CRASH DATA RESEARCH CENTER
Calspan Corporation
Buffalo, NY 14225

NOT-IN-TRAFFIC SURVEILLANCE
CALSPAN ON-SITE FRONT OVER INVESTIGATION

SCI CASE NO: CA09039

VEHICLE: 2005 CHRYSLER PACIFICA
LOCATION: CONNECTICUT
INCIDENT DATE: JUNE, 2009

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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An investigation of the 2005 Chrysler Pacifica involved in a front over incident with an 11-year old non-motorist.

16. Abstract

This on-site investigation focused on the circumstances surrounding the serious injuries sustained by an 11-year old female child who was injured during a front over incident in the driveway of her home. The child was struck by the front of a 2005 Chrysler Pacifica driven by her mother. The child was sitting in the driveway working on an arts and craft project at the time of the incident. The driver was returning home from a work related event and ascended the positive grade of the driveway toward a paved parking area located immediately outside of the garage. The center aspect of the Pacifica's front plane struck the non-motorist and knocked her to the ground. The forward undercarriage of the Pacifica then overrode the child as the vehicle came to a controlled stop. The driver stopped and exited the vehicle not knowing the front over incident had occurred.

The driver, alerted by the child's screaming/crying for help, knelt down and realized the child was under the vehicle. The child was located along the centerline of the vehicle near the front axle. She was not struck by a tire. The driver's husband and a neighbor responded to the driveway and were able to raise the vehicle sufficiently for the child to crawl to the front left corner. Her mother was able to then assist her out from under the Chrysler. The child sustained multiple abrasions and contusions, a fractured pelvis and a concussion. She was hospitalized for a total of five days (including two days in the Intensive Care Unit for observation) and was expected to fully recover from her injuries.

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NOT-IN-TRAFFIC SURVEILLANCE
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BACKGROUND

This on-site investigation focused on the circumstances surrounding the serious injuries sustained by an 11-year old female child who was injured during a front over incident in the driveway of her home. The child was struck by the front of a 2005 Chrysler Pacifica driven by her mother. The child was sitting in the driveway working on an arts and craft project at the time of the incident. The driver was returning home from a work related event and ascended the positive grade of the driveway toward a paved parking area located immediately outside of the garage. The center aspect of the Pacifica's front plane struck the non-motorist and knocked her to the ground. The forward undercarriage of the Pacifica then overrode the child as the vehicle came to a controlled stop. The driver stopped and exited the vehicle not knowing the front over incident had occurred (**Figure 1**).

Figure 1: Approximate stopped position of the Chrysler reconstructed during the SCI inspection.

The driver, alerted by the child's screaming/crying for help, knelt down and realized the child was under the vehicle. The child was located along the centerline of the vehicle near the front axle. She was not struck by a tire. The driver's husband and a neighbor responded to the driveway and were able to raise the vehicle sufficiently for the child to crawl to the front left corner. Her mother was able to then assist her out from under the Chrysler. The child sustained multiple abrasions and contusions, a fractured pelvis and a concussion. She was hospitalized for a total of five days (including two days in the Intensive Care Unit for observation) and was expected to fully recover from her injuries.

The Crash Investigation Division (CID) of the NHTSA received notification of this front-over incident on June 12, 2009 through an internet news search. The CID forwarded the article to the Calspan Special Crash Investigations (SCI) team and Calspan SCI initiated a follow-up investigation. The driver was contacted and cooperation was established on June 17, 2009 for an on-site inspection of the vehicle and incident site. The field work consisted of an inspection and visibility measurements of the Chrysler Pacifica, an inspection of the incident site and a detailed interview of the driver. The on-site inspection took place June 22, 2009.

SUMMARY

Vehicle Data

The 2005 Chrysler Pacifica Touring Edition was identified by a Vehicle Identification Number (VIN): 2C4GM68435R (production sequence deleted). The Pacifica was manufactured in May 2004 and was purchased new by the driver. It was her primary means of transportation. The vehicle was powered by a 3.5 liter V6 engine linked to a five-speed automatic transmission. The tires were Goodyear Wrangler P235/65R17 mounted on OEM alloy wheels and were the proper size as recommended by the vehicle manufacturer. The window glazing consisted of an AS1 laminated windshield, AS2 front glazing, and AS3 second row, rear and backlight glazing. There were no visual obstructions and the glazing clarity was clear. The interior consisted of front bucket seats with adjustable head restraints. The front head restraints were in the full up position. The second row consisted of bucket seats with folding backs and adjustable head restraints. The second row head restraints were in the full up position. The third row seat was folded down.

The vertical clearance heights for various components measured from the ground are listed in the following table:

Component	Clearance Height
Height of the hood face	89 cm (35.0 in)
Top of front bumper	57 cm (22.5 in)
Bottom of license plate bracket	30 cm (12 in)
Bottom of front bumper	27 cm (10.5 in)
Lowest edge of front fascia	20 cm (8.0 in)
Oil pan	22 cm (8.5in)
Cross member at the front axle location	15 cm (6.0 in)
Engine cradle	14 cm (5.5 in)
Height of the backlight	121 cm (47.5 in)
Top of rear bumper	64 cm (25 in)
Bottom of rear bumper	33 cm (13 in)
Beltline – Row 1	110 cm (43. 3 in)
Beltline – Row 2	115 cm (45.3 in)
Beltline – Row 3	123 cm (48.3 in)

Note: the height of the Belt line was not level. The height was measured at the mid aspect of each Row.

Incident Site

The incident occurred during the daylight hours of June 2009 in the driveway of a private residence. At the time of the incident, the weather conditions were clear and dry. The single-family dwelling was located on the west side of a two lane north/south road. The house and two-bay attached garage were located 19 m (62 ft) west of the road and approximately 3.7 m (12 ft) above the level of the road. The asphalt driveway was oriented east/west and had a positive 20 percent (+20%) grade. Trees and landscaping bordered both sides of the driveway. **Figure 2** is a view looking southwestward from the road toward the property. **Figure 3** is a west view along the driveway. The driveway had an irregular width. It measured 6.1 m (20 ft) in width at the road edge, tapered to 3.6 m (11.8 ft) and then flared to 8.5 m (28 ft) at its crest. The crest of the

driveway was 16 m (52 ft) from the road and had a positive fifteen percent (+15%) grade. A trapezoidal parking area was located at the top of the driveway adjacent to the garage. This area measured approximately 9 x 9.8 m (30 x 32 ft) and had a positive seven percent (+7%) grade. The total length of the paved area (east to west) measured 25 m (82 ft).

Figure 2: Southwest view toward the property.

Figure 3: West view along the driveway.

Driver Data

The driver of the Chrysler Pacifica was a 40-year old female with a reported height and weight of 170 cm (67 in) and 64 kg (140 lb). She did not require prescription eyeglasses and recalled that she may have been wearing sunglasses. The driver was returning to her residence from a work-related event and was not engaged in any non-driving activities. The windows of the Pacifica were closed.

Non-Motorist Data

The non-motorist was an 11-year old female with a reported height and weight of 147 cm (58 in) and 31 kg (68 lb). She was wearing soccer style shorts and a jersey without socks or shoes. The non-motorist was sitting in the center of the driveway, approximately 18 m (60 ft) from the road edge, working on an arts and craft project. Reportedly, she was carving a figurine out of a bar of soap. She was sitting cross-legged with a metal bowl in her lap to catch the soap shavings. The driver/mother indicated that this was the first time she could ever recall her daughter sitting in the driveway doing this type of activity.

Incident Sequence

Pre-Incident

A schematic of the incident is attached to the end of this narrative report, **Figure 13**. The driver of the Chrysler approached the residence from the north, traveling south on the roadway. She indicated that this was her typical path of travel and never approached the driveway from the south. She was returning home from a work-related event and was not rushed or in a hurry. The non-motorist was sitting in the driveway approximately 18 m (60 ft) from the road edge. A non-contact vehicle was located on the left side of the parking area at the first garage bay.

The visibility from the road to the parking area was partially obstructed by trees and landscaping along the vehicle's path of travel. **Figures 4 and 5** are views toward the driveway on the approach path. The driver turned right entered the driveway and began to ascend the grade. The driver estimated the speed of the vehicle was less than 8 km/h (5 mph). **Figure 6** is a view from the base of the driveway with the target placed at the approximate position of the non-motorist.

Figure 4: View toward the residence from the approach path.

Figure 5: View toward the driveway from the approach path.

Figure 6: View from the base of the driveway with the 71 cm (28 in) target at the non-motorist location.

Incident

The front plane of the Chrysler struck the non-motorist and knocked her to the ground. The front undercarriage of the vehicle overrode her as it continued forward. The driver applied the brakes and brought the Chrysler to a controlled stop without knowing that the front over incident had occurred. The forward undercarriage of the vehicle displaced the non-motorist forward along the asphalt surface approximately 4.5 m (15 ft). There was no residual contact damage to the Pacifica that could be related to the incident.

Post-Incident

The driver recalled hearing a "clank" as she stopped. She thought she had run-over one of the children's scooters. She exited the vehicle to the sounds of the non-motorist screaming/crying for help. She looked forward and aft of the vehicle trying to understand what the problem was. She then dropped to her knees, looked under the vehicle, and realized the front over incident had occurred. The non-motorist was at the approximate centerline of the vehicle near the front axle location. She was on her back with her legs in a contorted position. The "clank" the driver recalled was the sound of the metal bowl in the child's lap falling to the ground during the incident. An area of dissolved soap identified the area of the incident; the displacement of the non-motorist. The area was elliptical in shape and measured 4.5 m x 1.7 m (14.8 ft x 5.6 ft). **Figure 7** is view of the area of dissolved soap taken from the perspective of the vehicle's path of travel. The reflective target depicted the pre-incident location of the non-motorist.

Figure 7: View of the dispersed, dissolved soap; the area of the incident.

A neighbor and the driver's husband responded to the driveway. They attempted to lift the vehicle by the left front wheel opening and front bumper and were able to sufficiently raise the vehicle so that the non-motorist could crawl to the front left corner. The driver then assisted her out from under the vehicle by pulling at her shoulders. The non-motorist remained on the ground forward of the vehicle until the police and ambulance personnel responded.

The child was transported by ground ambulance and hospitalized for a five day period. The first two days of hospitalization were in the Intensive Care Unit (ICU) for observation. The non-motorist sustained multiple whole body abrasions and contusions to her back and lower extremities, a fractured pelvis and a concussion.

Front Visibility

The driver of the Pacifica parked the vehicle on the road adjacent to the driveway and its front visibility was measured during the SCI inspection. This visibility assessment was measured on level ground and on the slope of the driveway for comparison. Five 71 cm (28 in) tall targets were used to identify the location of the front blind zone around the vehicle. The targets were

located outboard the left mirror, at the left front, forward centerline, at the right front and outboard the right mirror. The driver was asked when she could first identify the targets while seated in a normal driving position. Her seated eye height was 157 cm (52 in) above the ground. **Figure 8** is a driver view through the windshield to the centerline target. **Figures 9 and 10** are exterior views depicting the forward blind zone of the Pacifica on level ground. The target locations were then measured with respect to the vehicle. On level ground, the longitudinal distance from the front bumper fascia to the centerline target measured 145 cm (57.2 in).

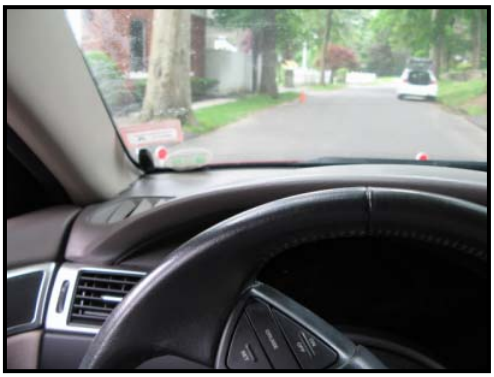

Figure 8: Driver view to the forward visibility targets.

The Chrysler was then moved, parked near the crest of the driveway, and the measurements repeated. The front plane of the vehicle was located 14.6 m (48 ft) from the end of the driveway. **Figure 11** is an exterior view depicting the forward blind zone at the crest of the driveway. Parked on the sloped driveway, the bumper to centerline target distance measured 285 cm (112.2 in). **Figure 12** attached to the end of this report is a scaled overhead visibility schematic depicting the blind zone forward of the driver based in the measured target locations.

Figure 9: Left front oblique view of the forward blind zone (level pavement).

Figure 10: Right exterior view of the forward blind zone (level pavement).

Figure 11: Left exterior view of the forward blind zone at the driveway crest.

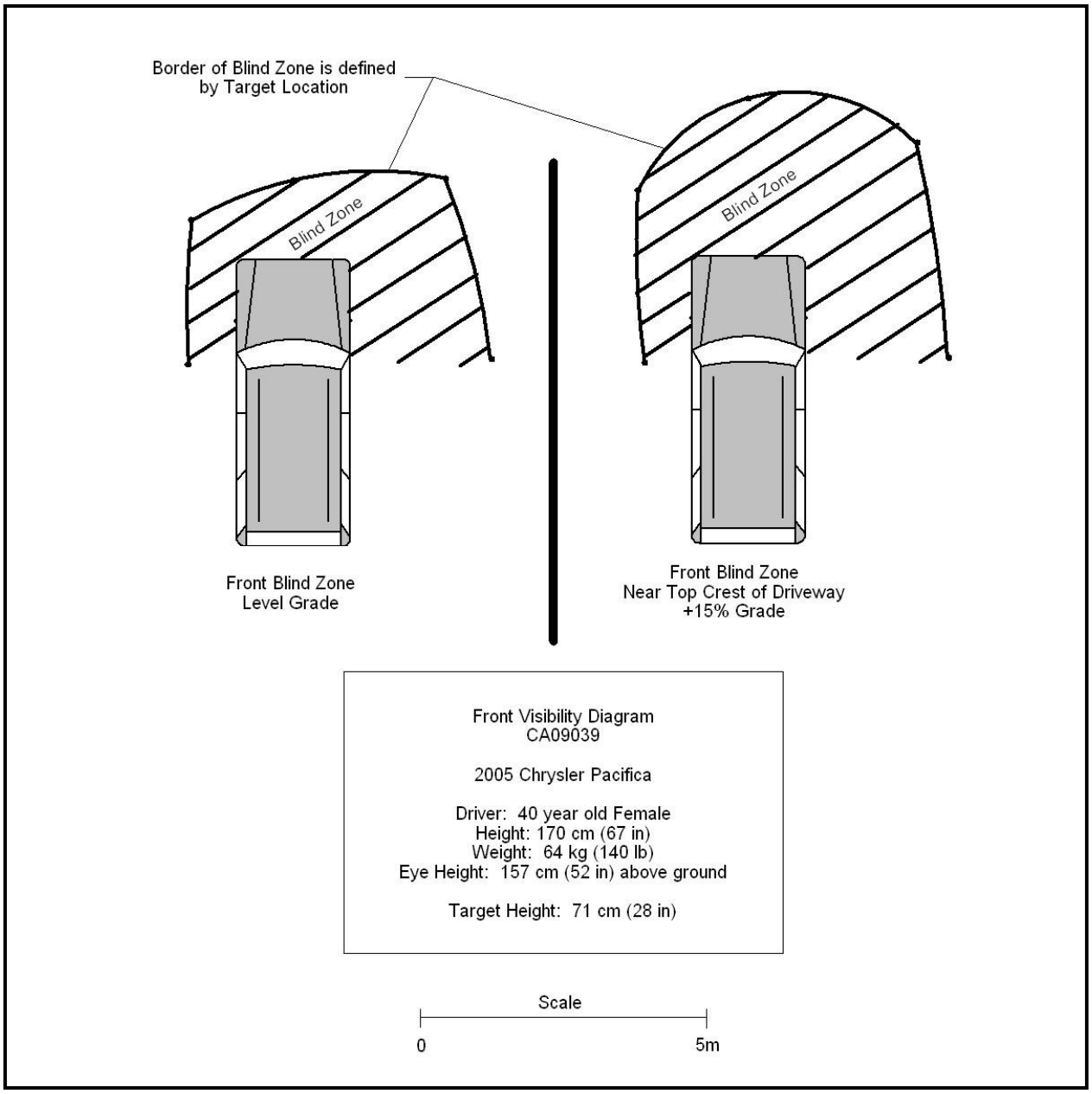

Figure 12: Overhead front visibility diagram.

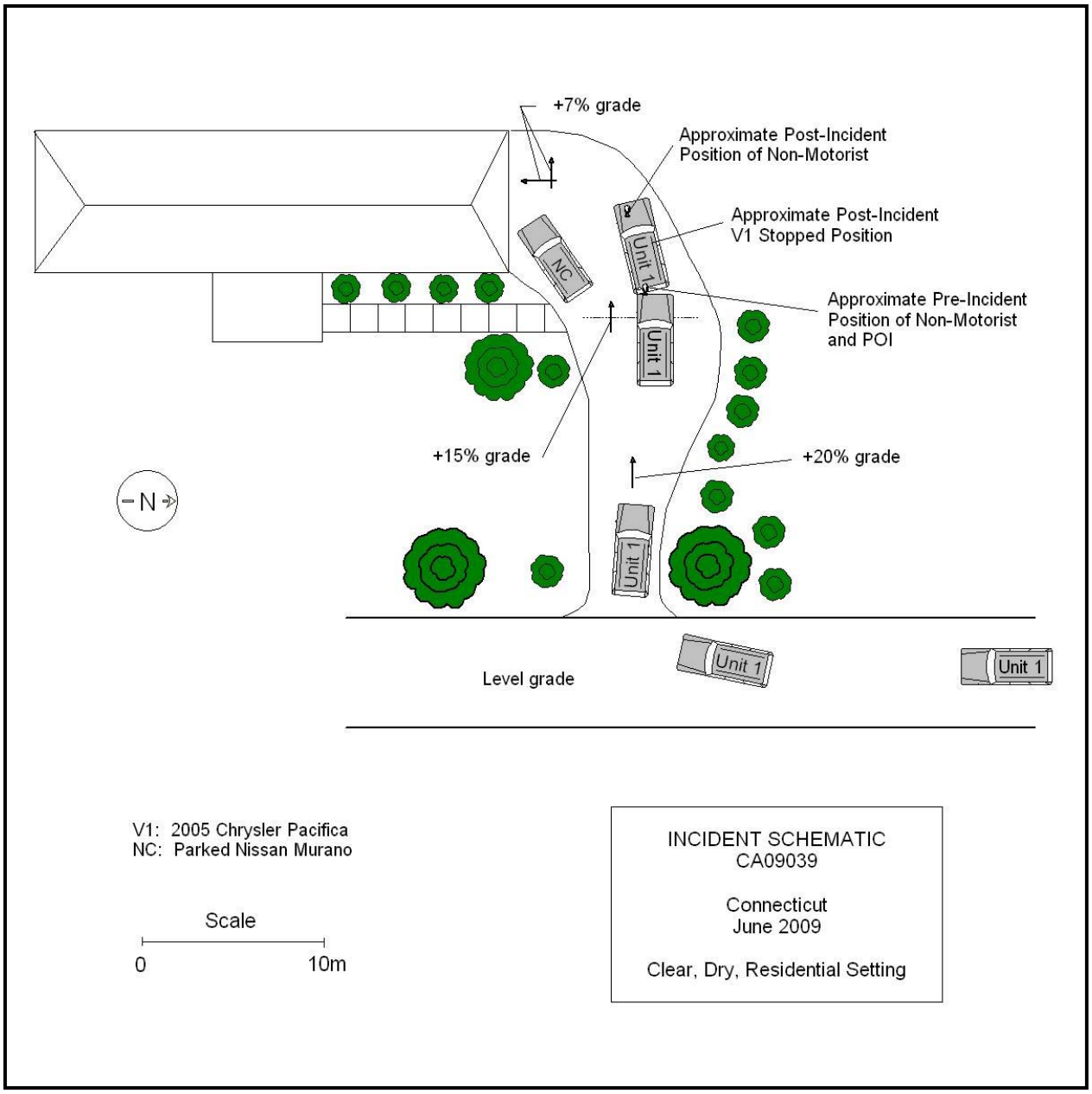

Figure 13: Incident schematic.

Attachment A

Not-In-Traffic Surveillance 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 9 0 3 9

IDENTIFICATION

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

3. Time of Crash 1 2 4 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 (+ / -) 9 9 9 %

12. Estimated distance from parked position to impact

9 9 9 . 9 m

13. Estimated speed at impact 0 0 8 kmph

14. Grade at impact (+/ -) + 1 5 %

15. Estimated distance from impact to vehicle final rest

0 0 4 . 5 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 9 0 3 9

VEHICLE IDENTIFICATION

2. VIN 2 C 4 G M 6 8 4 3 5 R X X X X X X

3. Model Year 2 0 0 5

4. Vehicle Make (specify): CHRYSLER

5. Vehicle Model (specify): PACIFICA

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 P235/65R17

7. LF Tire Size P235/65R17

8. LR Tire Size P235/65R17

9. RF Tire Size P235/65R17

10. RR Tire Size P235/65R17

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	2	☑	☐ ☐ ☑ Full Down / Mid / Full Up	
2nd Middle	0	☐	☐ ☐ ☐ Full Down / Mid / Full Up	
2nd Right	2	☑	☐ ☐ ☑ Full Down / Mid / Full Up	
3rd Left	7	☐	☐ ☐ ☐ Full Down / Mid / Full Up	
3rd Middle	0	☐	☐ ☐ ☐ Full Down / Mid / Full Up	
3rd Right	7	☐	☐ ☐ ☐ 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		110	BELTLINE REPORTED AT ROW 1
Top of trunk/tailgate		121	
Bottom of bumper		27	BOTTOM OF BUMPER IS REPORTED FOR THE FRONT BUMPER
Trailer hitch (if applicable)		N/A	
Undercarriage			SEE REPORT FOR ADDITIONAL MEASUREMENTS
	Sway bar	N/A	
	Axle	N/A	
	Differential	N/A	
	Other (specify): _____	N/A	
Sensor Height (if equipped)		N/A	
Camera Height (if equipped)		N/A	

Not Applicable ☑

Undo Not Applicable

Reset Values

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Back Up / Parking Aid Form

Special Crash Investigations
Not In Traffic Surveillance

1. Case Number

C A 0 9 0 3 9

PARKING AID PRESENCE

2. Type of backing/parking aid present

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

CAMERA INFORMATION

Specify field of view measurements on diagram

3. System make/model

_____

4. Video monitor type

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

5. Video display size _____ cm
(Diagonal)

6. Camera location

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

7. Video image quality under scene lighting conditions

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

8. Was the camera functioning properly

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

ULTRASONIC/RADAR SENSOR

Specify object detection range on diagram

9. System make/model

_____

10. Auditory warning illumination

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

11. Number of sensors ____

12. Sensor locations
(Select all that apply)

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

13. Was warning system functioning properly

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

14. Did driver react to warning

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

15. Did driver report common false warnings

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

Not Applicable

No Driver Present ☐

Reset Values

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DRIVER FORM

Special Crash Investigations
Not In Traffic Surveillance

1. Case Number

C A 0 9 0 3 9

DRIVER PROFILE

2. Driver's Age 4 0
99 = Unknown

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

4. Driver's Height 1 7 0 cm
999 = Unknown

5. Driver's Weight 0 6 4 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:

Returning to driveway from a work related event

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
C A 0 9 0 3 9

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 1 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): N/A
☐ 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) Craftproject
☐ Unknown

15. Were any other Non-motorists present?
(Select all that apply)

☉ Alone
☐ One adult present
☐ One other child present
☐ Multiple adults present
☐ Multiple children present
☐ Unknown

NON MOTORIST CLOTHING

NOTES:

- Specify Color, Fabric and Texture/Weight for outermost layer only
- Indicate "*NONE*" if applicable
- Available codes:

Colors		***Fabrics***	***Textures***	***Weights***
Black	Charcoal gray	Natural	Soft	Heavy
Lt gray/silver	Brown	Synthetic	Slick	Medium
Gold/tan	Purple	Blend	Coarse	Light
Dark blue	Light blue			
Dark green	Light green			
Maroon	Red			
Orange	Yellow			
White	Other (specify)			
Pink				

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