CRASH DATA RESEARCH CENTER
Calspan Corporation
Buffalo, NY 14225

NOT-IN-TRAFFIC SURVEILLANCE
CALSPAN REMOTE HYPERTHERMIA DEATH INVESTIGATION
SCI CASE NO.: CA08027

VEHICLE: 2001 GMC YUKON XLT

LOCATION: VIRGINIA

DATE OF INCIDENT: JULY 2008

Contract No. DTNH22-07-C-00043

Prepared for:

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

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

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

TECHNICAL REPORT STANDARD TITLE PAGE

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15. Supplementary Note An investigation of the hyperthermia death of a 21 month old non-motorist within a 2001 GMC Yukon.			
16. Abstract This remote investigation focused on the hyperthermia death of a 21-month-old male non-motorist who was left unattended in a closed vehicle for an extended period of time during daylight summer hours. The vehicle was a 2001 GMC Yukon sport utility vehicle that was pewter in color with a beige leather interior. The rear door, quarter windows, and backlight utilized OEM deep tint glazing. All the windows were closed during the incident. The non-motorist was restrained the full duration of the incident in a forward-facing Child Restraint System (CRS) that was secured in the second row left position of the GMC. He was found by a co-worker approximately 9.5 hours after the 49-year-old male driver had parked his vehicle at his work place. The child was pronounced deceased at the scene.			
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BACKGROUND

This remote investigation focused on the hyperthermia death of a 21-month-old male non-motorist who was left unattended in a closed vehicle for an extended period of time during daylight summer hours. The vehicle was a 2001 GMC Yukon sport utility vehicle that was pewter in color with a beige leather interior. The rear door, quarter windows, and backlight utilized OEM deep tint glazing. All the windows were closed during the incident. The non-motorist was restrained the full duration of the incident in a forward-facing Child Restraint System (CRS) that was secured in the second row left position of the GMC. He was found by a co-worker approximately 9.5 hours after the 49-year-old male driver had parked his vehicle at his work place **(Figure 1)**. The child was pronounced deceased at the scene.

Figure 1. View of the parked GMC at the site of the incident. Image provided by the investigating police.

This incident was identified by the National Highway Traffic Safety Administration (NHTSA) through media coverage of the incident. The notification was forwarded to the Calspan Special Crash Investigations (SCI) team on July 10, 2008 and assigned for remote follow-up. Telephone contact was initiated immediately with the investigating police department. The Public Information Officer and the investigating detective that was assigned this case were interviewed. Details of the incident were provided to the SCI team; however, due to pending criminal charges against the driver, images and reports for this case could not be released. The driver was subsequently charged with involuntary manslaughter. The release of the requested images and the Incident Report were delayed by the prosecutor and the police department for various reasons associated with the criminal aspects of the case. This hyperthermia death was classified by the police as a non-reportable incident and was documented on an internal report. The SCI investigation involved detailed interviews with the above referenced police officers and the acquisition of images of the vehicle, incident site, clothing of the non-motorist, and of the CRS. The detailed internal police report was obtained that contained numerous interviews. The images and the details of the police report provided the basis for this remote level investigation. The driver would not consent to an interview.

SUMMARY

Incident Site

This incident occurred in a commercial parking lot during daytime hours (**Figure 2**). The parking lot consisted of a driving aisle with a single row of perpendicular parking spaces located on each side of the aisle. The parking lot was surfaced with asphalt and the parking spaces were delineated with white paint markings. Commercial office buildings were adjacent to the parking spaces with concrete sidewalks located between the buildings and the parking spaces. Landscaped areas were located at the corners of the buildings that provided minimal shade to the parked vehicles. The GMC was parked front first in a designated parking space with a *"No Parking Zone"* painted adjacent to the left of the vehicle. The police measured the heading angle of the parked GMC at 285 degrees. The office building located forward of the vehicle's parked position was a single story building that was built on a berm, thus elevating the height of the building in relation to the parking lot. The driver worked in this building. A schematic of the incident site is attached as **Figure 9.**

Figure 2. Overall view of the incident site and the parked position of the GMC.

Local weather forcasters indicated the weather was overcast with reports of scattered clouds to partly cloudy skies over the duration of this incident. There was no precipitation. The temperature was recorded at 21.6 degrees C (71 degrees F) with relative humidity of 81 percent at the time the driver parked the GMC in the parking lot. The temperature elevated to an afternoon high of 32.2 degrees C (90 degrees F) at 1452 hours, a time that was approximately three hours prior to the discovery of the non-motorist in the vehicle. The temperature at the time of discovery was 31.1 degrees C (88.0 degrees F) with 48 percent humidity. The winds varied from a south-southwesterly direction at 16.7 km/h (10.4 mph) to calm at mid day, to 11.1 km/h (6.9 mph) at the 1532 hours.

Vehicle Data

The vehicle involved in this hyperthermia death was a 2001 GMC Yukon SLT, 4-door sport utility vehicle **(Figure 3)**. The GMC was identified by Vehicle Identification Number (VIN): 1GKEK13T31J (production number deleted). The GMC was powered by a 5.3 liter, V-8 engine linked to 4-speed automatic transmission with a column-mounted shift lever. The GMC was equipped with OEM alloy wheels and all-season tires. Although the specific

Figure 3. Front right oblique view of the 2001 GMC Yukon.

tire size is unknown, the tires and wheels appeared to be of the manufacture's specified size of P265/70R16. Additional exterior features of the GMC included step bars mounted below the sills, a sunroof, and a roof rack. The exterior color of the GMC was pewter and was in a clean condition.

The interior of the GMC was surfaced in leather and was beige in color **(Figure 4)**. The seating configurations consisted of front bucket seats and a split rear three passenger bench seat. The four outboard seating positions were equipped with adjustable head restraints. The front seat head restraints were in the full-down positions. The second row head restraints appeared to have been removed from the vehicle. It is unknown if the Yukon was equipped with a third row seat.

Figure 4. Interior view of the GMC.

The window glazing of the GMC was OEM tinted. The windshield and the front door windows were OEM solar tint. The rear door, rear quarter windows, and backlight glazing were OEM deep tint (AS3). All of the exterior glazing was clean at the time of this incident. All of the operable door windows were closed at the time of the incident. An interior image of the left rear door glazing showed numerous smears to the glazing, indicative of finger marks. The police department conducted a Tint Meter test of the GMC's glazing. The front door windows recorded a 72 percent light transmittance and the rear door and quarter windows recorded a 17 percent light transmittance.

Driver Data

The driver involved in this hyperthermia death was a 49-year-old male with a height of 185 cm (73 in) and a weight of 104 kg (230 lb). He was described by his co-workers as a hard working manager in a fast-paced office environment. On the day of the incident, he was dressed in corduroy pants for a hot July day and was described by co-workers as disheveled and "out of sorts". The driver was usually at work at 0700 hours.

Non-Motorist Data

The non-motorist was a 21-month-old male. He was adopted by the driver and his wife approximately three months prior to this incident. The height and weight of the non-motorist was not reported. The driver assumed the responsibility of caring for the non-motorist in the morning as his wife departed for work at an early time. The driver's responsibilities included awaking the non-motorist, feeding and dressing him, and transporting him to full-day, day care. On the morning of the incident, the driver dressed the non-motorist in a white short-sleeve T-shirt, orange polyester shorts, a diaper, socks and shoes.

Daycare Facility

The non-motorist was enrolled in a full-day program, 5-days per week at a daycare facility that was located 33.8 km (21.0 miles) from the driver's residence. The non-motorist had been enrolled in the daycare program three weeks prior to the incident. The daycare facility was located along the driver's route to his work place, 17.4 km (10.8 miles) from his office. The daycare facility had a policy not to follow-up with the parents of a child if the child was absent for a single day. The facility would contact the parents if the child was absent for two consecutive days. The non-motorist was at the daycare facility on the day prior to this incident.

Incident Sequence

Pre-Incident

On the morning of the incident, the driver awoke the non-motorist, and prepared him for his day at the daycare facility. This included changing his diaper and dressing him in the pre-described clothing. It was not reported if the non-motorist was provided breakfast prior to leaving for daycare. The non-motorist was placed in the GMC by the driver and secured in a forward-facing Britax Marathon convertible CRS **(Figure 5)** that was positioned in the second row left position of the vehicle. He was secured in the CRS by the integral 5-point harness system. The CRS was secured to the GMC by the vehicle's 3-point lap and shoulder belt system. The belt system was routed through the forward-facing belt path. Based on images of the installed CRS in the GMC, the CRS appeared to be compressed into the seat cushion indicating the installer compressed the CRS and tensioned the belt system at the time of installation. The internal harness straps of the CRS were adjusted to the lowest of the four adjustment slots. A neighbor to the driver reported to the investigating officer that the driver started the GMC, backed from the driveway, and pulled back in as though he forgot something. Within a few minutes, the driver exited the driveway a second time and initiated his morning commute.

Figure 5. Installed position of the CRS within the GMC Yukon.

While en route, the driver used his cellular telephone to converse with an undisclosed party. He continued toward his destination without stopping at the daycare facility. The police ran a check of his electronic toll system and reported that he passed through a toll booth that was located approximately 9.6 km (6.0 miles) from his office location. The time of this entry was 0727 hours. The driver continued to his work place and parked the GMC with the front of the vehicle facing the building. In this position, the vehicle was facing in a westerly direction. The GMC was parked the approximate distance of one parking space to the north from being directly in line with the front doors and the reception windows of the office building. A solid wall of the building was directly opposite the parked position of the GMC.

Incident

The driver exited the GMC and locked the doors using the key fob. All of the windows were closed. The GMC remained in this parked position during the full duration of this incident.

The driver and a co-worker exited the office building for lunch at 1330 hours, walked along the sidewalk directly in front of the GMC to the co-worker's vehicle and drove a short distance to get lunch away from the office. While at lunch, the driver briefly mentioned his son, the non-motorist. The conversation continued about work-related activities. On return to the office, the co-worker parked his vehicle a short distance away from the GMC. The driver and the co-worker again walked past the front of the parked GMC and entered the office building. After his return, the driver and his wife conversed on the telephone, however, according to the police, the conversation did not involve discussion of the non-motorist.

At 1650 hours, another co-worker walked out of the office building and walked along the left side of the parked GMC. He entered his vehicle and left the parking lot en route to his destination. As he was leaving the parking lot, this co-worker called the receptionist at the office building and asked her to check the GMC as he noticed what appeared to be a jacket or a doll in the GMC. The receptionist immediately exited the building and observed the non-motorist in the CRS. **Figure 6** is an interior view of the CRS within the GMC. She ran back into the building and yelled for the driver. He immediately exited the building, opened the doors and removed the non-motorist from the GMC. The non-motorist was unconscious with discoloration of the exposed skin and skin slippage.

Figure 6. Interior view of the position of the CRS within the GMC.

Post-Incident

The driver carried the non-motorist into the office building. A co-worker received the non-motorist from the driver as the driver began to lose his composure. The T-shirt was removed from the non-motorist and Cardio-Pulmonary Resuscitation (CPR) efforts were initiated. The emergency response system was called to report the incident and request Emergency Medical Services (EMS). Paramedics arrived to the site within minutes of the call and continued the CPR efforts. They evaluated the condition of the non-motorist and determined that continuation of CPR was not required as he was deceased. The non-motorist was placed in the ambulance while the EMS waited for the arrival of the police.

The police conducted their on-site investigation. The investigation involved obtaining witness statements and photographing the incident site, the GMC, and documenting the position of the

vehicle in relation to its heading with respect to north. The GMC was subsequently towed from the incident site to the impound facility of the police department. The driver was transported to a local hospital for evaluation. He was subsequently transferred to the police station for a detailed interview. The driver was later transported back to the local hospital for observation. The police investigation also included a search of the driver's residence, interviews with neighbors, co-workers and his wife.

An autopsy was performed on the body of the non-motorist. Several abrasions were noted to the back and to the extremities. There was no trauma noted to the body. Several areas of skin slippage were noted to the exposed tissue of the extremities. The cause of death was hyperthermia.

Police Reconstruction

The investigating officers conducted a temperature study of the GMC over a five day period to determine the approximate interior temperature of the GMC through the daytime hours. This was accomplished by parking the GMC in the same 285 degree heading that the vehicle was parked in at the time if the incident. An analog thermometer was clipped to the mid aspect of the CRS with the dial facing the left rear door window. The windows and the sunroof of the GMC were opened to positions noted at the time of the incident. Key temperatures throughout this study were as follows:

Time	Outside Temperature	GMC Interior Temperature
Day - 1 0900 Hours	23.3 degrees C (74 degrees F)	21.1 degrees C (70 degrees F)
Day - 1 1500 Hours	31.6 degrees C (89 degrees F)	49.4 degrees F (121 degrees F)
Day - 2 0900 Hours	26.6 degrees C (80 degrees F)	26.6 degrees C (80 degrees F)
Day - 2 1500 hours	33.3 degrees C (92 degrees F)	55.5 degrees C (132 degrees F)

The following figures **(Figures 7 and 8)** depict the low and high temperatures recorded above.

Figure 7. Lowest temperature recorded during the police reconstruction of the interior temperatures within the GMC.

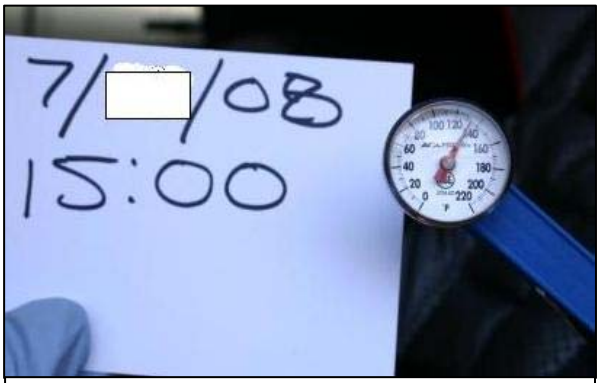

Figure 8. Highest temperature recorded during the police reconstruction of the interior temperatures within the GMC.

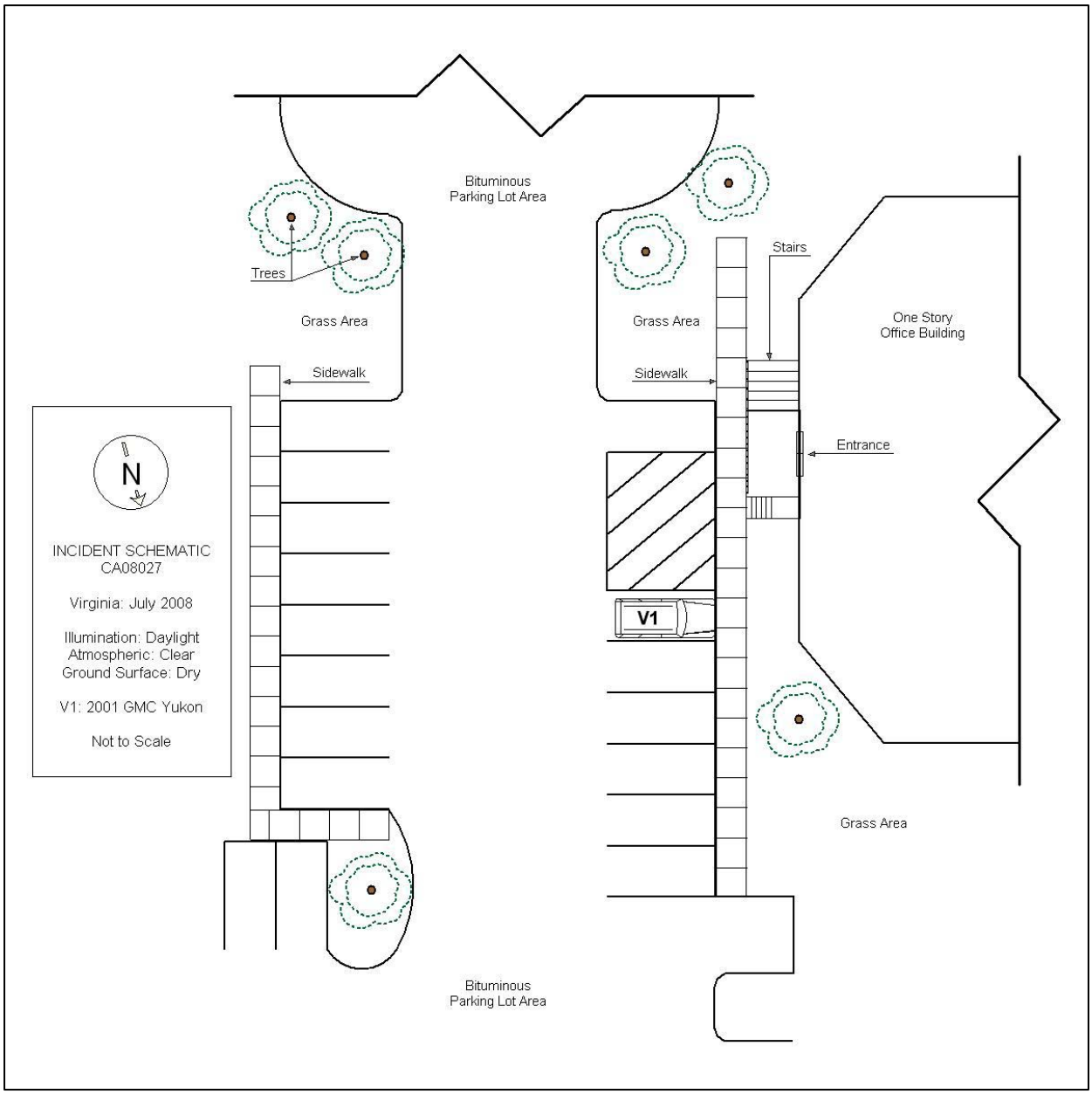

Figure 9. Incident Schematic

Attachment A:

Not-In-Traffic Surveillance Forms

Not Applicable ☐

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 8 0 2 7

IDENTIFICATION

2. Date of Crash 0 7 / X X / 0 8

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 +/- 0 0 0 %

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 +/- 0 0 0 %

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 ☐

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

VEHICLE FORM

Special Crash Investigations
Not In Traffic Surveillance

1. Case Number C A 0 8 0 2 7

VEHICLE IDENTIFICATION

2. VIN 1 G K E K 1 3 T 3 1 J X X X X X X

3. Model Year 2 0 0 1

4. Vehicle Make (specify): GMC

5. Vehicle Model (specify): YUKON XLT

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 P265/70R16

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	
Front Middle	0	☐	☐ Full Down / ☐ Mid / ☐ Full Up	
Front Right	1	☑	☑ Full Down / ☐ Mid / ☐ Full Up	
2nd Left	7	☐	☐ Full Down / ☐ Mid / ☐ Full Up	
2nd Middle	7	☐	☐ Full Down / ☐ Mid / ☐ Full Up	
2nd Right	7	☐	☐ Full Down / ☐ Mid / ☐ Full Up	
3rd Left	99	☐	☐ Full Down / ☐ Mid / ☐ Full Up	
3rd Middle	99	☐	☐ Full Down / ☐ Mid / ☐ Full Up	
3rd Right	99	☐	☐ 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	NOT APPLICABLE
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

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 8 0 2 7

PARKING AID PRESENCE

2. Type of backing/parking aid present

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

CAMERA INFORMATION

Specify field of view measurements on diagram

3. System make/model

_____

4. Video monitor type

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

5. Video display size _____ cm
(Diagonal)

6. Camera location

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

7. Video image quality under scene lighting conditions

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

8. Was the camera functioning properly

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

ULTRASONIC/RADAR SENSOR

Specify object detection range on diagram

9. System make/model

_____

10. Auditory warning illumination

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

11. Number of sensors ____

12. Sensor locations
(Select all that apply)

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

13. Was warning system functioning properly

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

14. Did driver react to warning

- ☐ No sensor present
- ☐ Yes
- ☐ No
- ☐ Unknown
- ☐ Sensor present, did not sound

15. Did driver report common false warnings

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

Not Applicable

No Driver Present ☐

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 8 0 2 7

DRIVER PROFILE

2. Driver's Age 4 9
99 = Unknown

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

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

5. Driver's Weight 9 9 9 kg
999 = Unknown

6. Driver eyewear worn
(Select all that apply)
- ☐ None
- ☐ Eyeglasses
- ☐ Sunglasses
- ☐ Contacts
- ☉ Unknown

7. Driver vision deficiency condition
(Select all that apply)
- ☐ None
- ☐ Near sighted
- ☐ Far sighted
- ☐ Astigmatism
- ☐ Other (specify) _____
- ☉ Unknown

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

DRIVER ACTIONS

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

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

N/A

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

Special Crash Investigations
Not In Traffic Surveillance

1. Case Number
C A 0 8 0 2 7

NON-MOTORIST PROFILE

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

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

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

5. Non-motorist's Weight
999 = Unknown
9 9 9 kg

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) in CRS
☐ 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): Restrained in CRS
☐ Unknown

12. Non-motorist approach relative to rear of vehicle
☐ Stationary
☐ From left
☐ From right
☐ From behind
☉ Other (specify): Restrained in CRS
☐ 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): Rest.in CRS
☐ 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) Rest. in CRS
☐ 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): _____	N/A			
	Unknown	White	Natural	Soft	Light
UPPER BODY	Short Sleeve				
	Long Sleeve				
	Light Jacket				
	Heavy Jacket				
	Other (Specify): _____				
	Unknown				
LOWER BODY	Shorts	Orange	Synthetic	Soft	Light
	Pants				
	Shoes	Unknown	Unknown	Unknown	Unknown
	Other (specify): _____	Diaper			
	Unknown				