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Special Crash Investigations: On-Site Rollover Crash Investigation; Vehicle: 2017 Dodge Journey; Location: Wisconsin; Crash Date: October 2020

DISCLAIMER

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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 on-site investigation documents the rollover crash of a 2017 Dodge Journey and the ejection of its unbelted 40-year-old right front passenger. The Dodge had front seat belt pretensioners, frontal air bags, front seat-mounted side impact air bags, and dual sensing (side impact and rollover) inflatable curtain (IC) air bags. Neither IC air bag deployed during the rollover. The police crash report (PCR) stated that the Dodge was traveling north in the center lane of a multi-lane interstate. The driver stated that she began to merge into the far-right lane, where she struck an object on the road. The PCR stated that no objects were found prior to or near the crash scene. The SCI investigation and review of the Event Data Recorder data indicated a sudden steering maneuver consistent with the vehicle's loss of control. At that time, the vehicle exited the roadway to the right, entered the ditch, struck the embankment, and began to roll over, left side leading. The Dodge rolled eight quarter turns and came to final rest on its wheels facing east. The unbelted 40-year-old male passenger was fully ejected out of the left front side window and sustained incapacitating (A-level) injuries. The belted 27-year-old female driver was transported to a hospital by police, but it is unknown if she was injured or treated.

17. Key Words	18. Distribution Statement
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Special Crash Investigations
On-Site Rollover Crash Investigation
Case Number: CR20033
Vehicle: 2017 Dodge Journey
Location: Wisconsin
Crash Date: October 2020

Background

This on-site investigation documents the rollover crash of a 2017 Dodge Journey (Figure 1) and the ejection of its unbelted 40-year-old right front passenger. The Dodge had front seat belt pretensioners, Certified Advanced Compliant frontal air bags, front seat-mounted side impact air bags, and dual sensing (side impact and rollover) inflatable curtain (IC) air bags. Neither IC air bag deployed during the rollover event.

Figure 1. Left front oblique view of the 2017 Dodge Journey

The police crash report (PCR) stated that the Dodge was traveling north in the center lane of a multi-lane interstate. The driver stated that she began to merge into the far-right lane, where she struck an object in the road. Local law enforcement personnel stated in the PCR that no objects were found prior to or near the crash scene. The SCI investigation and review of the Event Data Recorder (EDR) data indicated a sudden steering maneuver consistent with the vehicle's loss of control. At that time, the vehicle exited the roadway to the right, entered the ditch, struck the embankment, and began to roll over, left side leading. The Dodge rolled eight quarter turns and came to final rest on its wheels facing east. The 40-year-old male passenger was fully ejected out of the left front side window and sustained incapacitating (A-level) injuries. The belted 27-year-old female driver was transported to a hospital by police, but it is unknown if she was injured or treated.

This crash was identified by the National Highway Traffic Safety Administration's Crash Research Sampling System in October 2020 and forwarded to the Special Crash Investigations group. The crash was then assigned for an on-site investigation in November 2020. Cooperation with the vehicle's insurer was obtained, and the on-site investigation occurred in November 2020.

Summary

Crash Site

This crash occurred on a three-lane roadway at night. Reported weather conditions included fair conditions, a temperature of 8 ºC (47 ºF), 90 percent humidity, and winds from the east-northeast at 14 km/h (9 mph). In the northbound travel direction, the roadway had a level grade and curved slightly to the left. Travel lanes were approximately 3.7 m (12.0 ft) wide. The northbound lanes were separated from the southbound lanes by a grass median. The northbound lanes were delineated by dashed white lane lines. The left-most northbound travel lane was bordered by a solid yellow lane line. The right-most northbound travel lane was bordered with a solid white lane line. Rumble strips were present on the west and east edges of the roadway. Figure 2 depicts a north-facing view of the roadway on approach to the crash site. Speed was regulated by a posted limit of 113 km/h (70 mph). A crash diagram is included at the end of this report. It should be noted that photos of the scene were not obtained due to the SCI investigator being asked to leave the area by the road crew from the local Department of Transportation, which was then followed up with a request by the State Highway Patrol. The scene diagram and image obtained are from an online mapping service.

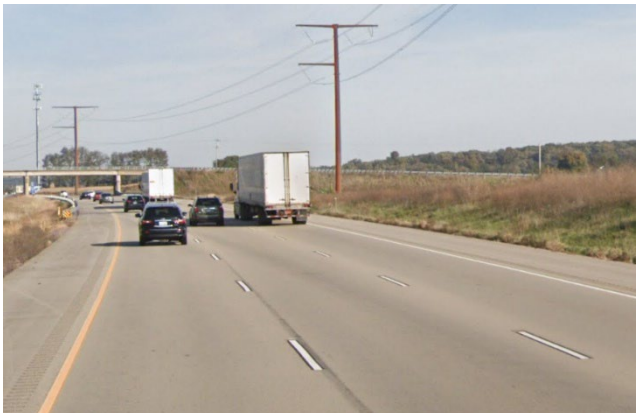


Figure 2. Northbound view of the Dodge's pre-crash approach to the crash site (photo obtained from an online mapping service)

Pre-Crash

The Dodge was traveling in the center lane of the three-lane interstate at an EDR-reported speed of 130 km/h (81 mph) five seconds prior to algorithm enabled (AE) with cruise control engaged. The 27-year-old female driver was restrained by the lap and shoulder belt. The 40-year-old male passenger was unbelted in the right front passenger seat. According to the EDR, the driver made a sudden left turn at -2.2 seconds and then steered back right at -1.4 seconds prior to AE. At -2.0 seconds prior to AE, the ESC status was reported as "Engaged" in the EDR. Additionally, the driver applied the brakes at -1.2 seconds prior to AE. This steering and brake application is indicative of the driver attempting to maintain control of the vehicle as the ESC attempted to assist.

Crash

After exiting the roadway, the Dodge entered the ditch and struck the embankment at an estimated speed of 97 km/h (60 mph). SCI was able to estimate the embankment impact speed based on the speeds reported by the EDR and distance from the final rest position. The force of the impact caused the Dodge to rotate clockwise. The Dodge then tripped and rolled, left side leaning, eight quarter turns. During the roll, the unbelted right front passenger was ejected through the driver side window. It is estimated that the passenger was ejected between the fifth and sixth quarter turn as the vehicle rolled away from him. SCI was able to estimate the ejection of the passenger based on the EDR roll data and the PCR. The Dodge settled onto its wheels and then rolled rearward, coming to final rest facing east.

Post-Crash

A passerby notified local emergency services, and the first responder was on scene within eight minutes of notification. The right front passenger was found approximately five feet directly in front of the Dodge with his head facing north. He was transported by a local ambulance to a local trauma center. He sustained several injuries and was admitted for treatment. The female driver was evaluated on scene by emergency medical services and later transferred by law enforcement to a local trauma center. The Dodge was removed by a towing service.

2017 Dodge Journey

Description

The 2017 Dodge Journey (Figure 3) was identified by the Vehicle Identification Number 3C4PDCAB8HTxxxxxx. It was built on a front-wheel-drive platform and powered by a 2.4-liter, 4-cylinder gasoline engine linked to a continuously variable transmission. Its service brakes were power-assisted 4-wheel disc with antilock. The gross vehicle weight rating was 2,270 kg (5,005 lb). At the time of the SCI inspection, the Dodge had four Sumitomo Ice Edge tires, size 225/65R17. The left front had at least 6 mm (7/32) of tread and was de-beaded from the wheel. The right front had at least 7 mm (8/32) of tread and was de-beaded from the wheel. The left rear and right rear tires had at least 6 mm (7/32) of tread, remained inflated, and were not restricted or damaged in the crash.

Figure 3. Front view of the Dodge Journey

The Dodge had seating for five occupants (2/3), with front row bucket seats and a second row bench seat with split forward-folding seat backs. All positions had adjustable head restraints and 3-point lap and shoulder belts. The driver's seat belt had a retractor pretensioner. The passenger's seat belt had buckle and retractor pretensioners. Additional supplemental restraints systems included seven air bags consisting of driver's and passenger's frontal, driver knee, front seat-mounted side impact, and IC air bags.

Exterior Damage

The crash involved the front and undercarriage striking the ground (Event 1), causing the Dodge to rotate clockwise and then roll, left side leading, eight quarter turns (Event 2), coming to final rest on its wheels facing east. The damage from the frontal impact (Figure 4) resulted in the front bumper fascia detaching from the Dodge. The right front wheel assembly was displaced rearward. Initial contact involved the front right corner of the Dodge. It should be noted that abrasions were found at the front bumper corner, with greater damage to the undercarriage and into the right front fender and right front wheel assembly. This corner impact caused the Dodge to rotate clockwise, resulting in an abrasion pattern extending 72 cm (28.3 in) from the right corner to the center aspect of the front bumper. A crush profile was documented across the bumper reinforcement of the Dodge. After measurements were taken and free space was

deducted, it was determined that there was no residual crush to the frontal plane. The direct damage for this crush profile started at the right bumper corner and extended 30 cm (11.8 in) left across the front bumper. The collision deformation classification (CDC) for this damage profile was 12FREE3.

Figure 4. Front right oblique view of the involved 2017 Dodge Journey

After the initial impact, the Dodge began to rotate clockwise and tripped over its left front wheel. This rollover (Event 2) resulted in minimal surface abrasions to the entirety of the Dodge. The CDC for this damage profile was 00TDDO1.

Event Data Recorder

The Dodge had an air bag control module (ACM) that performed the diagnostic, sensing, and deployment command functions for the vehicle's supplemental restraint systems. This module had EDR capabilities and was located on the center tunnel of the vehicle. The EDR component was imaged with the Bosch Crash Data Retrieval tool and software version 19.5.3 via direct connection to the module. The imaged data, reported with the version 21.3, are included at the end of this report as Appendix A.

The data limitations reported that the EDR was capable of recording two event types, non-deployment events and deployment events. The EDR could store two event records. A non-deployment event could be overwritten. A deployment event has a higher priority than a non-deployment event and cannot be interrupted or overwritten by another event. Deployment events, by definition, result in air bags deploying due to deployment thresholds being reached and/or exceeded. The EDR is capable of recording pre-crash data as well.

The imaged data indicated that the Dodge's EDR had recognized seven total events and recorded two events separated by 7.4 seconds. Both recorded events were complete and related to the incidents in this investigation. This was determined due to the time of recording for both deployment events, indicating that they occurred on the ignition cycle 7,205. The ignition count at the time of the SCI investigation was 7,208. The additional key cycles were likely part of the vehicle recovery process.

The first prior event was a deployment attributed to the front impact (Event 1). At the time of the event, the driver's seat belt was recorded as buckled, and the passenger's seat belt was recorded

as not buckled. The maximum recorded longitudinal velocity change (delta V) was -46 km/h (-28.6 mph). The maximum recorded lateral delta V was -27 km/h (-16.7 mph). The driver's retractor pretensioner was commanded to actuate. The driver's frontal air bag was also commanded to deploy, with the first stage deploying at 51 milliseconds and the second stage deploying at 103 milliseconds. The passenger's frontal air bag was commanded to deploy, with the first stage deploying at 51 milliseconds and the second stage deploying at 153 milliseconds. Additionally, the EDR reported that the driver knee air bag was commanded to deploy. It should be noted that the EDR reported that the IC and seat-mounted air bags for both the driver and the passenger were not commanded to deploy. A portion of the recorded pre-crash data for this event are listed in the following table at 0.5 second intervals.

Table 1. Pre-crash Data for Event 1 (First Prior Event)

Time	Vehicle Speed	Throttle Percentage	Engine RPM	Stability Control	Steering Input (degrees)
-5.0 seconds	131 km/h (81 mph)	25	2877	On	-4
-4.5 seconds	131 km/h (81 mph)	26	2875	On	-4
-4.0 seconds	130 km/h (81 mph)	26	2879	On	-4
-3.5 seconds	131 km/h (81 mph)	26	2881	On	-4
-3.0 seconds	131 km/h (81 mph)	26	2875	On	-4
-2.5 seconds	131 km/h (81 mph)	25	2873	On	-4
-2.0 seconds	131 km/h (81 mph)	26	2856	Engaged	-153
-1.5 seconds	122 km/h (76 mph)	3	2674	Engaged	-32
-1.0 seconds	107 km/h (66 mph)	1	2289	Engaged	40
-0.5 seconds	106 km/h (66 mph)	1	1918	Engaged	45
-0.1 seconds	51 km/h (32 mph)	1	1151	On	-67

The most recent event recorded was attributed to the rollover event (Event 2). During the event, the seat belt for the driver was recorded as buckled, and the seat belt for the right front passenger was recorded as faulted. The maximum recorded lateral delta V was -14 km/h (-8.9 mph) at 296 milliseconds. The deployment command data showed that all air bags were not commanded to deploy since they had deployed in the prior event. It should be noted that the EDR reported that the IC and seat-mounted side air bags for both the driver and the passenger were not commanded to deploy. For further detail, refer to Appendix A.

Interior Damage

The interior of the Dodge sustained damage that was primarily the result of occupant contact from the unbelted right front passenger due to the rollover event. He was ejected through the front driver side window (Figure 5) during the rollover event. During the SCI inspection, glass was observed in the window seal. It could not be determined if the front driver side window was shattered due to the rollover event or contact from the passenger as he was ejected.

Figure 5. Front driver's side window of the involved 2017 Dodge Journey

There were several occupant contacts to the interior of the Dodge. The occupant contacts attributed to this incident are listed in Table 2 and shown in Figures 6 and 7.

Table 2. Occupant Contacts

Contact	Area	Component	Evidence	Confidence	Occupant	Body Region
A	Left	Roof Side Rail	Scuffing	Probable	RF Passenger	Unknown
B	Left	Roof Side Rail	Scuffing	Probable	RF Passenger	Unknown
C	Left	Roof Side Rail	Scratched	Probable	RF Passenger	Unknown
D	Left	Left Side Window Frame	Scratched	Probable	RF Passenger	Unknown
E	Right	Lower A Pillar	Scuffing	Possible	RF Passenger	Right Foot
F	Right	RF Seat Bottom	Transfer	Certain	RF Passenger	Right Buttocks/Upper Leg
G	Right	RF Seat Head Restraint	Scuffing	Possible	RF Passenger	Head
H	Right	Right Door – Upper/Lower Quadrant	Scuffing	Probable	RF Passenger	Right Arm
I	Right	Right Door – Upper/Rear Quadrant	Scuffing	Probable	RF Passenger	Right Arm
J	Front	Windshield	Cracked	Probable	RF Passenger	Unknown

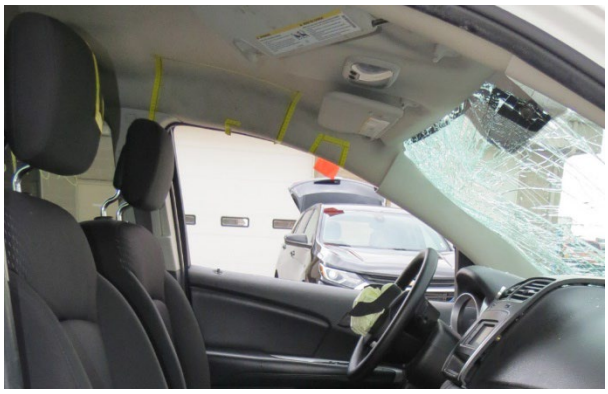


Figure 6. Overall view of occupant contacts located in the first row, left side

Figure 7. Overall view of occupant contacts located in the first row, right side

Manual Restraint Systems

The Dodge had manual 3-point lap and shoulder seat belt systems for all five seating positions. All 3-point lap and shoulder belt systems had continuous loop webbing with sliding latch plates. The front seat belts used retractor pretensioners for both positions and a buckle pretensioner for the right. The driver's seat belt system retracted onto an emergency locking retractor (ELR) while the other systems used switchable ELR/automatic locking reactor (ALR). The pretensioners for both frontal restraints were observed to be actuated. The driver's seat belt webbing was extended in the driver's seat at the time of inspection. The right front passenger's seat belt was taut against the B-pillar at the time of inspection, indicating that the occupant in that seating position was unbuckled. Additionally, the EDR data recorded the right front passenger safety belt status as "Not Buckled" for the frontal impact event (Event 1) and "Faulted" during the rollover event (Event 2).

Supplemental Restraint Systems

The Dodge had several supplemental restraints for its occupants. These included dual-stage driver's and passenger's frontal air bags, a driver's knee air bag, front seat-mounted side impact air bags, and IC air bags. IC airbags would deploy for rollover events and/or side impact collisions. The driver's frontal, driver's knee, and passenger's frontal air bags deployed during the incident.

The driver's frontal air bag (Figure 8) deployed from the steering wheel hub-mounted module and through the cover flaps without damage. The driver's knee air bag deployed with no damage as well. The passenger's frontal air bag (Figure 9) deployed through the cover flaps without damage. The stain located on the top right of the passenger's frontal air bag was determined to be from a scent packet that was adhered to it. Additionally, there was blood splatter found at the 6 o'clock sector of the passenger's frontal air bag.

Figure 8. View of the deployed driver's frontal steering wheel hub-mounted air bag

Figure 9. View of the deployed right front passenger's frontal top instrument panel air bag

Inflatable Curtain Air Bags Non-Deployment Discussion

The IC side air bags did not deploy at any time during this crash sequence. The cause of the non-deployment could not be determined. However, pretensioner actuation and frontal air bag deployments did occur during the first event (front impact) of the crash sequence.

The 2017 Dodge Journey's owner's manual states:

> The Occupant Restraint Controller (ORC) determines whether the deployment of the Side Air Bags in a particular rollover event is appropriate, based on the severity and type of collision … the Side Air Bags will not deploy in all rollover events. The rollover sensing-system determines if a rollover event may be in progress and whether deployment is appropriate. A slower-developing event may deploy the seat belt pretensioners on both sides of the vehicle. A faster-developing event may deploy the seat belt pretensioners as well as the Side Air Bags on both sides of the vehicle. The rollover sensing-system may also deploy the seat belt pretensioners, with or without the Side Air Bags, on both sides if the vehicle experiences a near rollover event.[1]

The EDR reported that the system status of the air bag light was "Off" for the first event, indicating that the system was working properly prior to the incident. During the second event, the EDR reported that the system status of the air bag light status was "On," indicating that the air bag deployed in the first event. Several DTCs were reported on the EDR for the second event related to the deployed safety systems, indicating that the system was working properly or within its programing.

[1] Dodge (2017). *Dodge Journey: Owner's Manual*. https://cdn.dealereprocess.org/cdn/servicemanuals/dodge/2017-journey.pdf

2017 Dodge Journey Occupants

Driver Demographics

Age/sex:	27 years/female
Height:	Unknown
Weight:	Unknown
Eyewear:	Unknown
Seat type:	Forward-facing bucket seat with adjustable head restraint
Seat track position:	Middle track position
Manual restraint usage:	Lap and shoulder belt
Usage source:	Vehicle inspection, EDR
Air bags:	Dual-stage driver's frontal, driver's knee, seat-mounted, and IC air bags available; driver's knee and driver's frontal air bags deployed
Alcohol/drug data:	Blood test/results unknown (per PCR)
Egress from vehicle:	Exited under own power
Transport from scene:	Local law enforcement escort to a local hospital
Type of medical treatment:	Unknown if treated

Driver Injuries

Injury No.	Injury	Injury Severity AIS 2015	Involved Physical Component (IPC)	IPC Confidence Level
1	Unknown	Unknown	Unknown	Unknown

Medical request rejected due to lack of signed release.

Driver Kinematics

The 27-year-old female was driving the Dodge while using the 3-point lap and shoulder seat belt system. The driver's seat was in the middle track position at the time of the SCI inspection. At impact with the embankment, the driver loaded the seat belt in a forward trajectory. The seat belt pretensioner secured the female driver in the driver seat, which accounted for no contacts from the driver in the vehicle.

According to the PCR, when the vehicle came to final rest, the driver noticed that the passenger was not in the vehicle. The driver exited the vehicle under her own power and began looking for him. No interview could be obtained from the driver. Upon arriving at the scene, emergency medical services personnel cleared the driver for transport by local law enforcement to a nearby medical center. The PCR indicated that the driver sustained no injuries.

First Row Right Occupant Demographics

Age/Sex:	40 years/male
Height:	Unknown
Weight:	Unknown
Eyewear:	Unknown
Seat type:	Forward-facing bucket seat with adjustable head restraint
Seat track position:	Middle track position
Manual restraint usage:	None used
Usage source:	Vehicle inspection, EDR
Air bags:	Dual-stage passenger's frontal, seat-mounted, and IC air bags available; only frontal air bags deployed
Alcohol/drug data:	Unknown if test given
Egress from vehicle:	Fully ejected
Transport from scene:	Ambulance to a local hospital
Type of medical treatment:	Unknown extent of treatment

First Row Right Occupant Injuries

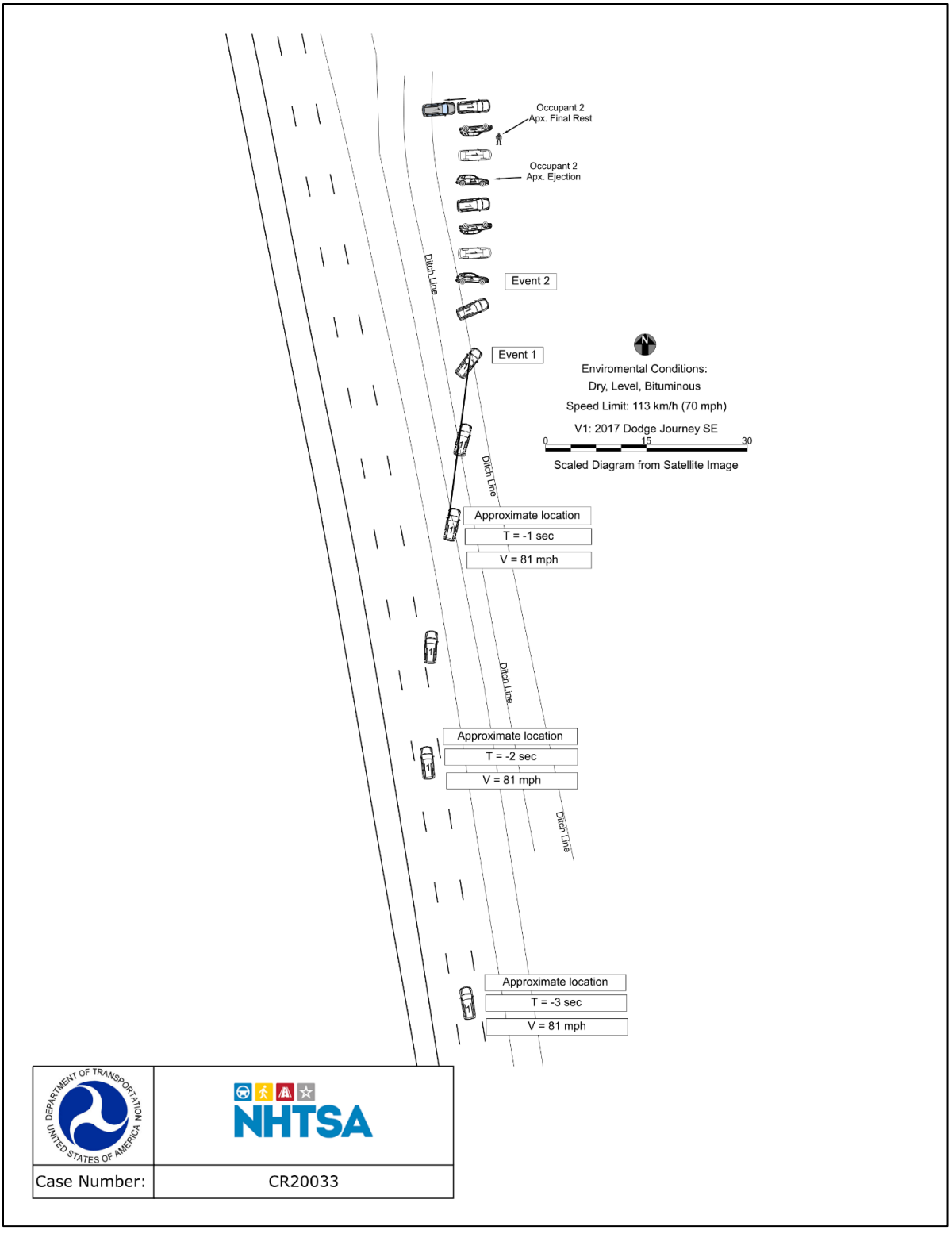
Injury No.	Injury	Injury Severity AIS 2015	Involved Physical Component (IPC)	IPC Confidence Level
1	Unknown	Unknown	Unknown	Unknown

Medical request rejected due to lack of signed release.

First Row Right Occupant Kinematics

The 40-year-old male was seated in the front row right occupant position and was not using the 3-point lap and shoulder seat belt system. The front row right seat was in the middle track position at the time of the SCI inspection. The impact with the ditch resulted in the passenger being displaced forward and to the right. Several contacts to the right front seat, right front door, and right front toe pan were the result of this displacement. As he rebounded from the impact with the ditch, he struck the right front seating position headrest. As the vehicle rolled, he was then displaced toward the left side of the vehicle. This displacement resulted in contact to the windshield in front of the driver's seat. After he contacted the windshield, he was ejected through the driver's front side window at approximately the fifth quarter turn. This ejection resulted in several contacts to the right roof side rail and right front door. The PCR indicated that he suffered suspected serious injuries. The extent of his injuries is unknown.

Crash Diagram



Appendix A: Event Data Recorder Report for 2017 Dodge Journey [2]

[2] The EDR report contained in this technical report was imaged using the version of the Bosch CDR software current 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	3C4PDCAB8HT******
User	
Case Number	
EDR Data Imaging Date	
Crash Date	
Filename	CR20033_V1.CDRX
Saved on	
Imaged with CDR version	Crash Data Retrieval Tool 19.5.3
Imaged with Software Licensed to (Company Name)	Company Name information was removed when this file was saved without VIN sequence number
Reported with CDR version	Crash Data Retrieval Tool 21.3
Reported with Software Licensed to (Company Name)	NHTSA
EDR Device Type	Airbag Control Module
Event(s) recovered	Most Recent Event 1st 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.
- A deployment event may be stored in a 2019 MY+ Ram 3500 as the result of a rear impact, even though the Ram 3500 does not deploy any restraint system devices in a rear impact.

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.
- For the 2021MY Jeep Grand Cherokee L, an event may be displayed in the "Event(s) Recovered" section of the report as "End of Line Test event - See Data Limitations". This event is an End of Line test event from the module manufacturing process which will be included in the count for the total number of events, but no data will be displayed in the CDR Report.

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:
- Frontal Airbag Warning Lamp - In Veoneer modules, the airbag warning lamp may indicate ON at the time of a most recent event without any DTCs present if a deployment event has already occurred in the same ignition cycle. The ABWL will come on due to the deployment but, as there are still algorithms processing data, the actual faults will not be qualified yet and will not show up as DTCs.

- 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.
    - For the 2021MY Jeep Grand Cherokee L, the module will contain one, two, or three End of Line test events from the module manufacturing process which will be included in the count for the total number of events. However, the data from these End of Line test events will not be displayed in the CDR Report.
- 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. "SNA" indicates undetermined;
    - For some non-North American applications, "Empty" indicates an empty seat;
- Odometer at Event - Vehicle odometer at the time of the event
    - For 2014-2016 MY Fiat 500L, the odometer value in miles may be shown in the brackets, labeled as kilometers. If this is the case, the non-bracketed value is not valid.
- 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. This voltage may be approximately 0.7V (one diode drop) below the bused voltage.
- 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.
- Tire Pressure Indicator Lamp at Event- "On" indicates a tire with low pressure or a fault in the tire pressure monitoring system at the time of the event. The TPM module DTC's should be read and recorded for final system interpretation. "Flashing" indicates a recent fault in the tire pressure monitoring system.
- Tire Pressure at Event, LF, LF, RF, RR - See "Tire Information" under Pre-Crash Data section for details.
- 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 N/A.
- A time to deploy value of 0 is valid and indicates that the deployment of the device triggered the EDR t0.
- In vehicles with Bosch and Veoneer 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.
- For the 2021 MY+ Jeep Grand Cherokee L, the DTCs will not be updated for the subsequent events within the same ignition cycle.

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
    - +/- 300 deg/sec for vehicles with Veoneer ACMs
- 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.
- For the 2010-2012 MY Chrysler Town and Country, Dodge Caravan, Dodge Grand Caravan, and Dodge Journey and the 2010-2011 MY Grand Voyager, the angular rate will only be displayed if it is non-zero.

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.
- Brake Pedal Position - This indicates the percentage of brake pedal depression by the driver.
- Brake Torque - This indicates the calculated amount of brake torque the system is producing at the wheels.
- Brake Torque Driver - This indicates the calculated amount of brake torque that the driver is requesting.
- 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 Status - "Off" indicates that all cruise control functionality is disabled; "NCC_On" indicates that the Normal Cruise Control system is turned on; "NCC_Engaged" indicates the Normal Cruise Control is actively controlling vehicle speed; "ACC_On" indicates that ACC is turned on; "ACC_Engaged" indicates that the ACC is actively controlling vehicle speed.
    - 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.
    - Cruise Control Override - "Active" indicates that the driver has overridden the set speed. "Not Active" indicates that the cruise control is either not turned on or is not being overridden.
    - 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.
    - Set Speed (if equip.)- This indicates the desired speed in mph that was input by the driver for the cruise control system.
    - 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 - If the FCW system is acting on the object, this indicates the actual forward distance to the main object being tracked by the FCW system. "No Object" indicates that the FCW system is not currently acting on 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 on with 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-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 enabled as well as the audible and visual warnings enabled. SNA indicates that the vehicle is not equipped with FCW.
  - FCW Braking Enabled - "Yes" indicates that the FCW system has active braking enabled; "No" indicates that the FCW system does not have active braking enabled.
- Gear Position/Current Gear - 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.
- Estimate Regenerative Braking Axle Torque - (HEV only) This indicates the calculated braking torque applied by the HEV system to the drive axles in Nm.
- Driver Intended Axle Torque - (HEV only) This indicates the calculated value of torque in Nm being applied to the drive axles based on accelerator pedal position.
- Trans torque request - (HEV only) "Yes" indicates that the transmission controller has requested a torque reduction when shifting from one gear to another.
- Static Axle Torque - (HEV only) This indicates the torque in Nm at the axle when the speed of the axle is constant.
- HEV Battery Pack Contactor State - (HEV only) "Closed' indicates that the HEV battery pack is connected to the vehicle's electrical system. "Open" indicates that the HEV battery pack is disconnected from the vehicle's electrical system. "Pre-Charging" indicates that the inverter internal capacitor is charging. "Pre-Charge Failed" indicates that the attempt to charge an internal capacitor failed. "Pre-Charge Inhibited" indicates that an attempt to charge an internal capacitor was not made.
- HEV Lamp Request - (HEV only) This indicates the HEV indicator lamp status. It will only be "On" when there is a fault in the HEV system. The vehicle DTC's should be read and recorded for final system interpretation.
- 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.
- Shift Selector Position - This indicates the status of the gear shift selector.
- 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 Significantly Under Inflated (TPM lamp will be on), LOW/Under/Under Inflated, NORMAL, HIGH/Over/Over Inflated, 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 tire with low pressure or a fault in the tire pressure monitoring system. The TPM module DTC's should be read and recorded for final system interpretation. "Flashing" indicates a recent fault in the tire pressure monitoring system.
- "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_ r046

System Status at Retrieval

Original VIN	3C4PDCAB8HT******
Ignition Cycle, Download	7208
Airbag Control Module Serial Number	T07JF077728060
Airbag Control Module Part Number	68163806AB
Airbag Control Module Supplier	Continental Corporation
ACM Supply Voltage at Time of Retrieval	11.8

System Configuration at Retrieval

Configured for Driver Frontal Airbag	Yes
Configured for Driver Knee Airbag	Yes
Configured for Driver Buckle Pretensioner	No
Configured for Driver Retractor Pretensioner	Yes
Configured for Driver Active Head Restraints	Yes
Configured for Passenger Frontal Airbag	Yes
Configured for Passenger Buckle Pretensioner	Yes
Configured for Passenger Retractor Pretensioner	Yes
Configured for Passenger Active Head Restraints	Yes
Configured for Right Side Seat Airbag	Yes
Configured for Right Side Curtain Airbag	Yes
Configured for Left Side Seat Airbag	Yes
Configured for Left Side Curtain Airbag	Yes
Configured for Driver Seat Track Position Sensor	Yes
Configured for Passenger Seat Seatbelt Switch	Yes
Configured for Passenger Seat Track Position Sensor	Yes
Configured for Pedestrian Protection Hood Actuators	No
Configured for Up Front Sensors	Yes
Configured for Side Sensing	Yes

System Status at Event (Most Recent Event)

Complete File Recorded	Yes
Ignition Cycle, Crash	7205
Safety Belt Status, Driver	Buckled
Safety Belt Status, Passenger	Faulted
Airbag Warning Lamp, On/Off	On
Seat Track Position Switch, Foremost, Status, Driver	No
Seat Track Position Switch, Foremost, Status, Passenger	No
Maximum Delta-V Longitudinal (MPH [km/h])	0.0 [0]
Time, Maximum Delta-V, Longitudinal (msec)	0
Maximum Delta-V Lateral (MPH [km/h])	-8.9 [-14]
Time, Maximum Delta-V, Lateral (msec)	296
Time, Operation System Time (sec)	13920441.15
Time, Airbag Warning Lamp On (min)	2641
Event Number	7
Total Number of Events	7
Time from Event 1 to 2 (sec)	0.0
Multi-Event, Number of Events (1,2)	1
Operation Via Energy Reserve Only (Yes, No)	No
Supply Voltage at Event, ACM (V)	12.3
Event Signal Transmission, Complete (if equip.)	Yes
Odometer at Event (km)	155538.4
VIN, Original	3C4PDCAB8HT******
VIN at event, Last 8 Digits	HT******

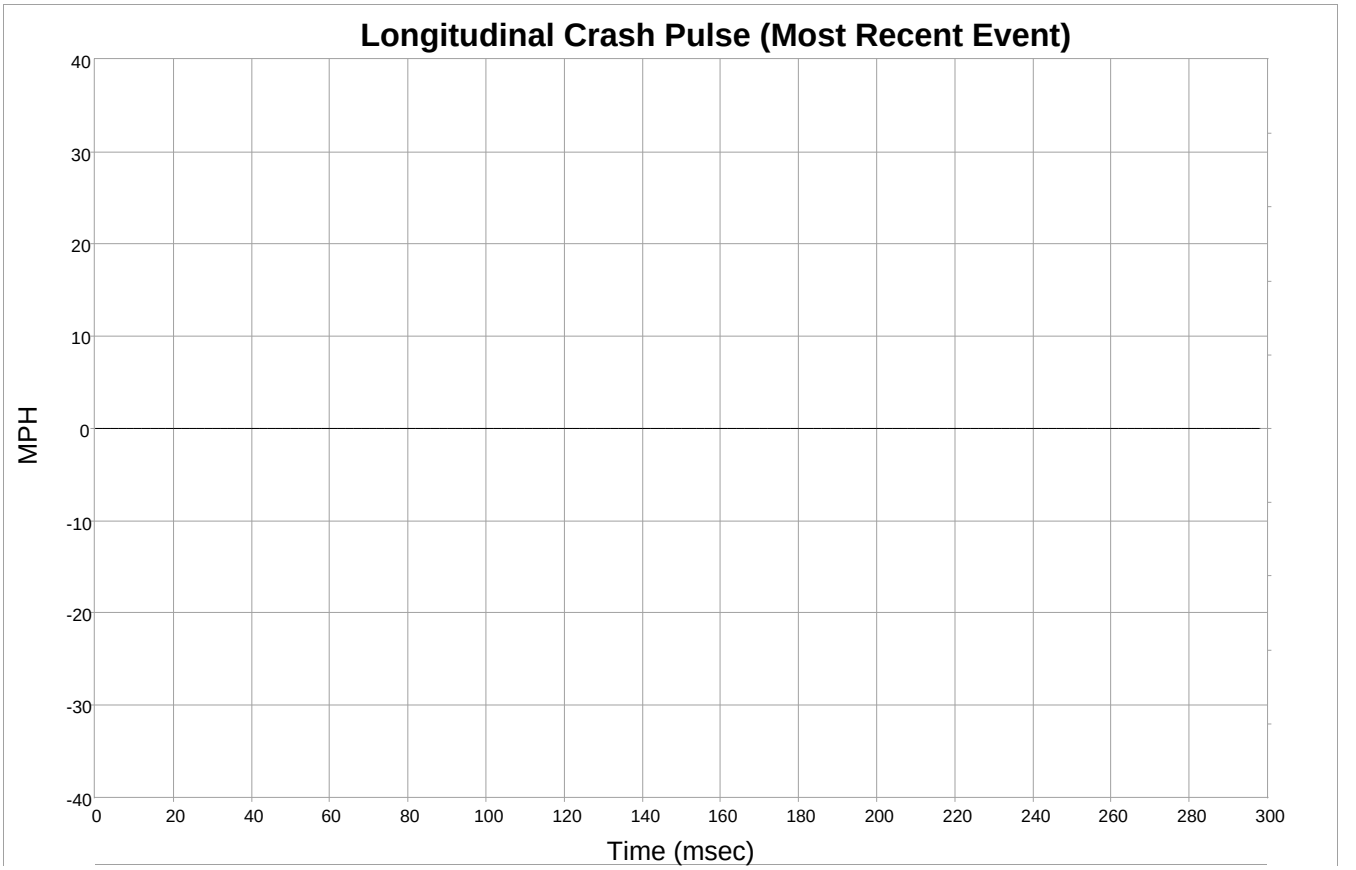
Deployment Command Data (Most Recent Event)

Frontal Airbag Deployment, 1st Stage, Driver	No
Frontal Airbag Deployment, 2nd Stage, Driver	No
Frontal Airbag Deployment, Time to First Stage Deployment, Driver (msec)	0
Frontal Airbag Deployment, Time to 2nd Stage Deployment from T0, Driver (msec)	0
Frontal Airbag Deployment, 1st Stage, Passenger	No
Frontal Airbag Deployment, 2nd Stage, Passenger	No
Frontal Airbag Deployment, Time to First Stage Deployment, Passenger (msec)	0
Frontal Airbag Deployment, Time to 2nd Stage Deployment from T0, Passenger (msec)	0
Knee Airbag Deployment, Driver	No
Buckle Pretensioner, Driver	No
Retractor Pretensioner, Driver	No
Frontal Airbag Deployment, Passenger 3rd Squib	No
Buckle Pretensioner, Passenger	No
Retractor Pretensioner, Passenger	No
Side Seat Airbag Deployment, Left	No
Side Seat Airbag Deployment, Right	No
Side Curtain Airbag Deployment, Left	No
Side Curtain Airbag Deployment, Right	No
Active Head Restraint, Driver	No
Active Head Restraint, Passenger	No

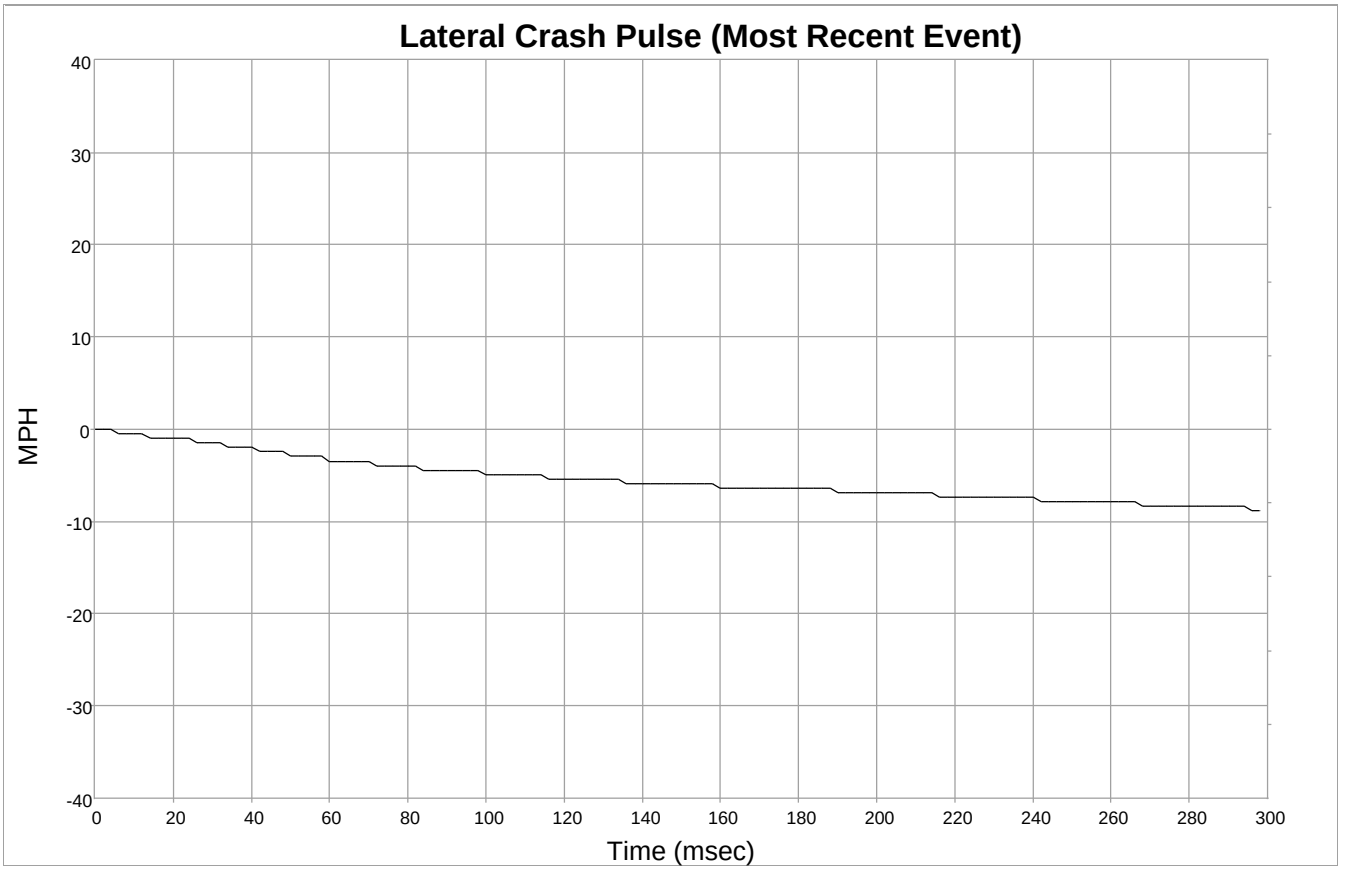
DTCs Present at Start of Event (Most Recent Event)

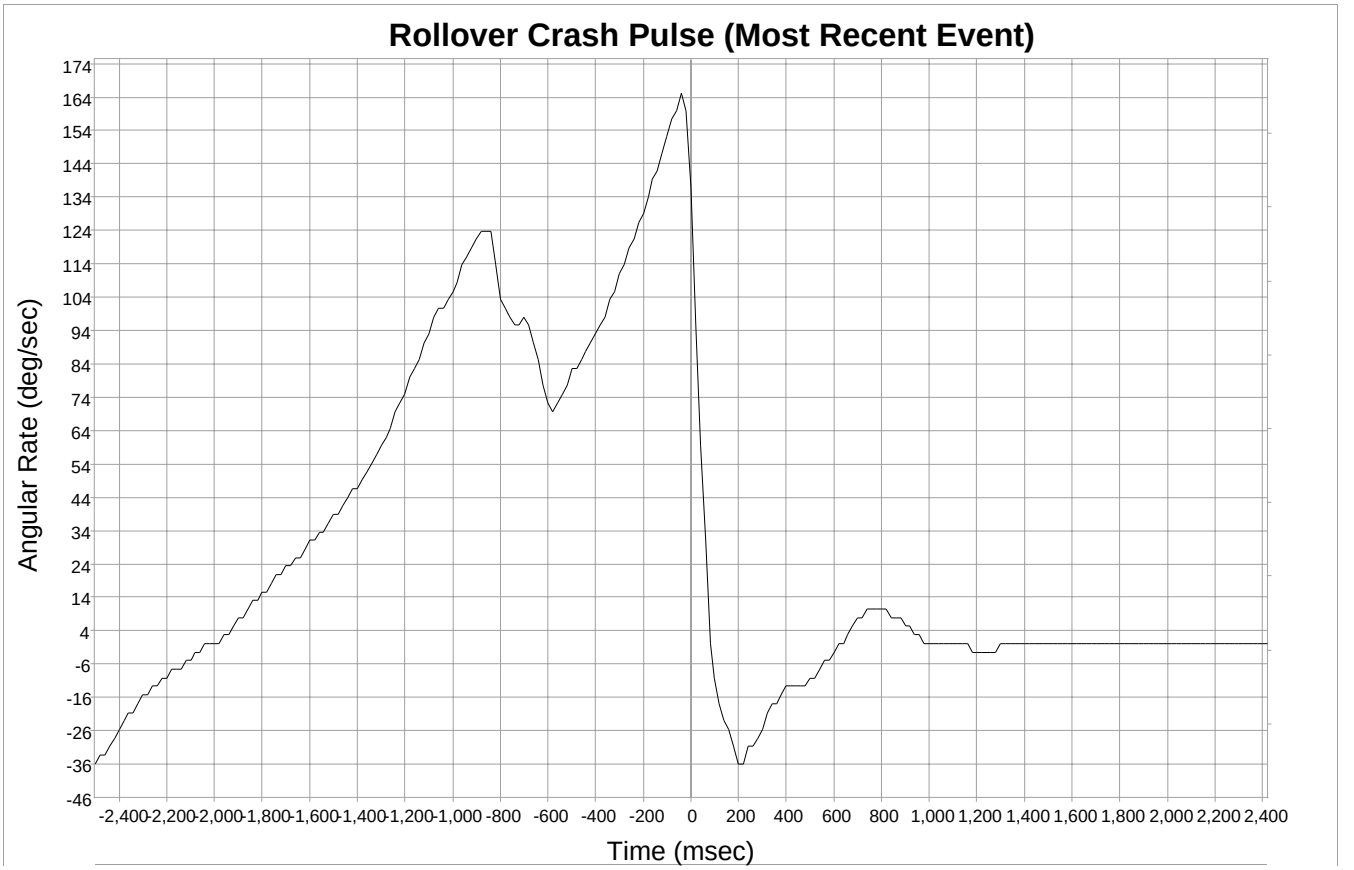
DTC Number	DTC Status
B1CDC	Active
B1B55	Active
B1C3A	Active
B1B12	Active
B275E	Active
B1C47	Active
B1B0A	Active
B1B0E	Active
B1B06	Active
B1B02	Active
B1C4E	Active

Longitudinal Crash Pulse (Most Recent Event)



Lateral Crash Pulse (Most Recent Event)




Rollover Crash Pulse (Most Recent Event)
Angular Rate (deg/sec)
174
164
154
144
134
124
114
104
94
84
74
64
54
44
34
24
14
4
-6
-16
-26
-36
-46
-2,400 -2,200 -2,000 -1,800 -1,600 -1,400 -1,200 -1,000 -800 -600 -400 -200 0 200 400 600 800 1,000 1,200 1,400 1,600 1,800 2,000 2,200 2,400
Time (msec)

Longitudinal Crash Pulse (Most Recent Event)

Time (msec)	Delta-V, Longitudinal (MPH [km/h])	Time (msec)	Delta-V, Longitudinal (MPH [km/h])	Time (msec)	Delta-V, Longitudinal (MPH [km/h])
0	0.0 [0]	100	0.0 [0]	200	0.0 [0]
2	0.0 [0]	102	0.0 [0]	202	0.0 [0]
4	0.0 [0]	104	0.0 [0]	204	0.0 [0]
6	0.0 [0]	106	0.0 [0]	206	0.0 [0]
8	0.0 [0]	108	0.0 [0]	208	0.0 [0]
10	0.0 [0]	110	0.0 [0]	210	0.0 [0]
12	0.0 [0]	112	0.0 [0]	212	0.0 [0]
14	0.0 [0]	114	0.0 [0]	214	0.0 [0]
16	0.0 [0]	116	0.0 [0]	216	0.0 [0]
18	0.0 [0]	118	0.0 [0]	218	0.0 [0]
20	0.0 [0]	120	0.0 [0]	220	0.0 [0]
22	0.0 [0]	122	0.0 [0]	222	0.0 [0]
24	0.0 [0]	124	0.0 [0]	224	0.0 [0]
26	0.0 [0]	126	0.0 [0]	226	0.0 [0]
28	0.0 [0]	128	0.0 [0]	228	0.0 [0]
30	0.0 [0]	130	0.0 [0]	230	0.0 [0]
32	0.0 [0]	132	0.0 [0]	232	0.0 [0]
34	0.0 [0]	134	0.0 [0]	234	0.0 [0]
36	0.0 [0]	136	0.0 [0]	236	0.0 [0]
38	0.0 [0]	138	0.0 [0]	238	0.0 [0]
40	0.0 [0]	140	0.0 [0]	240	0.0 [0]
42	0.0 [0]	142	0.0 [0]	242	0.0 [0]
44	0.0 [0]	144	0.0 [0]	244	0.0 [0]
46	0.0 [0]	146	0.0 [0]	246	0.0 [0]
48	0.0 [0]	148	0.0 [0]	248	0.0 [0]
50	0.0 [0]	150	0.0 [0]	250	0.0 [0]
52	0.0 [0]	152	0.0 [0]	252	0.0 [0]
54	0.0 [0]	154	0.0 [0]	254	0.0 [0]
56	0.0 [0]	156	0.0 [0]	256	0.0 [0]
58	0.0 [0]	158	0.0 [0]	258	0.0 [0]
60	0.0 [0]	160	0.0 [0]	260	0.0 [0]
62	0.0 [0]	162	0.0 [0]	262	0.0 [0]
64	0.0 [0]	164	0.0 [0]	264	0.0 [0]
66	0.0 [0]	166	0.0 [0]	266	0.0 [0]
68	0.0 [0]	168	0.0 [0]	268	0.0 [0]
70	0.0 [0]	170	0.0 [0]	270	0.0 [0]
72	0.0 [0]	172	0.0 [0]	272	0.0 [0]
74	0.0 [0]	174	0.0 [0]	274	0.0 [0]
76	0.0 [0]	176	0.0 [0]	276	0.0 [0]
78	0.0 [0]	178	0.0 [0]	278	0.0 [0]
80	0.0 [0]	180	0.0 [0]	280	0.0 [0]
82	0.0 [0]	182	0.0 [0]	282	0.0 [0]
84	0.0 [0]	184	0.0 [0]	284	0.0 [0]
86	0.0 [0]	186	0.0 [0]	286	0.0 [0]
88	0.0 [0]	188	0.0 [0]	288	0.0 [0]
90	0.0 [0]	190	0.0 [0]	290	0.0 [0]
92	0.0 [0]	192	0.0 [0]	292	0.0 [0]
94	0.0 [0]	194	0.0 [0]	294	0.0 [0]
96	0.0 [0]	196	0.0 [0]	296	0.0 [0]
98	0.0 [0]	198	0.0 [0]	298	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	-0.5 [-1]
8	-0.5 [-1]
10	-0.5 [-1]
12	-0.5 [-1]
14	-1.0 [-2]
16	-1.0 [-2]
18	-1.0 [-2]
20	-1.0 [-2]
22	-1.0 [-2]
24	-1.0 [-2]
26	-1.5 [-2]
28	-1.5 [-2]
30	-1.5 [-2]
32	-1.5 [-2]
34	-2.0 [-3]
36	-2.0 [-3]
38	-2.0 [-3]
40	-2.0 [-3]
42	-2.5 [-4]
44	-2.5 [-4]
46	-2.5 [-4]
48	-2.5 [-4]
50	-3.0 [-5]
52	-3.0 [-5]
54	-3.0 [-5]
56	-3.0 [-5]
58	-3.0 [-5]
60	-3.4 [-6]
62	-3.4 [-6]
64	-3.4 [-6]
66	-3.4 [-6]
68	-3.4 [-6]
70	-3.4 [-6]
72	-3.9 [-6]
74	-3.9 [-6]
76	-3.9 [-6]
78	-3.9 [-6]
80	-3.9 [-6]
82	-3.9 [-6]
84	-4.4 [-7]
86	-4.4 [-7]
88	-4.4 [-7]
90	-4.4 [-7]
92	-4.4 [-7]
94	-4.4 [-7]
96	-4.4 [-7]
98	-4.4 [-7]
100	-4.9 [-8]
102	-4.9 [-8]
104	-4.9 [-8]
106	-4.9 [-8]
108	-4.9 [-8]
110	-4.9 [-8]
112	-4.9 [-8]
114	-4.9 [-8]
116	-5.4 [-9]
118	-5.4 [-9]
120	-5.4 [-9]
122	-5.4 [-9]
124	-5.4 [-9]
126	-5.4 [-9]
128	-5.4 [-9]
130	-5.4 [-9]
132	-5.4 [-9]
134	-5.4 [-9]
136	-5.9 [-10]
138	-5.9 [-10]
140	-5.9 [-10]
142	-5.9 [-10]
144	-5.9 [-10]
146	-5.9 [-10]
148	-5.9 [-10]
150	-5.9 [-10]
152	-5.9 [-10]
154	-5.9 [-10]
156	-5.9 [-10]
158	-5.9 [-10]
160	-6.4 [-10]
162	-6.4 [-10]
164	-6.4 [-10]
166	-6.4 [-10]
168	-6.4 [-10]
170	-6.4 [-10]
172	-6.4 [-10]
174	-6.4 [-10]
176	-6.4 [-10]
178	-6.4 [-10]
180	-6.4 [-10]
182	-6.4 [-10]
184	-6.4 [-10]
186	-6.4 [-10]
188	-6.4 [-10]
190	-6.9 [-11]
192	-6.9 [-11]
194	-6.9 [-11]
196	-6.9 [-11]
198	-6.9 [-11]
200	-6.9 [-11]
202	-6.9 [-11]
204	-6.9 [-11]
206	-6.9 [-11]
208	-6.9 [-11]
210	-6.9 [-11]
212	-6.9 [-11]
214	-6.9 [-11]
216	-7.4 [-12]
218	-7.4 [-12]
220	-7.4 [-12]
222	-7.4 [-12]
224	-7.4 [-12]
226	-7.4 [-12]
228	-7.4 [-12]
230	-7.4 [-12]
232	-7.4 [-12]
234	-7.4 [-12]
236	-7.4 [-12]
238	-7.4 [-12]
240	-7.4 [-12]
242	-7.9 [-13]
244	-7.9 [-13]
246	-7.9 [-13]
248	-7.9 [-13]
250	-7.9 [-13]
252	-7.9 [-13]
254	-7.9 [-13]
256	-7.9 [-13]
258	-7.9 [-13]
260	-7.9 [-13]
262	-7.9 [-13]
264	-7.9 [-13]
266	-7.9 [-13]
268	-8.4 [-13]
270	-8.4 [-13]
272	-8.4 [-13]
274	-8.4 [-13]
276	-8.4 [-13]
278	-8.4 [-13]
280	-8.4 [-13]
282	-8.4 [-13]
284	-8.4 [-13]
286	-8.4 [-13]
288	-8.4 [-13]
290	-8.4 [-13]
292	-8.4 [-13]
294	-8.4 [-13]
296	-8.9 [-14]
298	-8.9 [-14]

Rollover Crash Pulse (Most Recent Event) (if equipped)

Time (msec)	Angular Rate (deg/sec)
-2500	-36.09
-2480	-33.52
-2460	-33.52
-2440	-30.94
-2420	-28.36
-2400	-25.78
-2380	-23.20
-2360	-20.62
-2340	-20.62
-2320	-18.05
-2300	-15.47
-2280	-15.47
-2260	-12.89
-2240	-12.89
-2220	-10.31
-2200	-10.31
-2180	-7.73
-2160	-7.73
-2140	-7.73
-2120	-5.16
-2100	-5.16
-2080	-2.58
-2060	-2.58
-2040	0.00
-2020	0.00
-2000	0.00
-1980	0.00
-1960	2.58
-1940	2.58
-1920	5.16
-1900	7.73
-1880	7.73
-1860	10.31
-1840	12.89
-1820	12.89
-1800	15.47
-1780	15.47
-1760	18.05
-1740	20.62
-1720	20.62
-1700	23.20
-1680	23.20
-1660	25.78
-1640	25.78
-1620	28.36
-1600	30.94
-1580	30.94
-1560	33.52
-1540	33.52
-1520	36.09

Time (msec)	Angular Rate (deg/sec)
-1500	38.67
-1480	38.67
-1460	41.25
-1440	43.83
-1420	46.41
-1400	46.41
-1380	48.98
-1360	51.56
-1340	54.14
-1320	56.72
-1300	59.30
-1280	61.87
-1260	64.45
-1240	69.61
-1220	72.19
-1200	74.76
-1180	79.92
-1160	82.50
-1140	85.08
-1120	90.23
-1100	92.81
-1080	97.97
-1060	100.55
-1040	100.55
-1020	103.12
-1000	105.70
-980	108.28
-960	113.44
-940	116.01
-920	118.59
-900	121.17
-880	123.75
-860	123.75
-840	123.75
-820	113.44
-800	103.12
-780	100.55
-760	97.97
-740	95.39
-720	95.39
-700	97.97
-680	95.39
-660	90.23
-640	85.08
-620	77.34
-600	72.19
-580	69.61
-560	72.19
-540	74.76
-520	77.34

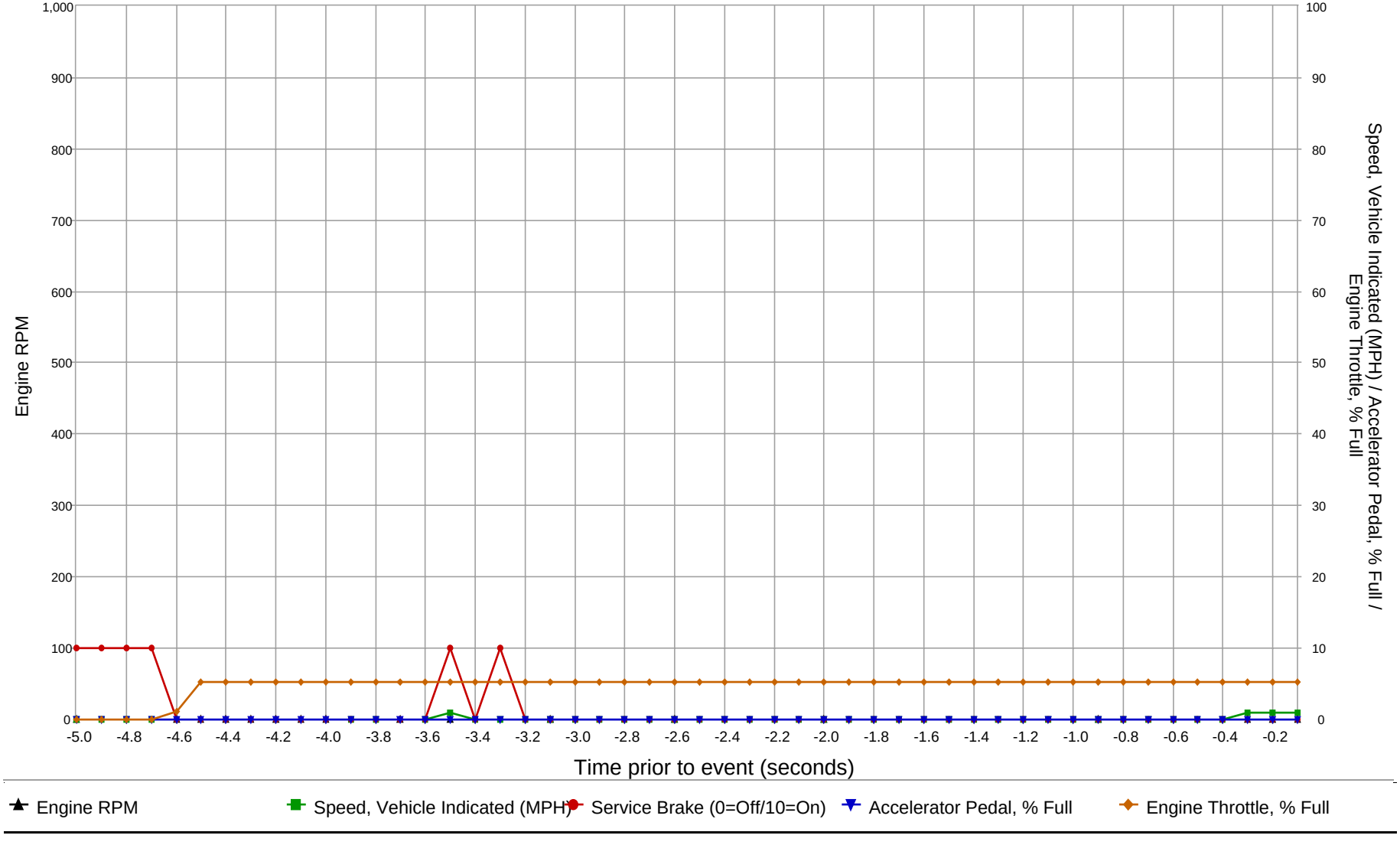
Time (msec)	Angular Rate (deg/sec)
-500	82.50
-480	82.50
-460	85.08
-440	87.66
-420	90.23
-400	92.81
-380	95.39
-360	97.97
-340	103.12
-320	105.70
-300	110.86
-280	113.44
-260	118.59
-240	121.17
-220	126.33
-200	128.91
-180	134.06
-160	139.22
-140	141.80
-120	146.95
-100	152.11
-80	157.26
-60	159.84
-40	165.00
-20	159.84
0	136.64
20	95.39
40	59.30
60	30.94
80	0.00
100	-10.31
120	-18.05
140	-23.20
160	-25.78
180	-30.94
200	-36.09
220	-36.09
240	-30.94
260	-30.94
280	-28.36
300	-25.78
320	-20.62
340	-18.05
360	-18.05
380	-15.47
400	-12.89
420	-12.89
440	-12.89
460	-12.89
480	-12.89

Rollover Crash Pulse (Most Recent Event) (if equipped)

Time (msec)	Angular Rate (deg/sec)
500	-10.31
520	-10.31
540	-7.73
560	-5.16
580	-5.16
600	-2.58
620	0.00
640	0.00
660	2.58
680	5.16
700	7.73
720	7.73
740	10.31
760	10.31
780	10.31
800	10.31
820	10.31
840	7.73
860	7.73
880	7.73
900	5.16
920	5.16
940	2.58
960	2.58
980	0.00
1000	0.00
1020	0.00
1040	0.00
1060	0.00
1080	0.00
1100	0.00
1120	0.00
1140	0.00
1160	0.00
1180	-2.58
1200	-2.58
1220	-2.58
1240	-2.58
1260	-2.58
1280	-2.58
1300	0.00
1320	0.00
1340	0.00
1360	0.00
1380	0.00
1400	0.00
1420	0.00
1440	0.00
1460	0.00
1480	0.00

Time (msec)	Angular Rate (deg/sec)
1500	0.00
1520	0.00
1540	0.00
1560	0.00
1580	0.00
1600	0.00
1620	0.00
1640	0.00
1660	0.00
1680	0.00
1700	0.00
1720	0.00
1740	0.00
1760	0.00
1780	0.00
1800	0.00
1820	0.00
1840	0.00
1860	0.00
1880	0.00
1900	0.00
1920	0.00
1940	0.00
1960	0.00
1980	0.00
2000	0.00
2020	0.00
2040	0.00
2060	0.00
2080	0.00
2100	0.00
2120	0.00
2140	0.00
2160	0.00
2180	0.00
2200	0.00
2220	0.00
2240	0.00
2260	0.00
2280	0.00
2300	0.00
2320	0.00
2340	0.00
2360	0.00
2380	0.00
2400	0.00
2420	0.00

Pre-Crash Data (Most Recent Event)



SNA values will not be plotted on the graph

Pre-Crash Data (Most Recent Event - table 1 of 4)

(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 (On, Off)	Engine RPM	ABS Activity	Stability Control
-5.0	Complete	0 [0]	0	0	On	0	No	Off
-4.9	Complete	0 [0]	0	0	On	0	No	Off
-4.8	Complete	0 [0]	0	0	On	0	No	Off
-4.7	Complete	0 [0]	0	0	On	0	No	Off
-4.6	Complete	SNA	0	1	Off	0	No	Off
-4.5	Complete	SNA	0	5	Off	0	No	Off
-4.4	Complete	SNA	0	5	Off	0	No	Off
-4.3	Complete	SNA	0	5	Off	0	No	Off
-4.2	Complete	SNA	0	5	Off	0	No	Off
-4.1	Complete	SNA	0	5	Off	0	No	Off
-4.0	Complete	SNA	0	5	Off	0	No	Off
-3.9	Complete	0 [0]	0	5	Off	0	No	Off
-3.8	Complete	0 [0]	0	5	Off	0	No	Off
-3.7	Complete	SNA	0	5	Off	0	No	Off
-3.6	Complete	0 [0]	0	5	Off	0	No	Off
-3.5	Complete	1 [2]	0	5	On	0	No	Off
-3.4	Complete	0 [0]	0	5	Off	0	No	Off
-3.3	Complete	0 [0]	0	5	On	0	No	Off
-3.2	Complete	0 [0]	0	5	Off	0	No	Off
-3.1	Complete	0 [0]	0	5	Off	0	No	Off
-3.0	Complete	0 [0]	0	5	Off	0	No	Off
-2.9	Complete	0 [0]	0	5	Off	0	No	Off
-2.8	Complete	0 [0]	0	5	Off	0	No	Off
-2.7	Complete	0 [0]	0	5	Off	0	No	Off
-2.6	Complete	0 [0]	0	5	Off	0	No	Off
-2.5	Complete	0 [0]	0	5	Off	0	No	Off
-2.4	Complete	0 [0]	0	5	Off	0	No	Off
-2.3	Complete	0 [0]	0	5	Off	0	No	Off
-2.2	Complete	0 [0]	0	5	Off	0	No	Off
-2.1	Complete	0 [0]	0	5	Off	0	No	Off
-2.0	Complete	0 [0]	0	5	Off	0	No	Off
-1.9	Complete	0 [0]	0	5	Off	0	No	Off
-1.8	Complete	0 [0]	0	5	Off	0	No	Off
-1.7	Complete	0 [0]	0	5	Off	0	No	Off
-1.6	Complete	0 [0]	0	5	Off	0	No	Off
-1.5	Complete	0 [0]	0	5	Off	0	No	Off
-1.4	Complete	0 [0]	0	5	Off	0	No	Off
-1.3	Complete	0 [0]	0	5	Off	0	No	Off
-1.2	Complete	0 [0]	0	5	Off	0	No	Off
-1.1	Complete	0 [0]	0	5	Off	0	No	Off
-1.0	Complete	0 [0]	0	5	Off	0	No	Off
-0.9	Complete	0 [0]	0	5	Off	0	No	Off
-0.8	Complete	0 [0]	0	5	Off	0	No	Off
-0.7	Complete	0 [0]	0	5	Off	0	No	Off
-0.6	Complete	0 [0]	0	5	Off	0	No	Off
-0.5	Complete	0 [0]	0	5	Off	0	No	Off
-0.4	Complete	0 [0]	0	5	Off	0	No	Off
-0.3	Complete	1 [2]	0	5	Off	0	No	Off
-0.2	Complete	1 [2]	0	5	Off	0	No	Off
-0.1	Complete	1 [2]	0	5	Off	0	No	Off

Pre-Crash Data (Most Recent Event - table 2 of 4)

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

Time Stamp (sec)	Steering Input (deg)	Raw Manifold Pressure (kPa)	PCM MIL	ESC Lamp (if equip.)	Yaw Rate (deg/sec) (if equip.)	Wheel Speed LF (RPM) (if equip.)	Wheel Speed RF (RPM) (if equip.)	Wheel Speed LR (RPM) (if equip.)	Wheel Speed RR (RPM) (if equip.)
-5.0	80	98	Off	Off	-2	0	8,192	329	379
-4.9	79	98	Off	Off	-27	0	8,192	320	371
-4.8	93	98	Off	Off	-17	0	8,192	43	347
-4.7	133	98	Off	Off	7	9	8,192	63	357
-4.6	174	98	Off	Off	37	0	8,192	12	344
-4.5	162	98	Off	Off	42	0	8,192	12	331
-4.4	163	98	Off	Off	43	0	8,192	7	330
-4.3	170	98	Off	Off	39	0	8,192	6	320
-4.2	176	98	Off	Off	48	0	8,192	0	322
-4.1	156	98	Off	Off	63	0	8,192	0	91
-4.0	92	98	Off	Off	43	0	8,192	15	39
-3.9	2	98	Off	Off	13	0	8,192	15	36
-3.8	16	98	Off	Off	3	0	8,192	7	32
-3.7	40	98	Off	Off	9	0	8,192	0	30
-3.6	31	98	Off	Off	7	0	8,192	0	27
-3.5	31	98	Off	Off	-1	15	8,192	0	22
-3.4	85	98	Off	Off	-31	8,192	8,192	8,192	8,192
-3.3	75	98	Off	Off	SNA	18	8,192	13	16
-3.2	65	98	Off	Off	SNA	12	8,192	9	15
-3.1	65	98	Off	Off	SNA	10	8,192	7	12
-3.0	74	98	Off	Off	SNA	7	8,192	0	9
-2.9	78	98	Off	Off	16	0	8,192	0	0
-2.8	79	98	Off	Off	SNA	0	8,192	0	0
-2.7	79	98	Off	Off	12	0	8,192	0	0
-2.6	74	98	Off	Off	SNA	0	8,192	0	0
-2.5	72	98	Off	Off	11	0	8,192	0	0
-2.4	72	98	Off	Off	12	0	8,192	0	0
-2.3	68	98	Off	Off	12	0	8,192	0	0
-2.2	72	98	Off	Off	10	0	8,192	0	0
-2.1	70	98	Off	Off	6	0	8,192	0	0
-2.0	70	98	Off	Off	4	0	8,192	0	0
-1.9	72	98	Off	Off	3	0	8,192	0	0
-1.8	72	98	Off	Off	0	0	8,192	0	0
-1.7	72	98	Off	Off	-1	0	8,192	0	0
-1.6	72	98	Off	Off	-3	0	8,192	0	0
-1.5	72	98	Off	Off	-3	0	8,192	0	0
-1.4	72	98	Off	Off	-4	0	8,192	0	0
-1.3	72	98	Off	Off	-4	0	8,192	0	0
-1.2	72	98	Off	Off	-4	0	8,192	0	0
-1.1	72	98	Off	Off	-2	0	8,192	0	0
-1.0	72	98	Off	Off	10	0	8,192	0	0
-0.9	69	98	Off	Off	19	0	8,192	0	0
-0.8	79	98	Off	Off	0	0	8,192	0	0
-0.7	91	98	Off	Off	-12	0	8,192	0	0
-0.6	96	98	Off	Off	3	0	8,192	13	0
-0.5	76	98	Off	Off	-4	6	8,192	17	0
-0.4	33	98	Off	Off	-4	10	8,192	15	0
-0.3	7	98	Off	Off	-4	14	8,192	13	0
-0.2	6	98	Off	Off	-4	15	8,192	12	0
-0.1	7	98	Off	Off	-6	13	8,192	10	0

Pre-Crash Data (Most Recent Event - table 3 of 4)

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

Time Stamp (sec)	ETC Lamp (if equip.)	ETC Lamp Flashing (if equip.)	Engine Torque Applied	PRNDL Status (if equip.)	Reverse Gear (Manual Only)
-5.0	Off	No	Yes	Drive	No
-4.9	Off	No	Yes	Drive	No
-4.8	Off	No	Yes	Drive	No
-4.7	Off	No	Yes	Drive	No
-4.6	Off	No	Yes	Drive	No
-4.5	Off	No	Yes	Drive	No
-4.4	Off	No	Yes	Drive	No
-4.3	Off	No	Yes	Drive	No
-4.2	Off	No	Yes	Drive	No
-4.1	Off	No	Yes	Drive	No
-4.0	Off	No	Yes	Drive	No
-3.9	Off	No	Yes	Drive	No
-3.8	Off	No	Yes	Drive	No
-3.7	Off	No	Yes	Drive	No
-3.6	Off	No	Yes	Drive	No
-3.5	Off	No	Yes	Drive	No
-3.4	Off	No	Yes	Drive	No
-3.3	Off	No	Yes	Drive	No
-3.2	Off	No	Yes	Drive	No
-3.1	Off	No	Yes	Drive	No
-3.0	Off	No	Yes	Drive	No
-2.9	Off	No	Yes	Drive	No
-2.8	Off	No	Yes	Drive	No
-2.7	Off	No	Yes	Drive	No
-2.6	Off	No	Yes	Drive	No
-2.5	Off	No	Yes	Drive	No
-2.4	Off	No	Yes	Drive	No
-2.3	Off	No	Yes	Drive	No
-2.2	Off	No	Yes	Drive	No
-2.1	Off	No	Yes	Drive	No
-2.0	Off	No	Yes	Drive	No
-1.9	Off	No	Yes	Drive	No
-1.8	Off	No	Yes	Drive	No
-1.7	Off	No	Yes	Drive	No
-1.6	Off	No	Yes	Drive	No
-1.5	Off	No	Yes	Drive	No
-1.4	Off	No	Yes	Drive	No
-1.3	Off	No	Yes	Drive	No
-1.2	Off	No	Yes	Drive	No
-1.1	Off	No	Yes	Drive	No
-1.0	Off	No	Yes	Drive	No
-0.9	Off	No	Yes	Drive	No
-0.8	Off	No	Yes	Drive	No
-0.7	Off	No	Yes	Drive	No
-0.6	Off	No	Yes	Drive	No
-0.5	Off	No	Yes	Drive	No
-0.4	Off	No	Yes	Drive	No
-0.3	Off	No	Yes	Drive	No
-0.2	Off	No	Yes	Drive	No
-0.1	Off	No	Yes	Drive	No

Pre-Crash Data (Most Recent Event - table 4 of 4)

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

Time Stamp (sec)	Tire Pressure Monitor Ind. Lamp (if equip.)	Tire Pressure, LF	Tire Pressure, RF	Tire Pressure, LR	Tire Pressure, RR	Cruise Control Engaged (if equip.)	Cruise Control Status (if equip.)
-5.0	Off	36	36	34	37	Not_Engaged	Off
-4.9	Off	36	36	34	37	Not_Engaged	Off
-4.8	Off	36	36	34	37	Not_Engaged	Off
-4.7	Off	36	36	34	37	Not_Engaged	Off
-4.6	Off	36	36	34	37	Not_Engaged	Off
-4.5	Off	36	36	34	37	Not_Engaged	Off
-4.4	Off	36	36	34	37	Not_Engaged	Off
-4.3	Off	36	36	34	37	Not_Engaged	Off
-4.2	Off	36	36	34	37	Not_Engaged	Off
-4.1	Off	36	36	34	37	Not_Engaged	Off
-4.0	Off	36	36	34	37	Not_Engaged	Off
-3.9	Off	36	36	34	37	Not_Engaged	Off
-3.8	Off	36	36	34	37	Not_Engaged	Off
-3.7	Off	36	36	34	37	Not_Engaged	Off
-3.6	Off	36	36	34	37	Not_Engaged	Off
-3.5	Off	36	36	34	37	Not_Engaged	Off
-3.4	Off	36	36	34	37	Not_Engaged	Off
-3.3	Off	36	36	34	37	Not_Engaged	Off
-3.2	Off	36	36	34	37	Not_Engaged	Off
-3.1	Off	36	36	34	37	Not_Engaged	Off
-3.0	Off	36	36	34	37	Not_Engaged	Off
-2.9	Off	36	36	34	37	Not_Engaged	Off
-2.8	Off	36	36	34	37	Not_Engaged	Off
-2.7	Off	36	36	34	37	Not_Engaged	Off
-2.6	Off	36	36	34	37	Not_Engaged	Off
-2.5	Off	36	36	34	37	Not_Engaged	Off
-2.4	Off	36	36	34	37	Not_Engaged	Off
-2.3	Off	36	36	34	37	Not_Engaged	Off
-2.2	Off	36	36	34	37	Not_Engaged	Off
-2.1	Off	36	36	34	37	Not_Engaged	Off
-2.0	Off	36	36	34	37	Not_Engaged	Off
-1.9	Off	36	36	34	37	Not_Engaged	Off
-1.8	Off	36	36	34	37	Not_Engaged	Off
-1.7	Off	36	36	34	37	Not_Engaged	Off
-1.6	Off	36	36	34	37	Not_Engaged	Off
-1.5	Off	36	36	34	37	Not_Engaged	Off
-1.4	Off	36	36	34	37	Not_Engaged	Off
-1.3	Off	36	36	34	37	Not_Engaged	Off
-1.2	Off	36	36	34	37	Not_Engaged	Off
-1.1	Off	36	36	34	37	Not_Engaged	Off
-1.0	Off	36	36	34	37	Not_Engaged	Off
-0.9	Off	36	36	34	37	Not_Engaged	Off
-0.8	Off	36	36	34	37	Not_Engaged	Off
-0.7	Off	36	36	34	37	Not_Engaged	Off
-0.6	Off	36	36	34	37	Not_Engaged	Off
-0.5	Off	36	36	34	37	Not_Engaged	Off
-0.4	Off	36	36	34	37	Not_Engaged	Off
-0.3	Off	36	36	34	37	Not_Engaged	Off
-0.2	Off	36	36	34	37	Not_Engaged	Off
-0.1	Off	36	36	34	37	Not_Engaged	Off

System Status at Event (1st Prior Event)

Complete File Recorded	Yes
Ignition Cycle, Crash	7205
Safety Belt Status, Driver	Buckled
Safety Belt Status, Passenger	Not Buckled
Airbag Warning Lamp, On/Off	Off
Seat Track Position Switch, Foremost, Status, Driver	No
Seat Track Position Switch, Foremost, Status, Passenger	No
Maximum Delta-V Longitudinal (MPH [km/h])	-28.6 [-46]
Time, Maximum Delta-V, Longitudinal (msec)	192
Maximum Delta-V Lateral (MPH [km/h])	-16.7 [-27]
Time, Maximum Delta-V, Lateral (msec)	232
Time, Operation System Time (sec)	13920433.75
Time, Airbag Warning Lamp On (min)	2641
Event Number	1
Total Number of Events	7
Time from Event 1 to 2 (sec)	0.0
Multi-Event, Number of Events (1,2)	1
Operation Via Energy Reserve Only (Yes, No)	No
Supply Voltage at Event, ACM (V)	14.3
Event Signal Transmission, Complete (if equip.)	Yes
Odometer at Event (km)	155538.4
VIN, Original	3C4PDCAB8HT******
VIN at event, Last 8 Digits	HT******

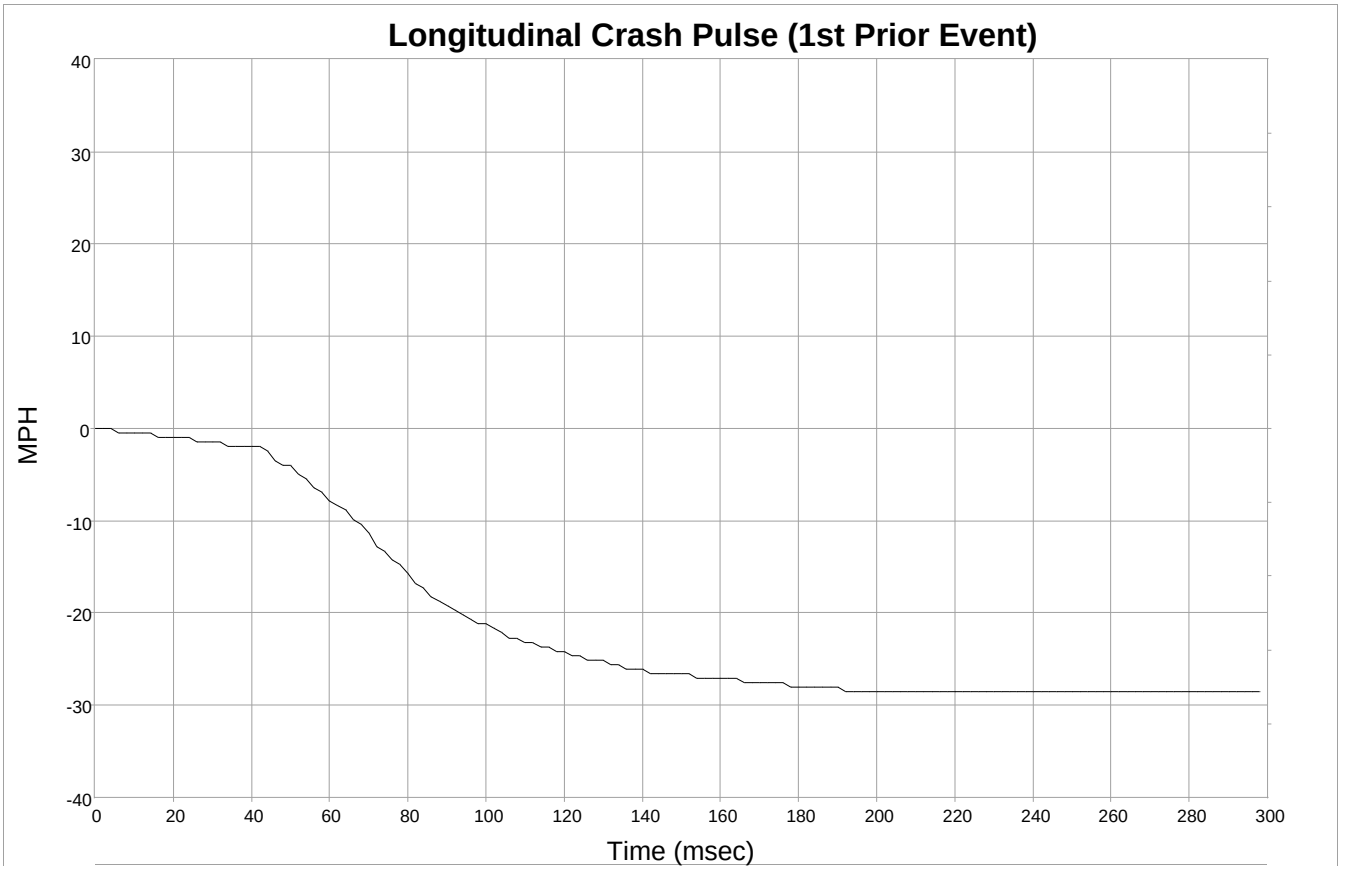
Deployment Command Data (1st Prior Event)

Frontal Airbag Deployment, 1st Stage, Driver	Yes
Frontal Airbag Deployment, 2nd Stage, Driver	Yes
Frontal Airbag Deployment, Time to First Stage Deployment, Driver (msec)	51
Frontal Airbag Deployment, Time to 2nd Stage Deployment from T0, Driver (msec)	103
Frontal Airbag Deployment, 1st Stage, Passenger	Yes
Frontal Airbag Deployment, 2nd Stage, Passenger	Yes
Frontal Airbag Deployment, Time to First Stage Deployment, Passenger (msec)	51
Frontal Airbag Deployment, Time to 2nd Stage Deployment from T0, Passenger (msec)	153
Knee Airbag Deployment, Driver	Yes
Buckle Pretensioner, Driver	No
Retractor Pretensioner, Driver	Yes
Frontal Airbag Deployment, Passenger 3rd Squib	Yes
Buckle Pretensioner, Passenger	Yes
Retractor Pretensioner, Passenger	Yes
Side Seat Airbag Deployment, Left	No
Side Seat Airbag Deployment, Right	No
Side Curtain Airbag Deployment, Left	No
Side Curtain Airbag Deployment, Right	No
Active Head Restraint, Driver	No
Active Head Restraint, Passenger	No

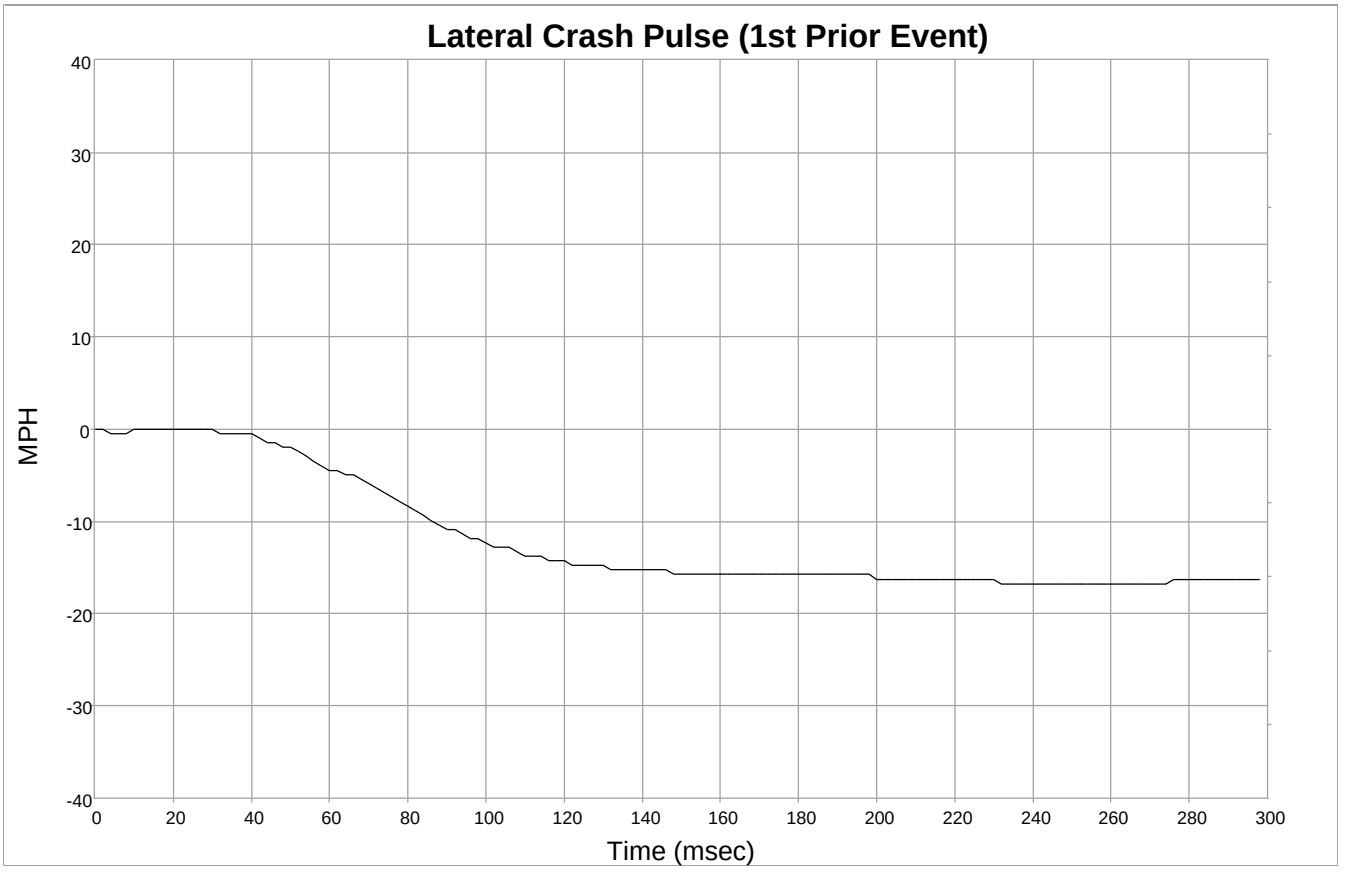
DTCs Present at Start of Event (1st Prior Event)

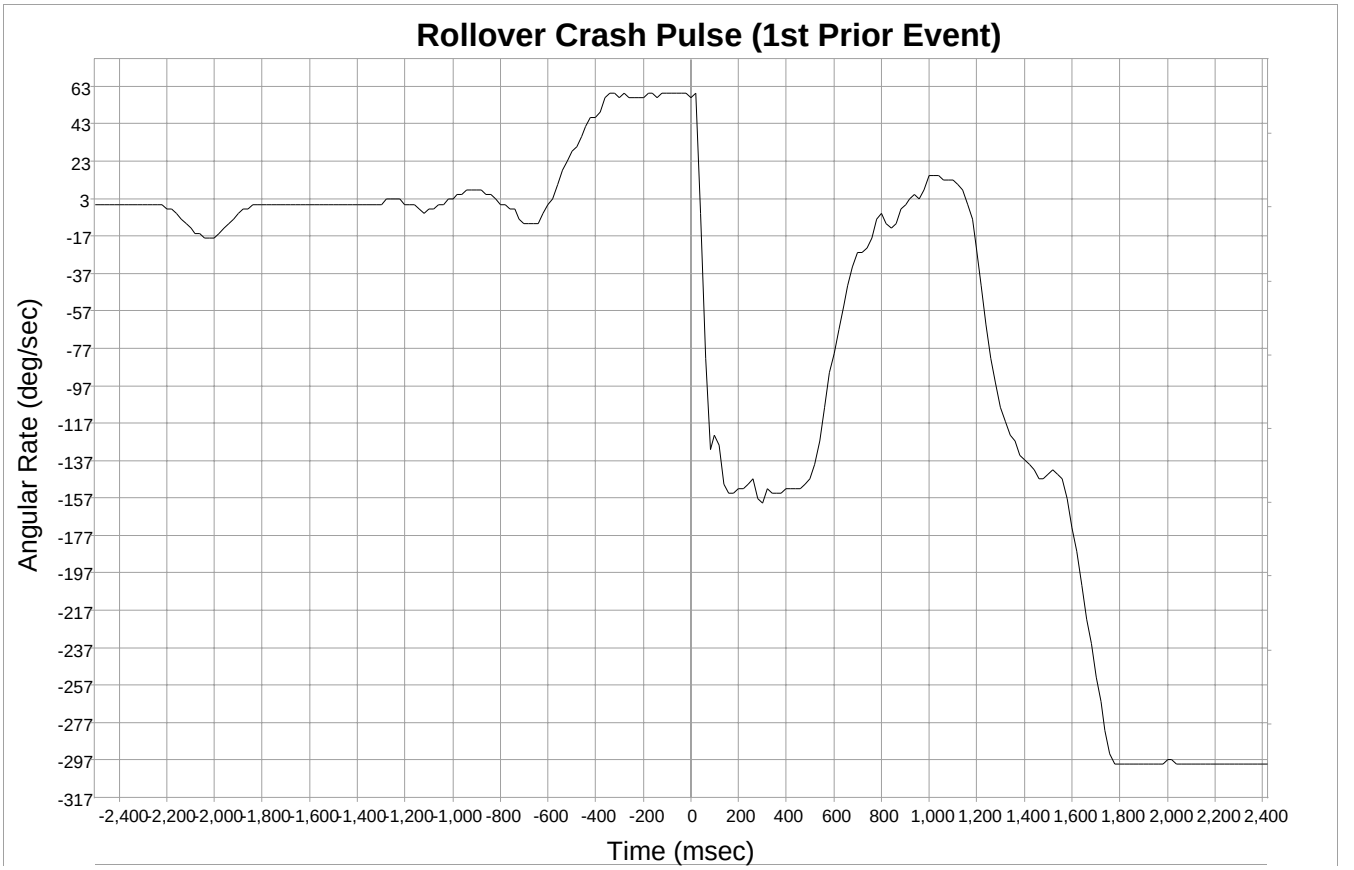
DTC Number	
B1CDC	Active

Longitudinal Crash Pulse (1st Prior Event)



Lateral Crash Pulse (1st Prior Event)




Rollover Crash Pulse (1st Prior Event)
Angular Rate (deg/sec)
63
43
23
3
-17
-37
-57
-77
-97
-117
-137
-157
-177
-197
-217
-237
-257
-277
-297
-317
-2,400 -2,200 -2,000 -1,800 -1,600 -1,400 -1,200 -1,000 -800 -600 -400 -200 0 200 400 600 800 1,000 1,200 1,400 1,600 1,800 2,000 2,200 2,400
Time (msec)

Longitudinal Crash Pulse (1st Prior Event)

Time (msec)	Delta-V, Longitudinal (MPH [km/h])	Time (msec)	Delta-V, Longitudinal (MPH [km/h])	Time (msec)	Delta-V, Longitudinal (MPH [km/h])
0	0.0 [0]	100	-21.2 [-34]	200	-28.6 [-46]
2	0.0 [0]	102	-21.7 [-35]	202	-28.6 [-46]
4	0.0 [0]	104	-22.2 [-36]	204	-28.6 [-46]
6	-0.5 [-1]	106	-22.7 [-36]	206	-28.6 [-46]
8	-0.5 [-1]	108	-22.7 [-36]	208	-28.6 [-46]
10	-0.5 [-1]	110	-23.2 [-37]	210	-28.6 [-46]
12	-0.5 [-1]	112	-23.2 [-37]	212	-28.6 [-46]
14	-0.5 [-1]	114	-23.6 [-38]	214	-28.6 [-46]
16	-1.0 [-2]	116	-23.6 [-38]	216	-28.6 [-46]
18	-1.0 [-2]	118	-24.1 [-39]	218	-28.6 [-46]
20	-1.0 [-2]	120	-24.1 [-39]	220	-28.6 [-46]
22	-1.0 [-2]	122	-24.6 [-40]	222	-28.6 [-46]
24	-1.0 [-2]	124	-24.6 [-40]	224	-28.6 [-46]
26	-1.5 [-2]	126	-25.1 [-40]	226	-28.6 [-46]
28	-1.5 [-2]	128	-25.1 [-40]	228	-28.6 [-46]
30	-1.5 [-2]	130	-25.1 [-40]	230	-28.6 [-46]
32	-1.5 [-2]	132	-25.6 [-41]	232	-28.6 [-46]
34	-2.0 [-3]	134	-25.6 [-41]	234	-28.6 [-46]
36	-2.0 [-3]	136	-26.1 [-42]	236	-28.6 [-46]
38	-2.0 [-3]	138	-26.1 [-42]	238	-28.6 [-46]
40	-2.0 [-3]	140	-26.1 [-42]	240	-28.6 [-46]
42	-2.0 [-3]	142	-26.6 [-43]	242	-28.6 [-46]
44	-2.5 [-4]	144	-26.6 [-43]	244	-28.6 [-46]
46	-3.4 [-6]	146	-26.6 [-43]	246	-28.6 [-46]
48	-3.9 [-6]	148	-26.6 [-43]	248	-28.6 [-46]
50	-3.9 [-6]	150	-26.6 [-43]	250	-28.6 [-46]
52	-4.9 [-8]	152	-26.6 [-43]	252	-28.6 [-46]
54	-5.4 [-9]	154	-27.1 [-44]	254	-28.6 [-46]
56	-6.4 [-10]	156	-27.1 [-44]	256	-28.6 [-46]
58	-6.9 [-11]	158	-27.1 [-44]	258	-28.6 [-46]
60	-7.9 [-13]	160	-27.1 [-44]	260	-28.6 [-46]
62	-8.4 [-13]	162	-27.1 [-44]	262	-28.6 [-46]
64	-8.9 [-14]	164	-27.1 [-44]	264	-28.6 [-46]
66	-9.9 [-16]	166	-27.6 [-44]	266	-28.6 [-46]
68	-10.3 [-17]	168	-27.6 [-44]	268	-28.6 [-46]
70	-11.3 [-18]	170	-27.6 [-44]	270	-28.6 [-46]
72	-12.8 [-21]	172	-27.6 [-44]	272	-28.6 [-46]
74	-13.3 [-21]	174	-27.6 [-44]	274	-28.6 [-46]
76	-14.3 [-23]	176	-27.6 [-44]	276	-28.6 [-46]
78	-14.8 [-24]	178	-28.1 [-45]	278	-28.6 [-46]
80	-15.8 [-25]	180	-28.1 [-45]	280	-28.6 [-46]
82	-16.7 [-27]	182	-28.1 [-45]	282	-28.6 [-46]
84	-17.2 [-28]	184	-28.1 [-45]	284	-28.6 [-46]
86	-18.2 [-29]	186	-28.1 [-45]	286	-28.6 [-46]
88	-18.7 [-30]	188	-28.1 [-45]	288	-28.6 [-46]
90	-19.2 [-31]	190	-28.1 [-45]	290	-28.6 [-46]
92	-19.7 [-32]	192	-28.6 [-46]	292	-28.6 [-46]
94	-20.2 [-33]	194	-28.6 [-46]	294	-28.6 [-46]
96	-20.7 [-33]	196	-28.6 [-46]	296	-28.6 [-46]
98	-21.2 [-34]	198	-28.6 [-46]	298	-28.6 [-46]

Lateral Crash Pulse (1st Prior Event)

Time (msec)	Delta-V, Lateral (MPH [km/h])
0	0.0 [0]
2	0.0 [0]
4	-0.5 [-1]
6	-0.5 [-1]
8	-0.5 [-1]
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	-0.5 [-1]
34	-0.5 [-1]
36	-0.5 [-1]
38	-0.5 [-1]
40	-0.5 [-1]
42	-1.0 [-2]
44	-1.5 [-2]
46	-1.5 [-2]
48	-2.0 [-3]
50	-2.0 [-3]
52	-2.5 [-4]
54	-3.0 [-5]
56	-3.4 [-6]
58	-3.9 [-6]
60	-4.4 [-7]
62	-4.4 [-7]
64	-4.9 [-8]
66	-4.9 [-8]
68	-5.4 [-9]
70	-5.9 [-10]
72	-6.4 [-10]
74	-6.9 [-11]
76	-7.4 [-12]
78	-7.9 [-13]
80	-8.4 [-13]
82	-8.9 [-14]
84	-9.4 [-15]
86	-9.9 [-16]
88	-10.3 [-17]
90	-10.8 [-17]
92	-10.8 [-17]
94	-11.3 [-18]
96	-11.8 [-19]
98	-11.8 [-19]

Time (msec)	Delta-V, Lateral (MPH [km/h])
100	-12.3 [-20]
102	-12.8 [-21]
104	-12.8 [-21]
106	-12.8 [-21]
108	-13.3 [-21]
110	-13.8 [-22]
112	-13.8 [-22]
114	-13.8 [-22]
116	-14.3 [-23]
118	-14.3 [-23]
120	-14.3 [-23]
122	-14.8 [-24]
124	-14.8 [-24]
126	-14.8 [-24]
128	-14.8 [-24]
130	-14.8 [-24]
132	-15.3 [-25]
134	-15.3 [-25]
136	-15.3 [-25]
138	-15.3 [-25]
140	-15.3 [-25]
142	-15.3 [-25]
144	-15.3 [-25]
146	-15.3 [-25]
148	-15.8 [-25]
150	-15.8 [-25]
152	-15.8 [-25]
154	-15.8 [-25]
156	-15.8 [-25]
158	-15.8 [-25]
160	-15.8 [-25]
162	-15.8 [-25]
164	-15.8 [-25]
166	-15.8 [-25]
168	-15.8 [-25]
170	-15.8 [-25]
172	-15.8 [-25]
174	-15.8 [-25]
176	-15.8 [-25]
178	-15.8 [-25]
180	-15.8 [-25]
182	-15.8 [-25]
184	-15.8 [-25]
186	-15.8 [-25]
188	-15.8 [-25]
190	-15.8 [-25]
192	-15.8 [-25]
194	-15.8 [-25]
196	-15.8 [-25]
198	-15.8 [-25]

Time (msec)	Delta-V, Lateral (MPH [km/h])
200	-16.3 [-26]
202	-16.3 [-26]
204	-16.3 [-26]
206	-16.3 [-26]
208	-16.3 [-26]
210	-16.3 [-26]
212	-16.3 [-26]
214	-16.3 [-26]
216	-16.3 [-26]
218	-16.3 [-26]
220	-16.3 [-26]
222	-16.3 [-26]
224	-16.3 [-26]
226	-16.3 [-26]
228	-16.3 [-26]
230	-16.3 [-26]
232	-16.7 [-27]
234	-16.7 [-27]
236	-16.7 [-27]
238	-16.7 [-27]
240	-16.7 [-27]
242	-16.7 [-27]
244	-16.7 [-27]
246	-16.7 [-27]
248	-16.7 [-27]
250	-16.7 [-27]
252	-16.7 [-27]
254	-16.7 [-27]
256	-16.7 [-27]
258	-16.7 [-27]
260	-16.7 [-27]
262	-16.7 [-27]
264	-16.7 [-27]
266	-16.7 [-27]
268	-16.7 [-27]
270	-16.7 [-27]
272	-16.7 [-27]
274	-16.7 [-27]
276	-16.3 [-26]
278	-16.3 [-26]
280	-16.3 [-26]
282	-16.3 [-26]
284	-16.3 [-26]
286	-16.3 [-26]
288	-16.3 [-26]
290	-16.3 [-26]
292	-16.3 [-26]
294	-16.3 [-26]
296	-16.3 [-26]
298	-16.3 [-26]

Rollover Crash Pulse (1st Prior Event) (if equipped)

Time (msec)	Angular Rate (deg/sec)
-2500	0.00
-2480	0.00
-2460	0.00
-2440	0.00
-2420	0.00
-2400	0.00
-2380	0.00
-2360	0.00
-2340	0.00
-2320	0.00
-2300	0.00
-2280	0.00
-2260	0.00
-2240	0.00
-2220	0.00
-2200	-2.58
-2180	-2.58
-2160	-5.16
-2140	-7.73
-2120	-10.31
-2100	-12.89
-2080	-15.47
-2060	-15.47
-2040	-18.05
-2020	-18.05
-2000	-18.05
-1980	-15.47
-1960	-12.89
-1940	-10.31
-1920	-7.73
-1900	-5.16
-1880	-2.58
-1860	-2.58
-1840	0.00
-1820	0.00
-1800	0.00
-1780	0.00
-1760	0.00
-1740	0.00
-1720	0.00
-1700	0.00
-1680	0.00
-1660	0.00
-1640	0.00
-1620	0.00
-1600	0.00
-1580	0.00
-1560	0.00
-1540	0.00
-1520	0.00

Time (msec)	Angular Rate (deg/sec)
-1500	0.00
-1480	0.00
-1460	0.00
-1440	0.00
-1420	0.00
-1400	0.00
-1380	0.00
-1360	0.00
-1340	0.00
-1320	0.00
-1300	0.00
-1280	2.58
-1260	2.58
-1240	2.58
-1220	2.58
-1200	0.00
-1180	0.00
-1160	0.00
-1140	-2.58
-1120	-5.16
-1100	-2.58
-1080	-2.58
-1060	0.00
-1040	0.00
-1020	2.58
-1000	2.58
-980	5.16
-960	5.16
-940	7.73
-920	7.73
-900	7.73
-880	7.73
-860	5.16
-840	5.16
-820	2.58
-800	0.00
-780	0.00
-760	-2.58
-740	-2.58
-720	-7.73
-700	-10.31
-680	-10.31
-660	-10.31
-640	-10.31
-620	-5.16
-600	0.00
-580	2.58
-560	10.31
-540	18.05
-520	23.20

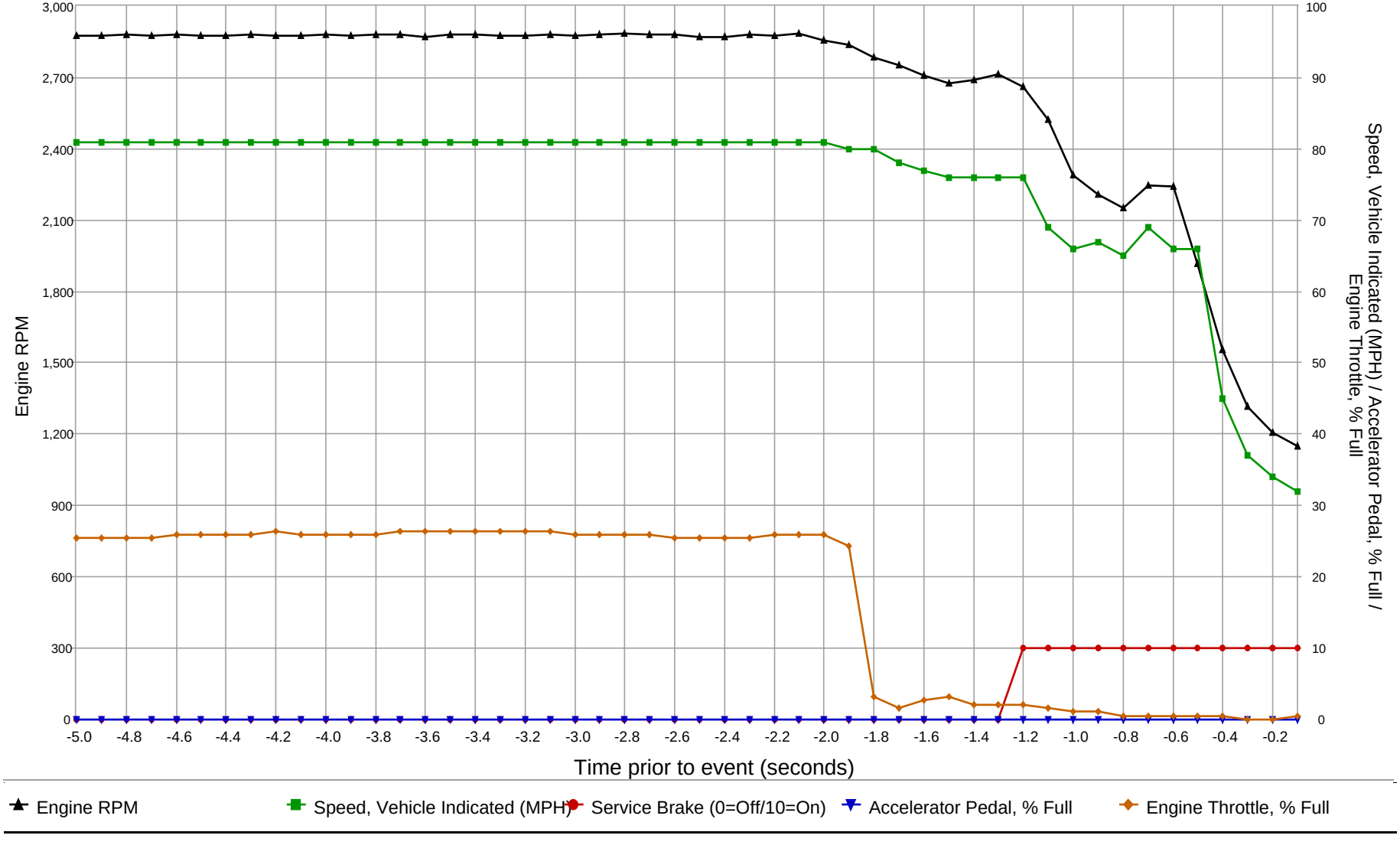
Time (msec)	Angular Rate (deg/sec)
-500	28.36
-480	30.94
-460	36.09
-440	41.25
-420	46.41
-400	46.41
-380	48.98
-360	56.72
-340	59.30
-320	59.30
-300	56.72
-280	59.30
-260	56.72
-240	56.72
-220	56.72
-200	56.72
-180	59.30
-160	59.30
-140	56.72
-120	59.30
-100	59.30
-80	59.30
-60	59.30
-40	59.30
-20	59.30
0	56.72
20	59.30
40	-5.16
60	-82.50
80	-131.48
100	-123.75
120	-128.91
140	-149.53
160	-154.69
180	-154.69
200	-152.11
220	-152.11
240	-149.53
260	-146.95
280	-157.26
300	-159.84
320	-152.11
340	-154.69
360	-154.69
380	-154.69
400	-152.11
420	-152.11
440	-152.11
460	-152.11
480	-149.53

Rollover Crash Pulse (1st Prior Event) (if equipped)

Time (msec)	Angular Rate (deg/sec)
500	-146.95
520	-139.22
540	-126.33
560	-108.28
580	-90.23
600	-79.92
620	-67.03
640	-54.14
660	-43.83
680	-33.52
700	-25.78
720	-25.78
740	-23.20
760	-18.05
780	-7.73
800	-5.16
820	-10.31
840	-12.89
860	-10.31
880	-2.58
900	0.00
920	2.58
940	5.16
960	2.58
980	7.73
1000	15.47
1020	15.47
1040	15.47
1060	12.89
1080	12.89
1100	12.89
1120	10.31
1140	7.73
1160	0.00
1180	-7.73
1200	-23.20
1220	-43.83
1240	-64.45
1260	-82.50
1280	-95.39
1300	-108.28
1320	-116.01
1340	-123.75
1360	-126.33
1380	-134.06
1400	-136.64
1420	-139.22
1440	-141.80
1460	-146.95
1480	-146.95

Time (msec)	Angular Rate (deg/sec)
1500	-144.37
1520	-141.80
1540	-144.37
1560	-146.95
1580	-157.26
1600	-172.73
1620	-185.62
1640	-203.67
1660	-221.72
1680	-234.61
1700	-252.65
1720	-265.54
1740	-281.01
1760	-293.90
1780	-299.06
1800	-299.06
1820	-299.06
1840	-299.06
1860	-299.06
1880	-299.06
1900	-299.06
1920	-299.06
1940	-299.06
1960	-299.06
1980	-299.06
2000	-296.48
2020	-296.48
2040	-299.06
2060	-299.06
2080	-299.06
2100	-299.06
2120	-299.06
2140	-299.06
2160	-299.06
2180	-299.06
2200	-299.06
2220	-299.06
2240	-299.06
2260	-299.06
2280	-299.06
2300	-299.06
2320	-299.06
2340	-299.06
2360	-299.06
2380	-299.06
2400	-299.06
2420	-299.06

Pre-Crash Data (1st Prior Event)



SNA values will not be plotted on the graph

Pre-Crash Data (1st Prior Event - table 1 of 4)

(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 (On, Off)	Engine RPM	ABS Activity	Stability Control
-5.0	Complete	81 [131]	0	25	Off	2,877	No	On
-4.9	Complete	81 [130]	0	25	Off	2,876	No	On
-4.8	Complete	81 [131]	0	25	Off	2,881	No	On
-4.7	Complete	81 [131]	0	25	Off	2,877	No	On
-4.6	Complete	81 [131]	0	26	Off	2,879	No	On
-4.5	Complete	81 [131]	0	26	Off	2,875	No	On
-4.4	Complete	81 [130]	0	26	Off	2,875	No	On
-4.3	Complete	81 [130]	0	26	Off	2,879	No	On
-4.2	Complete	81 [131]	0	26	Off	2,878	No	On
-4.1	Complete	81 [131]	0	26	Off	2,877	No	On
-4.0	Complete	81 [130]	0	26	Off	2,879	No	On
-3.9	Complete	81 [131]	0	26	Off	2,876	No	On
-3.8	Complete	81 [131]	0	26	Off	2,880	No	On
-3.7	Complete	81 [131]	0	26	Off	2,882	No	On
-3.6	Complete	81 [131]	0	26	Off	2,873	No	On
-3.5	Complete	81 [131]	0	26	Off	2,881	No	On
-3.4	Complete	81 [131]	0	26	Off	2,881	No	On
-3.3	Complete	81 [131]	0	26	Off	2,877	No	On
-3.2	Complete	81 [131]	0	26	Off	2,878	No	On
-3.1	Complete	81 [131]	0	26	Off	2,880	No	On
-3.0	Complete	81 [131]	0	26	Off	2,875	No	On
-2.9	Complete	81 [131]	0	26	Off	2,882	No	On
-2.8	Complete	81 [131]	0	26	Off	2,885	No	On
-2.7	Complete	81 [131]	0	26	Off	2,880	No	On
-2.6	Complete	81 [131]	0	25	Off	2,880	No	On
-2.5	Complete	81 [131]	0	25	Off	2,873	No	On
-2.4	Complete	81 [131]	0	25	Off	2,873	No	On
-2.3	Complete	81 [131]	0	25	Off	2,880	No	On
-2.2	Complete	81 [131]	0	26	Off	2,877	No	On
-2.1	Complete	81 [131]	0	26	Off	2,885	No	On
-2.0	Complete	81 [131]	0	26	Off	2,856	No	Engaged
-1.9	Complete	80 [128]	0	24	Off	2,839	No	Engaged
-1.8	Complete	80 [128]	0	3	Off	2,783	No	Engaged
-1.7	Complete	78 [125]	0	2	Off	2,753	No	Engaged
-1.6	Complete	77 [124]	0	3	Off	2,708	No	Engaged
-1.5	Complete	76 [122]	0	3	Off	2,674	No	Engaged
-1.4	Complete	76 [122]	0	2	Off	2,689	No	Engaged
-1.3	Complete	76 [123]	0	2	Off	2,714	No	Engaged
-1.2	Complete	76 [122]	0	2	On	2,663	No	Engaged
-1.1	Complete	69 [110]	0	2	On	2,521	No	Engaged
-1.0	Complete	66 [107]	0	1	On	2,289	No	Engaged
-0.9	Complete	67 [108]	0	1	On	2,210	No	Engaged
-0.8	Complete	65 [105]	0	1	On	2,150	No	Engaged
-0.7	Complete	69 [111]	0	1	On	2,246	No	Engaged
-0.6	Complete	66 [106]	0	1	On	2,240	No	Engaged
-0.5	Complete	66 [106]	0	1	On	1,918	No	Engaged
-0.4	Complete	45 [73]	0	1	On	1,557	No	Engaged
-0.3	Complete	37 [60]	0	0	On	1,317	No	Engaged
-0.2	Complete	34 [55]	0	0	On	1,206	No	Engaged
-0.1	Complete	32 [51]	0	1	On	1,151	No	On

Pre-Crash Data (1st Prior Event - table 2 of 4)

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

Time Stamp (sec)	Steering Input (deg)	Raw Manifold Pressure (kPa)	PCM MIL	ESC Lamp (if equip.)	Yaw Rate (deg/sec) (if equip.)	Wheel Speed LF (RPM) (if equip.)	Wheel Speed RF (RPM) (if equip.)	Wheel Speed LR (RPM) (if equip.)	Wheel Speed RR (RPM) (if equip.)
-5.0	-4	85	Off	Off	0	977	976	974	974
-4.9	-4	85	Off	Off	0	976	977	973	974
-4.8	-4	85	Off	Off	0	975	974	975	974
-4.7	-4	86	Off	Off	0	978	977	974	973
-4.6	-4	85	Off	Off	0	975	977	973	975
-4.5	-4	85	Off	Off	0	975	973	974	974
-4.4	-4	86	Off	Off	0	976	974	973	972
-4.3	-4	86	Off	Off	0	975	976	974	975
-4.2	-4	86	Off	Off	0	978	976	975	973
-4.1	-4	86	Off	Off	0	976	976	973	975
-4.0	-4	85	Off	Off	0	975	974	975	974
-3.9	-4	86	Off	Off	0	978	976	974	973
-3.8	-4	85	Off	Off	0	975	978	973	974
-3.7	-4	86	Off	Off	0	976	974	976	974
-3.6	-4	86	Off	Off	0	977	976	974	973
-3.5	-4	86	Off	Off	0	975	976	976	976
-3.4	-4	86	Off	Off	0	978	976	975	974
-3.3	-4	86	Off	Off	0	978	976	976	973
-3.2	-4	86	Off	Off	0	976	978	974	975
-3.1	-4	86	Off	Off	0	976	974	974	975
-3.0	-4	85	Off	Off	0	977	978	975	973
-2.9	-4	86	Off	Off	0	976	979	976	976
-2.8	-4	85	Off	Off	0	978	975	976	975
-2.7	-4	85	Off	Off	0	977	976	974	975
-2.6	-4	85	Off	Off	0	975	976	976	975
-2.5	-4	84	Off	Off	0	977	977	977	973
-2.4	-4	85	Off	Off	0	976	978	974	976
-2.3	-5	85	Off	Off	0	975	974	974	974
-2.2	-38	85	Off	Off	-1	980	976	975	972
-2.1	-99	85	Off	Off	-9	981	975	976	974
-2.0	-153	85	Off	Off	-21	980	978	981	965
-1.9	-147	68	Off	Off	-26	962	955	980	958
-1.8	-99	46	Off	Off	-27	953	955	973	945
-1.7	-62	32	Off	Off	-27	930	937	963	938
-1.6	-56	27	Off	Off	-24	921	925	951	931
-1.5	-32	25	Off	Off	-22	917	913	944	924
-1.4	28	22	Off	Off	-22	913	908	930	916
-1.3	62	22	Off	Off	-18	932	903	919	904
-1.2	42	21	Off	Off	-16	907	888	912	894
-1.1	27	19	Off	Off	-12	838	776	871	828
-1.0	40	18	Off	Off	-8	771	830	883	821
-0.9	51	18	Off	Off	-3	694	830	872	843
-0.8	50	19	Off	Off	1	750	808	851	844
-0.7	61	19	Off	Off	3	785	821	830	812
-0.6	55	18	Off	Off	13	813	656	819	801
-0.5	45	18	Off	Off	22	739	531	814	811
-0.4	1	19	Off	Off	28	500	539	805	713
-0.3	-31	20	Off	Off	25	361	523	724	693
-0.2	-50	20	Off	Off	23	314	502	706	668
-0.1	-67	23	Off	Off	21	274	482	700	652

Pre-Crash Data (1st Prior Event - table 3 of 4)

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

Time Stamp (sec)	ETC Lamp (if equip.)	ETC Lamp Flashing (if equip.)	Engine Torque Applied	PRNDL Status (if equip.)	Reverse Gear (Manual Only)
-5.0	Off	No	Yes	Drive	No
-4.9	Off	No	Yes	Drive	No
-4.8	Off	No	Yes	Drive	No
-4.7	Off	No	Yes	Drive	No
-4.6	Off	No	Yes	Drive	No
-4.5	Off	No	Yes	Drive	No
-4.4	Off	No	Yes	Drive	No
-4.3	Off	No	Yes	Drive	No
-4.2	Off	No	Yes	Drive	No
-4.1	Off	No	Yes	Drive	No
-4.0	Off	No	Yes	Drive	No
-3.9	Off	No	Yes	Drive	No
-3.8	Off	No	Yes	Drive	No
-3.7	Off	No	Yes	Drive	No
-3.6	Off	No	Yes	Drive	No
-3.5	Off	No	Yes	Drive	No
-3.4	Off	No	Yes	Drive	No
-3.3	Off	No	Yes	Drive	No
-3.2	Off	No	Yes	Drive	No
-3.1	Off	No	Yes	Drive	No
-3.0	Off	No	Yes	Drive	No
-2.9	Off	No	Yes	Drive	No
-2.8	Off	No	Yes	Drive	No
-2.7	Off	No	Yes	Drive	No
-2.6	Off	No	Yes	Drive	No
-2.5	Off	No	Yes	Drive	No
-2.4	Off	No	Yes	Drive	No
-2.3	Off	No	Yes	Drive	No
-2.2	Off	No	Yes	Drive	No
-2.1	Off	No	Yes	Drive	No
-2.0	Off	No	Yes	Drive	No
-1.9	Off	No	Yes	Drive	No
-1.8	Off	No	Yes	Drive	No
-1.7	Off	No	Yes	Drive	No
-1.6	Off	No	Yes	Drive	No
-1.5	Off	No	Yes	Drive	No
-1.4	Off	No	Yes	Drive	No
-1.3	Off	No	Yes	Drive	No
-1.2	Off	No	Yes	Drive	No
-1.1	Off	No	Yes	Drive	No
-1.0	Off	No	Yes	Drive	No
-0.9	Off	No	Yes	Drive	No
-0.8	Off	No	Yes	Drive	No
-0.7	Off	No	Yes	Drive	No
-0.6	Off	No	Yes	Drive	No
-0.5	Off	No	Yes	Drive	No
-0.4	Off	No	Yes	Drive	No
-0.3	Off	No	Yes	Drive	No
-0.2	Off	No	Yes	Drive	No
-0.1	Off	No	Yes	Drive	No

Pre-Crash Data (1st Prior Event - table 4 of 4)

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

Time Stamp (sec)	Tire Pressure Monitor Ind. Lamp (if equip.)	Tire Pressure, LF	Tire Pressure, RF	Tire Pressure, LR	Tire Pressure, RR	Cruise Control Engaged (if equip.)	Cruise Control Status (if equip.)
-5.0	Off	36	36	34	37	Engaged	On
-4.9	Off	36	36	34	37	Engaged	On
-4.8	Off	36	36	34	37	Engaged	On
-4.7	Off	36	36	34	37	Engaged	On
-4.6	Off	36	36	34	37	Engaged	On
-4.5	Off	36	36	34	37	Engaged	On
-4.4	Off	36	36	34	37	Engaged	On
-4.3	Off	36	36	34	37	Engaged	On
-4.2	Off	36	36	34	37	Engaged	On
-4.1	Off	36	36	34	37	Engaged	On
-4.0	Off	36	36	34	37	Engaged	On
-3.9	Off	36	36	34	37	Engaged	On
-3.8	Off	36	36	34	37	Engaged	On
-3.7	Off	36	36	34	37	Engaged	On
-3.6	Off	36	36	34	37	Engaged	On
-3.5	Off	36	36	34	37	Engaged	On
-3.4	Off	36	36	34	37	Engaged	On
-3.3	Off	36	36	34	37	Engaged	On
-3.2	Off	36	36	34	37	Engaged	On
-3.1	Off	36	36	34	37	Engaged	On
-3.0	Off	36	36	34	37	Engaged	On
-2.9	Off	36	36	34	37	Engaged	On
-2.8	Off	36	36	34	37	Engaged	On
-2.7	Off	36	36	34	37	Engaged	On
-2.6	Off	36	36	34	37	Engaged	On
-2.5	Off	36	36	34	37	Engaged	On
-2.4	Off	36	36	34	37	Engaged	On
-2.3	Off	36	36	34	37	Engaged	On
-2.2	Off	36	36	34	37	Engaged	On
-2.1	Off	36	36	34	37	Engaged	On
-2.0	Off	36	36	34	37	Engaged	On
-1.9	Off	36	36	34	37	Engaged	On
-1.8	Off	36	36	34	37	Not_Engaged	On
-1.7	Off	36	36	34	37	Not_Engaged	On
-1.6	Off	36	36	34	37	Not_Engaged	On
-1.5	Off	36	36	34	37	Not_Engaged	On
-1.4	Off	36	36	34	37	Not_Engaged	On
-1.3	Off	36	36	34	37	Not_Engaged	On
-1.2	Off	36	36	34	37	Not_Engaged	On
-1.1	Off	36	36	34	37	Not_Engaged	On
-1.0	Off	36	36	34	37	Not_Engaged	On
-0.9	Off	36	36	34	37	Not_Engaged	On
-0.8	Off	36	36	34	37	Not_Engaged	Off
-0.7	Off	36	36	34	37	Not_Engaged	Off
-0.6	Off	36	36	34	37	Not_Engaged	Off
-0.5	Off	36	36	34	37	Not_Engaged	Off
-0.4	Off	36	36	34	37	Not_Engaged	Off
-0.3	Off	36	36	34	37	Not_Engaged	Off
-0.2	Off	36	36	34	37	Not_Engaged	Off
-0.1	Off	36	36	34	37	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.

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5A 87 03 79 41 02 FF 10 12 12 32 00 36 38 31 36 33 38 30 36 41 42

5A 88 33 43 34 50 44 43 41 42 38 48 54 2A 2A 2A 2A 2A 2A

5A 90 33 43 34 50 44 43 41 42 38 48 54 2A 2A 2A 2A 2A 2A

5A 9C 01 03 79 41 02 FF 12 32 00 30 30 31 32 33 32 30 30 41 41

61 E1 54 30 37 4A 46 30 37 37 37 32 38 30 36 30

61 EA 05 9A 02 3F C0 9F C9 07 38 00 00 00 00 00 00 00 00 00 00

61 02 F1 65 00 00 EE 5A 18 C8 F0 04 90 C1 00 00 00 00 00 00 00

61 10 3F FF 03 1C 28

61 13 00 00 01 91

61 30 7F 00

61 31 02 CC 01 07 13 04 04 09 01 10 98 2D E3 0A 51 00 00 1C 25 17 BB B8 5D C6 6C DE 79 33 33
00 00 00 00 00 00 00 00 00 00 00 00 10 00 3F 80 08 00 66 98 00 CE 10 12 32 00 5A 9C DC 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 00
00 00 48 54 2A 2A 2A 2A 2A 2A

61 32 01 CC 07 07 53 04 04 09 01 10 98 2E 77 0A 51 00 00 1C 25 17 BB B8 49 00 43 EE 95 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 11 12 32 00 49 9C DC 9B 55
9C 3A 9B 12 A7 5E 9C 47 9B 0A 9B 0E 9B 06 9B 02 9C 4E 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 FF 07
00 00 48 54 2A 2A 2A 2A 2A 2A

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7A 16 00 80 01 00 00 00 00 24 00 00 00 24 00 00 00 25 00 10 0E 00 00 00 00 00 0F 00 00 00 00
00 00 00 00 00 E1 00 00 20 00 22 00 FF 02 7D FF FF 80 7A 76 00 76 00 00 00 10 C8 00 00 00 00
00 00 00 00 00 00 00 00

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00 00 00 00 01 00 00 00 20 00 22 00 FF 02 7D FF FF 6D 7A 76 00 76 00 00 00 10 00 00 00 00 00
00 00 00 00 00 00 00 00

71 02 01 02 CC 04 00 00 00 00 00 00 00 1A 00 1B 3F FF 7E 70 00 00 00 00 00 00 00 2F D0 2E 17
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00 00 00 00 00 E1 00 00 20 00 22 00 FF 02 7D FF FF 56 7A 76 00 76 00 00 00 0E D4 00 00 00 00
00 00 00 00 00 00 00 00

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7A 16 00 80 01 00 00 00 00 24 00 00 00 24 00 00 00 25 00 10 42 00 00 00 00 00 00 0F 00 00 00 00
00 00 00 00 00 00 00 00 20 00 22 00 FF 02 7D FF FF 40 7A 76 00 76 00 00 00 0D 44 00 00 00 00
00 00 00 00 00 00 00 00

71 02 01 04 CC 04 00 00 00 00 00 00 00 22 00 0C 3F FF 7E 5A 00 00 00 00 00 00 00 30 D0 2E 17
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00 00 00 00 00 00 00 00 20 00 22 00 FF 02 7D FF FF 01 7A 76 00 76 00 00 00 10 C8 00 00 00 00
00 00 00 00 00 00 00 00

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7A 16 00 80 01 00 00 00 00 24 00 00 00 24 00 00 00 25 00 10 9E 00 00 00 00 00 0F 00 00 00 00
00 00 00 00 00 00 00 00 20 00 22 00 FF 02 7D FF FF 01 7A 76 00 76 00 00 00 11 90 00 00 00 00
00 00 00 00 00 00 00 00

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7A 16 00 80 01 00 00 00 00 24 00 00 00 24 00 00 00 25 00 10 8A 00 00 00 00 00 0F 00 00 00 00
00 00 00 00 00 00 00 00 20 00 22 00 FF 02 7D FF FF 01 7A 76 00 76 00 00 00 10 00 00 00 00 00
00 00 00 00 00 00 00 00

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7A 16 00 80 01 00 00 00 00 24 00 00 00 24 00 00 00 25 00 10 8F 00 00 00 00 00 0F 00 00 00 00
00 00 00 00 00 00 00 00 20 00 22 00 FF 02 7D FF FF 1E 7A 76 00 76 00 00 00 10 00 00 00 00 00
00 00 00 00 00 00 00 00

71 02 01 0A CC 04 00 00 00 00 00 00 00 00 00 3F FF 7E EF 00 00 00 00 00 00 00 2F D0 2E 16
7A 16 00 80 01 00 00 00 00 24 00 00 00 24 00 00 00 25 00 10 8F 00 00 00 00 00 0F 00 00 00 00
00 00 00 00 00 00 00 00 20 00 22 00 FF 02 7D FF FF 49 7A 76 00 76 00 00 00 10 00 00 00 00 00
00 00 00 00 00 00 00 00

71 02 01 0B CC 04 00 00 00 00 00 00 00 00 00 3F FF 7E 54 00 00 00 00 00 00 00 2F D0 2E 16
7A 16 00 80 01 00 00 00 00 24 00 00 00 24 00 00 00 25 00 10 8F 00 00 00 00 00 0F 00 00 00 00
00 00 00 00 00 00 00 00 20 00 22 00 FF 02 7D FF FF 44 7A 76 00 76 00 00 00 10 00 00 00 00 00
00 00 00 00 00 00 00 00

71 02 01 0C CC 04 00 00 00 00 00 00 00 00 00 3F FF 7E 65 00 00 00 00 00 00 00 2F D0 2E 17
7A 16 00 80 01 00 00 00 00 24 00 00 00 24 00 00 00 25 00 10 8F 00 00 00 00 00 0F 00 00 00 00
00 00 00 00 00 00 00 00 20 00 22 00 FF 02 7D FF FF 42 7A 76 00 76 00 00 00 10 00 00 00 00 00
00 00 00 00 00 00 00 00

71 02 01 0D CC 04 00 00 00 00 00 00 00 00 00 3F FF 7E 66 00 00 00 00 00 00 00 2F D0 2E 17
7A 16 00 80 01 00 00 00 00 24 00 00 00 24 00 00 00 25 00 10 8F 00 00 00 00 00 0F 00 00 00 00
00 00 00 00 00 00 00 00 20 00 22 00 FF 02 7D FF FF 43 7A 76 00 76 00 00 00 10 00 00 00 00 00
00 00 00 00 00 00 00 00

71 02 01 0E CC 04 00 00 00 00 00 00 00 00 00 3F FF 7E 73 00 00 00 00 00 00 00 2F D0 2E 17
7A 16 00 80 01 00 00 00 00 24 00 00 00 24 00 00 00 25 00 10 8F 00 00 00 00 00 0F 00 00 00 00
00 00 00 00 00 00 00 00 20 00 22 00 FF 02 7D FF FF 43 7A 76 00 76 00 00 00 10 00 00 00 00 00
00 00 00 00 00 00 00 00

71 02 01 0F CC 04 00 00 00 00 00 00 00 00 00 3F FF 7E A5 00 00 00 00 00 00 00 30 D0 2E 17
7A 16 00 80 01 00 00 00 00 24 00 00 00 24 00 00 00 25 00 10 8F 00 00 00 00 00 0F 00 00 00 00
00 00 00 00 00 00 00 00 20 00 22 00 FF 02 7D FF FF 43 7A 76 00 76 00 00 00 10 00 00 00 00 00
00 00 00 00 00 00 00 00

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7A 16 00 80 01 00 00 00 00 24 00 00 00 24 00 00 00 25 00 10 8F 00 00 00 00 00 0F 00 00 00 00
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71 02 02 21 CC 04 0B 41 00 00 07 9C 07 9D 07 A3 07 9F 80 0A 00 00 00 00 00 00 00 57 A8 2F 17
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FF FD FC FC FC FC FE 00 01 04 07 09 0B 0C 0E 10 12 12 13 16 17 17 16 17 16 16 16 16 17 17 16
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55 E0

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57 01 D4 14 E0 00 25 F8 FF FF 02 00 00 0D FF FF FF 98 F5 E5

57 01 9C 19 E0 00 FF FF FF FF 01 00 00 00 FF FF FF FF FF FF

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57 01 9B 02 E0 00 25 F9 FF FF 05 00 00 00 FF FF FF FF FF FF

57 01 9B 06 E0 00 25 F9 FF FF 05 00 00 00 FF FF FF FF FF FF

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57 01 9B 0A E0 00 25 F9 FF FF 05 00 00 00 FF FF FF FF FF FF
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57 01 9C 3A E0 00 25 F9 FF FF 05 00 00 00 FF FF FF FF FF FF

57 01 9B 94 E0 00 FF FF FF FF 01 00 00 00 FF FF FF FF FF FF

57 01 9B 8E E0 00 FF FF FF FF 01 00 00 00 FF FF FF FF FF FF

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57 01 9B 55 E0 00 25 F9 FF FF 06 00 00 00 FF FF FF FF FF FF
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U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**

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