**CRASH DATA RESEARCH CENTER**

Calspan Corporation
Buffalo, NY 14225

# NOT-IN-TRAFFIC SURVEILLANCE
# CALSPAN REMOTE BACK OVER INCIDENT INVESTIGATION

**SCI CASE NO.: CA08035**

**VEHICLE: 1999 HONDA ODYSSEY MINIVAN**

**LOCATION: OHIO**

**INCIDENT DATE: JUNE 2008**

Contract No. DTNH22-07-C-00043

Prepared for:

U.S. Department of Transportation
National Highway Traffic Safety Administration
Washington, D.C. 20590

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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 vehicle(s) or their safety systems.

## TECHNICAL REPORT STANDARD TITLE PAGE

| | | | |
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| *16. Abstract*<br>This remote back over investigation focused on the circumstances of the vehicle to child back over incident and the rear visibility study of an exemplar vehicle. The incident occurred during daylight hours as the mother of a 3-year old male non-motorist was backing a 1999 Honda Odyssey from an attached garage of the family residence. The child exited the house and crossed behind the vehicle. He was knocked down and struck by the right rear quarter panel and possibly by the right rear tire. The child sustained a soft tissue injury of the ear and was transported to a hospital for treatment and observation. | | | |
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## BACKGROUND

This remote Not-In-Traffic Surveillance back over investigation focused on the circumstances of the vehicle to child back over incident and the rear visibility study of an exemplar vehicle. The incident occurred during daylight hours as the mother of a 3-year old male non-motorist was backing a 1999 Honda Odyssey **(Figure 1)** from an attached garage of the family residence. The child exited the house and crossed behind the vehicle. He was knocked down and struck by the right rear quarter panel and possibly by the right rear tire. The child sustained a soft tissue injury of the ear and was transported to a hospital for treatment and observation.

**Figure 1. Rear oblique view of an Exemplar Honda Odyssey minivan.**

This incident was identified by the NASS General Estimates System (GES) during sampling activities. The Police Crash Report was copied and forward to NHTSA for review. The PAR was subsequently forwarded to the Calspan Special Crash Investigations (SCI) team for follow-up. On-scene images of the incident site and vehicle were obtained from the investigating police agency. The driver of the Honda was contacted by the SCI team; however, she declined to participate in this back over study. NHTSA subsequently assigned this case for remote investigation. An exemplar vehicle will be documented for the rear visibility study.

## SUMMARY

### *Incident Site*

This back over incident occurred on a concrete surfaced residential driveway during daylight hours. At the time of the incident, the conditions were police reported as clear with a temperature of 31 degrees C (88 degrees F), humidity of 49 percent, and winds at 29 km/h (18 mph). The Honda was initially parked in the center area of the attached two-car garage of the family's residence on a level concrete floor. The garage was located to the right (as viewed from the street) of the ranch-style house. The overhead garage door was open and appeared to be 4.9 m (16') in width. The concrete driveway extended straight from the garage to the residential street. Based on the supplied police images, the driveway sloped downward from the garage to the street. This slope was

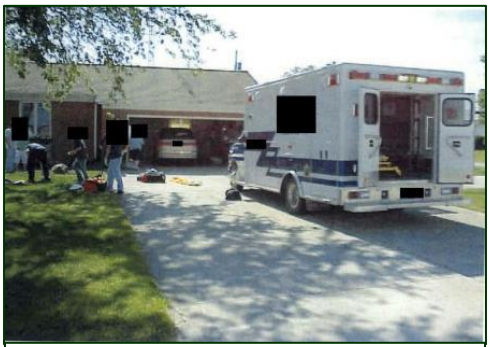

**Figure 2. Overall view of the incident site.**

estimated at 0.5-1 percent. There were no visual obstructions along the edges of the driveway or adjacent to the garage. **Figure 2** is an overall view of the incident site. A schematic of the incident scene is attached as **Figure 13**.

***Vehicle Data***

The involved vehicle was a 1999 Honda Odyssey minivan. The vehicle was beige in color and was configured with two conventionally mounted front doors, two sliding side doors, and a rear lift gate. The front door windows were AS-2 glazing. The sliding doors, rear quarter windows, and backlight were deep tint AS-3 glazing. There were no obstructions (stickers/appliqué) on the glazing and all side and rear glazing appeared to have a light coating of road film. Based on the on-scene images, both front doors windows were fully open. The vehicle was equipped with OEM steel wheels and wheel covers with the standard 41 cm (16") diameter tires and wheels. There were no accessories mounted to the exterior of the vehicle (i.e., trailer hitch).

The interior was configured with cloth surfaced front box mounted captain's chairs with adjustable head restraints. Both front head restraints were adjusted approximately 3-5 cm (1-2") above the seat backs. An aftermarket DVD system was installed in the vehicle with monitors mounted to the back surface of the front head restraints.

The second row seats consisted of captain's chairs with adjustable tracks, reclining seat backs, and adjustable head restraints. Both head restraints were in the full-down positions. Based on the supplied police images, both rear seat backs were reclined approximately 25-30 degrees aft of vertical. A forward facing child safety seat was secured by the vehicle's three-point lap and shoulder belt system to the second row left seat.

The third row seat was a folding three-passenger bench seat that stowed into the floor of the vehicle. The seat was up in position and was equipped with three adjustable head restraints. All three head restraints were set in the full-down positions. A second child safety seat was secured by the lap and shoulder belt system to the right outboard position of the third row seat.

The 1999 Honda Odyssey was not equipped with a back-up / parking aid system.

The back view of the involved Honda Odyssey is provided in **Figure 3**. **Figure 4** is an undercarriage view of the exemplar vehicle.

The rear vehicle measurements and clearance heights of the undercarriage components of the exemplar vehicle are documented in the following table:

| Component | Measurement Above Pavement |
|---|---|
| Beltline | 118 cm (46.5”) |
| Base of Tailgate Glazing | 117 cm (46”) |
| Top of Tailgate Glazing | 163 cm (64”) |
| Bottom of Bumper | 35 cm (13.75”) |
| Top of Bumper | 53 cm (21”) |
| Tailpipe | 25 cm (10”) |
| Exhaust Pipe | 18 cm (7”) |
| Muffler | 18 cm (7”) |
| Forward Edge of Undercarriage Floor | 21 cm (8.25”) |
| Rear Edge of Undercarriage Floor | 28 cm (11”) |
| Lower Control Arm | 15 cm (6”) |
| Lower Shock Mount | 12 cm (4.75”) |
| Sway Bar Link | 17 cm (6.75”) |
| Sway bar Mount | 20 cm (8”) |

**Figure 3. Back view of the involved Honda Odyssey.**

**Figure 4. Undercarriage of the exemplar Honda Odyssey.**

***Driver/Occupant Data***

The driver of the Honda odyssey was a 34-year-old female. She was the mother of the three-year old male non-motorist.

The Honda Odyssey was occupied by a 16-year-old male in the front right position, a one-year old male in the second row left position, an 11-year-old male in the second row right position, and a six-year old male in the third row left position. The 1-year-old was police-reported as restrained in the child safety seat. The driver and the passengers were restrained by the three-pint lap and shoulder belt systems.

***Non-Motorist***

The non-motorist in the back over incident was a 3-year old male. He was dressed in shorts and a T-shirt; color and material type is unknown. The non-motorist sustained a lacerated ear and was transported to a local hospital where he was admitted overnight for observation and was released.

***Incident***

***Pre-Incident***

The incident occurred at the family residence. The driver and four of her children entered the Honda Odyssey in the garage of the residence. The non-motorist was to remain in the home in the care of his father. The driver secured the one-year old in his child safety seat and the other occupants buckled their safety belts. The driver entered the minivan from the left and fastened her safety belt prior to starting the minivan. She stated to the investigating police officer that she checked her outside rear view mirrors and turned to her right to look over her right shoulder prior to backing the van from the garage. The driver placed the automatic transmission in reverse and backed the vehicle from the garage onto the concrete driveway **(Figure 5)**.

**Figure 5. Backing trajectory of the Honda Odyssey onto the driveway.**

The three-year old non-motorist exited the residence through the front door and ran toward the driveway, crossing the path of the backing minivan from left to right. The driver was looking over her right shoulder and failed to detect the non-motorist.

***Incident***

Based on the evidence noted on the PAR, the driver apparently backed the vehicle on a slight angle towards the vehicle's left as she exited the garage. The right aspect of the rear bumper fascia struck the non-motorist and knocked the child to the concrete driveway surface. The lower aspect of the right rear quarter panel aft of the wheel opening and possibly the right rear tire **(Figure 6)** contacted the non-motorist's head resulting in the reported laceration of the ear. A right rear tire mark was noted on the concrete driveway surface **(Figure 7)** that was 0.8 m (2'9") in length. Based on the police documentation of this tire mark, the driver backed approximately 7.2 m (23'6") from the parked position in the garage. Body fluid from the non-motorist was present within this tire mark. The non-motorist came to rest under the minivan with his head in close proximity to the right rear tire of the Honda.

It is unknown how the driver was alerted to this back over incident. She stopped the vehicle and exited the minivan to observe the non-motorist lying on the driveway surface. The emergency response 9-1-1 system was called and police, fire department, and ambulance personnel arrived on scene. The child was treated at the scene and transferred to a designated helicopter landing site where he was transported by air to a regional pediatric hospital and held overnight for treatment and observation of his injuries.

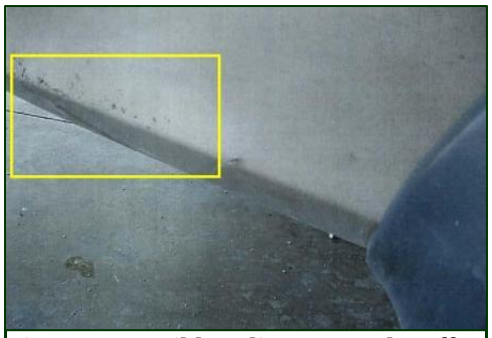

**Figure 6. Possible police reported scuff mark on the lower rear aspect of the quarter panel.**

**Figure 7. Tire mark with body fluid on driveway.**

***Post-Incident***

The non-motorist sustained a lacerated ear and a suspected head injury. Police, fire department, and emergency medical personnel were called to the scene. The non-motorist was evaluated at the scene and the EMS requested helicopter transport to a pediatric hospital. The ear laceration was sutured and the child was held overnight for observation. The investigating officer noted that the ear injury will require reconstructive surgery at a later date.

***Exemplar Vehicle Visibility Study***

An exemplar 2001 Honda Odyssey minivan (same body style as the 1999) was located by the SCI team for this visibility study **(Figure 8)**. An exemplar driver with a height of 173 cm (68”) was used to identify the field of view through the mirrors and a direct line of sight through the backlight. The exemplar driver’s eye height was 140 cm (55”) above the paved surface of the level parking lot. A (3”) diameter reflective marker was placed in a tripod stand and set to a height of 71 cm (28”) above the pavement.

The exemplar driver was positioned in the vehicle and the mirrors were adjusted to his line of sight. The reflective marker was positioned behind the Honda Odyssey. The exemplar driver detected the full diameter of the marker 4.5 m (14’10”) rearward of the bumper when looking over his right shoulder through the backlight of the minivan. The marker was fully visible to the exemplar driver at a distance of 5.6 m (18’3”) when viewed through the interior rear view mirror (**Figure 9)**.

**Figure 8. Rear visibility of the exemplar vehicle.**

**Figure 9. Reflective markers visible through the rear view mirror.**

Lateral cones of visibility were established using the outside mirrors with the reflective marker positioned at the 5.6 m (18’3”) distance from the back of the vehicle. The left mirror provided the exemplar driver with a cone of visibility that began 0.7 m (2’3”) left of the vehicle’s centerline to a point that was 2.2 m (7’4”) outboard of the centerline **(Figure 10)**. The right outside mirror yielded a cone of visibility that ranged from 0.9 m (3’) right of the vehicle centerline to a point that extended 3.7 m (12’) right of the centerline **(Figure 11)**. The rear visibility diagram is attached as **Figure 12**.

**Figure 10. Left outside mirror visibility.**

**Figure 11. Right outside mirror visibility.**

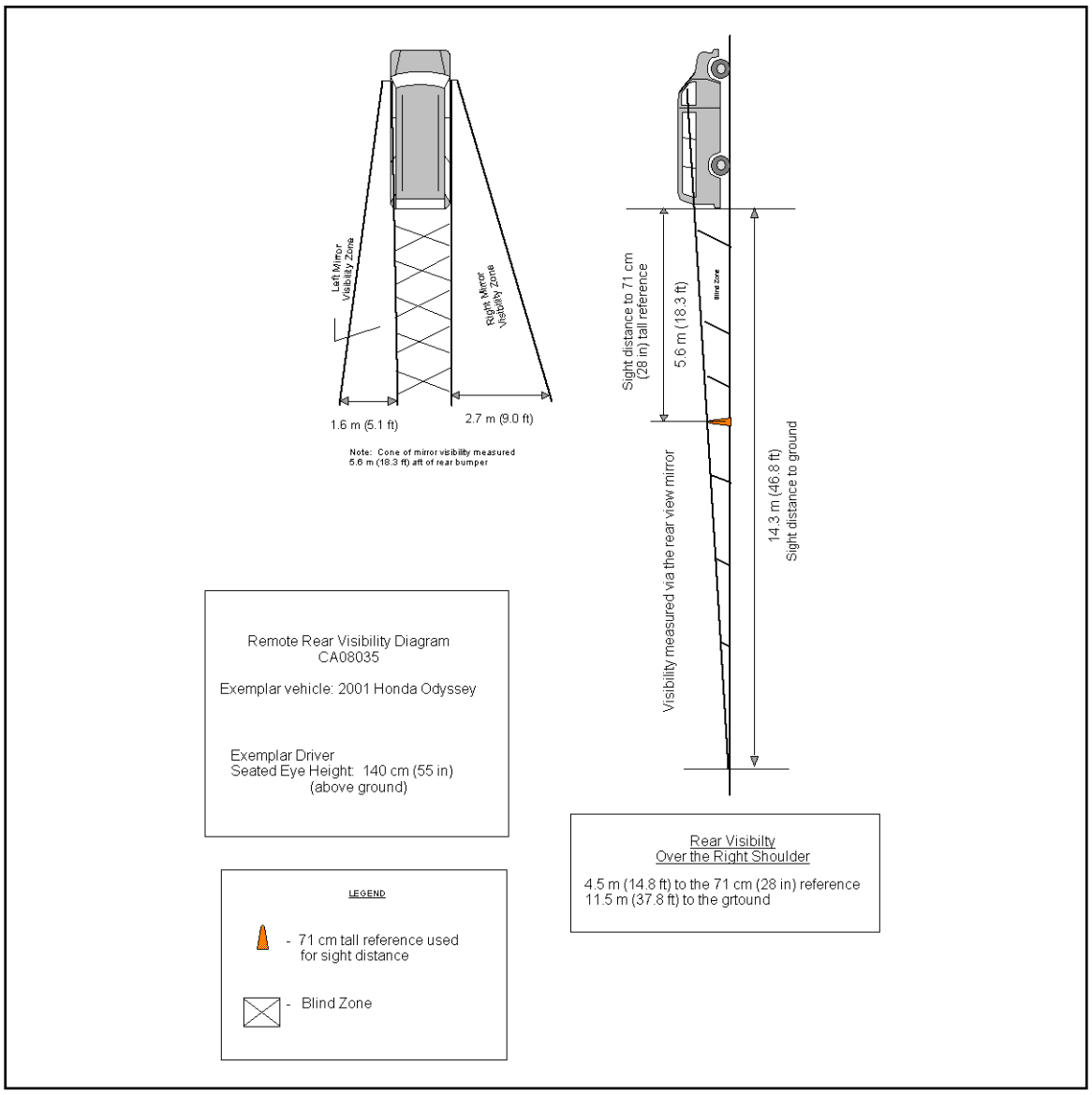


**Figure 12: Rear Visibility Study**

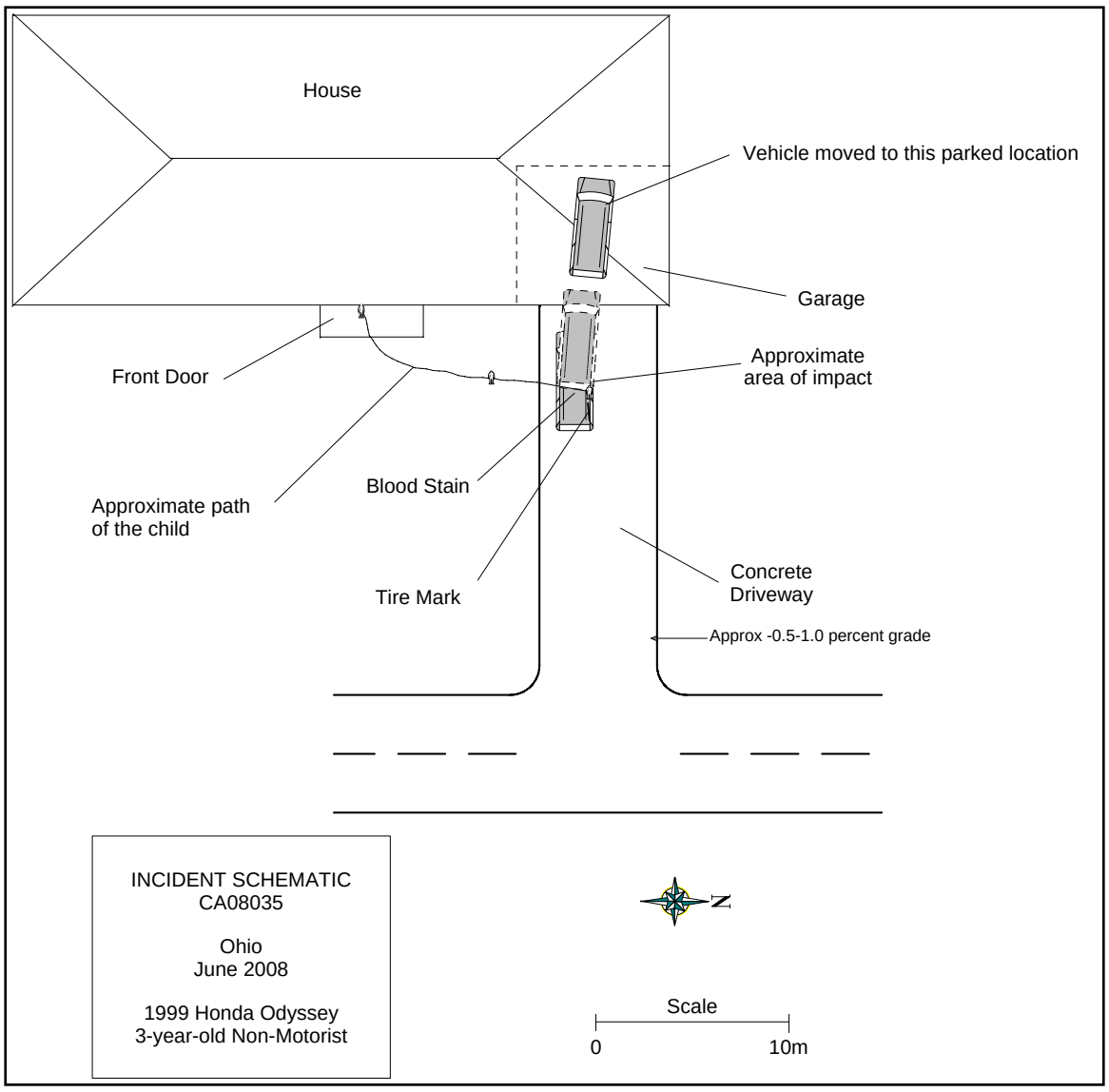


**Figure 13: Scene Schematic**

Not Applicable ☐

Reset Values

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National Highway Traffic Safety Administration

# SCENE FORM

Special Crash Investigations
Not In Traffic Surveillance

1. Case Number

C A 0 8 0 3 5

## IDENTIFICATION

2. Date of Crash 0 6 / X X / 0 8

3. Time of Crash 1 6 2 9

Code reported military time of crash.

NOTE: Midnight = 2400
Unknown = 9999

## AMBIENT CONDITIONS

4. Light Conditions

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

5. Atmospheric Conditions
(*Select all that apply)*

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

6. Temperature

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

## SCENE INFORMATION

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

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

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

- ☉ None
- ☐ Other vehicles
- ☐ Building
- ☐ Trees
- ☐ 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 + / - 0 0 0 %

12. Estimated distance from parked position to impact

0 0 7 . 2 m

13. Estimated speed at impact 0 0 5 kmph

14. Grade at impact +/ - - 0 1 %

15. Estimated distance from impact to vehicle final rest

0 0 0 . 8 m

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

Not Applicable ☐

Reset Values

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

# VEHICLE FORM

Special Crash Investigations
Not In Traffic Surveillance

1. Case Number C A 0 8 0 3 5

## VEHICLE IDENTIFICATION

2. VIN 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9

3. Model Year 1 9 9 9

4. Vehicle Make (specify): Honda

5. Vehicle Model (specify): Odyssey

## 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 215/65R16

7. LF Tire Size Unknown

8. LR Tire Size Unknown

9. RF Tire Size Unknown

10. RR Tire Size Unknown

## Seats / Head Restraint Data

| Seat Position | Seat Type (Select from below ) | Head Restraint (Check if available) | Head Restraint Adjustment (select) | NOTES: |
|---|---|---|---|---|
| Front Left | 9 | ☑ | ☐ ☑ ☐ Full Down / Mid / Full Up | |
| Front Middle | 0 | ☐ | ☐ ☐ ☐ Full Down / Mid / Full Up | |
| Front Right | 9 | ☑ | ☐ ☑ ☐ Full Down / Mid / Full Up | |
| 2nd Left | 9 | ☑ | ☑ ☐ ☐ Full Down / Mid / Full Up | |
| 2nd Middle | 0 | ☐ | ☐ ☐ ☐ Full Down / Mid / Full Up | |
| 2nd Right | 9 | ☑ | ☑ ☐ ☐ Full Down / Mid / Full Up | |
| 3rd Left | 5 | ☑ | ☑ ☐ ☐ Full Down / Mid / Full Up | |
| 3rd Middle | 5 | ☑ | ☑ ☐ ☐ Full Down / Mid / Full Up | |
| 3rd Right | 5 | ☑ | ☑ ☐ ☐ 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 | | 118 | See technical report for additional components not listed here. |
| Top of trunk/tailgate | | 163 | |
| Bottom of bumper | | 35 | |
| Trailer hitch (if applicable) | | N/A | |
| Undercarriage | | | |
| | Sway bar | 17 | |
| | Axle | N/A | |
| | Differential | N/A | |
| | Other (specify): Muffler | 18 | |
| Sensor Height (if equipped) | | N/A | |
| Camera Height (if equipped) | | N/A | |

Not Applicable ☑

Undo Not Applicable

Reset Values

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National Highway Traffic Safety Administration

# Back Up / Parking Aid Form

Special Crash Investigations
Not In Traffic Surveillance

1. Case Number

C A 0 8 0 3 5

## PARKING AID PRESENCE

2. Type of backing/parking aid present

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

## CAMERA INFORMATION

*Specify field of view measurements on diagram*

3. System make/model

_____

4. Video monitor type

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

5. Video display size _____ cm
*(Diagonal)*

6. Camera location

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

7. Video image quality under scene lighting conditions

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

8. Was the camera functioning properly

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

## ULTRASONIC/RADAR SENSOR

*Specify object detection range on diagram*

9. System make/model

_____

10. Auditory warning illumination

- ☐ No sensor present
- ☐ Yes
- ☐ No
- ☐ Unknown

11. Number of sensors ____

12. Sensor locations
*(Select all that apply)*

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

13. Was warning system functioning properly

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

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 ☐

Reset Values

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# DRIVER FORM

Special Crash Investigations
Not In Traffic Surveillance

1. Case Number

C A 0 8 0 3 5

## DRIVER PROFILE

2. Driver's Age 3 4
99 = Unknown

3. Driver's Sex
☐ Male
☉ Female
☐ Unknown

4. Driver's Height 9 9 9 cm
999 = Unknown

5. Driver's Weight 9 9 9 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): Child in CSS
☐ 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:
Unknown

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

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/cd/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
Not In Traffic Surveillance

1. Case Number
C A 0 8 0 3 5

## NON-MOTORIST PROFILE

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

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

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

5. Non-motorist's Weight — 9 9 9 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:_____
☐ 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): _____
☐ 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

## 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 | | | | |
| | Helmet | | | | |
| | Hood | | | | |
| | Other (specify): _____ | | | | |
| | Unknown | | | | |
| **UPPER BODY** | Short Sleeve | Unknown | Unknown | Unknown | Unknown |
| | Long Sleeve | | | | |
| | Light Jacket | | | | |
| | Heavy Jacket | | | | |
| | Other (Specify): _____ | | | | |
| | Unknown | | | | |
| **LOWER BODY** | Shorts | Unknown | Unknown | Unknown | Unknown |
| | Pants | | | | |
| | Shoes | | | | |
| | Other (specify): _____ | | | | |
| | Unknown | | | | |