Not in Traffic Surveillance Roll Away Investigation / Vehicle to Non Motorist
Dynamic Science, Inc. / Case Number: DS07042
1998 Ford Expedition
Utah
September 2007

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The crash investigation process is an inexact science which requires that physical evidence such as skid marks, vehicular damage measurements, and occupant contact points be coupled with the investigator's expert knowledge and experience of vehicle dynamics and occupant kinematics in order to determine the pre-crash, crash, and post-crash movements of involved vehicles and occupants.

Because each crash is a unique sequence of events, generalized conclusions cannot be made concerning the crashworthiness performance of the involved vehicle(s) or their safety systems.

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16. Abstract

This vehicle versus non-motorist roll away incident occurred in September 2007 at 1533 hours on a paved concrete driveway that leads from a residential roadway to a private residence. The case vehicle was a 1998 Ford Expedition utility vehicle. The Ford was driven to the residence by a 37-year-old female who had dropped off a 4-year-old female at the child's home. The driver and 4-year-old child were the only occupants in the Ford. The driver drove the Ford to the top of the private driveway. The concrete driveway character where the incident occurred is curved in an "S" shape and maintains a steep upgrade from the roadway to the residence. The driveway transitions from a negative 3% grade at the top to a negative 9% grade at the area of impact. The driver left the car running and she and the child exited the Ford. According to witnesses, the Ford began rolling backwards down the driveway. Near the bottom of the driveway, the Ford impacted the 4-year-old female, and the left rear tire rolled over the child's head. The vehicle then struck some landscaping rocks, where it came to final rest. When the Ford came to final rest, the child was still under the vehicle's rear end. The child was pronounced dead at the scene and was not transported.

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Dynamic Science, Inc.
Crash Investigation
Case Number: DS07042
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BACKGROUND

This vehicle versus non-motorist roll away incident occurred in September 2007 at 1533 hours on a paved concrete driveway that leads from a residential roadway to a private residence. The case vehicle was a 1998 Ford Expedition utility vehicle (**Figure 1**). The Ford was driven to the residence by a 37-year-old female who had dropped off a 4-year-old female at the child's home. The driver and 4-year-old child were the only occupants in the Ford. The driver drove the Ford to the top of the private driveway. The driver left the car running and she and the child exited the Ford. It was not clear why she left the vehicle running, but it may have been related to the engine being out of tune and running roughly. According to witnesses, the Ford began rolling backwards down the driveway. Near the bottom of the driveway, the Ford impacted the 4-year-old female, and the left rear tire rolled over the child's head. The vehicle then struck some landscaping rocks, where it came to final rest. When the Ford came to final rest, the child was still under the vehicle's rear end. The child was pronounced dead at the scene and was not transported.

Figure 1. 1998 Ford Expedition

This on-site Not In Traffic Surveillance (NITS) roll away investigation was initiated in response to an on-line news article reporting the death of a 4-year-old female who was run over by an unoccupied vehicle. On September 26, 2007, DSI was instructed to locate the case vehicle. On November 5, 2007, DSI obtained the police report. The case vehicle was being held at a police facility. DSI was assigned the case on November 15, 2007. Field work was completed on November 29, 2007.

This incident was reported by the local sheriff's department on a State of Utah Investigating Officer's Report Of Traffic Crash form. The incident was reported to the state. In Utah, State Law requires a Crash Report to be forwarded to the Department of Public Safety within 10 days following completion of the investigation.

SUMMARY

Incident Site

At the incident location, the residence is built on a grade that rises above the residential roadway. The concrete driveway character where the incident occurred is curved in an "S" shape and maintains a steep upgrade from the roadway to the residence. The driveway transitions from a negative 3% grade at the top to a negative 9% grade at the area of impact. The bottom of the driveway intersects with a paved roadway that runs perpendicular to the driveway. The north edge of the driveway was bounded by landscaping rocks. It was daylight at the time of the incident. The sky was clear and the roadway and driveway surfaces were dry. The temperature at the nearest reporting station was 12.8 degrees C (55 degrees F).

Pre-Crash

The Ford Expedition was driven to the residence by a 37-year-old female who had dropped off a 4-year-old female (110 cm/43 in, 17 kg/37 lbs) at the child's home. The driver and 4-year-old child were the only occupants in the Ford. The child was seated in the second row seat on the left side. The child was not related to the driver. The driver was bringing the child back from church. The driver drove the Ford to the top of the private driveway (**Figures 2-3**). The driver left the car running and she and the child exited the Ford. According to the driver, the Ford had been put into PARK and the floor-mounted parking brake had not been set. The Ford was purchased used by the current owners in 2000. The owners knew there was some problem with shifter (See Vehicle Shifter discussion later in this report). The owners initially indicated that they had known about the problems for six months, but this statement was later revised and they indicated that they had known of the problem for one month.

Figure 2. View down driveway (northeast)

Figure 3. Path to area of impact (north)

The driver exited the Ford. She opened the left second row door and let the 4-year-old out of the vehicle. According to the driver, at least 5 minutes had passed before anything happened. The two of them walked behind the vehicle and walked up the stairs to the north. At the top of landing they noticed the 4-year-old child's brother across the street. The driver and the 4-year-old walked backed down the stairs and down to the lower part of the driveway. The 10-year-old had found a dead snake in the driveway and wanted to show it to them.

Crash

Near the bottom of the driveway (**Figure 4**), the Ford impacted the 4-year-old female, and the left rear tire rolled over the child's head. The vehicle then struck some landscaping rocks, where it came to final rest.

The SCI investigator located a street with a grade change similar to the driveway in this case. Three free-rolling test runs were made from a stop to a distance of 18.6 m (60.9 ft) from the stopped point. The average time to travel the distance was 9.4 seconds. Based on this time, the Ford's speed at impact with the child was approximately 7.0 km/h (4.4 mph).

Figure 4. Area of impact with child and rock wall (north)

Post-Crash

When the Ford came to final rest, the child was still under the vehicle's rear end. The investigating officer found the vehicle in PARK with the parking brake set. He was never able to determine who placed the vehicle in PARK or who set the parking brake.

EMTs were called to the scene and arrived at 1622 hours. According to the police report, the 4-year-old female died of injuries to the head, caused by the vehicle's exterior. The child was pronounced dead at the scene and was not transported.

VEHICLE DATA - 1998 Ford Expedition

The involved vehicle in the roll away fatality incident was a 1998 Ford Eddie Bauer Edition Expedition four-door large sport utility vehicle. The Ford was identified by the Vehicle Identification Number (VIN): 1FMPU18LXWLxxxxxx. The Expedition was powered by a 5.4 liter V-8 engine linked to a 4-speed automatic transmission with a column mounted transmission selector lever. The Expedition was equipped with four-wheel drive. There were 240,098 kilometers (149,190 miles) on the odometer. The Expedition was configured with Yokohama Geolandar H/T-S P265/70R17 tires. The outside diameter and tread width of these tires was 75.4 cm (29.7 in) and 20.5 cm (8.1 in), respectively.

The Expedition was equipped with step bars that extended the full length of the sill. A class III receiver hitch was mounted to the rear frame of the vehicle.

Figure 5. Overall view of the 1998 Ford Expedition

Figure 6. Rear bumper height

Vehicle Dimensions

Dimensions obtained from Canadian vehicle specifications and the inspected case vehicle.

Ground to belt line:	128.0 cm (50.4 in)
Ground to top of trunk/tailgate:	128.0 cm (50.4 in)
Ground to top of rear bumper:	64.0 cm (25.1 in)
Ground to bottom of rear bumper:	36.0 cm (14.1 in)
Ground to sway bar:	N/A
Ground to axle:	N/A
Overall vehicle height:	194.0 cm (76.4 in)
Overall vehicle width:	200.0 cm (78.7 in)
Overall vehicle length:	520.0 cm (204.7 in)
Rear overhang:	119.0 cm (46.9 in)
Track width:	166.0 cm (65.4 in)
Longitudinal distance between rear most projection and front door latch pillar:	247.0 cm (97.2 in)

Parking Aids/Sensors

The 1998 Ford Expedition was not equipped with any parking aids or backing up sensor/video technology.

Vehicle Transmission Shifter Discussion

According to the driver, she parked the Ford Expedition on the top of the driveway. She put the Expedition into PARK and exited the vehicle with the engine running. The driver was aware of a problem with the transmission shifter. As can be seen in Figures 7 through 10, the selector was one detente off from the actual transmission position (i.e., if the vehicle is in PARK then the selector indicates Reverse). Shortly after the incident, the vehicle was taken to a local Ford dealership for examination. The technicians were able to see that the gear shifter was not working properly. The police agency located and hired an independent expert to examine the shifter. The expert arrived several days later to do his examination. During the examination, there were a number of attempts to replicate the problem but they were unable to cause the shifter to move from one position to another. During the DSI inspection, this same process was also attempted without any success. The vehicle could not be shifted from PARK to Reverse without pulling the shifter lever toward the driver. It was the expert's final opinion that there was no mechanical reason for the vehicle slipping out of PARK and the cause of the incident was operator error.

Figure 7. Vehicle in PARK, selector in Reverse.

Figure 8. Vehicle in Reverse, selector in Neutral.

Figure 9. Vehicle in Neutral, selector in Drive.

Figure 10. Vehicle in Drive, selector in 2nd.

The Expedition's engine was out of tune and was running roughly before and after the incident. While the vehicle was being moved from one location to another, officers indicated that the vehicle would stall out and quit on its own. The 10-year-old child witness indicated to police that he heard the vehicle engine die out before coming down the driveway.

Figure 11. Frontal view of steering wheel and shifter (in PARK).

It has been reported that there was a large bag on the console to the right of the driver's seat. The bag had large looped handles. There was some speculation that perhaps the bag's handle somehow caught the end of the shifter and, due to rough idling, fell down and pulled the vehicle into Reverse. In the end, the police ruled this out.

Figure 12. Side view of steering wheel and shifter.

There was a NHTSA recall related to the transmission gear position. The ID number was 97V171000 and was entitled: 1998 Ford Expedition Power Train:Automatic Transmission Gear Position Indication (PRNDL). The recall date was 10/07/1997. According to the recall, "If the automatic transmission shift cable assembly was not fully attached to the steering column bracket, the shift cable assembly can come off the bracket, the vehicle operator would then not be able to shift the transmission from of the drive gear positions into the park position even though the gear selector would indicate park". The remedy was to make the proper attachment of the transmission shift control cable to the steering column bracket and add a tie strap to that connection. According to the Ford dealership consulted by the police, the proper remedy had been completed.

Vehicle Damage

Exterior Damage - 1998 Ford Expedition

The Ford Expedition did not sustain any damage as a result of the impact and tire roll over contact with the non-motorist in this incident. The investigating officer did not observe distinct contact evidence such as wipe marks (i.e., road film removed) on the vehicle during his on-scene investigation. The child was knocked down by the left rear bumper and then run over by the left rear tire. Based on the description of the contact, the Collision Deformation Classification (CDC) was estimated to be: 06BLLU1.

The Expedition sustained minor rear end damage as a result of the impact with the landscaping rocks on the north side of the driveway (**Figures 13-15**). There was 17.0 cm (6.7 in) of direct contract to the bumper beginning at the right rear bumper corner. There was 4.0 cm (1.6 in) of direct contact to the receiver hitch on the right side and a slight amount of contact to the left side of the hitch. The bumper was rotated downward. The maximum crush was located at C6 and measured 2.0 cm (0.8 in). The CDC was estimated to be: 06BDLW1.

Figure 13. Right side view of rotated bumper

Figure 14. Right rear bumper and hitch contact

Figure 15. Left side hitch contact

Interior Damage -1998 Ford Expedition Sport Utility Vehicle

There was no interior damage.

Non Motorist Demographics

Age/Sex:	4/Female
Height:	110 cm (43 in)
Weight:	17 kg (37 lbs)
Type of medical treatment:	Examined and pronounced at the scene

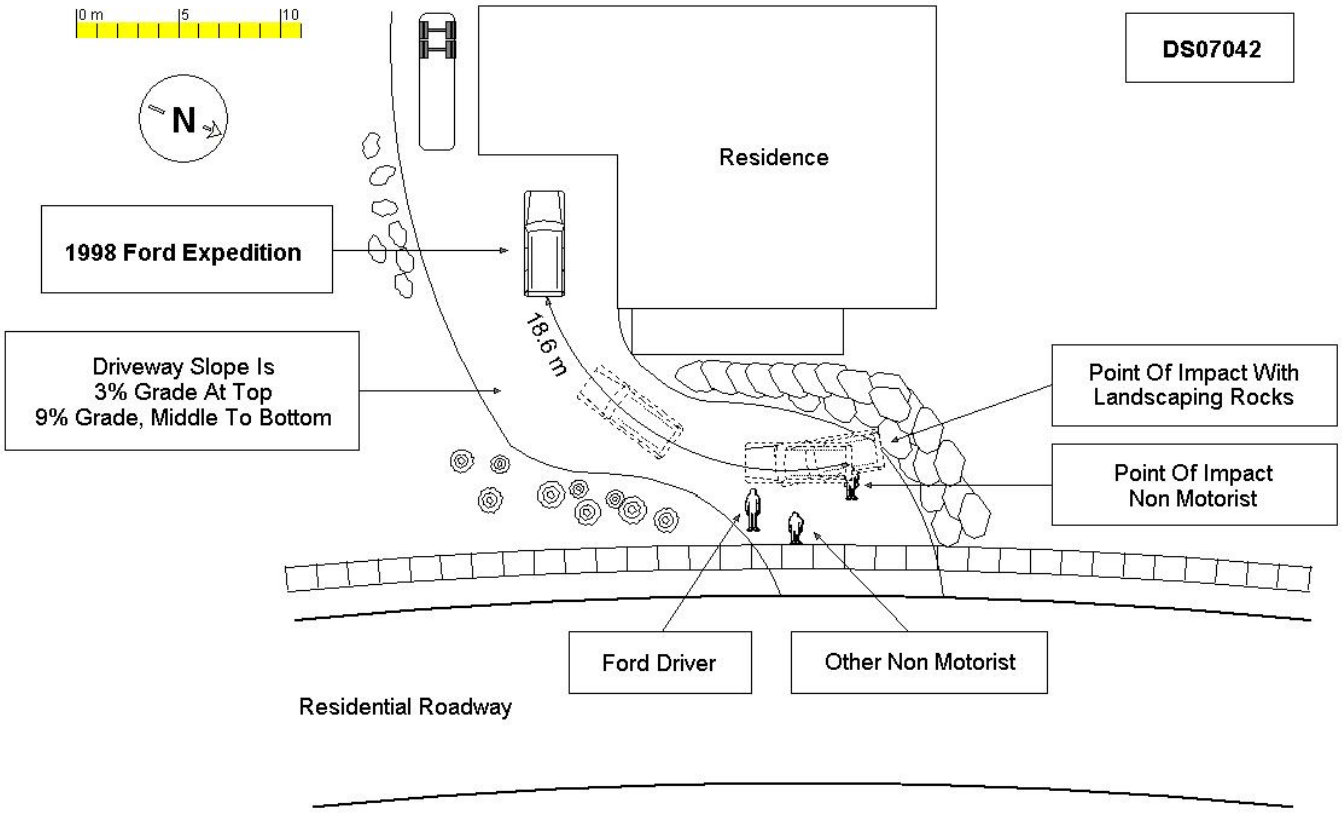
INJURIES

Non Motorist: Injuries obtained from phone call with medical examiner.

Injury	OIC Code	Injury Mechanism	Confidence Level
Crushed skull	113000.6,0	Tire	Certain

.

Attachment 1. Scene Diagram



Attachment 2. Data Forms

Not Applicable ☐

Reset Values | Print Forms

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

SCENE FORM

Special Crash Investigations
Not In Traffic Surveillance

1. Case Number

D S 0 7 0 4 2

IDENTIFICATION

2. Date of Crash 0 9 / X X / 0 7

3. Time of Crash 1 5 3 3

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) LANDSCAPING
- [ ] Unknown

11. Grade at parked position + / - - 0 3 %

12. Estimated distance from parked position to impact

0 1 8 . 5 m

13. Estimated speed at impact 0 0 7 kmph

14. Grade at impact +/ - - 0 9 %

15. Estimated distance from impact to vehicle final rest

0 0 2 . 1 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 D S 0 7 0 4 2

VEHICLE IDENTIFICATION

2. VIN 1 F M P U 1 8 L X W L X X X X X X

3. Model Year 1 9 9 8

4. Vehicle Make (specify): FORD

5. Vehicle Model (specify): EXPEDITION

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 P265/70R15

7. LF Tire Size P265/70R15

8. LR Tire Size P265/70R15

9. RF Tire Size P265/70R15

10. RR Tire Size P265/70R15

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 seats have integral head restraints.
Front Middle	0	☐	☐ ☐ ☐ Full Down / Mid / Full Up	
Front Right	1	☑	☐ ☐ ☑ Full Down / Mid / Full Up	
2nd Left	5	☑	☑ ☐ ☐ Full Down / Mid / Full Up	
2nd Middle	5	☐	☐ ☐ ☐ Full Down / Mid / Full Up	
2nd Right	5	☑	☑ ☐ ☐ Full Down / Mid / Full Up	
3rd Left	0	☐	☐ ☐ ☐ Full Down / Mid / Full Up	
3rd Middle	0	☐	☐ ☐ ☐ Full Down / Mid / Full Up	
3rd Right	0	☐	☐ ☐ ☐ 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		128	34 cm to top of tow bar
Top of trunk/tailgate		128	
Bottom of bumper		36	
Trailer hitch (if applicable)		34	
Undercarriage			
	Sway bar	N/A	
	Axle	N/A	
	Differential	N/A	
	Other (specify): _____	N/A	
Sensor Height (if equipped)		N/A	
Camera Height (if equipped)		N/A	

Not Applicable ☑

Undo Not Applicable

Reset Values

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

Back Up / Parking Aid Form

Special Crash Investigations
Not In Traffic Surveillance

1. Case Number

D S 0 7 0 4 2

PARKING AID PRESENCE

2. Type of backing/parking aid present

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

CAMERA INFORMATION

Specify field of view measurements on diagram

3. System make/model

_____

4. Video monitor type

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

5. Video display size _____ cm
(Diagonal)

6. Camera location

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

7. Video image quality under scene lighting conditions

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

8. Was the camera functioning properly

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

ULTRASONIC/RADAR SENSOR

Specify object detection range on diagram

9. System make/model

_____

10. Auditory warning illumination

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

11. Number of sensors ____

12. Sensor locations
(Select all that apply)

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

13. Was warning system functioning properly

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

Not Applicable

14. Did driver react to warning

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

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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National Highway Traffic Safety Administration

DRIVER FORM

Special Crash Investigations
Not In Traffic Surveillance

1. Case Number

D S 0 7 0 4 2

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

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

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

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
D S 0 7 0 4 2

NON-MOTORIST PROFILE

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

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

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

5. Non-motorist's Weight — 0 1 7 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) dead snake
☐ 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	NONE			
	Helmet	NONE			
	Hood	NONE			
	Other (specify): _____				
UPPER BODY	Short Sleeve	Unknown			
	Long Sleeve	Unknown			
	Light Jacket	Unknown			
	Heavy Jacket				
	Other (Specify): _____				
LOWER BODY	Shorts				
	Pants	Unknown			
	Shoes	Unknown			
	Other (specify): _____				