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REMOTE NOT-IN-TRAFFIC SURVEILLANCE BACKOVER INVESTIGATION

CASE NUMBER - IN-07-004
LOCATION - NEW MEXICO
VEHICLE - 2003 FORD F150 4X4 LARIAT SUPER CAB
CRASH DATE - October 2006

Submitted:

March 29, 2007
Revised August 6, 2007

Contract Number: DTNH22-07-C-00044

Prepared for:

U.S. Department of Transportation
National Highway Traffic Safety Administration
National Center for Statistics and Analysis
Washington, D.C. 20590-0003

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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.

Technical Report Documentation Page

1. *Report No.* IN-07-004	2. *Government Accession No.*	3. *Recipient's Catalog No.*	
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15. *Supplementary Notes* Remote not-in-traffic surveillance backover investigation involving a 2003 Ford F150 4x4 Lariat super cab.			
16. *Abstract* This report covers a remote not-in-traffic surveillance backover investigation involving a 2003 Ford F150 4x4 Lariat super cab (case vehicle), which was involved in a backover incident in a private driveway. This crash is of special interest because the case vehicle backed over a 2-year-old male resulting in fatal injury to the child. The case vehicle was parked in a driveway between two other parked vehicles and near a residence. Two adults were outside the residence talking. One was the driver (also the child's uncle) of the case vehicle and the other was the child's father. The father went into the residence to retrieve an item for the driver. When he returned, the child followed him out the door and was most likely behind and near the case vehicle when the driver began to back up. The child was struck by the left portion of the back bumper and the left rear wheel rolled over him causing fatal injuries.			
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BACKGROUND

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This incident was brought to NHTSA's attention on or before November 17, 2006 by an on-line news story from a Texas television station. This crash involved a 2003 Ford F-150 Lariat 4x4 super cab pickup truck. The crash occurred in October 2006, at 11:24 a.m. in New Mexico and was investigated by the applicable county sheriff's department. A standard "State of New Mexico Uniform Crash Report" was completed by the county sheriff's department, stored at the sheriff's department and reported to the state. This crash is of special interest because the case vehicle backed over a child pedestrian [2-year-old, White (Hispanic) male] who sustained critical injuries resulting in his death. This contractor was not able to locate the case vehicle or contact the case vehicle's driver (i.e., the child's uncle) for an interview because he was in the custody of the U.S. border patrol and under investigation for being a deported felon. Attempts to contact the child's father (a witness to this incident) were also unsuccessful. Therefore, this case was assigned as a remote investigation on February 1, 2007. This contractor initially acquired the sheriff's department crash report and on-scene photographs. Numerous attempts were made to acquire the sheriff's department supplemental on-scene measurements, which were promised but never sent. Further efforts to acquire the measurements were suspended March 6, 2007. An exemplar vehicle (2003 Ford F-150 Lariat 4x4 super cab) was located and nominal rear and right side visibility measurements were made on March 8, 2007. This report is based on the sheriff's department crash report, sheriff's department on-scene photographs, exemplar vehicle inspection, on-line news story, interviews with the investigating sheriff's deputies, and this contractor's evaluation of the evidence.

SUMMARY

The case vehicle was parked in a driveway between two other parked vehicles and near a residence. Two adults were outside the residence talking. One was the driver (also the child's uncle) of the case vehicle and the other was the child's father. The father went into the residence to retrieve an item for the driver. When he returned, the child followed him out the door and was most likely behind and near the case vehicle when the driver began to back up. The child was struck by the left portion of the back bumper and the left rear wheel rolled over him causing fatal injuries. Nominal visibility assessments were made from an exemplar vehicle. It was determined that a large blind zone exists behind the case vehicle. The child was most likely within this blind zone when the driver began to back up and could not be seen by the driver.

Figure 1: On-scene sheriff's department photo showing overview of case vehicle from street after incident in relation to parked pickup on its left and parked minivan on its right

CRASH CIRCUMSTANCES

Crash Environment: The case vehicle was parked in a somewhat large, level driveway area adjacent to a residence. The case vehicle was parked between a late model pickup truck on its left and what appeared to be a minivan on its right (**Figure 1**). It is not known if the case vehicle

was parked as far into the driveway as these two vehicles. A children's play area with playground toys was located in front of all three vehicles. The residence, which was to the right of the vehicles, and the property was surrounded by a woven wire fence with bushes along the front fence. The incident occurred in the driveway. At the time of the incident the light condition was daylight, the weather was clear and the driveway pavement was dry bituminous. See sketch of the after-incident situation at the end of this report.

Figure 2: Sheriff's department photo showing view of back of case vehicle at final rest in relation to the door of the residence

Pre-Crash: The available information indicated that two adults were outside the residence talking. One was the driver of the case vehicle (also the child's uncle) and the other was the child's father. The child's father went into the residence to retrieve an item that the case vehicle's driver had forgotten. The location of the case vehicle's driver at this time is not known, but it is possible he was sitting in the case vehicle's driver's seat preparing to leave. When the child's father came back out of the residence, the child reportedly followed him out the door (**Figure 2**). The child's father reportedly did not notice that the child had followed him out the door. The child's father gave the item to the case vehicle's driver, who then began to back the case vehicle out of the driveway. The time span from the child's father coming out of the residence to the case vehicle beginning to back up is not known. However, given the reported circumstances of the incident, one plausible scenario is that the child's father came out of the residence and walked around behind to case vehicle to give the item to the case vehicle's driver, who was in the driver's seat ready to leave. The child followed his father and was behind and near the back of the case vehicle when the driver began to back up.

Figure 3: Sheriff's department photo showing blood spot and contact mark on inside portion of case vehicle's left rear tire tread

Crash: The evidence in the sheriff's department on-scene photos indicated that as the case vehicle backed up, the child was most likely impacted by the left portion of the back bumper and knocked to the ground. The inside of the case vehicle's left rear tire then rolled over him. **Figure 3** shows a blood stain on the inside tread face of the left rear tire. This evidence and the injuries and tire mark evidence on the child's body visible in the sheriff's department on-scene photos indicated that the child was facing up with his feet toward the vehicle when he was contacted by the left rear tire and backed over. What appear to be tire marks were visible on the inside of his left leg. The tire marks extended onto the left portion of his abdomen, chest and face indicating he was laying on

his back or knocked to his back as the backover progressed. The evidence indicated that the case vehicle's left rear tire passed completely over the child's body. Based on the length of the case vehicle's rear overhang, blood stain evidence on the pavement below the case vehicle and measurements made by scaling off of one of the on-scene photos (**Figure 4**), it was determined that the case vehicle traveled backward approximately 2.9 to 3.2 meters (9.6 to 10.6 feet) from the point of bumper contact with the child to the case vehicle's rest position depicted in the sheriff's department on-scene photos. The distance the case vehicle backed to impact is not known. However, an outer bound distance can be estimated based on the sheriff's department on-scene photos and knowledge of the case vehicle's overall length. If the case vehicle had been parked as far forward as the children's play area (**Figure 5**), then given the case vehicle's rest position relative to the parked pickup truck (**Figure 6**) indicates the outer bound distance backed to impact would likely have been no more than the length of the case vehicle [5.7 meters (18.7 feet)]. Given this distance and backup acceleration data determined from exemplar vehicle acceleration tests (conducted assuming "normal" acceleration), the outer bound speed at impact and time to impact could have been respectively 8.5 km.p.h (5.3 m.p.h) and 4.82 seconds.

Figure 4: Sheriff's department photo showing left side view of case vehicle at its final rest position, arrows show blood spots on pavement

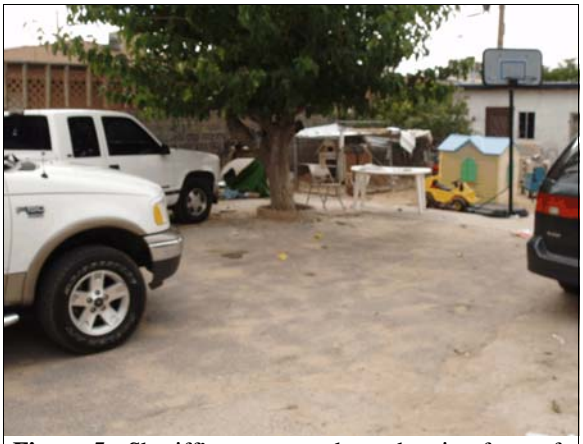


Figure 5: Sheriff's on-scene photo showing front of case vehicle at final rest relative to van on right, play area and pickup truck on left

Figure 6: View of front and left side of case vehicle at rest position, truck on right was parked at location shown at time of incident

Post-Crash: The sheriff's department crash report indicated that the driver stopped the case vehicle when he heard the child's father yell and saw him run toward the back of the case vehicle. The father picked up the child and ran toward the residence to call 911. The sheriff's department on-scene photos show a trail of blood drops heading toward the residence. The sheriff's department crash report indicated that the father was too frantic to make the call and then ran to a neighbor's house. The sheriff's department crash report indicated that the child was pronounced deceased at the scene 94 minutes following the crash.

The 2003 Ford F150 Lariat was a four wheel drive, super cab pickup truck (VIN: 2FTRX18L73C------) equipped with a 5.4L, V8 engine. The vehicle was equipped with dark tinted left and right rear windows and backlite. The pickup bed was equipped with a low profile chrome toolbox located at the front of the bed. There was no cargo in the pickup bed that extended above the sides or back of the bed at the time of the incident. The case vehicle's recommended tire size was P265/70R17. The tires on the truck at the time of the crash were LT (light truck) series tires. The size of the tires is not known, but it is assumed the rim size was 43 centimeters (17 inches). The case vehicle's specification wheelbase was 353 centimeters (139 inches). The overall length was 574 centimeters (225.8 inches), and the rear overhang was approximately 122 centimeters (48 inches). The sheriff's department on-scene photographs were used to code some of the variables on the vehicle data form attached at the end of this report.

CASE VEHICLE DAMAGE

The impact with the pedestrian caused no clearly identifiable marks on the case vehicle's back bumper. The CDC for the case vehicle was estimated to be: **06-BLLU-1** (**180** degrees). The CDC was estimated based on the most likely location of pedestrian contact to the back bumper given the location of the contact evidence on the inside of the left rear tire tread and the location of the injuries on the left aspect of the pedestrian's body.

CASE VEHICLE DRIVER

The case vehicle's driver was a 44-year-old, White (Hispanic) male. This contractor was unable to contact the case vehicle's driver for an interview. There was no available information regarding the case vehicle driver's height, weight and eye wear.

Figure 7: Left side view of exemplar 2003 Ford F150 4x4 super cab

VISIBILITY STUDY

An exemplar 2003 Ford F150 Lariat 4x4 super cab pickup truck (**Figure 7**) was located and a nominal visibility study was undertaken to determine the size of the blind zone behind the back of the pickup truck. The measurements were made assuming the driver was looking over his right shoulder through the backlite as he backed up. The surrogate driver for this study was 180 centimeters (71 inches) tall and his eye height was 164 centimeters (64.6 inches) above the ground as he sat in the driver's seat. A target 71 centimeters (28 inches) tall was moved rearward from the

Figure 8: Exemplar vehicle and location of target (arrow) at point it first came into view with driver looking over right shoulder and out backlite

back of the vehicle along the approximate centerline until the target came into view (**Figure 8** above and **Figure 9**). The target had to be moved rearward from the tailgate 10.4 meters (34.1 feet) before the top of the target began to come into the surrogate driver's view. The target was then moved forward slightly until it was out of view and then moved to the right from the approximate centerline until it came into view off the right rear corner of the truck bed. The distance from the truck's projected centerline to this point was 5.6 meters (18.4 feet). The target was then moved to the left from the approximate centerline until it came into view off the left rear corner of the truck bed. The distance from the projected centerline to this point was 2.7 meters (8.9 feet). For all practical purposes, a driver looking over his right shoulder while backing this vehicle would be unable to turn his head far enough to look much beyond the left rear corner of the truck bed. Nominal visibility observations were also taken to determine the blind zone off the right side of the truck bed and the right "C"-pillar. **Figure 10** shows a view from the driver's seat toward the right "C"-pillar and through the right side of the backlite See the nominal visibility diagram at the end of this report for an illustration of the back and right side blind zones.

Figure 9: View out backlite of exemplar vehicle from driver's seat

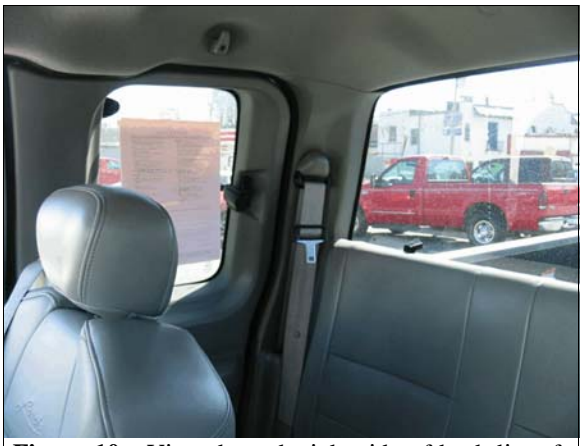


Figure 10: View through right side of back lite of exemplar vehicle

The visibility study showed that the case vehicle has a large blind zone behind and to the right rear side of the vehicle. The visibility study and the information regarding the location of the child just prior to the incident indicated the child was well within the blind zone behind the case vehicle when the driver began to back up. It would not have been possible for the driver to see the child in this location.

PEDESTRIAN

The pedestrian was a 2-year-old, White (Hispanic) male. The child's height and weight is not known. Based on the tire mark evidence on the child's skin visible in the sheriff's department photos, it appears that he was clothed only in a diaper at the time of the incident.

IN-07-004

Nominal Visibilty Diagram
Case Vehicle = 2003 Ford F150 4x4 Super Cab
Measurements Taken From Same Year, Make & Model Exemplar Vehicle
Surrogate Driver Looking Over Right Shoulder

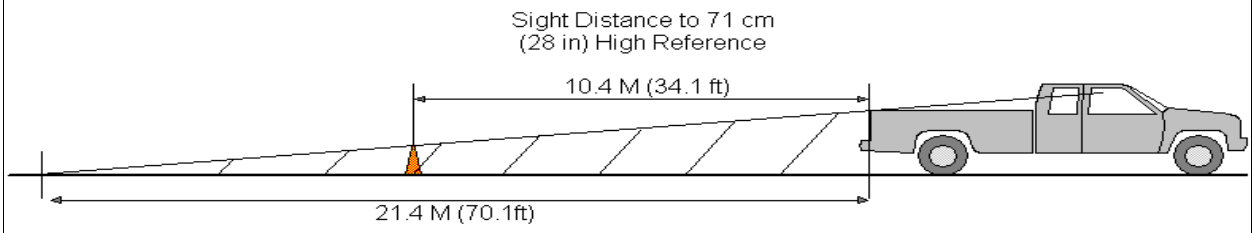
Surrogate Driver Eye Height From Gound = 164 cm (65 in)

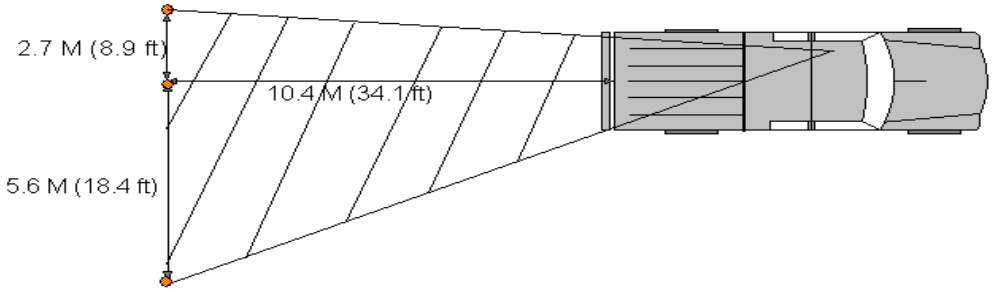
Surrogate Driver Height = 180 cm (71 in)

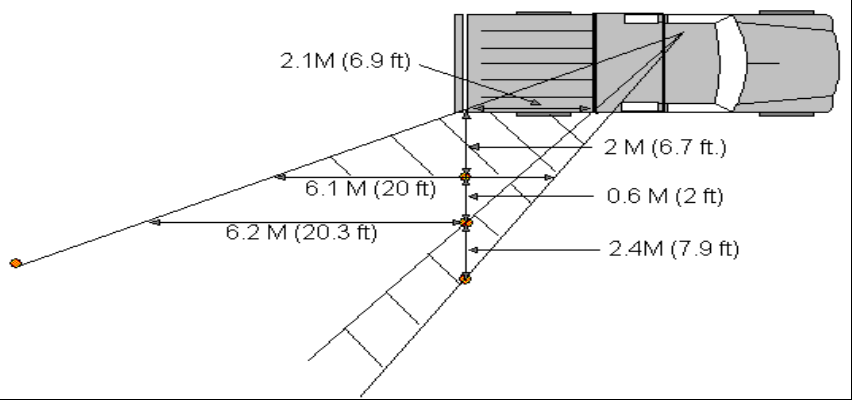
= Blind Zone Behind Truck Bed

= C-Pillar Blind Zone and Blind Zone Right Side of Truck Bed

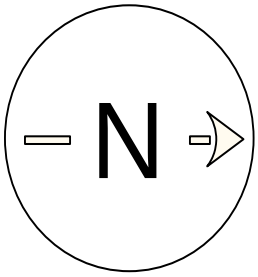
= 71 cm (28 in) High Target





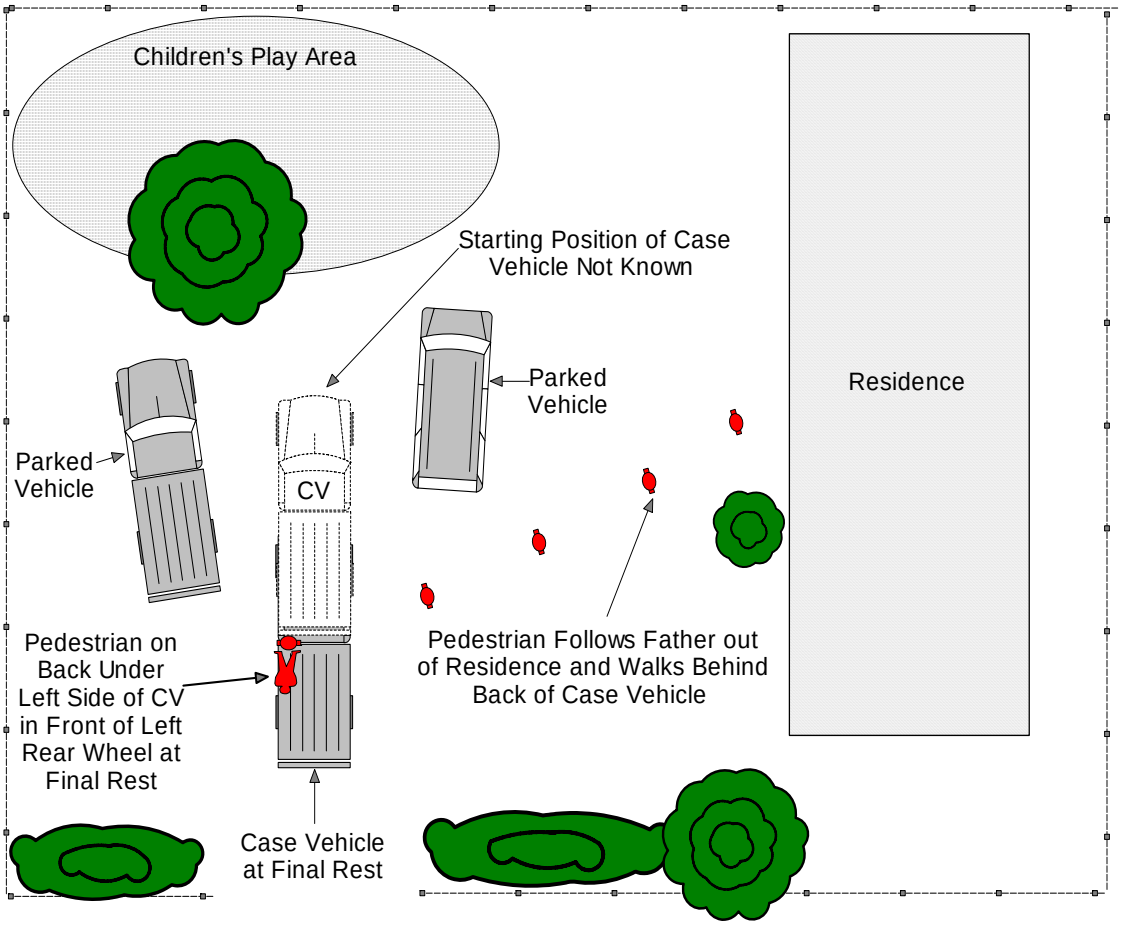


CRASH DIAGRAM



IN-07-004
Sketch of Crash Sequence
Not to Scale
Daylight, Clear
Dry, Bituminous Driveway

CV = 2003 Ford F150 4x4 Lariat Super Cab



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

I N 0 7 0 0 4

IDENTIFICATION

2. Date of Crash 1 0 / 9 9 / 0 6

3. Time of Crash 1 1 2 4

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 %

12. Estimated distance from parked position to impact

9 9 9 . 9 m

13. Estimated speed at impact 9 9 9 kmph

14. Grade at impact + / - 9 9 %

15. Estimated distance from impact to vehicle final rest

0 0 3 . 0 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 I N 0 7 0 0 4

VEHICLE IDENTIFICATION

2. VIN 2 F T R X 1 8 L 7 3 C x x x x x x

3. Model Year 2 0 0 3

4. Vehicle Make (specify): Ford (Note: variables below coded per on-scene photos)

5. Vehicle Model (specify): F150 4X4 Super Cab

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	☐	Unknown status
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 P265/70R17

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	99	☑	☑ Full Down / ☐ Mid / ☐ Full Up	Based on on-scene sheriff's department photos
Front Middle	99	☐	☐ Full Down / ☐ Mid / ☐ Full Up	
Front Right	99	☑	☑ Full Down / ☐ Mid / ☐ Full Up	
2nd Left	99	☐	☐ Full Down / ☐ Mid / ☐ Full Up	
2nd Middle	99	☐	☐ Full Down / ☐ Mid / ☐ Full Up	
2nd Right	99	☐	☐ Full Down / ☐ Mid / ☐ Full Up	
3rd Left		☐	☐ Full Down / ☐ Mid / ☐ Full Up	
3rd Middle		☐	☐ Full Down / ☐ Mid / ☐ Full Up	
3rd Right		☐	☐ Full Down / ☐ Mid / ☐ Full Up	

Seat Type codes:

0 = No seat or seat folded down
1 = Bucket
2 = Bucket w/ folding back
3 = Bench
4 = Bench w/ separate back cushions
5 = Bench w/ folding back
6 = Split bench w/ separate back cushions
7 = Split bench w/ 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		Unk	
Top of trunk/tailgate		Unk	
Bottom of bumper		Unk	
Trailer hitch (if applicable)		Unk	
Undercarriage			
	Sway bar	Unk	
	Axle	Unk	
	Differential	Unk	
	Other (specify): _____	Unk	
Sensor Height (if equipped)		N/A	
Camera Height (if equipped)		N/A	

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

I N 0 7 0 0 4

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): Not equipped

CAMERA INFORMATION

Specify field of view measurements on diagram

3. System make/model

Not equipped

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

Not equipped

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

15. Did driver report common false warnings

- (•) No sensor present
- ( ) Yes
- ( ) No
- ( ) Unknown

Not Applicable ☐

Reset Values

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

DRIVER FORM

Special Crash Investigations
Not In Traffic Surveillance

1. Case Number

I N 0 7 0 0 4

DRIVER PROFILE

2. Driver's Age 4 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): Nephew
   - ○ 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:

    Unknown

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
    - ○ 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 ☐

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
I N 0 7 0 0 4

NON-MOTORIST PROFILE

2. Non-motorist's Age 0 2 ◉ 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)			

	Clothing	Color	Fabric	Texture	Weight
HEADWEAR	Hat				
	Helmet				
	Hood				
	Other (specify): _____				
UPPER BODY	Short Sleeve				
	Long Sleeve				
	Light Jacket				
	Heavy Jacket				
	Other (Specify): _____				
LOWER BODY	Shorts				
	Pants	White	Blend	Soft	Light
	Shoes				
	Other (specify): _____				