



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



DOT HS 813 673

January 2025

**Special Crash Investigations:
On-Site Child Restraint System
Crash Investigation;
Vehicle: 2018 Jeep Compass;
Location: Illinois;
Crash Date: October 2022**

This page is intentionally left blank

DISCLAIMER

This publication is distributed by the U.S. Department of Transportation, National Highway Traffic Safety Administration, in the interest of information exchange. The opinions, findings and conclusions expressed in this publication are those of the authors and not necessarily those of the Department of Transportation or the National Highway Traffic Safety Administration. The United States Government assumes no liability for its contents or use thereof. If trade or manufacturers' names are mentioned, it is only because they are considered essential to the object of the publication and should not be construed as an endorsement. The United States Government does not endorse products or manufacturers.

Suggested APA Format Citation:

Crash Research & Analysis, Inc. (2025, January). *Special Crash Investigations: On-site child restraint system crash investigation; Vehicle: 2018 Jeep Compass; Location: Illinois; Crash Date: October 2022* (Report No. DOT HS 813 673). National Highway Traffic Safety Administration.

This page is intentionally left blank

Technical Report Documentation Page

1. Report No. DOT HS 813 673	2. Government Accession No.	3. Recipient's Catalog No.	
4. Title and Subtitle Special Crash Investigations: On-Site Child Restraint System Crash Investigation; Vehicle: 2018 Jeep Compass; Location: Illinois; Crash Date: October 2022		5. Report Date January 2025	
		6. Performing Organization Code	
7. Author Crash Research & Analysis, Inc.		8. Performing Organization Report No. CR22015	
9. Performing Organization Name and Address Crash Research & Analysis, Inc. PO Box 302 Elma, NY 14059		10. Work Unit No. (TRAIS)	
		11. Contract or Grant No. 693JJ919C000004	
12. Sponsoring Agency Name and Address National Highway Traffic Safety Administration 1200 New Jersey Avenue SE Washington, DC 20590		13. Type of Report and Period Covered Technical Report	
		14. Sponsoring Agency Code	
15. Supplementary Notes Each crash represents a unique sequence of events, and generalized conclusions cannot be made concerning the crashworthiness performance of the involved vehicles or their safety systems. This report and associated case data are based on information available to the Special Crash Investigation team on the date this report was submitted.			
16. Abstract This on-site investigation documents the fatality of a 4-year-old child in a crash involving a 2018 Jeep Compass, a 2016 Chrysler 200, and a 2010 Subaru Forester in Illinois in October 2022. A belted 30-year-old female was driving the Jeep, and a 4-year-old female occupied the second-row-right seat in an all-in-one child restraint system that was used as a booster seat. The Chrysler was driven by a belted 20-year-old male. The Subaru was driven by a belted 32-year-old female. The Jeep struck the right side of the Chrysler. The Subaru was then struck by the Chrysler after the initial impact. The 4-year-old child was pronounced deceased after being transported to the hospital. The Jeep driver was flown to a Level I trauma center and hospitalized with serious injuries. The Chrysler driver sustained police-reported incapacitating injuries and was transported to a hospital. The Subaru driver sustained police-reported non-incapacitating injuries and refused transport.			
17. Key Words 2018 Jeep Compass, child restraint system, CRS, fatality		18. Distribution Statement Document is available to the public from the USDOT, National Highway Traffic Safety Administration, National Center for Statistical Analysis, https://crashstats.nhtsa.dot.gov	
19 Security Classif. (of this report) Unclassified	20. Security Classif. (of this page) Unclassified	21 No. of Pages 154	22. Price

This page is intentionally left blank

Table of Contents

Background	2
Crash Summary	4
Crash Site	4
Pre-Crash	4
Crash.....	4
Post-Crash	5
2018 Jeep Compass	6
Description	6
Exterior Damage	6
Event Data Recorder	7
Interior Damage.....	8
Manual Restraint Systems.....	8
Supplemental Restraint Systems	9
Second-Row-Right Passenger’s Child Restraint System	10
2018 Jeep Compass Occupant Data	14
Driver Demographics	14
Driver Injuries	14
Driver Kinematics	16
Second-Row-Right Passenger Demographics.....	17
Second-Row-Right Passenger Injuries.....	17
Second-Row-Right Passenger Kinematics.....	19
2016 Chrysler 200	22
Description	22
Exterior Damage	22
Event Data Recorder	22
Chrysler Occupant Information.....	23
2010 Subaru Forester	24
Exterior Damage	24
Subaru Occupant Information	24
Crash Diagram	26
Appendix A: 2018 Jeep Compass Event Data Recorder Report	A-1
Appendix B: 2016 Chrysler 200 Event Data Recorder Report.....	B-1

This page is intentionally left blank

Special Crash Investigations
On-Site Child Restraint System Crash Investigation
SCI Case No: CR22015
Vehicle: 2018 Jeep Compass
Location: Illinois
Crash Date: October 2022

Background

This report documents the on-site investigation of a fatality of a 4-year-old child from a front-to-side impact crash of a 2018 Jeep Compass (Figure 1), a 2016 Chrysler 200 (Figure 2), and a 2010 Subaru Forester. A 4-year-old female was seated in the second-row-right seat of the Jeep in an all-in-one child restraint system (CRS) that was used as a booster seat. The child was restrained by the three-point lap and shoulder belt while the CRS was secured to the seat by the Lower Anchors and Tether for Children (LATCH) system. The Jeep was driven by a belted 30-year-old female. The Jeep driver was a belted 30-year-old female; the Chrysler driver was a belted 20-year-old male, and the Subaru driver was a belted 32-year-old female.

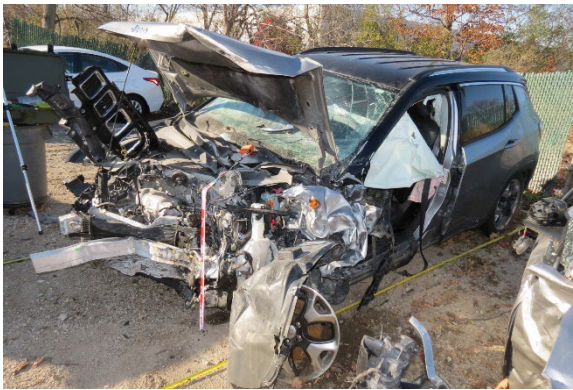


Figure 1. 2018 Jeep Compass

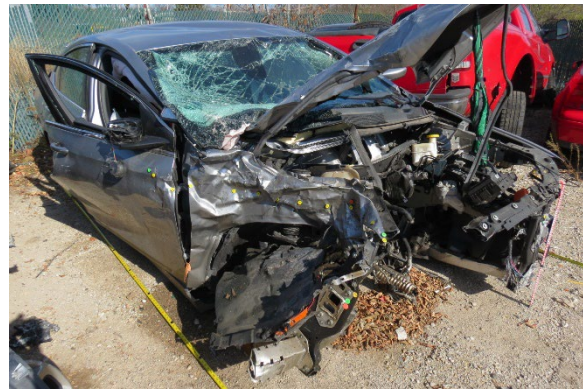


Figure 2. 2016 Chrysler 200

The crash was identified by the National Highway Traffic Safety Administration in October 2022 and an investigation of the crash was assigned to the Special Crash Investigations (SCI) team at Crash Research & Analysis, Inc., in the same month. Of special interest to the investigation was the role played by the child restraint system used as a booster seat for the 4-year-old child. The investigating police agency was contacted in October 2022 and authorized inspection for the Jeep and Chrysler, the CRS, and crash scene that were completed in November 2022. The Subaru was not inspected. The crash occurred in the westbound lane of a two-lane, undivided State highway.

The Jeep was traveling west followed by the Subaru at an unknown distance. The Chrysler was traveling east and crossed the centerline. The front of the Jeep struck the right side of the Chrysler (Event 1). The Jeep was redirected to the northwest, off the roadway and down an embankment where it came to rest facing west. The impact caused a minor fire in the Jeep's engine compartment (Event 2). The Chrysler continued east after the impact and its front right corner struck the Subaru (Event 3). The Chrysler came to rest in the westbound lane, facing

northeast. The Subaru was redirected off the south side of the roadway and down an embankment where it came to rest facing southwest.

The Jeep's 4-year-old passenger sustained critical injuries and was transported by ambulance to a Level II trauma center, then flown to a Level I pediatric trauma center where she was hospitalized. She expired 1 day later. The driver sustained serious AIS-3 injuries and was flown to a Level I trauma center where she was hospitalized for 19 days. The Chrysler driver sustained police-reported A-level (incapacitating) injuries and was flown to a trauma center where he was hospitalized for 19 days. The Subaru driver sustained police-reported B-level (non-incapacitating) injuries and refused transport.

On-site investigation included documentation and measurement of the Jeep's exterior and interior damage, identification of occupant contact points, assessment of its manual and supplemental restraint systems, and the inspection of the CRS. The Chrysler was inspected to document its exterior damage. Both vehicle event data recorders (EDR) were imaged using the Bosch Crash Data Retrieval (CDR) tool. Additional investigation included documentation of the crash site's physical environment using photographs and a total station mapping system.

Crash Summary

Crash Site

The crash occurred at dusk in the westbound lane of a two-lane, unlit State highway. According to a local weather report, environmental conditions were clear, a temperature of 9 °C (48 °F) with 10 km/h (6 mph) wind from the north. The undivided roadway ran in a general east/west direction with one through lane in each direction. The roadway was straight, level, bituminous, and each lane measured 3.5 m (11.5 ft) wide. Roadway markings had solid white edge lines and a solid/dashed yellow center line that showed no passing for eastbound traffic. There were also rumble strips on both paved shoulders at the edge lines and along the center line. The posted speed limit was 89 km/h (55 mph).

Pre-Crash

The Jeep was traveling west in the westbound lane (Figure 3) at an EDR-reported speed of 91 km/h (57 mph) at 5 seconds prior to algorithm enable (AE). The Subaru was also traveling west at an unknown distance behind the Jeep. The Chrysler was traveling in the eastbound lane at an EDR-reported speed of 124 km/h (77 mph) at 5 seconds prior to AE. The Subaru driver told police that the Chrysler was traveling erratically and, "...looked like the vehicle had lost control as it appeared the vehicle was fish-tailing and crossing into oncoming traffic" (Figure 4). The Chrysler's EDR steering data showed that prior to impact, the Chrysler drifted left, and the driver steered right, then overcorrected back to the left, causing the vehicle to rotate counterclockwise into the westbound lane. The Jeep's EDR showed the driver steered right and braked while yawing counterclockwise at a recorded speed of 81 km/h (50 mph) immediately prior to the crash.



Figure 3. West view, Jeep's approach to impact



Figure 4. East view, yellow line shows Chrysler's travel path to impact

Crash

The front plane of the Jeep struck the right front fender of the Chrysler (Event 1). The force direction on the Jeep was in the 11 o'clock sector and resulted in deployment of the Jeep driver's frontal and knee air bags, the left outboard seat-mounted side air bag, and the left inflatable curtain (IC) air bag. The impact redirected the Jeep off the north side of the roadway and down an embankment, negatively graded 29 percent. The Jeep came to rest at the bottom of the embankment, facing west. The impact caused a minor fire in the engine compartment (Event 2).

The force of the crash separated the Chrysler's engine and transaxle and caused the vehicle to rotate rapidly counterclockwise, as it continued east. Its front plane struck the right side of the Subaru (Event 3). The Chrysler slid to rest in the westbound lane facing northeast, approximately 18 m (59 ft) from initial impact. Figure 5 shows the rest positions of the Jeep and Chrysler. The impact with the Chrysler redirected the Subaru off the south side of the roadway and down an embankment. It came to rest at the bottom of the embankment facing southwest.

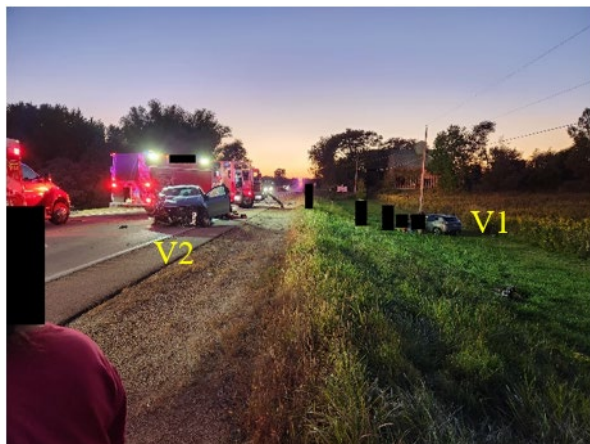


Figure 5. West view, rest positions of the Jeep (bystander provided image)

Post-Crash

The police were notified of the crash and rescue personnel responded. According to the investigating officer, an off-duty paramedic gave a knife to a bystander to cut the LATCH system on the CRS and the vehicle's three-point lap and shoulder belt system. The child was still in the CRS when removed from the vehicle. Once taken out of the CRS, the child was transported by ambulance to a Level II trauma center. She was then flown to a Level I pediatric trauma center where she expired 1 day later. The Jeep's driver sustained serious AIS-3 injuries and was flown to a Level I trauma center where she was hospitalized for 19 days. The Chrysler driver sustained police-reported A-level (incapacitating) injuries and was transported to a hospital by ambulance. The Subaru driver sustained police-reported B-level (non-incapacitating) injuries and refused transport. All vehicles were towed due to damage.

2018 Jeep Compass

Description

The Jeep was a 4-wheel drive, 5-passenger, 4-door SUV manufactured in December 2017 with Vehicle Identification Number 3C4NJDCB9JTxxxxxx. It was powered by a 2.4 liter, 4-cylinder engine with 4-wheel antilock brakes, and stability and traction control. The Jeep also had front seat belt pretensioners, dual-stage frontal air bags, a driver's knee air bag, front outboard seatback-mounted side impact air bags, and IC air bags. The vehicle's wheelbase was 262 cm (103.1 in).

The manufacturer's recommended tire size was P225/55R18. At the time of the crash, the Jeep had a Mohave Crossover CUV tire on the left front wheel, and Performer CXV Sport tires on the other three wheels. All tires were of the recommended size and in good condition prior to the crash.

The front row had leather bucket seats with adjustable head restraints. The driver's seatback was reclined 20° aft of vertical and the bottom of the head restraint was adjusted 3 cm (1.2 in) above the top of the seatback. The seat track position could not be determined due to damage. The second row had a leather three-passenger bench seat with folding backs and adjustable head restraints. LATCH anchors were available in the outboard seat positions of the second row. The distance between the anchors at each outboard position was 28 cm (11.0 in).

Exterior Damage

The front plane of the Jeep (Figure 6) was damaged during impact with the Chrysler (Event 1). Direct damage began at the left front bumper corner and extended 71 cm (28.0 in) to the right. The combined width of the damage extended across the entire end-width of the Jeep. The Field L measured 80 cm (31.5 in). The maximum residual crush was 51 cm (20.1 in) and was located 45 cm (17.7 in) left of the center line. The residual crush measurements were C1 = 50 cm (19.7 in), C2 = 51 cm (20.1 in), C3 = 45 cm (17.7 in), C4 = 34 cm (13.4 in), C5 = 19 cm (7.5 in), C6 = 6 cm (2.4 in). The right aspect of the bumper beam separated from its mounting point to the frame. The damage algorithm of the WinSMASH program calculated the Jeep's total delta V as 39 km/h (24.2 mph). The longitudinal and lateral velocity changes were -36 km/h (-22.4 mph) and 13 km/h (8.1 mph). The crash configuration fit the parameters of the collision model; however, the results were considered low. The delta Vs reported by the EDR were a better representation of the crash severity based on SCI field experience. Refer the Event Data Recorder section below. The collision deformation classification¹ (CDC) for this damage pattern was 11FYEW3 (340°).

During the crash sequence a small fire ignited in the left side of the engine compartment (Event 3). It is unknown how this fire was extinguished.

¹ SAE J224_202205 SAE recommended practice describing vehicle collision damage in an alphanumeric format.



Figure 6. Front-plane damage to Jeep

Event Data Recorder

The Jeep’s EDR was imaged with version 23.0.1 of the Bosch CDR software and reported with version 23.0.2. The investigating police department had removed the EDR module from the vehicle and SCI imaging took place via a bench top direct to module connection at police headquarters. The EDR report is included at the end of this report in Appendix A.

The data limitations stated that an event will be stored when the delta V is approximately 8 km/h 5 mph or greater in a 150 msec interval. The EDR could store up to three events. The Jeep’s EDR recorded a “most recent event (deployment),” defined as, “Data of the most recent event is displayed in the report.”

The EDR reported 17 data trouble codes (DTC); most regarded communication issues with the occupant classification module (OCM) in the right front seat. The DTCs are listed below:

Data Trouble Code	Issue
B223D-00	OCM issue for right-front seat, needs calibration
U0154-00	Lost communication between OCM and other modules
B0052-13	Right-front passenger seat belt sensor circuit open
B0050-13	Left-front buckle switch circuit open
B00C5-13	Right-front seat track position sensor circuit open
B00B5-13	Left-front seat track position sensor circuit open
B0028-13	Right-front seat-mounted air bag deployment squib 1...circuit open
B0020-13	Left-front seat-mounted air bag deployment squib 1...circuit open
B0095-13	Right frontal acceleration sensor circuit open
B0090-13	Left frontal acceleration sensor circuit open
B0002-13	Driver frontal squib 2...circuit open
B0001-13	Driver frontal squib 1...circuit open

Data Trouble Code	Issue
U0100-00	Lost communication with ECM/PCM
B222D-00	Unknown
B00DF-95	Issue with right-front restraints disable switch
B2734-13	Passenger presence detector sensor...circuit open
B1BA5-00	Air bag squib configuration mismatch

System Status at Deployment: The frontal air bag warning lamp was reported as “Off,” and the recorded file was complete. The deployment event was recorded during the Jeep’s impact with the Chrysler. The driver’s buckle switch was reported as “Buckled.” The maximum longitudinal and lateral delta Vs were reported as -70 km/h (-43.5 mph) and 25 km/h (15.5 mph). These values occurred at 224 and 44 msec after AE. The EDR further reported the first and second stages of the driver’s frontal air bag deployed 11 and 16 msec after AE. The first and second stages of the right frontal air bag deployed at 11 and 161 msec after AE. The EDR also reported deployments of the driver’s knee air bag, retractor and anchor pretensioner actuations for both front seat belts, the driver’s left seat-mounted and IC air bags, but no deployment times were given.

Interior Damage

The interior of the Jeep sustained moderate intrusion damage to the occupant compartment from the impact with the Chrysler. Among the intruded components were the left toe pan, and left instrument panel that intruded longitudinally 14 cm (5.5 in) and 6 cm (2.4 in). The transmission tunnel at the accelerator intruded laterally 10 cm (3.9 in). The left front seat cushion was displaced laterally to the left 8 cm (3.1 in) and deformed vertically. The driver’s torso loaded the steering wheel rim and column, through the deployed driver air bag, displacing it forward and upward. A probable right knee contact was noted to the knee bolster right of the steering column. In the second row a scuff/deformation of the seat back of the right front was observed from possible foot contact from the child passenger.

Manual Restraint Systems

The front row had continuous loop, three-point lap and shoulder seat belts with sliding latch plates, retractor and anchor pretensioners, and adjustable upper anchors. The driver’s upper anchor was adjusted to the full-down position. The driver’s seat belt had an emergency locking retractor (ELR) and the remainder of the seats had switchable ELR/automatic locking retractors (ALR). The driver’s retractor and anchor pretensioners actuated during the crash.

The driver was restrained by the lap and shoulder seat belt as evidenced by load abrasions on the latch plate belt guide and D-ring as well as a 24 cm (9.4 in) friction load mark from the D-ring on the belt webbing, 198 cm (78.0 in) from the floor anchor. The length of belt webbing extended from the locked retractor consistent with usage.

The second row three-point seat belts were continuous loop with sliding latch plates and fixed D-rings. The second-row-right CRS was secured to the vehicle by the lower anchors and top tether straps. The child was restrained by the vehicle's three-point lap and shoulder belt. She was sitting on the internal harness system (it was not in use to restrain the child). The vehicle's belt webbing was cut during the rescue effort, 24 cm (9.4 in) from the floor anchor and 6 cm (2.4 in) from the D-ring (Figure 7). Heavy load abrasions were noted on the latch plate belt guide (Figure 8). A 25 cm (9.8 in) section and a 15 cm (5.9 in) section of the belt webbing was stretched and abraded from loading the sides of the CRS. These abraded sections were located 38 cm (15.0 in) and 90 cm (35.4 in) from the floor anchor.



Figure 7. Second-row-right seat stretched and abraded- seat-belt-webbing



Figure 8. Load marks on latch plate belt guide, second-row-right seat

Supplemental Restraint Systems

The Jeep had dual-stage frontal air bags, a driver's knee air bag, front row outboard seat-mounted side impact air bags, and IC air bags. Both frontal air bags, the knee air bag, the left seat-mounted, and IC air bags deployed during the crash.

The driver's frontal air bag was located in the steering wheel hub. The deflated air bag was 60 cm (23.6 in) in diameter and there was no damage or discernable evidence of occupant contact. The module cover was a two-flap configuration constructed of pliable vinyl with a horizontal tear seam. Each flap was 13 cm (5.1 in) at its widest point and 7 cm (2.8 in) wide at its narrowest. Each flap measured 8 cm (3.1 in) in height. There was no damage or discernable evidence of occupant contact to the cover flaps.

The driver's knee air bag was located behind the left knee bolster. The deflated air bag was 60 cm (23.6 in) wide at the top, 43 cm (16.9 in) wide at its base, and 46 cm (18.1 in) in depth. No damage or discernable occupant contact was noted on the air bag.

The driver's outboard seat-mounted side impact air bag was located in the left outboard seatback and deployed through a vertical tear seam. The deflated air bag was 60 cm (23.6 in) in height and 27 cm (10.6 in) wide. There was no damage or discernable occupant contacts to the air bag.

The driver's IC air bag was located in the roof side rail and deployed through a seam in the headliner. The air bag was 188 cm (74.0 in) long and 38 cm (15.0) in height. It was cut vertically by rescue personnel near the B-pillar to facilitate extrication of the driver. No damage or discernable occupant contact were noted on the air bag.

Second-Row-Right Passenger's Child Restraint System

The 4-year-old child was seated in a Dorel Juvenile Group, Safety 1st Grow and Go Sprint All-in-One CRS (Figure 9), model number: CC226-FAR, manufactured on January 25, 2019. The CRS was used as a belt positioning booster at the time of the crash and had a one-piece plastic shell with a non-detachable base that let the back support recline with a 1 cm (0.4 in) thick band of Styrofoam padding that lined the head area, and a 1 cm (0.4 in) thick poly cover. Attached to the plastic shell were detachable armrest covers and an inner red plastic backing on the back support that had two sets of slots where the shoulder straps could be routed. The shoulder straps were routed through the top set of slots and anchored to a horizontal attachment bar in the back of the CRS. The height of the shoulder straps could be further adjusted by setting the horizontal bar to one of five different levels. The adjustment could be made by operating the vertical levers that rose above the seatback of the CRS. The shoulder strap attachment bar was set in the second slot from the lowest level.



Figure 9. Front of CRS with cover/padding in place

The CRS could be used in either forward-facing or rear-facing modes, using the internal 5-point harness. Installation of this CRS could be achieved by using the LATCH system or the vehicle's three-point lap and shoulder belt system routed through the appropriate belt path. The third option let the CRS be used as a belt-positioning booster seat, using just the lap and shoulder seat belt system. The CRS' back support could be adjusted to three different recline positions, the most being 50° aft of vertical. At the time of SCI inspection, the back support was adjusted to

Position 1, the most upright position at 20° aft of vertical. This was the correct position for booster mode.

The CRS manufacturer's recommendations were displayed on labeling on the side surface of the CRS shell that were as follows.

Forward-facing with internal harness

- 10.1–29 kg (22–65 lb)
- 73.6–125 cm (29–49 in)
- At least 1-year-old

Recommended CRS installation to the vehicle when used as a forward-facing CRS

- Lower anchor belt with tether (LATCH)
 - Do not use lower anchor strap for children weighing over 18 kg (40 lb)
- Lap belt with tether up to 29 kg (65 lb)
- Lap and shoulder belt with tether up to 29 kg (65 lb)
- Tether recommended in forward-facing position whether lower anchor strap or vehicle's seat belt is in use

The manufacturer's size parameters for usage as a belt-positioning booster seat

Weight: 18.1 kg–45.4 kg (40–100 lb)

Height: 110.1 cm–132.1 cm (43–52 in)

- Use with the vehicle's lap and shoulder belt only (lower anchor strap should not be used and removed from CRS)
- Do not use with lap belt only
- CRS internal harness should be removed

The SCI inspection revealed the internal five-point harness system was intact. The buckle and chest retainer clip were in good working order. The harness webbings were significantly twisted, the left strap more than the right. At the time of the crash the CRS was installed in booster mode and secured to the vehicle by the lower anchors and top tether. The child was restrained by the vehicle's lap and shoulder belt. The lap portion of the seat belt was routed through the CRS' U-shaped belt channel and the shoulder portion was routed over the chest of the child. It is unknown if the shoulder belt was routed through the CRS's positioning guide on the seatback of the CRS at the time of the crash.

The child's weight was reported as 21 kg (47 lb) and was beyond the manufacturer's weight limit for use with LATCH. She was in the manufacturer's recommended weight for use as a belt-positioning booster seat. The child's reported height was 99 cm (39 in) and was below the manufacturer's recommended height of 110.1 cm (43 in) for use as a booster seat. Based on her height and weight and the CRS manufacturer's recommendations, the 4-year-old should have been restrained in the CRS in a forward-facing position by the integrated 5-point harness system with the CRS secured by the vehicle's three-point lap and shoulder belt system routed through the forward-facing belt path.

The lower anchor strap and top tether and the vehicle's three-point lap and shoulder belt webbing were cut by first responder/bystander. No load marks were noted on the latch anchors, the straps or top tether webbing. The CRS remained intact during the crash, although there were stress marks noted on the front of the seat and behind the interior belt routing channels (Figure 10). These stress marks occurred as the shell of the CRS flexed under load during impact. Abrasions from the seat belt webbing were present on the right-side belt channel, but heavier abrasions on the left side belt channel (Figure 11). These occurred as the child and CRS loaded forward against the vehicle's lap belt webbing.

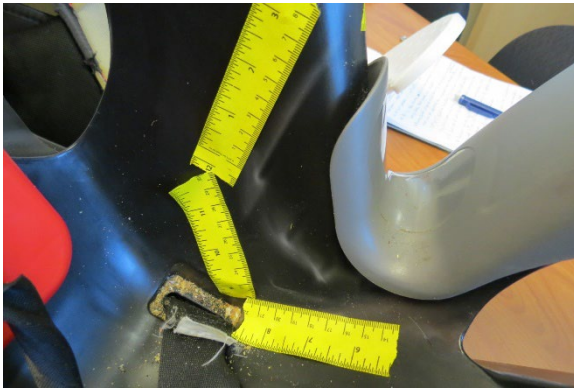


Figure 10. Stress marks, behind routing channel, interior left side of CRS



Figure 11. Left belt guide abrasions from webbing

This page is intentionally left blank

2018 Jeep Compass Occupant Data

Driver Demographics

Age/sex: 30 years/female
 Height: 163 cm (64 in)
 Weight: 84 kg (185 lb)
 Eyewear: Unknown
 Seat type: Forward-facing bucket seat with adjustable head restraint
 Seat track: Unknown
 Manual restraint usage: Lap and shoulder belt
 Usage source: Vehicle inspection, EDR, police crash report
 Air bags: Frontal, knee bolster, seat-mounted, and IC bags available; all deployed
 Alcohol/drug involvement: No alcohol or drugs
 Egress from vehicle: Removed from vehicle due to perceived serious injuries
 Transport from scene: Air ambulance
 Type of medical treatment: Level 1 trauma center; hospitalized for 19 days

Driver Injuries

Inj. No.	Injury	Injury Severity AIS 2015	Involved Physical Components (IPC)	IPC Confidence Level
1	Right femur shaft fracture, comminuted, intra-articular	853271.3	Tandem IPC Primary: Left air bag – Left bottom instrument panel Secondary: Front – Left lower instrument panel (includes knee bolster)	Possible Certain
2	Left femur shaft fracture, transverse	853251.3	Tandem IPC Primary: Left air bag – Left bottom instrument panel Secondary: Front – Left lower instrument panel (includes knee bolster)	Possible Certain
3	Right patella fracture, open, with disruption of extensor mechanism and retinacular tear on right	854572.2	Isolated Front – Left lower instrument panel (includes knee bolster)	Certain

Inj. No.	Injury	Injury Severity AIS 2015	Involved Physical Components (IPC)	IPC Confidence Level
4	Right patella tendon partially avulsed	841001.2	Isolated Front – Left lower instrument panel (includes knee bolster)	Certain
5	Right distal radius fracture, comminuted, intra-articular	752361.2	Isolated IPC Front - Center instrument panel	Probable
6	Right lunate facet fracture	752461.1	Isolated Front - Center instrument panel	Probable
7	Closed head injury: loss of consciousness	100099.9	Tandem IPC Primary: Left air bag – Steering wheel hub Secondary: Front – Steering wheel (combination of rim and hub/spoke)	Possible Possible
8	L1 transverse process fx, left	650620.1	Isolated Interior – Lap portion of belt restraint	Probable
9	L2 transverse process fx, left	650620.1	Isolated Interior – Lap portion of belt restraint	Probable
10	L3 transverse process fx, left	650620.1	Isolated Interior – Lap portion of belt restraint	Probable
11	L4 transverse process fx, left	650620.1	Isolated Interior – Lap portion of belt restraint	Probable
12	Groin lacerations, 15 cm on left, 2 cm on left, and small laceration on right	510602.1	Isolated Interior - Lap portion of belt restraint	Certain
13	Abdominal bruising; left groin hemorrhage	510402.1	Isolated	Certain

Inj. No.	Injury	Injury Severity AIS 2015	Involved Physical Components (IPC)	IPC Confidence Level
			Interior - Lap portion of belt restraint	
14	Right breast contusion	410402.1	Isolated Interior - Shoulder portion of belt restraint	Certain
15	Left hip contusion	810402.1	Isolated Interior - Lap portion of belt restraint	Probable

Source: Hospital record

Driver Kinematics

The driver was seated upright and restrained by the three-point lap and shoulder seat belt system. The seat track adjustment could not be determined, and the seatback was reclined to 20° aft of vertical. The bottom of the driver's head restraint was adjusted 3 cm (1.2 in) above the top of the seatback. The (Event 1) impact with the Chrysler actuated the retractor and anchor pretensioners and deployed the driver's frontal, knee, left seatback, and IC air bags. In response to the 11 o'clock direction of force, the driver initiated a forward and slightly left trajectory. She loaded the seat belt webbing, frontal air bag, and steering assembly with her torso and face. The driver sustained seat belt-related soft tissue injuries of the abdomen, left hip, and groin. Her loading of the seat belt resulted in several transverse process fractures of the lumbar spine. Her face/head loaded the air bag/steering assembly that caused an unspecified closed head injury with loss of consciousness.

The driver's knees contacted and loaded through the deployed knee air bag into the knee bolster/lower instrument panel. As a result, she sustained bilateral femur fractures and an open right patella fracture with an avulsed tendon. Her right hand probably separated from the steering wheel rim at impact, and she contacted the center instrument panel, sustaining fractures of the right distal radius and lunate facet.

Emergency responders removed the driver from the vehicle and she was flown to a Level 1 trauma center where she was hospitalized for 19 days.

Second-Row-Right Passenger Demographics

Age/sex: 4 years/female
 Height: 99 cm (39 in)
 Weight: 21 kg (47 lb)
 Eyewear: Unknown
 Seat type: Bench with folding back(s)
 Seat track position: Fixed
 Manual restraint use: Lap and shoulder belt with CRS
 Usage source: Vehicle inspection
 Air bags: IC bag available; not deployed
 Egress from vehicle: Removed by rescue personnel/bystander
 Transport from scene: Transported by ambulance to a Level II trauma center; then transferred by helicopter to a Level I pediatric trauma center
 Type of medical treatment: Hospitalized for 1 day, then expired

Second-Row-Right Passenger Injuries

Inj. No.	Injury	Injury Severity AIS 2015	Involved Physical Components (IPC)	IPC Confidence Level
1	Cerebellar tonsillar herniation	140202.5	Isolated IPC Interior - Shoulder portion of belt restraint	Probable
2	Cerebral brain edema; global effacement of cisterns and 3rd and 4th ventricles	140672.4	Isolated IPC Interior - Shoulder portion of belt restraint	Probable
3	Right hemopneumothorax with 300 cc of blood in lung	442206.5	Isolated IPC Interior - Shoulder portion of belt restraint	Certain
4	Left hemopneumothorax with 300 cc of blood in lung	442206.5	Isolated IPC Interior - Shoulder portion of belt restraint	Certain
5	Traumatic aortic injury with pseudoaneurysm in region of aortic isthmus	420210.5	Isolated IPC Interior – Shoulder portion of belt restraint	Certain
6	Bilateral pulmonary contusions with partial collapse of both lower lobes; mild herniation of right lung	441412.4	Isolated IPC Interior – Shoulder portion of belt restraint	Certain

Inj. No.	Injury	Injury Severity AIS 2015	Involved Physical Components (IPC)	IPC Confidence Level
7	Hemomediastinum, posterior	442208.2	Isolated IPC Interior – Shoulder portion of belt restraint	Certain
8	Pneumomediastinum, posterior	442209.2	Isolated IPC Interior – Shoulder portion of belt restraint	Certain
9	Significant distraction injury of thoracic spine at level of T2-T3	610400.3	Isolated IPC Interior – Shoulder portion of belt restraint	Probable
10	T3 vertebral body fracture, posterior aspect	650430.2	Isolated IPC Interior – Shoulder portion of belt restraint	Probable
11	Comminuted fractures of bilateral iliac bones	856151.2	Isolated IPC Interior – Lap portion of belt restraint	Certain
12	Left tibia fracture, NFS	854000.2	Isolated Interior – Other seating position seatback	Probable
13	Left fibula fracture, NFS	854441.2	Isolated Interior – Other seating position seatback	Probable
14	Scattered ecchymosis to lips	210402.1	Isolated Interior – Same occupant contact (specify): Head to thigh	Probable
15	Right forehead has 2.5 x 1.0-inch area of vertical curvilinear abrasions	210202.1	Isolated Interior – Same occupant contact (specify): Head to thigh	Probable
16	0.1-inch abrasion on right side of nose	210202.1	Isolated Interior – Same occupant contact (specify): Head to thigh	Probable

Inj. No.	Injury	Injury Severity AIS 2015	Involved Physical Components (IPC)	IPC Confidence Level
17	0.25 x 0.1-inch abrasion on chin	210202.1	Isolated Interior – Same occupant contact (specify): Head to thigh	Probable
18	Large right abdominal wall hematoma with active extravasation in region of right rectus muscle	510402.1	Isolated Interior – Lap portion of belt restraint	Certain
19	8.0 x 2.0 inch are of band-like abrasions on right lower quadrant of abdomen	510202.1	Isolated Interior – Lap portion of belt restraint	Certain
20	1.5 x 1.0-inch area of abrasion on labia	545699.1	Isolated Interior – Child safety seat harness system (i.e., straps, retainer clip, latch plate, buckle)	Probable
21	Left hip abrasion	810202.1	Isolated Interior – Lap portion of belt restraint	Certain
22	Anterolateral aspect of left thigh has 1.5 x 0.5-inch abrasion	810202.1	Isolated Interior – Lap portion of belt restraint	Certain

Source: Hospital records and autopsy

Second-Row-Right Passenger Kinematics

The 4-year-old child was seated in the CRS that was used as a belt-positioning booster seat. The CRS was secured to the seat by LATCH. The child was restrained by with the three-point lap and shoulder seat belt system. It should be noted that the child was above the CRS manufacturer's recommended weight limit for LATCH and was below the recommended height for use as a booster seat. Therefore, she should have been restrained by the internal 5-point harness system of the CRS and the CRS should have been restrained by the vehicle's lap and shoulder belt system.

In response to the 11 o'clock impact force from the Event 1 crash, the child was displaced forward and slightly left. She loaded the vehicle's lap and shoulder belt with her pelvic and thoracic regions. Frictional abrasions were present of the belt channel of the shell of the CRS with heavy load-induced abrasion of the polymer surface of the latch plate. Her loading of the belt webbing resulted in soft tissue abrasions of the left hip and thigh with band-like abrasions of the right lower quadrant of the abdomen and a large hematoma of the right abdominal wall.

Additionally, she sustained comminuted fractures of the bilateral iliac bones. As she moved forward in the CRS, her groin area slid over the buckle for the integrated harness system causing an abrasion of the labia.

The child continued loading the shoulder belt webbing resulting in bilateral hemopneumothorax and pulmonary contusions with a partial collapse of the lower lobes, a traumatic aortic injury, posterior hemomediastinum and pneumomediastinum, a distraction injury of the thoracic spine at the level of T2-T3, and a T3 vertebral body fracture.

As the shoulder belt restrained the child's torso, her head accelerated forward causing cerebellar tonsillar herniation with cerebral edema and effacement of the cisterns at the 3rd and 4th ventricles. Her head jackknifed forward as her lower extremities probably elevated due to the severe crash forces and the seat belt loading. Her face contacted her thighs causing soft tissues ecchymosis to her lips and abrasions of her forehead, nose, and chin.

The child sustained left tibia/fibula fractures from probable contact with the right front seatback. An area of suspected contact was present on the seatback. At the time of the SCI inspection, the right front seat was readjusted forward probably due in part to the removal of the child and CRS from the vehicle post-crash.

First responders and bystanders cut the lower anchor and tether straps, and three-point seat belt webbing to remove the CRS and the child from the vehicle. She was transported by ambulance to a Level II trauma center, then transferred by helicopter to a Level 1 pediatric trauma center where she was hospitalized. She was pronounced deceased 1 day later.

This page is intentionally left blank

2016 Chrysler 200

Description

The Chrysler was a front-wheel-drive, five-occupant, 4-door sedan manufactured in October 2015 with the VIN 1C3CCCAB2GNxxxxxx. It had a 2.4 liter, 4-cylinder engine on a 275 cm (108.3 in) wheelbase. The Chrysler had dual frontal air bags, front outboard seat-mounted side air bags, and IC air bags. All air bags deployed as a result of the crash.

Exterior Damage

The right plane of the Chrysler (Figure 12) was damaged during impact with the Jeep. The crash sequence separated the engine and transaxle from the vehicle, and it was found at the bottom of the embankment on the south roadside. The direct damage began 219 cm (86.2 in) forward of the right rear axle and extended forward 105 cm (41.3 in). The Field L was 105 cm (41.3 in). The crush measurements were taken on the right fender and door at the upper door level. The maximum residual crush was 37 cm (14.6 in) that occurred 303 cm (119.3 in) forward of the right rear axle. The crush values were C1 = 6 cm (2.4 in), C2 = 6 cm (2.4 in), C3 = 26 cm (10.2 in), C4 = 33 (13.0 in), C5 = 37 cm (14.6 in), C6 = 19 cm (7.5 in). The damage algorithm of the WinSMASH program calculated the total delta V as 39 km/h (24.2 mph). The longitudinal and lateral velocity changes were -34 km/h (-21.1 mph) and -20 km/h (-12.4 mph). The results were low. The CDC for this damage pattern was 01RYEW3 (40°).

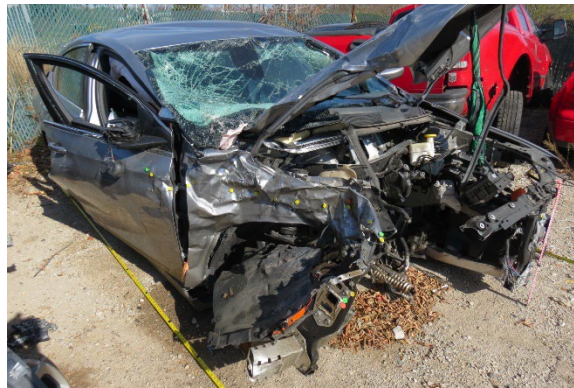


Figure 12. Front/right of Chrysler

The front right corner of the Chrysler was further damaged during impact with the right side of the Subaru (Event 3). This damage overlapped the initial impact damage with the Jeep. The CDC for this damage was 99F9E999. Based on the on-scene photographs taken by a bystander of the Subaru and its minor severity sideswipe type damage, the extent of the overlapping damage to the Chrysler was minor.

Event Data Recorder

The Chrysler's EDR was imaged with version 23.0.1 of the Bosch CDR software and reported with version 23.1. The investigating police department had removed the EDR module and SCI imaging took place via a bench top direct to module connection at police headquarters. The EDR report is included in Appendix B.

The data limitations stated that an event will be stored when the delta V is approximately 5 mph (8 km/h) or greater in a 150 msec interval. The EDR could store up to three events. The EDR Chrysler's EDR reported a "most recent event (deployment), defined as, "Data of the most recent event is displayed in the report."

System Status at Deployment: The deployment event was recorded during the Chrysler's impact with the Jeep. The frontal air bag warning lamp was reported as "Off," no DTCs were reported, and the recorded file was complete. The driver's buckle switch was reported as "Buckled." The maximum longitudinal and lateral delta Vs were reported as -97 km/h (-60.3 mph) and -72 km/h (-44.7 mph). These values occurred 298 and 54 msec after AE. The EDR further reported the first and second stages and the third squib of the driver's frontal air bag deployed 17, 37, and 167 msec after AE. The first and second stages of the passenger's frontal air bag deployed at 17 and 167 msec after AE. The third squib of this air bag deployed at 37 msec after AE. The EDR also reported deployments of the driver's and passenger's knee air bags, both seat-mounted air bags, and both IC air bags but no deployment times were given. Actuations for the retractor and anchor pretensioners were reported, but no times were given.

Chrysler Occupant Information

The Chrysler driver was a belted 20-year-old male. He sustained police-reported A-level injuries and was transported by ambulance to a hospital. His specific injury and treatment information is unknown.

2010 Subaru Forester

The Subaru was an all-wheel drive, 4-door, 5-passenger wagon with the VIN JF2SH6BC7AGxxxxxx. The vehicle had a 2.5 liter, 4-cylinder engine on a 262 cm (103.1 in) wheelbase. The Subaru had dual frontal air bags and IC air bags. Based on photography taken by a bystander on scene, none of the Subaru's air bags deployed.

Exterior Damage

Based on the police crash report and the bystander's photographs (Figure 13), the right side of the Subaru sustained side-swiping type damage due to contact with the front-right corner of the Chrysler.



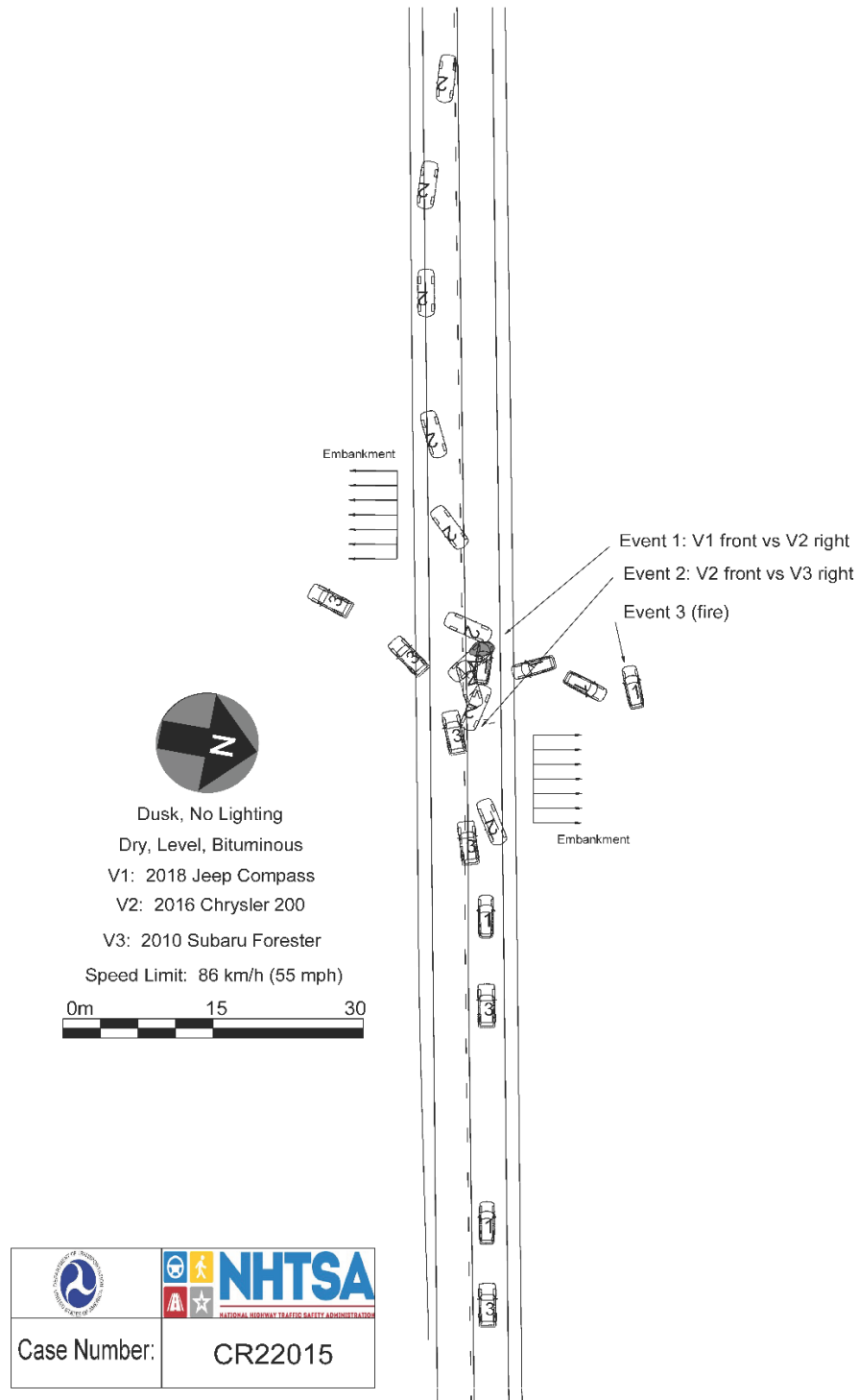
Figure 13. East-facing view of the Subaru at final rest (bystander provided image).

Subaru Occupant Information

The Subaru driver was a belted 32-year-old female. She sustained police reported B-level injuries and refused transport to a medical facility. Her specific injury and treatment information are unknown.

This page is intentionally left blank

Crash Diagram



This page is intentionally left blank

Appendix A: 2018 Jeep Compass Event Data Recorder Report

The EDR report in this technical report was imaged using the current version of the Bosch CDR software at the time of the vehicle inspection. The CDR report 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	3C4NJDCB9JT*****
User	
Case Number	
EDR Data Imaging Date	11/02/2022
Crash Date	
Filename	CR22015_V1_ACM.CDRX
Saved on	Wednesday, November 2 2022 at 13:27:54
Imaged with CDR version	Crash Data Retrieval Tool 23.0.1
Imaged with Software Licensed to (Company Name)	NHTSA
Reported with CDR version	Crash Data Retrieval Tool 23.0.2
Reported with Software Licensed to (Company Name)	NHTSA
EDR Device Type	Airbag Control Module
Event(s) recovered	Most Recent Event (Deployment)

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, 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. 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	3C4NJDCB9JT*****
Ignition Cycle, Download	8,122
ACM Part Number	68299147AH
ACM Serial Number	T08JF3267G0288
ACM Supplier	Continental
ACM Supply voltage at time of retrieval	4.100

System Configuration at Retrieval

Configured for Driver Frontal Airbag	Yes
Configured for Driver Knee Airbag	Yes
Configured for Driver Seatbelt Retractor Pretensioner	Yes
Configured for Driver Seatbelt Load Limiter	Yes
Configured for Driver Seatbelt Anchor Pretensioner	Yes
Configured for Driver Seatbelt Buckle Switch	Yes
Configured for Driver Seat Track Position Sensor	Yes
Configured for Left Side Curtain Airbag	Yes
Configured for Left Front Seat Side Airbag	Yes
Configured for Passenger Frontal Airbag	Yes
Configured for Passenger Seatbelt Retractor Pretensioner	Yes
Configured for Passenger Seatbelt Load Limiter	Yes
Configured for Passenger Seatbelt Anchor Pretensioner	Yes
Configured for Passenger Seatbelt Buckle Switch	Yes
Configured for Passenger Seat Track Position Sensor	Yes
Configured for Right Side Curtain Airbag	Yes
Configured for Right Front Seat Side Airbag	Yes
Configured for Rollover Sensing	Yes
Configured for Occupant Classification	Yes

System Configuration at Event (Most Recent Event - Deployment)

Configured for Driver Frontal Airbag	Yes
Configured for Driver Knee Airbag	Yes
Configured for Driver Seatbelt Retractor Pretensioner	Yes
Configured for Driver Seatbelt Load Limiter	Yes
Configured for Driver Seatbelt Anchor Pretensioner	Yes
Configured for Driver Seatbelt Buckle Switch	Yes
Configured for Driver Seat Track Position Sensor	Yes
Configured for Left Side Curtain Airbag	Yes
Configured for Left Front Seat Side Airbag	Yes
Configured for Passenger Frontal Airbag	Yes
Configured for Passenger Seatbelt Retractor Pretensioner	Yes
Configured for Passenger Seatbelt Load Limiter	Yes
Configured for Passenger Seatbelt Anchor Pretensioner	Yes
Configured for Passenger Seatbelt Buckle Switch	Yes
Configured for Passenger Seat Track Position Sensor	Yes
Configured for Right Side Curtain Airbag	Yes
Configured for Right Front Seat Side Airbag	Yes
Configured for Rollover Sensing	Yes
Configured for Occupant Classification	Yes

System Status at Event (Most Recent Event - Deployment)

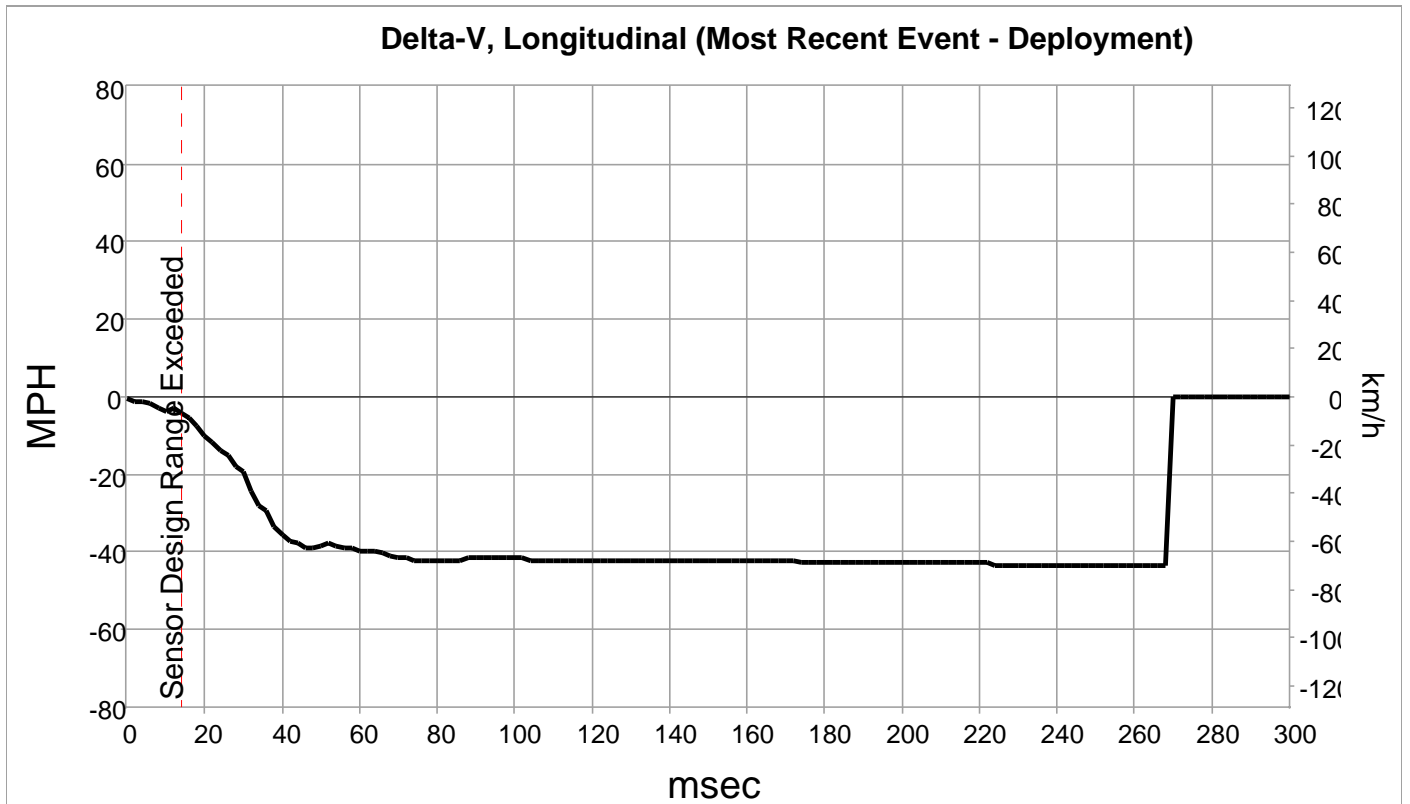
Event Number	1
Complete File Recorded	Yes
Ignition Cycle, Crash	8,120
Multi-Event, Number of Events	1
Time From Event 1 to 2 (sec)	>5
Safety Belt Status, Driver	Buckled
Safety Belt Status, Passenger	Unbuckled
Seat Track Position Switch, Foremost, Status, Driver	Not Frontal Zone
Seat Track Position Switch, Foremost, Status, Right Front Passenger	Not Frontal Zone
Occupant Size Classification, Outboard Front Passenger	Child
Maximum Delta-V, Longitudinal (MPH [km/h])	-43.5 [-70]
Time, Maximum Delta-V, Longitudinal (ms)	224
Maximum Delta-V, Lateral (MPH [km/h])	15.5 [25]
Time, Maximum Delta-V, Lateral (ms)	44
Frontal Airbag Warning Lamp	Off
Operation system time	9,782,346.35
Airbag Warning Lamp On Time (min)	0
Total Number of Events	1
ECU System Voltage at Event	14
Odometer at Event (miles [km])	70481.5 [113,429]
VIN at Event (last 8 characters)	JT*****

Deployment Command Data (Most Recent Event - Deployment)

Frontal Airbag Deployment, 1st Stage, Driver	Yes
Frontal Airbag deployment, Time to Deploy 1st stage, Driver (ms)	11
Frontal Airbag Deployment, 2nd Stage, Driver	Yes
Frontal Airbag deployment, Time to Deploy 2nd stage, Driver (ms)	16
Frontal Airbag, Deployment 1st Stage, Passenger	Yes
Frontal Airbag deployment, Time to Deploy 1st stage, Passenger (ms)	11
Frontal Airbag, Deployment 2nd Stage, Passenger	Yes
Front Airbag, Time to Deploy 2nd stage, Passenger (ms)	161
Front Airbag, Deployment 3rd Squib, Passenger	Yes
Front Airbag, Time to Deploy 3rd Squib, Passenger (ms)	46
Knee Airbag Deployment, Driver	Yes
Retractor Pretensioner Deployment, Driver	Yes
Retractor Pretensioner Deployment, Passenger	Yes
Side Seat Airbag Deployment, Front Left	Yes
Side Curtain Airbag Deployment, Left	Yes
Side Seat Airbag Deployment, Front Right	No
Side Curtain Airbag Deployment, Right	No

DTCs Present at Start of Event (Most Recent Event - Deployment)

B223D-00	Stored
U0154-00	Stored
B0052-13	Stored
B0050-13	Stored
B00C5-13	Stored
B00B5-13	Stored
B0028-13	Stored
B0020-13	Stored
B0095-13	Stored
B0090-13	Stored
B0002-13	Stored
B0001-13	Stored
U0100-00	Stored
B222D-00	Stored
B00DF-95	Stored
B2734-13	Stored
B1BA5-00	Stored

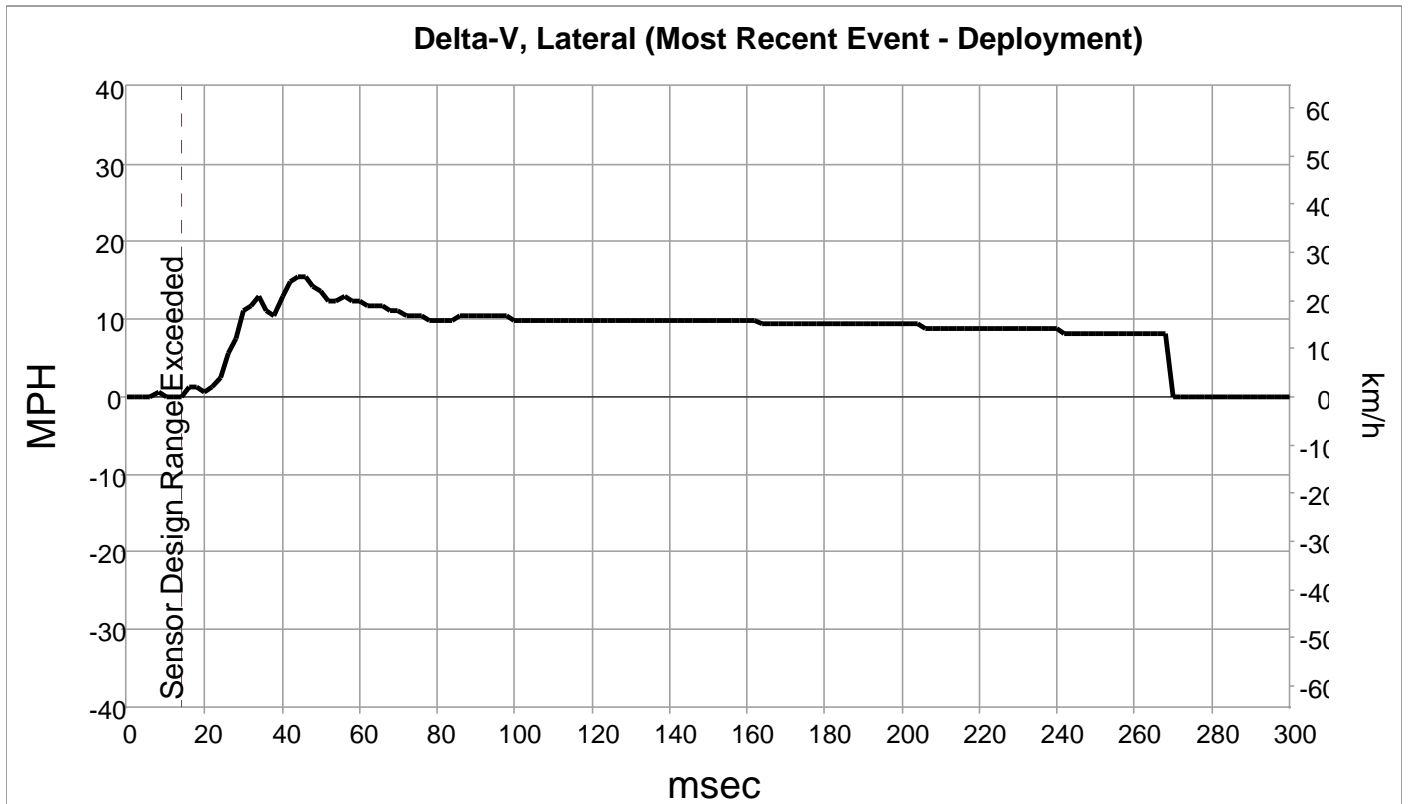


Longitudinal Crash Pulse (Most Recent Event - Deployment)

Time (msec)	Delta-V, Longitudinal (MPH [km/h])
0	-1 [-1]
2	-1 [-2]
4	-1 [-2]
6	-2 [-3]
8	-3 [-5]
10	-4 [-6]
12	-3 [-5]
14	-4 [-7]
16	-6 [-9]
18	-7 [-12]
20	-10 [-16]
22	-12 [-19]
24	-14 [-22]
26	-15 [-24]
28	-18 [-29]
30	-19 [-31]
32	-24 [-39]
34	-28 [-45]
36	-29 [-47]
38	-34 [-54]
40	-35 [-57]
42	-37 [-60]
44	-38 [-61]
46	-39 [-63]
48	-39 [-63]
50	-39 [-62]
52	-38 [-61]
54	-39 [-62]
56	-39 [-63]
58	-39 [-63]
60	-40 [-64]
62	-40 [-64]
64	-40 [-64]
66	-40 [-65]
68	-41 [-66]
70	-42 [-67]
72	-42 [-67]
74	-42 [-68]
76	-42 [-68]
78	-42 [-68]
80	-42 [-68]
82	-42 [-68]
84	-42 [-68]
86	-42 [-68]
88	-42 [-67]
90	-42 [-67]
92	-42 [-67]
94	-42 [-67]
96	-42 [-67]
98	-42 [-67]

Time (msec)	Delta-V, Longitudinal (MPH [km/h])
100	-42 [-67]
102	-42 [-67]
104	-42 [-68]
106	-42 [-68]
108	-42 [-68]
110	-42 [-68]
112	-42 [-68]
114	-42 [-68]
116	-42 [-68]
118	-42 [-68]
120	-42 [-68]
122	-42 [-68]
124	-42 [-68]
126	-42 [-68]
128	-42 [-68]
130	-42 [-68]
132	-42 [-68]
134	-42 [-68]
136	-42 [-68]
138	-42 [-68]
140	-42 [-68]
142	-42 [-68]
144	-42 [-68]
146	-42 [-68]
148	-42 [-68]
150	-42 [-68]
152	-42 [-68]
154	-42 [-68]
156	-42 [-68]
158	-42 [-68]
160	-42 [-68]
162	-42 [-68]
164	-42 [-68]
166	-42 [-68]
168	-42 [-68]
170	-42 [-68]
172	-42 [-68]
174	-43 [-69]
176	-43 [-69]
178	-43 [-69]
180	-43 [-69]
182	-43 [-69]
184	-43 [-69]
186	-43 [-69]
188	-43 [-69]
190	-43 [-69]
192	-43 [-69]
194	-43 [-69]
196	-43 [-69]
198	-43 [-69]

Time (msec)	Delta-V, Longitudinal (MPH [km/h])
200	-43 [-69]
202	-43 [-69]
204	-43 [-69]
206	-43 [-69]
208	-43 [-69]
210	-43 [-69]
212	-43 [-69]
214	-43 [-69]
216	-43 [-69]
218	-43 [-69]
220	-43 [-69]
222	-43 [-69]
224	-43 [-70]
226	-43 [-70]
228	-43 [-70]
230	-43 [-70]
232	-43 [-70]
234	-43 [-70]
236	-43 [-70]
238	-43 [-70]
240	-43 [-70]
242	-43 [-70]
244	-43 [-70]
246	-43 [-70]
248	-43 [-70]
250	-43 [-70]
252	-43 [-70]
254	-43 [-70]
256	-43 [-70]
258	-43 [-70]
260	-43 [-70]
262	-43 [-70]
264	-43 [-70]
266	-43 [-70]
268	-43 [-70]
270	0 [0]
272	0 [0]
274	0 [0]
276	0 [0]
278	0 [0]
280	0 [0]
282	0 [0]
284	0 [0]
286	0 [0]
288	0 [0]
290	0 [0]
292	0 [0]
294	0 [0]
296	0 [0]
298	0 [0]
300	0 [0]



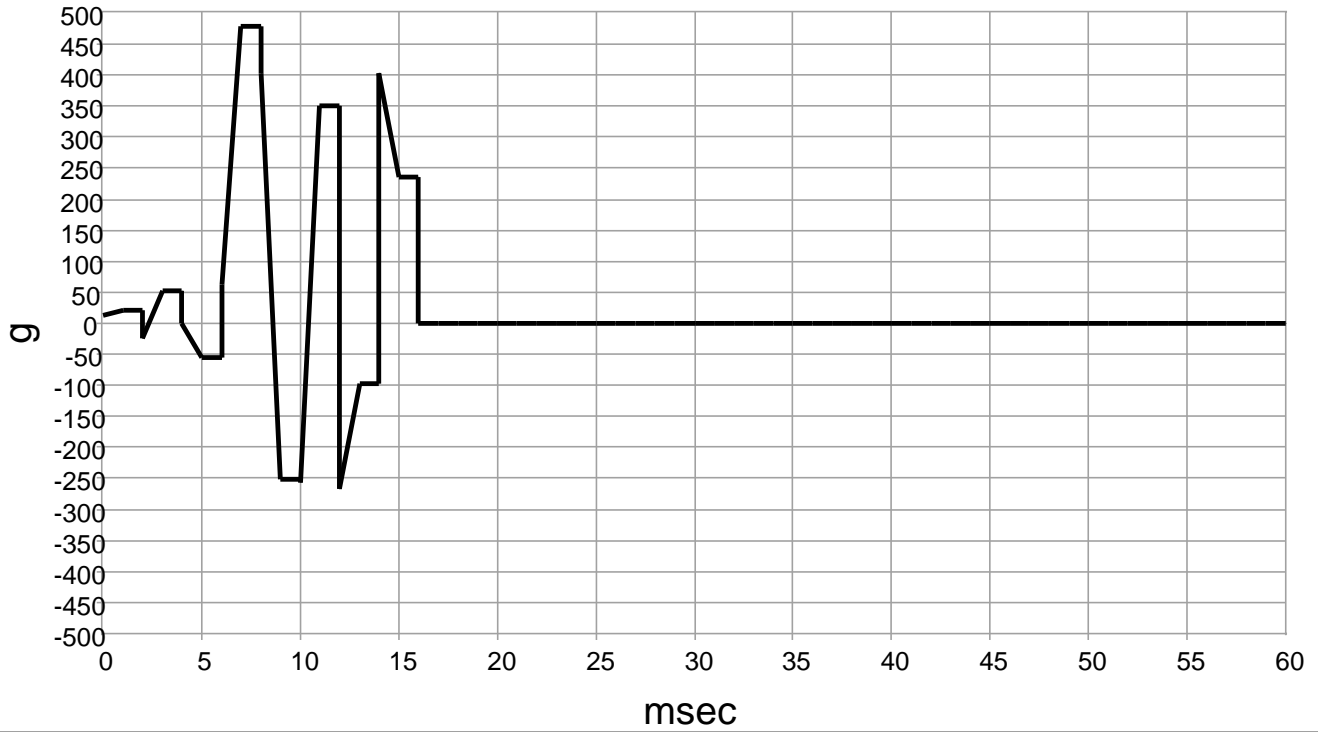
Lateral Crash Pulse (Most Recent Event - Deployment)

Time (msec)	Delta-V, Lateral (MPH [km/h])
0	0 [0]
2	0 [0]
4	0 [0]
6	0 [0]
8	1 [1]
10	0 [0]
12	0 [0]
14	0 [0]
16	1 [2]
18	1 [2]
20	1 [1]
22	1 [2]
24	2 [4]
26	6 [9]
28	7 [12]
30	11 [18]
32	12 [19]
34	13 [21]
36	11 [18]
38	11 [17]
40	13 [21]
42	15 [24]
44	16 [25]
46	16 [25]
48	14 [23]
50	14 [22]
52	12 [20]
54	12 [20]
56	13 [21]
58	12 [20]
60	12 [20]
62	12 [19]
64	12 [19]
66	12 [19]
68	11 [18]
70	11 [18]
72	11 [17]
74	11 [17]
76	11 [17]
78	10 [16]
80	10 [16]
82	10 [16]
84	10 [16]
86	11 [17]
88	11 [17]
90	11 [17]
92	11 [17]
94	11 [17]
96	11 [17]
98	11 [17]

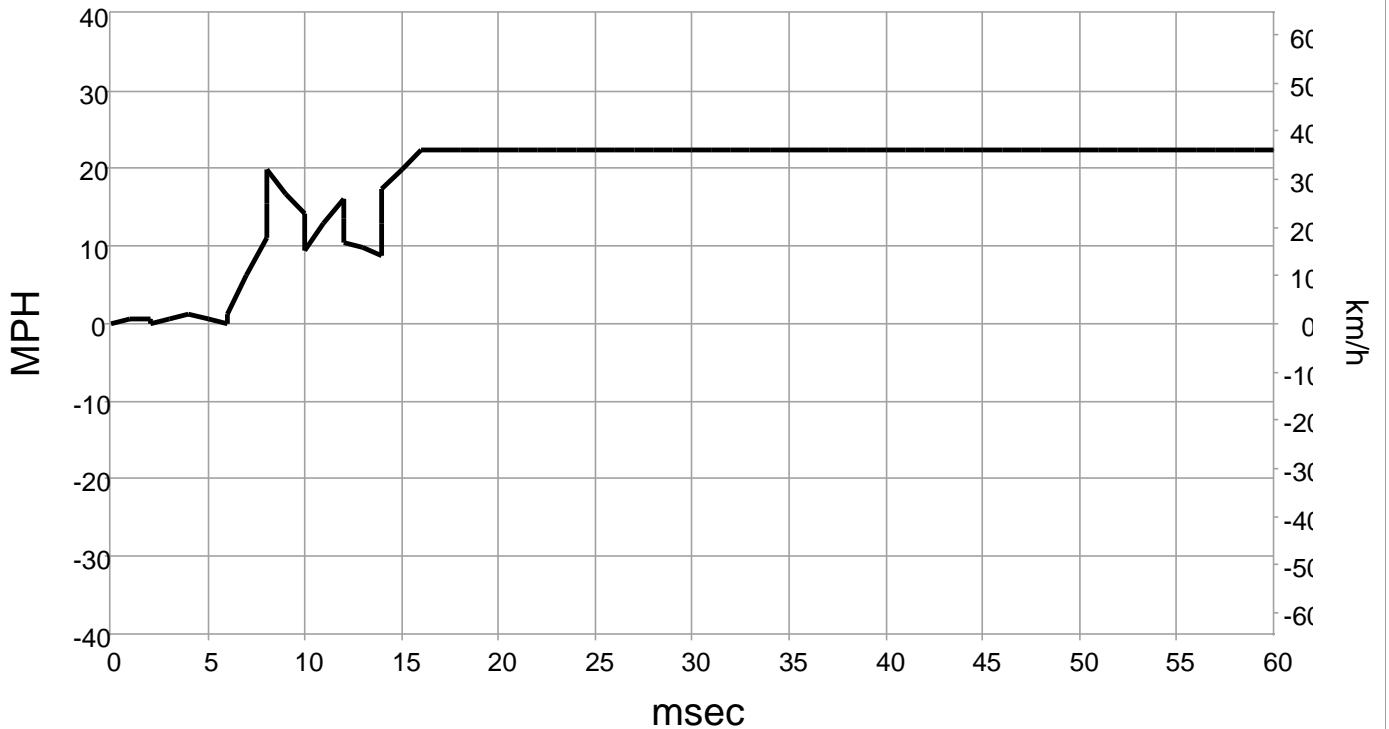
Time (msec)	Delta-V, Lateral (MPH [km/h])
100	10 [16]
102	10 [16]
104	10 [16]
106	10 [16]
108	10 [16]
110	10 [16]
112	10 [16]
114	10 [16]
116	10 [16]
118	10 [16]
120	10 [16]
122	10 [16]
124	10 [16]
126	10 [16]
128	10 [16]
130	10 [16]
132	10 [16]
134	10 [16]
136	10 [16]
138	10 [16]
140	10 [16]
142	10 [16]
144	10 [16]
146	10 [16]
148	10 [16]
150	10 [16]
152	10 [16]
154	10 [16]
156	10 [16]
158	10 [16]
160	10 [16]
162	10 [16]
164	9 [15]
166	9 [15]
168	9 [15]
170	9 [15]
172	9 [15]
174	9 [15]
176	9 [15]
178	9 [15]
180	9 [15]
182	9 [15]
184	9 [15]
186	9 [15]
188	9 [15]
190	9 [15]
192	9 [15]
194	9 [15]
196	9 [15]
198	9 [15]

Time (msec)	Delta-V, Lateral (MPH [km/h])
200	9 [15]
202	9 [15]
204	9 [15]
206	9 [14]
208	9 [14]
210	9 [14]
212	9 [14]
214	9 [14]
216	9 [14]
218	9 [14]
220	9 [14]
222	9 [14]
224	9 [14]
226	9 [14]
228	9 [14]
230	9 [14]
232	9 [14]
234	9 [14]
236	9 [14]
238	9 [14]
240	9 [14]
242	8 [13]
244	8 [13]
246	8 [13]
248	8 [13]
250	8 [13]
252	8 [13]
254	8 [13]
256	8 [13]
258	8 [13]
260	8 [13]
262	8 [13]
264	8 [13]
266	8 [13]
268	8 [13]
270	0 [0]
272	0 [0]
274	0 [0]
276	0 [0]
278	0 [0]
280	0 [0]
282	0 [0]
284	0 [0]
286	0 [0]
288	0 [0]
290	0 [0]
292	0 [0]
294	0 [0]
296	0 [0]
298	0 [0]
300	0 [0]

Left Frontal Peripheral Sensor X (Most Recent Event - Deployment)



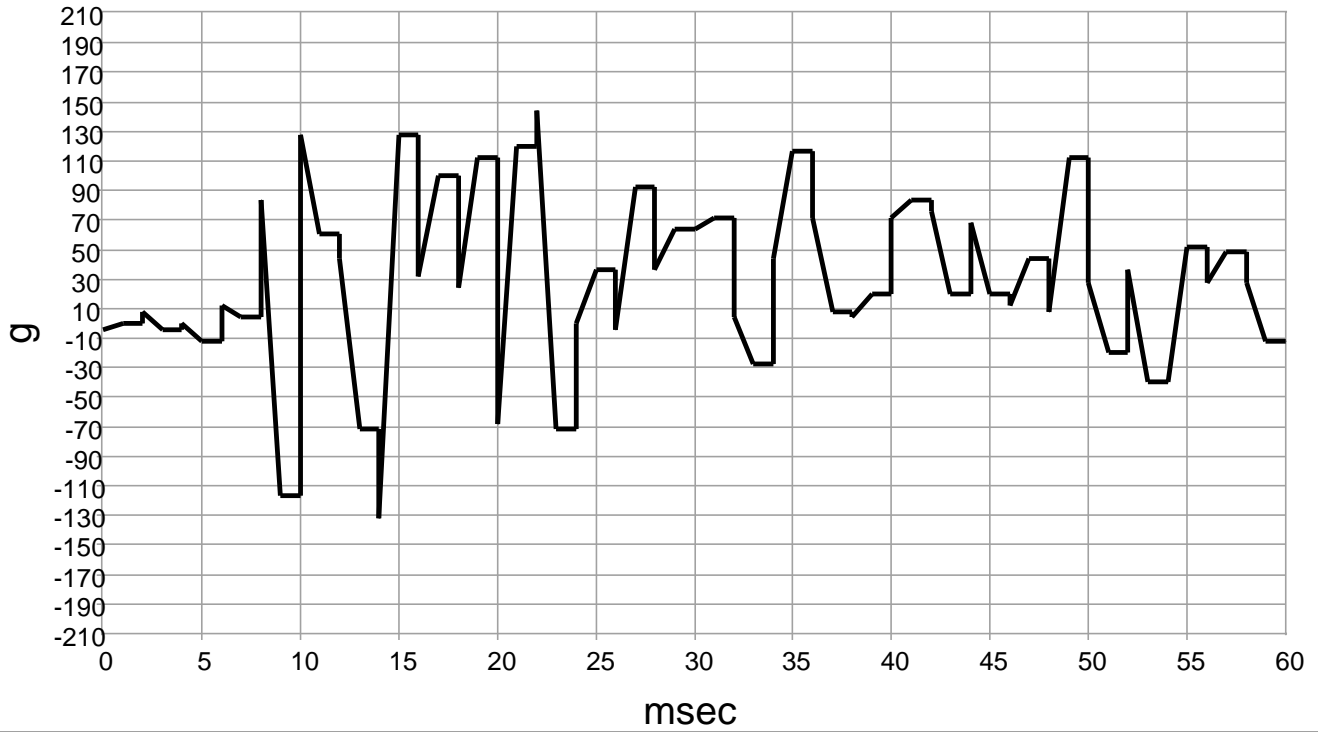
Left Frontal Peripheral Sensor X Delta-V (Most Recent Event - Deployment)



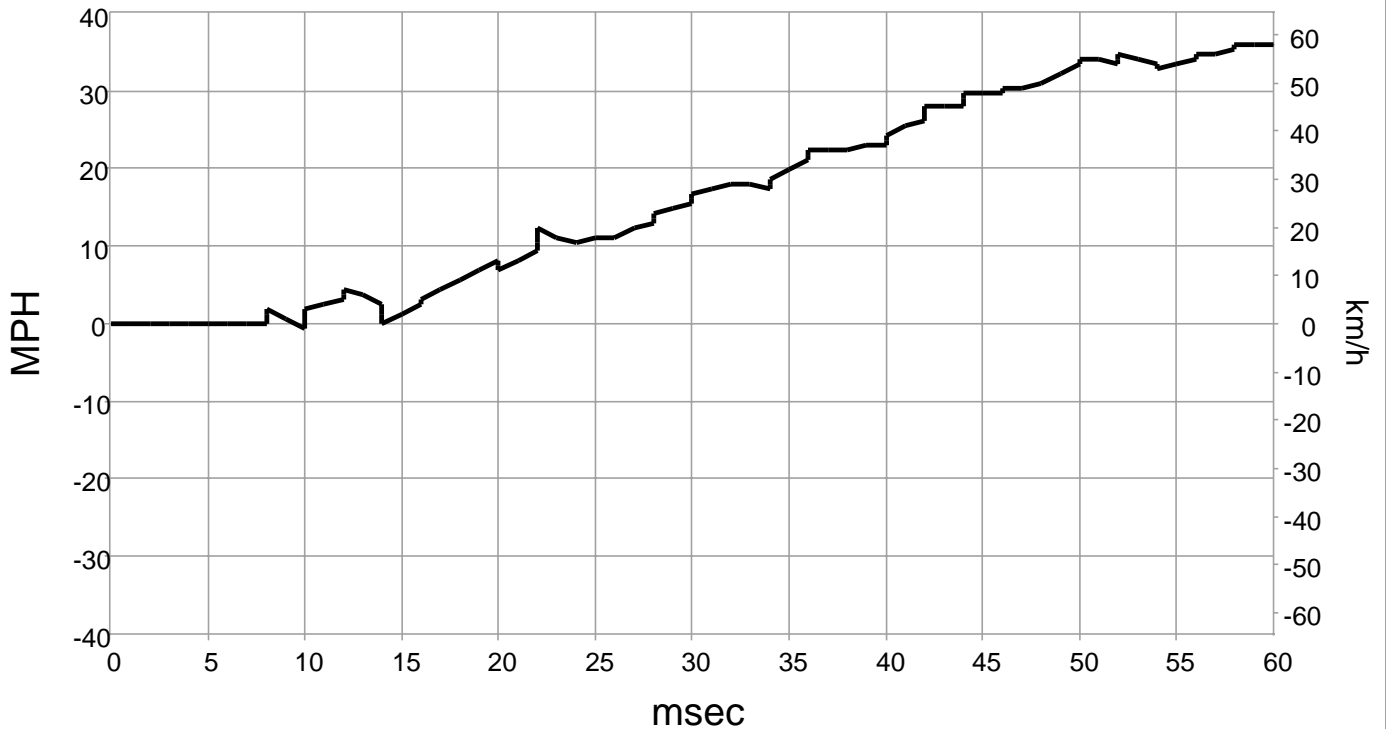
Left Frontal Peripheral Sensor X (Most Recent Event - Deployment)

Time (msec)	Left Frontal Peripheral Sensor X (g)	Left Frontal Peripheral Sensor X Delta-V (MPH [km/h])	Time (msec)	Left Frontal Peripheral Sensor X (g)	Left Frontal Peripheral Sensor X Delta-V (MPH [km/h])	Time (msec)	Left Frontal Peripheral Sensor X (g)	Left Frontal Peripheral Sensor X Delta-V (MPH [km/h])
0	12.00	0 [0]	25	0.00	22 [36]	50	0.00	22 [36]
0.5	12.00	0 [0]	25.5	0.00	22 [36]	50.5	0.00	22 [36]
1	20.00	1 [1]	26	0.00	22 [36]	51	0.00	22 [36]
1.5	20.00	1 [1]	26.5	0.00	22 [36]	51.5	0.00	22 [36]
2	-24.00	1 [1]	27	0.00	22 [36]	52	0.00	22 [36]
2.5	-24.00	0 [0]	27.5	0.00	22 [36]	52.5	0.00	22 [36]
3	52.00	1 [1]	28	0.00	22 [36]	53	0.00	22 [36]
3.5	52.00	1 [2]	28.5	0.00	22 [36]	53.5	0.00	22 [36]
4	0.00	1 [2]	29	0.00	22 [36]	54	0.00	22 [36]
4.5	0.00	1 [2]	29.5	0.00	22 [36]	54.5	0.00	22 [36]
5	-56.00	1 [1]	30	0.00	22 [36]	55	0.00	22 [36]
5.5	-56.00	0 [0]	30.5	0.00	22 [36]	55.5	0.00	22 [36]
6	64.00	1 [1]	31	0.00	22 [36]	56	0.00	22 [36]
6.5	64.00	1 [2]	31.5	0.00	22 [36]	56.5	0.00	22 [36]
7	480.00	6 [10]	32	0.00	22 [36]	57	0.00	22 [36]
7.5	480.00	11 [18]	32.5	0.00	22 [36]	57.5	0.00	22 [36]
8	404.00	16 [25]	33	0.00	22 [36]	58	0.00	22 [36]
8.5	404.00	20 [32]	33.5	0.00	22 [36]	58.5	0.00	22 [36]
9	-252.00	17 [27]	34	0.00	22 [36]	59	0.00	22 [36]
9.5	-252.00	14 [23]	34.5	0.00	22 [36]	59.5	0.00	22 [36]
10	-256.00	12 [19]	35	0.00	22 [36]			
10.5	-256.00	9 [15]	35.5	0.00	22 [36]			
11	352.00	13 [21]	36	0.00	22 [36]			
11.5	352.00	16 [26]	36.5	0.00	22 [36]			
12	-268.00	14 [22]	37	0.00	22 [36]			
12.5	-268.00	11 [17]	37.5	0.00	22 [36]			
13	-96.00	10 [16]	38	0.00	22 [36]			
13.5	-96.00	9 [14]	38.5	0.00	22 [36]			
14	404.00	13 [21]	39	0.00	22 [36]			
14.5	404.00	17 [28]	39.5	0.00	22 [36]			
15	236.00	20 [32]	40	0.00	22 [36]			
15.5	236.00	22 [36]	40.5	0.00	22 [36]			
16	0.00	22 [36]	41	0.00	22 [36]			
16.5	0.00	22 [36]	41.5	0.00	22 [36]			
17	0.00	22 [36]	42	0.00	22 [36]			
17.5	0.00	22 [36]	42.5	0.00	22 [36]			
18	0.00	22 [36]	43	0.00	22 [36]			
18.5	0.00	22 [36]	43.5	0.00	22 [36]			
19	0.00	22 [36]	44	0.00	22 [36]			
19.5	0.00	22 [36]	44.5	0.00	22 [36]			
20	0.00	22 [36]	45	0.00	22 [36]			
20.5	0.00	22 [36]	45.5	0.00	22 [36]			
21	0.00	22 [36]	46	0.00	22 [36]			
21.5	0.00	22 [36]	46.5	0.00	22 [36]			
22	0.00	22 [36]	47	0.00	22 [36]			
22.5	0.00	22 [36]	47.5	0.00	22 [36]			
23	0.00	22 [36]	48	0.00	22 [36]			
23.5	0.00	22 [36]	48.5	0.00	22 [36]			
24	0.00	22 [36]	49	0.00	22 [36]			
24.5	0.00	22 [36]	49.5	0.00	22 [36]			

Right Frontal Peripheral Sensor X (Most Recent Event - Deployment)

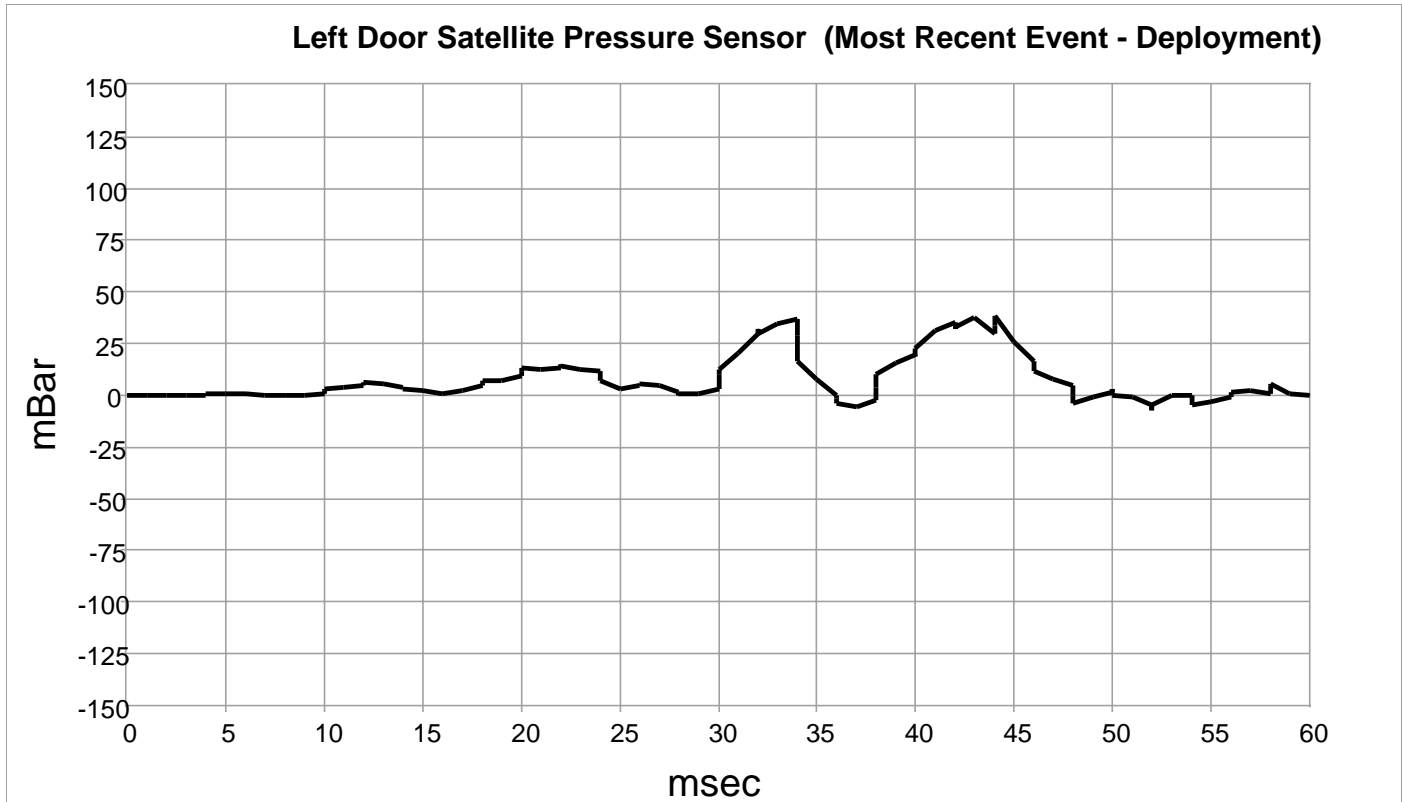


Right Frontal Peripheral Sensor X Delta-V (Most Recent Event - Deployment)



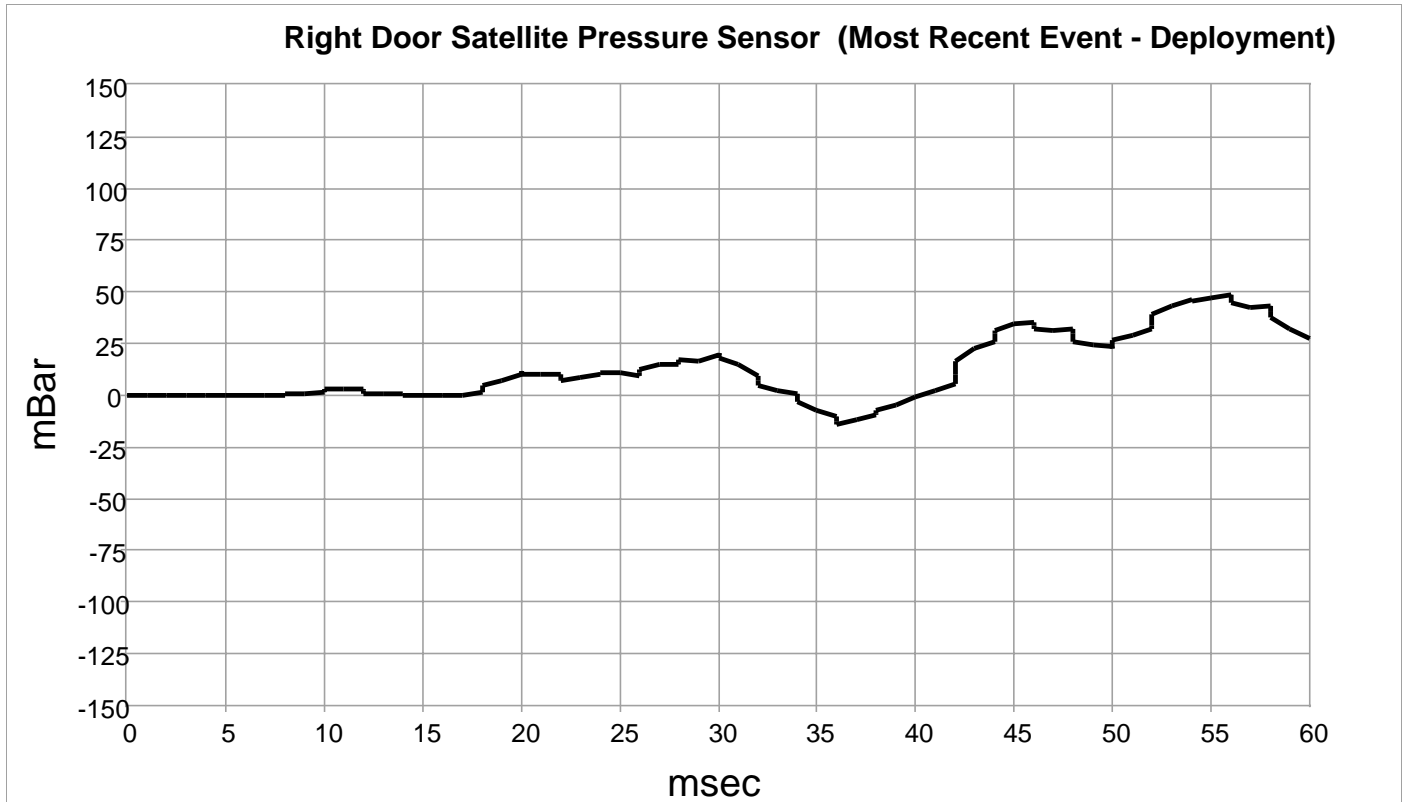
Right Frontal Peripheral Sensor X (Most Recent Event - Deployment)

Time (msec)	Right Frontal Peripheral Sensor X (g)	Right Frontal Peripheral Sensor X Delta-V (MPH [km/h])	Time (msec)	Right Frontal Peripheral Sensor X (g)	Right Frontal Peripheral Sensor X Delta-V (MPH [km/h])	Time (msec)	Right Frontal Peripheral Sensor X (g)	Right Frontal Peripheral Sensor X Delta-V (MPH [km/h])
0	-4.00	0 [0]	25	36.00	11 [18]	50	28.00	34 [55]
0.5	-4.00	0 [0]	25.5	36.00	11 [18]	50.5	28.00	34 [55]
1	0.00	0 [0]	26	-4.00	11 [18]	51	-20.00	34 [55]
1.5	0.00	0 [0]	26.5	-4.00	11 [18]	51.5	-20.00	34 [54]
2	8.00	0 [0]	27	92.00	12 [20]	52	36.00	34 [55]
2.5	8.00	0 [0]	27.5	92.00	13 [21]	52.5	36.00	35 [56]
3	-4.00	0 [0]	28	36.00	14 [22]	53	-40.00	34 [55]
3.5	-4.00	0 [0]	28.5	36.00	14 [23]	53.5	-40.00	34 [54]
4	0.00	0 [0]	29	64.00	15 [24]	54	-40.00	34 [54]
4.5	0.00	0 [0]	29.5	64.00	16 [25]	54.5	-40.00	33 [53]
5	-12.00	0 [0]	30	64.00	16 [26]	55	52.00	34 [54]
5.5	-12.00	0 [0]	30.5	64.00	17 [27]	55.5	52.00	34 [55]
6	12.00	0 [0]	31	72.00	17 [28]	56	28.00	34 [55]
6.5	12.00	0 [0]	31.5	72.00	18 [29]	56.5	28.00	35 [56]
7	4.00	0 [0]	32	4.00	18 [29]	57	48.00	35 [56]
7.5	4.00	0 [0]	32.5	4.00	18 [29]	57.5	48.00	35 [57]
8	84.00	1 [2]	33	-28.00	18 [29]	58	28.00	36 [58]
8.5	84.00	2 [3]	33.5	-28.00	17 [28]	58.5	28.00	36 [58]
9	-116.00	1 [1]	34	44.00	18 [29]	59	-12.00	36 [58]
9.5	-116.00	-1 [-1]	34.5	44.00	19 [30]	59.5	-12.00	36 [58]
10	128.00	1 [1]	35	116.00	20 [32]			
10.5	128.00	2 [3]	35.5	116.00	21 [34]			
11	60.00	2 [4]	36	72.00	22 [35]			
11.5	60.00	3 [5]	36.5	72.00	22 [36]			
12	44.00	4 [6]	37	8.00	22 [36]			
12.5	44.00	4 [7]	37.5	8.00	22 [36]			
13	-72.00	4 [6]	38	4.00	22 [36]			
13.5	-72.00	2 [4]	38.5	4.00	22 [36]			
14	-132.00	1 [2]	39	20.00	23 [37]			
14.5	-132.00	0 [0]	39.5	20.00	23 [37]			
15	128.00	1 [2]	40	72.00	24 [38]			
15.5	128.00	2 [4]	40.5	72.00	24 [39]			
16	32.00	3 [5]	41	84.00	25 [41]			
16.5	32.00	3 [5]	41.5	84.00	26 [42]			
17	100.00	4 [7]	42	76.00	27 [44]			
17.5	100.00	6 [9]	42.5	76.00	28 [45]			
18	24.00	6 [9]	43	20.00	28 [45]			
18.5	24.00	6 [9]	43.5	20.00	28 [45]			
19	112.00	7 [11]	44	68.00	29 [47]			
19.5	112.00	8 [13]	44.5	68.00	30 [48]			
20	-68.00	7 [12]	45	20.00	30 [48]			
20.5	-68.00	7 [11]	45.5	20.00	30 [48]			
21	120.00	8 [13]	46	12.00	30 [49]			
21.5	120.00	9 [15]	46.5	12.00	30 [49]			
22	144.00	11 [17]	47	44.00	30 [49]			
22.5	144.00	12 [20]	47.5	44.00	31 [50]			
23	-72.00	11 [18]	48	8.00	31 [50]			
23.5	-72.00	11 [17]	48.5	8.00	31 [50]			
24	0.00	11 [17]	49	112.00	32 [52]			
24.5	0.00	11 [17]	49.5	112.00	34 [54]			



Left Door Satellite Pressure Sensor (Most Recent Event - Deployment)

Time (msec)	Left Door Satellite Pressure Sensor (mBar)	Time (msec)	Left Door Satellite Pressure Sensor (mBar)	Time (msec)	Left Door Satellite Pressure Sensor (mBar)
0	0.00	25	3.12	50	3.12
0.5	0.00	25.5	4.68	50.5	0.00
1	0.00	26	5.46	51	-0.78
1.5	0.00	26.5	5.46	51.5	-4.68
2	0.00	27	4.68	52	-7.03
2.5	0.00	27.5	1.56	52.5	-4.68
3	0.00	28	0.00	53	0.00
3.5	0.00	28.5	0.78	53.5	0.00
4	0.00	29	0.78	54	-0.78
4.5	0.78	29.5	3.12	54.5	-4.68
5	0.78	30	10.15	55	-3.12
5.5	0.78	30.5	12.50	55.5	-0.78
6	0.78	31	20.31	56	0.00
6.5	0.78	31.5	29.68	56.5	1.56
7	0.00	32	32.03	57	2.34
7.5	0.00	32.5	29.68	57.5	0.78
8	0.00	33	34.37	58	4.68
8.5	0.00	33.5	36.71	58.5	5.46
9	0.00	34	28.90	59	0.78
9.5	0.78	34.5	16.40	59.5	0.00
10	2.34	35	7.81		
10.5	3.12	35.5	0.00		
11	3.90	36	-1.56		
11.5	4.68	36.5	-3.90		
12	6.25	37	-5.46		
12.5	6.25	37.5	-2.34		
13	5.46	38	3.90		
13.5	3.90	38.5	10.15		
14	3.90	39	15.62		
14.5	3.12	39.5	19.53		
15	2.34	40	18.75		
15.5	0.78	40.5	22.65		
16	0.78	41	31.25		
16.5	0.78	41.5	35.15		
17	2.34	42	32.03		
17.5	4.68	42.5	32.81		
18	5.46	43	37.50		
18.5	7.03	43.5	29.68		
19	7.03	44	33.59		
19.5	9.37	44.5	38.28		
20	11.71	45	25.78		
20.5	13.28	45.5	16.40		
21	12.50	46	14.06		
21.5	13.28	46.5	11.71		
22	14.84	47	7.81		
22.5	14.06	47.5	4.68		
23	12.50	48	0.00		
23.5	11.71	48.5	-3.90		
24	7.03	49	-0.78		
24.5	7.03	49.5	1.56		



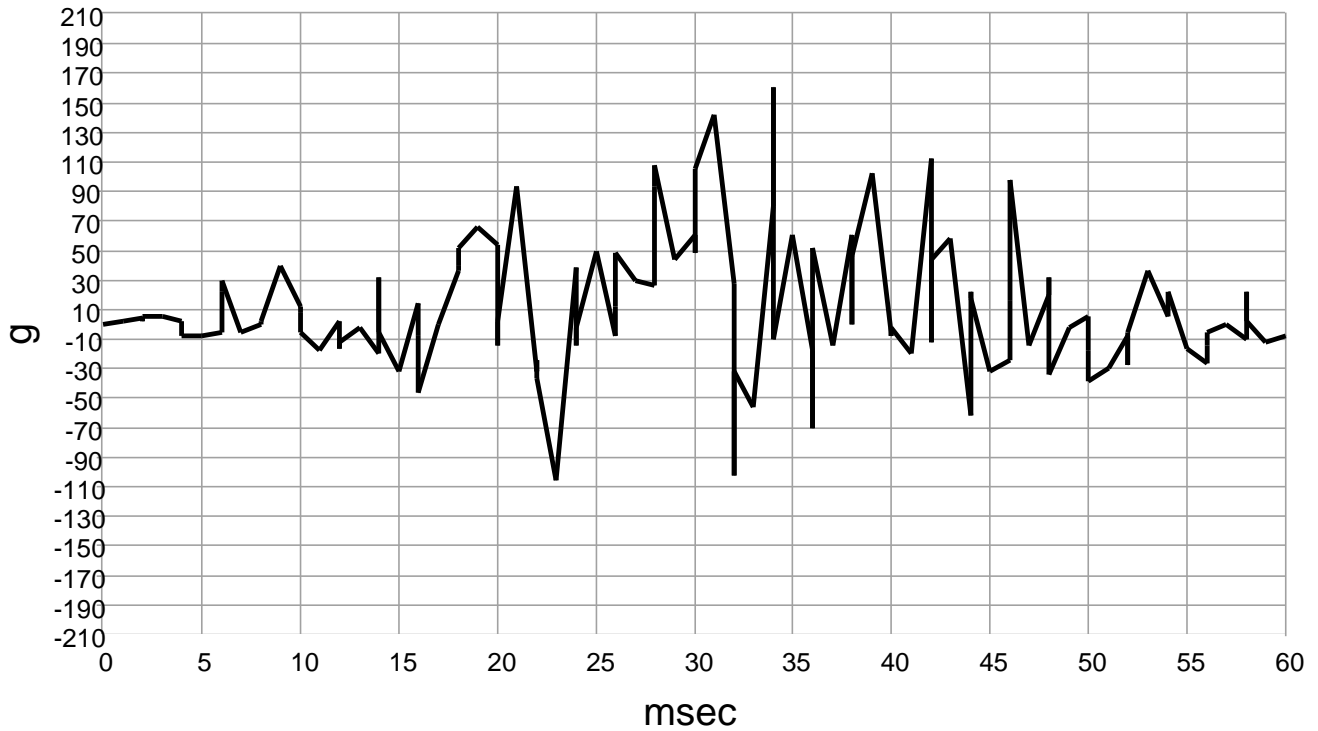
Right Door Satellite Pressure Sensor (Most Recent Event - Deployment)

Time (msec)	Right Door Satellite Pressure Sensor (mBar)
0	0.00
0.5	0.00
1	0.00
1.5	0.00
2	0.00
2.5	0.00
3	0.00
3.5	0.00
4	0.00
4.5	0.00
5	0.00
5.5	0.00
6	0.00
6.5	0.00
7	0.00
7.5	0.00
8	0.78
8.5	0.78
9	0.78
9.5	1.56
10	2.34
10.5	3.12
11	3.12
11.5	3.12
12	2.34
12.5	0.78
13	0.78
13.5	0.78
14	0.78
14.5	0.00
15	0.00
15.5	0.00
16	0.00
16.5	0.00
17	0.00
17.5	1.56
18	3.12
18.5	4.68
19	7.03
19.5	10.15
20	11.71
20.5	10.15
21	10.15
21.5	10.15
22	7.81
22.5	7.03
23	8.59
23.5	10.15
24	10.15
24.5	10.93

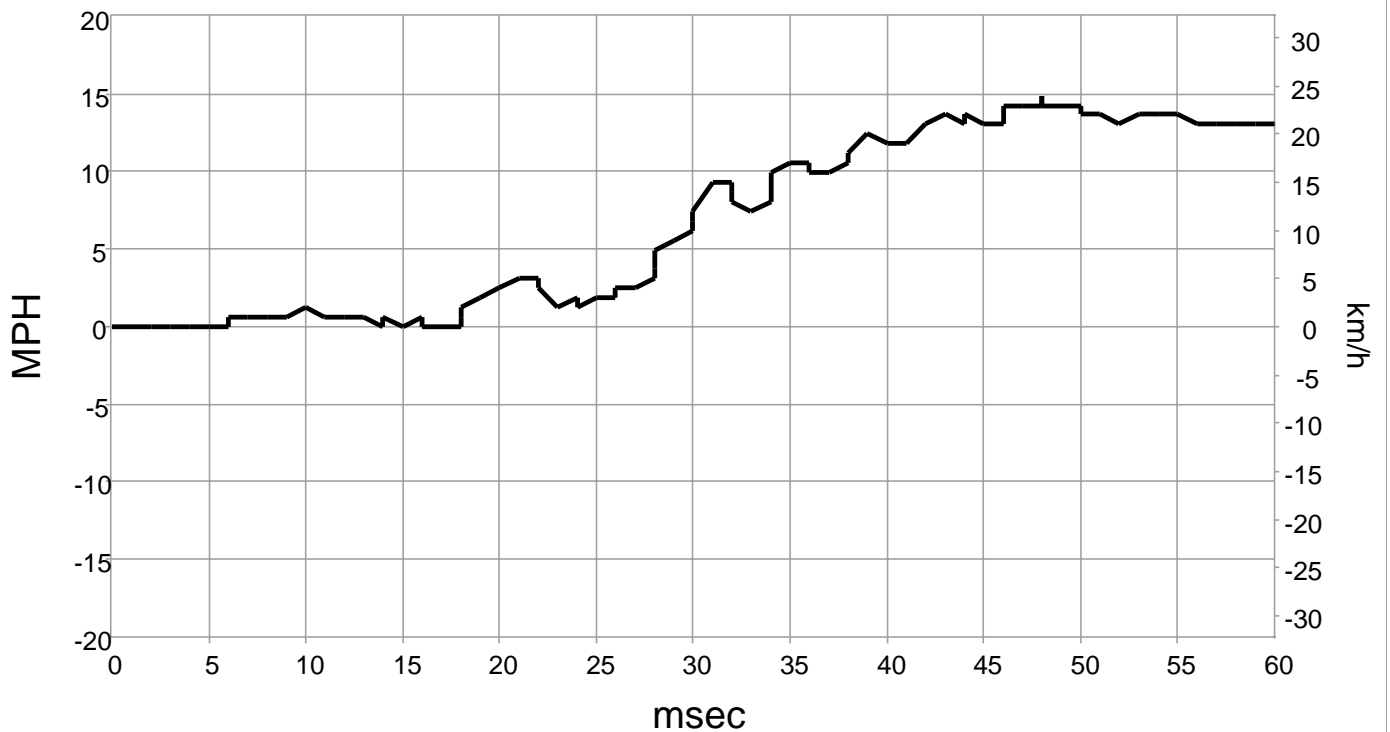
Time (msec)	Right Door Satellite Pressure Sensor (mBar)
25	10.93
25.5	9.37
26	10.93
26.5	12.50
27	14.84
27.5	14.84
28	15.62
28.5	17.18
29	16.40
29.5	19.53
30	20.31
30.5	17.96
31	14.84
31.5	9.37
32	7.03
32.5	4.68
33	2.34
33.5	0.78
34	-0.78
34.5	-3.12
35	-7.03
35.5	-10.15
36	-12.50
36.5	-14.06
37	-11.71
37.5	-9.37
38	-8.59
38.5	-7.03
39	-4.68
39.5	-0.78
40	-0.78
40.5	-0.78
41	2.34
41.5	5.46
42	10.15
42.5	16.40
43	22.65
43.5	25.78
44	29.68
44.5	31.25
45	34.37
45.5	35.15
46	33.59
46.5	32.03
47	31.25
47.5	32.03
48	29.68
48.5	25.78
49	24.21
49.5	23.43

Time (msec)	Right Door Satellite Pressure Sensor (mBar)
50	22.65
50.5	26.56
51	28.90
51.5	32.03
52	33.59
52.5	39.06
53	42.96
53.5	46.09
54	45.31
54.5	45.31
55	46.87
55.5	48.43
56	48.43
56.5	44.53
57	42.18
57.5	42.96
58	40.62
58.5	37.50
59	32.03
59.5	27.34

Left B-Pillar Impact Peripheral Sensor Y (Most Recent Event - Deployment)



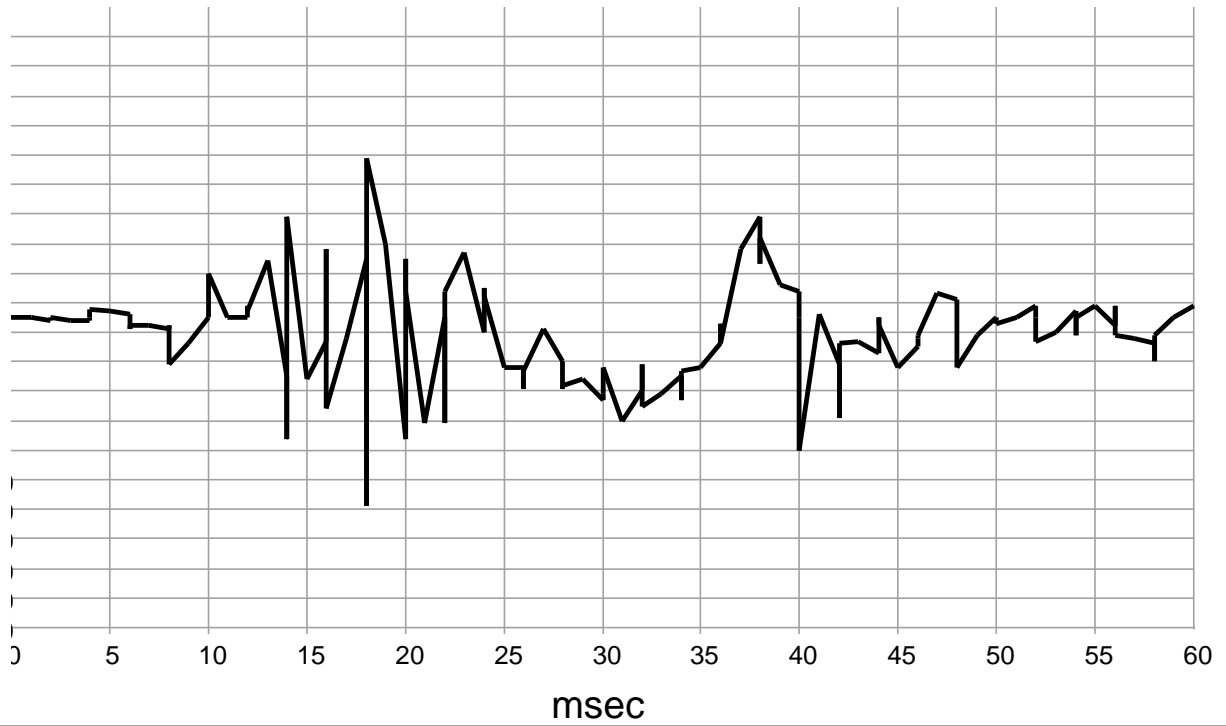
Left B-Pillar Impact Peripheral Sensor Y Delta-V (Most Recent Event - Deployment)



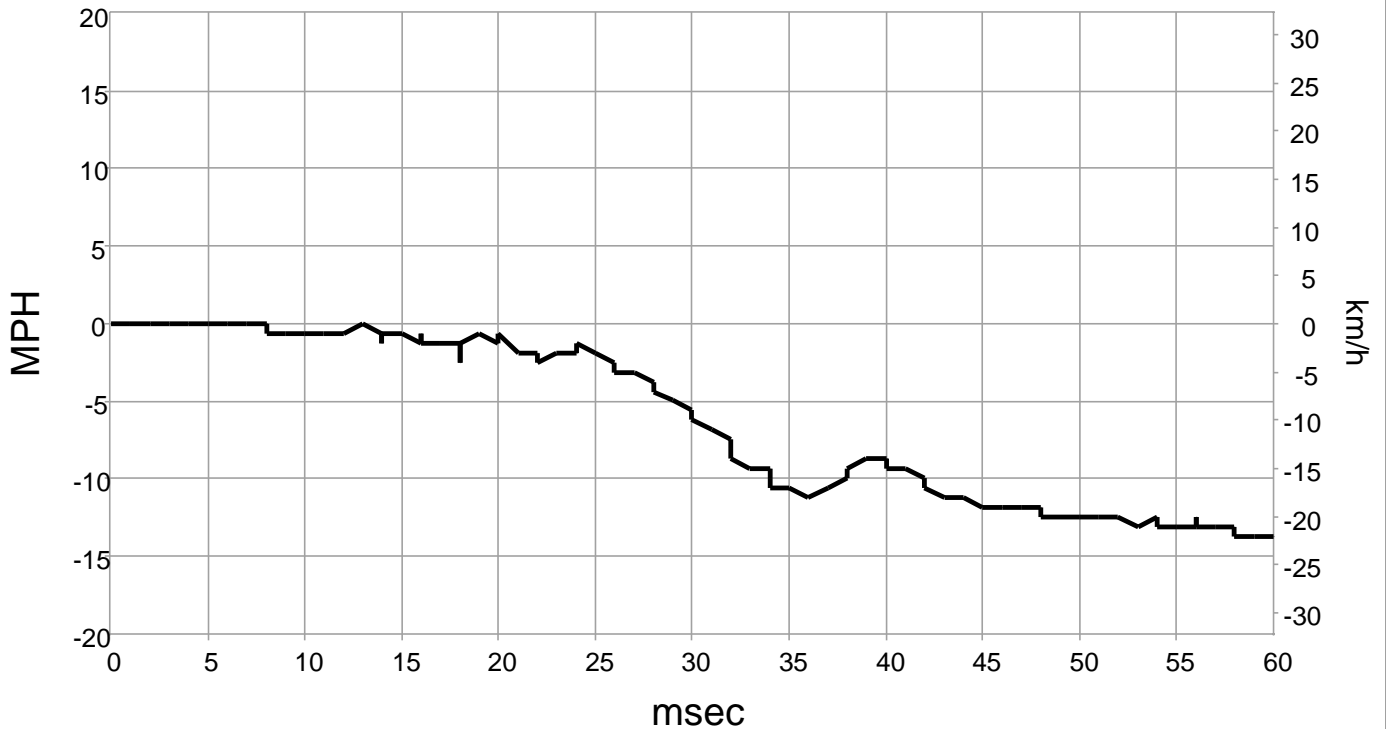
Left B-Pillar Impact Peripheral Sensor Y (Most Recent Event - Deployment)

Time (msec)	Left B-Pillar Impact Peripheral Sensor Y (g)	Left B-Pillar Impact Peripheral Sensor Y Delta-V (MPH [km/h])	Time (msec)	Left B-Pillar Impact Peripheral Sensor Y (g)	Left B-Pillar Impact Peripheral Sensor Y Delta-V (MPH [km/h])	Time (msec)	Left B-Pillar Impact Peripheral Sensor Y (g)	Left B-Pillar Impact Peripheral Sensor Y Delta-V (MPH [km/h])
0	0.000	0 [0]	25	50.000	2 [3]	50	-18.000	14 [23]
0.5	0.000	0 [0]	25.5	-8.000	2 [3]	50.5	-38.000	14 [22]
1	2.000	0 [0]	26	12.000	2 [3]	51	-30.000	14 [22]
1.5	4.000	0 [0]	26.5	48.000	2 [4]	51.5	-8.000	13 [21]
2	2.000	0 [0]	27	30.000	2 [4]	52	-28.000	13 [21]
2.5	6.000	0 [0]	27.5	26.000	3 [5]	52.5	-6.000	13 [21]
3	6.000	0 [0]	28	94.000	4 [6]	53	36.000	14 [22]
3.5	2.000	0 [0]	28.5	108.000	5 [8]	53.5	6.000	14 [22]
4	-8.000	0 [0]	29	44.000	6 [9]	54	6.000	14 [22]
4.5	-8.000	0 [0]	29.5	60.000	6 [10]	54.5	22.000	14 [22]
5	-8.000	0 [0]	30	48.000	7 [11]	55	-16.000	14 [22]
5.5	-6.000	0 [0]	30.5	106.000	7 [12]	55.5	-26.000	13 [21]
6	22.000	0 [0]	31	142.000	9 [15]	56	-14.000	13 [21]
6.5	30.000	1 [1]	31.5	28.000	9 [15]	56.5	-6.000	13 [21]
7	-6.000	1 [1]	32	-102.000	9 [14]	57	0.000	13 [21]
7.5	0.000	1 [1]	32.5	-32.000	8 [13]	57.5	-10.000	13 [21]
8	0.000	1 [1]	33	-56.000	7 [12]	58	22.000	13 [21]
8.5	2.000	1 [1]	33.5	80.000	8 [13]	58.5	2.000	13 [21]
9	40.000	1 [1]	34	160.000	10 [16]	59	-12.000	13 [21]
9.5	12.000	1 [2]	34.5	-10.000	10 [16]	59.5	-8.000	13 [21]
10	8.000	1 [2]	35	60.000	11 [17]			
10.5	-6.000	1 [2]	35.5	-18.000	11 [17]			
11	-18.000	1 [1]	36	-70.000	10 [16]			
11.5	2.000	1 [1]	36.5	52.000	10 [16]			
12	-16.000	1 [1]	37	-14.000	10 [16]			
12.5	-12.000	1 [1]	37.5	60.000	11 [17]			
13	-2.000	1 [1]	38	0.000	11 [17]			
13.5	-20.000	0 [0]	38.5	46.000	11 [18]			
14	32.000	1 [1]	39	102.000	12 [20]			
14.5	-6.000	1 [1]	39.5	-6.000	12 [19]			
15	-32.000	0 [0]	40	-8.000	12 [19]			
15.5	14.000	1 [1]	40.5	-2.000	12 [19]			
16	-8.000	0 [0]	41	-20.000	12 [19]			
16.5	-46.000	0 [0]	41.5	112.000	13 [21]			
17	0.000	0 [0]	42	-12.000	13 [21]			
17.5	36.000	0 [0]	42.5	44.000	13 [21]			
18	40.000	1 [1]	43	58.000	14 [22]			
18.5	52.000	1 [2]	43.5	-62.000	13 [21]			
19	66.000	2 [3]	44	22.000	14 [22]			
19.5	54.000	2 [4]	44.5	18.000	14 [22]			
20	-14.000	2 [4]	45	-32.000	13 [21]			
20.5	2.000	2 [4]	45.5	-24.000	13 [21]			
21	94.000	3 [5]	46	16.000	13 [21]			
21.5	-32.000	3 [5]	46.5	98.000	14 [23]			
22	-24.000	2 [4]	47	-14.000	14 [23]			
22.5	-36.000	2 [4]	47.5	20.000	14 [23]			
23	-106.000	1 [2]	48	32.000	15 [24]			
23.5	38.000	2 [3]	48.5	-34.000	14 [23]			
24	-14.000	1 [2]	49	-2.000	14 [23]			
24.5	-2.000	1 [2]	49.5	6.000	14 [23]			

Right B-Pillar Impact Peripheral Sensor Y (Most Recent Event - Deployment)



Right B-Pillar Impact Peripheral Sensor Y Delta-V (Most Recent Event - Deployment)



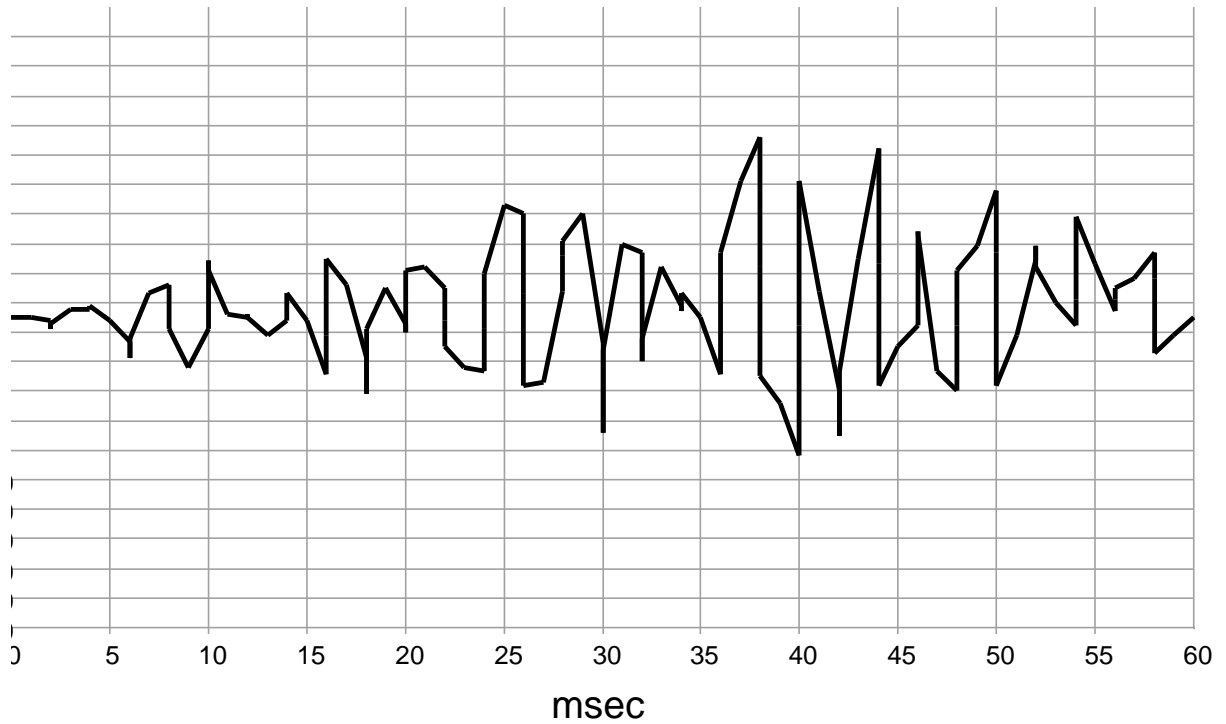
Right B-Pillar Impact Peripheral Sensor Y (Most Recent Event - Deployment)

Time (msec)	Right B-Pillar Impact Peripheral Sensor Y (g)	Right B-Pillar Impact Peripheral Sensor Y Delta-V (MPH)
0	0.000	0 [0]
0.5	0.000	0 [0]
1	0.000	0 [0]
1.5	-2.000	0 [0]
2	0.000	0 [0]
2.5	0.000	0 [0]
3	-2.000	0 [0]
3.5	-2.000	0 [0]
4	0.000	0 [0]
4.5	6.000	0 [0]
5	4.000	0 [0]
5.5	2.000	0 [0]
6	-8.000	0 [0]
6.5	-6.000	0 [0]
7	-6.000	0 [0]
7.5	-8.000	0 [0]
8	-6.000	0 [0]
8.5	-32.000	-1 [-1]
9	-18.000	-1 [-1]
9.5	0.000	-1 [-1]
10	4.000	-1 [-1]
10.5	30.000	-1 [-1]
11	0.000	-1 [-1]
11.5	0.000	-1 [-1]
12	8.000	-1 [-1]
12.5	4.000	-1 [-1]
13	38.000	0 [0]
13.5	-40.000	-1 [-1]
14	-82.000	-1 [-2]
14.5	68.000	-1 [-1]
15	-42.000	-1 [-1]
15.5	-16.000	-1 [-2]
16	46.000	-1 [-1]
16.5	-62.000	-1 [-2]
17	-14.000	-1 [-2]
17.5	40.000	-1 [-2]
18	-128.000	-2 [-4]
18.5	108.000	-1 [-2]
19	50.000	-1 [-1]
19.5	-82.000	-1 [-2]
20	40.000	-1 [-2]
20.5	18.000	-1 [-1]
21	-72.000	-2 [-3]
21.5	0.000	-2 [-3]
22	-72.000	-2 [-4]
22.5	18.000	-2 [-4]
23	44.000	-2 [-3]
23.5	-10.000	-2 [-3]
24	20.000	-2 [-3]
24.5	14.000	-1 [-2]

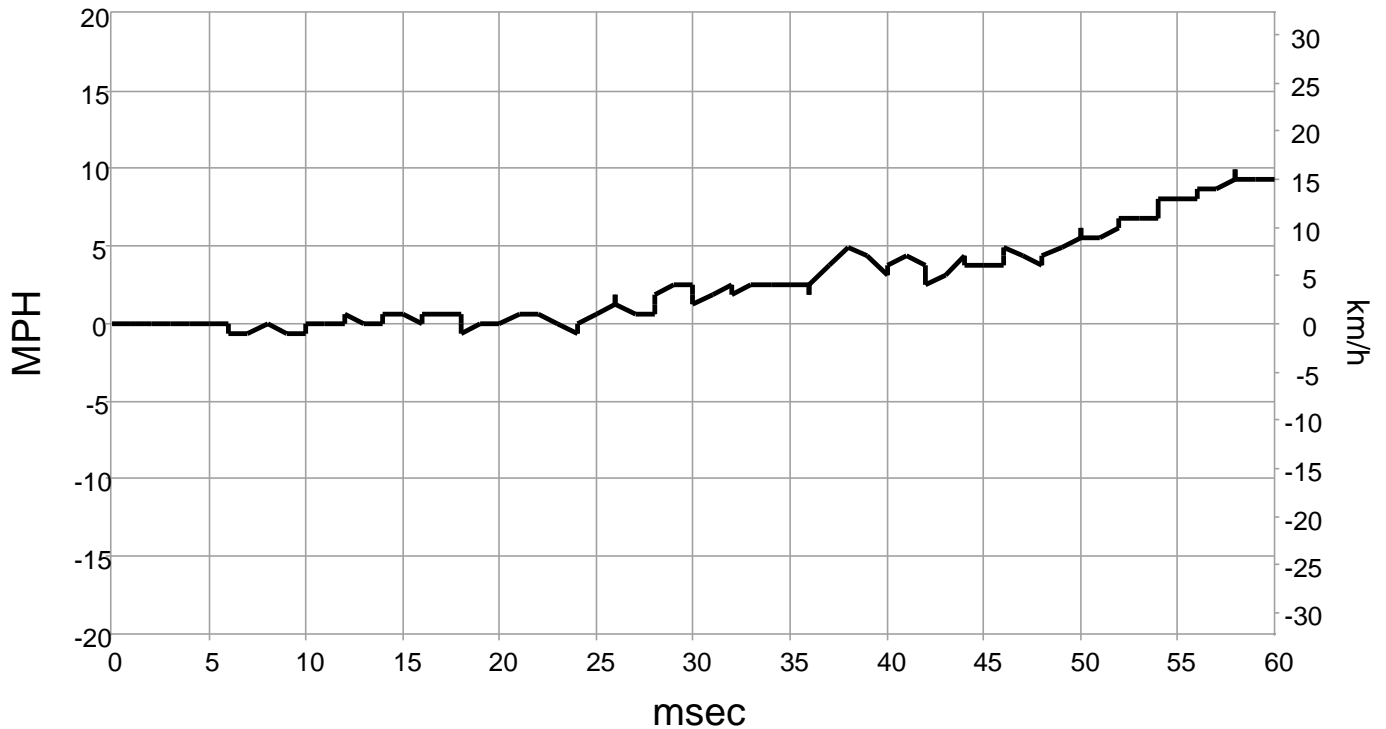
Time (msec)	Right B-Pillar Impact Peripheral Sensor Y (g)	Right B-Pillar Impact Peripheral Sensor Y Delta-V (MPH)
25	-34.000	-2 [-3]
25.5	-34.000	-2 [-4]
26	-48.000	-2 [-4]
26.5	-36.000	-3 [-5]
27	-8.000	-3 [-5]
27.5	-30.000	-4 [-6]
28	-48.000	-4 [-6]
28.5	-46.000	-4 [-7]
29	-42.000	-5 [-8]
29.5	-56.000	-6 [-9]
30	-52.000	-6 [-10]
30.5	-34.000	-6 [-10]
31	-70.000	-7 [-11]
31.5	-50.000	-7 [-12]
32	-32.000	-8 [-13]
32.5	-60.000	-9 [-14]
33	-52.000	-9 [-15]
33.5	-40.000	-9 [-15]
34	-56.000	-10 [-16]
34.5	-36.000	-11 [-17]
35	-34.000	-11 [-17]
35.5	-18.000	-11 [-18]
36	-4.000	-11 [-18]
36.5	-18.000	-11 [-18]
37	46.000	-11 [-17]
37.5	68.000	-10 [-16]
38	36.000	-10 [-16]
38.5	54.000	-9 [-15]
39	22.000	-9 [-14]
39.5	18.000	-9 [-14]
40	0.000	-9 [-14]
40.5	-90.000	-9 [-15]
41	2.000	-9 [-15]
41.5	-32.000	-10 [-16]
42	-68.000	-11 [-17]
42.5	-18.000	-11 [-17]
43	-16.000	-11 [-18]
43.5	-24.000	-11 [-18]
44	0.000	-11 [-18]
44.5	-6.000	-11 [-18]
45	-34.000	-12 [-19]
45.5	-20.000	-12 [-19]
46	-14.000	-12 [-19]
46.5	-12.000	-12 [-19]
47	16.000	-12 [-19]
47.5	12.000	-12 [-19]
48	-22.000	-12 [-19]
48.5	-34.000	-12 [-20]
49	-12.000	-12 [-20]
49.5	0.000	-12 [-20]

Time (msec)	Right B-Pillar Impact Peripheral Sensor Y (g)	Right B-Pillar Impact Peripheral Sensor Y Delta-V (MPH)
50	-2.000	-12 [-20]
50.5	-4.000	-12 [-20]
51	0.000	-12 [-20]
51.5	8.000	-12 [-20]
52	0.000	-12 [-20]
52.5	-16.000	-12 [-20]
53	-10.000	-13 [-21]
53.5	4.000	-12 [-20]
54	-12.000	-13 [-21]
54.5	0.000	-13 [-21]
55	8.000	-13 [-21]
55.5	-6.000	-13 [-21]
56	8.000	-12 [-20]
56.5	-12.000	-13 [-21]
57	-14.000	-13 [-21]
57.5	-18.000	-13 [-21]
58	-30.000	-14 [-22]
58.5	-12.000	-14 [-22]
59	0.000	-14 [-22]
59.5	8.000	-14 [-22]

Left C-Pillar Impact Peripheral Sensor Y (Most Recent Event - Deployment)



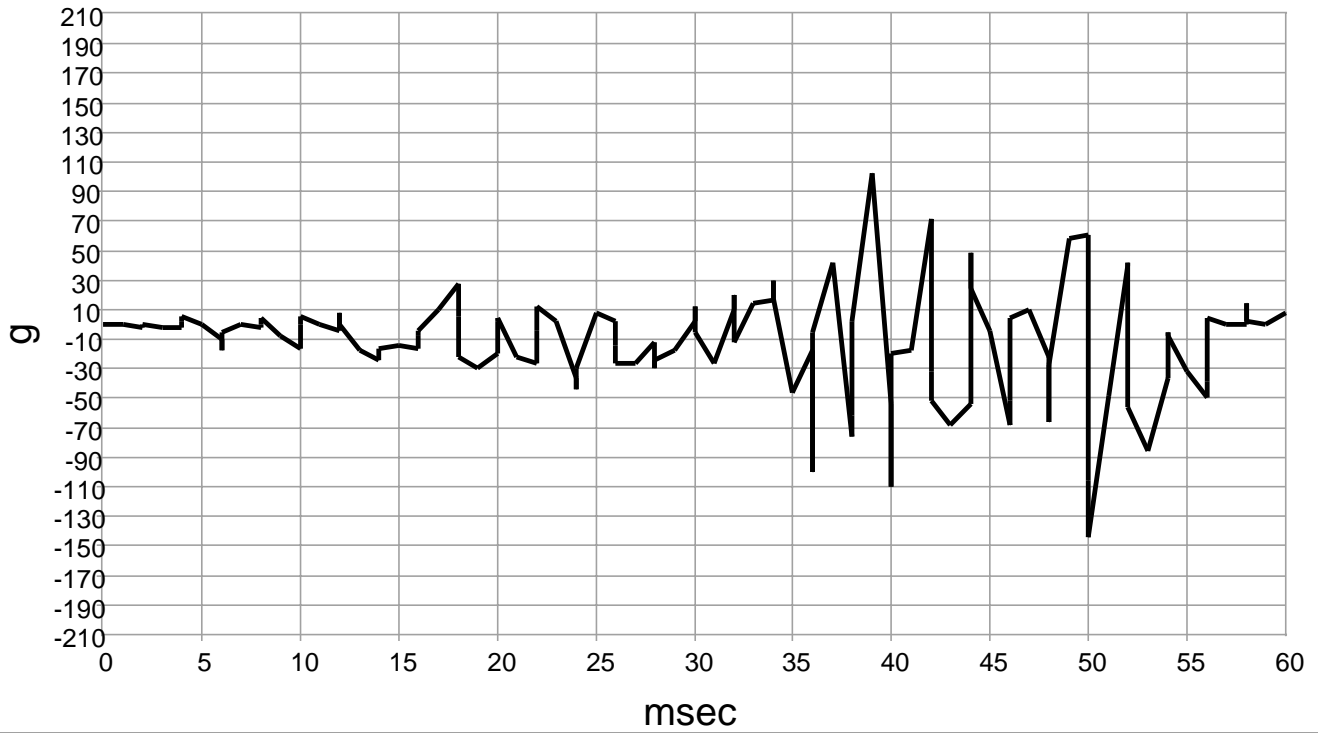
Left C-Pillar Impact Peripheral Sensor Y Delta-V (Most Recent Event - Deployment)



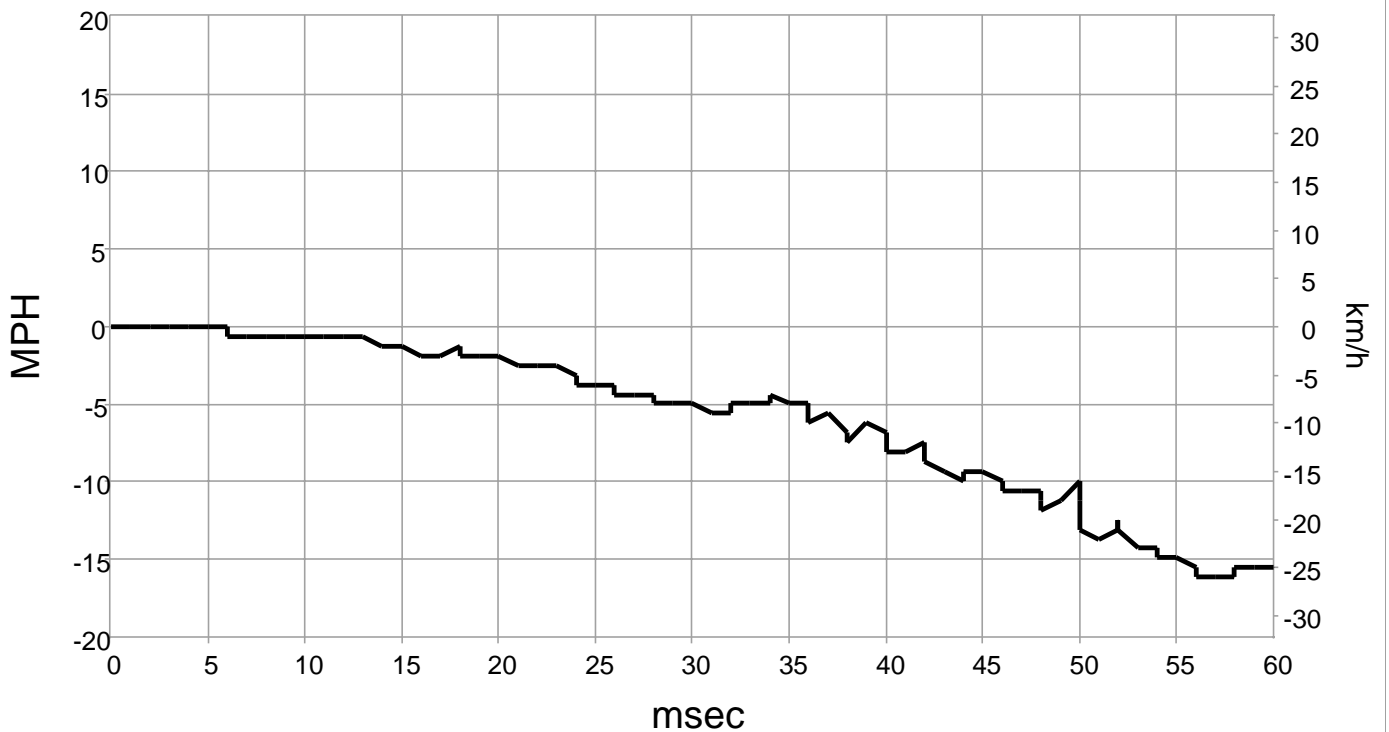
Left C-Pillar Impact Peripheral Sensor Y (Most Recent Event - Deployment)

Time (msec)	Left C-Pillar Impact Peripheral Sensor Y (g)	Left C-Pillar Impact Peripheral Sensor Y Delta-V (MPH [km/h])	Time (msec)	Left C-Pillar Impact Peripheral Sensor Y (g)	Left C-Pillar Impact Peripheral Sensor Y Delta-V (MPH [km/h])	Time (msec)	Left C-Pillar Impact Peripheral Sensor Y (g)	Left C-Pillar Impact Peripheral Sensor Y Delta-V (MPH [km/h])
0	0.000	0 [0]	25	76.000	1 [1]	50	44.000	6 [10]
0.5	0.000	0 [0]	25.5	70.000	1 [2]	50.5	-46.000	6 [9]
1	0.000	0 [0]	26	16.000	2 [3]	51	-12.000	6 [9]
1.5	-2.000	0 [0]	26.5	-46.000	1 [2]	51.5	38.000	6 [10]
2	-8.000	0 [0]	27	-44.000	1 [1]	52	48.000	7 [11]
2.5	-4.000	0 [0]	27.5	18.000	1 [1]	52.5	34.000	7 [11]
3	6.000	0 [0]	28	42.000	1 [2]	53	10.000	7 [11]
3.5	6.000	0 [0]	28.5	52.000	2 [3]	53.5	-6.000	7 [11]
4	6.000	0 [0]	29	70.000	2 [4]	54	12.000	7 [11]
4.5	8.000	0 [0]	29.5	-18.000	2 [4]	54.5	68.000	8 [13]
5	-2.000	0 [0]	30	-78.000	2 [3]	55	36.000	8 [13]
5.5	-16.000	0 [0]	30.5	-22.000	1 [2]	55.5	4.000	8 [13]
6	-28.000	-1 [-1]	31	50.000	2 [3]	56	12.000	9 [14]
6.5	-14.000	-1 [-1]	31.5	44.000	2 [4]	56.5	20.000	9 [14]
7	16.000	-1 [-1]	32	-30.000	2 [3]	57	26.000	9 [14]
7.5	22.000	0 [0]	32.5	-14.000	2 [3]	57.5	44.000	9 [15]
8	16.000	0 [0]	33	34.000	2 [4]	58	26.000	10 [16]
8.5	-8.000	0 [0]	33.5	8.000	2 [4]	58.5	-24.000	9 [15]
9	-34.000	-1 [-1]	34	4.000	2 [4]	59	-12.000	9 [15]
9.5	-8.000	-1 [-1]	34.5	16.000	2 [4]	59.5	0.000	9 [15]
10	38.000	0 [0]	35	0.000	2 [4]			
10.5	32.000	0 [0]	35.5	-38.000	2 [4]			
11	2.000	0 [0]	36	-22.000	2 [3]			
11.5	0.000	0 [0]	36.5	44.000	2 [4]			
12	2.000	1 [1]	37	92.000	4 [6]			
12.5	0.000	1 [1]	37.5	122.000	5 [8]			
13	-12.000	0 [0]	38	34.000	5 [8]			
13.5	-2.000	0 [0]	38.5	-40.000	5 [8]			
14	16.000	1 [1]	39	-58.000	4 [7]			
14.5	16.000	1 [1]	39.5	-94.000	3 [5]			
15	-2.000	1 [1]	40	-6.000	3 [5]			
15.5	-38.000	0 [0]	40.5	92.000	4 [6]			
16	-12.000	0 [0]	41	18.000	4 [7]			
16.5	40.000	1 [1]	41.5	-50.000	4 [6]			
17	22.000	1 [1]	42	-80.000	2 [4]			
17.5	-28.000	1 [1]	42.5	-36.000	2 [4]			
18	-52.000	0 [0]	43	40.000	3 [5]			
18.5	-8.000	-1 [-1]	43.5	114.000	4 [7]			
19	20.000	0 [0]	44	36.000	4 [7]			
19.5	-4.000	0 [0]	44.5	-46.000	4 [6]			
20	-10.000	0 [0]	45	-20.000	4 [6]			
20.5	32.000	0 [0]	45.5	-6.000	4 [6]			
21	34.000	1 [1]	46	58.000	4 [7]			
21.5	20.000	1 [1]	46.5	56.000	5 [8]			
22	-2.000	1 [1]	47	-36.000	4 [7]			
22.5	-20.000	1 [1]	47.5	-50.000	4 [6]			
23	-34.000	0 [0]	48	-6.000	4 [6]			
23.5	-36.000	-1 [-1]	48.5	32.000	4 [7]			
24	-8.000	-1 [-1]	49	48.000	5 [8]			
24.5	30.000	0 [0]	49.5	86.000	6 [9]			

Right C-Pillar Impact Peripheral Sensor Y (Most Recent Event - Deployment)

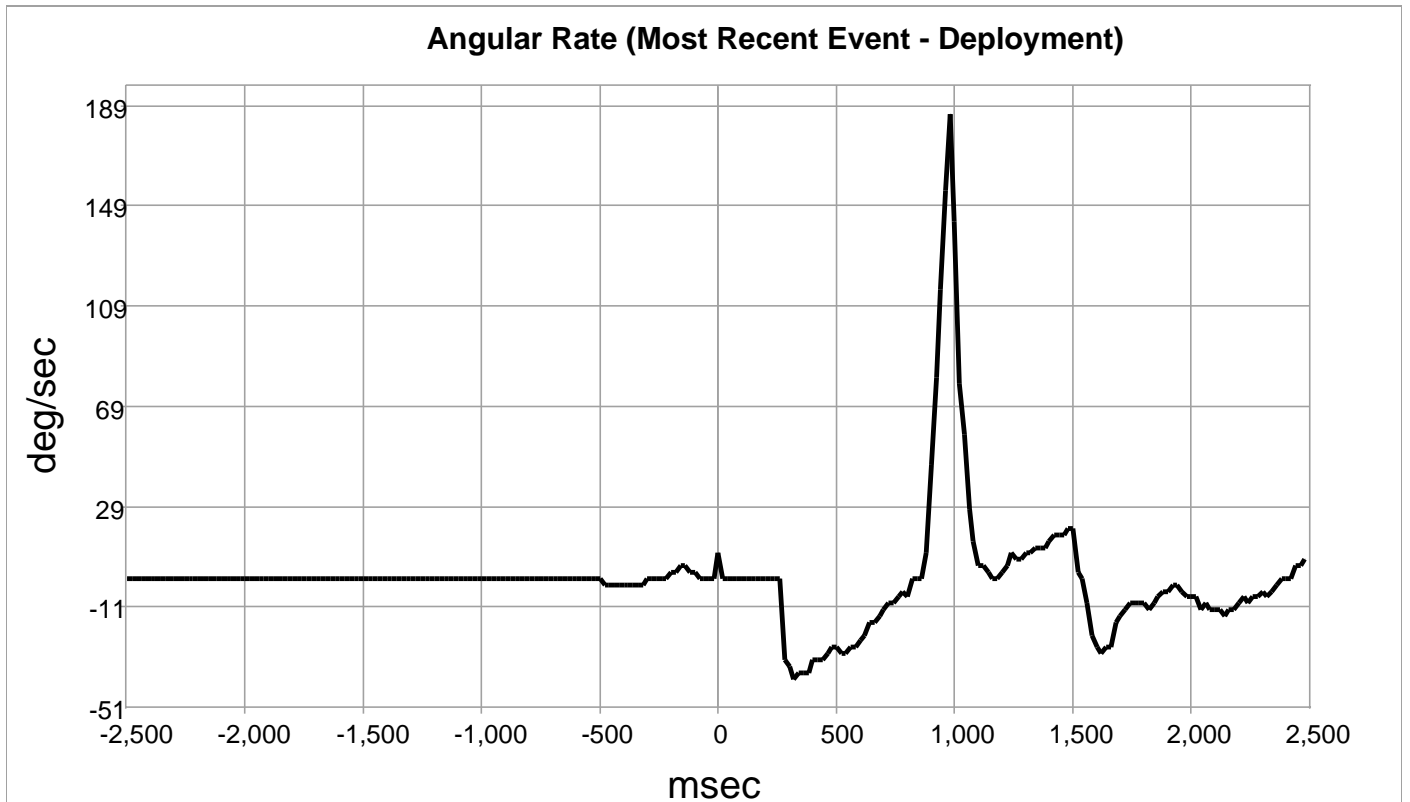


Right C-Pillar Impact Peripheral Sensor Y Delta-V (Most Recent Event - Deployment)



Right C-Pillar Impact Peripheral Sensor Y (Most Recent Event - Deployment)

Time (msec)	Right C-Pillar Impact Peripheral Sensor Y (g)	Right C-Pillar Impact Peripheral Sensor Y Delta-V (MPH)	Time (msec)	Right C-Pillar Impact Peripheral Sensor Y (g)	Right C-Pillar Impact Peripheral Sensor Y Delta-V (MPH)	Time (msec)	Right C-Pillar Impact Peripheral Sensor Y (g)	Right C-Pillar Impact Peripheral Sensor Y Delta-V (MPH)
0	0.000	0 [0]	25	8.000	-4 [-6]	50	-106.000	-11 [-18]
0.5	0.000	0 [0]	25.5	2.000	-4 [-6]	50.5	-144.000	-13 [-21]
1	0.000	0 [0]	26	-14.000	-4 [-6]	51	-48.000	-14 [-22]
1.5	-2.000	0 [0]	26.5	-26.000	-4 [-7]	51.5	40.000	-13 [-21]
2	-2.000	0 [0]	27	-26.000	-4 [-7]	52	42.000	-12 [-20]
2.5	0.000	0 [0]	27.5	-12.000	-4 [-7]	52.5	-56.000	-13 [-21]
3	-2.000	0 [0]	28	-30.000	-5 [-8]	53	-86.000	-14 [-23]
3.5	-2.000	0 [0]	28.5	-24.000	-5 [-8]	53.5	-36.000	-14 [-23]
4	2.000	0 [0]	29	-18.000	-5 [-8]	54	-6.000	-15 [-24]
4.5	6.000	0 [0]	29.5	2.000	-5 [-8]	54.5	-8.000	-15 [-24]
5	0.000	0 [0]	30	12.000	-5 [-8]	55	-32.000	-15 [-24]
5.5	-10.000	0 [0]	30.5	-6.000	-5 [-8]	55.5	-50.000	-16 [-25]
6	-18.000	0 [0]	31	-26.000	-6 [-9]	56	-38.000	-16 [-26]
6.5	-6.000	-1 [-1]	31.5	10.000	-6 [-9]	56.5	4.000	-16 [-26]
7	0.000	-1 [-1]	32	20.000	-5 [-8]	57	0.000	-16 [-26]
7.5	-2.000	-1 [-1]	32.5	-12.000	-5 [-8]	57.5	0.000	-16 [-26]
8	0.000	-1 [-1]	33	14.000	-5 [-8]	58	14.000	-16 [-26]
8.5	4.000	-1 [-1]	33.5	16.000	-5 [-8]	58.5	2.000	-16 [-25]
9	-8.000	-1 [-1]	34	30.000	-4 [-7]	59	0.000	-16 [-25]
9.5	-16.000	-1 [-1]	34.5	18.000	-4 [-7]	59.5	8.000	-16 [-25]
10	0.000	-1 [-1]	35	-46.000	-5 [-8]			
10.5	6.000	-1 [-1]	35.5	-18.000	-5 [-8]			
11	0.000	-1 [-1]	36	-100.000	-6 [-10]			
11.5	-4.000	-1 [-1]	36.5	-6.000	-6 [-10]			
12	8.000	-1 [-1]	37	42.000	-6 [-9]			
12.5	0.000	-1 [-1]	37.5	-76.000	-7 [-11]			
13	-18.000	-1 [-1]	38	-62.000	-7 [-12]			
13.5	-24.000	-1 [-2]	38.5	2.000	-7 [-12]			
14	-22.000	-1 [-2]	39	102.000	-6 [-10]			
14.5	-16.000	-1 [-2]	39.5	-54.000	-7 [-11]			
15	-14.000	-1 [-2]	40	-110.000	-8 [-13]			
15.5	-16.000	-2 [-3]	40.5	-20.000	-8 [-13]			
16	-8.000	-2 [-3]	41	-18.000	-8 [-13]			
16.5	-4.000	-2 [-3]	41.5	72.000	-7 [-12]			
17	10.000	-2 [-3]	42	-32.000	-8 [-13]			
17.5	28.000	-1 [-2]	42.5	-52.000	-9 [-14]			
18	6.000	-1 [-2]	43	-68.000	-9 [-15]			
18.5	-22.000	-2 [-3]	43.5	-54.000	-10 [-16]			
19	-30.000	-2 [-3]	44	48.000	-9 [-15]			
19.5	-20.000	-2 [-3]	44.5	24.000	-9 [-15]			
20	2.000	-2 [-3]	45	-4.000	-9 [-15]			
20.5	4.000	-2 [-3]	45.5	-68.000	-10 [-16]			
21	-22.000	-2 [-4]	46	-52.000	-11 [-17]			
21.5	-26.000	-2 [-4]	46.5	4.000	-11 [-17]			
22	-4.000	-2 [-4]	47	10.000	-11 [-17]			
22.5	12.000	-2 [-4]	47.5	-22.000	-11 [-17]			
23	2.000	-2 [-4]	48	-66.000	-11 [-18]			
23.5	-36.000	-3 [-5]	48.5	-28.000	-12 [-19]			
24	-44.000	-3 [-5]	49	58.000	-11 [-18]			
24.5	-30.000	-4 [-6]	49.5	60.000	-10 [-16]			



Angular Rate (Most Recent Event - Deployment)

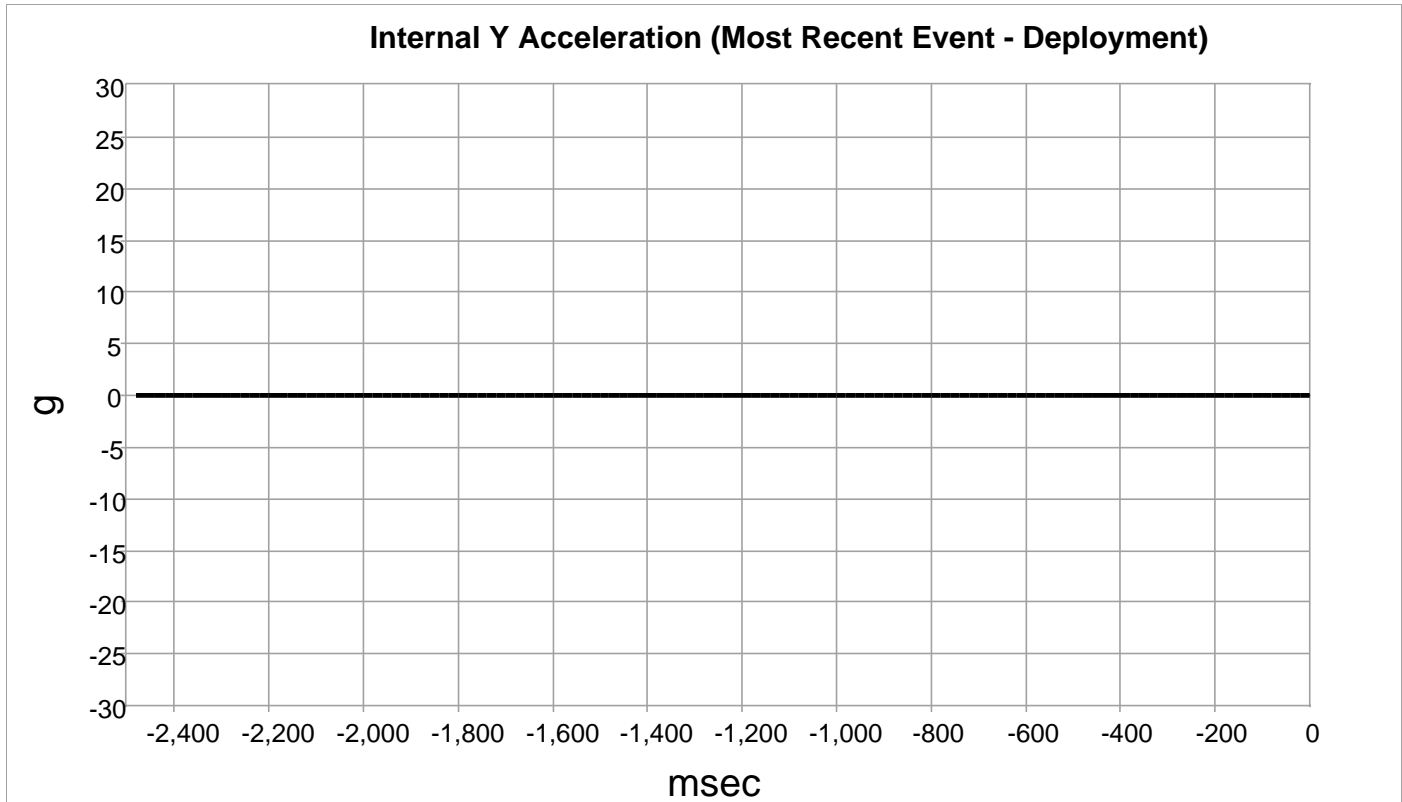
Time (msec)	Angular Rate (deg/sec)
-2500	0.0
-2480	0.0
-2460	0.0
-2440	0.0
-2420	0.0
-2400	0.0
-2380	0.0
-2360	0.0
-2340	0.0
-2320	0.0
-2300	0.0
-2280	0.0
-2260	0.0
-2240	0.0
-2220	0.0
-2200	0.0
-2180	0.0
-2160	0.0
-2140	0.0
-2120	0.0
-2100	0.0
-2080	0.0
-2060	0.0
-2040	0.0
-2020	0.0
-2000	0.0
-1980	0.0
-1960	0.0
-1940	0.0
-1920	0.0
-1900	0.0
-1880	0.0
-1860	0.0
-1840	0.0
-1820	0.0
-1800	0.0
-1780	0.0
-1760	0.0
-1740	0.0
-1720	0.0
-1700	0.0
-1680	0.0
-1660	0.0
-1640	0.0
-1620	0.0
-1600	0.0
-1580	0.0
-1560	0.0
-1540	0.0
-1520	0.0

Time (msec)	Angular Rate (deg/sec)
-1500	0.0
-1480	0.0
-1460	0.0
-1440	0.0
-1420	0.0
-1400	0.0
-1380	0.0
-1360	0.0
-1340	0.0
-1320	0.0
-1300	0.0
-1280	0.0
-1260	0.0
-1240	0.0
-1220	0.0
-1200	0.0
-1180	0.0
-1160	0.0
-1140	0.0
-1120	0.0
-1100	0.0
-1080	0.0
-1060	0.0
-1040	0.0
-1020	0.0
-1000	0.0
-980	0.0
-960	0.0
-940	0.0
-920	0.0
-900	0.0
-880	0.0
-860	0.0
-840	0.0
-820	0.0
-800	0.0
-780	0.0
-760	0.0
-740	0.0
-720	0.0
-700	0.0
-680	0.0
-660	0.0
-640	0.0
-620	0.0
-600	0.0
-580	0.0
-560	0.0
-540	0.0
-520	0.0

Time (msec)	Angular Rate (deg/sec)
-500	0.0
-480	-2.5
-460	-2.5
-440	-2.5
-420	-2.5
-400	-2.5
-380	-2.5
-360	-2.5
-340	-2.5
-320	-2.5
-300	0.0
-280	0.0
-260	0.0
-240	0.0
-220	0.0
-200	2.5
-180	2.5
-160	5.0
-140	5.0
-120	2.5
-100	2.5
-80	0.0
-60	0.0
-40	0.0
-20	0.0
0	10.0
20	0.0
40	0.0
60	0.0
80	0.0
100	0.0
120	0.0
140	0.0
160	0.0
180	0.0
200	0.0
220	0.0
240	0.0
260	0.0
280	-32.5
300	-35.0
320	-40.0
340	-37.5
360	-37.5
380	-37.5
400	-32.5
420	-32.5
440	-32.5
460	-30.0
480	-27.5

Angular Rate (Most Recent Event - Deployment)

Time (msec)	Angular Rate (deg/sec)	Time (msec)	Angular Rate (deg/sec)
500	-27.5	1500	20.0
520	-30.0	1520	2.5
540	-30.0	1540	0.0
560	-27.5	1560	-10.0
580	-27.5	1580	-22.5
600	-25.0	1600	-27.5
620	-22.5	1620	-30.0
640	-17.5	1640	-27.5
660	-17.5	1660	-27.5
680	-15.0	1680	-17.5
700	-12.5	1700	-15.0
720	-10.0	1720	-12.5
740	-10.0	1740	-10.0
760	-7.5	1760	-10.0
780	-5.0	1780	-10.0
800	-7.5	1800	-10.0
820	0.0	1820	-12.5
840	0.0	1840	-10.0
860	0.0	1860	-7.5
880	10.0	1880	-5.0
900	45.0	1900	-5.0
920	80.0	1920	-2.5
940	115.0	1940	-2.5
960	155.0	1960	-5.0
980	185.0	1980	-7.5
1000	142.5	2000	-7.5
1020	77.5	2020	-7.5
1040	57.5	2040	-12.5
1060	27.5	2060	-10.0
1080	15.0	2080	-12.5
1100	5.0	2100	-12.5
1120	5.0	2120	-12.5
1140	2.5	2140	-15.0
1160	0.0	2160	-12.5
1180	0.0	2180	-12.5
1200	2.5	2200	-10.0
1220	5.0	2220	-7.5
1240	10.0	2240	-10.0
1260	7.5	2260	-7.5
1280	7.5	2280	-7.5
1300	10.0	2300	-5.0
1320	10.0	2320	-7.5
1340	12.5	2340	-5.0
1360	12.5	2360	-2.5
1380	12.5	2380	0.0
1400	15.0	2400	0.0
1420	17.5	2420	0.0
1440	17.5	2440	5.0
1460	17.5	2460	5.0
1480	20.0	2480	7.5



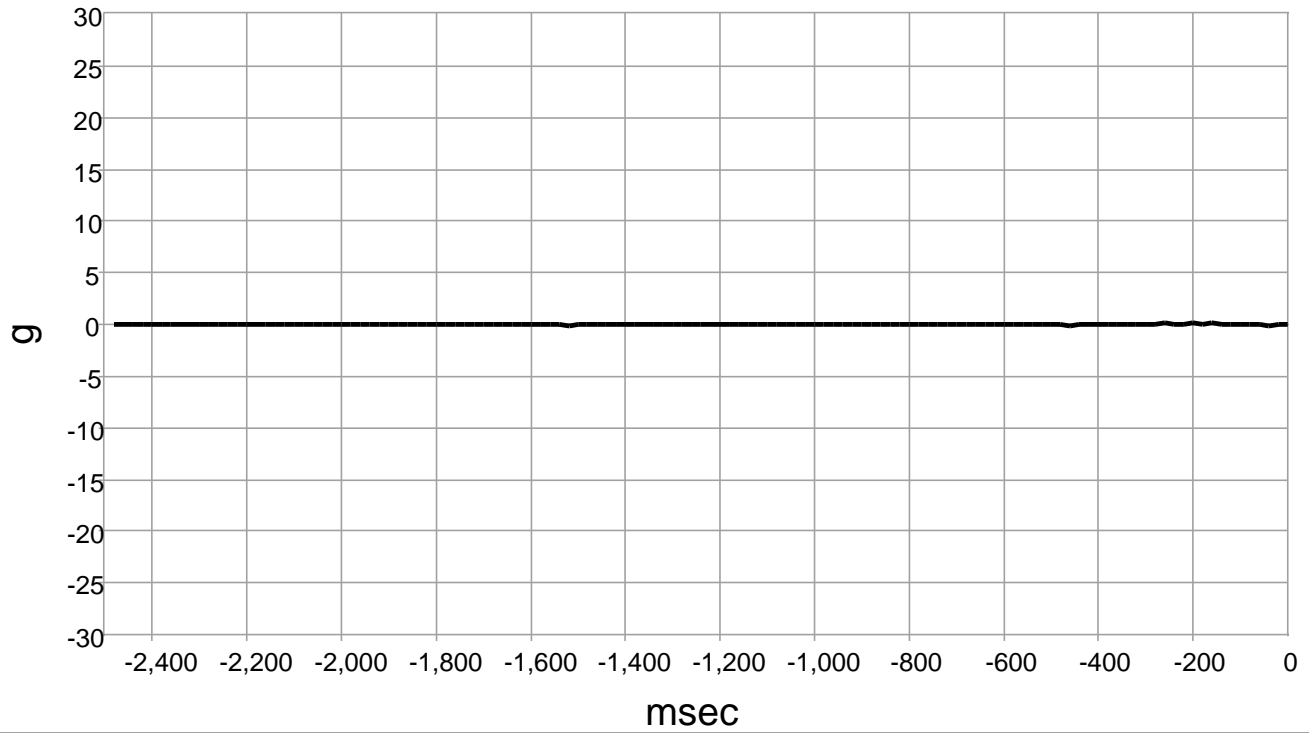
Internal Y Acceleration (Most Recent Event - Deployment)

Time (msec)	Internal Y Acceleration (g)
-2480	0.00000
-2460	0.00000
-2440	0.00000
-2420	0.00000
-2400	0.00000
-2380	0.00000
-2360	0.00000
-2340	0.00000
-2320	0.00000
-2300	0.00000
-2280	0.00000
-2260	0.00000
-2240	0.00000
-2220	0.00000
-2200	0.00000
-2180	0.00000
-2160	0.00000
-2140	0.00000
-2120	0.00000
-2100	0.00000
-2080	0.00000
-2060	0.00000
-2040	0.00000
-2020	0.00000
-2000	0.00000
-1980	0.00000
-1960	0.00000
-1940	0.00000
-1920	0.00000
-1900	0.00000
-1880	0.00000
-1860	0.00000
-1840	0.00000
-1820	0.00000
-1800	0.00000
-1780	0.00000
-1760	0.00000
-1740	0.00000
-1720	0.00000
-1700	0.00000
-1680	0.00000
-1660	0.00000
-1640	0.00000
-1620	0.00000
-1600	0.00000
-1580	0.00000
-1560	0.00000
-1540	0.00000
-1520	0.00000
-1500	0.00000

Time (msec)	Internal Y Acceleration (g)
-1480	0.00000
-1460	0.00000
-1440	0.00000
-1420	0.00000
-1400	0.00000
-1380	0.00000
-1360	0.00000
-1340	0.00000
-1320	0.00000
-1300	0.00000
-1280	0.00000
-1260	0.00000
-1240	0.00000
-1220	0.00000
-1200	0.00000
-1180	0.00000
-1160	0.00000
-1140	0.00000
-1120	0.00000
-1100	0.00000
-1080	0.00000
-1060	0.00000
-1040	0.00000
-1020	0.00000
-1000	0.00000
-980	0.00000
-960	0.00000
-940	0.00000
-920	0.00000
-900	0.00000
-880	0.00000
-860	0.00000
-840	0.00000
-820	0.00000
-800	0.00000
-780	0.00000
-760	0.00000
-740	0.00000
-720	0.00000
-700	0.00000
-680	0.00000
-660	0.00000
-640	0.00000
-620	0.00000
-600	0.00000
-580	0.00000
-560	0.00000
-540	0.00000
-520	0.00000
-500	0.00000

Time (msec)	Internal Y Acceleration (g)
-480	0.00000
-460	0.00000
-440	0.00000
-420	0.00000
-400	0.00000
-380	0.00000
-360	0.00000
-340	0.00000
-320	0.00000
-300	0.00000
-280	0.00000
-260	0.00000
-240	0.00000
-220	0.00000
-200	0.00000
-180	0.00000
-160	0.00000
-140	0.00000
-120	0.00000
-100	0.00000
-80	0.00000
-60	0.00000
-40	0.00000
-20	0.00000
0	0.00000

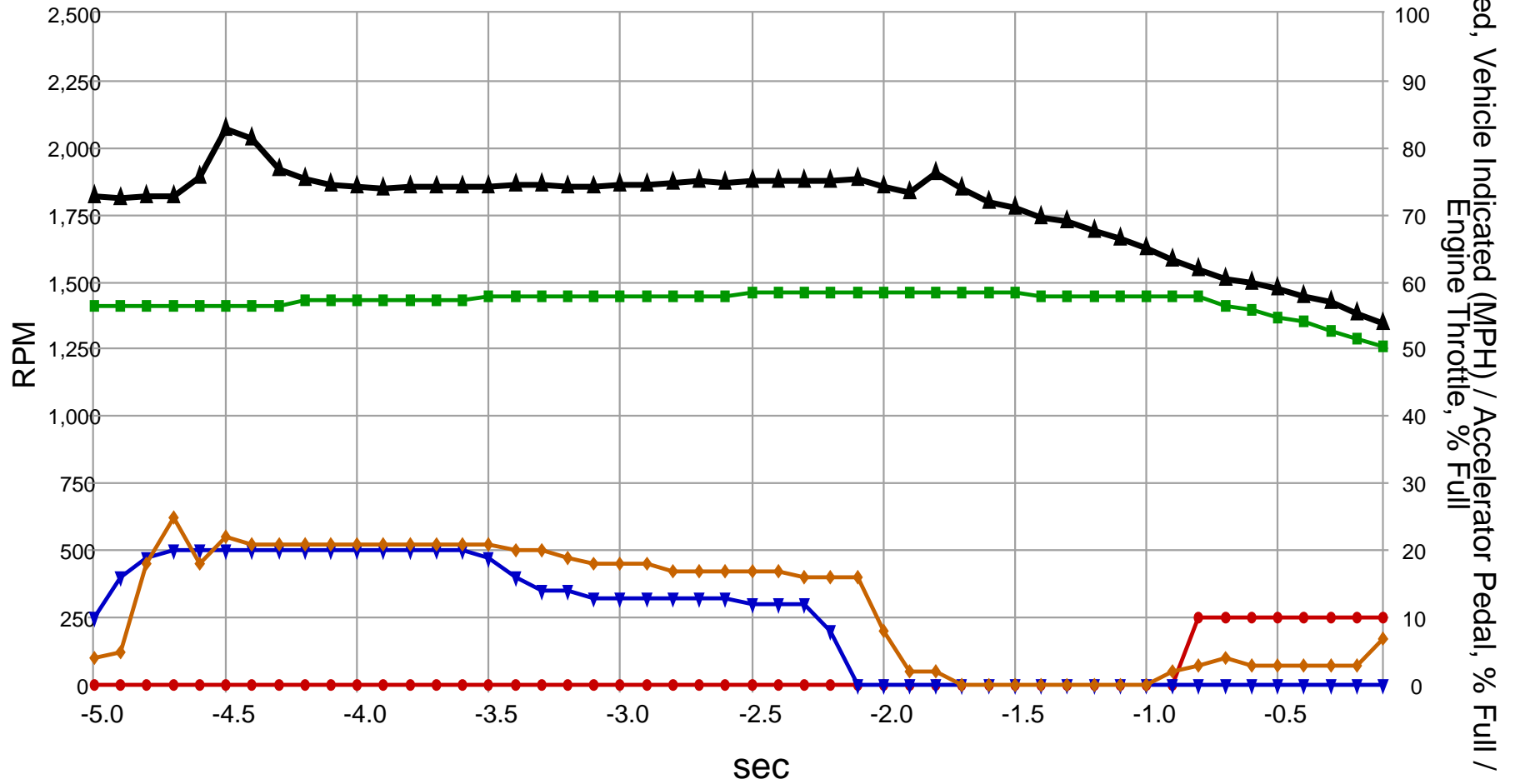
Low-g Z Acceleration Data Record (Most Recent Event - Deployment)



Low-g Z Acceleration Data Record (Most Recent Event - Deployment)

Time (msec)	Low-g Z Acceleration Data Record (g)	Time (msec)	Low-g Z Acceleration Data Record (g)	Time (msec)	Low-g Z Acceleration Data Record (g)
-2480	0.06245	-1480	-0.06245	-480	-0.06245
-2460	0.00000	-1460	0.00000	-460	-0.12491
-2440	0.00000	-1440	0.00000	-440	0.00000
-2420	0.06245	-1420	0.00000	-420	0.00000
-2400	0.00000	-1400	0.00000	-400	-0.06245
-2380	0.00000	-1380	0.00000	-380	0.00000
-2360	0.00000	-1360	0.00000	-360	0.00000
-2340	0.00000	-1340	0.00000	-340	0.00000
-2320	0.00000	-1320	0.00000	-320	0.00000
-2300	0.00000	-1300	0.00000	-300	0.06245
-2280	0.00000	-1280	0.00000	-280	0.00000
-2260	0.00000	-1260	0.00000	-260	0.12491
-2240	-0.06245	-1240	0.00000	-240	0.06245
-2220	-0.06245	-1220	0.00000	-220	0.06245
-2200	0.00000	-1200	0.00000	-200	0.12491
-2180	-0.06245	-1180	0.00000	-180	0.06245
-2160	-0.06245	-1160	-0.06245	-160	0.12491
-2140	-0.06245	-1140	-0.06245	-140	0.06245
-2120	-0.06245	-1120	0.06245	-120	0.00000
-2100	-0.06245	-1100	0.00000	-100	0.00000
-2080	0.00000	-1080	0.00000	-80	0.06245
-2060	0.00000	-1060	0.00000	-60	0.00000
-2040	0.00000	-1040	0.00000	-40	-0.12491
-2020	0.06245	-1020	0.00000	-20	0.00000
-2000	0.00000	-1000	0.00000	0	-0.06245
-1980	0.00000	-980	0.00000		
-1960	0.00000	-960	0.00000		
-1940	0.00000	-940	0.00000		
-1920	0.00000	-920	0.00000		
-1900	0.00000	-900	0.00000		
-1880	0.00000	-880	0.00000		
-1860	0.00000	-860	0.00000		
-1840	0.00000	-840	0.00000		
-1820	0.00000	-820	0.00000		
-1800	0.06245	-800	0.00000		
-1780	-0.06245	-780	0.00000		
-1760	0.00000	-760	0.00000		
-1740	0.06245	-740	0.00000		
-1720	0.00000	-720	0.00000		
-1700	0.00000	-700	0.00000		
-1680	0.00000	-680	0.00000		
-1660	0.06245	-660	0.00000		
-1640	0.00000	-640	0.00000		
-1620	0.00000	-620	0.00000		
-1600	0.00000	-600	0.00000		
-1580	-0.06245	-580	0.00000		
-1560	0.00000	-560	0.00000		
-1540	0.00000	-540	-0.06245		
-1520	-0.12491	-520	0.00000		
-1500	0.00000	-500	-0.06245		

Pre-Crash Data -5 to 0 Sec



- ▲ Engine RPM
- Speed, Vehicle Indicated (MPH)
- Service Brake (0=Off/10=On)
- ▼ Accelerator Pedal, % Full
- ◆ Engine Throttle, % Full

Pre-Crash Data -5 to 0 Sec (Part I - 100 msec) (Most Recent Event - Deployment) - Table 1 of 2

Time (sec)	Pre-Crash Recorder Status	Speed, Vehicle Indicated (MPH [km/h])	Accelerator Pedal, % Full (%)	Engine Throttle, % Full (%)	Service Brake	Engine RPM (RPM)	ABS Activity	Stability Control
-5.0	Complete	57 [91]	10	4	Off	1,819	No	On
-4.9	Complete	57 [91]	16	5	Off	1,815	No	On
-4.8	Complete	57 [91]	19	18	Off	1,822	No	On
-4.7	Complete	57 [91]	20	25	Off	1,818	No	On
-4.6	Complete	57 [91]	20	18	Off	1,893	No	On
-4.5	Complete	57 [91]	20	22	Off	2,070	No	On
-4.4	Complete	57 [91]	20	21	Off	2,031	No	On
-4.3	Complete	57 [91]	20	21	Off	1,923	No	On
-4.2	Complete	57 [92]	20	21	Off	1,881	No	On
-4.1	Complete	57 [92]	20	21	Off	1,863	No	On
-4.0	Complete	57 [92]	20	21	Off	1,852	No	On
-3.9	Complete	57 [92]	20	21	Off	1,851	No	On
-3.8	Complete	57 [92]	20	21	Off	1,852	No	On
-3.7	Complete	57 [92]	20	21	Off	1,853	No	On
-3.6	Complete	57 [92]	20	21	Off	1,855	No	On
-3.5	Complete	58 [93]	19	21	Off	1,857	No	On
-3.4	Complete	58 [93]	16	20	Off	1,862	No	On
-3.3	Complete	58 [93]	14	20	Off	1,860	No	On
-3.2	Complete	58 [93]	14	19	Off	1,858	No	On
-3.1	Complete	58 [93]	13	18	Off	1,856	No	On
-3.0	Complete	58 [93]	13	18	Off	1,859	No	On
-2.9	Complete	58 [93]	13	18	Off	1,863	No	On
-2.8	Complete	58 [93]	13	17	Off	1,871	No	On
-2.7	Complete	58 [93]	13	17	Off	1,875	No	On
-2.6	Complete	58 [93]	13	17	Off	1,873	No	On
-2.5	Complete	58 [94]	12	17	Off	1,876	No	On
-2.4	Complete	58 [94]	12	17	Off	1,877	No	On
-2.3	Complete	58 [94]	12	16	Off	1,880	No	On
-2.2	Complete	58 [94]	8	16	Off	1,878	No	On
-2.1	Complete	58 [94]	0	16	Off	1,885	No	On
-2.0	Complete	58 [94]	0	8	Off	1,853	No	On
-1.9	Complete	58 [94]	0	2	Off	1,834	No	On
-1.8	Complete	58 [94]	0	2	Off	1,902	No	On
-1.7	Complete	58 [94]	0	0	Off	1,846	No	On
-1.6	Complete	58 [94]	0	0	Off	1,800	No	On
-1.5	Complete	58 [94]	0	0	Off	1,780	No	On
-1.4	Complete	58 [93]	0	0	Off	1,744	No	On
-1.3	Complete	58 [93]	0	0	Off	1,723	No	On
-1.2	Complete	58 [93]	0	0	Off	1,694	No	On
-1.1	Complete	58 [93]	0	0	Off	1,663	No	On
-1.0	Complete	58 [93]	0	0	Off	1,628	No	On
-0.9	Complete	58 [93]	0	2	Off	1,582	No	On
-0.8	Complete	58 [93]	0	3	On	1,545	No	On
-0.7	Complete	57 [91]	0	4	On	1,512	No	On
-0.6	Complete	56 [90]	0	3	On	1,500	No	On
-0.5	Complete	55 [88]	0	3	On	1,473	No	On
-0.4	Complete	54 [87]	0	3	On	1,450	No	On
-0.3	Complete	53 [85]	0	3	On	1,425	No	On
-0.2	Complete	52 [83]	0	3	On	1,380	No	On
-0.1	Complete	50 [81]	0	7	On	1,345	No	On

Pre-Crash Data -5 to 0 Sec (Part I - 100 msec) (Most Recent Event - Deployment) - Table 2 of 2

Time (sec)	Steering Input (deg)
-5.0	0.4
-4.9	0.4
-4.8	0.4
-4.7	0.3
-4.6	0.4
-4.5	0.2
-4.4	0.1
-4.3	0.1
-4.2	0.1
-4.1	0.2
-4.0	0.3
-3.9	0.3
-3.8	0.3
-3.7	0.3
-3.6	0.3
-3.5	0.3
-3.4	0.3
-3.3	0.3
-3.2	0.3
-3.1	0.3
-3.0	0.3
-2.9	0.3
-2.8	0.3
-2.7	0.3
-2.6	0.3
-2.5	0.3
-2.4	0.3
-2.3	0.2
-2.2	0.0
-2.1	0.0
-2.0	-0.3
-1.9	-1.0
-1.8	-1.0
-1.7	-1.0
-1.6	-1.1
-1.5	-1.6
-1.4	-1.6
-1.3	-1.0
-1.2	-0.7
-1.1	-0.7
-1.0	-0.6
-0.9	-0.7
-0.8	-0.7
-0.7	-2.1
-0.6	-9.7
-0.5	-14.7
-0.4	-17.0
-0.3	-25.1
-0.2	-15.7
-0.1	-11.9

Pre-Crash Data -5 to 0 Sec (Part II - 100 msec) (Most Recent Event - Deployment)

Time (sec)	Pre-Crash Recorder Status	Braking system, Maximum Braking	Wheel Speed, LF (MPH [km/h])	Wheel Speed, RF (MPH [km/h])	Wheel Speed, LR (MPH [km/h])	Wheel Speed, RR (MPH [km/h])	Yaw Rate (deg/sec)	Master Cylinder Pressure (Bar)
-5.0	Complete	Not Active	56 [90]	56 [90]	57 [91]	56 [90]	1.28	0.00
-4.9	Complete	Not Active	56 [90]	56 [90]	57 [91]	56 [90]	1.28	0.00
-4.8	Complete	Not Active	56 [90]	56 [90]	57 [91]	56 [90]	1.12	0.00
-4.7	Complete	Not Active	56 [90]	56 [90]	57 [91]	56 [90]	1.20	0.00
-4.6	Complete	Not Active	56 [90]	56 [90]	57 [91]	56 [90]	1.12	0.00
-4.5	Complete	Not Active	56 [90]	56 [90]	57 [91]	56 [90]	1.04	0.00
-4.4	Complete	Not Active	56 [90]	56 [90]	57 [91]	56 [90]	0.88	0.00
-4.3	Complete	Not Active	56 [90]	56 [90]	57 [91]	56 [90]	0.80	0.00
-4.2	Complete	Not Active	56 [90]	56 [90]	57 [91]	56 [90]	0.96	0.00
-4.1	Complete	Not Active	56 [90]	56 [90]	57 [91]	56 [90]	1.12	0.00
-4.0	Complete	Not Active	57 [91]	56 [90]	57 [91]	56 [90]	1.20	0.00
-3.9	Complete	Not Active	57 [91]	56 [90]	57 [91]	57 [91]	0.56	0.00
-3.8	Complete	Not Active	57 [91]	57 [91]	57 [92]	57 [91]	1.20	0.00
-3.7	Complete	Not Active	57 [91]	57 [91]	57 [92]	57 [91]	0.88	0.00
-3.6	Complete	Not Active	57 [91]	57 [91]	57 [92]	57 [91]	0.96	0.00
-3.5	Complete	Not Active	57 [91]	57 [91]	57 [92]	57 [91]	1.36	0.00
-3.4	Complete	Not Active	57 [91]	57 [92]	57 [92]	57 [91]	1.36	0.00
-3.3	Complete	Not Active	57 [92]	57 [91]	57 [92]	57 [91]	1.20	0.00
-3.2	Complete	Not Active	57 [92]	57 [92]	58 [93]	57 [92]	1.04	0.00
-3.1	Complete	Not Active	57 [92]	57 [92]	58 [93]	57 [92]	1.04	0.00
-3.0	Complete	Not Active	57 [92]	57 [92]	58 [93]	57 [92]	0.96	0.00
-2.9	Complete	Not Active	57 [92]	57 [92]	58 [93]	57 [92]	0.88	0.00
-2.8	Complete	Not Active	57 [92]	57 [92]	58 [93]	57 [92]	0.96	0.00
-2.7	Complete	Not Active	57 [92]	57 [92]	58 [93]	57 [92]	1.36	0.00
-2.6	Complete	Not Active	57 [92]	57 [92]	58 [93]	57 [92]	1.28	0.00
-2.5	Complete	Not Active	57 [92]	57 [92]	58 [93]	57 [92]	0.72	0.00
-2.4	Complete	Not Active	57 [92]	57 [92]	58 [93]	57 [92]	0.80	0.00
-2.3	Complete	Not Active	57 [92]	57 [92]	58 [93]	57 [92]	0.72	0.00
-2.2	Complete	Not Active	58 [93]	57 [92]	58 [94]	57 [92]	0.96	0.00
-2.1	Complete	Not Active	58 [93]	58 [93]	58 [94]	58 [93]	0.88	0.00
-2.0	Complete	Not Active	58 [93]	58 [93]	58 [94]	58 [93]	1.12	0.00
-1.9	Complete	Not Active	58 [93]	57 [92]	58 [93]	58 [93]	0.72	0.00
-1.8	Complete	Not Active	58 [93]	57 [92]	58 [94]	57 [92]	0.32	0.00
-1.7	Complete	Not Active	57 [92]	57 [92]	58 [93]	57 [92]	0.48	0.00
-1.6	Complete	Not Active	57 [92]	57 [92]	58 [93]	57 [92]	0.64	0.00
-1.5	Complete	Not Active	57 [92]	57 [92]	58 [93]	57 [92]	0.48	0.00
-1.4	Complete	Not Active	57 [92]	57 [92]	58 [93]	57 [92]	0.40	0.00
-1.3	Complete	Not Active	57 [92]	57 [92]	58 [93]	57 [92]	0.40	0.00
-1.2	Complete	Not Active	57 [92]	57 [92]	58 [93]	57 [92]	0.56	0.00
-1.1	Complete	Not Active	57 [92]	57 [92]	58 [93]	57 [92]	0.96	0.00
-1.0	Complete	Not Active	57 [92]	57 [92]	58 [93]	57 [92]	0.72	0.00
-0.9	Complete	Not Active	57 [92]	57 [92]	58 [93]	57 [92]	0.80	0.00
-0.8	Complete	Not Active	57 [92]	57 [92]	58 [93]	57 [92]	0.56	23.75
-0.7	Complete	Not Active	56 [90]	57 [91]	57 [91]	57 [91]	0.16	37.00
-0.6	Complete	Not Active	55 [89]	55 [89]	56 [90]	55 [89]	-1.20	40.75
-0.5	Complete	Not Active	54 [87]	53 [86]	55 [88]	54 [87]	-3.36	41.00
-0.4	Complete	Not Active	53 [85]	53 [85]	54 [87]	53 [86]	-4.80	41.50
-0.3	Complete	Not Active	52 [83]	52 [83]	53 [85]	53 [85]	-6.40	42.00
-0.2	Complete	Not Active	50 [80]	49 [79]	52 [83]	52 [83]	-6.96	53.75
-0.1	Complete	Not Active	49 [79]	48 [77]	50 [81]	50 [80]	-5.28	71.50

Pre-Crash Data -5 to 0 Sec (Part II - 250 msec) (Most Recent Event - Deployment) - Table 1 of 3

Time (sec)	Pre-Crash Recorder Status	Current Gear	Tire Pressure Indicator Lamp	Tire Pressure status, LF	Tire Pressure status, RF	Tire Pressure status, LR	Tire Pressure status, RR	Tire Pressure, LF (psi)
-5.00	Complete	Neutral	Off	Normal	Normal	Normal	Normal	32.64
-4.75	Complete	Neutral	Off	Normal	Normal	Normal	Normal	32.64
-4.50	Complete	Neutral	Off	Normal	Normal	Normal	Normal	32.64
-4.25	Complete	Neutral	Off	Normal	Normal	Normal	Normal	32.64
-4.00	Complete	Neutral	Off	Normal	Normal	Normal	Normal	32.64
-3.75	Complete	Neutral	Off	Normal	Normal	Normal	Normal	32.64
-3.50	Complete	Neutral	Off	Normal	Normal	Normal	Normal	32.64
-3.25	Complete	Neutral	Off	Normal	Normal	Normal	Normal	32.64
-3.00	Complete	Neutral	Off	Normal	Normal	Normal	Normal	32.64
-2.75	Complete	Neutral	Off	Normal	Normal	Normal	Normal	32.64
-2.50	Complete	Neutral	Off	Normal	Normal	Normal	Normal	32.64
-2.25	Complete	Neutral	Off	Normal	Normal	Normal	Normal	32.64
-2.00	Complete	Neutral	Off	Normal	Normal	Normal	Normal	32.64
-1.75	Complete	Neutral	Off	Normal	Normal	Normal	Normal	32.64
-1.50	Complete	Neutral	Off	Normal	Normal	Normal	Normal	32.64
-1.25	Complete	Neutral	Off	Normal	Normal	Normal	Normal	32.64
-1.00	Complete	Neutral	Off	Normal	Normal	Normal	Normal	32.64
-0.75	Complete	Neutral	Off	Normal	Normal	Normal	Normal	32.64
-0.50	Complete	Neutral	Off	Normal	Normal	Normal	Normal	32.64
-0.25	Complete	Neutral	Off	Normal	Normal	Normal	Normal	32.64

**Pre-Crash Data -5 to 0 Sec (Part II - 250 msec) (Most Recent Event - Deployment) - Table
2 of 3**

Time (sec)	Tire Pressure, RF (psi)	Tire Pressure, LR (psi)	Tire Pressure, RR (psi)	Cruise Control Status	Cruise Control Engaged	Cruise Control Override	ETC Lamp	Reverse gear (MTX)
-5.00	34.63	31.45	31.85	Off	Not Engaged	No	Off	Not Reverse
-4.75	34.63	31.45	31.85	Off	Not Engaged	No	Off	Not Reverse
-4.50	34.63	31.45	31.85	Off	Not Engaged	No	Off	Not Reverse
-4.25	34.63	31.45	31.85	Off	Not Engaged	No	Off	Not Reverse
-4.00	34.63	31.45	31.85	Off	Not Engaged	No	Off	Not Reverse
-3.75	34.63	31.45	31.85	Off	Not Engaged	No	Off	Not Reverse
-3.50	34.63	31.45	31.85	Off	Not Engaged	No	Off	Not Reverse
-3.25	34.63	31.45	31.85	Off	Not Engaged	No	Off	Not Reverse
-3.00	34.63	31.45	31.85	Off	Not Engaged	No	Off	Not Reverse
-2.75	34.63	31.45	31.85	Off	Not Engaged	No	Off	Not Reverse
-2.50	34.63	31.45	31.85	Off	Not Engaged	No	Off	Not Reverse
-2.25	34.63	31.45	31.85	Off	Not Engaged	No	Off	Not Reverse
-2.00	34.63	31.45	31.85	Off	Not Engaged	No	Off	Not Reverse
-1.75	34.63	31.45	31.85	Off	Not Engaged	No	Off	Not Reverse
-1.50	34.63	31.45	31.85	Off	Not Engaged	No	Off	Not Reverse
-1.25	34.63	31.45	31.85	Off	Not Engaged	No	Off	Not Reverse
-1.00	34.63	31.45	31.85	Off	Not Engaged	No	Off	Not Reverse
-0.75	34.63	31.45	31.85	Off	Not Engaged	No	Off	Not Reverse
-0.50	34.63	31.45	31.85	Off	Not Engaged	No	Off	Not Reverse
-0.25	34.63	31.45	31.85	Off	Not Engaged	No	Off	Not Reverse

Pre-Crash Data -5 to 0 Sec (Part II - 250 msec) (Most Recent Event - Deployment) - Table 3 of 3

Time (sec)	Shift Lever Position	PCM MIL
-5.00	Drive	Off
-4.75	Drive	Off
-4.50	Drive	Off
-4.25	Drive	Off
-4.00	Drive	Off
-3.75	Drive	Off
-3.50	Drive	Off
-3.25	Drive	Off
-3.00	Drive	Off
-2.75	Drive	Off
-2.50	Drive	Off
-2.25	Drive	Off
-2.00	Drive	Off
-1.75	Drive	Off
-1.50	Drive	Off
-1.25	Drive	Off
-1.00	Drive	Off
-0.75	Drive	Off
-0.50	Drive	Off
-0.25	Drive	Off

71 01 03 01 01 1A CC 05 D6 00 BA 21 00 3D C3 00 07 53 00 1C 23 00 00 00 00 2C 00 00 00 00 00
71 01 03 01 01 1B CC 05 D4 00 BA 21 00 3E C2 00 07 4F 00 1C 23 00 00 00 00 2C 00 00 00 00 00
71 01 03 01 01 1C CC 05 D4 00 B9 21 00 3E C2 00 07 47 00 1C 23 00 00 00 00 2D 00 00 00 00 00
71 01 03 01 01 1D CC 05 D1 00 B9 21 00 40 C0 00 07 43 00 1C 23 00 00 00 00 2D 00 00 00 00 00
71 01 03 01 01 1E CC 05 CD 00 B9 21 00 42 BE 00 07 40 00 1C 23 00 00 00 00 2E 00 00 00 00 00
71 01 03 01 01 1F CC 05 CC 00 B9 22 00 43 BD 00 07 42 00 1C 23 00 00 00 00 30 00 00 00 00 00
71 01 03 01 01 20 CC 05 CD 00 B9 24 00 44 BC 00 07 44 00 1C 23 00 00 00 00 33 00 00 00 00 00
71 01 03 01 01 21 CC 05 CC 00 B8 29 00 44 BC 00 07 46 00 1C 23 00 00 00 00 34 00 00 00 00 00
71 01 03 01 01 22 CC 05 C8 00 B8 2F 00 44 BB 00 07 41 00 1C 23 00 00 00 00 35 00 00 00 00 00
71 01 03 01 01 23 CC 05 C4 00 B8 31 00 44 BC 00 07 3F 00 1C 23 00 00 00 00 35 00 00 00 00 00
71 01 03 01 01 24 CC 05 C2 00 B8 31 00 44 BB 00 07 3D 00 1C 23 00 00 00 00 35 00 00 00 00 00
71 01 03 01 01 25 CC 05 C2 00 B7 31 00 44 BB 00 07 3C 00 1C 23 00 00 00 00 35 00 00 00 00 00
71 01 03 01 01 26 CC 05 C0 00 B7 31 00 44 BB 00 07 3B 00 1C 23 00 00 00 00 35 00 00 00 00 00
71 01 03 01 01 27 CC 05 BD 00 B7 31 00 44 BB 00 07 3C 00 1C 23 00 00 00 00 35 00 00 00 00 00
71 01 03 01 01 28 CC 05 BB 00 B6 31 00 45 BB 00 07 47 00 1C 22 00 00 00 00 35 00 00 00 00 00
71 01 03 01 01 29 CC 05 BA 00 B6 31 00 46 B9 00 07 59 00 1C 21 00 00 00 00 36 00 00 00 00 00
71 01 03 01 01 2A CC 05 B7 00 B6 31 00 43 BD 00 07 83 00 1C 21 00 00 00 00 35 00 00 00 00 00
71 01 03 01 01 2B CC 05 B5 00 B6 31 00 49 B7 00 07 EF 00 1C 21 00 00 00 00 36 00 00 00 00 00
71 01 03 01 01 2C CC 05 B4 00 B5 31 00 4A B6 00 08 16 00 1C 22 00 00 00 00 38 00 00 00 00 00
71 01 03 01 01 2D CC 05 B2 00 B5 31 00 2F D1 00 07 65 00 1C 24 00 00 00 00 2F 00 00 00 00 00
71 01 03 01 01 2E CC 05 AF 00 B5 31 00 21 DE 00 07 1A 00 1C 23 00 00 00 00 3F 00 00 00 00 00
71 01 03 01 01 2F CC 05 AE 00 B6 30 00 21 DE 00 07 1E 00 1C 24 00 00 00 00 2D 00 00 00 00 00
71 01 03 01 01 30 CC 05 AF 00 B6 28 00 21 DE 00 07 17 00 1C 24 00 00 00 00 0D 00 00 00 00 00
71 01 03 01 01 31 CC 05 AF 00 B6 19 00 21 DE 00 07 1B 00 1C 24 00 00 00 00 09 00 00 00 00 00
71 01 03 01 FF
71 01 03 01 FF
71 01 03 01 FF
71 01 03 01 FF
71 01 03 01 FF
71 01 03 01 FF
71 01 03 01 FF
71 01 03 01 FF
71 01 03 01 FF
71 01 03 01 FF

FF FF

71 01 03 05 FF

71 01 03 05 FF

71 01 03 05 FF

71 01 03 05 FF

71 01 03 05 FF

71 01 03 05 FF

71 01 03 05 FF

71 01 03 05 FF

71 01 03 05 FF

71 01 03 05 FF

71 01 03 05 FF

71 01 03 05 FF

71 01 03 05 FF

71 01 03 06 01 00 CC 00 20 1D 00 C9 08 08 09 00 00 00 00 0A 06 FF 00 03 4D 30 00 38 42 00 00
FF 64 00 1C 10 01 01 96 04 07 00 00 00 04 00 00 52 57 4F 50 01 BB 15 00 03 B3 00 FF 00 2C 9C
00 00

71 01 03 06 01 01 CC 00 20 1D 00 C9 08 08 09 00 00 00 00 0A 06 FF 00 03 4D 30 00 38 42 00 00
FF 64 00 1C 10 01 01 96 04 07 00 00 00 04 00 00 52 57 4F 50 01 BB 15 00 01 AE 00 FF 00 2C 9C
00 00

71 01 03 06 01 02 CC 00 20 1D 00 C9 08 08 09 00 00 00 00 0A 06 FF 00 03 4D 30 00 38 42 00 00
FF 64 00 1C 10 01 01 96 04 07 00 00 00 04 00 00 52 57 4F 50 01 BB 15 00 02 73 00 FF 00 2C 7F
00 00

71 01 03 06 01 03 CC 00 20 1D 00 C9 08 08 09 00 00 00 00 0A 06 FF 00 03 4D 30 00 38 42 00 00

FF
FF FF

71 01 03 06 FF
FF
FF FF

71 01 03 06 FF
FF
FF FF

71 01 03 06 FF
FF
FF FF

71 01 03 06 FF
FF
FF FF

71 01 03 06 FF
FF
FF FF

62 10 04 10 04

71 01 AA 01 01 CC 00 03 03 05 05 FA FA 0D 0D 00 00 F2 F2 10 10 78 78 65 65 C1 C1 C0 C0 58 58
BD BD E8 E8 65 65 3B 3B 00
00
00
00 00

71 01 AA 01 FF
FF
FF
FF
FF FF FF FF FF FF FF FF FF FF FF FF

71 01 AA 01 FF
FF
FF
FF
FF FF FF FF FF FF FF FF FF FF FF FF

71 01 AA 03 01 CC 00 FF FF 00 00 02 02 FF FF 00 00 FD FD 03 03 01 01 15 15 E3 E3 20 20 0F 0F
0B 0B EE EE DF DF 20 20 08 08 19 19 06 06 1C 1C EF EF 1E 1E 24 24 EE EE 00 00 09 09 FF FF 17
17 09 09 10 10 10 10 12 12 01 01 F9 F9 0B 0B 1D 1D 12 12 02 02 01 01 05 05 12 12 15 15 13 13
05 05 11 11 05 05 03 03 0B 0B 02 02 1C 1C 07 07 FB FB 09 09 F6 F6 F6 F6 0D 0D 07 07 0C 0C 07
07 FD FD 00 00 00 00 00 00 00 00

71 01 AA 03 FF
FF
FF
FF
FF FF FF FF FF FF FF FF FF FF FF

71 01 AA 03 FF
FF
FF
FF
FF FF FF FF FF FF FF FF FF FF FF

71 01 AA 05 01 CC 00 C0 C0 C0 C0 C0 C0 C0 C0 C0 C0 C1 C1 C1 C1 C1 C0 C0 C0 C0 C0 C1 C3 C4 C5 C6
C8 C8 C7 C5 C5 C4 C3 C1 C1 C1 C3 C6 C7 C9 C9 CC CF D1 D0 D1 D3 D2 D0 CF C9 C9 C4 C6 C7 C7 C6
C2 C0 C1 C1 C4 CD D0 DA E6 E9 E6 EC EF E5 D5 CA C0 BE BB B9 BD C5 CD D4 D9 D8 DD E8 ED E9 EA
F0 E6 EB F1 E1 D5 D2 CF CA C6 C0 BB BF C2 C4 C0 BF BA B7 BA C0 C0 BF BA BC BF C0 C2 C3 C1 C6
C7 C1 C0 00 00 00 00 00 00 00 00

71 01 AA 05 FF

FF
FF
FF
FF FF FF FF FF FF FF FF FF FF FF FF

71 01 AA 05 FF
FF
FF
FF
FF FF FF FF FF FF FF FF FF FF FF FF

71 01 AA 06 01 CC 00 C0 C0 C0 C0 C0 C0 C0 C0 C0 C0 C0 C0 C0 C0 C0 C0 C1 C1 C1 C2 C3 C4 C4 C4
C3 C1 C1 C1 C1 C0 C0 C0 C0 C0 C0 C2 C4 C6 C9 CD CF CD CD CD CA C9 CB CD CD CE CE CC CE D0 D3
D3 D4 D6 D5 D9 DA D7 D3 CC C9 C6 C3 C1 BF BC B7 B3 B0 AE B1 B4 B5 B7 BA BF BF BF C3 C7 CD D5
DD E1 E6 E8 EC ED EB E9 E8 E9 E6 E1 DF DE DD E2 E5 E9 EB F2 F7 FB FA FA FC FE FE F9 F6 F7 F4
F0 E9 E3 00 00 00 00 00 00 00 00 00 00 00 00

71 01 AA 06 FF
FF
FF
FF FF FF FF FF FF FF FF FF FF FF FF

71 01 AA 06 FF
FF
FF
FF FF FF FF FF FF FF FF FF FF FF FF

71 01 AA 07 01 CC 00 02 03 07 0A 08 04 01 FE FD 00 07 0E 10 12 0C 07 0F 17 19 0D 06 FD F9 FC
F9 FD FE 02 00 1C 1E 22 0E 07 14 18 0B 10 12 1A 1F 16 2E 11 0E 0E FD 15 0B 08 15 09 0E 1B 1C
21 13 05 10 2B 30 21 2B 2B 14 2B 1B 1A 27 02 11 1B 1E 3F 2E 35 2E 21 37 29 13 04 FF 1D 0F 0A
14 00 0E 12 0D 0B 05 17 0C FE 0A 02 08 09 FA FE FC FF 00 FE 0A 09 05 0A 01 01 00 03 08 04 0B
0C 06 09 00 00 00 00 00 00 00 00 00 00 00 00

71 01 AA 07 FF
FF
FF
FF FF FF FF FF FF FF FF FF FF FF

71 01 AA 07 FF
FF
FF
FF FF FF FF FF FF FF FF FF FF FF

71 01 AA 08 01 CC 00 00 00 01 02 01 03 03 01 FC FC FC FD 0B 0F FD 00 00 01 14 06 04 FD F7 01
F8 FA FF F6 10 FD F0 07 FC E9 00 12 14 1A 21 1B F9 01 2F F0 F4 EE CB 13 F9 FF 19 FC 06 18 0F
0D 2F 36 16 1E 18 35 47 0E CD F0 E4 28 50 FB 1E F7 DD 1A F9 1E 00 17 33 FD FC FF F6 38 FA 16
1D E1 0B 09 F0 F4 08 31 F9 0A 10 EF FF 03 F7 ED F1 FC F2 FD 12 03 03 0B F8 F3 F9 FD 00 FB 0B
01 FA FC 00 00 00 00 00 00 00 00 00 00 00 00

71 01 AA 08 FF
FF
FF
FF FF FF FF FF FF FF FF FF FF FF

71 01 AA 08 FF
FF
FF
FF FF FF FF FF FF FF FF FF FF FF

71 01 AA 09 01 CC 00 01 02 04 05 06 07 06 03 01 01 04 06 03 09 12 10 0A 0F 11 0C 0B 06 03 FD
F9 FB FB FE 01 00 1E 1F 12 1E 17 05 13 FF 03 19 09 09 1A 0B 13 15 18 20 1A 1A 1D 18 24 2F 2E
2B 2B 28 25 20 1C 16 1C 20 20 25 24 1E 1D 19 1D 1C 10 06 0A 14 20 21 1D 14 0A 1D 16 14 15 0F

12 18 16 0D 09 09 0B 12 14 10 10 0D 0C 0F 11 0D 0C 0A 07 07 0A 08 06 04 03 06 01 01 01 00 02
06 06 01 00

71 01 AA 09 FF
FF
FF
FF FF

71 01 AA 09 FF
FF
FF
FF FF

71 01 AA 10 01 CC 00 00 00 00 FF 00 00 FF FF 00 03 02 01 FC FD FD FC FD F0 F7 00 02 0F 00 00
04 02 13 EC D7 22 EB F8 17 E1 F9 14 C0 36 19 D7 14 09 DC 00 DC 09 16 FB 0A 07 EF EF E8 EE FC
F1 E8 E9 EB E4 E6 EF DD E7 F0 E2 E6 EC E4 EE EF F7 FE F7 17 22 12 1B 0B 09 00 D3 01 F0 DE F7
F8 F4 00 FD EF F6 F9 FA 08 06 F5 EF FA 00 FF FE 00 04 00 F8 FB 02 FA 00 04 FD 04 FA F9 F7 F1
FA 00 04 00

71 01 AA 10 FF
FF
FF
FF FF

71 01 AA 10 FF
FF
FF
FF FF

71 01 AA 11 01 CC 00 00 00 00 FF FC FE 03 03 03 04 FF F8 F2 F9 08 0B 08 FC EF FC 13 10 01 00
01 00 FA FF 08 08 FF ED FA 14 0B F2 E6 FC 0A FE FB 10 11 0A FF F6 EF EE FC 0F 26 23 08 E9 EA
09 15 1A 23 F7 D9 F5 19 16 F1 F9 11 04 02 08 00 ED F5 16 2E 3D 11 EC E3 D1 FD 2E 09 E7 D8 EE
14 39 12 E9 F6 FD 1D 1C EE E7 FD 10 18 2B 16 E9 FA 13 18 11 05 FD 06 22 12 02 06 0A 0D 16 0D
F4 FA 00

71 01 AA 11 FF
FF
FF
FF FF

71 01 AA 11 FF
FF
FF
FF FF

71 01 AA 12 01 CC 00 00 00 00 FF FF 00 FF FF 01 03 00 FB F7 FD 00 FF 00 02 FC F8 00 03 00 FE
04 00 F7 F4 F5 F8 F9 F8 FC FE 05 0E 03 F5 F1 F6 01 02 F5 F3 FE 06 01 EE EA F1 04 01 F9 F3 F3
FA F1 F4 F7 01 06 FD F3 05 0A FA 07 08 0F 09 E9 F7 CE FD 15 DA E1 01 33 E5 C9 F6 F7 24 F0 E6
DE E5 18 0C FE DE E6 02 05 F5 DF F2 1D 1E CB B8 E8 14 15 E4 D5 EE FD FC F0 E7 ED 02 00 00 07
01 00 04 00

71 01 AA 12 FF
FF
FF
FF FF

71 01 AA 12 FF
FF
FF
FF FF

FE D8 FE D8 00 00 FE D8 FE D8 FE D8 FE D8 FE D8 FE D8 00 00 00 00 00 00 01 28 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 01 28 FE D8 00 00 01 28 00 00 00 00 00 00 01 28 00 00
00 00 00 00 FE D8 00 00 00 00 00 00 FD B0 00 00 FE D8 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 FE D8 FE D8 01 28 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 FE D8 00 00 FE D8 FE D8 FD B0 00 00 00 00 FE D8
00 00 00 00 00 00 01 28 00 00 02 50 01 28 01 28 02 50 01 28 02 50 01 28 02 50 01 28 00 00 00 00 01
28 00 00 FD B0 00 00 FE D8

71 01 AA 16 FF
FF FF
FF FF
FF FF
FF FF
FF FF
FF FF
FF FF

71 01 AA 16 FF
FF FF
FF FF
FF FF
FF FF
FF FF
FF FF
FF FF
FF FF

62 F1 00 FF 90 20 23 3C 00 D2
62 F1 12 39 36 33 37 33 33 30 30 41 43
62 F1 22 34 30 37 36 37 32 32 33 41 53
62 F1 32 36 38 32 39 39 31 34 37 41 48
62 F1 54 00 D2

62 F1 8C 54 30 38 4A 46 33 32 36 37 47 30 32 38 38 20
62 F1 90 33 43 34 4E 4A 44 43 42 39 4A 54 2A 2A 2A 2A 2A 2A

62 FA 01 01 CC 01 01 31 00 00 2D 04 00 0B A9 55 CF 00 00 1F B8 01 BB 15 A6 70 20 16 21 00 01
90 00 90 1E 00 00 40 00 00 00 00 00 00 00 00 00 3F 54 C0 3C 05 F2 01 90 03 FF 06 00 00 17
12 00 58 4A 54 2A 2A 2A 2A 2A 2A FF FE 00 00 00 10 0B 05 00 00 0B 96 23 00 91 10 04 60 0E 0E
A2 3D 00 C1 54 00 80 52 13 80 50 13 80 C5 13 80 B5 13 80 28 13 80 20 13 80 95 13 80 90 13 80
02 13 80 01 13 C1 00 00 A2 2D 00 80 DF 95 A7 34 13 9B A5 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 17 12 00 E8 00 83 B9 7E 3C 3F 03 43 32 00 5D 02 50 4F 46 01 50 4F 53 00
50 4F 4F 02 50 4F 52 00 50 4F 4D 03 00 2C 10 09 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00

62 FA 02 FF
FF FF
FF FF
FF FF
FF FF
FF FF
FF FF

62 FA 03 FF
FF FF
FF FF
FF FF
FF FF
FF FF
FF FF

FF FF

59 02 FF 80 01 13 AF 80 02 13 AF 80 10 13 AF 80 11 13 AF 80 12 13 AF 80 04 13 AF 80 20 13 AF
80 21 13 AF 80 28 13 AF 80 29 13 AF 80 79 13 AF 80 7A 13 AF 80 7E 13 AF 80 7F 13 AF 80 80 13
AF 80 82 13 AF 80 50 13 AF 80 52 13 AF 80 90 13 AF 80 95 13 AF A7 62 13 AF A7 65 13 AF A7 67
13 AF A7 68 13 AF D1 EA 00 AF D1 ED 00 AF C0 01 00 AF

Disclaimer of Liability

The users of the CDR product and reviewers of the CDR reports and exported data shall ensure that data and information supplied is applicable to the vehicle, vehicle's system(s) and the vehicle ECU. Robert Bosch LLC and all its directors, officers, employees and members shall not be liable for damages arising out of or related to incorrect, incomplete or misinterpreted software and/or data. Robert Bosch LLC expressly excludes all liability for incidental, consequential, special or punitive damages arising from or related to the CDR data, CDR software or use thereof.

Appendix B: 2016 Chrysler 200 Event Data Recorder Report

The EDR report in this technical report was imaged using the current version of the Bosch CDR software at the time of the vehicle inspection. The CDR report 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	1C3CCCAB2GN*****
User	
Case Number	
EDR Data Imaging Date	11/02/2022
Crash Date	
Filename	CR22015_V2_ACM.CDRX
Saved on	Wednesday, November 2 2022 at 13:40:32
Imaged with CDR version	Crash Data Retrieval Tool 23.0.1
Imaged with Software Licensed to (Company Name)	NHTSA
Reported with CDR version	Crash Data Retrieval Tool 23.1
Reported with Software Licensed to (Company Name)	NHTSA
EDR Device Type	Airbag Control Module
Event(s) recovered	Most Recent 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.
- If a 2023 MY Jeep Grand Cherokee or Jeep Grand Cherokee L was imaged with a CDR Tool version 23.0.2 or older, the ACM will need to be reimaged as not all the 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, 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_r047

System Status at Retrieval

VIN, Original	1C3CCCAB2GN*****
VIN, Current	1C3CCCAB2GN*****
Ignition Cycle, Download	17397
ACM Part Number	68264878AA
ACM Serial Number	TNRMF256500615
ACM Supplier	TRW
ACM Supply Voltage at Time of Retrieval	11.8
ACM Hardware Part Number	68264878AA
ACM Software Part Number	68264878AA

System Configuration at Retrieval

Configured for Rollover Sensing	Yes
Configured for Driver Frontal Airbag Squib(s)	Yes
Configured for Driver Knee Airbag	Yes
Configured for Driver Retractor Pretensioner	Yes
Configured for Driver Anchor Pretensioner	Yes
Configured for Driver Seatbelt Load Limiter	Yes
Configured for Passenger Frontal Airbag Squib(s)	Yes
Configured for Passenger Knee Airbag	Yes
Configured for Passenger Retractor Pretensioner	Yes
Configured for Passenger Anchor Pretensioner	Yes
Configured for Passenger Seatbelt Load Limiter	Yes
Configured for Left Side Seat Airbag	Yes
Configured for Left Side Curtain Airbag	Yes
Configured for 2nd Row Left Side Seat Airbag	No
Configured for Right Side Seat Airbag	Yes
Configured for Right Side Curtain Airbag	Yes
Configured for 2nd Row Right Side Seat Airbag	No
Configured for Driver Seat Seatbelt Switch	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 Passenger Occupant Classification Module	Yes

System Configuration at Event (Most Recent Event)

Event Number	1
Configured for Rollover Sensing	Yes
Configured for Driver Frontal Airbag Squib(s)	Yes
Configured for Driver Knee Airbag	Yes
Configured for Driver Retractor Pretensioner	Yes
Configured for Driver Anchor Pretensioner	Yes
Configured for Driver Seatbelt Load Limiter	Yes
Configured for Passenger Frontal Airbag Squib(s)	Yes
Configured for Passenger Knee Airbag	Yes
Configured for Passenger Retractor Pretensioner	Yes
Configured for Passenger Anchor Pretensioner	Yes
Configured for Passenger Seatbelt Load Limiter	Yes
Configured for Left Side Seat Airbag	Yes
Configured for Left Side Curtain Airbag	Yes
Configured for 2nd Row Left Side Seat Airbag	No
Configured for Right Side Seat Airbag	Yes
Configured for Right Side Curtain Airbag	Yes
Configured for 2nd Row Right Side Seat Airbag	No
Configured for Driver Seat Seatbelt Switch	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 Passenger Occupant Classification Module	Yes

System Status at Event (Most Recent Event)

Complete File Recorded (Yes, No)	Yes
Ignition Cycle, Crash	17384
Multi-Event, Number of Events (1,2)	1
Time from Event 1 to 2 (sec)	0.00
Safety Belt Status, Driver	Buckled
Safety Belt Status, Outboard Front Passenger	Unbuckled
Frontal Airbag Warning Lamp, On/Off	Off
Seat Track Position Switch, Foremost, Status, Driver	No
Seat Track Position Switch, Foremost, Status, Outboard Front Passenger	No
Occupant Size Classification, Right Front Passenger	Child
Maximum Delta-V Longitudinal (MPH [km/h])	-60.3 [-97]
Time, Maximum Delta-V, Longitudinal (msec)	298
Clipping Flag, Longitudinal, Time (ms)	N/A
Maximum Delta-V Lateral (MPH [km/h])	-44.7 [-72]
Time, Maximum Delta-V, Lateral (msec)	54
Clipping Flag, Lateral, Time (ms)	14
Time, Operation System Time (min)	275152.7
Time, Airbag Warning Lamp On (min)	0
Number, Event	1
Number, Total Events	1
System Voltage at Event, Bussed (V)	14.1
Supply Voltage at Event, ACM (V)	14.4
Operation Via Energy Reserved	No
Odometer at Event (km)	118688
VIN at Event (last 8 digits)	GN*****

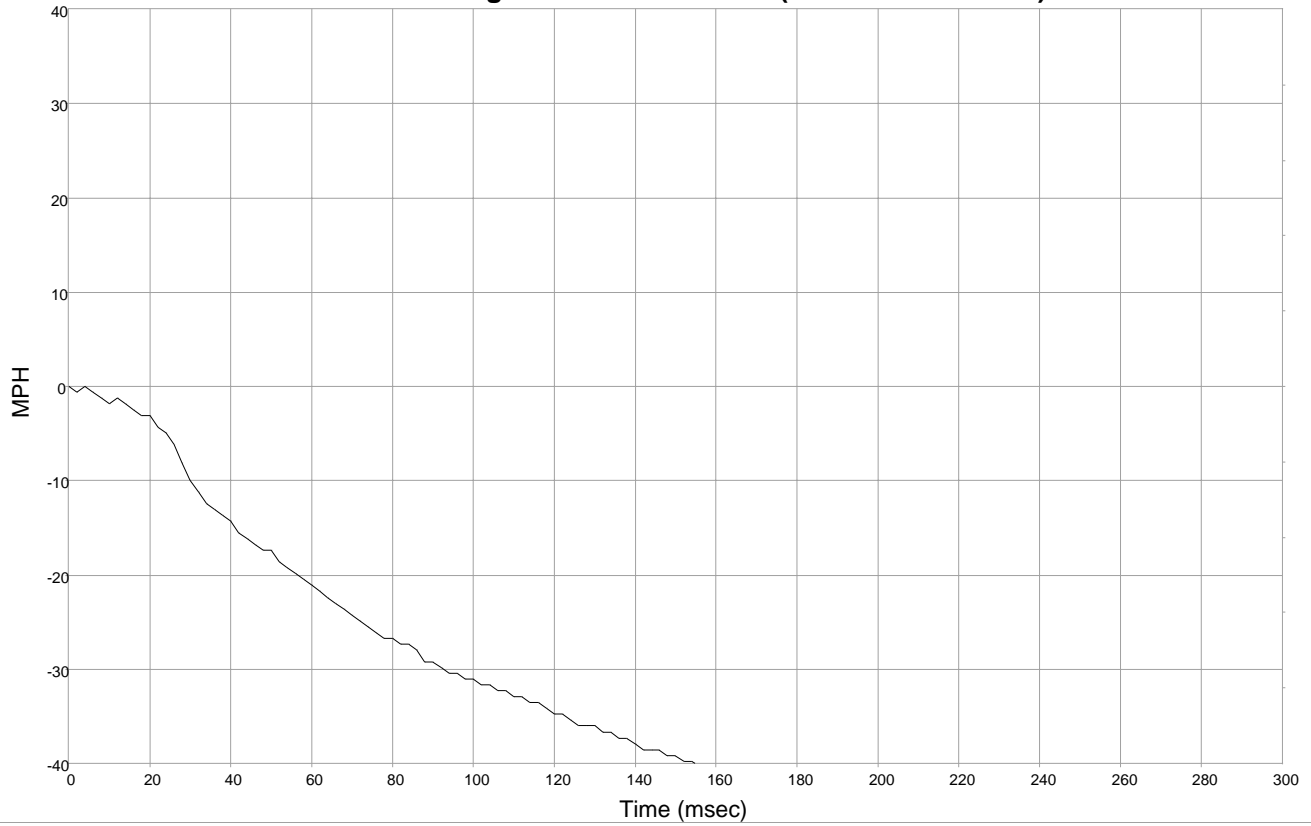
Deployment Command Data (Most Recent Event)

Frontal Airbag Deployment, 1st Stage, Driver	Yes
Frontal Airbag Deployment, 2nd Stage, Driver	Yes
Frontal Airbag Deployment, 3rd Squib, Driver	Yes
Frontal Airbag Deployment, Time to First Stage Deployment, Driver (msec)	17
Frontal Airbag Deployment, Time to 2nd Stage Deployment, Driver (msec)	37
Frontal Airbag Deployment, Time to 3rd Squib Deployment, Driver (msec)	167
Knee Airbag Deployment, Driver	Yes
Retractor Pretensioner, Driver	Yes
Anchor Pretensioner, Driver	Yes
Seatbelt Load Limiter, Driver	Yes
Frontal Airbag Deployment, 1st Stage, Passenger	Yes
Frontal Airbag Deployment, 2nd Stage, Passenger	Yes
Frontal Airbag Deployment, 3rd Squib, Passenger	Yes
Frontal Airbag Deployment, Time to First Stage Deployment, Passenger (msec)	17
Frontal Airbag Deployment, Time to 2nd Stage Deployment, Passenger (msec)	167
Frontal Airbag Deployment, Time to 3rd Squib Deployment, Passenger (msec)	37
Knee Airbag Deployment, Passenger	Yes
Retractor Pretensioner, Passenger	Yes
Anchor Pretensioner, Passenger	Yes
Seatbelt Load Limiter, Passenger	Yes
Side Seat Airbags Deployment, Left	Yes
Side Curtain Airbag Deployment, Left	Yes
Side Seat Airbags Deployment, Right	Yes
Side Curtain Airbag Deployment, Right	Yes

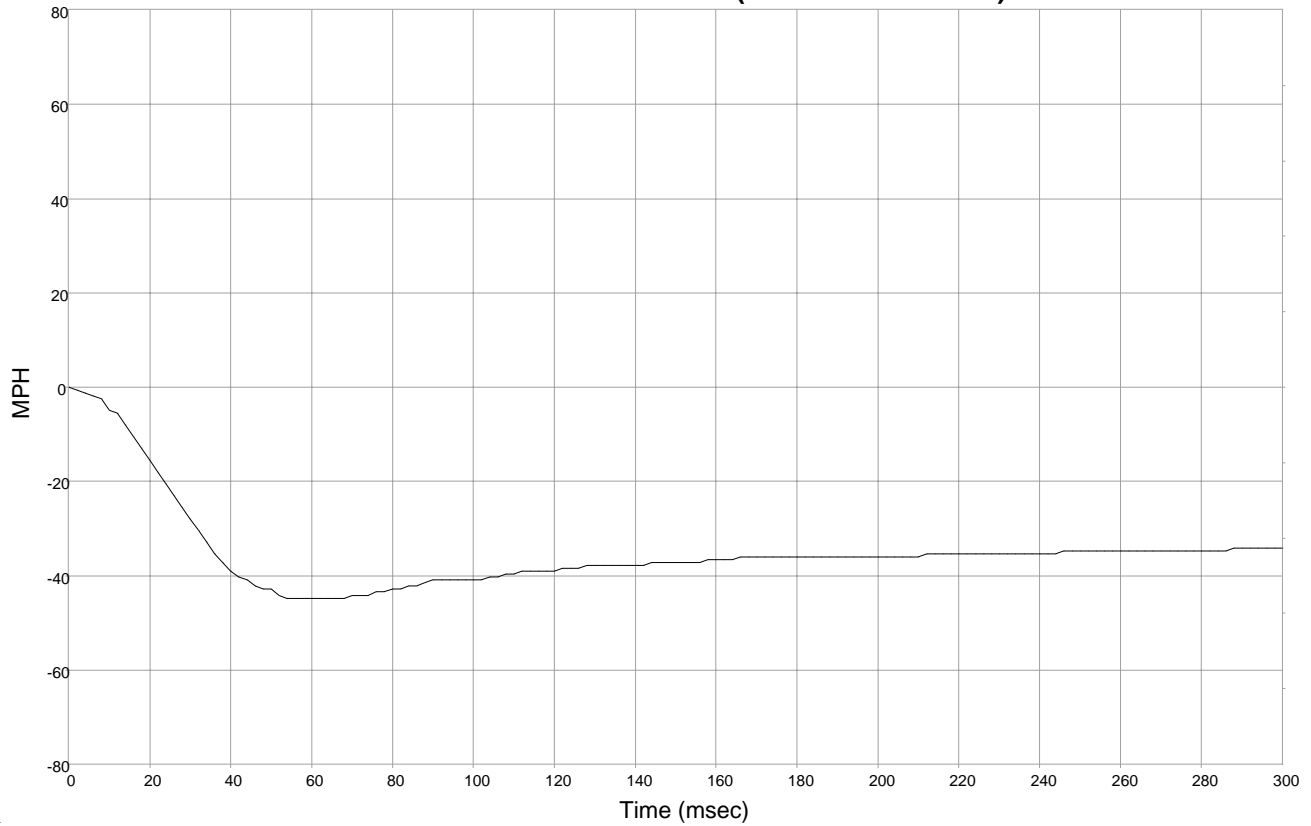
DTCs Present at Start of Event (Most Recent Event)

No DTCs Present

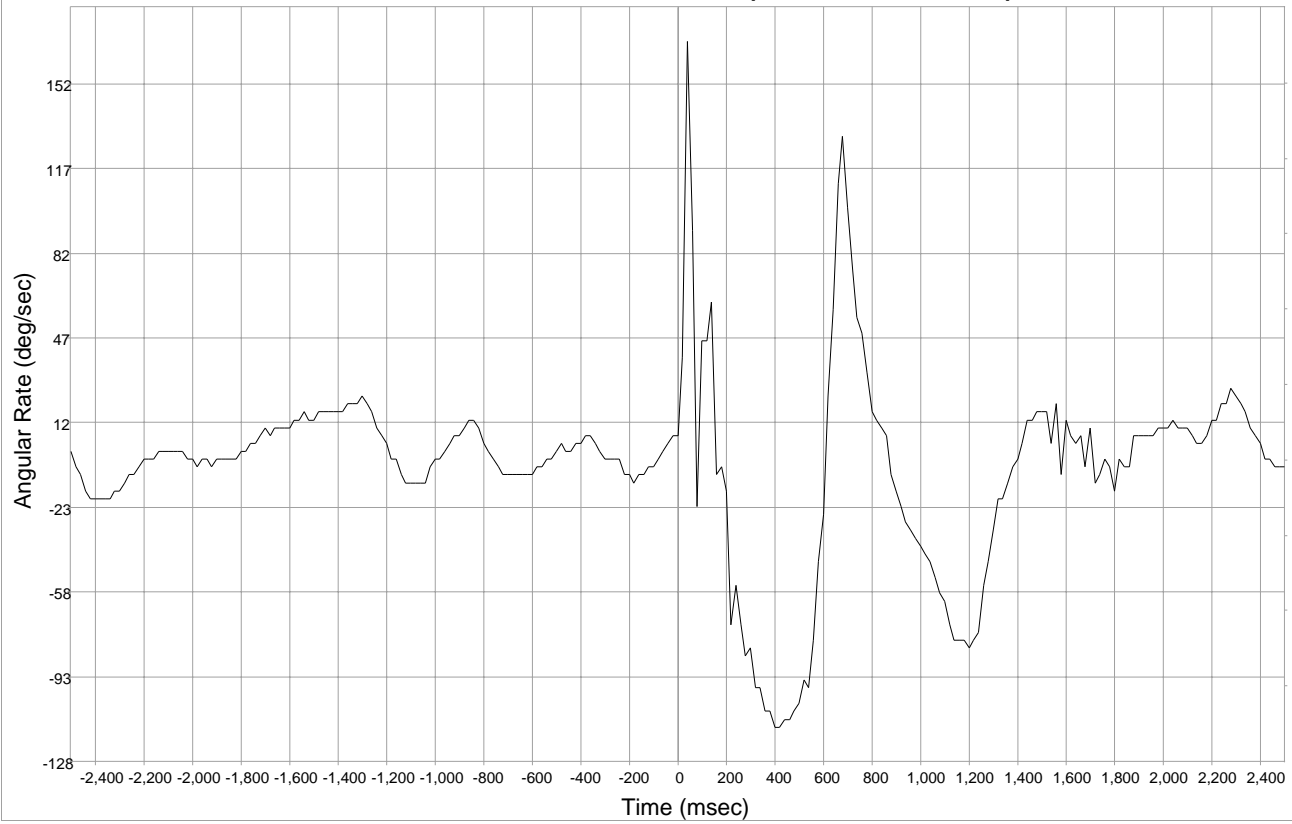
Longitudinal Crash Pulse (Most Recent Event)



Lateral Crash Pulse (Most Recent Event)



Rollover Crash Pulse (Most Recent Event)



Longitudinal Crash Pulse (Most Recent Event)

Time (msec)	Delta-V, Longitudinal (MPH [km/h])
0	0.0 [0]
2	-0.6 [-1]
4	0.0 [0]
6	-0.6 [-1]
8	-1.2 [-2]
10	-1.9 [-3]
12	-1.2 [-2]
14	-1.9 [-3]
16	-2.5 [-4]
18	-3.1 [-5]
20	-3.1 [-5]
22	-4.3 [-7]
24	-5.0 [-8]
26	-6.2 [-10]
28	-8.1 [-13]
30	-9.9 [-16]
32	-11.2 [-18]
34	-12.4 [-20]
36	-13.0 [-21]
38	-13.7 [-22]
40	-14.3 [-23]
42	-15.5 [-25]
44	-16.2 [-26]
46	-16.8 [-27]
48	-17.4 [-28]
50	-17.4 [-28]
52	-18.6 [-30]
54	-19.3 [-31]
56	-19.9 [-32]
58	-20.5 [-33]
60	-21.1 [-34]
62	-21.7 [-35]
64	-22.4 [-36]
66	-23.0 [-37]
68	-23.6 [-38]
70	-24.2 [-39]
72	-24.9 [-40]
74	-25.5 [-41]
76	-26.1 [-42]
78	-26.7 [-43]
80	-26.7 [-43]
82	-27.3 [-44]
84	-27.3 [-44]
86	-28.0 [-45]
88	-29.2 [-47]
90	-29.2 [-47]
92	-29.8 [-48]
94	-30.4 [-49]
96	-30.4 [-49]
98	-31.1 [-50]

Time (msec)	Delta-V, Longitudinal (MPH [km/h])
100	-31.1 [-50]
102	-31.7 [-51]
104	-31.7 [-51]
106	-32.3 [-52]
108	-32.3 [-52]
110	-32.9 [-53]
112	-32.9 [-53]
114	-33.6 [-54]
116	-33.6 [-54]
118	-34.2 [-55]
120	-34.8 [-56]
122	-34.8 [-56]
124	-35.4 [-57]
126	-36.0 [-58]
128	-36.0 [-58]
130	-36.0 [-58]
132	-36.7 [-59]
134	-36.7 [-59]
136	-37.3 [-60]
138	-37.3 [-60]
140	-37.9 [-61]
142	-38.5 [-62]
144	-38.5 [-62]
146	-38.5 [-62]
148	-39.1 [-63]
150	-39.1 [-63]
152	-39.8 [-64]
154	-39.8 [-64]
156	-40.4 [-65]
158	-40.4 [-65]
160	-41.0 [-66]
162	-41.0 [-66]
164	-41.6 [-67]
166	-41.6 [-67]
168	-42.3 [-68]
170	-42.3 [-68]
172	-42.9 [-69]
174	-42.9 [-69]
176	-43.5 [-70]
178	-43.5 [-70]
180	-44.1 [-71]
182	-44.1 [-71]
184	-44.1 [-71]
186	-44.7 [-72]
188	-44.7 [-72]
190	-45.4 [-73]
192	-45.4 [-73]
194	-46.0 [-74]
196	-46.0 [-74]
198	-46.6 [-75]

Time (msec)	Delta-V, Longitudinal (MPH [km/h])
200	-46.6 [-75]
202	-47.2 [-76]
204	-47.2 [-76]
206	-47.8 [-77]
208	-47.8 [-77]
210	-48.5 [-78]
212	-48.5 [-78]
214	-48.5 [-78]
216	-49.1 [-79]
218	-49.1 [-79]
220	-49.7 [-80]
222	-49.7 [-80]
224	-50.3 [-81]
226	-50.3 [-81]
228	-51.0 [-82]
230	-51.0 [-82]
232	-51.0 [-82]
234	-51.6 [-83]
236	-51.6 [-83]
238	-52.2 [-84]
240	-52.2 [-84]
242	-52.8 [-85]
244	-52.8 [-85]
246	-53.4 [-86]
248	-53.4 [-86]
250	-53.4 [-86]
252	-54.1 [-87]
254	-54.1 [-87]
256	-54.7 [-88]
258	-54.7 [-88]
260	-55.3 [-89]
262	-55.3 [-89]
264	-55.3 [-89]
266	-55.9 [-90]
268	-55.9 [-90]
270	-56.5 [-91]
272	-56.5 [-91]
274	-57.2 [-92]
276	-57.2 [-92]
278	-57.2 [-92]
280	-57.8 [-93]
282	-57.8 [-93]
284	-58.4 [-94]
286	-58.4 [-94]
288	-58.4 [-94]
290	-59.0 [-95]
292	-59.0 [-95]
294	-59.7 [-96]
296	-59.7 [-96]
298	-60.3 [-97]
300	-60.3 [-97]

Lateral Crash Pulse (Most Recent Event)

Time (msec)	Delta-V, Lateral (MPH [km/h])
0	0.0 [0]
2	-0.6 [-1]
4	-1.2 [-2]
6	-1.9 [-3]
8	-2.5 [-4]
10	-5.0 [-8]
12	-5.6 [-9]
14	-8.1 [-13]
16	-10.6 [-17]
18	-13.0 [-21]
20	-15.5 [-25]
22	-18.0 [-29]
24	-20.5 [-33]
26	-23.0 [-37]
28	-25.5 [-41]
30	-28.0 [-45]
32	-30.4 [-49]
34	-32.9 [-53]
36	-35.4 [-57]
38	-37.3 [-60]
40	-39.1 [-63]
42	-40.4 [-65]
44	-41.0 [-66]
46	-42.3 [-68]
48	-42.9 [-69]
50	-42.9 [-69]
52	-44.1 [-71]
54	-44.7 [-72]
56	-44.7 [-72]
58	-44.7 [-72]
60	-44.7 [-72]
62	-44.7 [-72]
64	-44.7 [-72]
66	-44.7 [-72]
68	-44.7 [-72]
70	-44.1 [-71]
72	-44.1 [-71]
74	-44.1 [-71]
76	-43.5 [-70]
78	-43.5 [-70]
80	-42.9 [-69]
82	-42.9 [-69]
84	-42.3 [-68]
86	-42.3 [-68]
88	-41.6 [-67]
90	-41.0 [-66]
92	-41.0 [-66]
94	-41.0 [-66]
96	-41.0 [-66]
98	-41.0 [-66]

Time (msec)	Delta-V, Lateral (MPH [km/h])
100	-41.0 [-66]
102	-41.0 [-66]
104	-40.4 [-65]
106	-40.4 [-65]
108	-39.8 [-64]
110	-39.8 [-64]
112	-39.1 [-63]
114	-39.1 [-63]
116	-39.1 [-63]
118	-39.1 [-63]
120	-39.1 [-63]
122	-38.5 [-62]
124	-38.5 [-62]
126	-38.5 [-62]
128	-37.9 [-61]
130	-37.9 [-61]
132	-37.9 [-61]
134	-37.9 [-61]
136	-37.9 [-61]
138	-37.9 [-61]
140	-37.9 [-61]
142	-37.9 [-61]
144	-37.3 [-60]
146	-37.3 [-60]
148	-37.3 [-60]
150	-37.3 [-60]
152	-37.3 [-60]
154	-37.3 [-60]
156	-37.3 [-60]
158	-36.7 [-59]
160	-36.7 [-59]
162	-36.7 [-59]
164	-36.7 [-59]
166	-36.0 [-58]
168	-36.0 [-58]
170	-36.0 [-58]
172	-36.0 [-58]
174	-36.0 [-58]
176	-36.0 [-58]
178	-36.0 [-58]
180	-36.0 [-58]
182	-36.0 [-58]
184	-36.0 [-58]
186	-36.0 [-58]
188	-36.0 [-58]
190	-36.0 [-58]
192	-36.0 [-58]
194	-36.0 [-58]
196	-36.0 [-58]
198	-36.0 [-58]

Time (msec)	Delta-V, Lateral (MPH [km/h])
200	-36.0 [-58]
202	-36.0 [-58]
204	-36.0 [-58]
206	-36.0 [-58]
208	-36.0 [-58]
210	-36.0 [-58]
212	-35.4 [-57]
214	-35.4 [-57]
216	-35.4 [-57]
218	-35.4 [-57]
220	-35.4 [-57]
222	-35.4 [-57]
224	-35.4 [-57]
226	-35.4 [-57]
228	-35.4 [-57]
230	-35.4 [-57]
232	-35.4 [-57]
234	-35.4 [-57]
236	-35.4 [-57]
238	-35.4 [-57]
240	-35.4 [-57]
242	-35.4 [-57]
244	-35.4 [-57]
246	-34.8 [-56]
248	-34.8 [-56]
250	-34.8 [-56]
252	-34.8 [-56]
254	-34.8 [-56]
256	-34.8 [-56]
258	-34.8 [-56]
260	-34.8 [-56]
262	-34.8 [-56]
264	-34.8 [-56]
266	-34.8 [-56]
268	-34.8 [-56]
270	-34.8 [-56]
272	-34.8 [-56]
274	-34.8 [-56]
276	-34.8 [-56]
278	-34.8 [-56]
280	-34.8 [-56]
282	-34.8 [-56]
284	-34.8 [-56]
286	-34.8 [-56]
288	-34.2 [-55]
290	-34.2 [-55]
292	-34.2 [-55]
294	-34.2 [-55]
296	-34.2 [-55]
298	-34.2 [-55]
300	-34.2 [-55]

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

Time (msec)	Angular Rate (deg/sec)
-2500	0.00
-2480	-6.51
-2460	-9.77
-2440	-16.28
-2420	-19.53
-2400	-19.53
-2380	-19.53
-2360	-19.53
-2340	-19.53
-2320	-16.28
-2300	-16.28
-2280	-13.02
-2260	-9.77
-2240	-9.77
-2220	-6.51
-2200	-3.26
-2180	-3.26
-2160	-3.26
-2140	0.00
-2120	0.00
-2100	0.00
-2080	0.00
-2060	0.00
-2040	0.00
-2020	-3.26
-2000	-3.26
-1980	-6.51
-1960	-3.26
-1940	-3.26
-1920	-6.51
-1900	-3.26
-1880	-3.26
-1860	-3.26
-1840	-3.26
-1820	-3.26
-1800	0.00
-1780	0.00
-1760	3.26
-1740	3.26
-1720	6.51
-1700	9.77
-1680	6.51
-1660	9.77
-1640	9.77
-1620	9.77
-1600	9.77
-1580	13.02
-1560	13.02
-1540	16.28
-1520	13.02

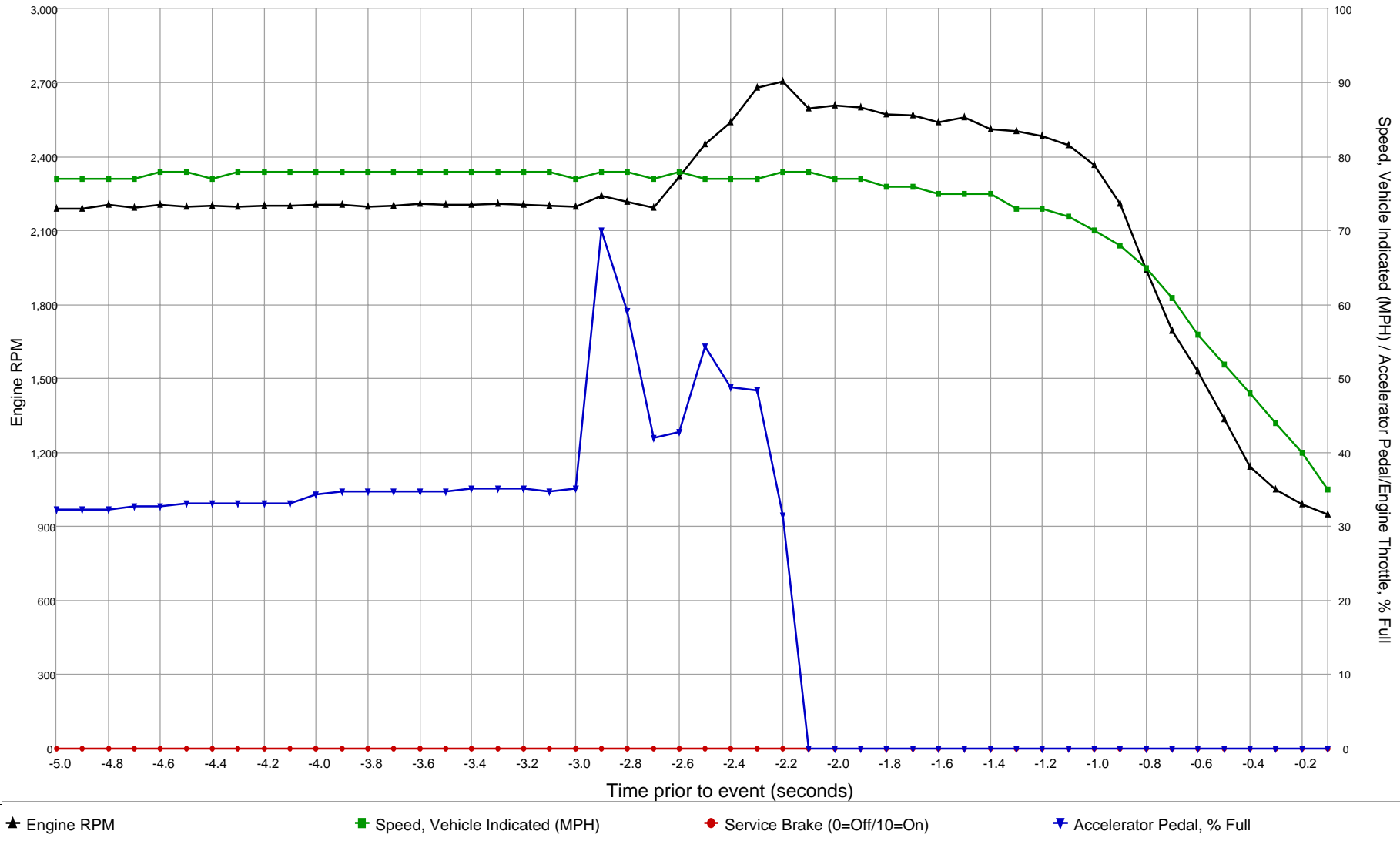
Time (msec)	Angular Rate (deg/sec)
-1500	13.02
-1480	16.28
-1460	16.28
-1440	16.28
-1420	16.28
-1400	16.28
-1380	16.28
-1360	19.53
-1340	19.53
-1320	19.53
-1300	22.79
-1280	19.53
-1260	16.28
-1240	9.77
-1220	6.51
-1200	3.26
-1180	-3.26
-1160	-3.26
-1140	-9.77
-1120	-13.02
-1100	-13.02
-1080	-13.02
-1060	-13.02
-1040	-13.02
-1020	-6.51
-1000	-3.26
-980	-3.26
-960	0.00
-940	3.26
-920	6.51
-900	6.51
-880	9.77
-860	13.02
-840	13.02
-820	9.77
-800	3.26
-780	0.00
-760	-3.26
-740	-6.51
-720	-9.77
-700	-9.77
-680	-9.77
-660	-9.77
-640	-9.77
-620	-9.77
-600	-9.77
-580	-6.51
-560	-6.51
-540	-3.26
-520	-3.26

Time (msec)	Angular Rate (deg/sec)
-500	0.00
-480	3.26
-460	0.00
-440	0.00
-420	3.26
-400	3.26
-380	6.51
-360	6.51
-340	3.26
-320	0.00
-300	-3.26
-280	-3.26
-260	-3.26
-240	-3.26
-220	-9.77
-200	-9.77
-180	-13.02
-160	-9.77
-140	-9.77
-120	-6.51
-100	-6.51
-80	-3.26
-60	0.00
-40	3.26
-20	6.51
0	6.51
20	39.06
40	169.27
60	91.15
80	-22.79
100	45.57
120	45.57
140	61.85
160	-9.77
180	-6.51
200	-16.28
220	-71.61
240	-55.34
260	-71.61
280	-84.64
300	-81.38
320	-97.66
340	-97.66
360	-107.42
380	-107.42
400	-113.93
420	-113.93
440	-110.68
460	-110.68
480	-107.42

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

Time (msec)	Angular Rate (deg/sec)	Time (msec)	Angular Rate (deg/sec)
500	-104.17	1500	16.28
520	-94.40	1520	16.28
540	-97.66	1540	3.26
560	-78.12	1560	19.53
580	-45.57	1580	-9.77
600	-26.04	1600	13.02
620	22.79	1620	6.51
640	58.59	1640	3.26
660	110.68	1660	6.51
680	130.21	1680	-6.51
700	100.91	1700	9.77
720	74.87	1720	-13.02
740	55.34	1740	-9.77
760	48.83	1760	-3.26
780	32.55	1780	-6.51
800	16.28	1800	-16.28
820	13.02	1820	-3.26
840	9.77	1840	-6.51
860	6.51	1860	-6.51
880	-9.77	1880	6.51
900	-16.28	1900	6.51
920	-22.79	1920	6.51
940	-29.30	1940	6.51
960	-32.55	1960	6.51
980	-35.81	1980	9.77
1000	-39.06	2000	9.77
1020	-42.32	2020	9.77
1040	-45.57	2040	13.02
1060	-52.08	2060	9.77
1080	-58.59	2080	9.77
1100	-61.85	2100	9.77
1120	-71.61	2120	6.51
1140	-78.12	2140	3.26
1160	-78.12	2160	3.26
1180	-78.12	2180	6.51
1200	-81.38	2200	13.02
1220	-78.12	2220	13.02
1240	-74.87	2240	19.53
1260	-55.34	2260	19.53
1280	-45.57	2280	26.04
1300	-32.55	2300	22.79
1320	-19.53	2320	19.53
1340	-19.53	2340	16.28
1360	-13.02	2360	9.77
1380	-6.51	2380	6.51
1400	-3.26	2400	3.26
1420	3.26	2420	-3.26
1440	13.02	2440	-3.26
1460	13.02	2460	-6.51
1480	16.28	2480	-6.51
		2500	-6.51

Pre-Crash Data (Most Recent Event)



SNA values will not be plotted on the graph

Pre-Crash Data [10 samples/sec] (Most Recent Event - table 1 of 3)

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

Time Stamp (sec)	Pre-Crash Recorder Status	Speed, Vehicle Indicated (MPH [km/h])	Accelerator Pedal, % Full	Service Brake	Engine RPM	ABS Activity	Stability Control	Steering Input (deg)
-5.0	Complete	77 [124]	32	Off	2,191	No	On	0
-4.9	Complete	77 [124]	32	Off	2,190	No	On	0
-4.8	Complete	77 [124]	32	Off	2,205	No	On	0
-4.7	Complete	77 [125]	33	Off	2,196	No	On	0
-4.6	Complete	78 [125]	33	Off	2,205	No	On	0
-4.5	Complete	78 [125]	33	Off	2,200	No	On	0
-4.4	Complete	77 [125]	33	Off	2,202	No	On	0
-4.3	Complete	78 [125]	33	Off	2,197	No	On	0
-4.2	Complete	78 [125]	33	Off	2,203	No	On	0
-4.1	Complete	78 [125]	33	Off	2,204	No	On	-1
-4.0	Complete	78 [125]	34	Off	2,207	No	On	0
-3.9	Complete	78 [125]	35	Off	2,206	No	On	0
-3.8	Complete	78 [125]	35	Off	2,199	No	On	0
-3.7	Complete	78 [125]	35	Off	2,203	No	On	0
-3.6	Complete	78 [125]	35	Off	2,210	No	On	0
-3.5	Complete	78 [125]	35	Off	2,208	No	On	0
-3.4	Complete	78 [125]	35	Off	2,208	No	On	0
-3.3	Complete	78 [125]	35	Off	2,209	No	On	0
-3.2	Complete	78 [125]	35	Off	2,205	No	On	0
-3.1	Complete	78 [125]	35	Off	2,204	No	On	1
-3.0	Complete	77 [125]	35	Off	2,198	No	On	7
-2.9	Complete	78 [126]	70	Off	2,241	Yes	On	10
-2.8	Complete	78 [125]	59	Off	2,217	Yes	On	-1
-2.7	Complete	77 [124]	42	Off	2,196	Yes	On	-11
-2.6	Complete	78 [125]	43	Off	2,319	Yes	On	-16
-2.5	Complete	77 [125]	54	Off	2,453	Yes	On	-33
-2.4	Complete	77 [124]	49	Off	2,541	Yes	On	-49
-2.3	Complete	77 [124]	48	Off	2,682	Yes	On	-65
-2.2	Complete	78 [126]	32	Off	2,707	Yes	On	-46
-2.1	Complete	78 [125]	0	Off	2,597	Yes	On	-16
-2.0	Complete	77 [124]	0	Off	2,609	Yes	Engaged	-5
-1.9	Complete	77 [123]	0	Off	2,602	Yes	Engaged	6
-1.8	Complete	76 [122]	0	Off	2,573	No	Engaged	35
-1.7	Complete	76 [122]	0	Off	2,570	No	Engaged	72
-1.6	Complete	75 [121]	0	Off	2,539	No	Engaged	103
-1.5	Complete	75 [121]	0	Off	2,562	No	Engaged	122
-1.4	Complete	75 [120]	0	Off	2,514	No	Engaged	125
-1.3	Complete	73 [118]	0	Off	2,505	No	Engaged	51
-1.2	Complete	73 [118]	0	Off	2,485	No	Engaged	-29
-1.1	Complete	72 [116]	0	Off	2,449	No	Engaged	-62
-1.0	Complete	70 [113]	0	Off	2,368	No	Engaged	-66
-0.9	Complete	68 [109]	0	Off	2,210	No	Engaged	-135
-0.8	Complete	65 [104]	0	Off	1,942	No	Engaged	-181
-0.7	Complete	61 [97]	0	Off	1,694	No	Engaged	-173
-0.6	Complete	56 [91]	0	Off	1,530	No	Engaged	-148
-0.5	Complete	52 [84]	0	Off	1,337	No	Engaged	-133
-0.4	Complete	48 [77]	0	Off	1,145	Yes	Engaged	-148
-0.3	Complete	44 [70]	0	Off	1,052	Yes	Engaged	-159
-0.2	Complete	40 [64]	0	Off	989	Yes	Engaged	-164
-0.1	Complete	35 [57]	0	Off	952	Yes	Engaged	-165

Pre-Crash Data [10 samples/sec] (Most Recent Event - table 2 of 3)

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

Time Stamp (sec)	ABS MIL	Yaw Rate (deg/sec)	Wheel Speed LF (km/h)	Wheel Speed RF (km/h)	Wheel Speed LR (km/h)	Wheel Speed RR (km/h)	Raw Manifold Pressure (kpa)
-5.0	Off	0.00	124	125	124	124	307.2
-4.9	Off	-0.24	124	125	123	124	307.2
-4.8	Off	-0.16	124	125	124	124	307.2
-4.7	Off	0.00	125	125	123	124	307.2
-4.6	Off	0.00	125	125	124	124	307.2
-4.5	Off	-0.08	125	125	124	124	307.2
-4.4	Off	-0.16	125	125	124	124	307.2
-4.3	Off	-0.24	125	125	124	124	307.2
-4.2	Off	-0.08	125	125	124	124	307.2
-4.1	Off	-0.08	125	125	124	124	307.2
-4.0	Off	-0.48	125	125	124	124	307.2
-3.9	Off	-0.48	125	125	124	124	307.2
-3.8	Off	-0.24	125	125	124	124	307.2
-3.7	Off	-0.32	125	125	124	124	307.2
-3.6	Off	-0.48	125	125	124	124	307.2
-3.5	Off	-0.48	125	125	124	124	307.2
-3.4	Off	-0.32	125	125	124	124	307.2
-3.3	Off	-0.24	125	125	124	124	307.2
-3.2	Off	0.00	125	125	124	124	307.2
-3.1	Off	0.08	125	125	124	124	307.2
-3.0	Off	-0.16	125	125	124	124	307.2
-2.9	Off	5.92	127	125	104	124	307.2
-2.8	Off	10.16	125	125	120	125	307.2
-2.7	Off	7.68	124	125	123	124	307.2
-2.6	Off	1.36	124	125	124	123	307.2
-2.5	Off	-4.72	125	125	125	124	307.2
-2.4	Off	-12.16	125	124	125	124	307.2
-2.3	Off	-17.20	125	124	125	123	307.2
-2.2	Off	-22.56	125	127	125	122	307.2
-2.1	Off	-23.36	125	124	123	121	307.2
-2.0	Off	-19.68	124	123	122	121	307.2
-1.9	Off	-16.56	124	123	121	121	307.2
-1.8	Off	-12.72	123	122	120	121	307.2
-1.7	Off	-4.00	122	121	119	120	307.2
-1.6	Off	14.08	121	121	117	120	307.2
-1.5	Off	40.56	119	122	116	121	307.2
-1.4	Off	54.64	117	122	117	122	307.2
-1.3	Off	55.12	115	122	116	122	307.2
-1.2	Off	58.08	114	121	115	120	307.2
-1.1	Off	63.20	113	119	114	118	307.2
-1.0	Off	66.64	111	113	110	114	307.2
-0.9	Off	67.76	109	108	104	110	307.2
-0.8	Off	65.28	108	98	100	104	307.2
-0.7	Off	64.32	105	80	97	98	307.2
-0.6	Off	62.80	99	48	94	91	307.2
-0.5	Off	61.84	91	32	92	83	307.2
-0.4	Off	60.96	83	33	90	74	307.2
-0.3	Off	59.04	76	33	86	66	307.2
-0.2	Off	55.76	70	31	78	57	307.2
-0.1	Off	53.20	63	34	66	49	307.2

Pre-Crash Data [10 samples/sec] (Most Recent Event - table 3 of 3)

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

Time Stamp (sec)	ESP Feature is Completely Disabled
-5.0	Enabled
-4.9	Enabled
-4.8	Enabled
-4.7	Enabled
-4.6	Enabled
-4.5	Enabled
-4.4	Enabled
-4.3	Enabled
-4.2	Enabled
-4.1	Enabled
-4.0	Enabled
-3.9	Enabled
-3.8	Enabled
-3.7	Enabled
-3.6	Enabled
-3.5	Enabled
-3.4	Enabled
-3.3	Enabled
-3.2	Enabled
-3.1	Enabled
-3.0	Enabled
-2.9	Enabled
-2.8	Enabled
-2.7	Enabled
-2.6	Enabled
-2.5	Enabled
-2.4	Enabled
-2.3	Enabled
-2.2	Enabled
-2.1	Enabled
-2.0	Enabled
-1.9	Enabled
-1.8	Enabled
-1.7	Enabled
-1.6	Enabled
-1.5	Enabled
-1.4	Enabled
-1.3	Enabled
-1.2	Enabled
-1.1	Enabled
-1.0	Enabled
-0.9	Enabled
-0.8	Enabled
-0.7	Enabled
-0.6	Enabled
-0.5	Enabled
-0.4	Enabled
-0.3	Enabled
-0.2	Enabled
-0.1	Enabled

Pre-Crash Data [4 samples/sec] (Most Recent Event - table 1 of 3)

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

Time Stamp (sec)	Pre-Crash Recorder Status	PCM MIL	ETC Lamp	Current Gear	Reverse Gear Status	Tire Pressure Position
-5.00	Complete	Off	Off	D8	Not Reverse	RHR
-4.75	Complete	Off	Off	D8	Not Reverse	LHF
-4.50	Complete	Off	Off	D8	Not Reverse	LHF
-4.25	Complete	Off	Off	D8	Not Reverse	LHF
-4.00	Complete	Off	Off	D8	Not Reverse	RHR
-3.75	Complete	Off	Off	D8	Not Reverse	RHR
-3.50	Complete	Off	Off	D8	Not Reverse	RHR
-3.25	Complete	Off	Off	D8	Not Reverse	RHR
-3.00	Complete	Off	Off	D8	Not Reverse	LHR
-2.75	Complete	Off	Off	D8	Not Reverse	LHR
-2.50	Complete	Off	Off	D8	Not Reverse	LHR
-2.25	Complete	Off	Off	D8	Not Reverse	LHR
-2.00	Complete	Off	Off	D7	Not Reverse	RHF
-1.75	Complete	Off	Off	D7	Not Reverse	RHF
-1.50	Complete	Off	Off	D7	Not Reverse	RHF
-1.25	Complete	Off	Off	D7	Not Reverse	RHF
-1.00	Complete	Off	Off	D7	Not Reverse	LHF
-0.75	Complete	Off	Off	D7	Not Reverse	LHF
-0.50	Complete	Off	Off	D7	Not Reverse	LHF
-0.25	Complete	Off	Off	D7	Not Reverse	LHF

Pre-Crash Data [4 samples/sec] (Most Recent Event - table 2 of 3)

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

Time Stamp (sec)	Tire Pressure Status	Tire Pressure Value (PSI)	Cruise Control Lamp Status	Cruise Control Engaged Status	ACC On/Off	ACC Set Speed (MPH) [km/h]	ACC Faulted	TPM System Failure Status
-5.00	Normal	31	Off	Not_Engaged	Off	0 [0.0]	No	Fail Not Present
-4.75	Normal	52	Off	Not_Engaged	Off	0 [0.0]	No	Fail Not Present
-4.50	Normal	52	Off	Not_Engaged	Off	0 [0.0]	No	Fail Not Present
-4.25	Normal	52	Off	Not_Engaged	Off	0 [0.0]	No	Fail Not Present
-4.00	Normal	31	Off	Not_Engaged	Off	0 [0.0]	No	Fail Not Present
-3.75	Normal	31	Off	Not_Engaged	Off	0 [0.0]	No	Fail Not Present
-3.50	Normal	31	Off	Not_Engaged	Off	0 [0.0]	No	Fail Not Present
-3.25	Normal	31	Off	Not_Engaged	Off	0 [0.0]	No	Fail Not Present
-3.00	Normal	33	Off	Not_Engaged	Off	0 [0.0]	No	Fail Not Present
-2.75	Normal	33	Off	Not_Engaged	Off	0 [0.0]	No	Fail Not Present
-2.50	Normal	33	Off	Not_Engaged	Off	0 [0.0]	No	Fail Not Present
-2.25	Normal	33	Off	Not_Engaged	Off	0 [0.0]	No	Fail Not Present
-2.00	Normal	43	Off	Not_Engaged	Off	0 [0.0]	No	Fail Not Present
-1.75	Normal	43	Off	Not_Engaged	Off	0 [0.0]	No	Fail Not Present
-1.50	Normal	43	Off	Not_Engaged	Off	0 [0.0]	No	Fail Not Present
-1.25	Normal	43	Off	Not_Engaged	Off	0 [0.0]	No	Fail Not Present
-1.00	Normal	52	Off	Not_Engaged	Off	0 [0.0]	No	Fail Not Present
-0.75	Normal	52	Off	Not_Engaged	Off	0 [0.0]	No	Fail Not Present
-0.50	Normal	52	Off	Not_Engaged	Off	0 [0.0]	No	Fail Not Present
-0.25	Normal	52	Off	Not_Engaged	Off	0 [0.0]	No	Fail Not Present

Pre-Crash Data [4 samples/sec] (Most Recent Event - table 3 of 3)

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

Time Stamp (sec)	Shift Lever Position	Traction Control Switch Status
-5.00	D	No Intervention
-4.75	D	No Intervention
-4.50	D	No Intervention
-4.25	D	No Intervention
-4.00	D	No Intervention
-3.75	D	No Intervention
-3.50	D	No Intervention
-3.25	D	No Intervention
-3.00	D	No Intervention
-2.75	D	No Intervention
-2.50	D	No Intervention
-2.25	D	No Intervention
-2.00	D	No Intervention
-1.75	D	No Intervention
-1.50	D	No Intervention
-1.25	D	No Intervention
-1.00	D	No Intervention
-0.75	D	No Intervention
-0.50	D	No Intervention
-0.25	D	No Intervention

Hexadecimal Data

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

```
62 F1 00 00 61 00 03
62 F1 32 36 38 32 36 34 38 37 38 41 41
62 F1 8C 54 4E 52 4D 46 32 35 36 35 30 30 36 31 35 20
62 F1 54 00 27
62 F1 90 31 43 33 43 43 43 41 42 32 47 4E 2A 2A 2A 2A 2A 2A
62 FA 01 01 CC 01 01 31 2D 1C 13 AE 32 20 00 00 43 E8 01 CF A0 9F 95 B8 1A 00 00 31 13 3F 00
00 00 00 00 00 00 00 00 00 00 00 00 F7 3E F8 01 90 80 00 0E 29 09 58 47 4E 2A 2A 2A 2A 2A 2A 00 00
00 00 00 00 11 25 A7 00 11 A7 25 00 81 12 00 40 00 07 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
03
62 FA 02 02 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
FF
62 FA 03 03 FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
FF
62 01 02 1D 8C FF 1F 0F 3F 03
62 01 0E 00 01 00 00 00 01 00 00 00 01 00 00 00 01 00 00 FF FF 00 00 FF FF 00 00 FF FF 00 00
01 E8 01 E3 FF FF FF 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
62 01 E9 43 F5 00 FB EF 55 01 00 00 00 00
62 02 B6 01 7F 00 00 00 00
71 01 03 01 01 00 CC 03 8F 00 BA 00 00 23 DD 00 03 B8 81 01 15 A9 00 00 00 00 00 00 00 00 00 00
00 00 00
71 01 03 01 01 01 CC 03 FB 00 BB 00 00 2C D4 00 03 DD 81 01 15 B7 00 00 00 00 00 00 00 00 00 00
00 00 00
71 01 03 01 01 02 CC 04 67 00 C1 00 00 2E D2 00 04 1C 81 01 15 E5 00 00 00 00 00 00 00 00 00 00
00 00 00
71 01 03 01 01 03 CC 04 D3 00 C9 00 00 29 D7 00 04 79 81 01 16 54 00 00 00 00 00 00 00 00 00 00
00 00 00
71 01 03 01 01 04 CC 05 3F 00 CE 00 00 25 DB 00 05 39 80 01 16 EE 00 00 00 00 00 00 00 00 00 00
00 00 00
```

71 01 03 01 01 05 CC 05 AA 00 D4 00 00 20 E0 00 05 FA 80 01 16 57 00 00 00 00 00 00 00 00 00 00
00 00 00

71 01 03 01 01 06 CC 06 16 00 DA 00 00 1B E5 00 06 9E 80 01 15 5C 00 00 00 00 00 00 00 00 00 00
00 00 00

71 01 03 01 01 07 CC 06 81 00 DE 00 00 1D E3 00 07 96 80 01 15 0B 00 00 00 00 00 00 00 00 00 00
00 00 00

71 01 03 01 01 08 CC 06 D7 00 E2 00 00 27 D9 00 08 A2 80 01 16 D7 00 00 00 00 00 00 00 00 00 00
00 00 00

71 01 03 01 01 09 CC 07 13 00 E6 00 00 27 D9 00 09 40 80 01 19 88 00 00 00 00 00 00 00 00 00 00
00 00 00

71 01 03 01 01 0A CC 07 45 00 E9 00 00 26 DA 00 09 91 80 01 19 B1 00 00 00 00 00 00 00 00 00 00
00 00 00

71 01 03 01 01 0B CC 07 5A 00 EC 00 00 1E E2 00 09 B5 80 01 1A FB 00 00 00 00 00 00 00 00 00 00
00 00 00

71 01 03 01 01 0C CC 07 63 00 EE 00 00 1E E2 00 09 C9 80 01 1E 26 00 00 00 00 00 00 00 00 00 00
00 00 00

71 01 03 01 01 0D CC 07 7F 00 EF 00 00 1C E4 00 09 D2 80 01 21 09 00 00 00 00 00 00 00 00 00 00
00 00 00

71 01 03 01 01 0E CC 07 8A 00 EF 00 00 1F E1 00 0A 02 80 01 20 EA 00 00 00 00 00 00 00 00 00 00
00 00 00

71 01 03 01 01 0F CC 07 8F 00 F2 00 00 20 E0 00 09 EB 80 01 20 2B 00 00 00 00 00 00 00 00 00 00
00 00 00

71 01 03 01 01 10 CC 07 9A 00 F4 00 00 27 D9 00 0A 0A 80 01 1E F9 00 00 00 00 00 00 00 00 00 00
00 00 00

71 01 03 01 01 11 CC 07 A7 00 F6 00 00 3C C4 00 0A 0D 80 01 1D 7F 00 00 00 00 00 00 00 00 00 00
00 00 00

71 01 03 01 01 12 CC 07 B5 00 F7 00 00 45 BB 00 0A 2A 81 01 1C 5C 00 00 00 00 00 00 00 00 00 00
00 00 00

71 01 03 01 01 13 CC 07 BC 00 F7 00 00 4B B5 00 0A 31 81 01 1B E5 00 00 00 00 00 00 00 00 00 00
00 00 00

71 01 03 01 01 14 CC 07 CD 00 F8 00 00 A4 5C 00 0A 25 01 01 1B 7E 00 00 00 00 00 00 00 00 00 00
00 00 00

71 01 03 01 01 15 CC 07 DC 00 F8 4F 36 A5 5B 00 0A 93 01 01 1A 53 00 00 00 00 00 00 00 00 00 00
00 00 00

71 01 03 01 01 16 CC 07 C6 00 F8 79 7A A1 5F 00 0A 7A 01 01 19 8D 00 00 00 00 00 00 00 00 00 00
00 00 00

71 01 03 01 01 17 CC 07 C5 00 F8 7A 7C 9E 62 00 09 ED 01 00 1A 33 00 00 00 00 00 00 00 00 00 00
00 00 00

71 01 03 01 01 18 CC 07 CB 00 F8 88 8A 9A 65 00 09 95 01 00 1A CE 00 00 00 00 00 00 00 00 00 00
00 00 00

71 01 03 01 01 19 CC 07 CC 00 F7 6B 6E 97 69 00 09 0F 01 01 1B 7C 00 00 00 00 00 00 00 00 00 00
00 00 00

71 01 03 01 01 1A CC 07 C7 00 F8 69 6B 97 69 00 08 94 01 00 1B AE 00 00 00 00 00 00 00 00 00 00
00 00 00

71 01 03 01 01 30 CC 07 C8 00 F8 51 52 4F B1 00 08 8E 00 00 1C 1E 00 00 00 00 00 00 00 00 00 00
00 00 00

71 01 03 01 01 31 CC 07 C6 00 F8 51 52 4F B1 00 08 8F 00 00 1C 1F 00 00 00 00 00 00 00 00 00 00
00 00 00

71 01 03 01 02 00 FF
FF FF FF

71 01 03 01 02 01 FF
FF FF FF

71 01 03 01 02 02 FF
FF FF FF

71 01 03 01 02 03 FF
FF FF FF

71 01 03 01 02 04 FF
FF FF FF

71 01 03 01 02 05 FF
FF FF FF

71 01 03 01 02 06 FF
FF FF FF

71 01 03 01 02 07 FF
FF FF FF

71 01 03 01 02 08 FF
FF FF FF

71 01 03 01 02 09 FF
FF FF FF

71 01 03 01 02 0A FF
FF FF FF

71 01 03 01 02 0B FF
FF FF FF

71 01 03 01 02 0C FF
FF FF FF

71 01 03 01 02 0D FF
FF FF FF

71 01 03 01 02 0E FF
FF FF FF

71 01 03 01 02 0F FF
FF FF FF

71 01 03 01 02 10 FF
FF FF FF

71 01 03 01 02 11 FF
FF FF FF

71 01 03 01 02 12 FF
FF FF FF

71 01 03 01 02 13 FF
FF FF FF

71 01 03 01 02 14 FF
FF FF FF

71 01 03 01 02 15 FF
FF FF FF

71 01 03 01 02 16 FF
FF FF FF

71 01 03 01 02 17 FF
FF FF FF

71 01 03 01 02 18 FF
FF FF FF

71 01 03 01 02 19 FF
FF FF FF

71 01 03 01 02 1A FF
FF FF FF

71 01 03 01 02 1B FF
FF FF FF

71 01 03 01 02 1C FF
FF FF FF

71 01 03 01 02 1D FF
FF FF FF

71 01 03 01 02 1E FF
FF FF FF

71 01 03 01 02 1F FF
FF FF FF

71 01 03 01 02 20 FF
FF FF FF

71 01 03 01 02 21 FF
FF FF FF

71 01 03 01 02 22 FF
FF FF FF

71 01 03 01 02 23 FF
FF FF FF

71 01 03 01 02 24 FF
FF FF FF

71 01 03 01 02 25 FF
FF FF FF

71 01 03 01 02 26 FF
FF FF FF

71 01 03 01 02 27 FF
FF FF FF

71 01 03 01 02 28 FF
FF FF FF

71 01 03 01 02 29 FF
FF FF FF

FF FF FF

71 01 03 01 02 2A FF
FF FF FF

71 01 03 01 02 2B FF
FF FF FF

71 01 03 01 02 2C FF
FF FF FF

71 01 03 01 02 2D FF
FF FF FF

71 01 03 01 02 2E FF
FF FF FF

71 01 03 01 02 2F FF
FF FF FF

71 01 03 01 02 30 FF
FF FF FF

71 01 03 01 02 31 FF
FF FF FF

71 01 03 01 03 00 FF
FF FF FF

71 01 03 01 03 01 FF
FF FF FF

71 01 03 01 03 02 FF
FF FF FF

71 01 03 01 03 03 FF
FF FF FF

71 01 03 01 03 04 FF
FF FF FF

71 01 03 01 03 05 FF
FF FF FF

71 01 03 01 03 06 FF
FF FF FF

71 01 03 01 03 07 FF
FF FF FF

71 01 03 01 03 08 FF
FF FF FF

71 01 03 01 03 09 FF
FF FF FF

71 01 03 01 03 0A FF
FF FF FF

71 01 03 01 03 0B FF
FF FF FF

71 01 03 01 03 0C FF
FF FF FF

71 01 03 01 03 23 FF
FF FF FF

71 01 03 01 03 24 FF
FF FF FF

71 01 03 01 03 25 FF
FF FF FF

71 01 03 01 03 26 FF
FF FF FF

71 01 03 01 03 27 FF
FF FF FF

71 01 03 01 03 28 FF
FF FF FF

71 01 03 01 03 29 FF
FF FF FF

71 01 03 01 03 2A FF
FF FF FF

71 01 03 01 03 2B FF
FF FF FF

71 01 03 01 03 2C FF
FF FF FF

71 01 03 01 03 2D FF
FF FF FF

71 01 03 01 03 2E FF
FF FF FF

71 01 03 01 03 2F FF
FF FF FF

71 01 03 01 03 30 FF
FF FF FF

71 01 03 01 03 31 FF
FF FF FF

71 01 03 05 01 00 CC 40 02 02 25 07 FE 07 FE 04 00 06 2F 07 FF 00 00 20 FC 18 5C 1F 4F 10 CA
00 01 05 56 07 FF 01 FD 01 FB 09 A0 07 FF 0A 99 32 19 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 01 CC 40 02 02 25 07 FE 07 FE 04 00 06 2F 07 FF 00 00 26 E1 1C B9 23 24 0F 50
00 01 04 DF 07 FF 01 F8 01 FB 09 A2 07 F1 0A B9 32 19 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 02 CC 40 02 01 FF 07 FE 07 FE 04 00 06 2F 07 FF 00 00 2A D3 21 00 25 FC 10 B0
00 01 03 D7 07 FF 01 F4 01 FB 09 78 07 D8 0A E2 32 19 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 03 CC 40 02 01 EE 07 FE 07 FE 04 00 06 30 07 FF 00 00 2C D9 24 F9 29 7B 10 80
00 01 04 C7 07 FF 01 F4 01 F5 09 11 07 B4 0A FA 33 19 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 04 CC 40 02 01 EE 07 FE 07 FE 04 00 06 2F 07 FF 00 00 2D DC 29 69 2D 80 0F C3
00 01 05 43 07 FF 01 F0 01 F4 09 7F 07 85 0B 05 32 19 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 05 CC 40 02 01 ED 07 FE 07 FE 04 00 06 30 07 FF 00 00 2E D7 2D 9D 31 8F 18 1D
00 01 05 B8 07 FF 01 ED 01 F2 09 A4 07 83 0B 11 32 19 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 06 CC 40 02 01 ED 07 FE 07 FE 04 00 06 2F 07 FF 00 01 30 42 31 0D 34 85 28 23
00 01 05 92 07 FF 01 E8 01 EA 09 E3 07 8D 0B 24 32 19 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 07 CC 40 00 01 FA 07 FE 07 FE 04 00 06 2F 07 FF 00 01 31 D5 34 0F 35 C0 31 03
00 01 06 2C 07 FF 01 E5 01 EE 09 C9 07 7C 0B 30 32 19 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 08 CC 40 00 02 00 07 FE 07 FE 04 00 06 2F 07 FF 00 01 34 30 36 CE 36 87 36 20
00 01 07 A9 07 FF 01 E4 01 EC 09 C5 07 41 0B 4F 33 19 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 09 CC 40 00 01 F6 07 FE 07 FE 04 00 06 2F 07 FF 00 01 36 F3 39 3F 37 BE 38 99
00 01 01 F9 07 FF 01 E4 01 F6 0A 50 07 A2 0B 41 33 19 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 0A CC 40 00 01 FC 07 FE 07 FE 04 00 06 2F 07 FF 00 03 38 DB 3B 09 38 A3 3B 5B
00 01 06 41 07 FF 01 E4 01 F6 09 E4 07 DB 0B 16 32 19 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 0B CC 40 00 02 02 07 FE 07 FE 04 00 06 2F 07 FF 00 00 39 81 3C 35 38 F9 3C 7F
00 01 05 AE 07 FF 01 E4 01 F6 09 89 08 04 0A D6 32 19 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 0C CC 40 00 01 F8 07 FE 07 FE 04 00 06 2F 07 FF 00 00 3A 03 3C C5 39 4A 3C D4
00 01 05 07 07 FF 01 E3 01 F7 09 FC 07 BF 0A B1 32 19 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 0D CC 40 00 01 FE 07 FE 07 FE 04 00 06 2F 07 FF 00 00 3A 50 3C CD 3A 6E 3D 3F
00 01 01 F9 07 FF 01 E3 01 F6 09 CC 07 97 0A AB 32 19 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 0E CC 40 00 01 F4 07 FE 07 FE 04 00 06 2F 07 FF 00 00 3A 3E 3C 44 3B 92 3D 34
00 01 07 D2 07 FF 01 E3 01 F5 08 D9 07 D5 09 FB 32 19 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 0F CC 40 00 01 FA 07 FE 07 FE 04 00 06 2F 07 FF 00 00 3A 9E 3B EB 3C 48 3C B6
00 01 07 E9 07 FF 01 E3 01 F6 08 45 07 C7 08 B0 32 19 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 10 CC 40 00 02 00 07 FE 07 FE 04 00 06 2F 07 FF 00 00 3B 45 3B E4 3C D8 3C 92
00 01 06 25 07 FF 01 E3 01 FC 07 7A 07 EB 07 CE 32 19 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 11 CC 40 00 01 F6 07 FE 07 FE 04 00 06 2F 07 FF 00 00 3C 17 3C 48 3D 77 3C D8
00 01 03 7B 07 FF 01 E3 02 09 07 12 07 D8 07 61 33 19 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 12 CC 40 00 01 FC 07 FE 07 FE 04 00 06 2F 07 FF 00 00 3C 7F 3C 74 3D EA 3D 5A
00 01 02 E4 07 FF 01 E3 02 23 06 C5 07 D9 07 31 32 19 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 13 CC 40 00 02 02 07 FE 07 FE 04 00 06 30 07 FF 00 00 3C EB 3C 8E 3E 37 3D 77
00 01 01 CE 07 FF 01 E3 02 43 06 A4 07 EB 07 0A 33 19 00 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 14 CC 40 00 01 F8 07 FE 07 FE 04 00 06 2F 07 FF 00 00 3D 9C 3C 7C 3E 89 3E 33
00 01 01 6C 07 FF 01 E3 02 73 07 16 08 01 06 DC 32 19 00 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 15 CC 40 00 01 FE 07 FE 07 FE 04 00 06 2F 07 FF 00 00 3E 76 3C F5 3E 89 3F 49
00 01 03 D5 07 FF 02 65 02 A7 06 A7 07 FE 06 E6 64 31 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 16 CC 40 00 01 F4 07 FE 07 FE 04 00 06 2F 07 FF 00 00 3E 85 3D 77 3E 6B 3E 25
00 01 03 52 07 FF 02 B2 02 A4 07 21 07 EA 07 29 6B 35 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 17 CC 00 00 01 FA 07 FE 07 FE 04 00 06 2F 07 FF 00 00 3E 98 3D F1 3E 59 3E 00
00 01 00 00 07 FF 02 B0 02 A5 07 83 07 EE 07 68 6E 37 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 18 CC 00 00 02 00 07 FE 07 FE 04 00 06 2F 07 FF 00 00 3E 5C 3D D3 3E 60 3E 5C
00 01 01 E6 07 FF 02 B0 02 A6 07 FF 07 FE 07 C5 6C 36 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 19 CC 40 00 01 F6 07 FE 07 FE 04 00 06 2F 07 FF 00 00 3E 1A 3D 8A 3E 33 3E 90
00 01 03 01 07 FF 02 B0 02 A6 08 31 08 39 08 11 65 32 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 1A CC 00 00 01 FC 07 FE 07 FE 04 00 06 2F 07 FF 00 00 3D B2 3D FC 3E 30 3E 9F
00 01 05 1C 07 FF 02 B4 02 A7 08 95 07 ED 08 60 69 34 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 1B CC 00 00 02 02 07 FE 07 FE 04 00 06 30 07 FF 00 00 3B E4 3E 81 3E 46 3E 9F
00 01 04 14 07 FF 02 B2 02 AB 09 75 07 27 08 7F 7E 3F 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 1C CC 00 00 01 F8 07 FE 07 FE 04 00 06 2F 07 FF 00 00 33 F1 3D F5 3F BC 3E A6
00 01 04 F6 07 FF 02 B5 02 A5 08 3E 06 DC 08 4A 82 41 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 1D CC 00 00 01 FE 07 FE 07 FE 04 00 06 2F 07 FF 00 00 3E 1D 3E 0B 3E 85 3E 9F
00 01 07 FF 07 FF 02 B4 02 A3 05 EF 07 8A 07 FE 5C 2D 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 1E CC 00 00 01 F4 07 FE 07 FE 04 00 06 2F 07 FF 00 00 3E 0B 3E 29 3E 98 3E B9
00 01 04 DF 07 FF 02 A3 02 9A 08 16 08 0F 08 01 5B 2D 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 1F CC 00 00 01 FA 07 FE 07 FE 04 00 06 2F 07 FF 00 00 3E 12 3E 30 3E 8C 3E A6
00 01 05 0B 07 FF 02 A3 02 9C 08 0C 08 04 08 00 5C 2E 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 20 CC 00 00 02 00 07 FE 07 FE 04 00 06 2F 07 FF 00 00 3E 1A 3E 3B 3E 85 3E 9B
00 01 04 A1 07 FF 02 A6 02 A3 07 F7 08 19 07 FD 5C 2E 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 21 CC 00 00 01 F6 07 FE 07 FE 04 00 06 2F 07 FF 00 00 3E 0F 3E 12 3E 90 3E A3
00 01 04 A7 07 FF 02 A6 02 A2 08 05 08 18 07 FC 5C 2E 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 22 CC 00 00 01 FC 07 FE 07 FE 04 00 06 2F 07 FF 00 00 3E 0B 3E 29 3E 90 3E A6
00 01 04 65 07 FF 02 A3 02 A2 08 01 08 11 07 FA 5C 2D 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 23 CC 00 00 02 02 07 FE 07 FE 04 00 06 2F 07 FF 00 00 3D F9 3E 0F 3E 7A 3E 94
00 01 04 6B 07 FF 02 A3 02 A2 07 FC 08 11 07 FA 5C 2D 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 24 CC 00 00 01 F8 07 FE 07 FE 04 00 06 2F 07 FF 00 00 3D F9 3E 12 3E 7E 3E 9B
00 01 04 4F 07 FF 02 A3 02 99 08 13 08 1D 07 FC 5C 2D 00 00 00 00 00 00 00 00 00 00 00
00 00 00 00 00 00 00

71 01 03 05 01 25 CC 00 00 01 FE 07 FE 07 FE 04 00 06 2F 07 FF 00 00 3E 07 3E 12 3E 7A 3E 8C

71 01 03 06 01 01 CC 00 43 E8 01 C7 05 74 00 E4 FF 00 00 00 02 00 00 04 00 70 00 30 44 11 00
08 A5 FF 70 00 BD 1C F8 00 04 00 00 00 00 58 04 00 00 00 04 38 00 00 04 82 01 86 02 33 01 CF
A0 02 00 03 CD 0C BF 00 00

71 01 03 06 01 02 CC 00 43 E8 07 1C 05 74 00 E4 FF 00 00 00 02 00 00 04 00 70 00 30 44 11 00
07 09 FF 70 00 BD 23 F8 00 04 00 00 00 00 58 04 00 00 00 04 38 00 00 04 82 01 86 01 7C 01 CF
A0 02 00 02 D3 0B C3 00 00

71 01 03 06 01 03 CC 00 43 E8 03 FE 05 74 00 E4 FF 00 00 00 02 00 00 04 00 70 00 30 44 01 00
07 D4 FF 70 00 BD 2A F8 00 04 00 00 00 00 58 04 00 00 00 04 38 00 00 04 82 01 85 02 04 01 CF
A0 02 00 01 35 0A 13 00 00

71 01 03 06 01 04 CC 00 43 E8 06 B4 05 74 00 E4 FF 00 00 00 02 00 00 04 00 70 00 30 44 01 00
03 DE FF 70 00 BD 35 F8 00 04 00 00 00 00 58 04 00 00 00 04 38 00 00 04 6C 00 84 02 02 01 CF
A0 02 00 00 0B 08 DB 00 00

71 01 03 06 01 05 CC 00 43 E8 07 FF 05 74 00 E4 FF 00 00 00 02 00 00 04 00 70 00 30 44 01 00
08 70 FF 70 00 BD 4F F8 00 04 00 00 00 00 58 04 00 00 00 04 38 00 00 04 6C 00 83 02 5C 01 CF
A0 02 00 1E 46 07 03 00 00

71 01 03 06 01 06 CC 00 43 E8 03 B9 05 74 00 E4 FF 00 00 00 02 00 00 04 00 70 00 30 44 01 00
09 15 FF 70 00 BD 6E F8 00 04 00 00 00 00 58 04 00 00 00 04 38 00 00 04 6C 00 83 03 8B 01 CF
A0 02 00 1D 12 05 CC 00 00

71 01 03 06 01 07 CC 00 43 E8 02 0F 05 74 00 E4 FF 00 00 00 02 00 00 04 00 70 00 30 44 01 00
08 2F FF 70 00 BD 72 F8 00 04 00 00 00 00 58 04 00 00 00 04 38 00 00 04 6C 00 82 07 3C 01 CF
A0 02 00 1B 3A 03 F5 00 00

71 01 03 06 01 08 CC 00 43 E8 03 7E 05 74 00 E4 FF 00 00 00 02 00 00 04 00 70 00 30 44 01 00
07 A9 FF 80 00 BD 79 F8 00 04 00 00 00 00 58 04 00 00 00 04 40 00 00 04 52 03 81 0B 5B 01 CF
A0 02 00 19 F7 02 B9 00 00

71 01 03 06 01 09 CC 00 43 E8 02 FA 05 75 00 E4 FF 00 00 00 02 00 00 04 00 70 00 30 44 01 00
07 27 FF 80 00 BD 7A F8 00 04 00 00 00 00 58 04 00 00 00 04 40 00 00 04 52 03 80 0B 50 01 CF
A0 02 00 18 11 00 D8 00 00

71 01 03 06 01 0A CC 00 43 E8 04 6E 05 75 00 E4 FF 00 00 00 02 00 00 04 00 70 00 30 44 01 00
07 7F FF 80 00 BD 7A F8 00 04 00 00 00 00 58 04 00 00 00 04 40 00 00 04 52 03 7F 0B 87 01 CF
A0 02 00 16 CE 1F 97 00 00

71 01 03 06 01 0B CC 00 43 E8 00 FC 05 75 00 E4 FF 00 00 00 02 00 00 04 00 70 00 30 44 01 00
07 CF FF 80 00 BD 78 F8 00 04 00 00 00 00 58 04 00 00 00 04 40 00 00 04 52 03 7E 0A EF 01 CF
A0 02 00 15 05 1D B3 00 00

71 01 03 06 01 0C CC 00 43 E8 03 FE 05 75 00 E4 FF 00 00 00 02 00 00 04 00 70 00 30 44 01 00
07 CF FF 80 00 BD 78 F8 00 04 00 00 00 00 58 04 00 00 00 04 40 00 00 04 4D 02 7D 0B 13 01 CF
A0 02 00 13 C3 1C 71 00 00

71 01 03 06 01 0D CC 00 43 E8 04 09 05 75 00 E4 FF 00 00 00 02 00 00 04 00 70 00 30 44 01 00
07 D0 FF 80 00 BD 77 F8 00 04 00 00 00 00 58 04 00 00 00 04 40 00 00 04 4D 02 7C 0A D8 01 CF
A0 02 00 11 E0 1A 8D 00 00

71 01 03 06 01 0E CC 00 43 E8 04 10 05 75 00 E4 FF 00 00 00 02 00 00 04 00 70 00 30 44 01 00
07 D0 FF 80 00 BD 77 F8 00 04 00 00 00 00 58 04 00 00 00 04 40 00 00 04 4D 02 7C 0A CE 01 CF
A0 02 00 10 9E 19 4B 00 00

71 01 03 06 01 0F CC 00 43 E8 04 61 05 75 00 E4 FF 00 00 00 02 00 00 04 00 70 00 30 44 01 00
07 CA FF 80 00 BD 75 F8 00 04 00 00 00 00 58 04 00 00 00 04 40 00 00 04 4D 02 7A 0A 7E 01 CF
A0 02 00 0E BC 17 68 00 00

71 01 03 06 01 10 CC 00 43 E8 04 02 05 75 00 E4 FF 00 00 00 02 00 00 04 00 70 00 30 44 01 00
07 D0 FF 80 00 BD 74 F8 00 04 00 00 00 00 58 04 00 00 00 04 40 00 00 04 82 01 7A 0A 79 01 CF
A0 02 00 0D 7B 16 26 00 00

71 01 03 06 01 11 CC 00 43 E8 04 1C 05 75 00 E4 FF 00 00 00 02 00 00 04 00 70 00 30 44 01 00

FF
FF
FF
FF FF

71 01 03 03 01 CC 00 FF FE FD FC F8 F7 F3 EF EB E7 E3 DF DB D7 D3 CF CB C7 C4 C1 BF BE BC BB
BB B9 B8 B8 B8 B8 B8 B8 B8 B9 B9 B9 BA BA BB BB BC BC BD BE BE BE BE BE BE BE BF BF C0 C0
C1 C1 C1 C1 C1 C2 C2 C2 C3 C3 C3 C3 C3 C3 C4 C4 C4 C4 C4 C4 C5 C5 C5 C5 C6 C6 C6 C6
C6 C6 C6 C6 C6 C6 C6 C6 C6 C6 C6 C6 C6 C6 C6 C7 C7 C7 C7 C7 C7 C7 C7 C7 C7 C7 C7 C7
C7 C7 C7 C7 C7 C8
C9 C9 00
00
00
00 00 00 00 00

71 01 03 03 02 FF
FF
FF
FF
FF
FF
FF FF

71 01 03 03 03 FF
FF
FF
FF
FF
FF
FF FF

71 01 03 04 01 CC 00 02 03 05 06 06 06 06 06 05 05 04 03 03 02 01 01 01 00 00 00 00 00 00 00 01
01 02 01 01 02 01 01 01 01 01 00 00 FF FF FE FD FE FD FD FD FD FC FC FB FC FC FB FB FB FB FB
FB FA FA FA FA F9 FA FB FD FE FF 01 01 03 04 04 04 04 04 02 01 01 00 FF FE FE FD FC FC FD FF 00
01 02 03 03 03 03 03 03 02 02 01 01 00 FF 00 00 FF FF FE FE FF 00 01 01 01 03 03 04 03
03 02 02 01 00 FF FE FE F4 CC E4 07 F2 F2 ED 03 02 05 16 11 16 1A 19 1E 1E 21 21 23 23 22 22
21 20 1D 1E 18 0E 08 F9 EE DE D8 E1 E9 EF F1 F6 FB FC FD FE 03 05 07 09 0A 0B 0C 0D 0E 10 12
13 16 18 18 18 19 18 17 11 0E 0A 06 06 04 02 01 FF FC FC FB FB FB FF FA 03 FC FE FF FE 02 FD
04 03 01 02 05 01 02 02 FE FE FE FE FE FD FD FD FC FD FD FD FE FF FF FE FC FC FA FA F8 F9 FA
FB FD FE FF 01 01 02 02 02

71 01 03 04 02 FF
FF
FF
FF
FF
FF
FF FF

71 01 03 04 03 FF
FF
FF
FF
FF
FF
FF FF

59 02 CF 80 13 13 8F 80 12 13 8F 80 11 13 8F 80 10 13 8F 80 04 13 8F 80 03 13 8F 80 02 13 8F
80 01 13 8F A7 68 13 8F A7 67 13 8F A7 64 13 8F A7 61 13 8F 80 90 13 8F 80 95 13 8F A7 62 13
8F A7 65 13 8F

62 03 05 31 43 33 43 43 43 41 42 32 47 4E 2A 2A 2A 2A 2A 2A

62 F1 22 36 38 32 36 34 38 37 38 41 41

62 F1 12 36 38 32 36 34 38 37 38 41 41

Disclaimer of Liability

The users of the CDR product and reviewers of the CDR reports and exported data shall ensure that data and information supplied is applicable to the vehicle, vehicle's system(s) and the vehicle ECU. Robert Bosch LLC and all its directors, officers, employees and members shall not be liable for damages arising out of or related to incorrect, incomplete or misinterpreted software and/or data. Robert Bosch LLC expressly excludes all liability for incidental, consequential, special or punitive damages arising from or related to the CDR data, CDR software or use thereof.

DOT HS 813 673
January 2025



U.S. Department
of Transportation

**National Highway
Traffic Safety
Administration**



16514-123024-v2b