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**Special Crash Investigations:
Remote Hyperthermia Fatality
Investigation;
Vehicle: 2012 Honda Pilot;
Location: Delaware;
Incident Date: July 2019**

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16. Abstract This report documents the circumstances surrounding the hyperthermia-related fatality of a 10-month-old female who was left unattended in a vehicle for 7.5 hours by her 37-year-old caregiver/father. The mother placed her in a rear-facing child restraint system (CRS) in the second row left position of a 2012 Honda Pilot at shortly after 0700 hours. The father transported the mother to her work and then dropped off the other children at different daycare facilities. He was then supposed to drop the infant off at daycare, which she attended 3 to 4 days a week. Instead, he drove home, parked the Honda at curbside, exited and locked the vehicle with the windows closed, and left the infant in the rear-facing CRS. Approximately 7.25 hours later, his wife (mother of the infant) called to tell him to pick up the infant at daycare and her from her workplace. He drove to his wife's work place, arriving less than 10 minutes later. The mother observed the infant unresponsive and sweaty in the CRS. She got in the driver's seat and the father got in the front passenger seat holding the infant. They drove to the emergency room of a level 1 trauma center and carried the infant into the emergency room. Hospital staff attempted to resuscitate the infant; however, they pronounced her deceased within 0.5 hours.			
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Special Crash Investigations
Remote Hyperthermia Fatality Investigation
Case Number: CR21002
Vehicle: 2012 Honda Pilot
Location: Delaware
Incident Date: July 2019

Background

This report documents the circumstances surrounding the hyperthermia-related fatality of a 10-month-old female who was left unattended in a vehicle for 7.5 hours by her 37-year-old caregiver/father. This family consisted of the parents and seven children ranging in ages from 10 months to 10 years. The mother of the infant placed her in a rear-facing child restraint system (CRS) in the second row left position of a 2012 Honda Pilot (Figure 1) shortly after 0700 hours. The remaining children and the father entered the Honda and departed the residence less than 5 minutes later. The normal routine was for the father to transport the mother to her work and then drop the children off at three different daycare facilities. His last stop was to drop the 10-month-old off at daycare, which she attended 3 to 4 days a week.

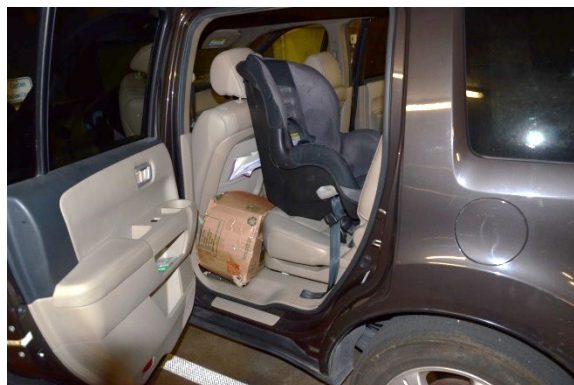


Figure 1. CRS and position of the infant in the 2012 Honda Pilot

However on this day he returned to the residence, parked the Honda at curbside, exited and locked the vehicle with the windows closed, leaving the infant in the rear-facing CRS. The father entered the residence and was alone, according to the police report. Approximately 7.25 hours later, his wife (mother of the infant) called to tell him to pick her up at her workplace and to pick up the infant from daycare. He drove to his wife's workplace, arriving less than 10 minutes later. She walked to the vehicle and opened the left rear door to check on the status of the infant. She observed the infant unresponsive and sweaty in the CRS. The father exited the vehicle, removed the infant from the CRS, and attempted cardiopulmonary resuscitation. The mother got in the driver's seat and the father got in the passenger seat holding the infant. They drove to the emergency room of a level 1 trauma center and carried the infant into the ER. Hospital staff attempted to resuscitate the infant; however, they pronounced her deceased within 0.5 hours. Her body temperature was 42.7 °C (109 °F).

The police were called to the hospital to investigate the suspicious death of the infant. The Honda was towed to police impound. An autopsy was performed on the infant and the cause of death was related to hyperthermia.

Following the police investigation and in consultation with the district attorney, charges of murder by abuse or neglect in the second degree and falsifying statements to police were filed against the father. He subsequently pleaded guilty to these charges and was sentenced to 1 year of incarceration with 4 years of supervised release.

The incident was identified by the National Highway Traffic Safety Administration and assigned to the Special Crash Investigations (SCI) group for further research in January 2021. The SCI team contacted the police agency and interviewed the investigating police officer. A copy of the incident report and images of the vehicle and incident site were obtained. These data provided the basis for this report.

Summary

Incident Site

This incident occurred over 7.5 hours during the morning and afternoon. The Honda was parked at the curbside of a one-way city street in front of the family residence (Figure 2). The city street was oriented in a north/south direction and was surfaced with asphalt and consisted of two lanes with alternate curbside parking. The one-way travel direction was southerly. Located immediately beyond the pavement edge was a concrete sidewalk that was approximately 3 m (10 ft) in width that terminated at the residence. A single small diameter tree was located in the sidewalk area within 0.6 m (2.0 ft) of the pavement edge. This tree did provide minimal shade to the Honda. The row houses were two story buildings with flat roofs that also provided shade to the parked position of the Honda as observed in satellite imagery. The Honda was parked adjacent to the east side of the street facing in a southerly direction.



Figure 2. Aerial view of the incident site. Image obtained from Google Maps ©2022 Maxar Technologies, US Geological Survey Map Data.

Weather Data

The weather data for this incident were obtained from the National Weather Service. Sunrise occurred at 0543 hours with sunset at 2033 hours. The peak temperature for the day was 30 °C (86 °F) recorded at 1251 hours with 55 percent humidity. The temperatures, humidity, calculated heat index, and conditions for this incident are provided in the following table.

Time (2400 clock)	Temperature Degrees C (F)	Percent Humidity	Heat Index (Calculated)	Wind Direction/Velocity	Conditions
0651	22 (72)	87	23 (73)	NW 10 km/h (6 mph)	Fair
0751	24 (76)	76	25 (77)	NW 8 km/h (5 mph)	Fair
0851	26 (79)	69	27 (81)	NNW 8 km/h (5 mph)	Fair
0951	27 (80)	69	28 (83)	Calm (0 mph)	Fair
1051	28 (83)	63	30 (87)	NW 10 km/h (6 mph)	Fair
1151	29 (85)	57	31 (88)	Calm (0 mph)	Fair
1251	30 (86)	55	32 (89)	Variable 10 km/h (6 mph)	Fair
1351	28 (83)	63	30 (87)	SSE 13 km/h (8 mph)	Mostly cloudy
1451	29 (85)	57	31 (87)	SSW 8 km/h (5 mph)	Cloudy

Time (2400 clock)	Temperature Degrees C (F)	Percent Humidity	Heat Index (Calculated)	Wind Direction/Velocity	Conditions
1551	29 (85)	57	31 (87)	WSW 11 km/h (7 mph)	Fair
1651	29 (84)	58	31 (87)	WSW 13 km/h (8 mph)	Mostly cloudy
1751	28 (83)	56	29 (85)	SW 11 km/h (7 mph)	Partly cloudy

Vehicle Information

The vehicle was a 2012 Honda Pilot 4-door SUV (Figure 3). The exterior color was bronze (dark amber metallic). The windows were original with standard tint on the front door windows and deep tint on the second row doors, rear quarter windows, and back window. At the time of this incident, all windows and doors were closed. The Honda had three rows of seating (2/3/3) with eight occupant positions. The interior had beige leather with black trim for the upper door panels and the top of the instrument panel (Figure 4). The front row had two bucket seats with adjustable head restraints and a fixed center console. The driver's head restraint was adjusted approximately 3 cm (1.2 in) above the seatback. The front right head restraint was in the full-down position. The second and third row seats had forward-folding seatbacks and adjustable head restraints. All seatbacks were upright to facilitate occupant seating. The rear-facing CRS (make and model unknown) was installed in the second row left position. It was removed during the police investigation and loosely repositioned as shown in the police image.



Figure 3. Exterior view of the Honda. Image provided by the investigating police officer.



Figure 4. Front row interior of the Honda. Image provided by the investigating police officer.

The four door windows were power-activated. The master switch console was located on the forward aspect of the driver's door armrest and was horizontally positioned. The switches required down pressure to open and a vertical pull force to close. The front row right and second row doors each had a singular switch of the same configuration.

The exterior door handles were horizontally mounted, hinged at the forward aspect. A pocket was formed into the exterior door panel to facilitate finger grip. The interior door release levers were flush-mounted in the upper forward aspect of the door panels. The levers were chrome, U-shaped, and hinged at the aft aspect. A shallow pocket was formed into the door panel to allow for finger grip of the lever. Located in the hinge portion of the lever was a locking lever. The lock lever rotated forward to a flush position when locked and rotated approximately 30 degrees rearward in the unlock position. Power locking was achieved by switches on the front door armrests or via the remote key fob. The father stated to police that when he arrived home in the morning, he exited the vehicle and locked the doors with the key fob. The infant was left forgotten in the vehicle with the windows closed and the doors locked.

Child Restraint System

The CRS was a convertible-type restraint (Figure 5), unknown make and model. The CRS was constructed of a molded plastic shell and a fabric cover. An integral five-point harness system provided restraint for the infant. The shoulder straps appeared to have been adjusted to the lower set of three slots. Based on the police image of the CRS and the adjusted position of the driver's seat, it appeared the CRS was installed in a more vertical position than the recommended 45-degree recline for the rear-facing position. It also appeared that the CRS was secured to the vehicle by the lower anchors of the LATCH system.

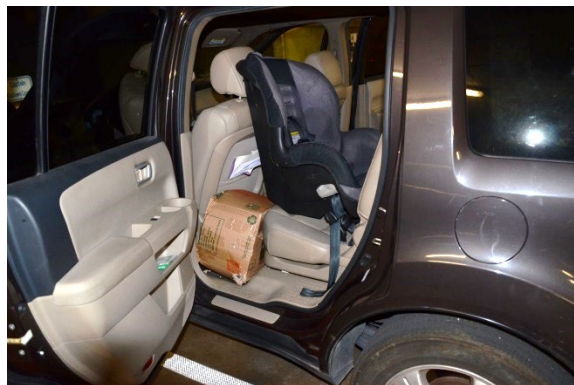


Figure 5. CRS in the second row left position of the Honda. Image provided by the investigating police officer.

Pre-Incident

The 37-year-old father and his wife were the parents of seven children, four females and three males, ranging from 10 months (infant) to 10 years. On the morning of the incident, the infant's father stated to the investigating police officer that he awoke between 0600 and 0615 hours. He and his wife got dressed and prepared the seven children for various daycare facilities. The mother had a steady daytime job; however, the father worked sporadically at a construction job and was not working at the time of this incident. The police obtained surveillance camera

documentation from several locations that provided a time history for this incident. The Honda was parked in front of the family residence at curbside as the row house did not have a driveway. A neighbor's security camera documented an adult leaving the residence and approaching the Honda shortly after 0700 hours. Based on police interviews, the mother placed the 10-month-old infant in the rear-facing CRS in the second row left position of the Honda. The other six children and the father entered the vehicle. The father was the driver and the mother was seated in the front row right position. It should be noted that the Honda was configured with eight designated seat positions and the rear-facing CRS was the only CRS in the vehicle. The security camera captured their departure from the residence less than 5 minutes later.

The father drove to the mother's workplace located approximately 8 km (5 mi) from their residence. A security camera captured their arrival at her workplace. The mother exited the vehicle and the father departed the location 1 minute later.

The next stop was to drop the three females (ages 7, 8, and 10 years) off at a daycare facility located approximately 20 km (12 mi) north of the mother's workplace. This trip involved expressway-type driving. A security camera captured the Honda's arrival about 20 minutes later. The father exited the vehicle and walked the three females to the daycare facility, leaving the other children in the vehicle. He returned to the Honda and departed the facility.

The father then drove approximately 8 km (5 mi) south to drop the three males off at a daycare provider. One of the males was police-reported as age 6, while the other two males were of unknown ages. The father arrived in the parking lot of the facility, dropped off the children, and departed within 5 minutes.

His next stop was to drop the infant off at a third daycare facility. This facility was located about 5 km (3 mi) from his last stop at the male children's daycare facility. For reasons unknown, the father forgot to drop off the infant and proceeded to his residence. Several neighborhood cameras captured the Honda traveling on the streets surrounding his residence. His neighbor's camera captured his arrival back home approximately 1 hour after his wife had placed the infant in the vehicle.

Incident

The father parked the vehicle at curbside facing south. The parked position of the Honda was approximately 3 m (10 ft) from the front of the residence. The father stated to police that he made sure the windows were closed and he locked the Honda with the remote key fob. He proceeded to the residence, entered, and remained until almost 7.5 hours later. The 10-month-old was left in the parked Honda.

About 7.25 hours later, the mother called the father to instruct him to first pick up the infant from daycare, and then pick her up at her workplace. He departed the residence and within about 15 minutes arrived at the mother's workplace.

A security camera captured her walking to the Honda and opening the left rear door to check on the infant. She immediately observed the infant slumped with her eyes partially closed and unresponsive. The father immediately exited the driver position of the Honda and removed the infant from the CRS. He claimed he attempted CPR activities. Within minutes, the mother got in the driver's seat and the father carried the infant to the right front position. The mother drove approximately 16 km (10 mi) to a level 1 trauma center for children and arrived within 20 minutes.

The father carried the infant into the emergency entrance where the parents were met by medical staff. The infant was immediately taken to a trauma bay where resuscitative efforts were initiated. Her body temperature was measured at 42.7 °C (109 °F). Resuscitative efforts were stopped and the infant was pronounced deceased less than 0.5 hours later.

Post-Incident

The hospital staff contacted the local police department to report the death of the infant with suspicious circumstances. Officers responded to the hospital and initiated their investigation. During the course of their investigation, the police interviewed the parents, hospital staff, daycare workers at all three involved facilities, and the older children of the family. Based on the interviews of the infant daycare staff, it was verified that she was not in attendance on the day of the incident.

The police towed the Honda to an impound lot, where they conducted an inspection of the vehicle. The CRS was found to be secure in the second row left position of the vehicle.

Following the police investigation and consultation with the district attorney, the father was charged with murder by abuse or neglect of a child in the second degree and providing false statement to the police. He pleaded guilty to the charges and was sentenced to 1 year of incarceration with 4 years of supervised release.

Daycare Facility

The investigating police officer interviewed the daycare staff. It was determined the infant was not a full-time (5-days/week) client of the daycare facility. Typically, the infant was dropped off 3 to 4 days a week, dependent on the work status/availability of the father. The daycare facility did not contact the parents on the day of this incident to check on the status of the infant. The facility did report the infant appeared to be healthy without evidence or knowledge of abuse or developmental issues.

Caregiver Data

The father of the 10-month-old infant was a 37-year-old male. He and his wife had a family consisting of seven children from 10 months to 10 years old. The infant was the youngest. The mother of the infant had a steady full-time job with regular daytime work hours. The father worked sporadically for a construction company as a laborer. The owner of the company reported that the father last worked for that company in December 2018. He periodically provided daycare for the infant, often 1 to 2 days a week. On this day, he forgot to drop the infant off at the daycare facility and left the infant restrained in the rear-facing CRS.

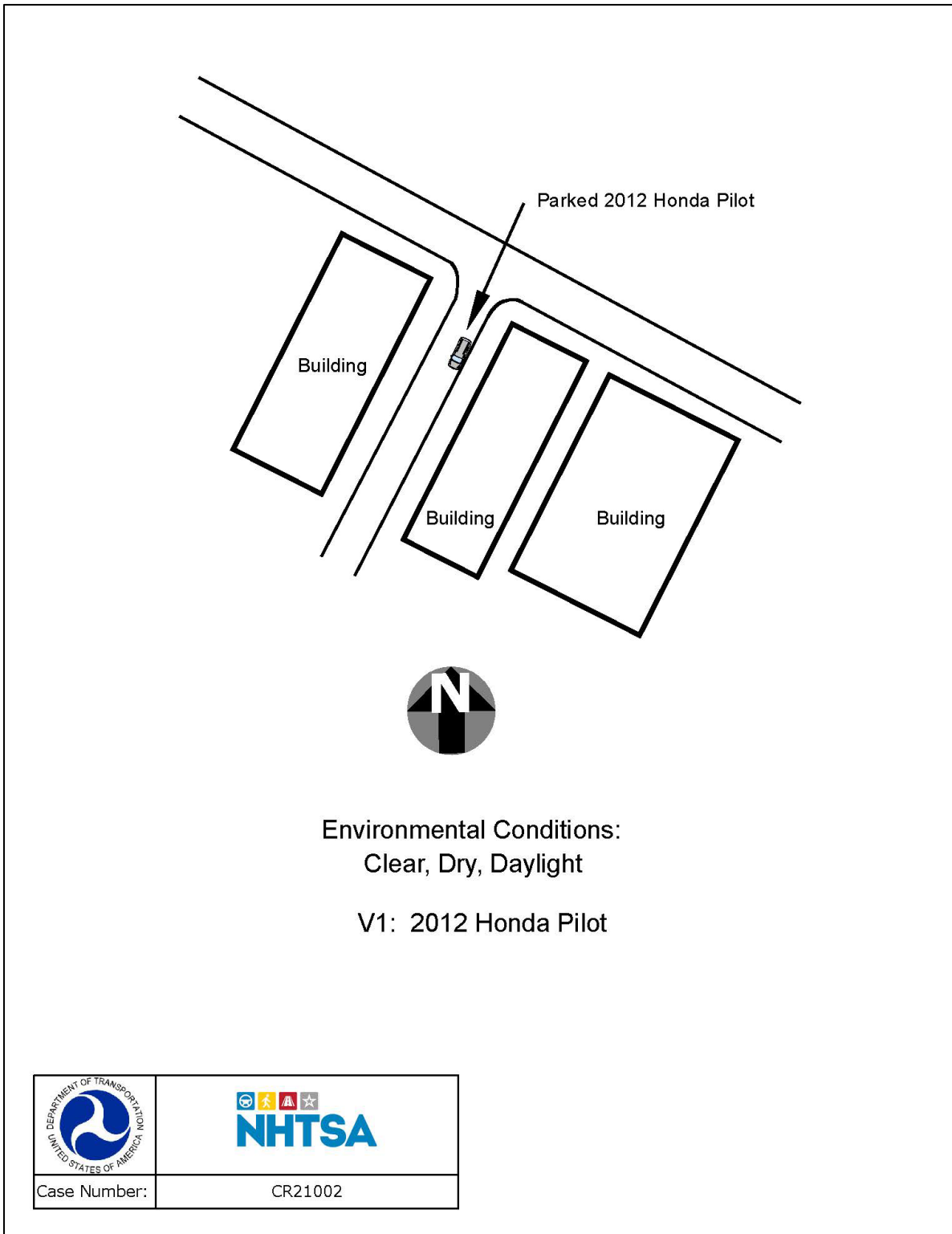
Following the discovery of the infant, the father was adamant that he dropped her off at daycare.

Infant Data

Age/sex:	10 months/female
Height:	Not reported
Weight:	Not reported
Seat type:	Bench seat with split forward folding seat backs
Restraint use:	Restrained in a rear-facing CRS
Transport from scene:	Personal vehicle to a local level 1 trauma center
Type of medical treatment:	Attempted resuscitation, pronounced deceased at the trauma facility

The infant was the youngest child of the father. She was reportedly in good health with no underlying illnesses or developmental issues. At the time of this incident, she was dressed in a one-piece (onesie) with short sleeves and a diaper. There were no leg coverings. The onesie snapped in the front to facilitate removal and diaper change. On arrival to the hospital, medical staff reported a body temperature of 42.7 °C (109 °F). Resuscitative efforts were attempted; however, the infant was determined to be deceased. An autopsy was performed and the cause of death was related to hyperthermia.

Incident Site Diagram



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