CRASH DATA RESEARCH CENTER
Calspan Corporation
Buffalo, NY 14225

NOT-IN-TRAFFIC SURVEILLANCE
CALSPAN REMOTE TRUNK ENTRAPMENT INVESTIGATION

SCI CASE NO: CA07-020

VEHICLE: 1996 AUDI A4
LOCATION: KENTUCKY
INCIDENT DATE: JUNE 2007

Contract No. DTNH22-07-C-00043

Prepared for:

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

DISCLAIMER

This document is disseminated under the sponsorship of the Department of Transportation in the interest of information exchange. The United States Government assumes no responsibility for the contents or use thereof.

The opinions, findings, and conclusions expressed in this publication are those of the authors and not necessarily those of the National Highway Traffic Safety Administration.

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

1. Report No. CA07-020	*2. Government Accession No.*	*3. Recipient's Catalog No.*	
4. Title and Subtitle Calspan Remote Trunk Entrapment Investigation Vehicle: 1996 Audi A4 Location: Kentucky		*5. Report Date*: July 2008	
		6. Performing Organization Code	
7. Author(s) Crash Data Research Center		*8. Performing Organization Report No.*	
9. Performing Organization Name and Address Calspan Corporation Crash Data Research Center P.O. Box 400 Buffalo, New York 14225		*10. Work Unit No.* C00500.0000.0027	
		11. Contract or Grant No. DTNH22-07-C-00043	
12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Washington, D.C. 20590		*13. Type of Report and Period Covered* Technical Report Incident Date: June 2007	
		14. Sponsoring Agency Code	

15. Supplementary Note

A remote investigation of an 8 year old male and an 11 year old male that became entrapped in the trunk of a 1996 Audi A4 and subsequently died due to hyperthermia.

16. Abstract

This remote investigation focused on the circumstances surrounding the deaths of two bothers, ages 8 and 11, who became trapped in the trunk of a 1996 Audi A4 four door sedan. The vehicle was reportedly parked outside of the home where the children resided at the time of the incident. The Audi's trunk was unlocked and did not require a key to open the rear lid. The children were discovered in the trunk of the vehicle approximately 7 hours after they were reported missing. The vehicle was not equipped with an internal trunk release. The medical examiner determined the cause of death was hyperthermia.

The Calspan Special Crash Investigations (SCI) Team provided notification of this incident to the Crash Investigation Division (CID) of the National Highway Traffic Safety Administration (NHTSA) on June 11, 2007. The CID assigned a remote level investigation of the incident to Calspan SCI on the same day due to the Agency's interest in children seriously or fatally injured in a Not-In-Traffic setting. Calspan SCI established cooperation with the investigating police department and obtained a copy of the incident report. There were no photographs of the involved vehicle or the incident site. The lead police officer was interviewed regarding the incident and the details of that conversation are included in this written report. The trunk entrapment was initially investigated as a criminal matter; however, a grand jury found no evidence to press charges.

17. Key Words Not-In-Traffic Surveillance Trunk Entrapment Hyperthermia		*18. Distribution Statement* General Public	
19. Security Classif. (of this report) Unclassified	*20. Security Classif. (of this page)* Unclassified	*21. No. of Pages* 15	*22. Price*

TABLE OF CONTENTS

NOT-IN-TRAFFIC SURVEILLANCE
CALSPAN REMOTE TRUNK ENTRAPMENT INVESTIGATION
SCI CASE NO.: CA07-020

VEHICLE: 1996 AUDI A4
LOCATION: KENTUCKY
INCIDENT DATE: JUNE 2007

BACKGROUND

This remote investigation focused on the circumstances surrounding the deaths of two bothers, ages 8 and 11, who became trapped in the trunk of a 1996 Audi A4 four door sedan. **Figure 1** is a left front oblique view of an exemplar Audi. The vehicle was reportedly parked outside of the home where the children resided at the time of the incident. The Audi's trunk was unlocked and did not require a key to open the rear lid. The children were discovered in the trunk of the vehicle approximately 7 hours after they were reported missing. The vehicle was not equipped with an internal trunk release. The medical examiner determined the cause of death was hyperthermia.

Figure 1: Exemplar Audi A4.

The Calspan Special Crash Investigations (SCI) Team provided notification of this incident to the Crash Investigation Division (CID) of the National Highway Traffic Safety Administration (NHTSA) on June 11, 2007. The CID assigned a remote level investigation of the incident to Calspan SCI on the same day due to the Agency's interest in children seriously or fatally injured in a Not-In-Traffic setting. Calspan SCI established cooperation with the investigating police department and obtained a copy of the incident report. There were no photographs of the involved vehicle or the incident site. The lead police officer was interviewed regarding the incident and the details of that conversation are included in this written report. The trunk entrapment was initially investigated as a criminal matter; however, a grand jury found no evidence to press charges.

SUMMARY

VEHICLE DATA

The 1996 Audi A4, four-door sedan, was manufactured on a 262 cm (103.0 in) wheelbase and was designed for five passengers. The Audi was equipped with front bucket seats and a 60/40 split fold down rear bench (left side wide). The power train consisted of a 2.8 liter, V6 engine linked to a five-speed automatic transmission. The A4 was police reported as white in color. The Vehicle Identification Number (VIN) was not documented by the police investigator. The Audi was owned by the grandfather of the deceased children; however, the vehicle was reportedly being used by the children's mother for her daily transportation.

INCIDENT SITE

This incident occurred over a seven hour time period during the afternoon to evening hours in June 2007 in a rural setting. At the time the incident was initiated, the Audi was not locked and was parked outside the home of the children in full sun. The afternoon sky condition was reported as clear. The afternoon temperatures were in the 27 degree C (80 degree F) range and reached at maximum reported temperature of 28 degrees C (83 degrees F) at 1753 hours. The relative humidity range was 47 to 75 percent. At the time the children were discovered within the trunk of the Audi, the vehicle was parked in the driveway of the children's grandfather after being used in the search effort by the mother. **Figure 2** is a Not-to-Scale police schematic that was included in the incident report.

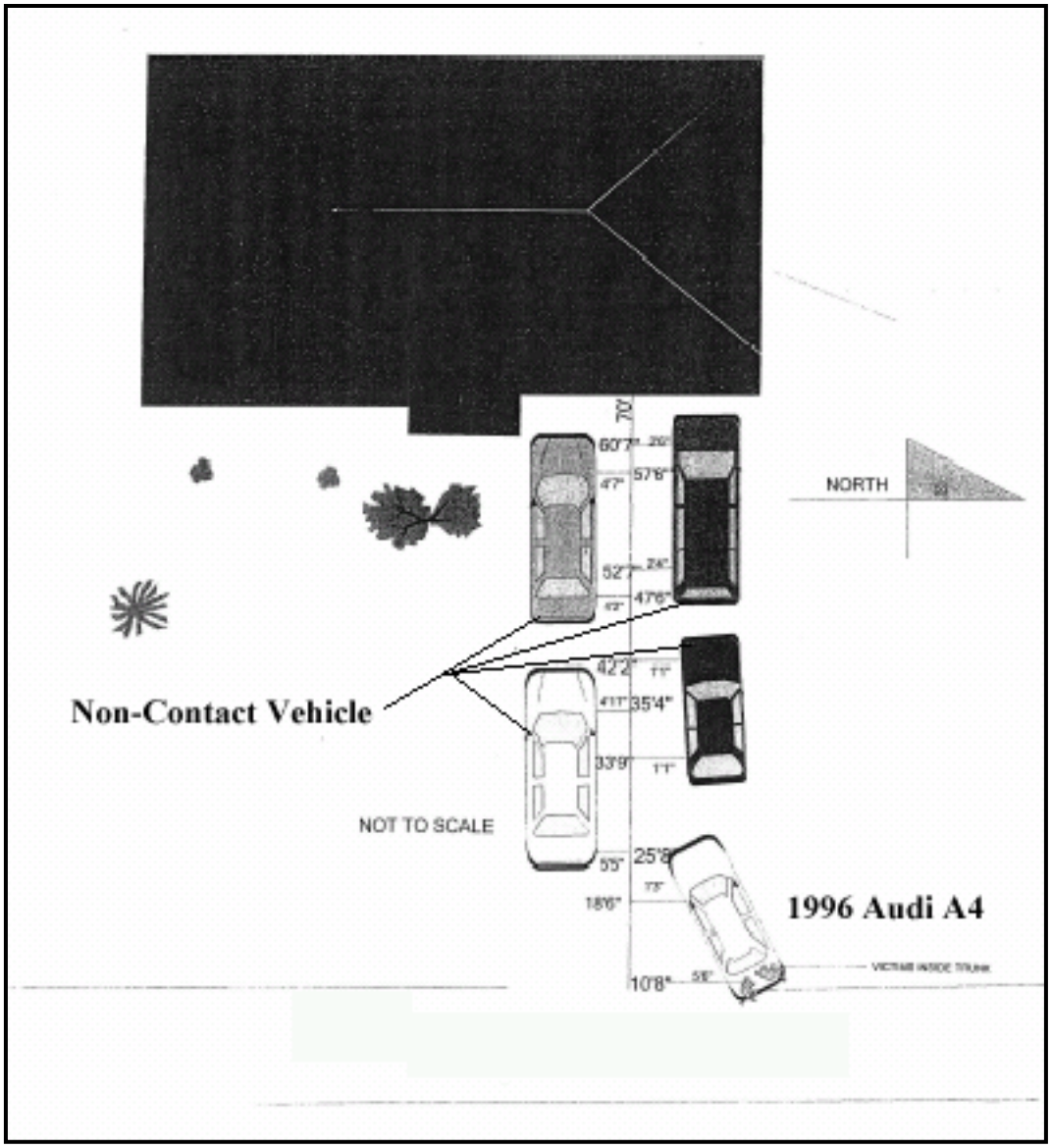


Figure 2: Police schematic of the incident site.

INCIDENT

A timeline developed during the police investigation indicated the incident occurred in the following manner. The two male children exited their home during the afternoon hours to play while their mother was in the kitchen preparing dinner. After approximately 30 to 45 minutes, the mother exited the house in order to locate the children. Unable to find them, she enlisted the aid of her father (the children's grandfather) who lived across the road. Reportedly the mother then drove the Audi for approximately 1 to 1.5 hours looking for the children throughout the area. The Kentucky State Police were notified of the missing children at 2000 hours after approximately a two hour search by the family.

Local, county and state police arrived and again searched the area for the children. After an additional four hour search, the children were located at 0030 hours in the trunk of the Audi A4. The Audi was parked in the grandfather's driveway at that time after its use during the search.

The children were removed from the vehicle and transported to the medical examiner's office. Autopsies were conducted the day following the incident. It was determined that the children died as a result of hyperthermia. The medical examiner theorized that the entrapped children were rendered unconscious prior to the mother's use of the vehicle. It was estimated the children had been deceased approximately 6 hours prior to their discovery (approximately one hour after entrapment).

Research conducted by General Motors and other independent sources indicated that the interior temperature of a closed vehicle may rise approximately 11 degrees C (20 degrees F) over the ambient temperature in two hour period. Based on the reported high temperature which occurred near the beginning of this incident, the interior temperature of the trunk was an estimated 41 degrees C (105 degrees F).

During the police investigation, an interview of the mother was conducted. In that interview, the mother indicated that one of the children had played in the trunk approximately two months prior to the date of the incident. She did not actually see that occurrence take place, but discovered beverage containers, food wrappers and a blanket in the trunk. She did not think to look in the Audi's trunk for the missing children on the day of the incident.

NON-MOTORIST DATA

The non-motorists in this incident were brothers, ages 8 and 11. Both children were reportedly clothed in shorts and a T-shirt. The 8 year old male had a height and weight of 130 cm (51 in) and 30 kg (66 lb). The height and weight of the 11 year old male was 147 cm (58 in) and 33 kg (73 lb). The medical examiner listed the cause of death for both individuals as hyperthermia due to exposure to heat within a confined space.

1996 AUDI A4

TRUNK AND TRUNK LOCK MECHANISM

The remote level investigative effort and the lack of photographs of the involved vehicle prompted the need for an exemplar vehicle inspection. A 1997 Audi A4 was located a dealership

and inspected for this investigation. The specifications and equipment of the 1996 and 1997 model year A4's were reportedly identical. The trunk of the Audi was conventionally located in the aft aspect of the vehicle behind the rear seat. A rear deck lid hinged on gas filled struts enclosed the trunk space. The interior dimensions of the carpeted trunk measured approximately 107 cm x 102 cm x 51 cm (42 in x 40 in x 20 in), length x width x height. The trunk lock was not equipped with an internal release. **Figures 3 and 4** are rear views of an exemplar Audi and its trunk space.

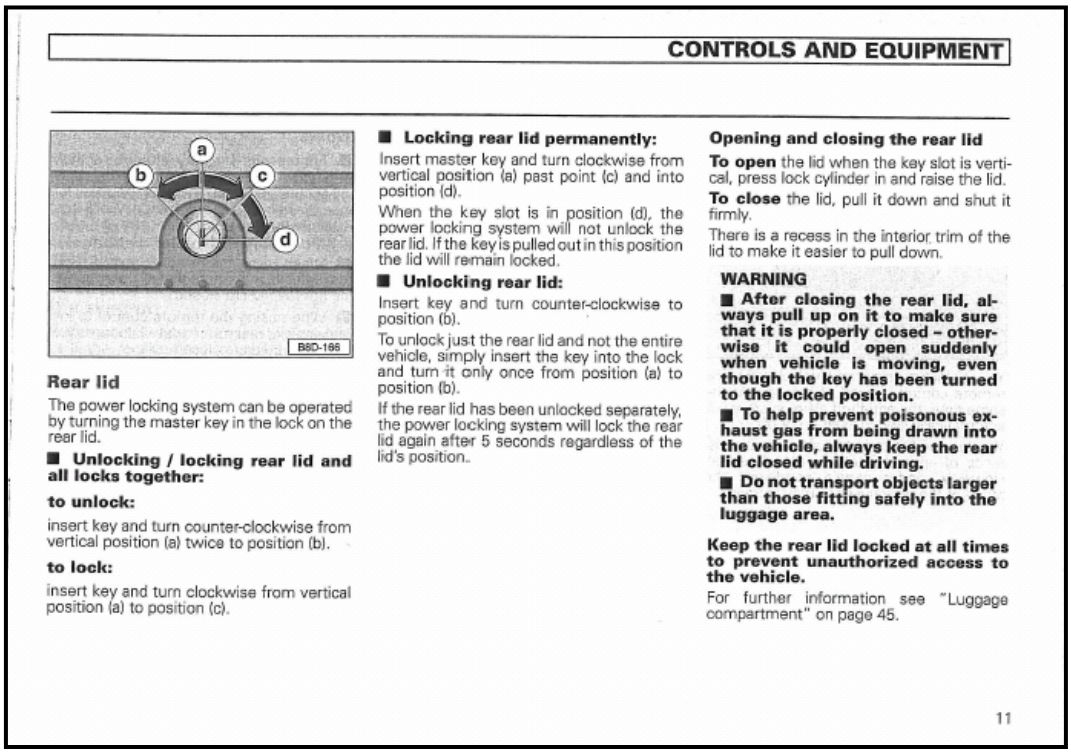
Figure 3: Right rear oblique view.

Figure 4: Trunk view.

The 1996 Audi A4 was equipped with a "plunger-type" lock mechanism that did not require a key to open when it was in the unlocked position (vertical key slot). **Figure 5** is a close-up view of the lock mechanism. Pushing the unlocked plunger unlatched and opened the rear lid; closing and latching the rear lid reset the plunger for use. The vehicle's key could be used to lock the plunger and render it inoperative. The children did not have the keys to the vehicle nor would have required them to open the unlocked trunk.

Figure 5: Close-up view of the plunger trunk lock mechanism.

The operation of the Audi rear lid and lock were described on Page 11 of the vehicle's owner's manual. **Figure 6** is an image of that description that from the owner's manual of the exemplar vehicle.



CONTROLS AND EQUIPMENT

Rear lid

The power locking system can be operated by turning the master key in the lock on the rear lid.

■ **Unlocking / locking rear lid and all locks together:**

to unlock:

insert key and turn counter-clockwise from vertical position (a) twice to position (b).

to lock:

insert key and turn clockwise from vertical position (a) to position (c).

■ **Locking rear lid permanently:**

Insert master key and turn clockwise from vertical position (a) past point (c) and into position (d).

When the key slot is in position (d), the power locking system will not unlock the rear lid. If the key is pulled out in this position the lid will remain locked.

■ **Unlocking rear lid:**

Insert key and turn counter-clockwise to position (b).

To unlock just the rear lid and not the entire vehicle, simply insert the key into the lock and turn it only once from position (a) to position (b).

If the rear lid has been unlocked separately, the power locking system will lock the rear lid again after 5 seconds regardless of the lid's position.

Opening and closing the rear lid

To open the lid when the key slot is vertical, press lock cylinder in and raise the lid.

To close the lid, pull it down and shut it firmly.

There is a recess in the interior trim of the lid to make it easier to pull down.

WARNING

■ **After closing the rear lid, always pull up on it to make sure that it is properly closed – otherwise it could open suddenly when vehicle is moving, even though the key has been turned to the locked position.**

■ **To help prevent poisonous exhaust gas from being drawn into the vehicle, always keep the rear lid closed while driving.**

■ **Do not transport objects larger than those fitting safely into the luggage area.**

Keep the rear lid locked at all times to prevent unauthorized access to the vehicle.

For further information see "Luggage compartment" on page 45.

11

Figure 6: Description of the rear lid and trunk lock operation from the Audi A4 Owner's

ATTACHMENT A

NITS 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

C A 0 7 0 2 0

IDENTIFICATION

2. Date of Crash 0 6 / X X / 0 7

3. Time of Crash 9 9 9 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 + / - 9 9 9 %

12. Estimated distance from parked position to impact

0 0 0 . 0 m

13. Estimated speed at impact 0 0 0 kmph

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

15. Estimated distance from impact to vehicle final rest

0 0 0 . 0 m

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

Not Applicable ☐

Reset Values

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

VEHICLE FORM

Special Crash Investigations
Not In Traffic Surveillance

1. Case Number C A 0 7 0 2 0

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 6

4. Vehicle Make (specify): Audi

5. Vehicle Model (specify): A4

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 205/55R16

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	1	☑	Full Down / Mid / Full Up	Vehicle not inspected
Front Middle	0	☐	Full Down / Mid / Full Up	
Front Right	1	☑	Full Down / Mid / Full Up	
2nd Left	3	☑	Full Down / Mid / Full Up	
2nd Middle	3	☐	Full Down / Mid / Full Up	
2nd Right	3	☑	Full Down / Mid / Full Up	
3rd Left	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		n/a	
Top of trunk/tailgate		n/a	
Bottom of bumper		n/a	
Trailer hitch (if applicable)		n/a	
Undercarriage			
	Sway bar	n/a	
	Axle	n/a	
	Differential	n/a	
	Other (specify): n/a	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

C A 0 7 0 2 0

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

15. Did driver report common false warnings

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

Not Applicable

No Driver Present ✔

Undo Not Applicable

Reset Values

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

DRIVER FORM

Special Crash Investigations
Not In Traffic Surveillance

1. Case Number

C A 0 7 0 2 0

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
- ☐ Nea sighted
- ☐ Far ighted
- ☐ stigmatism
- ☐ Other (specify) _____
- ☐ Unknown

8. Non motorist's relationship to driver
- ☐ No relationship
- ☐ Child
- ☐ Grandchild
- ☐ Sibling
- ☐ Neighbor
- ☐ Friend
- ☐ Other (specify): _____
- ☐ Unknown

DRIVER ACTIONS

9. Driver approach to vehicle for entry
- ☐ From left front
- ☐ From left
- ☐ From left rear
- ☐ From right rear
- ☐ From right front
- ☐ Circled vehicle
- ☐ Return trip (backing into driveway/lot)
- ☐ Other (specify): _____
- ☐ N/A
- ☐ Unknown

10. Driver entry interruption
(Select all that apply)
- ☐ Direct trip from building to vehicle
- ☐ Loaded items into vehicle
- ☐ Spoke with family
- ☐ Spoke with neighbors
- ☐ Spoke with contacted nonmotorist
- ☐ Return trip (backing into driveway/lot)
- ☐ Other (specify): _____
- ☐ N/A
- ☐ Unknown

11. Purpose of backing
- ☐ Leaving parking space in parking lot
- ☐ Backing onto roadway from driveway
- ☐ Entering parking space in parking lot
- ☐ Backing into driveway from roadway
- ☐ Other (specify): _____
- ☐ N/A
- ☐ Unknown

12. Where was driver going
Description:

_____

_____

13. Driver in a hurry
- ☐ Yes ☐ N/A
- ☐ No ☐ Unknown

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
C A 0 7 0 2 0

NON-MOTORIST PROFILE

2. Non-motorist's Age 1 1 ☐ Months ◉ Years
99 = Unknown

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

4. Non-motorist's Height 1 4 7 cm
999 = Unknown

5. Non-motorist's Weight 0 3 3 kg
999 = Unknown

6. Medical outcome
☐ Not injured
☐ ER only
☐ Hospitalized 1-4 days
☐ Hospitalized 5 days or more
☐ Treatment later
◉ Fatal
☐ Unknown

7. Source of most severe injury
☐ Bumper
☐ Tire
☐ Undercarriage
◉ Other Specify: Hyperthermia
☐ Ground
☐ N/A
☐ Unknown

8. Non-motorist impairment
(Select all that apply)
◉ No drugs or alcohol present
☐ Positive for alcohol (specify BAC): _____
☐ Positive for drugs (specify): _____
☐ Unknown

9. Source of alcohol/drug results
◉ Police reported
☐ Medical Report
☐ Other (specify) _____
☐ Not Tested
☐ Unknown if tested

NON-MOTORIST ACTIONS

10. Non-motorist attitude
☐ Standing
☐ Bending at waist
☐ Sitting
☐ Crouching
☐ Kneeling
☐ On skates/skateboard
☐ On bike/scooter
◉ Other (specify) n/a
☐ 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): n/a trunk entrapment
☐ Unknown

12. Non-motorist approach relative to rear of vehicle
☐ Stationary
☐ From left
☐ From right
☐ From behind
◉ Other (specify): n/a trunk entrapment
☐ Unknown

13. Non-motorist first avoidance action
☐ No avoidance actions
☐ Stopped
☐ Accelerated pace
☐ Ran away (along vehicle path)
☐ Jumped
☐ Turned away from vehicle
☐ Turned toward vehicle and braced
☐ Dove or fell away from vehicle
◉ Other (specify): n/a trunk entra
☐ Unknown

14. Non-motorist primary focus of attention
☐ Striking vehicle
☐ Play object
☐ Person
☐ Surrounding traffic
☐ Animal
☐ Handheld electronic (phone, MP3 player, etc.)
◉ Other Object (specify) n/a trunk en
☐ 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): _____				
UPPER BODY	Short Sleeve	Unknown	Natural	Soft	Light
	Long Sleeve				
	Light Jacket				
	Heavy Jacket				
	Other (Specify): _____				
LOWER BODY	Shorts	Unknown	Natural	Soft	Light
	Pants				
	Shoes				
	Other (specify): _____				

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 7 0 2 0

NON-MOTORIST PROFILE

2. Non-motorist's Age 0 8 ☐ Months ☉ Years
99 = Unknown

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

4. Non-motorist's Height 1 3 0 cm
999 = Unknown

5. Non-motorist's Weight 0 3 0 kg
999 = Unknown

6. Medical outcome

☐ Not injured
☐ ER only
☐ Hospitalized 1-4 days
☐ Hospitalized 5 days or more
☐ Treatment later
☉ Fatal
☐ Unknown

7. Source of most severe injury
☐ Bumper
☐ Tire
☐ Undercarriage
☉ Other Specify: Hyperthermia
☐ Ground
☐ N/A
☐ Unknown

8. Non-motorist impairment
(Select all that apply)
☉ No drugs or alcohol present
☐ Positive for alcohol (specify BAC): _____
☐ Positive for drugs (specify): _____
☐ Unknown

9. Source of alcohol/drug results
☉ Police reported
☐ Medical Report
☐ Other (specify) _____
☐ Not Tested
☐ Unknown if tested

NON-MOTORIST ACTIONS

10. Non-motorist attitude

☐ Standing
☐ Bending at waist
☐ Sitting
☐ Crouching
☐ Kneeling
☐ On skates/skateboard
☐ On bike/scooter
☉ Other (specify) n/a
☐ 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): n/a Trunk entrapment
☐ Unknown

13. Non-motorist first avoidance action

☐ No avoidance actions
☐ Stopped
☐ Accelerated pace
☐ Ran away (along vehicle path)
☐ Jumped
☐ Turned away from vehicle
☐ Turned toward vehicle and braced
☐ Dove or fell away from vehicle
☉ Other (specify): n/a Trunk entra
☐ Unknown

14. Non-motorist primary focus of attention

☐ Striking vehicle
☐ Play object
☐ Person
☐ Surrounding traffic
☐ Animal
☐ Handheld electronic (phone, MP3 player, etc.)
☉ Other Object (specify) n/a Trunk en
☐ 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): _____				
UPPER BODY	Short Sleeve	Unknown	Natural	Soft	Light
	Long Sleeve				
	Light Jacket				
	Heavy Jacket				
	Other (Specify): _____				
LOWER BODY	Shorts	Unknown	Natural	Soft	Light
	Pants				
	Shoes				
	Other (specify): _____				