / ☐ Hazy / ☐ Very Dirty / ☐ Unknown	☐	
Backlight	☑	☑ Fixed / ☐ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☑ Clear / ☐ Hazy / ☐ Very Dirty / ☐ Unknown	☐	
Left Backlight	☐	☐ Fixed / ☐ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☐ Clear / ☐ Hazy / ☐ Very Dirty / ☐ Unknown	☐	
Right Backlight	☐	☐ Fixed / ☐ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☐ Clear / ☐ Hazy / ☐ Very Dirty / ☐ Unknown	☐	
Roof	☐	☐ Fixed / ☐ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☐ Clear / ☐ Hazy / ☐ Very Dirty / ☐ Unknown	☐	
Other (specify)	☐	☐ Fixed / ☐ Closed / ☐ Open / ☐ Partially Open / ☐ Unknown	☐ Clear / ☐ Hazy / ☐ Very Dirty / ☐ Unknown	☐	

TIRE DATA

6. Vehicle Manufacturer Recommended Tire Size P215/55R17

7. LF Tire Size UNKNOWN

8. LR Tire Size UNKNOWN

9. RF 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	☑	☐ ☑ ☐ Full Down / Mid / Full Up	
Front Middle		☐	☐ ☐ ☐ Full Down / Mid / Full Up	
Front Right	1	☑	☐ ☐ ☑ Full Down / Mid / Full Up	
2nd Left	3	☑	☑ ☐ ☐ Full Down / Mid / Full Up	
2nd Middle	3	☑	☑ ☐ ☐ Full Down / Mid / Full Up	
2nd Right	3	☑	☑ ☐ ☐ Full Down / Mid / Full Up	
3rd Left		☐	☐ ☐ ☐ Full Down / Mid / Full Up	
3rd Middle		☐	☐ ☐ ☐ Full Down / Mid / Full Up	
3rd Right		☐	☐ ☐ ☐ Full Down / Mid / Full Up	

Seat Type codes:

0 = No seat or seat folded down
1 = Bucket
2 = Bucket w/ folding back
3 = Bench
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
8 = Pedestal (i.e. column supported)
9 = Box mounted (i.e. van type)
10= Other seat type (specify)
99= Unknown seat type

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	

Revised January 2018

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

D S 1 7 0 0 7

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

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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

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DRIVER FORM

Special Crash Investigations
Non-Traffic Surveillance

1. Case Number

D S 1 7 0 0 7

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
   - ☐ Nearsighted
   - ☐ Farsighted
   - ☐ 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

Not Applicable

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
    - ☐ 11-30 Seconds
    - ☐ 31-60 Seconds
    - ☐ Over 60 Seconds
    - ☐ N/A
    - ☐ Unknown

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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/or 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 ☐

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 7 0 0 7

NON-MOTORIST PROFILE

2. Non-motorist's Age
99 = Unknown
0 3 ☐ Months ☒ Years

3. Non-motorist's Sex
☒ Male
☐ Female
☐ Unknown

4. Non-motorist's Height
999 = Unknown
0 9 4 cm

5. Non-motorist's Weight
999 = Unknown
0 1 7 kg

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) SUPINE
☐ 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): INSIDE VEHICLE
☐ Unknown

12. Non-motorist approach relative to rear of vehicle
☐ Stationary
☐ From left
☐ From right
☐ From behind
☒ Other (specify): N/A
☐ 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): N/A
☐ 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) N/A
☐ 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:

Colors		***Fabrics***	***Textures***	***Weights***
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
HEADWEAR	Hat	NONE			
	Helmet	NONE			
	Hood	NONE			
	Other (specify): _____	NONE			
	Unknown	NONE			
UPPER BODY	Short Sleeve	NONE			
	Long Sleeve	NONE			
	Light Jacket	NONE			
	Heavy Jacket	NONE			
	Other (Specify): _____	NONE			
	Unknown	NONE			
LOWER BODY	Shorts	NONE			
	Pants	NONE			
	Shoes	NONE			
	Other (specify): UNDERWEAR	Unknown	Unknown	Soft	Light
	Unknown	NONE			

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**National Highway
Traffic Safety
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