



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



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DOT HS 812 550

May 2018

**Special Crash Investigations  
Remote Non-Traffic  
Surveillance Fatal  
Hyperthermia Investigation  
Vehicle: 1998 Volkswagen  
Beetle  
Location: South Carolina  
Incident Date: June 2015**

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<p><i>16. Abstract</i> The interest in this remote investigation was the circumstances surrounding the hyperthermia-related fatality of a 4-year-old male who was found inside a 1998 Volkswagen Beetle parked in the parking lot of an apartment complex. The child was police-reported to have gone outside to play while being watched by a 19-year-old sibling who remained in the apartment. The child's mother returned home from work and asked the whereabouts of the 4-year-old male. The mother and a neighbor began to search for the child and found him in the Volkswagen approximately 75 minutes after he allegedly exited the apartment to play. The child was found unconscious and was transported by ambulance to a local hospital where he was pronounced deceased on arrival.</p>			
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**NON-TRAFFIC SURVEILLANCE  
SPECIAL CRASH INVESTIGATIONS  
CASE NO. CR16035  
REMOTE HYPERTHERMIA FATALITY INVESTIGATION  
VEHICLE: 1998 VOLKSWAGEN BEETLE  
LOCATION: SOUTH CAROLINA  
INCIDENT DATE: JUNE 2015**

***BACKGROUND***

The interest in this remote investigation was the circumstances surrounding the hyperthermia-related fatality of a 4-year-old male (57 months) who was found inside a 1998 Volkswagen Beetle (Figure 1) that was parked in the parking lot of an apartment complex. The child was police-reported to have gone outside to play while being watched by a 19-year-old sibling who remained in the apartment. The child's mother returned home from work and asked the whereabouts of the 4-year-old male. The mother and a neighbor began to search for the child and found him in the Volkswagen approximately 75 minutes after he allegedly exited the apartment to play. The child was found unconscious and was transported by ambulance to a local hospital where he was pronounced deceased on-arrival.



**Figure 1: The 1998 Volkswagen Beetle parked at the apartment complex. (Image supplied by the investigating police department.)**

The incident was identified by the National Highway Traffic Safety Administration and assigned to the Special Crash Investigations (SCI) group for further research in November 2016. This research was aimed to chronicle the circumstances of these types of incidents and provide direction to potential countermeasures. Approximately 700 children have died due to hyperthermia over a 19-year period (1998 – 2016) with 28 percent of these deaths attributed to children playing in unattended vehicles.<sup>1</sup>

The SCI team contacted the involved police agency and interviewed the investigating officer to obtain the circumstances of the incident. The police incident report, police interview, police images of the Volkswagen, an exemplar vehicle inspection, and supplemental internet research provided the basis for this remote SCI investigation.

***INCIDENT SCENE***

This incident occurred during the mid-afternoon hours in June 2015. The National Weather Service reported the temperature throughout the time of the incident at 36 °C (97 °F) with a humidity level of 31 percent, resulting in a heat index of 36.6 °C (97.8 °F). The winds ranged from 14.8 to 9.3 km/h (9.2 to 5.8 mph) from the south-southwest to a variable direction. The overall conditions were clear and dry.

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<sup>1</sup> Null, J. (2016). Heatstroke Deaths of Children in Vehicles (Web page). San Jose, CA: Department of Meteorology and Climate Science, San Jose State University. Retrieved from <http://noheatstroke.org>

The Volkswagen was parked on an asphalt parking lot in an apartment complex. The vehicle was unattended, unlocked, and without battery power. The windows and doors were closed.

**Figure 2** is a satellite image of the apartment complex in the area where this incident occurred. The apartment complex was sprawling, consisting of multiple buildings, sidewalks and parking lots that served each building. The specific location and orientation of the Volkswagen was not reported. Based on satellite imagery of the apartment complex and the areas surrounding the child's residence, minimal shade was provided by the small trees that were planted at the corners and ends of the parking lots. The apartment buildings were typically rectangular wood framed structures consisting of two stories. Minimal green space was present at the complex as the grounds were primarily comprised of buildings, sidewalks, and parking lots. A separate pool, recreational, and playground areas were provided.



**Figure 2. Satellite image of the area of the incident.**

### ***1998 VOLKSWAGEN BEETLE***

#### ***Description***

The involved vehicle in this hyperthermia fatality investigation was a 1998 Volkswagen Beetle (**Figure 3**). The two-door hatchback identified by Vehicle Identification Number 3VWBB61C2WMxxxxxx. On-scene police images identified the vehicle as black in color, configured with a two-tone interior consisting of black seating surfaces, upper instrument panel and upper door panels. The lower instrument panel and door panels were gray in color. Specifications for this vehicle listed the power train as a 2.0-liter gasoline engine and an automatic transmission with a console-mounted shifter. The service brakes were power-assisted four-wheel disc brakes with ABS. The seating consisted of front bucket seats with adjustable head restraints and a split back second row seat with a folding back.



**Figure 3. Left side view of the 1998 Volkswagen Beetle. Image provided by the police agency.**

### ***Glazing***

The Volkswagen was configured with an AS1 laminated windshield, operable AS2 door windows, fixed AS2 second row quarter windows, and a fixed AS2 backlight glazing (**Figure 4**). There was no roof glazing in this vehicle. None of the glazing panels were covered with aftermarket window tint. The front door windows were power-operable. The driver's door panel was configured with two vertically-mounted power window rocker switches in the forward aspect of the door panel forward of the door closure pull handle. These switches operated the driver's and right door window. Downward pressure opened the window while upward switch pressure closed the respective window. Twelve-volt battery power with the ignition switch placed in the accessory or run positions was required to operate the windows. During this incident, with a depleted battery, the power windows were inoperative.



**Figure 4. Right plane door glazing of the Volkswagen. Image provided by the police agency.**

### ***Exterior Door Handles***

The two doors of the Volkswagen Beetle were equipped with pull-style exterior door handles (**Figure 5**) that required a horizontal pull force to open. Based on an exemplar vehicle inspection, the door handles were 81 to 84 cm (32 to 33.25 in) above the pavement. The hinge point of the door handle was at the forward aspect. The driver's door handle was configured with a key lock. The ignition key could be inserted to lock or unlock the front doors. The right front door was not equipped with a key lock.



**Figure 5. Exterior door handle of an exemplar vehicle.**

### ***Interior Door Release Levers***

The interior door panels were configured with flush-mounted door release levers located in the forward-third aspect of the door panels (**Figure 6**). The interior length of the Volkswagen door panel was 97 cm (38.25 in) with a hinge point of the horizontal pull handle located 52 cm (20.5 in) forward of the aft edge of the door panel. The L-shaped release lever was 8 cm (3 in) in length and 4 cm (1.6 in) in height. Based on the SCI inspection of the exemplar vehicle, and other Volkswagens having the same door latch and release lever configurations, it was common for the door latch to release the second stage of the door latch with a fast



**Figure 6. Driver side interior door lever of the involved 1998 Volkswagen Beetle. Image provided by the police agency.**

pull of the interior release lever as the door would not “pop” open on its own. A second pull force of the interior release lever was required with a push force against the interior door panel to open the door. The police reported that the doors on the involved Volkswagen were heavy, requiring some force to open.

### ***Door Locking System***

The Volkswagen was equipped with a power locking system for the doors and the rear hatchback. A key fob was configured with separate lock and unlock buttons for remote operation. Based on an inspection of an exemplar Volkswagen Beetle, the locking of the door required a single engagement of the key fob lock button while the unlock feature would unlock the driver’s door on one engagement and unlock both doors and the rear hatch on two engagements of the unlock button.

The interior door panel was configured with two modes of locking (**refer to arrows in Figure 7**). Both doors were equipped with a rocker power locking switch that would lock or unlock both doors with one engagement of the switch. These switches were located immediately forward of the interior door release lever and were 4 cm (1.5 in) in height and 1 cm (0.5 in) in width. The upper aspect of the rocker switch was the unlock mode while the lower aspect of the vertically oriented switch was the lock mode. Unlike the power window switches that had a protruding finger hold, the lock switches were flush with the door panel. Icons depicting an open door and a key designated the unlock and lock positions respectively. Vehicle 12-volt battery power was obviously required to operate this system.



**Figure 7. Locking modes (arrows) of an exemplar vehicle.**

The top aft aspect of each door panels was configured with a locking stalk. These stalks were 6 mm (0.25 in) in diameter and were 2 cm (0.75 in) in height. These stalks would recess flush with the top of the door panel when the power lock system was enabled. A person on the inside of the Volkswagen could not grasp this stalk to unlock the door. The stalk could be manually pushed down to lock the door in the event of a power loss or to lock the door without utilizing the power locking feature.

The interior door release lever, when activated, would override the locking system regardless of battery power and the method of how the doors were locked. This would prevent a person from inadvertently locking themselves inside the vehicle. No additional steps were required to open a locked door from the inside other than pulling on the door release lever and pushing the door open.



## ***INCIDENT***

The Volkswagen was owned by a neighbor of the child and was parked on the asphalt parking lot of the apartment complex. The 4-year-old male child was under the supervision of his 19-year-old male sibling. It was reported by the police that the mother was at work at the time of the incident.

At approximately 1530 hours, the child exited the apartment to go outside to play, unsupervised by his sibling. The ambient temperature was recorded as 36 °C (97 °F) at 1600 hours. For unknown reasons, the child apparently opened a door to the parked and unlocked Volkswagen, entered the vehicle, and the door closed. It is unknown if he opened and closed the door unassisted.

The child's mother returned home from work at approximately 1600 hours. As she entered the apartment, she questioned the 19-year-old male as to the whereabouts of the 4-year-old child. He relayed that he went outside to play. The mother contacted a neighbor and the two went searching for the child. He was located in the Volkswagen at approximately 1645 hours. The doors and windows of the vehicle were closed. The child was unconscious and was immediately removed from the vehicle. The emergency response system was called and the police and fire department arrived on-scene at 1655 hours. The police Incident Report stated that the interior temperature of the Volkswagen was 48.3 °C (119 °F). The time of the temperature measurement was not reported. The emergency medical services (EMS) personnel initiated cardiopulmonary resuscitation in an attempt to revive the child. He was transported by ambulance to a local hospital where he was pronounced deceased on arrival.

The police conducted a post-incident inspection of the Volkswagen and determined that the vehicle's 12-volt battery was completely drained of charge, which had rendered the power locking and power window systems inoperative. The vehicle was towed from the incident site and was impounded for further police evaluation. The investigating officer stated to the SCI team that the vehicle was started using an auxiliary battery jump box. Once started, the power lock system was evaluated. The driver's power lock rocker switch was found to be inoperative and would not lock or unlock the doors with the engine running or not running. The front right door power lock rocker switch was fully functional in both the running and non-running modes. These switches would actuate the power locking system regardless of ignition status, even with the key removed and the ignition switch in the off position.

The police tested the door-mounted power window switches and found the windows systems to be fully operational. They did report that the exterior door handles seemed awkward, requiring some pull force to open. It was further reported that the doors seemed heavy and required some force to open and close. Based on this police testing, it is unknown if the child victim was assisted in opening and closing the doors of the Volkswagen.

***NON-MOTORIST DEMOGRAPHICS***

The non-motorist in this remote hyperthermia fatality investigation was a 4-year-old male with a police-reported height of 109 cm (43 in) and weight of 20 kg (43.5 lb). He was dressed in a white T-shirt and gray shorts.

***NON-MOTORIST INJURIES***

<b>Injury No.</b>	<b>Injury</b>	<b>AIS 2015</b>	<b>Involved Physical Component</b>	<b>IPC Confidence</b>
1	Hyperthermia	010200.1	Vehicle entrapment	Certain

*Source: Police Report*

**INCIDENT SITE DIAGRAM**



**Incident Site:  
Apartment Complex Parking Lot**

**V1: 1998 Volkswagen Beetle**

	
Case Number:	CR16035

**APPENDIX A:**  
**Non-Traffic Surveillance Forms**

**SCENE FORM**

1. Case Number  
  C     R     1     6     0     3     5  

**IDENTIFICATION**

2. Date of Crash   0     6   /   x     x   /   1     5  

3. Time of Crash   1     6     4     5  

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)

<input type="checkbox"/> None	<input type="checkbox"/> Utility poles
<input type="checkbox"/> Other vehicles	<input type="checkbox"/> Signs
<input type="checkbox"/> Building	<input type="checkbox"/> Glare
<input type="checkbox"/> Trees	<input type="checkbox"/> Unknown
<input type="checkbox"/> Shrubby	<input type="checkbox"/> No driver present
<input checked="" type="checkbox"/> Other (specify) <u>N/A</u>	

9. Crash location

<input type="checkbox"/> Driveway	<input type="checkbox"/> Road / street
<input type="checkbox"/> Parking Lot	<input type="checkbox"/> Roadside / shoulder
<input type="checkbox"/> Sidewalk	<input checked="" type="checkbox"/> Other (specify) <u>N/A</u>
<input type="checkbox"/> Alley	<input type="checkbox"/> Unknown
<input type="checkbox"/> Intersection of driveway and sidewalk	

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

- None
- Other vehicles
- Building
- Trees
- Shrubby
- Utility poles
- Signs
- Glare
- Other (specify) N/A
- Unknown

11. Grade at parked position  $\pm$    9     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  $\pm$    9     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

Not Applicable

**Reset Values**



U.S. Department of Transportation  
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**VEHICLE FORM**

Special Crash Investigations  
Non-Traffic Surveillance

1. Case Number   C     R     1     6     0     3     5  

**VEHICLE IDENTIFICATION**

2. VIN   3     V     W     B     B     6     1     C     7     W     M     X     X     X     X     X  

3. Model Year   1     9     9     8  

4. Vehicle Make (specify):   Volkswagen  

5. Vehicle Model (specify):   Beetle  

**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 checked="" type="checkbox"/> Unknown	<input type="checkbox"/>	Not inspected
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 type="checkbox"/> Clear / <input type="checkbox"/> Hazy / <input type="checkbox"/> Very Dirty / <input checked="" 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 type="checkbox"/> Clear / <input type="checkbox"/> Hazy / <input type="checkbox"/> Very Dirty / <input checked="" type="checkbox"/> Unknown	<input type="checkbox"/>	
2 <sup>nd</sup> 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 type="checkbox"/> Clear / <input type="checkbox"/> Hazy / <input type="checkbox"/> Very Dirty / <input checked="" type="checkbox"/> Unknown	<input type="checkbox"/>	
2 <sup>nd</sup> 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 type="checkbox"/> Clear / <input type="checkbox"/> Hazy / <input type="checkbox"/> Very Dirty / <input checked="" type="checkbox"/> Unknown	<input type="checkbox"/>	
3 <sup>rd</sup> 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 <sup>rd</sup> 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 checked="" 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   P205/55R16  

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				NOTES:  Not inspected by SCI team. Head restraint data not known for rear seats.
Seat Position	Seat Type (Select from below )	Head Restraint (Check if available)	Head Restraint Adjustment (select)	
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 checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Full Down / Mid / Full Up	
2 <sup>nd</sup> Left	4	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Full Down / Mid / Full Up	
2 <sup>nd</sup> Middle		<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Full Down / Mid / Full Up	
2 <sup>nd</sup> Right	4	<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Full Down / Mid / Full Up	
3 <sup>rd</sup> Left		<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Full Down / Mid / Full Up	
3 <sup>rd</sup> Middle		<input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Full Down / Mid / Full Up	
3 <sup>rd</sup> Right		<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		Not inspected by SCI team.
Top of trunk/tailgate		
Bottom of bumper		
Trailer hitch (if applicable)		
Undercarriage		
Sway bar		
Axle		
Differential		
Other (specify):		
Sensor Height (if equipped)		
Camera Height (if equipped)		

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  
C R 1 6 0 3 5

#### 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  No  
 N/A  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  
C R 1 6 0 3 5

## NON-MOTORIST PROFILE

2. Non-motorist's Age 0 4  Months  
99 = Unknown  Years

3. Non-motorist's Sex  Male  
 Female  
 Unknown

4. Non-motorist's Height 1 0 9 cm  
999 = Unknown

5. Non-motorist's Weight 0 2 0 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  On skates/skateboard  
 Bending at waist  On bike/scooter  
 Sitting  Other (specify) N/A  
 Crouching  Unknown  
 Kneeling

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): N/A
- 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:

<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				

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

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

