



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



DOT HS 813 046

July 2021

Special Crash Investigations: On-Site Air Bag Non-Deployment Crash Investigation; Vehicle: 2016 Ram 1500; Location: Texas; Crash Date: July 2016

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Suggested APA Format Citation:

Indiana University Transportation Research Center (2021, July). *Special Crash Investigations: On-Site Air Bag Non-Deployment Crash Investigation; Vehicle: 2016 Ram 1500; Location: Texas; Crash Date: July 2016* (Report No. DOT 813 046). National Highway Traffic Safety Administration.

Technical Report Documentation Page

1. Report No. DOT HS 813 046	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle Special Crash Investigations: On-Site Air Bag Non-Deployment Crash Investigation; Vehicle: 2016 Ram 1500; Location: Texas; Crash Date: July 2016		5. Report Date July 2021	
		6. Performing Organization Code	
7. Author Indiana University Transportation Research Center		8. Performing Organization Report No. IN17019	
9. Performing Organization Name and Address Indiana University Transportation Research Center 501 South Madison Street, Suite 105 Bloomington, Indiana 47403		10. Work Unit No. (TRAIS)	
		11. Contract or Grant No. DTNH22-12-C-00270	
12. Sponsoring Agency Name and Address National Highway Traffic Safety Administration National Center for Statistics and Analysis (NSA-110) 1200 New Jersey Avenue SE Washington, DC 20590		13. Type of Report and Period Covered Technical Report	
		14. Sponsoring Agency Code	
15. Supplementary Notes Each crash represents a unique sequence of events, and generalized conclusions cannot be made concerning the crashworthiness performance of the involved vehicles or their safety systems. This report and associated case data are based on information available to the Special Crash Investigation team on the date this report was published.			
16. Abstract This report documents the on-site investigation of the crash of a 2016 Ram 1500 in which the vehicle's rollover/side impact inflatable curtain (IC) air bags did not deploy. The Ram was a 4-door crew cab pickup truck equipped with multi-stage frontal air bags, front seat-mounted side impact air bags, and rollover/side impact IC air bags compliant to Federal Motor Vehicle Safety Standard (FMVSS) No. 226, Ejection Mitigation. A belted 34-year-old female driver, a belted 16-year old male front row passenger, and a belted 13-year-old male second row middle passenger occupied the vehicle. According to the police crash report and the Ram's driver, the Ram was traveling southwest in the left-through lane, and a 2006 Chevrolet Trailblazer was southwest-bound in the right-through lane. The right plane of the Ram was struck by the left plane of the Chevrolet twice, and both vehicles departed the west side of the roadway, where five additional events occurred, including a rollover of each vehicle. Both vehicles came to final rest on their right planes heading west. The Ram was equipped with roll sensing IC air bags that did not deploy during the rollover. Front safety belt pretensioners did deploy. The non-deployment of the IC air bags was probably related to the crash events that took place prior to the rollover. These events were consistent with conditions described in the recall documentation for the Ram, which stated that such conditions could trigger a fault related to the roll sensor in the Occupant Restraint Controller (ORC) resulting in non-deployment of the IC air bags. The Ram's driver sustained police-reported "C" (possible) injuries and was transported by ambulance to a trauma center, where she was hospitalized for five days for treatment of severe injuries. The front row passenger and second row center passenger were reported as not injured on the police crash report. Both vehicles were towed from the crash scene due to damage.			
17. Key Words inflatable curtain air bag, motor vehicle traffic crash, air bag non-deployment, severe injury		18. Distribution Statement The document is available to the public from the National Technical Information Service, www.ntis.gov .	
19. Security Classif. (of this report) Unclassified	20. Security Classif. (of this page) Unclassified	21. No. of Pages 80	22. Price

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**Special Crash Investigations
On-Site Air Bag Non-Deployment Crash Investigation
Office of Defects Investigation
Case Number: IN17019
Vehicle: 2016 Ram 1500
Location: Texas
Crash Date: July 2016**

BACKGROUND

This report documents the on-site investigation of the crash of a 2016 Ram 1500 (**Figure 1**) in which the vehicle's rollover/side impact inflatable curtain (IC) air bags did not deploy. This investigation was initiated by the National Highway Traffic Safety Administration in April 2017 and assigned to the Special Crash Investigation Team at the Indiana University Transportation Research Center. The crash involved the Ram and a 2006 Chevrolet Trailblazer in July 2016 during the evening in Texas and was investigated by a local police agency. Inspection of the Ram, crash scene, and an interview with the driver were completed in May 2017. Photographs of the Ram taken prior to partial repair work on the vehicle were obtained from the driver's father in June 2017. The Chevrolet was not inspected since it could not be located.



Figure 1. The damaged 2016 Ram 1500.

This crash occurred in the southwest-bound lanes and on the west roadside of a four-lane, divided interstate highway. The Ram was a 4-door crew cab pickup truck equipped with multi-stage frontal air bags, front -seat-mounted side impact air bags, and rollover/side impact IC air bags compliant to Federal Motor Vehicle Safety Standard (FMVSS) No. 226, Ejection Mitigation. A belted 34-year-old female driver, a belted 16-year old male front row passenger, and a belted 13-year-old male second row middle passenger occupied the vehicle.

According to the police crash report and the Ram's driver, the Ram was traveling southwest in the left-through lane and the Chevrolet was southwest-bound in the right-through lane. The right plane of the Ram was struck by the left plane of the Chevrolet twice (Events 1 and 2) and both vehicles departed the west side of the roadway where five additional events (Events 3 to 7) occurred, including a rollover of each vehicle. Both vehicles came to final rest on their right planes heading west. The Ram was equipped with roll-sensing IC air bags that did not deploy during the rollover. Front seat belt pretensioners did deploy. The non-deployment of the IC air bags was probably related to the crash events that took place prior to the rollover. These events were consistent with conditions described in the recall documentation for the Ram, which stated that such conditions could trigger a fault related to the roll sensor in the occupant restraint controller (ORC) resulting in non-deployment of the IC air bags. The Ram's driver sustained police-reported "C" (possible) injuries and was transported by ambulance to a trauma center

where she was hospitalized for five days for treatment of severe injuries. The front row passenger and second row center passenger were reported as not injured on the police crash report. Both vehicles were towed from the crash scene due to damage.

SUMMARY

Crash Site

This crash occurred during the evening in an interchange area in the southwest-bound lanes and on the west roadside of a four-lane, divided, interstate highway. The weather conditions were clear visibility, southerly winds at 24 km/h (15 mph), a temperature of 35 °C (95 °F), and a dew point of 18.3 °C (65 °F), according to local weather reports. The southwest-bound roadway was straight with two bituminous through lanes and was bordered on each side by bituminous shoulders with rumble strips adjacent to the edge lines. Each through lane was approximately 3.7 m (12 ft) wide and the roadway pavement markings consisted of a solid white edge line, a broken white centerline, and a solid yellow median line. The right shoulder and median shoulder were 3.0 m (9.8 ft), and 1.5 m (4.9 ft) wide, respectively. A steel, blocked-out, W-beam guardrail was located adjacent and parallel to the right shoulder edge. The two southwest-bound through lanes were separated from the northeast-bound through lanes by a grassy median, ditch, and cable barrier. The roadway grade was negative 3 percent for southwest-bound traffic, and the speed limit was 113 km/h (70 mph). A crash diagram is included at the end of this report.

Pre-Crash

The Ram was traveling southwest in the left-through lane (**Figure 2**) at a driver-reported speed of 97 km/h (60 mph). The Chevrolet was traveling southwest in the right-through lane. The Ram's driver stated during the SCI interview that she had noticed that the Chevrolet was encroaching into her lane as she began to pass the Chevrolet. The Ram's driver then steered left in an attempt to avoid a crash. She stated that her vehicle traveled off the left side of the roadway with the left wheels on the roadside and the right wheels on the shoulder. The police crash report stated that the Chevrolet's driver fell asleep and lost control of his vehicle.



Figure 2. Vehicle 1, southwest-bound approach to the crash area.

Crash

The right plane of the Ram was struck by the left plane of the Chevrolet (Event 1). The Ram's driver steered right, and the Ram's right plane was struck again by the left plane of the Chevrolet (Event 2). The WinSMASH program could not be used to calculate delta V on either of these impacts since a crush profile could not be measured due to subsequent repair work on the right plane. Both vehicles traveled across the roadway departing the right side of the roadway, where the front plane of the Ram struck a guardrail end terminal (Event 3). The WinSMASH program could not be used to calculate delta V for this impact since an impact with a yielding object is out of scope for the program. Also, WinSMASH could not be used to calculate a barrier equivalent speed since the bumper had been removed from the vehicle, and a crush profile could not be

measured. The guardrail was also struck by the Ram's undercarriage (Event 4) and rear portion of the left plane (Event 5) as the vehicle rotated clockwise and traveled over the guardrail. The Ram then rolled over (Event 6, **Figure 3**), left side leading, three quarter turns across an estimated distance of 14 m (42 ft) down a 16 percent grade into a ditch, coming to final rest on its right plane heading west. The Ram traveled a distance of approximately 21 m (69 ft) from the end terminal impact to its final rest position. The Chevrolet also departed the west side of the roadway into the ditch, and rolled over, left-side-leading, three quarter turns (Event 7) across an estimated distance of 12 m (39 ft), coming to final rest on its right plane, heading west.



Figure 3. Northeast view, V1 approximate travel.

Post-Crash

The police were notified of the crash at 2014 hours and arrived on scene at 2024 hours. Rescue and emergency medical personnel also responded to the crash. The Ram's driver crawled to the back seat, and a passerby assisted her in exiting the vehicle through the left rear window. The driver sustained police-reported "C" (possible) injuries and was transported by ambulance to a trauma center, where she was hospitalized for five days for treatment of severe injuries. The Ram's front row right and second row center passengers exited the vehicle without assistance through the left rear window. Neither of the passengers was reported as injured on the police crash report, and they were transported home from the crash scene by the driver's father. There were no police reported injuries for the driver of the Chevrolet.

2016 RAM 1500

Description

The Ram was a 4-wheel-drive, 5-occupant, 4-door, crew cab pickup truck vehicle identification number (VIN) 1C6RR7NM2GSxxxxxx manufactured in April 2016. The vehicle was equipped with a 3.0 liter, V-6 EcoDiesel engine; an 8-speed automatic transmission with sport shift feature; and 4-wheel antilock brakes with electronic brake force distribution, brake assist, traction control, and electronic stability control. The vehicle was also equipped with multi-stage frontal air bags, front-seat-mounted side impact air bags, rollover/side impact IC air bags compliant with Federal Motor Vehicle Safety Standard (FMVSS) No. 226, Ejection Mitigation, and an EDR. The EDR-reported mileage was 5,651 kilometers (3,511.1 miles). The vehicle's specified wheelbase was 357 cm (140.5 in.).

The vehicle manufacturer's recommended tire size was P275/60R20. The vehicle was equipped with Goodyear Wrangler SR-A tires of the recommended size. The vehicle manufacturer's recommended cold tire pressure for the front and rear tires was 269 kPa (39 psi). The tire data for the Ram, which was measured approximately 10 months following the crash, are presented in the table on the following page.

<i>Position</i>	<i>Measured Pressure</i>	<i>Measured Tread Depth</i>	<i>Restricted</i>	<i>Damage</i>
LF	248 kPa (36 psi)	9 mm (11 /32 in.)	No	None
LR	255 kPa (37 psi)	8 mm (10 /32 in.)	No	None
RR	262 kPa (38 psi)	9 mm (11/32 in.)	No	None
RF	Flat	9 mm (11/32 in.)	No	None

The front row was equipped with cloth and vinyl-covered bucket seats with adjustable head restraints at the outboard seating positions. The second row seat type is unknown since it was removed prior to the SCI inspection. The driver's seat track was adjusted to the forward-most position and the seat back was reclined 30 degrees aft of vertical. The top of the driver's head restraint was located 21 cm (8.3 in.) above the top of the seat back. The front passenger's seat track was adjusted to the middle position and the seat back was reclined 32 degrees aft of vertical. The top of the head restraint was located 28 cm (11.0 in.) above the top of the seat back.

Exterior Damage

Exterior Damage Events 1 and 2:

The Ram sustained direct damage to the right plane as a result of impacts with the left plane of the Chevrolet. The length of the direct damage and crush could not be determined since body work had been done on the Ram prior to SCI vehicle inspection.

Damage Classification Events 1 and 2:

The collision deformation classification (CDC) for both events was 99R9999. Columns one, two, and four through seven of the CDC were unknown since the damage had been repaired prior to the SCI vehicle inspection. Also, a photograph of the vehicle damage provided to SCI by the driver's father could not be used to estimate a CDC since there was overlapping damage to the right plane from the rollover. The severity of the damage was estimated to be minor.



Figure 4. Front plane damage from guardrail impact, bumper placed back on frame ends.

Exterior Damage Event 3:

The Ram sustained direct damage to the front bumper (**Figure 4**) during the impact with the end terminal. Direct damage began 50 cm (19.7 in.) right of the front left bumper corner and extended 60 cm (23.6 in.) to the right. A crush profile could not be measured since the bumper was off the vehicle, and there was overlapping damage to the right portion of the bumper from the rollover.

Damage Classification Event 3:

The CDC was estimated to be 12FYEW2 (0 degree). The severity of the damage was moderate.

Exterior Damage Event 4:

The left undercarriage sustained direct damage during the impact with the guardrail.

Damage Classification Event 4:

The CDC was 00UPLW1. The severity of the damage was minor.

Exterior Damage Event 5:

The Ram's left rear bed wall and back bumper sustained direct damage during the impact with the guardrail.

Damage Classification Event 5:

The CDC was estimated to be 00LBEW2 based on a photograph of the damage provided to SCI by the driver's father. The severity of the damage was minor.



Figure 5. Ram 1500 rollover damage to left plane, photo by the driver's father.

Exterior Damage Event 6:

The vehicle sustained direct damage to the left, right, and top planes (**Figures 5 and 6**) during the rollover. Left plane damage began on the fender, 76 cm (29.9 in.) forward of the left front axle and extended rearward 145 cm (57.1 in.), involving the fender and front door. Right plane damage began on the fender, 72 cm (28.3 in.) forward of the right front axle and extended rearward the length of the vehicle. Top plane damage started at the front of the hood, 80 cm (31.5 in.) forward of the right front axle, and extended to the back of the passenger compartment. The maximum lateral crush was 1 cm (0.4 in.), occurring at the top of the right C-pillar. The maximum vertical crush was 8 cm (3.1 in.), occurring at the right rear roof side rail near the right C-pillar.



Figure 6. Ram 1500 rollover damage to right and top planes, photo by the driver's father.

Damage Classification Event 6:

The CDC was 00TDDO2. The severity of the damage was minor.

Event Data Recorder

The Ram's EDR was imaged with version 17.3 of the Bosch Crash Data Retrieval software and reported with version 21.0.2. The vehicle had power and the data was imaged via connection to the diagnostic link connector. The EDR report is attached at the end of this report as **Appendix A**.

Three events were reported: a "Most Recent Event," a "First Prior Event," and a "Second Prior Event." The recording was reported as "Complete" for each event. The air bag warning lamp was reported as "Off," and the driver's and front row right passenger's seat belt statuses were reported as "Buckled" for all events. The ignition cycles at the time of the crash and when the

data were imaged were reported as 233 and 241, respectively. The diagnostic trouble code (DTC) C10CC-00 was reported for all three events. A service department technician at a Ram dealership stated that the code was related to a “dynamic sensor fault” (possibly the roll sensor) in the ORC. Internet research for technical data regarding the DTC pointed to a fault with the electronic stability control and the ORC.

The total number of events occurring during the crash was reported as 24. The three reported events (“Most Recent Event,” “First Prior Event,” and “Second Prior Event”) were numbers 22, 23, and 24 indicating that they probably occurred during the rollover. The data for these events were identical. The multi-event counter was reported as “1” with each event and reported as occurring >5 sec from the previous event. No air bags were commanded to deploy; however, the driver’s and front row passenger’s seat belt pretensioners were commanded to deploy. The longitudinal maximum delta V was reported as 0.0 km/h and the maximum lateral delta V was reported as 4 km/h (2.5 mph), occurring 240 msec after algorithm enable. The maximum angular rate was -202 deg/sec occurring 260 msec after AE.

Interior Damage

The interior of the Ram did not sustain any intrusions. Scuffs were noted on the left B-pillar, probably from contact by the driver’s head, and on the right instrument panel, probably from contact by the hands or knees of the front row passenger. There was no other discernable evidence of occupant contacts noted. All doors remained closed during the crash and were operational at the time of SCI inspection.

Manual Restraint Systems

The front row outboard seating positions were equipped with three-point lap and shoulder seat belts with sliding latch plates and adjustable upper anchors. Both outboard seats’ upper anchors were adjusted to the full-down position. The front row seat belts were also equipped with retractor-mounted pretensioners and both actuated during the crash. The second row was equipped with lap and shoulder seat belts with sliding latch plates and fixed upper anchors.

The driver was restrained by the lap and shoulder seat belt as evidenced by a 2 cm (0.8 in.) long scuff mark from the latch plate belt guide on the seat belt webbing. The scuff was located 95 cm (37.4 in.) from the anchor. An 8 cm (3.1 in.) long scuff mark from the D-ring was also present on the belt webbing located 165 cm (65 in.) from the anchor, and load marks were found on the latch plate belt guide. The EDR reported the driver’s seat belt status as “Buckled.”

The front row passenger was restrained by his lap and shoulder seat belt as evidenced by a 4 cm (1.6 in.) long scuff mark from the latch plate belt guide on the belt webbing located 89 cm (35 in.) from the anchor. A 10 cm (3.9 in.) long scuff mark from the D-ring was also located on the belt webbing 155 cm (61 in.) from the anchor, and load marks were found on the latch plate belt guide. The EDR reported the status of the front row right passenger’s seat belt as “Buckled.”

The second row center passenger was restrained by the lap and shoulder seat belt. Inspection of the passenger’s seat belt assembly revealed historical usage marks on the latch plate and an impression on the belt webbing. The driver also stated during the interview that the passenger was restrained by the lap and shoulder seat belt.

Supplemental Restraint Systems

The Ram was equipped with multi-stage frontal air bags, front-seat-mounted side impact air bags, and rollover/side impact IC air bags compliant with FMVSS No 226. No air bags deployed during the crash. Discussion regarding the non-deployment of the rollover IC air bags follows.

NHTSA Recalls and Investigations

On January 7, 2020, the NHTSA database www.nhtsa/recall was searched for data using the Ram's VIN. This search identified two unrepaired recalls, both of which were issued after the date of the crash and the May 2017 SCI vehicle inspection. The identified recalls addressed mechanical components that were unrelated to the circumstances of this SCI investigation.

A search of the NHTSA recall database by Year/Make/Model reported 12 recalls and one investigation related to some of the vehicles in the population of the 2016 Ram pickup truck line. The investigation was related to the powertrain and not relevant to the circumstances of this crash. One recall, dated May 9, 2017, was related to the air bag systems and was identified as NHTSA campaign number 17V302000. The recall stated:

“Certain driving conditions, such as off-road or debris striking the vehicle may cause the roll rate sensor to trigger a fault in the ORC. If this fault occurs, the rollover side curtain air bag and the seat belt pretensioner will be disabled from deploying.”

Associated manufacturer documents indicated that trucks subject to the recall were manufactured between June 8, 2012 and July 10, 2015. The vehicle involved in this investigation was manufactured in April 2016 and was thus out of scope for the recall. However, even though the date of this vehicle's manufacture did not fit into the recall scope and both seat belt pretensioners actuated, the non-deployment of the IC air bags mimicked a portion of the recall's circumstances.

A CARFAX report obtained for this vehicle reported one owner, no recalls, and one crash, which was the subject of this investigation.

Inflatable Curtain Non-Deployment Discussion

The SCI investigation determined that the Ram was equipped with IC air bags that were designed to deploy in a rollover event. The IC air bags should have deployed since the vehicle was equipped with roll sensing and the vehicle rolled over during the crash sequence. The investigation determined that the vehicle was involved in off-road travel and five impacts prior to the rollover. Although the Ram was not in the scope of the 17V302000 recall, these events were consistent with conditions described in the recall documentation that could trigger a fault related to the roll sensor in the ORC and result in non-deployment of the IC air bags. DTC C10CC-00 was reported by the vehicle's EDR, which indicated a “dynamic sensor fault,” according to a Ram dealership service technician. Internet research for technical data regarding the DTC pointed to a fault with the electronic stability control and the ORC.

2016 RAM 1500 OCCUPANTS

Driver Demographics

Age/sex: 34 years/female
Height: 160 cm (63 in.)
Weight: 51 kg (112 lb)
Eyewear: Contact lenses
Seat type: Bucket
Seat track position: Full forward
Manual restraint usage: Lap and shoulder seat belt
Usage source: Vehicle inspection
Air bags: Driver's frontal, seat-mounted side impact, and IC air bags, none deployed; seat belt pretensioner deployed

Alcohol/drug data: None
Egress from vehicle: Exited with assistance through left rear window
Transport from scene: Ambulance to a trauma center
Medical treatment: Hospitalized five days

Driver Injuries

Injury No.	Injury	Injury Severity AIS 2015	Involved Physical Components (IPC)	IPC Confidence Level
1	Closed head injury involving only headache and dizziness; GCS=15	110009.1	Isolated Left Side - Left B-pillar	Possible
2	Injury, incomplete, spinal cord with severe cervical radiculopathy right C ₅ -C ₆ (ASIA=D) with severe neuroforaminal spinal canal stenosis secondary to bulging disc with herniation, cord compression/impingement, and right hemiparesis	610213.4	Isolated Primary: Left Side - Left B-pillar Secondary: Left side window frame	Possible Possible
3	Abrasion, 10 cm (3.9 in.) in length over left shoulder	710202.1	Isolated Interior - Shoulder portion of belt restraint	Probable
4	Contusion, 10 cm (3.9 in.) in length over left shoulder	710202.1	Isolated Interior - Shoulder portion of belt restraint	Probable
5	Abrasions, slight, scattered over right arm, NFS	710202.1	Isolated Injured, Unknown Source - Injured, unknown source	Unknown
6	Abrasions, slight, scattered over left arm, NFS	710202.1	Isolated Injured, Unknown Source - Injured, unknown source	Unknown

Injury No.	Injury	Injury Severity AIS 2015	Involved Physical Components (IPC)	IPC Confidence Level
7	Abrasions, slight, scattered over right leg, NFS	810202.1	Isolated Injured, Unknown Source - Injured, unknown source	Unknown
8	Abrasions, slight, scattered over left leg, NFS	810202.1	Isolated Injured, Unknown Source - Injured, unknown source	Unknown

Sources: emergency room records, hospitalization records, and interviewee data—same person. Injury numbers 3 and 4 came only from interviewee data. Injury numbers 1 and 5 through 8 came only from emergency room records. Injury number 2 came from a combination of all three sources.

Driver Kinematics

The driver was restrained by the lap and shoulder seat belt. The seat track was adjusted to the full forward position and the seat back was reclined 30 degrees aft of vertical. The top of the head restraint was located 21 cm (53.3 in.) above the top of the seat back. The two right plane impacts with the left plane of the Chevrolet probably displaced the driver forward and to the right in her seat belt. The front plane impact with the guardrail end terminal redirected the driver forward. The driver was then redirected in multiple directions as the Ram traveled over the guardrail and rolled over, left-side leading, and she possibly contacted the left B-pillar or window frame, resulting in a spinal injury involving the C5 and C6 vertebrae. The driver's head also possibly contacted the left B-pillar or window frame during the crash resulting in a closed head injury. She sustained an abrasion and contusion over her left shoulder, probably from loading the seat belt during the crash and multiple abrasions over her extremities. She was transported by ambulance to a trauma center, where she was hospitalized for five days.

Front Row Right Occupant Demographics

Age/sex:	16 years/male
Height:	175 cm (69 in.)
Weight:	59 kg (130 lb)
Eyewear:	Glasses
Seat type:	Bucket
Seat track position:	Middle
Manual restraint usage:	Lap and shoulder seat belt
Usage source:	Vehicle inspection
Air bags:	Frontal, seat-mounted side impact, and IC air bags, none deployed; seat belt pretensioner deployed
Alcohol/drug data:	None
Egress from vehicle:	Exited under own power through left rear window
Transport from scene:	Driven home from crash scene by driver's father
Medical treatment:	None

Front Row Right Occupant Injuries

Injury No.	Injury	Injury Severity AIS 2015	Involved Physical Components (IPC)	IPC Confidence Level
1	Closed head injury, not further specified	100099.9	Isolated IPC Primary: Right Side - Right B-pillar Secondary: Right Side - This occupant's head restraint	Possible Possible
2	Laceration, 10 cm (3.9 in.) on lateral left forearm	710602.1	Isolated Noncontact Injury - Flying glass	Probable

Source: interviewee data–driver.

Front Row Right Occupant Kinematics

The front row passenger was restrained by the lap and shoulder seat belt. The seat track was adjusted to the middle position, and the seatback was reclined 32 degrees aft of vertical. The top of the head restraint was located 28 cm (11.0 in.) above the top of the seatback. The right plane impact with the left plane of the Chevrolet probably displaced the passenger forward and to the right in his seat belt. The impact with the end of the guardrail displaced the passenger forward. As the vehicle traveled over the guardrail and rolled over, left-side leading, the passenger was redirected in multiple directions. He sustained a closed head injury from possibly contacting the right B-pillar or head restraint. Flying glass fragments probably caused a 10 cm (3.9 in.) long laceration on his left forearm. He sustained no police-reported injuries and was driven home from the crash scene by the driver's father.

Second Row Center Occupant Demographics

Age/Sex:	13 years/male
Height:	178 cm (70 in.)
Weight:	52 kg (115 lb)
Eyewear:	Glasses
Seat type:	Bench
Seat track position:	Not adjustable
Manual restraint usage:	Lap and shoulder seat belt
Usage source:	Vehicle inspection and driver interview
Air bags:	Both IC air bags, neither deployed
Alcohol/drug data:	None
Egress from vehicle:	Exited under own power through left rear window
Transport from scene:	Driven home from crash scene by driver's father
Medical treatment:	None

Second Row Center Occupant Injuries

Injury No.	Injury	Injury Severity AIS 2015	Involved Physical Components (IPC)	IPC Confidence Level
1	Laceration, 10 cm (3.9 in.) on lateral left forearm	710602.1	Isolated Noncontact Injury - Flying glass	Probable

Source: interviewee data–driver.

Second Row Center Occupant Kinematics

The second row center occupant was restrained by the lap and shoulder seat belt. The right plane impact with the left plane of the Chevrolet probably displaced the passenger forward and to the right in his seat belt. The impact with the end of the guardrail displaced the passenger forward. As the vehicle traveled over the guardrail and rolled over, left-side leading, the passenger was redirected in multiple directions. He sustained a 10 cm (3.9 in.) long laceration on his left forearm, probably from flying glass fragments. He sustained no police-reported injuries and was driven home from the crash scene by the driver's father.

2006 CHEVROLET TRAILBLAZER

Description

The Chevrolet was a rear-wheel-drive, 5-passenger, 4-door sport utility vehicle (SUV) with the VIN 1GNDS13S062XXXXXX, equipped with a 4.2-liter, L-6 engine and a 4-speed automatic transmission. The Chevrolet was equipped with 4-wheel, antilock brakes with electronic brake force distribution, ESC, multi-stage frontal air bag inflators, front seat belt pretensioners, and an EDR.

Exterior Damage

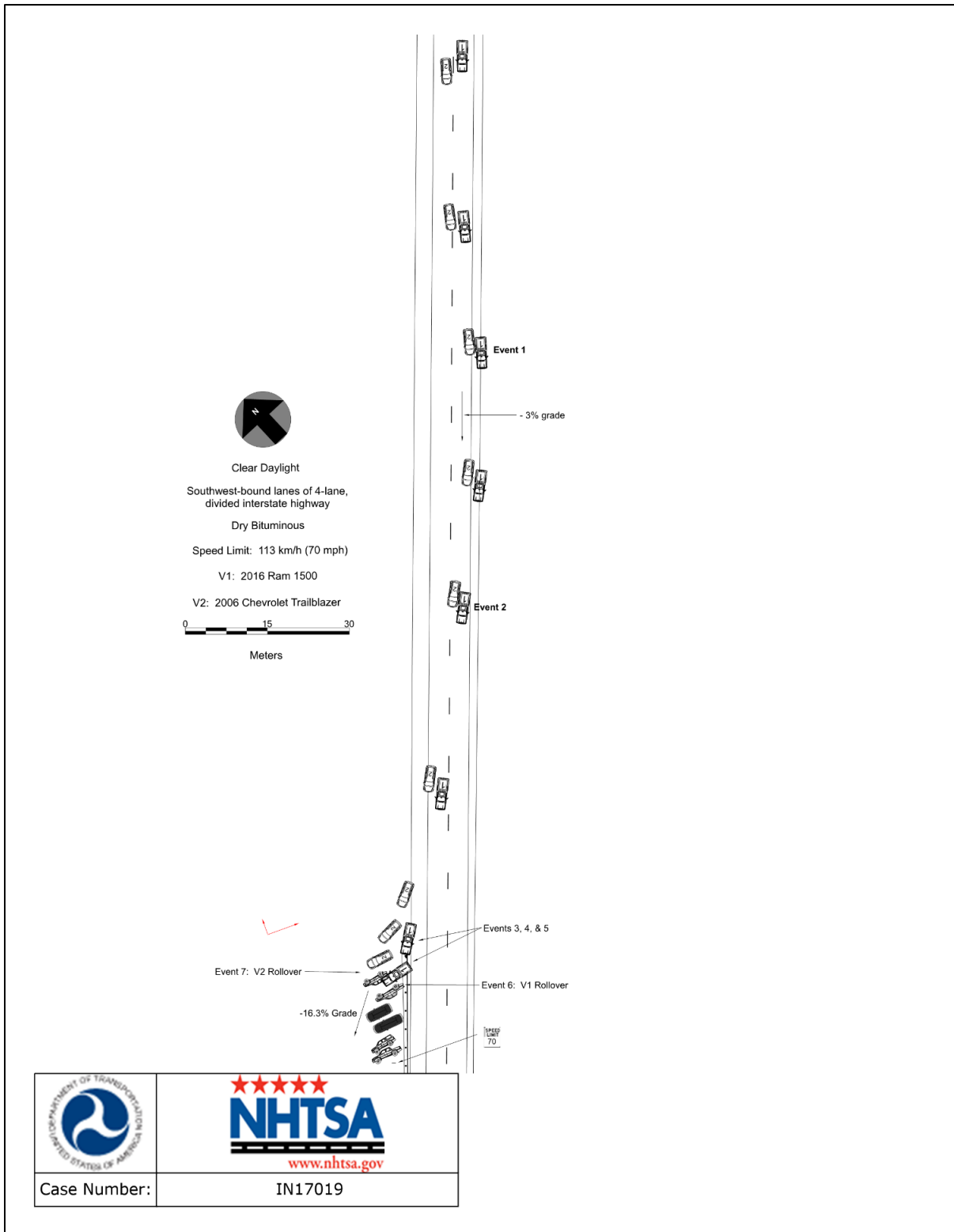
Exterior Damage Events 1, 2, and 7:

Based on the police crash report, the Chevrolet sustained damage to the left plane during its impacts with the right plane of the Ram. It also sustained damage on its top, left, and right planes due to the rollover. The Chevrolet was not inspected.

Occupant Data

The driver (33-year-old male) was restrained by his lap and shoulder seat belt. He did not sustain any police reported injury and was not transported.

CRASH DIAGRAM



APPENDIX A: Event Data Recorder Report for 2016 Ram 1500¹

¹ The EDR report contained in this technical report was imaged using the current version of the Bosch CDR software at the time of the vehicle inspection. The CDR report contained in the associated Crash Viewer application may differ relative to this report.

IMPORTANT NOTICE: Robert Bosch LLC and the manufacturers whose vehicles are accessible using the CDR System urge end users to use the latest production release of the Crash Data Retrieval system software when viewing, printing or exporting any retrieved data from within the CDR program. Using the latest version of the CDR software is the best way to ensure that retrieved data has been translated using the most current information provided by the manufacturers of the vehicles supported by this product.

CDR File Information

User Entered VIN	1C6RR7NM2GS*****
User	
Case Number	
EDR Data Imaging Date	
Crash Date	
Filename	IN17019_V1_ACM.CDRX
Saved on	
Imaged with CDR version	Crash Data Retrieval Tool 17.3
Imaged with Software Licensed to (Company Name)	NHTSA
Reported with CDR version	Crash Data Retrieval Tool 21.0.2
Reported with Software Licensed to (Company Name)	NHTSA
EDR Device Type	Airbag Control Module
Event(s) recovered	Most Recent Event 1st Prior Event 2nd Prior Event

Comments

No comments entered.

Data Limitations

AIRBAG CONTROL MODULE (ACM) DATA LIMITATIONS:

GENERAL INFORMATION:

CAUTION: During direct-to-module imaging where the Airbag Control Module (ACM) is disconnected and removed from a vehicle, make sure the ACM is not moved, tilted or turned over while connected to and powered by the CDR Interface Module (with appropriate adaptors in place, where required). Also, after a CDR imaging process, wait 2 minutes after power is removed from the ACM before attempting to move the module. Not following these general ACM guidelines for direct-to-module imaging may cause new events to be recorded in the ACM.

- For additional definitions, please refer to the CDR Help File Glossary.
- As the VIN may be used to determine the configuration of the restraint system, it is imperative that the correct VIN be entered into the CDR Tool during the imaging process.
- If a DLC adapter has to be used with the CDR Tool, the "Read VIN from Vehicle" feature in the CDR Tool will not work. The VIN will have to be manually entered.
- If a 2021 or later MY Dodge Durango was imaged with a CDR Tool version 19.4 or older, the ACM will need to be reimaged as not all the peripheral sensor data will have been retrieved.
- The 2019 MY RAM 1500 may take up to 30 minutes to retrieve the EDR data. The ignition will time out within 20 minutes so the vehicle flashers must be turned on within 20 minutes to keep the ignition and communication bus active.
- Lateral Delta V will not be displayed for the 2013 MY Jeep Compass and Patriot.
- Ignition Cycle, download/crash
 - For RAMs and Dodge Vipers, there are 2 internal ignition counters in the ACM. It is possible for the ignition cycles at download to be different than the ignition cycles at event due to the 2 different counters.
 - Note that the ignition cycle count in an ACM may differ from the ignition cycle count in a Pedestrian Protection Module (PPM) in the same vehicle due to the fact that the ACM has an energy reserve while the PPM does not.

The following table provides an explanation of the sign notation for data elements that may be included in this CDR report. All directional references to sign notation are from the perspective of the driver when seated in the vehicle facing the direction of forward vehicle travel.

Data Element Name	Positive Sign Notation Indicates
Delta-V, Longitudinal	Forward
Maximum Delta-V, Longitudinal	Forward
Delta-V, Lateral	Left to Right

Maximum Delta-V, Lateral	Left to Right
Angular Rate	Clockwise rotation around the longitudinal axis
Peripheral Sensors, X and Y	Outside to Inside
Pressure Sensors	Compression of air
Internal Y Acceleration	Left to Right
Low-g Z Acceleration	Downward
Steering Input	Steering wheel turned counter clockwise
Yaw Rate	Counter clockwise rotation

CDR FILE INFORMATION:

- An event will be stored when the delta V is approximately 5 mph (8 km/h) or greater within a 150 ms interval.
- For non-NAFTA ACMs that control pedestrian protection devices, a non-deployment event will be stored when the pedestrian protection devices are activated.
- A non-deployment event may be stored with activation of the Active Head Restraints. See AHR explanation under System Configuration at Retrieval/Event section.

Event(s) Recovered definitions:

- None - There are no stored events in the ACM
- Not Retrievable - Event Data may be stored in the ACM but is not retrievable by the CDR Tool.
- Most Recent Event - Data of the most recent event is displayed in the report
- 1st Prior Event - Two events are stored in the ACM, Data displayed is of the first prior event.
- 2nd Prior Event - Three events are stored in the ACM, Data displayed is of the second prior event.
- For 2013 and 2014 MY Dodge Journey and Fiat Freemont:
 - Event Record 1 - Data from an event is stored in the ACM (not necessarily in chronological order)
 - Event Record 2 - Data from another event is stored in the ACM (not necessarily in chronological order)
- For TRW modules:
 - If there is a side impact, two EDR events may be stored for the one side impact event. The second event may be recorded due to the Lateral Delta V exceeding 5 mph (8 km/h) within a 150 ms interval after the side deployment occurred.
- For some Fiat vehicles:
 - Two EDR events may be stored for one impact event. The second event may be recorded due to the deployment of the frontal airbag, 3rd stage passenger.
- During an event, if power to the ACM is lost, all or part of the event data record may not be recorded. An indication may be observed in the recorded data under this condition: The restraint data is recorded first and then the vehicle data.
 - "None" may be displayed in the "Event(s) Recovered" section of the report indicating no pre-crash vehicle data.
 - An event may be displayed in the "Event(s) Recovered" section of the report and "Interrupted" will be displayed for Pre-Crash Recorder Status.

SYSTEM STATUS AT RETRIEVAL:

- Original VIN - The VIN is captured by the ACM and then recorded as the Original VIN after 10 consecutive ignition cycles of capturing the same number. Once it has been recorded, this number cannot be changed.

SYSTEM CONFIGURATION AT RETRIEVAL/EVENT:

- The System Configuration data tables indicate the components that the ACM for a particular vehicle monitors and/or controls.
- Active Head Restraint (AHR) - This refers to some active head restraint systems that are electronically controlled by the ACM. AHRs may activate but not store an EDR Record if the delta V does not exceed the minimum delta V threshold. It is possible that the AHRs may activate after the EDR record has been stored and written, based on achieving the minimum delta V. This condition will result in an EDR but no record of the AHR activation in the CDR report. Activation of only the AHRs, if stored, will be a non-deployment event.

SYSTEM STATUS AT EVENT:

- Number, Total Events - Cumulative number of events that the ACM has recorded, including those non-deployment events that have been overwritten by a subsequent event.
- Occupant Size Classification, Outboard Front Passenger - "Child" status may be used to indicate anything weighing less than a 5th percentile female adult crash dummy, including an empty seat; "Not Child" indicates anything weighing the same as or more than a 5th percentile female adult crash dummy.
- Odometer at Event - Vehicle odometer at the time of the event

- Operation via Energy Reserve Only - "Yes" indicates that the ACM had lost power at or before T0 and was only operating on energy reserve at T0.
- Safety Belt Status, Outboard Front Passenger - For vehicles sold outside of North America which do not contain a buckle switch for the outboard front passenger, the safety belt status, outboard front passenger will default to "not buckled/unbuckled".
- System Voltage at Event, ACM - Voltage at the ACM as measured by the ACM.
- System Voltage at Event, Bused - Voltage of the vehicle system, communicated on the communication bus to other electronic modules in the vehicle.
- Temperature, Outside - Ambient Air Temperature.
- Time, Airbag Warning Lamp On - This is a cumulative time. It indicates the total amount of time that the ACM has requested the Airbag Warning Lamp be turned on.
 - This time does not include the warning lamp bulb check time, which occurs at every ignition cycle
 - For 2013 MY Minivans and new 2017+ MY Jeep Compass, this time is only cumulative for the past 10 ignition cycles.
- Time from event 1 to 2 -
 - If only one event is stored, either a value of 0 or >5 may be displayed for this data element.
 - For the 2018+ MY Promaster and 2019+ MY RAM 1500, a value of 0 may be displayed for the first event or for events >5 seconds apart.
 - If multiple events exist in the EDR, the time from event 1 to event 2 is defined as:
 - For Bosch and TRW modules, the time from the prior recorded event (even if it has been overwritten) to the current recorded event.
 - For Continental modules, the time from the prior existing recorded event (as long as it is still displayed in the CDR report) to the current recorded event. If the prior event in a multi-event condition is overwritten by a subsequent event, the multi-event status will no longer be displayed.
 - For the 2019+ MY RAM 1500, the time from event 1 to 2 may utilize a non-stored event as event 1. In this case, the total number of events and multi-event data elements will not include the non-stored event in the number of events. However, the time from event 1 to 2 will be shown as time from that non-stored event.
- Time, Operation System Time - This is a cumulative lifetime timer for the ACM. It indicates the total amount of time the ACM has been powered up.
 - For 2019 and later MY RAMs, this time is only cumulative for the current ignition cycle.
- VIN at Event, Last 8 Digits- Last 8 digits of the VIN of the vehicle at the time the ACM records the event.

DEPLOYMENT COMMAND DATA:

- A "Yes" for a particular item indicates that the ACM commanded the deployment /activation of the associated device.
- The phrase "Exceeded Storage Range" for a particular time to deploy indicates that the deployment time is equal to or greater than the 255 milliseconds that can be stored.
- If a device is not deployed, the "time to deploy" for that device will display 0, SNA, N/A or 255.
- In vehicles with Bosch ACMs, once a device has been deployed in an ignition cycle, it is possible that the ACM will not attempt to re-deploy any already deployed device during subsequent events in that same ignition cycle.

DTCs PRESENT AT START OF EVENT:

- If any DTCs (diagnostic trouble codes) are present in the ACM at the start of the event, these will be listed in this section. A dealership service manual can be used to decode the DTCs.
 - DTCs Present at Start of Event are not present in the Alfa Romeo Giulia, Fiat 500X, and the Jeep Renegade.

SENSOR DATA:

- The design range for the angular rate data is:
 - +/- 240 deg/sec for Bosch ACMs, unless specifically called out below
 - +/- 300 deg/sec for TRW ACMs, the 2019 MY RAM 1500, and the 2018+ MY Dodge Journey
 - +/- 290 deg/sec for 2008+ MY minivans and 2009-2017 MY Dodge Journey
 - +/- 340 deg/sec for 2017+ MY Chrysler Pacifica and new 2017+ MY Jeep Compass
 - -416.67 deg/sec to +413.41 deg/sec for 2014+ MY Jeep Cherokee
- For vehicles that store peripheral sensor data, t0 for the peripheral sensors is the same as the t0 for the delta V.
- Internal y acceleration is stored prior to t0 so the internal y acceleration data will usually be zero unless the rollover sensing algorithm has triggered storage of the EDR event.
- The words "Sensor Design Range Exceeded" and a vertical line will be displayed on the Longitudinal and Lateral Delta-V graphs the first time the applicable sensor range is exceeded.

PRE-CRASH DATA:

- The recorded Event may contain Pre-Crash data. Pre-Crash data from the various electronic control modules in the vehicle is transmitted to the Airbag Control Module via the vehicle's communication bus.
- In the Pre-Crash Data graph, data transmitted at a rate other than 0.1 seconds will be shown as dots for each available data point. Only data transmitted at a rate of 0.1 seconds will have the dots connected by a line.

(if equip.) - If a parameter name is followed by the words (if equip.), then the parameter is only valid for vehicles equipped with the associated parameter/vehicle system.

- The MIL (Malfunction Indicator Lamp) Status for the various recorded systems indicates the requested state of the applicable malfunction indicator lamp at the time that the data was captured. Note: Some fault codes could be stored due to component/system damage from the accident. The appropriate diagnostic tool should be used to read any stored Diagnostic Trouble Codes (DTC's) in the various electronic modules (ACM, PCM, ABS, TCM, etc., where applicable) for use in interpretation of some vehicle specific recorded data.
- ABS Activity - "Yes" indicates an active ABS event in which the ABS is actively controlling the brakes.
- ABS MIL - This indicates the ABS fault indicator lamp status. It will only be "On" when there is a fault in the ABS system. The Electronic brake module DTC's should be read and recorded for final system interpretation.
- Accelerator Pedal, % Full - This indicates the actual position of the accelerator pedal. It will be "SNA" if the vehicle is in the power free mode which limits acceleration.
- Accelerator Pedal (Derived), % Full - This indicates the calculated value of the accelerator pedal for battery electric vehicles only.
- Accelerator Pedal/Engine Throttle, % Full - This indicates the actual position of the accelerator pedal unless the cruise control is engaged. If the cruise control is engaged, this indicates the actual position of the engine throttle blade.
- Braking System, Maximum Braking -- "Yes" indicates that ABS is active on all 4 wheels at the same time.
- Cruise Control:
 - Note that the following two Cruise Control data elements are only valid for vehicles not equipped with Adaptive Cruise Control (ACC). For vehicles equipped with ACC, the ACC data elements are used for both regular Cruise Control and ACC.
 - Cruise Control System/Lamp Status - "On" indicates that the Cruise Control system is turned on.
 - Cruise Control Engaged Status/Active - "Engaged"/"Yes" indicates the Cruise Control system is actively controlling vehicle speed. "Not Engaged"/"No" indicates the system is NOT controlling vehicle speed.
 - Adaptive Cruise Control (ACC) Status (if equip.)- "Off" indicates that all cruise control functionality is disabled; "NCC_On" indicates that the Normal Cruise Control system is turned on; "NCC_Set" indicates the Normal Cruise Control is actively controlling vehicle speed; "ACC_On" indicates that ACC is turned on; "ACC_Set" indicates that the ACC is actively controlling vehicle speed. If the value is SNA for all time stamps, then the vehicle is not equipped with ACC.
 - ACC Speed Set (if equip.)- This indicates the desired speed in mph that was input by the driver for the ACC system. If the value is SNA for all time stamps, then the vehicle is not equipped with ACC.
 - ACC Faulted - "Yes" indicates that the ACC system will not function and the ACC warning lamp is lit; "No" indicates that the ACC system is functional and the ACC warning lamp is off;
 - For new 2017+ MY Jeep Compass, cruise control data elements are only available for vehicles NOT equipped with ACC.
- Drive Mode - This indicates the driver selected mode of operation (e.g. normal, sport, track, ...)
- Electronic Brake/Stability Control information:
 - Stability Control - This is the status of the ESC symbol - "car with squiggly lines" indicator lamp. "On" indicates that the ESC system is functional. "Off" indicates that the ESC system was turned off either by the driver or due to a fault or thermal mode shutdown. "Engaged" indicates an active ESC/TCS event. "Partial Off" indicates that engine management has been turned off but brake traction control is still functional.
 - For the Jeep Renegade, if the Stability Control is "Off", the ESC Button Status is "Disabled", and the vehicle speed exceeds 40 mph, the stability control system will operate in a reduced functionality mode with traction control turned off ("partial off" mode) even though the user disabled it. For all other conditions, when the Stability Control is "Off", the stability control system will be off.
 - ESC Button Status - This indicates the driver selected mode for the ESC system. "Disabled" indicates that the driver pressed the ESC Button to disable engine management. "Enabled" is the default state for the ESC system.
 - SRT and some Fiat products have the ability to fully disable the ESC system if the ESC button has been pressed and held for a specific amount of time. Additional system analysis is required.
 - ESP Feature is Completely Disabled - This indicates that the stability control system has turned off engine management, traction control, and stability control.
 - ESC/ESP MIL - This indicates the ESC/ESP fault indication lamp status. It will only be "On" when there is a fault or thermal mode shutdown in the ESC/ESP system. The ESC/ESP module DTC's should be read and recorded for final system interpretation.
 - Brake Intervention by ESP - "Yes" indicates that the stability control system has engaged the brakes.
 - Engine Torque Applied - "No" indicates no engine torque output was applied (as in Park/Neutral for Automatic transmissions or clutch depressed on manual or during an ESP/Traction Control event). If "Yes", then engine torque output was applied.
 - Traction Control Active - "Yes" indicates that the traction control system is actively controlling the vehicle's wheels.
- Electronic Park Brake (EPB):
 - Park Brake Engaged - "Yes" indicates that the park brake is applied.
 - EPB MIL - "On" indicates that there is a fault in the Electronic Park Brake System.
- Engine RPM - For the RAM ProMaster City, the minimum resolution for Engine RPM is 32 rpm.
- Engine Throttle, % Full - This indicates the actual position of the Engine Throttle blade. This data element is not supported by vehicles with diesel engines. Thus a value of "SNA" will be displayed if the vehicle has a diesel engine.
- ETC Lamp - Lamp "ON" indicates there is an active Electronic Throttle DTC.
- ETC Lamp Flashing - "Yes" indicates that the ETC is in the limp-in mode.
- Forward Collision Warning (FCW) (if equip.):
 - Object of Interest Distance - This indicates the actual forward distance to the main object being tracked by the FCW system. "FCW present but not tracking" indicates that the FCW system is not currently tracking an object. If the value is SNA for all time stamps, then the vehicle is not equipped with FCW.
 - FCW System Operating State - "Off" indicates that the FCW system is off and the FCW Warning Lamp will be "On"; "On" indicates that the FCW system is fully on with active braking as well as the audible and visual warnings enabled.
 - FCW System Status - "Off" indicates that the FCW system is off and the FCW Warning Lamp will be "On". "On-braking" indicates that the FCW system is on with active braking enabled but there will no FCW audible or visual warnings in an FCW event. "On-warning"

indicates that the FCW system is on but active braking is disabled. In an FCW event, the driver will only receive FCW audible and visual warnings. "On-full" indicates that the FCW system is fully on with active braking as well as the audible and visual warnings enabled. SNA indicates that the vehicle is not equipped with FCW.

- Gear Position - For all vehicles except the RAM ProMaster City, this indicates the current transmission gear.
 - For the RAM ProMaster City, this indicates the status of the gear shift lever.
- Master Cylinder Pressure - This indicates the brake pressure applied to the brakes through the brake pedal.
- PCM MIL - This indicates the PCM fault indicator lamp status. It will only be "On" when there is a fault in the PCM. "Flashing" indicates misfire detection. The Powertrain Control Module DTC's should be read and recorded for final system interpretation.
- Pre-Crash Recorder Complete - Due to the interruption of data recording in one section, this data element may display "Interrupted" for all sections when some data sections are actually complete.
 - For the 2014 MY Jeep Grand Cherokee and Dodge Durango, if recording of angular rate data is interrupted, the entire EDR record will display "Interrupted" even though the rest of the data may be complete.
- PRND/PRNDL/PRNDS Status - This indicates the status of the Shifter Position.
- Raw Manifold Pressure - This indicates engine load in kPa.
- Reverse Gear - For manual transmission vehicles only, "Yes" indicates the transmission is in the reverse gear.
- Service Brake - "On" indicates that the brake pedal is physically depressed. Braking from the ABS or FCW systems will not be reported in this data element.
- Speed, Vehicle Indicated - This indicates the average of the wheel speeds of the drive wheels.
 - The reporting resolution for Speed, Vehicle Indicated is 1 km/h.
 - To display this data element in mph, the CDR Tool converts the km/h to mph and reports a rounded value in mph.
 - The accuracy of the recorded Speed, Vehicle Indicated may be affected by a significant change of the tire size for the drive wheels or the final drive axle ratio of the transmission from the factory build specifications, wheel lockup, wheel slip, or wheel spin.
 - On some vehicles capable of speeds in excess of 255km/h (about 158mph), the actual vehicle speed may have exceeded the reporting range. It is always prudent to check the reported wheel speeds and other parameters to confirm the Speed, Vehicle Indicated value(s).
- Tire Information:
 - XX where LF = Left Front Tire, RF = Right Front Tire, LR = Left Rear Tire, and RR = Right Rear Tire.
 - Tire X Location - This indicates the location of the tire pressure sensor data being displayed for that time stamp. Default is used to indicate that the location of the tire pressure sensor is unknown or there is no tire pressure sensor in that wheel. Vehicles with Base Tire Pressure Monitoring systems will display SNA for both Tire Locations as these vehicles do not send actual pressure values across the communication bus.
 - Tire X Pressure/Tire Pressure Status, XX - This indicates the actual pressure status of the Tire Location defined in the previous column (Tire X Location) or by the values for XX. Possible values are LOW, NORMAL, HIGH, or SNA for this parameter. Vehicles with Base Tire Pressure Monitoring systems may display NORMAL even though these vehicles do not send actual pressure values across the communication bus.
 - Tire X Pressure/Tire Pressure Value, XX (psi) - This indicates the actual tire pressure value of the Tire Location defined in the previous column (Tire X Location) or by the values for XX. Vehicles with Base Tire Pressure Monitoring systems will display N/A for this parameter as these vehicles do not send actual pressure values across the communication bus.
 - For the following vehicles, the tire location, if displayed, may not be accurate if the tires have been rotated:
 - 2013 MY Ram
 - 2013-2017 MY Jeep Patriot
 - 2013-2014 MY Chrysler 200
 - 2013-2017 MY Jeep Compass
 - 2013-2016 MY Dodge Dart
 - For the 2013 MY Ram, if the values for tire pressure status and the tire pressure are SNA, the EDR does not store tire pressure monitoring data.
 - Tire pressure is not stored in the EDR for the following vehicles:
 - 2014-2018 MY RAM 1500
 - 2014+ MY RAM (all but 1500)
 - 2013+ MY Jeep Wrangler
 - 2013 MY Jeep Grand Cherokee
 - 2013 MY Dodge Durango
 - 2013-2014 MY Dodge Challenger
 - 2013-2016 MY Chrysler Town and Country
 - 2013+ MY Dodge Grand Caravan
 - 2015+ MY Fiat 500
 - Wheel Speed, XX - This indicates the speed value of a particular tire as denoted by XX.
- Tire Pressure Monitor Indicator Lamp/Faults - "On" indicates a fault in the tire pressure monitoring system. The TPM module DTC's should be read and recorded for final system interpretation.
- "T0" ("Time zero" where '0' is seen as subscript) is defined as "beginning of the crash event". T0 is the time at which the ACM algorithm is activated, a specific Delta-V is exceeded, or a non-reversible restraint device is deployed. T0 may be defined differently for front, side, rear and roll-over events.
 - If multiple algorithm decisions (i.e.: frontal, side, rear and/or rollover) are made before the first recorded event ends, all of those events are part of the same event record and "T0" is defined as the "T0" from the first recorded event.
 - In the Pre-Crash data tables, the relative time marker "-0.1s" or "-0.25s" respectively represents the last set of data captured in the buffer prior to "T0."
- Torque Information:
 - Axle Torque - This indicates the E-Motor Torque multiplied by the gear ratio for battery electric vehicles only.
 - E-Motor Torque - This indicates the calculated torque from the output shaft of the electric motor in battery electric vehicles only.
- Traction Control Intervention Active - "Active" indicates wheel slippage was occurring during vehicle acceleration.

APPLICATION INFORMATION:

- Alfa Romeo Giulia, Alfa Romeo Stelvio, Fiat 500L, Fiat 500X, and Jeep Renegade are only CDR supported in the United States, Canada, and Saudi Arabia markets.
- Fiat 500/500e is only CDR supported in the United States, Canada, Mexico, and Brazil markets.

03002_Chrysler_r043

System Status at Retrieval

Original VIN	1C6RR7NM2GS*****
Ignition Cycle, Download	241
ACM Part Number	68085881AI
ECU Serial Number	T52MD078602320
ACM Supplier	Bosch
ECU Supply Voltage at Time of Retrieval	12.3

System Configuration at Retrieval

Configured for Driver Frontal Airbag	Yes
Configured for Passenger Airbag	Yes
Configured for Driver Retractor Pretensioner	Yes
Configured for Passenger Retractor Pretensioner	Yes
Configured for Left Side Curtain Airbag	Yes
Configured for Right Side Curtain Airbag	Yes
Configured for Front Left Seat Airbags	Yes
Configured for Front Right Seat Airbag	Yes
Configured for Safety Belt Status, Driver	Yes
Configured for Safety Belt Status, Outboard Front Passenger	Yes
Configured for Seat Track Position Switch, Foremost, Status, Driver	No
Configured for Seat Track Position Switch, Foremost, Status, Outboard Front Passenger	No
Configured for Rollover Sensing	Yes

System Configuration at Event (Most Recent Event)

Configured for Driver Frontal Airbag	Yes
Configured for Passenger Airbag	Yes
Configured for Driver Retractor Pretensioner	Yes
Configured for Passenger Retractor Pretensioner	Yes
Configured for Left Side Curtain Airbag	Yes
Configured for Right Side Curtain Airbag	Yes
Configured for Front Left Seat Airbags	Yes
Configured for Front Right Seat Airbag	Yes
Configured for Safety Belt Status, Driver	Yes
Configured for Safety Belt Status, Outboard Front Passenger	Yes
Configured for Seat Track Position Switch, Foremost, Status, Driver	No
Configured for Seat Track Position Switch, Foremost, Status, Outboard Front Passenger	No
Configured for Rollover Sensing	Yes

System Status at Event (Most Recent Event)

Event Number	24
Multi-Event, Number of Events (1,2)	1
Total number of events	24
Time from Event 1 to 2 (Time since last event)(sec)	>5
Complete File Recorded (Yes, No)	Yes
Maximum Delta-V Longitudinal (MPH [km/h])	0.0 [0]
Time, Maximum Delta-V, Longitudinal (msec)	0
Maximum Delta-V Lateral (MPH [km/h])	2.5 [4]
Time, Maximum Delta-V, Lateral (msec)	240
Ignition Cycle, Crash	233
Safety Belt Status, Driver	Buckled
Safety Belt Status, Outboard Front Passenger	Buckled
Airbag Warning Lamp, On/Off	Off
Operation System Time (sec)	319412
Airbag Warning Lamp On Time Before Event (min)	0
Supply Voltage at Event, ACM (V)	13.8
Operation via Energy Reserve	No
VIN at Event (last 8 digits)	GS*****
Odometer at Event (km [miles])	5651 [3511.1]

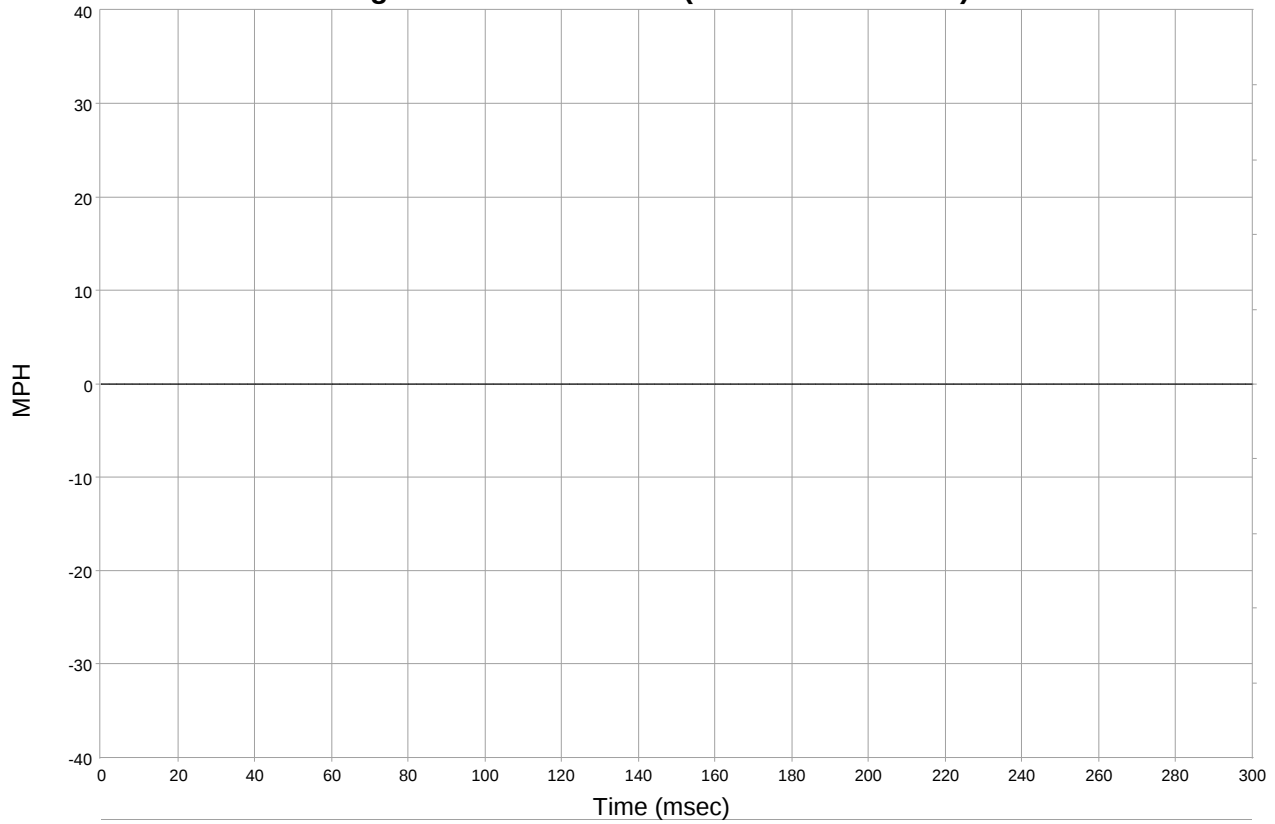
Deployment Command Data (Most Recent Event)

Driver Frontal Airbag Commanded	No
Driver Front Airbag, Time to 1st stage (msec)	0
Driver Front Airbag, Time to 2nd Stage from T0 (msec)	0
Passenger Frontal Airbag Commanded	No
Passenger Front Airbag, Time to 1st stage (msec)	0
Passenger Front Airbag, Time to 2nd Stage from T0 (msec)	0
Commanded Driver Retractor Pretensioner Deployment	Yes
Commanded Passenger Retractor Pretensioner Deployment	Yes
Commanded Left Side Curtain Airbag Deployment	No
Commanded Left Seat Airbag Deployment	No
Commanded Right Side Curtain Airbag Deployment	No
Commanded Front Right Side Seat Airbag Deployment	No

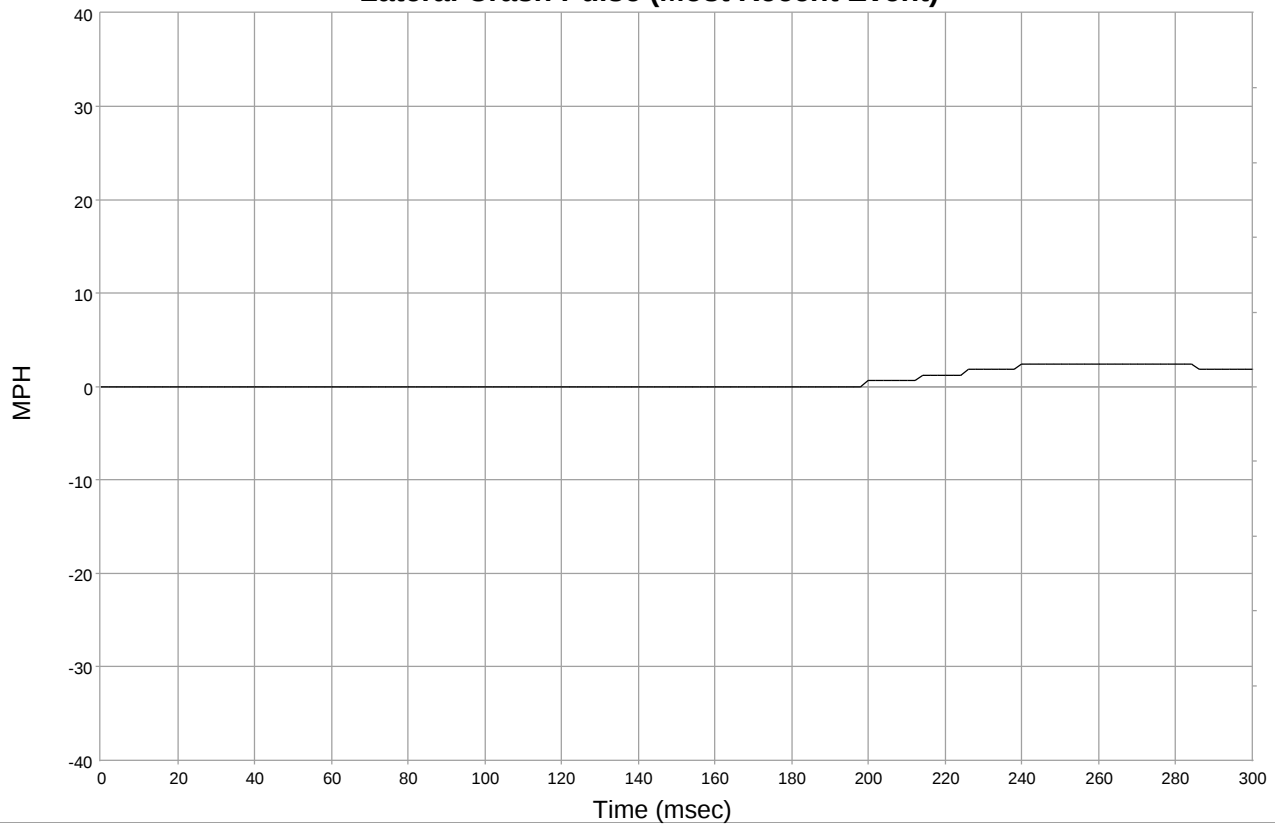
DTCs Present at Start of Event (Most Recent Event)

DTC Number	DTC Status
C10CC-00	Active

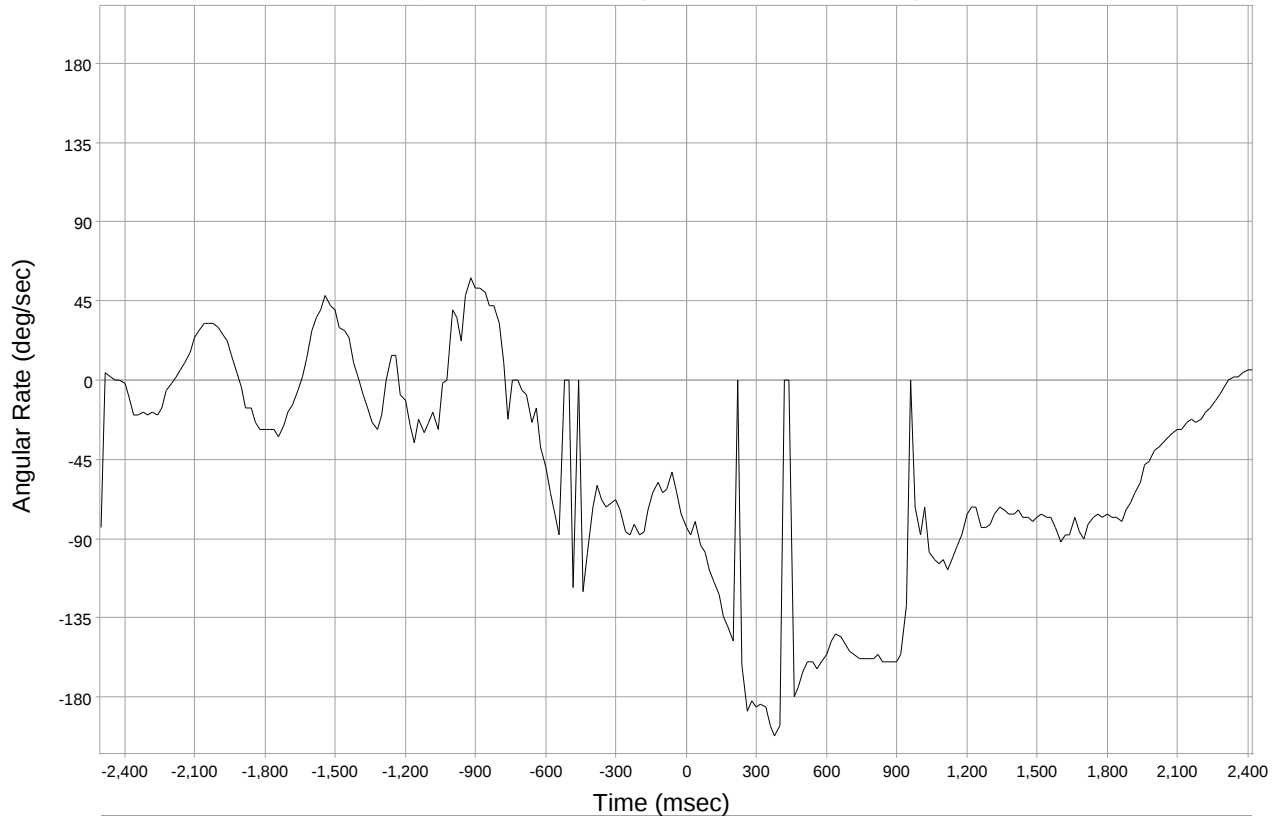
Longitudinal Crash Pulse (Most Recent Event)



Lateral Crash Pulse (Most Recent Event)



Angular Rate Data (Most Recent Event)



Longitudinal Crash Pulse (Most Recent Event)

Time (msec)	Delta-V, Longitudinal (MPH [km/h])
0	0.0 [0]
2	0.0 [0]
4	0.0 [0]
6	0.0 [0]
8	0.0 [0]
10	0.0 [0]
12	0.0 [0]
14	0.0 [0]
16	0.0 [0]
18	0.0 [0]
20	0.0 [0]
22	0.0 [0]
24	0.0 [0]
26	0.0 [0]
28	0.0 [0]
30	0.0 [0]
32	0.0 [0]
34	0.0 [0]
36	0.0 [0]
38	0.0 [0]
40	0.0 [0]
42	0.0 [0]
44	0.0 [0]
46	0.0 [0]
48	0.0 [0]
50	0.0 [0]
52	0.0 [0]
54	0.0 [0]
56	0.0 [0]
58	0.0 [0]
60	0.0 [0]
62	0.0 [0]
64	0.0 [0]
66	0.0 [0]
68	0.0 [0]
70	0.0 [0]
72	0.0 [0]
74	0.0 [0]
76	0.0 [0]
78	0.0 [0]
80	0.0 [0]
82	0.0 [0]
84	0.0 [0]
86	0.0 [0]
88	0.0 [0]
90	0.0 [0]
92	0.0 [0]
94	0.0 [0]
96	0.0 [0]
98	0.0 [0]

Time (msec)	Delta-V, Longitudinal (MPH [km/h])
100	0.0 [0]
102	0.0 [0]
104	0.0 [0]
106	0.0 [0]
108	0.0 [0]
110	0.0 [0]
112	0.0 [0]
114	0.0 [0]
116	0.0 [0]
118	0.0 [0]
120	0.0 [0]
122	0.0 [0]
124	0.0 [0]
126	0.0 [0]
128	0.0 [0]
130	0.0 [0]
132	0.0 [0]
134	0.0 [0]
136	0.0 [0]
138	0.0 [0]
140	0.0 [0]
142	0.0 [0]
144	0.0 [0]
146	0.0 [0]
148	0.0 [0]
150	0.0 [0]
152	0.0 [0]
154	0.0 [0]
156	0.0 [0]
158	0.0 [0]
160	0.0 [0]
162	0.0 [0]
164	0.0 [0]
166	0.0 [0]
168	0.0 [0]
170	0.0 [0]
172	0.0 [0]
174	0.0 [0]
176	0.0 [0]
178	0.0 [0]
180	0.0 [0]
182	0.0 [0]
184	0.0 [0]
186	0.0 [0]
188	0.0 [0]
190	0.0 [0]
192	0.0 [0]
194	0.0 [0]
196	0.0 [0]
198	0.0 [0]

Time (msec)	Delta-V, Longitudinal (MPH [km/h])
200	0.0 [0]
202	0.0 [0]
204	0.0 [0]
206	0.0 [0]
208	0.0 [0]
210	0.0 [0]
212	0.0 [0]
214	0.0 [0]
216	0.0 [0]
218	0.0 [0]
220	0.0 [0]
222	0.0 [0]
224	0.0 [0]
226	0.0 [0]
228	0.0 [0]
230	0.0 [0]
232	0.0 [0]
234	0.0 [0]
236	0.0 [0]
238	0.0 [0]
240	0.0 [0]
242	0.0 [0]
244	0.0 [0]
246	0.0 [0]
248	0.0 [0]
250	0.0 [0]
252	0.0 [0]
254	0.0 [0]
256	0.0 [0]
258	0.0 [0]
260	0.0 [0]
262	0.0 [0]
264	0.0 [0]
266	0.0 [0]
268	0.0 [0]
270	0.0 [0]
272	0.0 [0]
274	0.0 [0]
276	0.0 [0]
278	0.0 [0]
280	0.0 [0]
282	0.0 [0]
284	0.0 [0]
286	0.0 [0]
288	0.0 [0]
290	0.0 [0]
292	0.0 [0]
294	0.0 [0]
296	0.0 [0]
298	0.0 [0]
300	0.0 [0]

Lateral Crash Pulse (Most Recent Event)

Time (msec)	Delta-V, Lateral (MPH [km/h])
0	0.0 [0]
2	0.0 [0]
4	0.0 [0]
6	0.0 [0]
8	0.0 [0]
10	0.0 [0]
12	0.0 [0]
14	0.0 [0]
16	0.0 [0]
18	0.0 [0]
20	0.0 [0]
22	0.0 [0]
24	0.0 [0]
26	0.0 [0]
28	0.0 [0]
30	0.0 [0]
32	0.0 [0]
34	0.0 [0]
36	0.0 [0]
38	0.0 [0]
40	0.0 [0]
42	0.0 [0]
44	0.0 [0]
46	0.0 [0]
48	0.0 [0]
50	0.0 [0]
52	0.0 [0]
54	0.0 [0]
56	0.0 [0]
58	0.0 [0]
60	0.0 [0]
62	0.0 [0]
64	0.0 [0]
66	0.0 [0]
68	0.0 [0]
70	0.0 [0]
72	0.0 [0]
74	0.0 [0]
76	0.0 [0]
78	0.0 [0]
80	0.0 [0]
82	0.0 [0]
84	0.0 [0]
86	0.0 [0]
88	0.0 [0]
90	0.0 [0]
92	0.0 [0]
94	0.0 [0]
96	0.0 [0]
98	0.0 [0]

Time (msec)	Delta-V, Lateral (MPH [km/h])
100	0.0 [0]
102	0.0 [0]
104	0.0 [0]
106	0.0 [0]
108	0.0 [0]
110	0.0 [0]
112	0.0 [0]
114	0.0 [0]
116	0.0 [0]
118	0.0 [0]
120	0.0 [0]
122	0.0 [0]
124	0.0 [0]
126	0.0 [0]
128	0.0 [0]
130	0.0 [0]
132	0.0 [0]
134	0.0 [0]
136	0.0 [0]
138	0.0 [0]
140	0.0 [0]
142	0.0 [0]
144	0.0 [0]
146	0.0 [0]
148	0.0 [0]
150	0.0 [0]
152	0.0 [0]
154	0.0 [0]
156	0.0 [0]
158	0.0 [0]
160	0.0 [0]
162	0.0 [0]
164	0.0 [0]
166	0.0 [0]
168	0.0 [0]
170	0.0 [0]
172	0.0 [0]
174	0.0 [0]
176	0.0 [0]
178	0.0 [0]
180	0.0 [0]
182	0.0 [0]
184	0.0 [0]
186	0.0 [0]
188	0.0 [0]
190	0.0 [0]
192	0.0 [0]
194	0.0 [0]
196	0.0 [0]
198	0.0 [0]

Time (msec)	Delta-V, Lateral (MPH [km/h])
200	0.6 [1]
202	0.6 [1]
204	0.6 [1]
206	0.6 [1]
208	0.6 [1]
210	0.6 [1]
212	0.6 [1]
214	1.2 [2]
216	1.2 [2]
218	1.2 [2]
220	1.2 [2]
222	1.2 [2]
224	1.2 [2]
226	1.9 [3]
228	1.9 [3]
230	1.9 [3]
232	1.9 [3]
234	1.9 [3]
236	1.9 [3]
238	1.9 [3]
240	2.5 [4]
242	2.5 [4]
244	2.5 [4]
246	2.5 [4]
248	2.5 [4]
250	2.5 [4]
252	2.5 [4]
254	2.5 [4]
256	2.5 [4]
258	2.5 [4]
260	2.5 [4]
262	2.5 [4]
264	2.5 [4]
266	2.5 [4]
268	2.5 [4]
270	2.5 [4]
272	2.5 [4]
274	2.5 [4]
276	2.5 [4]
278	2.5 [4]
280	2.5 [4]
282	2.5 [4]
284	2.5 [4]
286	1.9 [3]
288	1.9 [3]
290	1.9 [3]
292	1.9 [3]
294	1.9 [3]
296	1.9 [3]
298	1.9 [3]
300	1.9 [3]

Angular Rate Data (Most Recent Event)

Time (msec)	Angular Rate (deg/sec)
-2500	-84.00
-2480	4.00
-2460	2.00
-2440	0.00
-2420	0.00
-2400	-2.00
-2380	-10.00
-2360	-20.00
-2340	-20.00
-2320	-18.00
-2300	-20.00
-2280	-18.00
-2260	-20.00
-2240	-16.00
-2220	-6.00
-2200	-2.00
-2180	2.00
-2160	6.00
-2140	10.00
-2120	16.00
-2100	24.00
-2080	28.00
-2060	32.00
-2040	32.00
-2020	32.00
-2000	30.00
-1980	26.00
-1960	22.00
-1940	14.00
-1920	4.00
-1900	-4.00
-1880	-16.00
-1860	-16.00
-1840	-24.00
-1820	-28.00
-1800	-28.00
-1780	-28.00
-1760	-28.00
-1740	-32.00
-1720	-26.00
-1700	-18.00
-1680	-14.00
-1660	-6.00
-1640	2.00
-1620	12.00
-1600	28.00
-1580	36.00
-1560	40.00
-1540	48.00
-1520	42.00

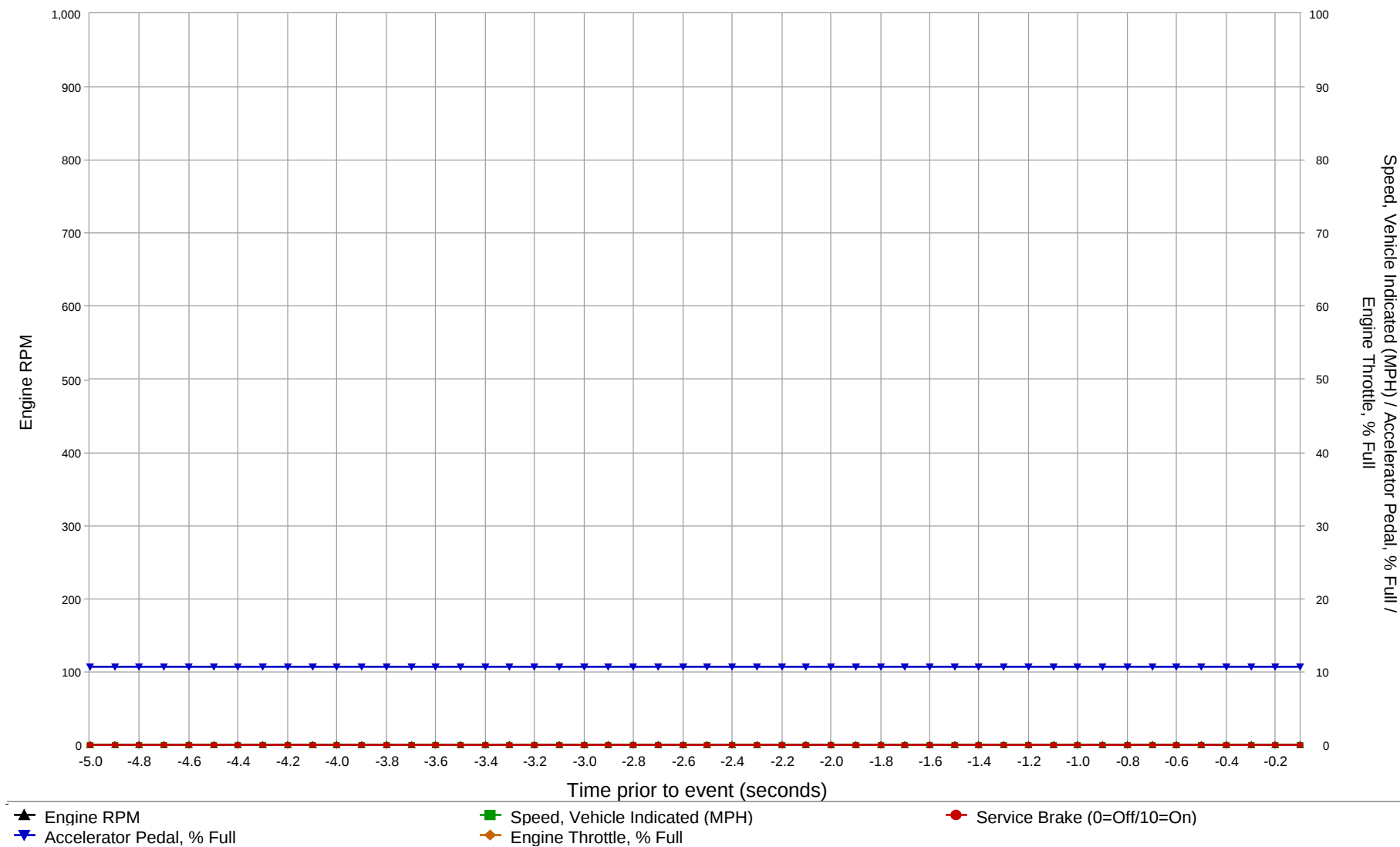
Time (msec)	Angular Rate (deg/sec)
-1500	40.00
-1480	30.00
-1460	28.00
-1440	24.00
-1420	10.00
-1400	0.00
-1380	-8.00
-1360	-16.00
-1340	-24.00
-1320	-28.00
-1300	-20.00
-1280	0.00
-1260	14.00
-1240	14.00
-1220	-8.00
-1200	-12.00
-1180	-26.00
-1160	-36.00
-1140	-22.00
-1120	-30.00
-1100	-24.00
-1080	-18.00
-1060	-28.00
-1040	-2.00
-1020	0.00
-1000	40.00
-980	36.00
-960	22.00
-940	48.00
-920	58.00
-900	52.00
-880	52.00
-860	50.00
-840	42.00
-820	42.00
-800	32.00
-780	10.00
-760	-22.00
-740	0.00
-720	0.00
-700	-6.00
-680	-8.00
-660	-24.00
-640	-16.00
-620	-38.00
-600	-50.00
-580	-64.00
-560	-76.00
-540	-88.00
-520	0.00

Time (msec)	Angular Rate (deg/sec)
-500	0.00
-480	-118.00
-460	0.00
-440	-120.00
-420	-98.00
-400	-72.00
-380	-60.00
-360	-68.00
-340	-72.00
-320	-70.00
-300	-68.00
-280	-74.00
-260	-86.00
-240	-88.00
-220	-82.00
-200	-88.00
-180	-86.00
-160	-74.00
-140	-64.00
-120	-58.00
-100	-64.00
-80	-62.00
-60	-52.00
-40	-64.00
-20	-76.00
0	-84.00
20	-88.00
40	-80.00
60	-94.00
80	-98.00
100	-108.00
120	-114.00
140	-122.00
160	-134.00
180	-140.00
200	-148.00
220	0.00
240	-162.00
260	-188.00
280	-182.00
300	-186.00
320	-184.00
340	-186.00
360	-196.00
380	-202.00
400	-196.00
420	0.00
440	0.00
460	-180.00
480	-174.00

Angular Rate Data (Most Recent Event)

Time (msec)	Angular Rate (deg/sec)	Time (msec)	Angular Rate (deg/sec)
500	-166.00	1500	-78.00
520	-160.00	1520	-76.00
540	-160.00	1540	-78.00
560	-164.00	1560	-78.00
580	-160.00	1580	-84.00
600	-156.00	1600	-92.00
620	-148.00	1620	-88.00
640	-144.00	1640	-88.00
660	-146.00	1660	-78.00
680	-150.00	1680	-86.00
700	-154.00	1700	-90.00
720	-156.00	1720	-82.00
740	-158.00	1740	-78.00
760	-158.00	1760	-76.00
780	-158.00	1780	-78.00
800	-158.00	1800	-76.00
820	-156.00	1820	-78.00
840	-160.00	1840	-78.00
860	-160.00	1860	-80.00
880	-160.00	1880	-74.00
900	-160.00	1900	-70.00
920	-156.00	1920	-64.00
940	-128.00	1940	-58.00
960	0.00	1960	-48.00
980	-72.00	1980	-46.00
1000	-88.00	2000	-40.00
1020	-72.00	2020	-38.00
1040	-98.00	2040	-36.00
1060	-102.00	2060	-32.00
1080	-104.00	2080	-30.00
1100	-102.00	2100	-28.00
1120	-108.00	2120	-28.00
1140	-100.00	2140	-24.00
1160	-94.00	2160	-22.00
1180	-88.00	2180	-24.00
1200	-76.00	2200	-22.00
1220	-72.00	2220	-18.00
1240	-72.00	2240	-16.00
1260	-84.00	2260	-12.00
1280	-84.00	2280	-8.00
1300	-82.00	2300	-4.00
1320	-76.00	2320	0.00
1340	-72.00	2340	2.00
1360	-74.00	2360	2.00
1380	-76.00	2380	4.00
1400	-76.00	2400	6.00
1420	-74.00	2420	6.00
1440	-78.00		
1460	-78.00		
1480	-80.00		

Pre-Crash Data (Most Recent Event)



SNA values will not be plotted on the graph

Pre-Crash Data (Most Recent Event - table 1 of 3)

(the most recent sampled values are recorded prior to the event)

Time Stamp (sec)	Pre-Crash Recorder Status	Speed, Vehicle Indicated (MPH [km/h])	Accelerator Pedal, % Full	Engine Throttle, % Full	Service Brake	Engine RPM	ABS Activity	Stability Control	Steering Input (deg)
-5.0	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.9	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.8	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.7	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.6	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.5	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.4	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.3	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.2	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.1	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.0	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.9	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.8	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.7	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.6	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.5	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.4	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.3	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.2	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.1	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.0	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.9	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.8	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.7	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.6	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.5	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.4	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.3	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.2	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.1	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.0	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.9	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.8	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.7	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.6	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.5	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.4	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.3	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.2	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.1	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.0	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.9	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.8	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.7	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.6	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.5	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.4	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.3	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.2	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.1	Complete	0 [0]	11	SNA	Off	0	No	Off	143

Pre-Crash Data (Most Recent Event - table 2 of 3)

(the most recent sampled values are recorded prior to the event)

Time Stamp (sec)	Raw Manifold Pressure (kPa)	PCM MIL	Yaw Rate (deg/sec)	Wheel Speed LF (RPM)	Wheel Speed RF (RPM)	Wheel Speed LR (RPM)	Wheel Speed RR (RPM)	ETC Lamp
-5.0	99.20	On	SNA	0	0	0	0	On
-4.9	99.20	On	SNA	0	0	0	0	On
-4.8	98.40	On	SNA	0	0	0	0	On
-4.7	98.40	On	SNA	0	0	0	0	On
-4.6	99.20	On	SNA	0	0	0	0	On
-4.5	99.20	On	SNA	0	0	0	0	On
-4.4	99.20	On	SNA	0	0	0	0	On
-4.3	98.40	On	SNA	0	0	0	0	On
-4.2	98.40	On	SNA	0	0	0	0	On
-4.1	98.40	On	SNA	0	0	0	0	On
-4.0	98.40	On	SNA	0	0	0	0	On
-3.9	98.40	On	SNA	0	0	0	0	On
-3.8	98.40	On	SNA	0	0	0	0	On
-3.7	99.20	On	SNA	0	0	0	0	On
-3.6	99.20	On	SNA	0	0	0	0	On
-3.5	99.20	On	SNA	0	0	0	0	On
-3.4	99.20	On	SNA	0	0	0	0	On
-3.3	99.20	On	SNA	0	0	0	0	On
-3.2	99.20	On	SNA	0	0	0	0	On
-3.1	99.20	On	SNA	0	0	0	0	On
-3.0	99.20	On	SNA	0	0	0	0	On
-2.9	99.20	On	SNA	0	0	0	0	On
-2.8	99.20	On	SNA	0	0	0	0	On
-2.7	99.20	On	SNA	0	0	0	0	On
-2.6	99.20	On	SNA	0	0	0	0	On
-2.5	99.20	On	SNA	0	0	0	0	On
-2.4	99.20	On	SNA	0	0	0	0	On
-2.3	99.20	On	SNA	0	0	0	0	On
-2.2	99.20	On	SNA	0	0	0	0	On
-2.1	99.20	On	SNA	0	0	0	0	On
-2.0	99.20	On	SNA	0	0	0	0	On
-1.9	99.20	On	SNA	0	0	0	0	On
-1.8	99.20	On	SNA	0	0	0	0	On
-1.7	99.20	On	SNA	0	0	0	0	On
-1.6	99.20	On	SNA	0	0	0	0	On
-1.5	99.20	On	SNA	0	0	0	0	On
-1.4	99.20	On	SNA	0	0	0	0	On
-1.3	99.20	On	SNA	0	0	0	0	On
-1.2	99.20	On	SNA	0	0	0	0	On
-1.1	99.20	On	SNA	0	0	0	0	On
-1.0	99.20	On	SNA	0	0	0	0	On
-0.9	99.20	On	SNA	0	0	0	0	On
-0.8	99.20	On	SNA	0	0	0	0	On
-0.7	99.20	On	SNA	0	0	0	0	On
-0.6	99.20	On	SNA	0	0	0	0	On
-0.5	99.20	On	SNA	0	0	0	0	On
-0.4	99.20	On	SNA	0	0	0	0	On
-0.3	99.20	On	SNA	0	0	0	0	On
-0.2	99.20	On	SNA	0	0	0	0	On
-0.1	99.20	On	SNA	0	0	0	0	On

Pre-Crash Data (Most Recent Event - table 3 of 3)

(the most recent sampled values are recorded prior to the event)

Time Stamp (sec)	ETC Flashing	Engine Torque Applied	PRNDL Status (if equip.)	Reverse Gear (Manual Only)	Cruise Control Engaged (if equip.)	Cruise Control Status (if equip.)
-5.0	No	No	Park	No	Not Engaged	Off
-4.9	No	No	Park	No	Not Engaged	Off
-4.8	No	No	Park	No	Not Engaged	Off
-4.7	No	No	Park	No	Not Engaged	Off
-4.6	No	No	Park	No	Not Engaged	Off
-4.5	No	No	Park	No	Not Engaged	Off
-4.4	No	No	Park	No	Not Engaged	Off
-4.3	No	No	Park	No	Not Engaged	Off
-4.2	No	No	Park	No	Not Engaged	Off
-4.1	No	No	Park	No	Not Engaged	Off
-4.0	No	No	Park	No	Not Engaged	Off
-3.9	No	No	Park	No	Not Engaged	Off
-3.8	No	No	Park	No	Not Engaged	Off
-3.7	No	No	Park	No	Not Engaged	Off
-3.6	No	No	Park	No	Not Engaged	Off
-3.5	No	No	Park	No	Not Engaged	Off
-3.4	No	No	Park	No	Not Engaged	Off
-3.3	No	No	Park	No	Not Engaged	Off
-3.2	No	No	Park	No	Not Engaged	Off
-3.1	No	No	Park	No	Not Engaged	Off
-3.0	No	No	Park	No	Not Engaged	Off
-2.9	No	No	Park	No	Not Engaged	Off
-2.8	No	No	Park	No	Not Engaged	Off
-2.7	No	No	Park	No	Not Engaged	Off
-2.6	No	No	Park	No	Not Engaged	Off
-2.5	No	No	Park	No	Not Engaged	Off
-2.4	No	No	Park	No	Not Engaged	Off
-2.3	No	No	Park	No	Not Engaged	Off
-2.2	No	No	Park	No	Not Engaged	Off
-2.1	No	No	Park	No	Not Engaged	Off
-2.0	No	No	Park	No	Not Engaged	Off
-1.9	No	No	Park	No	Not Engaged	Off
-1.8	No	No	Park	No	Not Engaged	Off
-1.7	No	No	Park	No	Not Engaged	Off
-1.6	No	No	Park	No	Not Engaged	Off
-1.5	No	No	Park	No	Not Engaged	Off
-1.4	No	No	Park	No	Not Engaged	Off
-1.3	No	No	Park	No	Not Engaged	Off
-1.2	No	No	Park	No	Not Engaged	Off
-1.1	No	No	Park	No	Not Engaged	Off
-1.0	No	No	Park	No	Not Engaged	Off
-0.9	No	No	Park	No	Not Engaged	Off
-0.8	No	No	Park	No	Not Engaged	Off
-0.7	No	No	Park	No	Not Engaged	Off
-0.6	No	No	Park	No	Not Engaged	Off
-0.5	No	No	Park	No	Not Engaged	Off
-0.4	No	No	Park	No	Not Engaged	Off
-0.3	No	No	Park	No	Not Engaged	Off
-0.2	No	No	Park	No	Not Engaged	Off
-0.1	No	No	Park	No	Not Engaged	Off

System Configuration at Event (1st Prior Event)

Configured for Driver Frontal Airbag	Yes
Configured for Passenger Airbag	Yes
Configured for Driver Retractor Pretensioner	Yes
Configured for Passenger Retractor Pretensioner	Yes
Configured for Left Side Curtain Airbag	Yes
Configured for Right Side Curtain Airbag	Yes
Configured for Front Left Seat Airbags	Yes
Configured for Front Right Seat Airbag	Yes
Configured for Safety Belt Status, Driver	Yes
Configured for Safety Belt Status, Outboard Front Passenger	Yes
Configured for Seat Track Position Switch, Foremost, Status, Driver	No
Configured for Seat Track Position Switch, Foremost, Status, Outboard Front Passenger	No
Configured for Rollover Sensing	Yes

System Status at Event (1st Prior Event)

Event Number	23
Multi-Event, Number of Events (1,2)	1
Total number of events	24
Time from Event 1 to 2 (Time since last event)(sec)	>5
Complete File Recorded (Yes, No)	Yes
Maximum Delta-V Longitudinal (MPH [km/h])	0.0 [0]
Time, Maximum Delta-V, Longitudinal (msec)	0
Maximum Delta-V Lateral (MPH [km/h])	2.5 [4]
Time, Maximum Delta-V, Lateral (msec)	240
Ignition Cycle, Crash	233
Safety Belt Status, Driver	Buckled
Safety Belt Status, Outboard Front Passenger	Buckled
Airbag Warning Lamp, On/Off	Off
Operation System Time (sec)	319412
Airbag Warning Lamp On Time Before Event (min)	0
Supply Voltage at Event, ACM (V)	13.8
Operation via Energy Reserve	No
VIN at Event (last 8 digits)	GS*****
Odometer at Event (km [miles])	5651 [3511.1]

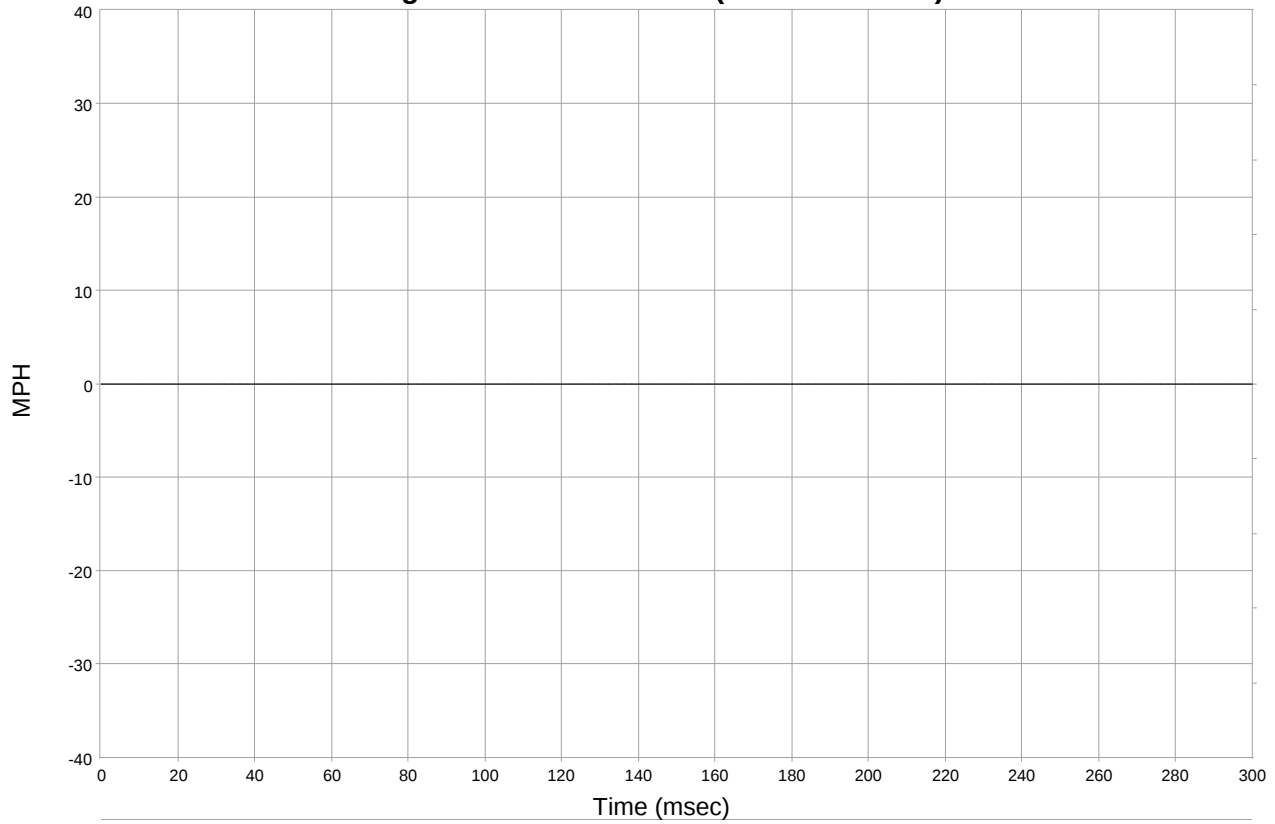
Deployment Command Data (1st Prior Event)

Driver Frontal Airbag Commanded	No
Driver Front Airbag, Time to 1st stage (msec)	0
Driver Front Airbag, Time to 2nd Stage from T0 (msec)	0
Passenger Frontal Airbag Commanded	No
Passenger Front Airbag, Time to 1st stage (msec)	0
Passenger Front Airbag, Time to 2nd Stage from T0 (msec)	0
Commanded Driver Retractor Pretensioner Deployment	Yes
Commanded Passenger Retractor Pretensioner Deployment	Yes
Commanded Left Side Curtain Airbag Deployment	No
Commanded Left Seat Airbag Deployment	No
Commanded Right Side Curtain Airbag Deployment	No
Commanded Front Right Side Seat Airbag Deployment	No

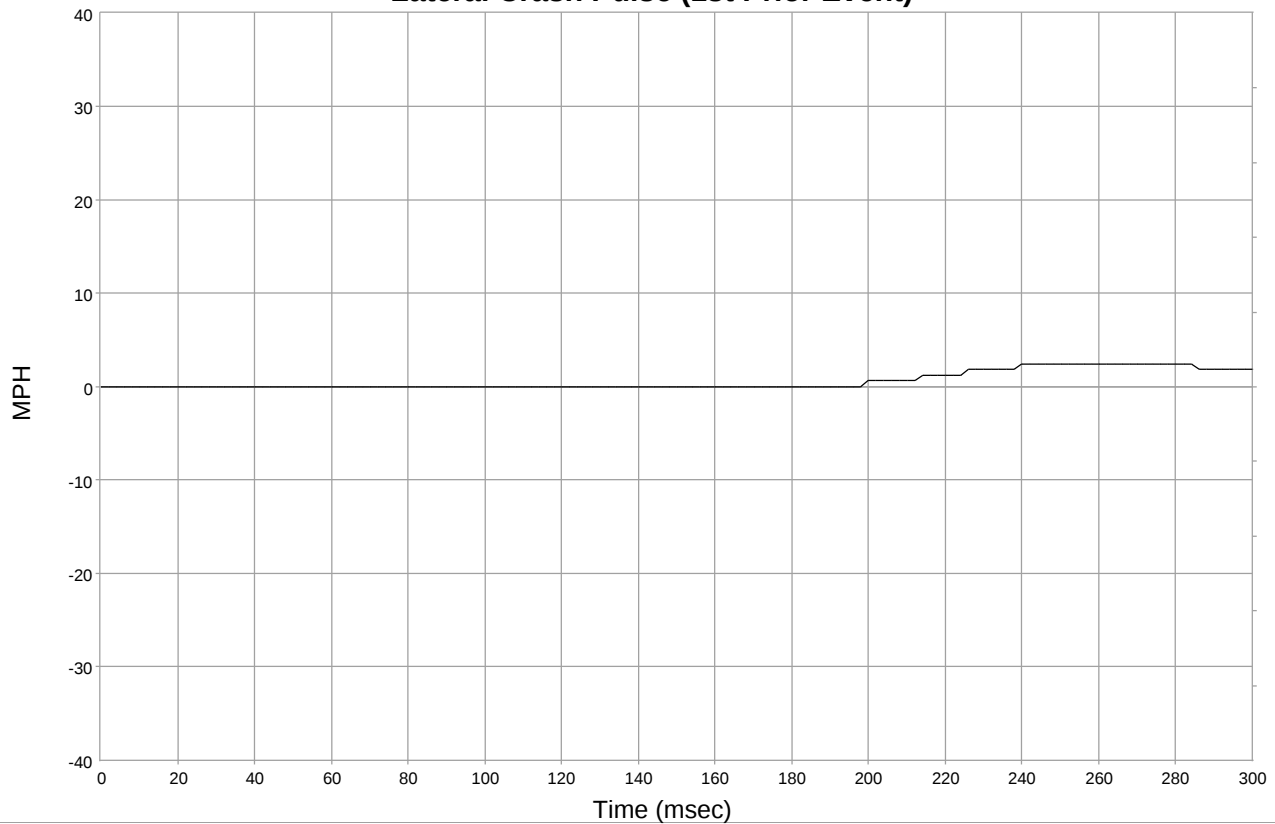
DTCs Present at Start of Event (1st Prior Event)

DTC Number	DTC Status
C10CC-00	Active

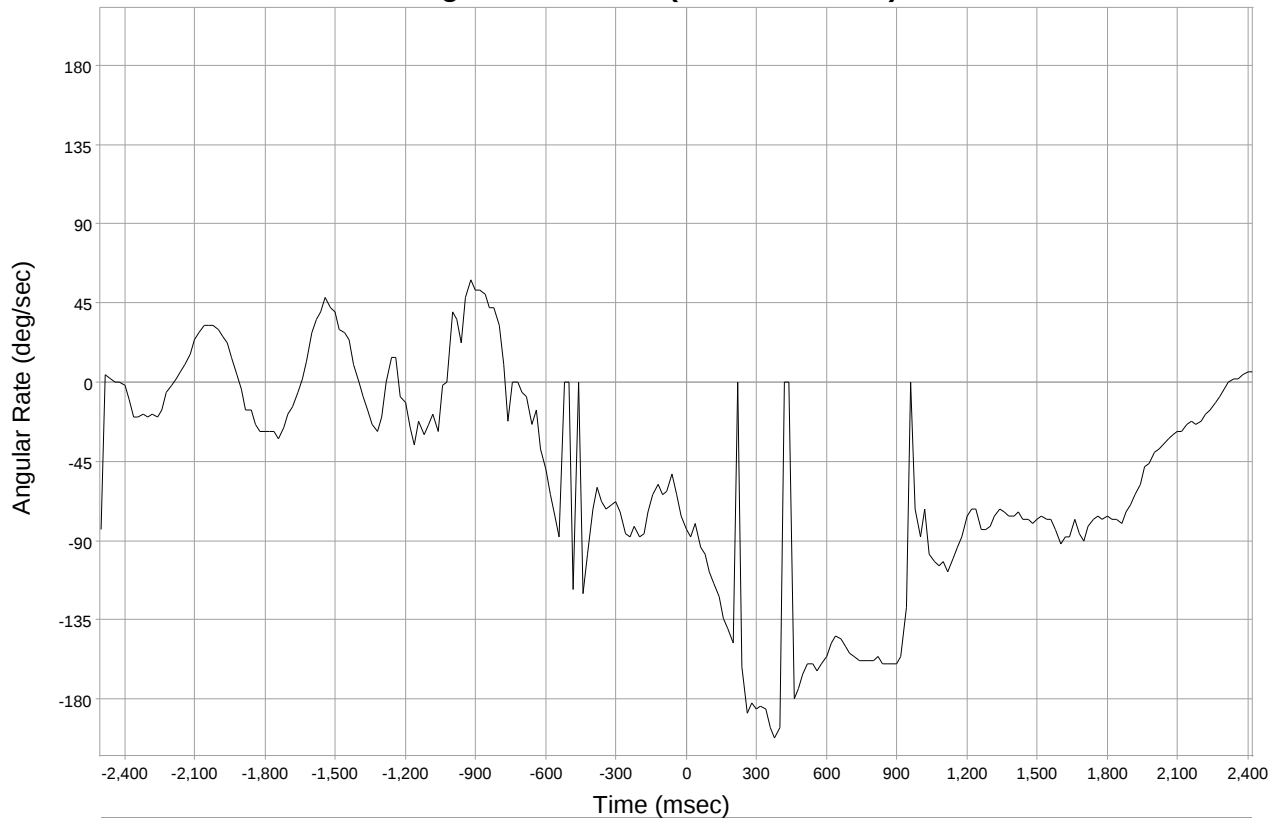
Longitudinal Crash Pulse (1st Prior Event)



Lateral Crash Pulse (1st Prior Event)



Angular Rate Data (1st Prior Event)



Longitudinal Crash Pulse (1st Prior Event)

Time (msec)	Delta-V, Longitudinal (MPH [km/h])
0	0.0 [0]
2	0.0 [0]
4	0.0 [0]
6	0.0 [0]
8	0.0 [0]
10	0.0 [0]
12	0.0 [0]
14	0.0 [0]
16	0.0 [0]
18	0.0 [0]
20	0.0 [0]
22	0.0 [0]
24	0.0 [0]
26	0.0 [0]
28	0.0 [0]
30	0.0 [0]
32	0.0 [0]
34	0.0 [0]
36	0.0 [0]
38	0.0 [0]
40	0.0 [0]
42	0.0 [0]
44	0.0 [0]
46	0.0 [0]
48	0.0 [0]
50	0.0 [0]
52	0.0 [0]
54	0.0 [0]
56	0.0 [0]
58	0.0 [0]
60	0.0 [0]
62	0.0 [0]
64	0.0 [0]
66	0.0 [0]
68	0.0 [0]
70	0.0 [0]
72	0.0 [0]
74	0.0 [0]
76	0.0 [0]
78	0.0 [0]
80	0.0 [0]
82	0.0 [0]
84	0.0 [0]
86	0.0 [0]
88	0.0 [0]
90	0.0 [0]
92	0.0 [0]
94	0.0 [0]
96	0.0 [0]
98	0.0 [0]

Time (msec)	Delta-V, Longitudinal (MPH [km/h])
100	0.0 [0]
102	0.0 [0]
104	0.0 [0]
106	0.0 [0]
108	0.0 [0]
110	0.0 [0]
112	0.0 [0]
114	0.0 [0]
116	0.0 [0]
118	0.0 [0]
120	0.0 [0]
122	0.0 [0]
124	0.0 [0]
126	0.0 [0]
128	0.0 [0]
130	0.0 [0]
132	0.0 [0]
134	0.0 [0]
136	0.0 [0]
138	0.0 [0]
140	0.0 [0]
142	0.0 [0]
144	0.0 [0]
146	0.0 [0]
148	0.0 [0]
150	0.0 [0]
152	0.0 [0]
154	0.0 [0]
156	0.0 [0]
158	0.0 [0]
160	0.0 [0]
162	0.0 [0]
164	0.0 [0]
166	0.0 [0]
168	0.0 [0]
170	0.0 [0]
172	0.0 [0]
174	0.0 [0]
176	0.0 [0]
178	0.0 [0]
180	0.0 [0]
182	0.0 [0]
184	0.0 [0]
186	0.0 [0]
188	0.0 [0]
190	0.0 [0]
192	0.0 [0]
194	0.0 [0]
196	0.0 [0]
198	0.0 [0]

Time (msec)	Delta-V, Longitudinal (MPH [km/h])
200	0.0 [0]
202	0.0 [0]
204	0.0 [0]
206	0.0 [0]
208	0.0 [0]
210	0.0 [0]
212	0.0 [0]
214	0.0 [0]
216	0.0 [0]
218	0.0 [0]
220	0.0 [0]
222	0.0 [0]
224	0.0 [0]
226	0.0 [0]
228	0.0 [0]
230	0.0 [0]
232	0.0 [0]
234	0.0 [0]
236	0.0 [0]
238	0.0 [0]
240	0.0 [0]
242	0.0 [0]
244	0.0 [0]
246	0.0 [0]
248	0.0 [0]
250	0.0 [0]
252	0.0 [0]
254	0.0 [0]
256	0.0 [0]
258	0.0 [0]
260	0.0 [0]
262	0.0 [0]
264	0.0 [0]
266	0.0 [0]
268	0.0 [0]
270	0.0 [0]
272	0.0 [0]
274	0.0 [0]
276	0.0 [0]
278	0.0 [0]
280	0.0 [0]
282	0.0 [0]
284	0.0 [0]
286	0.0 [0]
288	0.0 [0]
290	0.0 [0]
292	0.0 [0]
294	0.0 [0]
296	0.0 [0]
298	0.0 [0]
300	0.0 [0]

Lateral Crash Pulse (1st Prior Event)

Time (msec)	Delta-V, Lateral (MPH [km/h])
0	0.0 [0]
2	0.0 [0]
4	0.0 [0]
6	0.0 [0]
8	0.0 [0]
10	0.0 [0]
12	0.0 [0]
14	0.0 [0]
16	0.0 [0]
18	0.0 [0]
20	0.0 [0]
22	0.0 [0]
24	0.0 [0]
26	0.0 [0]
28	0.0 [0]
30	0.0 [0]
32	0.0 [0]
34	0.0 [0]
36	0.0 [0]
38	0.0 [0]
40	0.0 [0]
42	0.0 [0]
44	0.0 [0]
46	0.0 [0]
48	0.0 [0]
50	0.0 [0]
52	0.0 [0]
54	0.0 [0]
56	0.0 [0]
58	0.0 [0]
60	0.0 [0]
62	0.0 [0]
64	0.0 [0]
66	0.0 [0]
68	0.0 [0]
70	0.0 [0]
72	0.0 [0]
74	0.0 [0]
76	0.0 [0]
78	0.0 [0]
80	0.0 [0]
82	0.0 [0]
84	0.0 [0]
86	0.0 [0]
88	0.0 [0]
90	0.0 [0]
92	0.0 [0]
94	0.0 [0]
96	0.0 [0]
98	0.0 [0]

Time (msec)	Delta-V, Lateral (MPH [km/h])
100	0.0 [0]
102	0.0 [0]
104	0.0 [0]
106	0.0 [0]
108	0.0 [0]
110	0.0 [0]
112	0.0 [0]
114	0.0 [0]
116	0.0 [0]
118	0.0 [0]
120	0.0 [0]
122	0.0 [0]
124	0.0 [0]
126	0.0 [0]
128	0.0 [0]
130	0.0 [0]
132	0.0 [0]
134	0.0 [0]
136	0.0 [0]
138	0.0 [0]
140	0.0 [0]
142	0.0 [0]
144	0.0 [0]
146	0.0 [0]
148	0.0 [0]
150	0.0 [0]
152	0.0 [0]
154	0.0 [0]
156	0.0 [0]
158	0.0 [0]
160	0.0 [0]
162	0.0 [0]
164	0.0 [0]
166	0.0 [0]
168	0.0 [0]
170	0.0 [0]
172	0.0 [0]
174	0.0 [0]
176	0.0 [0]
178	0.0 [0]
180	0.0 [0]
182	0.0 [0]
184	0.0 [0]
186	0.0 [0]
188	0.0 [0]
190	0.0 [0]
192	0.0 [0]
194	0.0 [0]
196	0.0 [0]
198	0.0 [0]

Time (msec)	Delta-V, Lateral (MPH [km/h])
200	0.6 [1]
202	0.6 [1]
204	0.6 [1]
206	0.6 [1]
208	0.6 [1]
210	0.6 [1]
212	0.6 [1]
214	1.2 [2]
216	1.2 [2]
218	1.2 [2]
220	1.2 [2]
222	1.2 [2]
224	1.2 [2]
226	1.9 [3]
228	1.9 [3]
230	1.9 [3]
232	1.9 [3]
234	1.9 [3]
236	1.9 [3]
238	1.9 [3]
240	2.5 [4]
242	2.5 [4]
244	2.5 [4]
246	2.5 [4]
248	2.5 [4]
250	2.5 [4]
252	2.5 [4]
254	2.5 [4]
256	2.5 [4]
258	2.5 [4]
260	2.5 [4]
262	2.5 [4]
264	2.5 [4]
266	2.5 [4]
268	2.5 [4]
270	2.5 [4]
272	2.5 [4]
274	2.5 [4]
276	2.5 [4]
278	2.5 [4]
280	2.5 [4]
282	2.5 [4]
284	2.5 [4]
286	1.9 [3]
288	1.9 [3]
290	1.9 [3]
292	1.9 [3]
294	1.9 [3]
296	1.9 [3]
298	1.9 [3]
300	1.9 [3]

Angular Rate Data (1st Prior Event)

Time (msec)	Angular Rate (deg/sec)
-2500	-84.00
-2480	4.00
-2460	2.00
-2440	0.00
-2420	0.00
-2400	-2.00
-2380	-10.00
-2360	-20.00
-2340	-20.00
-2320	-18.00
-2300	-20.00
-2280	-18.00
-2260	-20.00
-2240	-16.00
-2220	-6.00
-2200	-2.00
-2180	2.00
-2160	6.00
-2140	10.00
-2120	16.00
-2100	24.00
-2080	28.00
-2060	32.00
-2040	32.00
-2020	32.00
-2000	30.00
-1980	26.00
-1960	22.00
-1940	14.00
-1920	4.00
-1900	-4.00
-1880	-16.00
-1860	-16.00
-1840	-24.00
-1820	-28.00
-1800	-28.00
-1780	-28.00
-1760	-28.00
-1740	-32.00
-1720	-26.00
-1700	-18.00
-1680	-14.00
-1660	-6.00
-1640	2.00
-1620	12.00
-1600	28.00
-1580	36.00
-1560	40.00
-1540	48.00
-1520	42.00

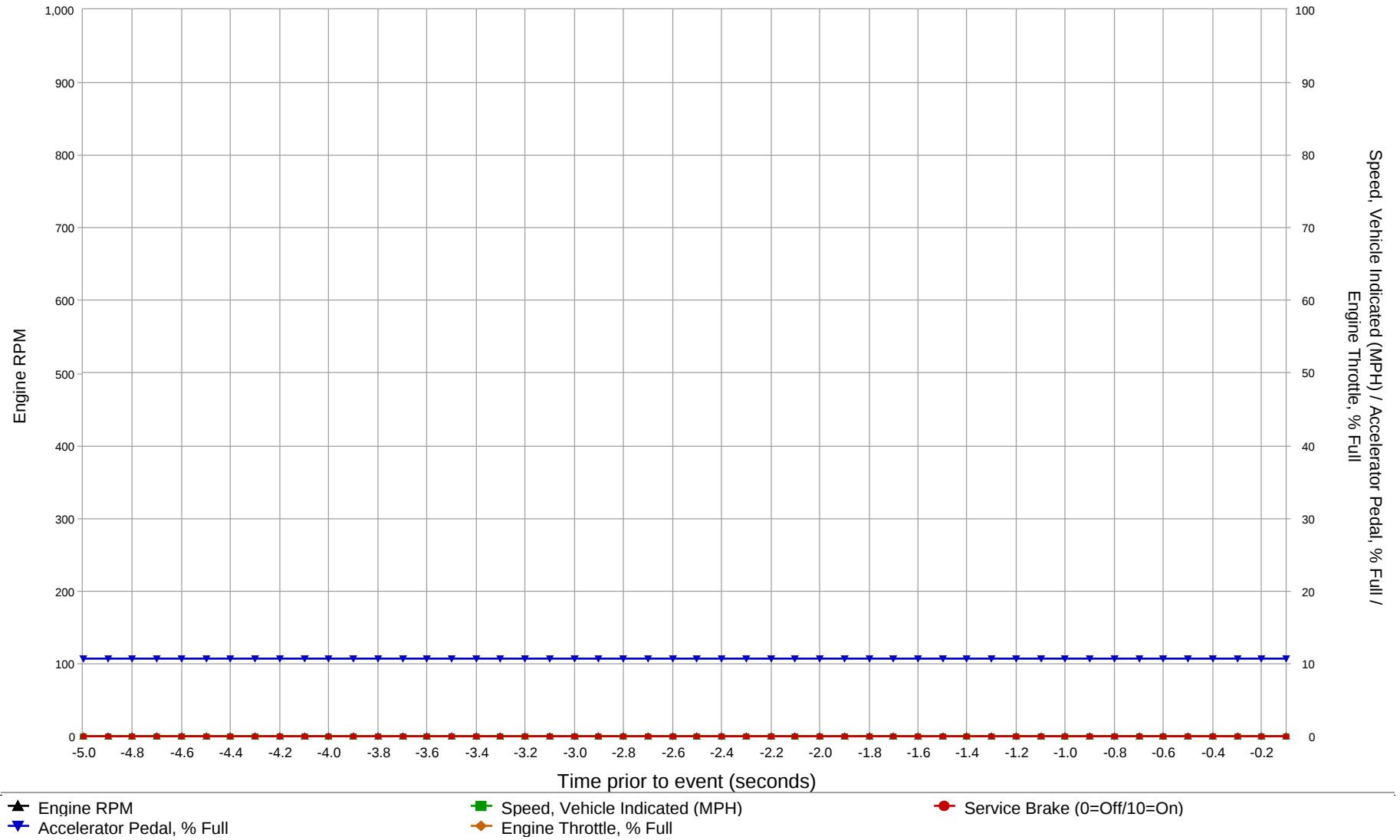
Time (msec)	Angular Rate (deg/sec)
-1500	40.00
-1480	30.00
-1460	28.00
-1440	24.00
-1420	10.00
-1400	0.00
-1380	-8.00
-1360	-16.00
-1340	-24.00
-1320	-28.00
-1300	-20.00
-1280	0.00
-1260	14.00
-1240	14.00
-1220	-8.00
-1200	-12.00
-1180	-26.00
-1160	-36.00
-1140	-22.00
-1120	-30.00
-1100	-24.00
-1080	-18.00
-1060	-28.00
-1040	-2.00
-1020	0.00
-1000	40.00
-980	36.00
-960	22.00
-940	48.00
-920	58.00
-900	52.00
-880	52.00
-860	50.00
-840	42.00
-820	42.00
-800	32.00
-780	10.00
-760	-22.00
-740	0.00
-720	0.00
-700	-6.00
-680	-8.00
-660	-24.00
-640	-16.00
-620	-38.00
-600	-50.00
-580	-64.00
-560	-76.00
-540	-88.00
-520	0.00

Time (msec)	Angular Rate (deg/sec)
-500	0.00
-480	-118.00
-460	0.00
-440	-120.00
-420	-98.00
-400	-72.00
-380	-60.00
-360	-68.00
-340	-72.00
-320	-70.00
-300	-68.00
-280	-74.00
-260	-86.00
-240	-88.00
-220	-82.00
-200	-88.00
-180	-86.00
-160	-74.00
-140	-64.00
-120	-58.00
-100	-64.00
-80	-62.00
-60	-52.00
-40	-64.00
-20	-76.00
0	-84.00
20	-88.00
40	-80.00
60	-94.00
80	-98.00
100	-108.00
120	-114.00
140	-122.00
160	-134.00
180	-140.00
200	-148.00
220	0.00
240	-162.00
260	-188.00
280	-182.00
300	-186.00
320	-184.00
340	-186.00
360	-196.00
380	-202.00
400	-196.00
420	0.00
440	0.00
460	-180.00
480	-174.00

Angular Rate Data (1st Prior Event)

Time (msec)	Angular Rate (deg/sec)	Time (msec)	Angular Rate (deg/sec)
500	-166.00	1500	-78.00
520	-160.00	1520	-76.00
540	-160.00	1540	-78.00
560	-164.00	1560	-78.00
580	-160.00	1580	-84.00
600	-156.00	1600	-92.00
620	-148.00	1620	-88.00
640	-144.00	1640	-88.00
660	-146.00	1660	-78.00
680	-150.00	1680	-86.00
700	-154.00	1700	-90.00
720	-156.00	1720	-82.00
740	-158.00	1740	-78.00
760	-158.00	1760	-76.00
780	-158.00	1780	-78.00
800	-158.00	1800	-76.00
820	-156.00	1820	-78.00
840	-160.00	1840	-78.00
860	-160.00	1860	-80.00
880	-160.00	1880	-74.00
900	-160.00	1900	-70.00
920	-156.00	1920	-64.00
940	-128.00	1940	-58.00
960	0.00	1960	-48.00
980	-72.00	1980	-46.00
1000	-88.00	2000	-40.00
1020	-72.00	2020	-38.00
1040	-98.00	2040	-36.00
1060	-102.00	2060	-32.00
1080	-104.00	2080	-30.00
1100	-102.00	2100	-28.00
1120	-108.00	2120	-28.00
1140	-100.00	2140	-24.00
1160	-94.00	2160	-22.00
1180	-88.00	2180	-24.00
1200	-76.00	2200	-22.00
1220	-72.00	2220	-18.00
1240	-72.00	2240	-16.00
1260	-84.00	2260	-12.00
1280	-84.00	2280	-8.00
1300	-82.00	2300	-4.00
1320	-76.00	2320	0.00
1340	-72.00	2340	2.00
1360	-74.00	2360	2.00
1380	-76.00	2380	4.00
1400	-76.00	2400	6.00
1420	-74.00	2420	6.00
1440	-78.00		
1460	-78.00		
1480	-80.00		

Pre-Crash Data (1st Prior Event)



SNA values will not be plotted on the graph

Pre-Crash Data (1st Prior Event - table 1 of 3)

(the most recent sampled values are recorded prior to the event)

Time Stamp (sec)	Pre-Crash Recorder Status	Speed, Vehicle Indicated (MPH [km/h])	Accelerator Pedal, % Full	Engine Throttle, % Full	Service Brake	Engine RPM	ABS Activity	Stability Control	Steering Input (deg)
-5.0	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.9	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.8	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.7	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.6	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.5	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.4	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.3	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.2	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.1	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.0	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.9	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.8	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.7	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.6	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.5	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.4	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.3	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.2	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.1	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.0	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.9	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.8	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.7	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.6	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.5	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.4	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.3	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.2	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.1	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.0	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.9	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.8	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.7	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.6	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.5	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.4	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.3	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.2	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.1	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.0	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.9	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.8	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.7	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.6	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.5	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.4	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.3	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.2	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.1	Complete	0 [0]	11	SNA	Off	0	No	Off	143

Pre-Crash Data (1st Prior Event - table 2 of 3)

(the most recent sampled values are recorded prior to the event)

Time Stamp (sec)	Raw Manifold Pressure (kPa)	PCM MIL	Yaw Rate (deg/sec)	Wheel Speed LF (RPM)	Wheel Speed RF (RPM)	Wheel Speed LR (RPM)	Wheel Speed RR (RPM)	ETC Lamp
-5.0	99.20	On	SNA	0	0	0	0	On
-4.9	99.20	On	SNA	0	0	0	0	On
-4.8	98.40	On	SNA	0	0	0	0	On
-4.7	98.40	On	SNA	0	0	0	0	On
-4.6	99.20	On	SNA	0	0	0	0	On
-4.5	99.20	On	SNA	0	0	0	0	On
-4.4	99.20	On	SNA	0	0	0	0	On
-4.3	99.20	On	SNA	0	0	0	0	On
-4.2	99.20	On	SNA	0	0	0	0	On
-4.1	99.20	On	SNA	0	0	0	0	On
-4.0	99.20	On	SNA	0	0	0	0	On
-3.9	99.20	On	SNA	0	0	0	0	On
-3.8	99.20	On	SNA	0	0	0	0	On
-3.7	99.20	On	SNA	0	0	0	0	On
-3.6	99.20	On	SNA	0	0	0	0	On
-3.5	99.20	On	SNA	0	0	0	0	On
-3.4	99.20	On	SNA	0	0	0	0	On
-3.3	99.20	On	SNA	0	0	0	0	On
-3.2	99.20	On	SNA	0	0	0	0	On
-3.1	99.20	On	SNA	0	0	0	0	On
-3.0	99.20	On	SNA	0	0	0	0	On
-2.9	99.20	On	SNA	0	0	0	0	On
-2.8	99.20	On	SNA	0	0	0	0	On
-2.7	99.20	On	SNA	0	0	0	0	On
-2.6	99.20	On	SNA	0	0	0	0	On
-2.5	99.20	On	SNA	0	0	0	0	On
-2.4	99.20	On	SNA	0	0	0	0	On
-2.3	99.20	On	SNA	0	0	0	0	On
-2.2	99.20	On	SNA	0	0	0	0	On
-2.1	99.20	On	SNA	0	0	0	0	On
-2.0	99.20	On	SNA	0	0	0	0	On
-1.9	99.20	On	SNA	0	0	0	0	On
-1.8	99.20	On	SNA	0	0	0	0	On
-1.7	99.20	On	SNA	0	0	0	0	On
-1.6	99.20	On	SNA	0	0	0	0	On
-1.5	99.20	On	SNA	0	0	0	0	On
-1.4	99.20	On	SNA	0	0	0	0	On
-1.3	99.20	On	SNA	0	0	0	0	On
-1.2	99.20	On	SNA	0	0	0	0	On
-1.1	99.20	On	SNA	0	0	0	0	On
-1.0	99.20	On	SNA	0	0	0	0	On
-0.9	99.20	On	SNA	0	0	0	0	On
-0.8	99.20	On	SNA	0	0	0	0	On
-0.7	99.20	On	SNA	0	0	0	0	On
-0.6	99.20	On	SNA	0	0	0	0	On
-0.5	99.20	On	SNA	0	0	0	0	On
-0.4	99.20	On	SNA	0	0	0	0	On
-0.3	99.20	On	SNA	0	0	0	0	On
-0.2	99.20	On	SNA	0	0	0	0	On
-0.1	99.20	On	SNA	0	0	0	0	On

Pre-Crash Data (1st Prior Event - table 3 of 3)

(the most recent sampled values are recorded prior to the event)

Time Stamp (sec)	ETC Flashing	Engine Torque Applied	PRNDL Status (if equip.)	Reverse Gear (Manual Only)	Cruise Control Engaged (if equip.)	Cruise Control Status (if equip.)
-5.0	No	No	Park	No	Not Engaged	Off
-4.9	No	No	Park	No	Not Engaged	Off
-4.8	No	No	Park	No	Not Engaged	Off
-4.7	No	No	Park	No	Not Engaged	Off
-4.6	No	No	Park	No	Not Engaged	Off
-4.5	No	No	Park	No	Not Engaged	Off
-4.4	No	No	Park	No	Not Engaged	Off
-4.3	No	No	Park	No	Not Engaged	Off
-4.2	No	No	Park	No	Not Engaged	Off
-4.1	No	No	Park	No	Not Engaged	Off
-4.0	No	No	Park	No	Not Engaged	Off
-3.9	No	No	Park	No	Not Engaged	Off
-3.8	No	No	Park	No	Not Engaged	Off
-3.7	No	No	Park	No	Not Engaged	Off
-3.6	No	No	Park	No	Not Engaged	Off
-3.5	No	No	Park	No	Not Engaged	Off
-3.4	No	No	Park	No	Not Engaged	Off
-3.3	No	No	Park	No	Not Engaged	Off
-3.2	No	No	Park	No	Not Engaged	Off
-3.1	No	No	Park	No	Not Engaged	Off
-3.0	No	No	Park	No	Not Engaged	Off
-2.9	No	No	Park	No	Not Engaged	Off
-2.8	No	No	Park	No	Not Engaged	Off
-2.7	No	No	Park	No	Not Engaged	Off
-2.6	No	No	Park	No	Not Engaged	Off
-2.5	No	No	Park	No	Not Engaged	Off
-2.4	No	No	Park	No	Not Engaged	Off
-2.3	No	No	Park	No	Not Engaged	Off
-2.2	No	No	Park	No	Not Engaged	Off
-2.1	No	No	Park	No	Not Engaged	Off
-2.0	No	No	Park	No	Not Engaged	Off
-1.9	No	No	Park	No	Not Engaged	Off
-1.8	No	No	Park	No	Not Engaged	Off
-1.7	No	No	Park	No	Not Engaged	Off
-1.6	No	No	Park	No	Not Engaged	Off
-1.5	No	No	Park	No	Not Engaged	Off
-1.4	No	No	Park	No	Not Engaged	Off
-1.3	No	No	Park	No	Not Engaged	Off
-1.2	No	No	Park	No	Not Engaged	Off
-1.1	No	No	Park	No	Not Engaged	Off
-1.0	No	No	Park	No	Not Engaged	Off
-0.9	No	No	Park	No	Not Engaged	Off
-0.8	No	No	Park	No	Not Engaged	Off
-0.7	No	No	Park	No	Not Engaged	Off
-0.6	No	No	Park	No	Not Engaged	Off
-0.5	No	No	Park	No	Not Engaged	Off
-0.4	No	No	Park	No	Not Engaged	Off
-0.3	No	No	Park	No	Not Engaged	Off
-0.2	No	No	Park	No	Not Engaged	Off
-0.1	No	No	Park	No	Not Engaged	Off

System Configuration at Event (2nd Prior Event)

Configured for Driver Frontal Airbag	Yes
Configured for Passenger Airbag	Yes
Configured for Driver Retractor Pretensioner	Yes
Configured for Passenger Retractor Pretensioner	Yes
Configured for Left Side Curtain Airbag	Yes
Configured for Right Side Curtain Airbag	Yes
Configured for Front Left Seat Airbags	Yes
Configured for Front Right Seat Airbag	Yes
Configured for Safety Belt Status, Driver	Yes
Configured for Safety Belt Status, Outboard Front Passenger	Yes
Configured for Seat Track Position Switch, Foremost, Status, Driver	No
Configured for Seat Track Position Switch, Foremost, Status, Outboard Front Passenger	No
Configured for Rollover Sensing	Yes

System Status at Event (2nd Prior Event)

Event Number	22
Multi-Event, Number of Events (1,2)	1
Total number of events	24
Time from Event 1 to 2 (Time since last event)(sec)	>5
Complete File Recorded (Yes, No)	Yes
Maximum Delta-V Longitudinal (MPH [km/h])	0.0 [0]
Time, Maximum Delta-V, Longitudinal (msec)	0
Maximum Delta-V Lateral (MPH [km/h])	2.5 [4]
Time, Maximum Delta-V, Lateral (msec)	240
Ignition Cycle, Crash	233
Safety Belt Status, Driver	Buckled
Safety Belt Status, Outboard Front Passenger	Buckled
Airbag Warning Lamp, On/Off	Off
Operation System Time (sec)	319412
Airbag Warning Lamp On Time Before Event (min)	0
Supply Voltage at Event, ACM (V)	13.8
Operation via Energy Reserve	No
VIN at Event (last 8 digits)	GS*****
Odometer at Event (km [miles])	5651 [3511.1]

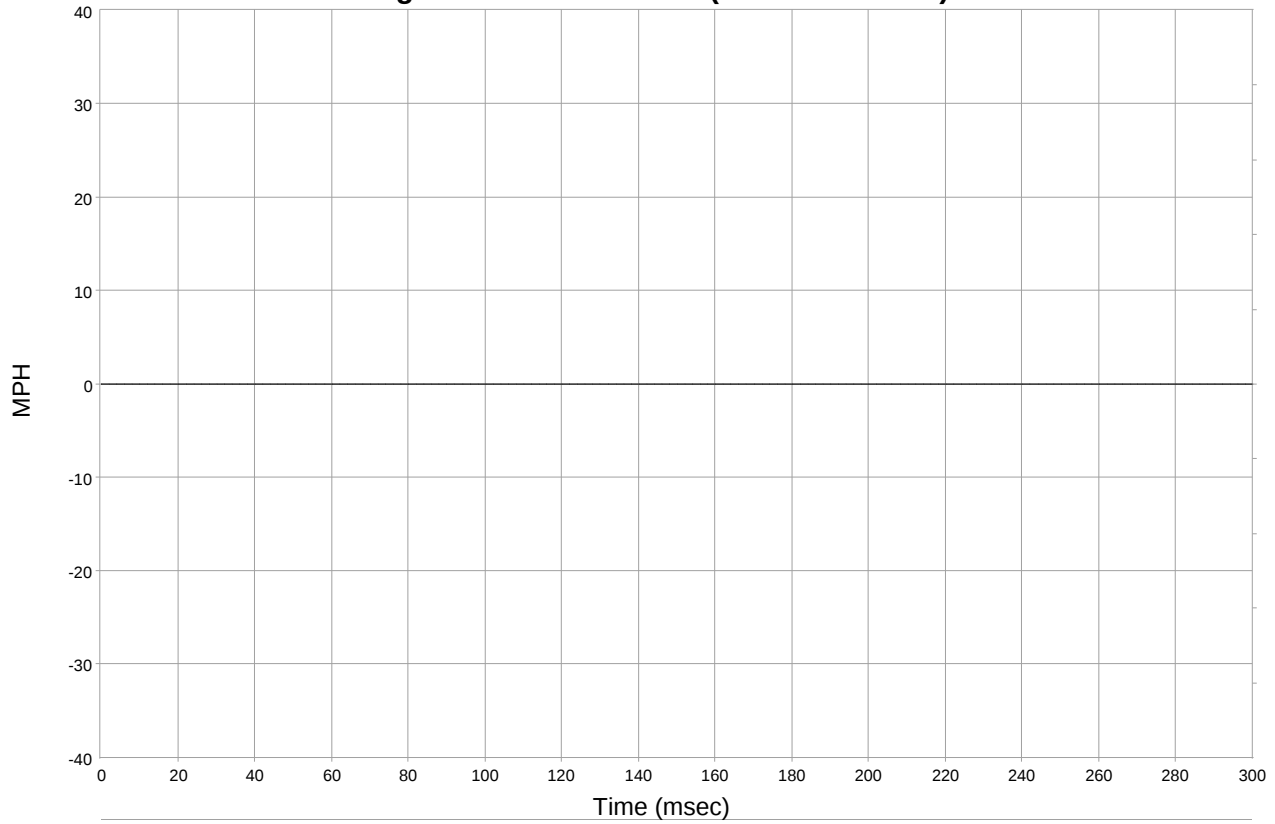
Deployment Command Data (2nd Prior Event)

Driver Frontal Airbag Commanded	No
Driver Front Airbag, Time to 1st stage (msec)	0
Driver Front Airbag, Time to 2nd Stage from T0 (msec)	0
Passenger Frontal Airbag Commanded	No
Passenger Front Airbag, Time to 1st stage (msec)	0
Passenger Front Airbag, Time to 2nd Stage from T0 (msec)	0
Commanded Driver Retractor Pretensioner Deployment	Yes
Commanded Passenger Retractor Pretensioner Deployment	Yes
Commanded Left Side Curtain Airbag Deployment	No
Commanded Left Seat Airbag Deployment	No
Commanded Right Side Curtain Airbag Deployment	No
Commanded Front Right Side Seat Airbag Deployment	No

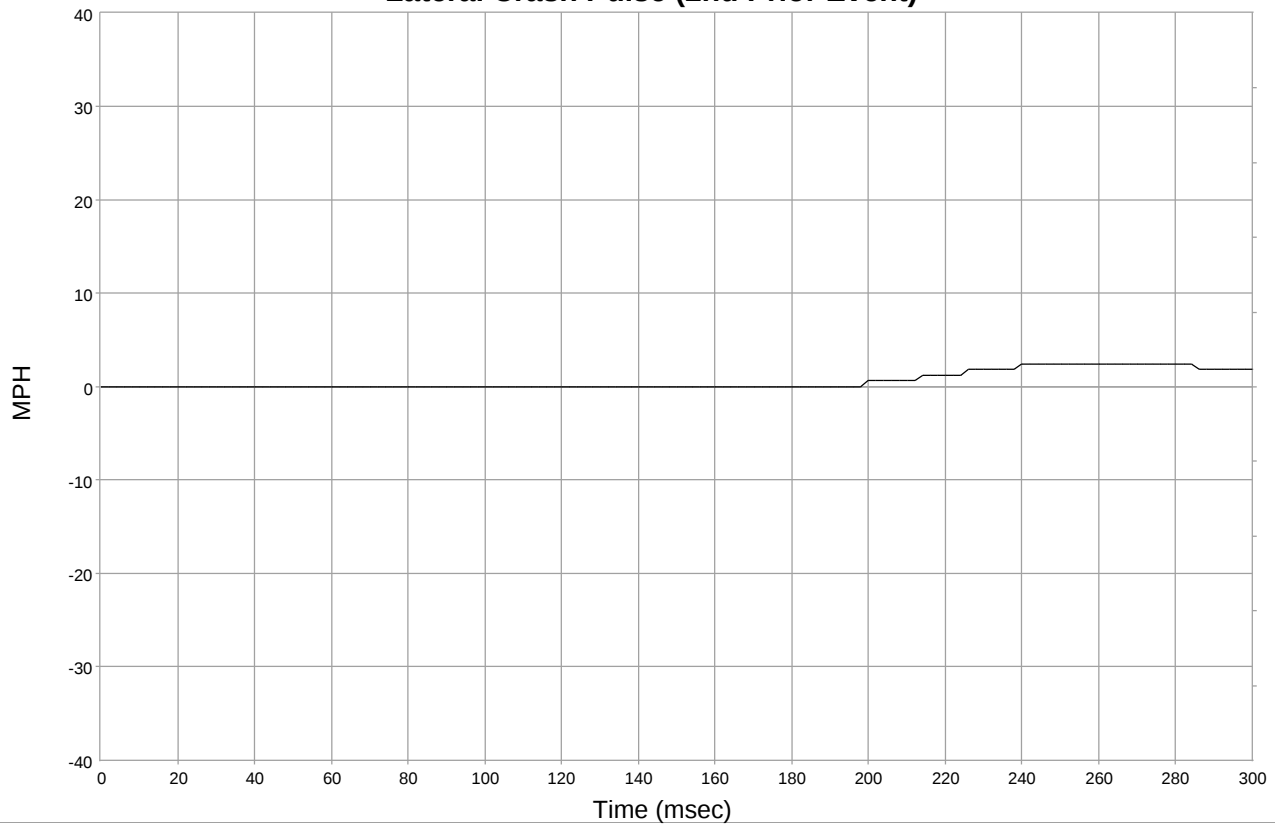
DTCs Present at Start of Event (2nd Prior Event)

DTC Number	DTC Status
C10CC-00	Active

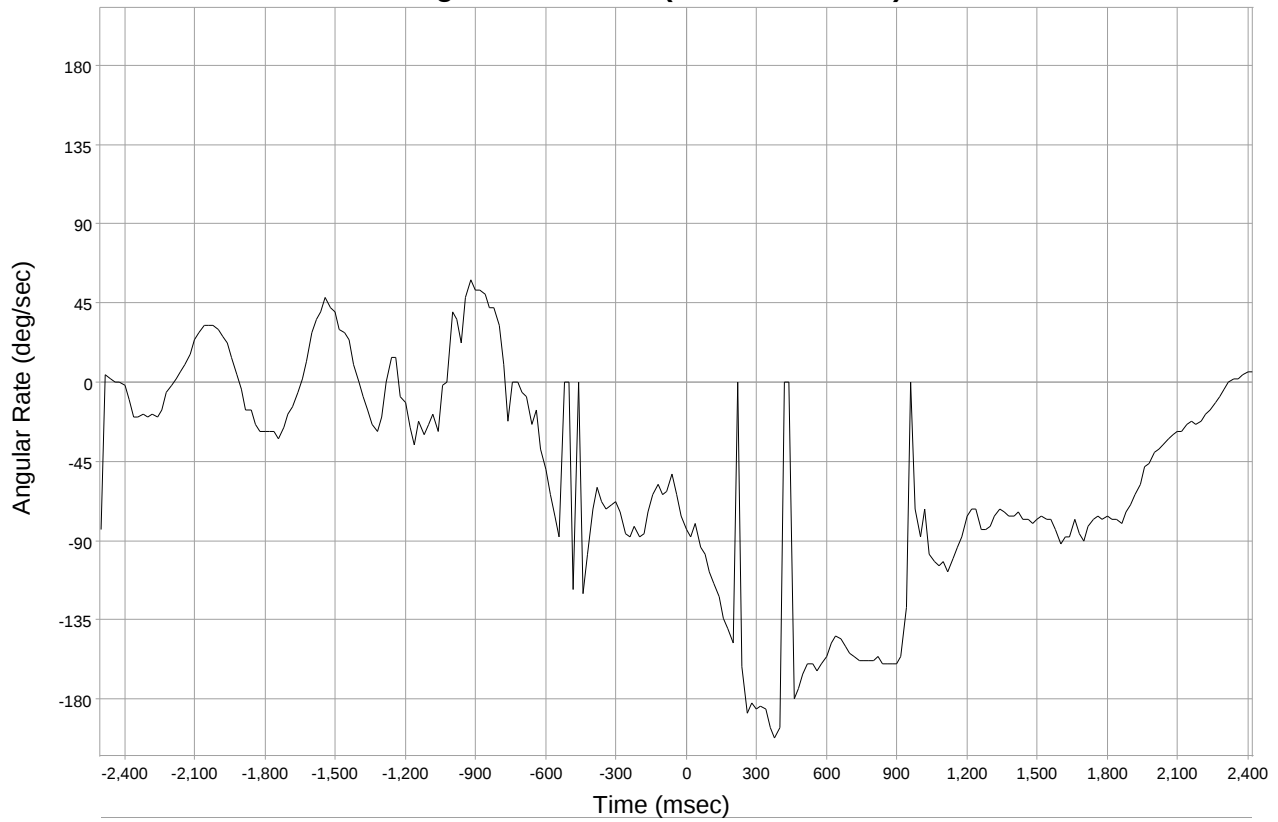
Longitudinal Crash Pulse (2nd Prior Event)



Lateral Crash Pulse (2nd Prior Event)



Angular Rate Data (2nd Prior Event)



Longitudinal Crash Pulse (2nd Prior Event)

Time (msec)	Delta-V, Longitudinal (MPH [km/h])
0	0.0 [0]
2	0.0 [0]
4	0.0 [0]
6	0.0 [0]
8	0.0 [0]
10	0.0 [0]
12	0.0 [0]
14	0.0 [0]
16	0.0 [0]
18	0.0 [0]
20	0.0 [0]
22	0.0 [0]
24	0.0 [0]
26	0.0 [0]
28	0.0 [0]
30	0.0 [0]
32	0.0 [0]
34	0.0 [0]
36	0.0 [0]
38	0.0 [0]
40	0.0 [0]
42	0.0 [0]
44	0.0 [0]
46	0.0 [0]
48	0.0 [0]
50	0.0 [0]
52	0.0 [0]
54	0.0 [0]
56	0.0 [0]
58	0.0 [0]
60	0.0 [0]
62	0.0 [0]
64	0.0 [0]
66	0.0 [0]
68	0.0 [0]
70	0.0 [0]
72	0.0 [0]
74	0.0 [0]
76	0.0 [0]
78	0.0 [0]
80	0.0 [0]
82	0.0 [0]
84	0.0 [0]
86	0.0 [0]
88	0.0 [0]
90	0.0 [0]
92	0.0 [0]
94	0.0 [0]
96	0.0 [0]
98	0.0 [0]

Time (msec)	Delta-V, Longitudinal (MPH [km/h])
100	0.0 [0]
102	0.0 [0]
104	0.0 [0]
106	0.0 [0]
108	0.0 [0]
110	0.0 [0]
112	0.0 [0]
114	0.0 [0]
116	0.0 [0]
118	0.0 [0]
120	0.0 [0]
122	0.0 [0]
124	0.0 [0]
126	0.0 [0]
128	0.0 [0]
130	0.0 [0]
132	0.0 [0]
134	0.0 [0]
136	0.0 [0]
138	0.0 [0]
140	0.0 [0]
142	0.0 [0]
144	0.0 [0]
146	0.0 [0]
148	0.0 [0]
150	0.0 [0]
152	0.0 [0]
154	0.0 [0]
156	0.0 [0]
158	0.0 [0]
160	0.0 [0]
162	0.0 [0]
164	0.0 [0]
166	0.0 [0]
168	0.0 [0]
170	0.0 [0]
172	0.0 [0]
174	0.0 [0]
176	0.0 [0]
178	0.0 [0]
180	0.0 [0]
182	0.0 [0]
184	0.0 [0]
186	0.0 [0]
188	0.0 [0]
190	0.0 [0]
192	0.0 [0]
194	0.0 [0]
196	0.0 [0]
198	0.0 [0]

Time (msec)	Delta-V, Longitudinal (MPH [km/h])
200	0.0 [0]
202	0.0 [0]
204	0.0 [0]
206	0.0 [0]
208	0.0 [0]
210	0.0 [0]
212	0.0 [0]
214	0.0 [0]
216	0.0 [0]
218	0.0 [0]
220	0.0 [0]
222	0.0 [0]
224	0.0 [0]
226	0.0 [0]
228	0.0 [0]
230	0.0 [0]
232	0.0 [0]
234	0.0 [0]
236	0.0 [0]
238	0.0 [0]
240	0.0 [0]
242	0.0 [0]
244	0.0 [0]
246	0.0 [0]
248	0.0 [0]
250	0.0 [0]
252	0.0 [0]
254	0.0 [0]
256	0.0 [0]
258	0.0 [0]
260	0.0 [0]
262	0.0 [0]
264	0.0 [0]
266	0.0 [0]
268	0.0 [0]
270	0.0 [0]
272	0.0 [0]
274	0.0 [0]
276	0.0 [0]
278	0.0 [0]
280	0.0 [0]
282	0.0 [0]
284	0.0 [0]
286	0.0 [0]
288	0.0 [0]
290	0.0 [0]
292	0.0 [0]
294	0.0 [0]
296	0.0 [0]
298	0.0 [0]
300	0.0 [0]

Lateral Crash Pulse (2nd Prior Event)

Time (msec)	Delta-V, Lateral (MPH [km/h])
0	0.0 [0]
2	0.0 [0]
4	0.0 [0]
6	0.0 [0]
8	0.0 [0]
10	0.0 [0]
12	0.0 [0]
14	0.0 [0]
16	0.0 [0]
18	0.0 [0]
20	0.0 [0]
22	0.0 [0]
24	0.0 [0]
26	0.0 [0]
28	0.0 [0]
30	0.0 [0]
32	0.0 [0]
34	0.0 [0]
36	0.0 [0]
38	0.0 [0]
40	0.0 [0]
42	0.0 [0]
44	0.0 [0]
46	0.0 [0]
48	0.0 [0]
50	0.0 [0]
52	0.0 [0]
54	0.0 [0]
56	0.0 [0]
58	0.0 [0]
60	0.0 [0]
62	0.0 [0]
64	0.0 [0]
66	0.0 [0]
68	0.0 [0]
70	0.0 [0]
72	0.0 [0]
74	0.0 [0]
76	0.0 [0]
78	0.0 [0]
80	0.0 [0]
82	0.0 [0]
84	0.0 [0]
86	0.0 [0]
88	0.0 [0]
90	0.0 [0]
92	0.0 [0]
94	0.0 [0]
96	0.0 [0]
98	0.0 [0]

Time (msec)	Delta-V, Lateral (MPH [km/h])
100	0.0 [0]
102	0.0 [0]
104	0.0 [0]
106	0.0 [0]
108	0.0 [0]
110	0.0 [0]
112	0.0 [0]
114	0.0 [0]
116	0.0 [0]
118	0.0 [0]
120	0.0 [0]
122	0.0 [0]
124	0.0 [0]
126	0.0 [0]
128	0.0 [0]
130	0.0 [0]
132	0.0 [0]
134	0.0 [0]
136	0.0 [0]
138	0.0 [0]
140	0.0 [0]
142	0.0 [0]
144	0.0 [0]
146	0.0 [0]
148	0.0 [0]
150	0.0 [0]
152	0.0 [0]
154	0.0 [0]
156	0.0 [0]
158	0.0 [0]
160	0.0 [0]
162	0.0 [0]
164	0.0 [0]
166	0.0 [0]
168	0.0 [0]
170	0.0 [0]
172	0.0 [0]
174	0.0 [0]
176	0.0 [0]
178	0.0 [0]
180	0.0 [0]
182	0.0 [0]
184	0.0 [0]
186	0.0 [0]
188	0.0 [0]
190	0.0 [0]
192	0.0 [0]
194	0.0 [0]
196	0.0 [0]
198	0.0 [0]

Time (msec)	Delta-V, Lateral (MPH [km/h])
200	0.6 [1]
202	0.6 [1]
204	0.6 [1]
206	0.6 [1]
208	0.6 [1]
210	0.6 [1]
212	0.6 [1]
214	1.2 [2]
216	1.2 [2]
218	1.2 [2]
220	1.2 [2]
222	1.2 [2]
224	1.2 [2]
226	1.9 [3]
228	1.9 [3]
230	1.9 [3]
232	1.9 [3]
234	1.9 [3]
236	1.9 [3]
238	1.9 [3]
240	2.5 [4]
242	2.5 [4]
244	2.5 [4]
246	2.5 [4]
248	2.5 [4]
250	2.5 [4]
252	2.5 [4]
254	2.5 [4]
256	2.5 [4]
258	2.5 [4]
260	2.5 [4]
262	2.5 [4]
264	2.5 [4]
266	2.5 [4]
268	2.5 [4]
270	2.5 [4]
272	2.5 [4]
274	2.5 [4]
276	2.5 [4]
278	2.5 [4]
280	2.5 [4]
282	2.5 [4]
284	2.5 [4]
286	1.9 [3]
288	1.9 [3]
290	1.9 [3]
292	1.9 [3]
294	1.9 [3]
296	1.9 [3]
298	1.9 [3]
300	1.9 [3]

Angular Rate Data (2nd Prior Event)

Time (msec)	Angular Rate (deg/sec)
-2500	-84.00
-2480	4.00
-2460	2.00
-2440	0.00
-2420	0.00
-2400	-2.00
-2380	-10.00
-2360	-20.00
-2340	-20.00
-2320	-18.00
-2300	-20.00
-2280	-18.00
-2260	-20.00
-2240	-16.00
-2220	-6.00
-2200	-2.00
-2180	2.00
-2160	6.00
-2140	10.00
-2120	16.00
-2100	24.00
-2080	28.00
-2060	32.00
-2040	32.00
-2020	32.00
-2000	30.00
-1980	26.00
-1960	22.00
-1940	14.00
-1920	4.00
-1900	-4.00
-1880	-16.00
-1860	-16.00
-1840	-24.00
-1820	-28.00
-1800	-28.00
-1780	-28.00
-1760	-28.00
-1740	-32.00
-1720	-26.00
-1700	-18.00
-1680	-14.00
-1660	-6.00
-1640	2.00
-1620	12.00
-1600	28.00
-1580	36.00
-1560	40.00
-1540	48.00
-1520	42.00

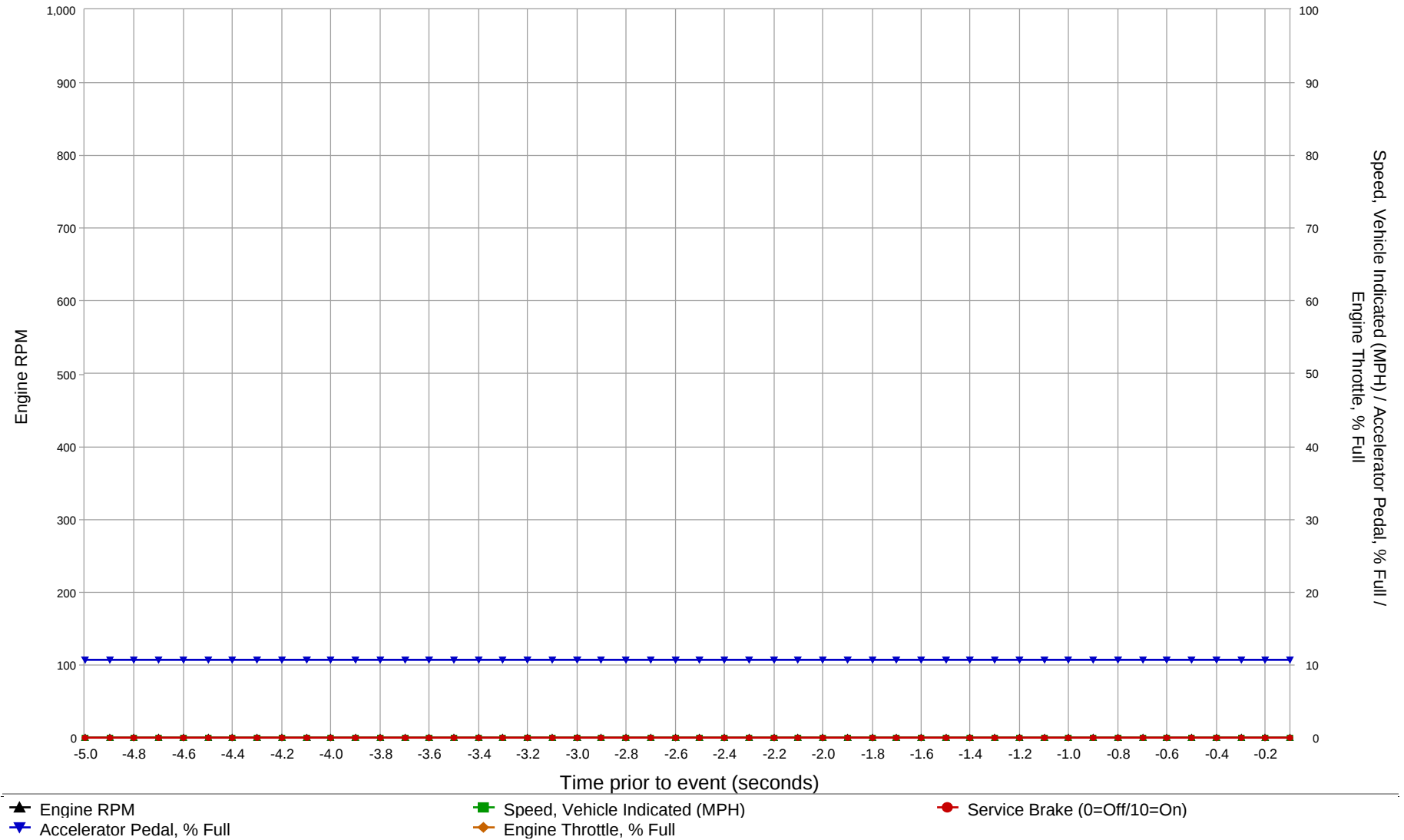
Time (msec)	Angular Rate (deg/sec)
-1500	40.00
-1480	30.00
-1460	28.00
-1440	24.00
-1420	10.00
-1400	0.00
-1380	-8.00
-1360	-16.00
-1340	-24.00
-1320	-28.00
-1300	-20.00
-1280	0.00
-1260	14.00
-1240	14.00
-1220	-8.00
-1200	-12.00
-1180	-26.00
-1160	-36.00
-1140	-22.00
-1120	-30.00
-1100	-24.00
-1080	-18.00
-1060	-28.00
-1040	-2.00
-1020	0.00
-1000	40.00
-980	36.00
-960	22.00
-940	48.00
-920	58.00
-900	52.00
-880	52.00
-860	50.00
-840	42.00
-820	42.00
-800	32.00
-780	10.00
-760	-22.00
-740	0.00
-720	0.00
-700	-6.00
-680	-8.00
-660	-24.00
-640	-16.00
-620	-38.00
-600	-50.00
-580	-64.00
-560	-76.00
-540	-88.00
-520	0.00

Time (msec)	Angular Rate (deg/sec)
-500	0.00
-480	-118.00
-460	0.00
-440	-120.00
-420	-98.00
-400	-72.00
-380	-60.00
-360	-68.00
-340	-72.00
-320	-70.00
-300	-68.00
-280	-74.00
-260	-86.00
-240	-88.00
-220	-82.00
-200	-88.00
-180	-86.00
-160	-74.00
-140	-64.00
-120	-58.00
-100	-64.00
-80	-62.00
-60	-52.00
-40	-64.00
-20	-76.00
0	-84.00
20	-88.00
40	-80.00
60	-94.00
80	-98.00
100	-108.00
120	-114.00
140	-122.00
160	-134.00
180	-140.00
200	-148.00
220	0.00
240	-162.00
260	-188.00
280	-182.00
300	-186.00
320	-184.00
340	-186.00
360	-196.00
380	-202.00
400	-196.00
420	0.00
440	0.00
460	-180.00
480	-174.00

Angular Rate Data (2nd Prior Event)

Time (msec)	Angular Rate (deg/sec)	Time (msec)	Angular Rate (deg/sec)
500	-166.00	1500	-78.00
520	-160.00	1520	-76.00
540	-160.00	1540	-78.00
560	-164.00	1560	-78.00
580	-160.00	1580	-84.00
600	-156.00	1600	-92.00
620	-148.00	1620	-88.00
640	-144.00	1640	-88.00
660	-146.00	1660	-78.00
680	-150.00	1680	-86.00
700	-154.00	1700	-90.00
720	-156.00	1720	-82.00
740	-158.00	1740	-78.00
760	-158.00	1760	-76.00
780	-158.00	1780	-78.00
800	-158.00	1800	-76.00
820	-156.00	1820	-78.00
840	-160.00	1840	-78.00
860	-160.00	1860	-80.00
880	-160.00	1880	-74.00
900	-160.00	1900	-70.00
920	-156.00	1920	-64.00
940	-128.00	1940	-58.00
960	0.00	1960	-48.00
980	-72.00	1980	-46.00
1000	-88.00	2000	-40.00
1020	-72.00	2020	-38.00
1040	-98.00	2040	-36.00
1060	-102.00	2060	-32.00
1080	-104.00	2080	-30.00
1100	-102.00	2100	-28.00
1120	-108.00	2120	-28.00
1140	-100.00	2140	-24.00
1160	-94.00	2160	-22.00
1180	-88.00	2180	-24.00
1200	-76.00	2200	-22.00
1220	-72.00	2220	-18.00
1240	-72.00	2240	-16.00
1260	-84.00	2260	-12.00
1280	-84.00	2280	-8.00
1300	-82.00	2300	-4.00
1320	-76.00	2320	0.00
1340	-72.00	2340	2.00
1360	-74.00	2360	2.00
1380	-76.00	2380	4.00
1400	-76.00	2400	6.00
1420	-74.00	2420	6.00
1440	-78.00		
1460	-78.00		
1480	-80.00		

Pre-Crash Data (2nd Prior Event)



SNA values will not be plotted on the graph

Pre-Crash Data (2nd Prior Event - table 1 of 3)

(the most recent sampled values are recorded prior to the event)

Time Stamp (sec)	Pre-Crash Recorder Status	Speed, Vehicle Indicated (MPH [km/h])	Accelerator Pedal, % Full	Engine Throttle, % Full	Service Brake	Engine RPM	ABS Activity	Stability Control	Steering Input (deg)
-5.0	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.9	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.8	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.7	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.6	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.5	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.4	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.3	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.2	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.1	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-4.0	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.9	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.8	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.7	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.6	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.5	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.4	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.3	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.2	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.1	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-3.0	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.9	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.8	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.7	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.6	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.5	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.4	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.3	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.2	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.1	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-2.0	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.9	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.8	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.7	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.6	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.5	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.4	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.3	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.2	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.1	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-1.0	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.9	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.8	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.7	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.6	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.5	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.4	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.3	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.2	Complete	0 [0]	11	SNA	Off	0	No	Off	143
-0.1	Complete	0 [0]	11	SNA	Off	0	No	Off	143

Pre-Crash Data (2nd Prior Event - table 2 of 3)

(the most recent sampled values are recorded prior to the event)

Time Stamp (sec)	Raw Manifold Pressure (kPa)	PCM MIL	Yaw Rate (deg/sec)	Wheel Speed LF (RPM)	Wheel Speed RF (RPM)	Wheel Speed LR (RPM)	Wheel Speed RR (RPM)	ETC Lamp
-5.0	99.20	On	SNA	0	0	0	0	On
-4.9	99.20	On	SNA	0	0	0	0	On
-4.8	99.20	On	SNA	0	0	0	0	On
-4.7	99.20	On	SNA	0	0	0	0	On
-4.6	99.20	On	SNA	0	0	0	0	On
-4.5	99.20	On	SNA	0	0	0	0	On
-4.4	99.20	On	SNA	0	0	0	0	On
-4.3	99.20	On	SNA	0	0	0	0	On
-4.2	99.20	On	SNA	0	0	0	0	On
-4.1	99.20	On	SNA	0	0	0	0	On
-4.0	99.20	On	SNA	0	0	0	0	On
-3.9	99.20	On	SNA	0	0	0	0	On
-3.8	99.20	On	SNA	0	0	0	0	On
-3.7	99.20	On	SNA	0	0	0	0	On
-3.6	99.20	On	SNA	0	0	0	0	On
-3.5	99.20	On	SNA	0	0	0	0	On
-3.4	99.20	On	SNA	0	0	0	0	On
-3.3	99.20	On	SNA	0	0	0	0	On
-3.2	99.20	On	SNA	0	0	0	0	On
-3.1	99.20	On	SNA	0	0	0	0	On
-3.0	99.20	On	SNA	0	0	0	0	On
-2.9	99.20	On	SNA	0	0	0	0	On
-2.8	99.20	On	SNA	0	0	0	0	On
-2.7	99.20	On	SNA	0	0	0	0	On
-2.6	99.20	On	SNA	0	0	0	0	On
-2.5	99.20	On	SNA	0	0	0	0	On
-2.4	99.20	On	SNA	0	0	0	0	On
-2.3	99.20	On	SNA	0	0	0	0	On
-2.2	99.20	On	SNA	0	0	0	0	On
-2.1	99.20	On	SNA	0	0	0	0	On
-2.0	99.20	On	SNA	0	0	0	0	On
-1.9	99.20	On	SNA	0	0	0	0	On
-1.8	99.20	On	SNA	0	0	0	0	On
-1.7	99.20	On	SNA	0	0	0	0	On
-1.6	99.20	On	SNA	0	0	0	0	On
-1.5	99.20	On	SNA	0	0	0	0	On
-1.4	99.20	On	SNA	0	0	0	0	On
-1.3	99.20	On	SNA	0	0	0	0	On
-1.2	99.20	On	SNA	0	0	0	0	On
-1.1	99.20	On	SNA	0	0	0	0	On
-1.0	99.20	On	SNA	0	0	0	0	On
-0.9	99.20	On	SNA	0	0	0	0	On
-0.8	99.20	On	SNA	0	0	0	0	On
-0.7	99.20	On	SNA	0	0	0	0	On
-0.6	99.20	On	SNA	0	0	0	0	On
-0.5	99.20	On	SNA	0	0	0	0	On
-0.4	99.20	On	SNA	0	0	0	0	On
-0.3	99.20	On	SNA	0	0	0	0	On
-0.2	99.20	On	SNA	0	0	0	0	On
-0.1	99.20	On	SNA	0	0	0	0	On

Pre-Crash Data (2nd Prior Event - table 3 of 3)

(the most recent sampled values are recorded prior to the event)

Time Stamp (sec)	ETC Flashing	Engine Torque Applied	PRNDL Status (if equip.)	Reverse Gear (Manual Only)	Cruise Control Engaged (if equip.)	Cruise Control Status (if equip.)
-5.0	No	No	Park	No	Not Engaged	Off
-4.9	No	No	Park	No	Not Engaged	Off
-4.8	No	No	Park	No	Not Engaged	Off
-4.7	No	No	Park	No	Not Engaged	Off
-4.6	No	No	Park	No	Not Engaged	Off
-4.5	No	No	Park	No	Not Engaged	Off
-4.4	No	No	Park	No	Not Engaged	Off
-4.3	No	No	Park	No	Not Engaged	Off
-4.2	No	No	Park	No	Not Engaged	Off
-4.1	No	No	Park	No	Not Engaged	Off
-4.0	No	No	Park	No	Not Engaged	Off
-3.9	No	No	Park	No	Not Engaged	Off
-3.8	No	No	Park	No	Not Engaged	Off
-3.7	No	No	Park	No	Not Engaged	Off
-3.6	No	No	Park	No	Not Engaged	Off
-3.5	No	No	Park	No	Not Engaged	Off
-3.4	No	No	Park	No	Not Engaged	Off
-3.3	No	No	Park	No	Not Engaged	Off
-3.2	No	No	Park	No	Not Engaged	Off
-3.1	No	No	Park	No	Not Engaged	Off
-3.0	No	No	Park	No	Not Engaged	Off
-2.9	No	No	Park	No	Not Engaged	Off
-2.8	No	No	Park	No	Not Engaged	Off
-2.7	No	No	Park	No	Not Engaged	Off
-2.6	No	No	Park	No	Not Engaged	Off
-2.5	No	No	Park	No	Not Engaged	Off
-2.4	No	No	Park	No	Not Engaged	Off
-2.3	No	No	Park	No	Not Engaged	Off
-2.2	No	No	Park	No	Not Engaged	Off
-2.1	No	No	Park	No	Not Engaged	Off
-2.0	No	No	Park	No	Not Engaged	Off
-1.9	No	No	Park	No	Not Engaged	Off
-1.8	No	No	Park	No	Not Engaged	Off
-1.7	No	No	Park	No	Not Engaged	Off
-1.6	No	No	Park	No	Not Engaged	Off
-1.5	No	No	Park	No	Not Engaged	Off
-1.4	No	No	Park	No	Not Engaged	Off
-1.3	No	No	Park	No	Not Engaged	Off
-1.2	No	No	Park	No	Not Engaged	Off
-1.1	No	No	Park	No	Not Engaged	Off
-1.0	No	No	Park	No	Not Engaged	Off
-0.9	No	No	Park	No	Not Engaged	Off
-0.8	No	No	Park	No	Not Engaged	Off
-0.7	No	No	Park	No	Not Engaged	Off
-0.6	No	No	Park	No	Not Engaged	Off
-0.5	No	No	Park	No	Not Engaged	Off
-0.4	No	No	Park	No	Not Engaged	Off
-0.3	No	No	Park	No	Not Engaged	Off
-0.2	No	No	Park	No	Not Engaged	Off
-0.1	No	No	Park	No	Not Engaged	Off

Hexadecimal Data

Data that the vehicle manufacturer has specified for data retrieval is shown in the hexadecimal data section of the CDR report. The hexadecimal data section of the CDR report may contain data that is not translated by the CDR program. The control module contains additional data that is not retrievable by the CDR system.

```
62  F1  00  00  42  01  03
```

62 F1 32 36 38 30 38 35 38 38 31 41 49

```
62 F1 50 0C 05 00
```

```
62 F1 51 0F 05 00 0F 07 00
```

```
62 02 20 04 7A 41 04 10 1D 00 DC BB 0F DF 10 00 00 00 00 00 00 00 00 00 00 00 07 31 43 36 52
52 37 4E 4D 32 47 53 33 31 36 31 39 37 7E 0F 00 00 00 00
```

62 F1 8C 54 35 32 4D 44 30 37 38 36 30 32 33 32 30

62 F1 54 00 03

62 F1 90 31 43 36 52 52 37 4E 4D 32 47 53 2A 2A 2A 2A 2A 2A

[illegible][illegible][illegible]

```
62 02 C1 18 7F 00 17 7F 00 16 7F 00
```



Printed on: Monday, June 21 2021 at 15:11:41



```
71 01 03 01 01 18 CC 00 00 00 00 00 00 00 00 00 00 FF FF 00 00 00 00 00 00 FF FF 15 0A 7C  
FF 15 10 01 00 00 07 00 FF 00 00 00 00 00 00 11 1E 00 0F 1F FF 00 FF 60 03 FF FF 78 FF FF FF FF  
FF 00 00 08 04 00 FB FF 03 FF FF FF FF FF 40 FF FF FF FF FF 00 00 00 00 00 00 10 00 00 00 00  
00 00 00 00 00 00 00 00 00 00 00 00 00 00 FF FF
```



```
71 01 03 01 01 25 CC 00 00 00 00 00 00 00 00 00 00 FF FF 00 00 00 00 00 00 FF FF 15 0B 7B  
FF 15 10 01 00 00 07 00 FF 00 00 00 00 00 00 11 1E 00 0F 1F FF 00 FF 60 03 FF FF 78 FF FF FF FF  
FF 00 00 08 04 00 FB FF 03 FF FF FF FF FF 40 FF FF FF FF FF 00 00 00 00 00 00 10 00 00 00 00  
00 00 00 00 00 00 00 00 00 00 00 00 00 00 FF FF
```



```

71 01 03 01 02 00 CC 00 00 00 00 00 00 00 00 00 00 00 00 00 00 FF FF 00 00 00 00 00 00 FF FF 15 0B 7C
FF 15 10 01 00 00 07 00 FF 00 00 00 00 00 00 11 1E 00 0F 1F FF 00 FF 60 03 FF FF 78 FF FF FF FF
FF 00 00 08 04 00 FB FF 03 FF FF FF FF FF 40 FF FF FF FF FF 00 00 00 00 00 00 10 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 FF FF

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71 01 03 01 02 0D CC 00 00 00 00 00 00 00 00 00 00 00 00 00 00 FF FF 00 00 00 00 00 00 FF FF 15 0A 7C
FF 15 10 01 00 00 07 00 FF 00 00 00 00 00 00 11 1E 00 0F 1F FF 00 FF 60 03 FF FF 78 FF FF FF FF
FF 00 00 08 04 00 FB FF 03 FF FF FF FF FF 40 FF FF FF FF FF 00 00 00 00 00 00 10 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 FF FF

```



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71 01 03 01 02 1A CC 00 00 00 00 00 00 00 00 00 00 00 00 00 00 FF FF 00 00 00 00 00 00 FF FF 15 0A 7C
FF 15 10 01 00 00 07 00 FF 00 00 00 00 00 00 11 1E 00 0F 1F FF 00 FF 60 03 FF FF 78 FF FF FF FF
FF 00 00 08 04 00 FB FF 03 FF FF FF FF FF 40 FF FF FF FF FF 00 00 00 00 00 00 10 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 FF FF

```



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71 01 03 01 02 27 CC 00 00 00 00 00 00 00 00 00 00 FF FF 00 00 00 00 00 00 FF FF 15 0A 7C  
FF 15 10 01 00 00 07 00 FF 00 00 00 00 00 11 1E 00 0F 1F FF 00 FF 60 03 FF FF 78 FF FF FF FF  
FF 00 00 08 04 00 FB FF 03 FF FF FF FF FF 40 FF FF FF FF FF 00 00 00 00 00 00 10 00 00 00 00  
00 00 00 00 00 00 00 00 00 00 00 00 00 00 FF FF
```



```

71 01 03 01 03 02 CC 00 00 00 00 00 00 00 00 00 00 00 00 00 00 FF FF 00 00 00 00 00 00 FF FF 15 0A 7C
FF 15 10 01 00 00 07 00 FF 00 00 00 00 00 00 11 1E 00 0F 1F FF 00 FF 60 03 FF FF 78 FF FF FF FF
FF 00 00 08 04 00 FB FF 03 FF FF FF FF FF 40 FF FF FF FF FF 00 00 00 00 00 00 10 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 FF FF

```



```
71 01 03 01 03 0F CC 00 00 00 00 00 00 00 00 00 00 FF FF 00 00 00 00 00 00 FF FF 15 0A 7C  
FF 15 10 01 00 00 07 00 FF 00 00 00 00 00 11 1E 00 0F 1F FF 00 FF 60 03 FF FF 78 FF FF FF FF  
FF 00 00 08 04 00 FB FF 03 FF FF FF FF FF 40 FF FF FF FF FF 00 00 00 00 00 00 10 00 00 00 00  
00 00 00 00 00 00 00 00 00 00 00 00 00 00 FF FF
```



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71 01 03 01 03 1C CC 00 00 00 00 00 00 00 00 00 00 FF FF 00 00 00 00 00 00 FF FF 15 0A 7C  
FF 15 10 01 00 00 07 00 FF 00 00 00 00 00 11 1E 00 0F 1F FF 00 FF 60 03 FF FF 78 FF FF FF FF  
FF 00 00 08 04 00 FB FF 03 FF FF FF FF FF 40 FF FF FF FF FF 00 00 00 00 00 00 10 00 00 00 00  
00 00 00 00 00 00 00 00 00 00 00 00 00 FF FF
```



```
71 01 03 01 03 29 CC 00 00 00 00 00 00 00 00 00 00 FF FF 00 00 00 00 00 00 FF FF 15 0A 7C  
FF 15 10 01 00 00 07 00 FF 00 00 00 00 00 00 11 1E 00 0F 1F FF 00 FF 60 03 FF FF 78 FF FF FF FF  
FF 00 00 08 04 00 FB FF 03 FF FF FF FF FF 40 FF FF FF FF FF 00 00 00 00 00 00 10 00 00 00 00  
00 00 00 00 00 00 00 00 00 00 00 00 00 00 FF FF
```



```

71 01 03 03 01 CC 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 01 01 01 01 01 01 01 01 02 02 02 02 02 02 03 03 03 03

```

03 03 03 04 03 03 03 03 03
03 03 03

71 01 03 03 02 CC 00
00
00
00
03 03 03 04
03 03 03

71 01 03 03 03 CC 00
00
00
00
03 03 03 04
03 03 03

71 01 03 04 01 CC 00 D6 02 01 00 00 FF FB F6 F6 F7 F6 F7 F6 F8 FD FF 01 03 05 08 0C 0E 10 10
10 0F 0D 0B 07 02 FE F8 F8 F4 F2 F2 F2 F2 F0 F3 F7 F9 FD 01 06 0E 12 14 18 15 14 0F 0E 0C 05
00 FC F8 F4 F2 F6 00 07 07 FC FA F3 EE F5 F1 F4 F7 F2 FF 00 14 12 0B 18 1D 1A 1A 19 15 15 10
05 F5 00 00 FD FC F4 F8 ED E7 E0 DA D4 00 00 C5 00 C4 CF DC E2 DE DC DD DE DB D5 D4 D7 D4 D5
DB E0 E3 E0 E1 E6 E0 DA D6 D4 D8 D1 CF CA C7 C3 BD BA B6 00 AF A2 A5 A3 A4 A3 9E 9B 9E 00 00
A6 A9 AD B0 B0 AE B0 B2 B6 B8 B7 B5 B3 B2 B1 B1 B1 B1 B2 B0 B0 B0 B0 B2 C0 00 DC D4 DC CF CD
CC CD CA CE D1 D4 DA DC DC D6 D6 D7 DA DC DB DA DA DB D9 D9 D8 D9 DA D9 D9 D6 D2 D4 D4 D9 D5
D3 D7 D9 DA D9 DA D9 D9 D8 DB DD E0 E3 E8 E9 EC ED EE F0 F1 F2 F2 F4 F5 F4 F5 F7 F8 FA FC FE
00 01 01 02 03 03 04 06 05 07

71 01 03 04 02 CC 00 D6 02 01 00 00 FF FB F6 F6 F7 F6 F7 F6 F8 FD FF 01 03 05 08 0C 0E 10 10
10 0F 0D 0B 07 02 FE F8 F8 F4 F2 F2 F2 F2 F0 F3 F7 F9 FD 01 06 0E 12 14 18 15 14 0F 0E 0C 05
00 FC F8 F4 F2 F6 00 07 07 FC FA F3 EE F5 F1 F4 F7 F2 FF 00 14 12 0B 18 1D 1A 1A 19 15 15 10
05 F5 00 00 FD FC F4 F8 ED E7 E0 DA D4 00 00 C5 00 C4 CF DC E2 DE DC DD DE DB D5 D4 D7 D4 D5
DB E0 E3 E0 E1 E6 E0 DA D6 D4 D8 D1 CF CA C7 C3 BD BA B6 00 AF A2 A5 A3 A4 A3 9E 9B 9E 00 00
A6 A9 AD B0 B0 AE B0 B2 B6 B8 B7 B5 B3 B2 B1 B1 B1 B1 B2 B0 B0 B0 B0 B2 C0 00 DC D4 DC CF CD
CC CD CA CE D1 D4 DA DC DC D6 D6 D7 DA DC DB DA DA DB D9 D9 D8 D9 DA D9 D9 D6 D2 D4 D4 D9 D5
D3 D7 D9 DA D9 DA D9 D9 D8 DB DD E0 E3 E8 E9 EC ED EE F0 F1 F2 F2 F4 F5 F4 F5 F7 F8 FA FC FE
00 01 01 02 03 03 04 06 05 07

71 01 03 04 03 CC 00 D6 02 01 00 00 FF FB F6 F6 F7 F6 F7 F6 F8 FD FF 01 03 05 08 0C 0E 10 10
10 0F 0D 0B 07 02 FE F8 F8 F4 F2 F2 F2 F2 F0 F3 F7 F9 FD 01 06 0E 12 14 18 15 14 0F 0E 0C 05
00 FC F8 F4 F2 F6 00 07 07 FC FA F3 EE F5 F1 F4 F7 F2 FF 00 14 12 0B 18 1D 1A 1A 19 15 15 10
05 F5 00 00 FD FC F4 F8 ED E7 E0 DA D4 00 00 C5 00 C4 CF DC E2 DE DC DD DE DB D5 D4 D7 D4 D5
DB E0 E3 E0 E1 E6 E0 DA D6 D4 D8 D1 CF CA C7 C3 BD BA B6 00 AF A2 A5 A3 A4 A3 9E 9B 9E 00 00
A6 A9 AD B0 B0 AE B0 B2 B6 B8 B7 B5 B3 B2 B1 B1 B1 B1 B2 B0 B0 B0 B0 B2 C0 00 DC D4 DC CF CD
CC CD CA CE D1 D4 DA DC DC D6 D6 D7 DA DC DB DA DA DB D9 D9 D8 D9 DA D9 D9 D6 D2 D4 D4 D9 D5
D3 D7 D9 DA D9 DA D9 D9 D8 DB DD E0 E3 E8 E9 EC ED EE F0 F1 F2 F2 F4 F5 F4 F5 F7 F8 FA FC FE
00 01 01 02 03 03 04 06 05 07

62 F1 0B 1D 00 00 00 07 1F 84 00 B6 88 07 00 0C 00 00 00 07 01 02 3F 10 4F FD 26 C7 00 02 00
00 07 39 21 03 00 CF 37 00 8E 67 18 06 00 02 B0 FE FE 42 00 54 3C 00 00 00 00 0C 5A 03 00 00
00 00 00

59 02 99 50 CC 00 08 9B C7 00 89 80 29 13 89 80 7F 13 89 80 7E 13 89

59 06 50 CC 00 08 01 00 01 61 01 61 01 08 02 00 1D 00 04 DF B7 00 04 E6 C2

59 06 9B C7 00 89 01 00 01 61 01 61 01 00 02 00 17 00 04 E6 C2 FF FF FF FF

59 06 80 29 13 89 01 00 01 61 01 61 01 00 02 00 08 00 04 EA E9 FF FF FF FF

59 06 80 7F 13 89 01 00 01 61 01 61 02 00 02 00 34 00 04 DF CD FF FF FF FF

59 06 80 7E 13 89 01 00 01 61 01 61 02 00 02 00 34 00 04 DF CD FF FF FF FF

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DOT HS 813 046
July 2021



U.S. Department
of Transportation
**National Highway
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